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Nonsurgical Treatments for Urinary Incontinence in Women:

A Systematic Review Update

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Nonsurgical Treatments for Urinary Incontinence in Women: A Systematic Review Update

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None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.

The information in this report is intended to help health care decisionmakers—patients and clinicians, health system leaders, and policymakers, among others—make well-informed decisions and thereby improve the quality of health care services. This report is not intended to be a substitute for the application of clinical judgment. Anyone who makes decisions concerning the provision of clinical care should consider this report in the same way as any medical reference and in conjunction with all other pertinent information, i.e., in the context of available resources and circumstances presented by individual patients.

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This report may periodically be assessed for the currency of conclusions. If an assessment is done, the resulting surveillance report describing the methodology and findings will be found on the Effective Health Care Program Web site at: www.effectivehealthcare.ahrq.gov.

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Preface

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-based Practice Centers (EPCs), sponsors the development of evidence reports and technology assessments to assist public- and private-sector organizations in their efforts to improve the quality of health care in the United States.

The Patient-Centered Research Outcomes Institute (PCORI) was established to fund research that can help patients and those who care for them make better informed decisions about the health care choices they face every day. PCORI partnered with AHRQ to help fulfill PCORI's authorizing mandate to engage in evidence synthesis and make information from comparative effectiveness research more available to patients and providers. PCORI identifies topics for review based on broad stakeholder interest. After identifying specific topics, multistakeholder virtual workshops are held by PCORI to inform the individual research protocols.

The reports and assessments provide organizations, patients, clinicians, and caregivers with comprehensive, evidence-based information on common medical conditions and new health care technologies and strategies. They also identify research gaps in the selected scientific area, identify methodological and scientific weaknesses, suggest research needs, and move the field forward through an unbiased, evidence-based assessment of the available literature. The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments.

To bring the broadest range of experts into the development of evidence reports and health technology assessments, AHRQ encourages the EPCs to form partnerships and enter into collaborations with other medical and research organizations. The EPCs work with these partner organizations to ensure that the evidence reports and technology assessments they produce will become building blocks for health care quality improvement projects throughout the Nation. The reports undergo peer review and public comment prior to their release as a final report.

AHRQ expects that the EPC evidence reports and technology assessments, when appropriate, will inform patients and caregivers, individual health plans, providers, and purchasers as well as the health care system as a whole by providing important information to help improve health care quality.

If you have comments on this evidence report, they may be sent by mail to the Task Order Officer: Aysegul Gozu, M.D., M.P.H., Agency for Healthcare Research and Quality, 5600 Fishers Lane, Rockville, MD 20857, or by email to epc@ahrq.hhs.gov.

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Introduction

This systematic review uses current methods and is an update of an earlier report published in 2012, which evaluated comparisons of nonsurgical treatments for urinary incontinence (UI) in (adult) women. The 2012 report included questions about diagnosis and treatment of UI. Based on feedback from a stakeholder panel, this update focuses on the comparative benefits and harms of nonsurgical treatments, both nonpharmacological and pharmacological. In addition, this review addresses the question of how women with UI perceive treatment success.

UI is the involuntary loss of urine. About 17 percent of nonpregnant women are estimated to have UI.[1] The prevalence of UI increases with age, particularly after menopause. UI can affect a woman's physical, psychological, and social well-being and can impose substantial lifestyle restrictions. The effects of UI range from slightly bothersome to debilitating. Up-to-date data on the economic impact of UI in women are lacking, but the American College of Physicians estimated the costs of UI care in the United States at $19.5 billion in 2004 in their 2014 Clinical Practice Guideline,[2] and other estimates are even higher.[3]

The most common types of UI that affect women include stress, urgency, and mixed. Stress UI is associated with an inability to retain urine during coughing, sneezing, or other activities that increase intraabdominal pressure. Urgency UI is defined as the involuntary loss of urine associated with the sensation of a sudden, compelling urge to void that is difficult to defer. Mixed UI occurs when both stress and urgency UI are present.[4]

Both nonpharmacological and pharmacological interventions are available for management of UI. Some causes of UI are amenable to surgical interventions, but we focus only on nonsurgical interventions. Nonpharmacological interventions mostly aim to strengthen the pelvic floor and change behaviors that influence bladder function, whereas pharmacological interventions mostly address bladder and sphincter function.

This report addresses a Contextual Question and four Key Questions.

Key Question 1: What are the benefits and harms of nonpharmacological treatments of UI in women, and how do they compare with each other?

Key Question 2: What are the benefits and harms of pharmacological treatments of UI in women, and how do they compare with each other?

Key Question 3: What are the comparative benefits and harms of nonpharmacological versus pharmacological treatments of UI in women?

Key Question 4: What are the benefits and harms of combined nonpharmacological and pharmacological treatment of UI in women?

Contextual Question: How do women with UI that is amenable to nonsurgical treatments perceive treatment success?

The references for the Evidence Summary are included in the reference list that follows the appendixes.

Methods

Refer to the full report for details about the Methods; the following is a summary. To address the contextual question, we followed the general guidance of the U.S. Preventive Services Task Force.[5] We sought relevant studies and solicited input from several clinician and research experts in female UI. To address the four Key Questions, we conducted a systematic review of the scientific literature, using established methodologies.[6] The review's protocol was prospectively registered with PROSPERO, and its registration number is CRD42017069903.

We included all eligible studies included in the 2012 review. For newer studies, we searched multiple medical literature databases and sources of unpublished (grey) literature for articles from January 1, 2011 through our final search date of December 4, 2017.

Table A presents the basic study eligibility criteria; the full report has further details.

Table A. Summary of the eligibility criteria

PICOTS	Inclusion	Exclusion
Population	Non-pregnant community-dwelling adult women with symptoms of UI *Subpopulations*: • women engaging in athletic activity, • older women • women in the military or veterans • racial and ethnic minorities	*If >10% of study participants* are from ineligible groups (children or adolescents, men, pregnant women, institutionalized or hospitalized participants, or have surgically-treated UI)
Interventions	*Nonpharmacological interventions*: Behavioral interventions, neuromodulation, intravesical pressure release devices, and combinations thereof *Pharmacological interventions*: Anticholinergics, onabotulinum toxin A (BTX), hormones; alpha agonists, beta agonists; antidepressants, periurethral bulking agents (see full report) *Combinations* of eligible nonpharmacological and pharmacological interventions. All doses or variations of interventions are included, including unapproved doses. Similarly, all eligible interventions are included regardless of regulatory body approval.	Interventions not available in the United States and surgical treatments
Comparators	Any eligible intervention, sham or no treatment.	.
Outcomes	*Categorical measures of UI*: Cure*, improvement, satisfaction with the treatment outcome (see full report) *Quality of life*: Generic, sexual function, UI-specific; validated. *Adverse events*.	Measurements used for diagnostic purposes or that do not measure UI specifically (see full report)
Timing	Minimum 4 weeks follow up (since the start of treatment)	.
Settings	Interventions provided in primary care or specialized clinic or equivalent by any healthcare provider	.
Country	Any geographic area	.
Study designs	*For effectiveness outcomes (UI and QoL)*: • randomized controlled trials (RCTs) • nonrandomized comparative studies (NRCS) that used strategies to reduce confounding bias, N≥50 women per group (N≥100 total). *For harms outcomes*: • RCTs • Any NRCS with N≥50 women per group (N≥100 total) • Other, including noncomparative studies (N≥100 women)	.
Publication language	Any	Unable to read, translate, or retrieve.

Empty cells (with periods) indicate no additional exclusion criteria (beyond what is implied by the inclusion criteria)

* In the literature on UI treatments, cure is defined as complete resolution of symptoms, even if the "cure" is not permanent or requires continued treatment to be maintained. It does not imply permanent resolution requiring no further treatment.

Abbreviations: N = sample size; NRCS = nonrandomized comparative study; PICOTS = populations, interventions, comparators, outcomes, timing, and setting; RCT = randomized controlled trial; QoL = quality of life; UI = urinary incontinence.

In contrast with most published systematic reviews, we used network meta-analyses to summarize the study findings for UI outcomes (cure, improvement, and satisfaction) since studies have compared a large number of specific interventions (53) and categories of interventions (16) and many interventions have not been directly compared with each other.

Network meta-analysis combines data from direct (head-to-head) and indirect comparisons through a common comparator. Instead of conducting numerous pairwise meta-analyses solely of interventions that have been directly compared in studies, network meta-analysis simultaneously analyzes all interventions that have been compared across studies. We used this approach because not only does it efficiently analyze the data, but it allows estimates of comparisons that have not been directly compared in studies, providing simultaneous estimates of comparative effects among all interventions. Analyses were performed separately for each outcome. See the full report for a description of the assumptions and logic for using network meta-analysis. In brief, we chose to include all studies in overall network meta-analyses across all interventions. This included studies of women with stress UI and urgency UI; it also included interventions commonly used for either one or the other type of UI. Ideally, we would have created separate networks for stress UI and urgency UI; however, 40 percent of the studies included women with both UI types and neuromodulation (commonly used for urgency UI) has been evaluated in studies of women with stress UI. We compared results from the network meta-analyses with both the direct comparisons (from studies providing head-to-head comparisons) and subgroup analyses including only studies restricted to women with stress UI or to women with urgency UI. All comparisons were consistent, supporting the validity of the overall network meta-analysis findings.

We took two major approaches to ensure that our conclusions are consistent with clinical logic and with the evidence base. First, based on current guidelines,[7, 8] we categorized interventions based on whether they are used primarily for stress UI or for urgency UI (or both) and whether they are typically used as first-, second-, or third-line interventions. From the overall network meta-analyses, we summarized six (overlapping) sets of comparisons: 1) stress UI interventions compared to no treatment, 2) first- and second-line interventions used for stress UI compared to each other, 3) third-line interventions used for stress UI compared to each other or to first- or second-line interventions, 4) urgency UI interventions compared to no treatment, 5) first- and second-line interventions used for urgency UI compared to each other, and 6) third-line interventions used for urgency UI compared to each other or to first- or second-line interventions. Second, we summarized comparisons made (directly) within studies that restricted study participants to women with either stress UI or urgency UI. In theory, the sets of interventions evaluated by these two different approaches (selected interventions from the overall analysis and evaluated interventions from stress- or urgency-only studies) should have corresponded one to one. However, we found several studies of neuromodulation in women with stress UI, despite its being recommended only for women with urgency UI.

Studies were evaluated for methodological quality (risk of bias), and the body of studies were evaluated for strength of evidence, using standard methodologies.[9-11]

Contextual Question

Based on input from clinicians and nurses who treat women with UI, patient advocates, and articles found from our primary and grey literature searches, cure (or complete resolution) of UI

symptoms (incontinence, urgency, and frequency), rather than cure of UI itself, is highest priority for most women with UI. Many women would be satisfied with improvement in their symptoms or resolution of just one of their symptoms.

Other important categories of outcomes described in the literature for a large percentage of women include 1) satisfactory physical function (e.g., exercise, household chores) and social function (interacting with other people), 2) reduced need for coping strategies (e.g., wearing pads, toilet mapping), 3) improved psychological symptoms (e.g., anxiety, depression, self-esteem, loss of control), 4) improved quality of life (e.g., sleep, worry-free travel), and 5) lessened degree of adverse events. Economic concerns related to out-of-pocket costs (e.g., of incontinence pads) and employment are likely also important concerns for many women.

Women with UI who are considering treatment may be more concerned than clinicians about the tradeoffs between reducing UI symptoms and the risks of adverse events. Studies that employed surveys and focus groups reported that people with UI generally ranked adverse events among important outcomes.[12,13] In one study in particular, women with UI put more emphasis on limiting the risk of adverse events than on improving symptoms, in contrast with physicians who put more emphasis on increasing benefits.[13]

Results/Key Findings

Overview of Evidence Base

The update searches returned 7840 new citations across all databases searched, of which 723 were retrieved and screened in full text. Of these, 109 were deemed eligible, and were combined with 124 eligible studies from the original report, for a total of 233 studies: 140 informing on incontinence outcomes, 96 on quality of life outcomes, and 127 on adverse events.

Across studies, 80 comparisons have been observed for UI outcomes among 53 interventions organized into 16 intervention categories (including no treatment). Table B lists and categorizes the interventions, which include combinations of interventions. Fourteen intervention categories have been evaluated for UI outcomes (cure, improvement, satisfaction), 12 have been evaluated for quality of life, and all 16 for adverse events. Studies included women between 33 and 85 (median 55) years old. Studies included between 18 and 2393 (median 85) women.

Table B. Intervention categories evaluated by eligible studies

	Intervention Category	Specific Interventions (When Applicable)	Line of Therapy*	Cure†	Imp†	Sat†	QoL†	AE†
Interventions used (or studied) for both stress and urgency UI #	Behavioral therapy	Bladder training, biofeedback, bladder support (including pessaries), cones, education, heat therapy, MBSR, PFMT, spheres, weight loss, yoga	1st	x	x	x	x	x
	Neuromodulation	Electroacupuncture, InterStim™, magnetic stimulation, TENS	3rd	x	x	x	x	x
	Neuromodulation + behavioral therapy	TENS + bladder training; TENS + PFMT; TENS + PFMT + biofeedback; TENS + biofeedback	3rd	x	x	x	x	x
	Neuromodulation + hormones + behavioral therapy	TENS + PFMT + vaginal estrogen	3rd	x	x	.	x	x
Interventions used for stress UI ‡	Hormones + behavioral therapy	PFMT + vaginal estrogen; PFMT + pessaries + vaginal estrogen	2nd	x	x	.	.	x
	Hormones	Vaginal estrogen, oral estrogen, subcutaneous estrogen, transdermal estrogen, raloxifene	2nd	x	x	.	x	x
	Intravesical pressure release	.	3rd	x	x	.	x	x
	Periurethral bulking	Autologous fat, carbonated beads, collagen, dextranomer hyaluronate, polyacrylamide, polydimethylsiloxane, porcine collagen	3rd	x	x	.	x	x
	Alpha agonists	Duloxetine, midodrine	2nd	x	x	.	x	x
Interventions used for urgency UI §	Anticholinergics + behavioral therapy	Bladder training + PFMT + tolterodine; PFMT + tolterodine; PFMT + oxybutynin; PFMT + trospium	2nd	x	x	x		x
	Anticholinergics	Darifenacin, fesoterodine, flavoxate, oxybutynin, phenylpropanolamine, pilocarpine, propantheline, propiverine, solifenacin, tolterodine, trospium	2nd	x	x	x	x	x
	Anticholinergics + hormones	Phenylpropanolamine + estrogen	2nd	.	x	.	.	x
	BTX (onabotulinum toxin A)	.	3rd	x	x	x	x	x
	Antiepileptics	Pregabalin	2nd	.	.	.	x	x
	Beta-adrenergic agonists	Mirabegron	2nd	.	.	.	.	x

Abbreviations: AE = adverse events, Imp = improvement, MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle therapy, QoL = quality of life, Sat = satisfaction, TENS = transcutaneous electrical nerve stimulation (including transvaginal, surface, and related electric stimulation used to treat UI), UI = urinary incontinence.

* The categorization of different interventions was based on recommendations from The National Institute for Health and Care Excellence (NICE) and American Urological Association (AUA) guidelines.[7, 8]

† An x indicates that there is evidence regarding the outcome for the intervention category. Empty cells (with periods) indicate that the outcome was not reported in studies of the given intervention.

‡ Intervention categories commonly used for stress UI (but not for urgency UI). See table section "Interventions used (or studied) for both stress and urgency UI" and accompanying footnote.

Behavioral therapy is commonly used both for women with stress UI and urgency UI. Neuromodulation is most commonly used for women with stress UI, but studies have evaluated it in women with urgency UI.

§ Intervention categories commonly used for urgency UI (but not for stress UI). See table section "Interventions used (or studied) for both stress and urgency UI" and accompanying footnote.

Evidence Summary

The following results are organized by clinical outcome in the following order: UI outcomes (cure or symptom resolution, improvement, and satisfaction), quality of life, and adverse events. Further details specific to each Key Question can be found in the main report.

Evaluation of UI Outcomes for All Interventions

For at least one UI outcome (cure, improvement, satisfaction), trials directly compared 25 of 91 possible comparisons of the 14 analyzed intervention categories evaluated for UI outcomes, of which 13 were comparisons between active interventions (not sham, placebo, or no treatment) and 10 were comparisons of active interventions with no treatment. Studies of antiepileptics (pregabalin) and beta-adrenergic agonists (mirabegron) did not report on UI outcomes. In addition to the direct (head-to-head) comparisons between studies, network meta-analyses provided estimates of effect sizes for the remaining indirect comparisons (for interventions that were not compared in head-to-head studies). Full results are available in the main report. Across trials, the mean or median age of enrollees ranged between 33 and 85 (median 55; interquartile range [IQR] 50 to 59) years. Analyzed sample sizes ranged between 18 and 2393; median 85 (IQR 50 to 218).

There were 88 trials that reported on at least one UI outcome. Of these, 33 (38%) studies included only women with stress UI, 16 (18%) included only women with urgency UI, and 4 (5%) included only women with mixed UI. The remaining 35 studies (40%) either included women with any UI type (stress, urgency, and mixed) or did not report any information about UI type. Only one study reported subgroup analyses based on UI type.[14] Eighteen studies (20%) were restricted to older women (≥60 years of age); of these three evaluated only women with stress UI and two only women with urgency UI. No study reported specifically on women who engage in athletic activities or military women or veterans.

Conclusions reported here are primarily classified by the subgroups of women specifically with stress UI or with urgency UI based on the interventions used and the eligibility criteria of the studies regarding UI type. For most analyses, we provide the conclusions from the overall analyses (of all studies regardless of UI type) and compare these findings with data specifically from the studies that included only women with a given UI type (stress or urgency). Data were sparse regarding the effect of interventions specifically in women with mixed urinary incontinence; the results of these studies are summarized briefly.

Separate findings are summarized for treatment of stress UI, urgency UI, and mixed UI. Summary findings focus on 1) comparisons with no treatment (or sham or placebo), 2) comparisons of first- and second-line interventions together (since only behavioral therapy is categorized as a first-line intervention, and second-line interventions may also be used as initial treatment), and 3) comparisons of third-line interventions. Furthermore, where relevant, we provide summaries for both analyses based specifically on studies that included women with either stress or urgency UI ("stress UI studies" and "urgency UI studies") and for analyses based on the complete network meta-analyses, which include the plurality of studies that included women with UI, regardless of type ("all studies"). Categorization of interventions by UI type and line of therapy can be found in Table B and is recapitulated in results tables.

Cure

In the literature on UI treatments, cure is defined as complete resolution of symptoms, even if the "cure" is not permanent or requires continued treatment to be maintained. Tables C and D

summarize the comparative effectiveness results for the intervention categories. Table E summarizes the percentage of women with cure for each type of intervention.

Key Points: Cure of Stress UI

- Overall, 51 studies reported on cure; 29 of these studies were specifically among women who have only stress UI.
- **First- and second-line interventions** (behavioral therapy, alpha agonists, and hormones); see Table C.
  - In total, 29 studies evaluated first- and second-line interventions used for stress UI reported on cure; 12 of these were studies specifically of women with stress UI.
  - Behavioral therapy was more effective to achieve cure than no treatment (odds ratio [OR] 3.1, 95% confidence interval [CI] 2.2 to 4.4 across all studies; high strength of evidence). Combination behavioral therapy and hormones were also more effective than no treatment (OR 4.4, 95% CI 1.4 to 13.8 across all studies; moderate strength of evidence); studies of only women with stress UI found similar effects.
  - Studies found no significant difference in rates of cure with either alpha agonists (moderate strength of evidence) or hormones (low strength of evidence) compared with no treatment.
  - Indirect evidence suggests that both behavioral therapy (OR 4.6, 95% CI 1.4 to 15.8, in studies of only women with stress UI) and combination hormones and behavioral therapy (OR 9.4, 95% CI 1.2 to 73.6) were more effective than alpha agonists (moderate strength of evidence); analyses across all studies found similar effects.
  - All other comparisons among first- and second-line interventions were statistically nonsignificant with wide confidence intervals.
- **Third-line interventions** (periurethral bulking agents, intravesical pressure release, and neuromodulation which is typically used for urgency UI); see Table C.
  - There were 22 studies that evaluated third-line interventions used for stress UI reported on cure; 13 of these were studies specifically of women with stress UI.
  - Intravesical pressure release may be more effective to achieve cure than no treatment (OR 2.7, 95% CI 0.8, 9.0, across all studies; low strength of evidence).
  - Indirect evidence found no significant difference in effect between periurethral bulking agents and no treatment (low strength of evidence).
  - In studies of women with stress UI, neuromodulation (which is typically used for urgency UI) has been found to be significantly more effective than sham or no treatment (OR 3.5, 95% CI 1.7 to 7.3); high strength of evidence.
  - No study directly compared the third-line interventions. The indirect comparison (from the network meta-analysis) provided insufficient evidence to draw any conclusions, giving only an imprecise estimate of the comparative effectiveness of periurethral bulking agents and intravesical pressure release and a wide confidence interval.

Key Points: Cure of Urgency UI

- Overall, 51 studies reported on cure; 10 of these studies were specifically among women who have only urgency UI.
- **First- and second-line interventions** (behavioral therapy, anticholinergics, and combination anticholinergic and behavioral therapy); see Table D.

- There were 33 studies that evaluated first- and second-line interventions used for urgency UI reported on cure; 9 of these were studies specifically of women with urgency UI.
- Across all studies (including studies of any UI type), behavioral therapy, anticholinergics, and combination anticholinergic and behavioral therapy, have been found to be more effective than placebo or no treatment (OR 3.1, 95% CI 2.2 to 4.4 for behavioral therapy, high strength of evidence; OR 2.0, 95% CI 1.3 to 2.9 for anticholinergics, high strength of evidence; and OR 2.4, 95% CI 0.8 to 7.0 for combination, moderate strength of evidence). Studies of only women with urgency UI had similar findings as the analyses of all studies; although combination therapy was found to be statistically significantly more effective than no treatment among these studies (OR 2.3, 95% CI 1.2 to 2.4 for combination).
- Behavioral therapy was found to be significantly more likely to achieve cure than anticholinergics (OR 1.6, 95% CI 1.0 to 2.4) across all studies, with a similar effect found in studies of only women with urgency UI. High strength of evidence.
- Other comparisons were statistically nonsignificant with wide confidence intervals.

- **Third-line interventions** (onabotulinum toxin A [BTX], neuromodulation, and combinations of neuromodulation with first- or second-line interventions); see Table D.
  - In total, 21 studies evaluated third-line interventions used for urgency UI reported on cure; 6 of these were studies specifically of women with urgency UI.
  - Across all studies (including studies of any UI type), onabotulinum toxin A (BTX) and neuromodulation were found to be more effective than sham or no treatment across all studies (BTX: OR 5.7, 95% CI 2.8 to 11.4; neuromodulation OR 3.3, 95% CI 2.1 to 5.3; both high strength of evidence). Studies of women with only urgency UI found similar effects. Combination neuromodulation and behavioral therapy was also found to be more effective than no therapy (OR 4.0, 95% CI 1.9 to 8.4, low strength of evidence).
  - Sparse data suggests that BTX may be more effective to achieve cure than neuromodulation (OR 1.7, 95% CI 0.8, 3.6; low strength of evidence).

Table C. Comparative effectiveness for cure from analyses of all studies and of studies specific to women with stress UI

	Comparison*	Population	No. Studies (N)†	Odds Ratio (95% CI)‡	SoE (Reason)
1st and 2nd line treatments	**Behav** vs. no Tx	All	15 (1530)	**3.06 (2.16, 4.35)§**	High
		Stress UI	6 (305)	**5.62 (2.28, 13.9)§**	
	Alpha vs. no Tx	All	2 (736)	1.22 (0.61, 2.45)	Moderate
		Stress UI	2 (736)	1.22 (0.47, 3.18)	(imprecise)
	Horm vs. no Tx	All	0	2.89 (0.76, 11.0)#	Low
		Stress UI	0	nd	(indirect, imprecise)
	Horm+Behav vs. no Tx	All	0	**4.43 (1.42, 13.8)§,#**	Moderate
		Stress UI	0	**11.4 (1.72, 75.6)§,#**	(indirect)
	Behav vs. alpha	All	0	**2.50 (1.19, 5.28)§,#**	Moderate
		Stress UI	0	**4.61 (1.35, 15.8)§,#**	(indirect)
	Horm+Behav vs. alpha	All	0	*3.62 (0.98, 13.4)#,¶*	Moderate
		Stress UI	0	**9.36 (1.19, 73.6)§,#**	(indirect)
3rd line treatments	**IVP** vs. no Tx	All	1 (115)	*2.74 (0.84, 8.98)¶*	Low
		Stress UI	1 (115)	2.69 (0.54, 13.3)	(sparse, NS)
	Bulking vs. no Tx	All	0	1.36 (0.59, 3.13)#	Low
		Stress UI	0	1.32 (0.42, 4.16)#	(indirect, imprecise)
	Neuro** vs. no Tx	All	7 (454)	**3.34 (2.12, 5.26)§**	High
		Stress UI	6 (402)	**3.49 (1.67, 7.30)§**	

This table provides a summary of the odds ratios for comparisons of interventions with placebo (regardless of statistical significance) and statistically significant or near-significant comparisons between active interventions. However, comparisons of active interventions are restricted to those between 1st or 2nd line treatments and those between 3rd line treatments; comparisons between 1st or 2nd line treatments and 3rd line treatments are omitted.

Only comparisons that yield an odds ratio >1 are listed (favoring the first treatment listed in a comparison; e.g., behavioral therapy is favored over no treatment). Thus, for example, if one is interested in alpha agonists vs. behavioral therapy, one needs to also look for behavioral therapy vs. alpha agonists.

Results are reported from network meta-analysis of All studies (all UI types: stress, urgency, mixed, or a combination of types)) and those restricted to women with Stress UI. Footnotes and shading indicate which results have direct (head-to-head, unshaded) comparisons and which are based on indirect comparisons only (shaded, see footnotes). Statistically significant comparisons are in bold font (with footnote); near-significant comparisons (lower bound of 95% confidence interval [CI] ≥0.80) are in italic font (with footnote).

Abbreviations: Alpha = alpha agonist (a 2nd line treatment used primarily for stress UI), Behav = behavioral therapy (a 1st line treatment used for both stress and urgency UI), Bulking = periurethral bulking agents (a 3rd line treatment used primarily for stress UI), CI = confidence interval, Horm = hormones (2nd line treatment used primarily for stress UI), IVP = intravesical pressure release (a 3rd line treatment used primarily for stress UI), nd = no data, Neuro = neuromodulation (a 3rd line treatment used primarily for urgency UI, which has also been investigated for stress UI), no Tx = no treatment (or sham or placebo), NS = not statistically significant (in SoE column, near-significant), SoE = strength of evidence, UI = urinary incontinence.

* Favored intervention in bold. Rows without a bolded intervention indicate no evidence of a difference in effect.
† Number of studies (and total sample size) of studies directly comparing the interventions.
‡ Based on network meta-analysis.
§ Statistically significant (in bold text).
# Estimate is derived from indirect comparisons of the two interventions. No studies directly compared the two interventions.

¶ "Near-significant" (lower bound of 95% confidence interval ≥0.80).
** Neuromodulation is primarily used for urgency UI. However, it was evaluated in studies of women with stress UI; thus, relevant comparisons are included here.

Table D. Comparative effectiveness for cure from analyses of all studies and of studies specific to women with urgency UI

	Comparison*	Population	No. Studies (N)†	Odds Ratio (95% CI)‡	SoE (Reason)
1st and 2nd line treatments	**Behav** vs. no Tx	All	15 (1530)	**3.06 (2.16, 4.35)§**	High
		Urgency UI	1 (130)	**2.75 (1.53, 4.92)§**	
	Antichol vs. no Tx	All	6 (1871)	**1.95 (1.32, 2.88)§**	High
		Urgency UI	4 (655)	**1.80 (1.29, 2.52)§**	
	Antichol+Behav vs. no Tx	All	0	*2.42 (0.83, 7.03)#,¶*	Moderate
		Urgency UI	0	**2.28 (1.18, 4.39)§,#**	(indirect)
	Behav vs. antichol	All	3 (348)	**1.57 (1.02, 2.43)§**	High
		Urgency UI	2 (191)	*1.53 (0.90, 2.60)¶*	
3rd line treatments	**BTX** vs. no Tx	All	2 (119)	**5.66 (2.80, 11.4)§**	High
		Urgency UI	2 (119)	**4.94 (2.82, 8.65)§**	
	Neuro vs. no Tx	All	7 (454)	**3.34 (2.12, 5.26)§**	High
		Urgency UI	0	**2.94 (1.47, 5.88)§,#**	
	Neuro+Behav vs. no Tx	All	1 (93)	**3.98 (1.89, 8.39)§**	Moderate
		Urgency UI	0	nd	(sparse)
	BTX vs. neuro	All	1 (226)	*1.69 (0.80, 3.62)¶*	Low
		Urgency UI	1 (226)	*1.68 (0.80, 3.55)¶*	(sparse, NS)

This table provides a summary of the odds ratios for comparisons of interventions with placebo (regardless of statistical significance) and statistically significant or near-significant comparisons between active interventions. However, comparisons of active interventions are restricted to those between 1st or 2nd line treatments and those between 3rd line treatments; comparisons between 1st or 2nd line treatments and 3rd line treatments are omitted.

Only comparisons that yield an odds ratio >1 are listed (favoring the first treatment listed in a comparison; e.g., behavioral therapy is favored over no treatment). Thus, for example, if one is interested in anticholinergics vs. behavioral therapy, one needs to also look for behavioral therapy vs. anticholinergics.

Results are reported from network meta-analysis of All studies (all UI types: stress, urgency, mixed, or a combination of types)) and those restricted to women with Urgency UI. Footnotes and shading indicate which results have direct (head-to-head, unshaded) comparisons and which are based on indirect comparisons only (shaded, see footnotes). Statistically significant comparisons are in bold font (with footnote); near-significant comparisons (lower bound of 95% confidence interval [CI] ≥0.80) are in italic font (with footnote).

Abbreviations: Antichol = anticholinergics (a 2nd line treatment used primarily for urgency UI), Behav = behavioral therapy (a 1st line treatment used for both stress and urgency UI), BTX = onabotulinum toxin A (a 3rd line treatment used primarily for urgency UI), CI = confidence interval, nd = no data, Neuro = neuromodulation (a 3rd line treatment used primarily for urgency UI), no Tx = no treatment (or sham or placebo), NS = not statistically significant (in SoE column, near-significant), SoE = strength of evidence, UI = urinary incontinence.

* Favored intervention in bold. Rows without a bolded intervention indicate no evidence of a difference in effect.
† Number of studies (and total sample size) of studies directly comparing the interventions.
‡ Based on network meta-analysis.
§ Statistically significant (in bold text).
# Estimate is derived from indirect comparisons of the two interventions. No studies directly compared the two interventions.
¶ "Near-significant" (lower bound of 95% confidence interval ≥0.80).

Table E. Summary percent of women (across studies) with cure for each intervention

	Interventions	Line of therapy*	All Studies, %	Older Women Studies,† %	Stress UI Studies,† %	Urgency UI Studies,† %
Stress UI interventions ‡	Hormones + behavioral therapy	2nd	37.7	70.1	63.7	.
	Hormones	2nd	28.3	1.7	1.7	.
	Alpha agonists	2nd	14.3	.	15.8	.
	Intravesical pressure release	3rd	27.2	.	29.2	.
	Periurethral bulking	3rd	15.6	.	16.9	.
Stress and urgency UI interventions #	Behavioral therapy	1st	29.5	35.6	46.4	30.8
	Anticholinergics + behavioral therapy	2nd	24.8	.	1.7	25.7
	Anticholinergics + hormones	2nd	4.6	1.7	.	.
	Hormones + neuromodulation + behavioral therapy	3rd	39.5	25.6	.	.
	Neuromodulation + behavioral therapy	3rd	35.2	69.5	28.4	.
	Neuromodulation	3rd	31.3	.	34.9	29.4
Urgency UI interventions §	Anticholinergics	2nd	21.0	16.7	.	21.4
	BTX (onabotulinum toxin A)	3rd	43.6	.	.	42.8
No treatment	Placebo/Sham/No treatment	.	12.0	12.7	13.3	13.2

Interventions are sorted within each grouping (UI type and line of therapy) by percent of women across all studies who achieved cure. Empty cells (with periods) indicate that the intervention was not evaluated among the studies restricted to the given population.

Abbreviation: UI = urinary incontinence.

* The line of therapy indicates the common order in which interventions are used for women with UI.
† Restricted to studies of the given subgroup of women
‡ Intervention categories commonly used for stress UI (but not for urgency UI).
# Behavioral therapy is commonly used both for women with stress UI and urgency UI. Neuromodulation and anticholinergics are most commonly used for women with stress UI, but studies have evaluated them in women with urgency UI.
§ Intervention categories commonly used for urgency UI (but not for stress UI).

Key Point: Cure in Studies of Women With Mixed UI

- None of the four studies that reported UI outcome in women with mixed UI reported cure rates.

Key Points: Cure in Studies of Older Women

- Seven studies provided data specifically for women at least 60 years of age with either stress or urgency UI.
- Combinations of behavioral therapy with either hormones or neuromodulation were significantly more likely to achieve cure than no treatment. Moderate strength of evidence
- Compared with anticholinergics alone, combined hormones and behavioral therapy (OR 11.7, 95% CI 2.15 to 63.7), combined neuromodulation and behavioral therapy (OR 11.4, 95% CI 2.09, 62.0), and behavioral therapy alone (OR 2.76, 95% CI 1.09 to 6.99) were found to be statistically significantly more likely to result in cure. Moderate strength of evidence.
- Other evidence of possible comparative benefits, based on statistically nonsignificant ORs of >2.0 (for which the lower bound of the confidence interval is ≥0.80) suggest that combinations of behavioral therapy with either hormones or with neuromodulation are favored over behavioral therapy alone. Moderate strength of evidence.

Improvement

Tables F and G summarize the comparative effectiveness results for the intervention categories. Table H summarizes the percentage of women with improvement for each type of intervention.

Key Points: Improvement of Stress UI

- Overall, 64 studies reported on improvement; 25 of these studies were specifically among women who have only stress UI.
- **First- and second-line interventions** (behavioral therapy, alpha agonists, and hormones); see Table F.
  - In total, 36 studies evaluated first- and second-line interventions used for stress UI reported on improvement; 15 of these were studies specifically of women with stress UI.
  - Behavioral therapy and alpha agonists have been found to be significantly more effective to achieve improvement than no treatment in studies of women with stress UI (OR 7.0, 95% CI 3.2 to 15.6 for behavioral therapy; OR 2.3, 95% CI 1.6 to 3.3 for alpha agonists). Similar results were found across all 64 studies. High strength of evidence for both comparisons.
  - Studies found no evidence of a significant difference in rates of improvement between hormones and no treatment (moderate strength of evidence).
  - Based on indirect comparisons, behavioral therapy was found to be statistically significantly more effective in achieving improvement than alpha agonists (OR 3.1, 95% CI 1.3 to 7.3) and hormones (OR 13.8, 95% CI 3.0 to 63.5) in studies including only women with stress UI (moderate strength of evidence for both comparisons). Similarly, alpha agonists were more effective than hormones (OR 4.5, 95% CI 1.1 to 17.8; moderate strength of evidence). Smaller, but more precise, estimates were found across all 64 studies
- **Third-line interventions** (periurethral bulking agents and intravesical pressure release); see Table F.
  - There were 25 studies that evaluated third-line interventions used for stress UI reported on improvement; 13 of these were studies specifically of women with stress UI.
  - Compared with sham or no treatment, intravesical pressure release was found to be more effective for improvement (OR 4.4, 95% CI 1.4 to 13.4 in stress UI studies, with similar findings across all studies; moderate strength of evidence). No significant difference has been found between periurethral bulking agents and no treatment (low strength of evidence).
  - The two third-line interventions have not been directly compared and indirect comparisons are imprecise. Insufficient evidence.
  - Across studies of only women with stress UI, there is evidence that neuromodulation (which is typically used for urgency UI) was more effective than no treatment (high strength of evidence). Triple combination neuromodulation, hormones, and behavioral therapy was also more effective than no treatment (moderate strength of evidence). By indirect comparison, intravesical pressure release was found to be possibly more effective than combination neuromodulation and behavioral therapy to achieve improvement (OR 4.4, 95% CI 0.9 to 20.9), and triple combination neuromodulation, hormones, and behavioral therapy may be more effective than either periurethral bulking (OR 5.9, 95% CI 0.95, 37.0) or combination neuromodulation and behavioral therapy (OR 11.7, 95% CI 1.8 to 76.8); low strength of evidence for all comparisons.

Key Points: Improvement of Urgency UI

- Overall, 64 studies reported on improvement; 18 of these studies were specifically among women who have only urgency UI.
- **First- and second-line interventions** (behavioral therapy, anticholinergics, and combination anticholinergic and behavioral therapy); see Table G.
  - Overall, 29 studies evaluated first- and second-line interventions used for urgency UI reported on improvement; 10 of these were studies specifically of women with urgency UI.
  - All first- or second-line interventions were found to be more effective than no treatment in studies of women with urgency UI (behavioral therapy: OR 7.5, 95% CI 2.9 to 19.5, high strength of evidence; anticholinergics: OR 1.8, 95% CI 1.2 to 2.7, high strength of evidence; and combination anticholinergic and behavioral therapy: OR 3.9, 95% CI 1.9 to 7.8, moderate strength of evidence). Larger and more precise estimates were found in analyses across all 64 studies.
  - Behavioral therapy was found to be significantly more likely to achieve improvement than anticholinergics (OR 4.2, 95% CI 1.6 to 10.9) in studies of only women urgency UI, with a similar but smaller estimate found across all studies. High strength of evidence.
  - Combination anticholinergics and behavioral therapy was found to achieve significantly higher rates of improvement than anticholinergics in studies of only women with urgency UI (OR 2.2, 95% CI 1.2 to 3.9; moderate strength of evidence), but no significant difference was found across all studies.
- **Third-line interventions** (BTX, neuromodulation, and combinations of neuromodulation with first- or second-line interventions); see Table G.
  - There were 23 studies that evaluated third-line interventions used for urgency UI reported on improvement; 3 of these were studies specifically of women with urgency UI.
  - Indirect evidence from urgency UI studies found that BTX (OR 3.6, 95% CI 1.8 to 7.3; moderate strength of evidence) and neuromodulation (OR 4.4, 95% CI 2.0 to 9.6; high strength of evidence) were more effective than no treatment in studies of women with only urgency UI. Across all studies, similar estimates were found. In addition, combination neuromodulation and behavioral therapy was found to be more effective than no treatment (OR 6.7, 95% CI 2.7 to 16.7); although this comparison was not available across studies of only women with urgency UI. Low strength of evidence overall.
  - No third-line intervention was found to be statistically significantly more effective than others, but no study directly compared BTX with the various neuromodulation therapies.

Table F. Comparative effectiveness for improvement from analyses of all studies and of studies specific to women with stress UI

	Comparison*	Population	No. Studies (N)†	Odds Ratio (95% CI)‡	SoE (Reason)
1st and 2nd line treatments	**Behav** vs. no Tx	All	15 (1717)	**5.40 (3.60, 8.08)§**	High
		Stress UI	3 (189)	**7.01 (3.16, 15.6)§**	
	Alpha vs. no Tx	All	10 (6112)	**2.16 (1.37, 3.41)§**	High
		Stress UI	7 (5035)	**2.28 (1.60, 3.27)§**	
	Horm vs. no Tx	All	2 (466)	0.53 (0.20, 1.41)	Moderate
		Stress UI	1 (49)	0.51 (0.13, 1.96)	(imprecise)
	Behav vs. alpha	All	0	**2.50 (1.39, 4.50)§,#**	Moderate
		Stress UI	0	**3.07 (1.30, 7.25)§,#**	(indirect)
	Behav vs. horm	All	0	**10.2 (3.61, 28.9)§,#**	Moderate
		Stress UI	0	**13.8 (3.00, 63.5)§,#**	(indirect)
	Alpha vs. horm	All	0	**4.09 (1.40, 11.9)§,#**	Moderate
		Stress UI	0	**4.50 (1.14, 17.8)§,#**	(indirect)
3rd line treatments	**IVP** vs. no Tx	All	1 (115)	**4.59 (1.00, 21.0)§**	Moderate
		Stress UI	1 (115)	**4.38 (1.44, 13.4)§**	(sparse)
	Bulking vs. no Tx	All	0	2.20 (0.53, 9.24)#	Low
		Stress UI	0	1.97 (0.74, 5.20)#	(indirect, imprecise)
	IVP vs. neuro**+behav	All	0	1.45 (0.36, 5.84)#	Low
		Stress UI	0	*4.41 (0.93, 20.9)#,¶*	(indirect, NS)
	Neuro** vs. no Tx	All	10 (1177)	**4.18 (2.70, 6.47)§**	High
		Stress UI	6 (925)	**4.00 (2.56, 6.24)§**	
	Neuro+Behav** vs. no Tx	All	1 (93)	**6.66 (2.66, 16.7)§**	Low
		Stress UI	1 (93)	0.99 (0.33, 2.99)	(sparse, inconsistent)
	Neuro+Horm+Behav** vs. no Tx	All	1 (80)	**7.39 (2.22, 24.6)§**	Moderate
		Stress UI	0	**11.6 (2.42, 55.9)§,#**	(sparse)
	Neuro+Horm+Behav** vs. neuro**+behav	All	0	1.11 (0.25, 4.95)#	Low
		Stress UI	0	**11.7 (1.79, 76.8)§,#**	(indirect, inconsistent)
	Neuro+Horm+Behav** vs. bulking	All	0	3.36 (0.52, 21.7)#	Low
		Stress UI	0	*5.92 (0.95, 37.0)#,¶*	(indirect, NS)

This table provides a summary of the odds ratios for comparisons of interventions with placebo (regardless of statistical significance) and statistically significant or near-significant comparisons between active interventions. However, comparisons of active interventions are restricted to those between 1st or 2nd line treatments and those between 3rd line treatments; comparisons between 1st or 2nd line treatments and 3rd line treatments are omitted.

Only comparisons that yield an odds ratio >1 are listed (favoring the first treatment listed in a comparison; e.g., behavioral therapy is favored over no treatment). Thus, for example, if one is interested in alpha agonists vs. behavioral therapy, one needs to also look for behavioral therapy vs. alpha agonists.

Results are reported from network meta-analysis of All studies (all UI types: stress, urgency, mixed, or a combination of types)) and those restricted to women with Stress UI. Footnotes and shading indicate which results have direct (head-to-head, unshaded) comparisons and which are based on indirect comparisons only (shaded, see footnotes). Statistically significant comparisons are in bold font (with footnote); near-significant comparisons (lower bound of 95% confidence interval [CI] ≥0.80) are in italic font (with footnote).

Abbreviations: Alpha = alpha agonist (a 2nd line treatment used primarily for stress UI), Behav = behavioral therapy (a 1st line treatment used for both stress and urgency UI), Bulking = periurethral bulking agents (a 3rd line treatment used primarily for stress UI), CI = confidence interval, Horm = hormones (2nd line treatment used primarily for stress UI), IVP = intravesical pressure release (a 3rd line treatment used primarily for stress UI), nd = no data, Neuro = neuromodulation (a 3rd line treatment used primarily for urgency UI, which has also been investigated for stress UI), no Tx = no treatment (or sham or placebo), NS = not statistically significant (in SoE column, near-significant), SoE = strength of evidence, UI = urinary incontinence.

* Favored intervention in bold. Rows without a bolded intervention indicate no evidence of a difference in effect.
† Number of studies (and total sample size) of studies directly comparing the interventions.
‡ Based on network meta-analysis.
§ Statistically significant (in bold text).
# Estimate is derived from indirect comparisons of the two interventions. No studies directly compared the two interventions.
¶ "Near-significant" (lower bound of 95% confidence interval ≥0.80).
** Neuromodulation is primarily used for urgency U

Table G. Comparative effectiveness for improvement from analyses of all studies and of studies specific to women with urgency UI

	Comparison*	Population	No. Studies (N)†	Odds Ratio (95% CI)‡	SoE (Reason)
1st and 2nd line treatments	**Behav** vs. no Tx	All	15 (1717)	**5.40 (3.60, 8.08)§**	High
		Urgency UI	1 (130)	**7.50 (2.88, 19.5)§**	
	Antichol vs. no Tx	All	7 (1470)	**2.95 (1.81, 4.79)§**	High
		Urgency UI	6 (696)	**1.79 (1.18, 2.70)§**	
	Antichol+Behav vs. no Tx	All	0	**5.30 (1.63, 17.2)§,#**	Moderate
		Urgency UI	0	**3.87 (1.92, 7.80)§,#**	(indirect)
	Behav vs. antichol	All	2 (289)	**1.83 (1.04, 3.23)§**	High
		Urgency UI	1 (132)	**4.20 (1.61, 10.9)§**	
	Antichol+Behav vs. antichol	All	2 (371)	1.79 (0.58, 5.56)	Moderate
		Urgency UI	2 (371)	**2.16 (1.22, 3.85)§**	(inconsistent)
3rd line treatments	**BTX** vs. no Tx	All	1 (43)	**6.03 (2.32, 15.7)§**	Moderate
		Urgency UI	0	**3.62 (1.80, 7.28)§,#**	(sparse)
	Neuro vs. no Tx	All	10 (1177)	**4.18 (2.70, 6.47)§**	High
		Urgency UI	0	**4.36 (1.98, 9.59) §,#**	
	Neuro+Behav vs. no Tx	All	1 (93)	**6.66 (2.66, 16.7)§**	Low
		Urgency UI		nd	(sparse, no urgency UI comparison)

This table provides a summary of the odds ratios for comparisons of interventions with placebo (regardless of statistical significance) and statistically significant or near-significant comparisons between active interventions. However, comparisons of active interventions are restricted to those between 1st or 2nd line treatments and those between 3rd line treatments; comparisons between 1st or 2nd line treatments and 3rd line treatments are omitted.
Only comparisons that yield an odds ratio >1 are listed (favoring the first treatment listed in a comparison; e.g., behavioral therapy is favored over no treatment). Thus, for example, if one is interested in anticholinergics vs. behavioral therapy, one needs to also look for behavioral therapy vs. anticholinergics.
Results are reported from network meta-analysis of All studies (all UI types: stress, urgency, mixed, or a combination of types)) and those restricted to women with Urgency UI. Footnotes and shading indicate which results have direct (head-to-head, unshaded) comparisons and which are based on indirect comparisons only (shaded, see footnotes). Statistically significant comparisons are in bold font (with footnote); near-significant comparisons (lower bound of 95% confidence interval [CI] ≥0.80) are in italic font (with footnote).

Abbreviations: Antichol = anticholinergics (a 2nd line treatment used primarily for urgency UI), Behav = behavioral therapy (a 1st line treatment used for both stress and urgency UI), BTX = onabotulinum toxin A (a 3rd line treatment used primarily for urgency UI), CI = confidence interval, nd = no data, Neuro = neuromodulation (a 3rd line treatment used primarily for urgency UI), no Tx = no treatment (or sham or placebo), NS = not statistically significant (in SoE column, near-significant), SoE = strength of evidence, UI = urinary incontinence.

* Favored intervention in bold. Rows without a bolded intervention indicate no evidence of a difference in effect.
† Number of studies (and total sample size) of studies directly comparing the interventions.
‡ Based on network meta-analysis.
§ Statistically significant (in bold text).
# Estimate is derived from indirect comparisons of the two interventions. No studies directly compared the two interventions.

Table H. Summary percent of women (across studies) with improvement for each intervention

	Interventions	Line of therapy*	All Studies, %	Older Women Studies,† %	Stress UI Studies,† %	Urgency UI Studies,† %
Stress UI interventions ‡	Alpha agonists	2nd	41.6	18.0	46.0	.
	Hormones	2nd	14.9	16.6	15.9	.
	Hormones + neuromodulation + behavioral therapy	3rd	71.0	65.5	81.3	.
	Neuromodulation + behavioral therapy	3rd	68.7	69.5	27.0	.
	Periurethral bulking	3rd	42.1	.	42.3	.
Stress and urgency UI interventions #	Behavioral therapy	1st	64.1	56.6	72.3	86.3
	Anticholinergics	2nd	49.4	52.3	24.9	60.1
	Anticholinergics + hormones	2nd	25.2	32.2	.	.
	Neuromodulation	3rd	58.0	36.1	59.8	78.6
Urgency UI interventions §	Anticholinergics + behavioral therapy	2nd	63.7	.	.	76.5
	BTX (onabotulinum toxin A)	3rd	66.6	.	.	75.3
No treatment	Placebo/sham/no treatment	.	24.8	17.9	27.2	45.7

Interventions are sorted within each grouping by percent of women across all studies who achieved improvement. Empty cells (with periods) indicate that the intervention was not evaluated among the studies restricted to the given population.

Abbreviation: UI = urinary incontinence.

* The line of therapy indicates the common order in which interventions are used for women with UI.
† Restricted to studies of the given subgroup of women
‡ Intervention categories commonly used for stress UI (but not for urgency UI).
# Behavioral therapy is commonly used both for women with stress UI and urgency UI. Neuromodulation and anticholinergics are most commonly used for women with stress UI, but studies have evaluated them in women with urgency UI.
§ Intervention categories commonly used for urgency UI (but not for stress UI).

Key Points: Improvement in Studies of Women With Mixed UI

- Four studies reported on improvement in women with mixed UI.
- In 1 study each, compared to placebo, both the alpha agonist duloxetine (OR 2.10, 95% CI 1.45 to 3.05) and the anticholinergic tolterodine (OR 1.85, 95% CI 1.37 to 2.51) were effective to achieve improvement. Low strength of evidence.
- In 2 small studies, neuromodulation was nonsignificantly more likely to achieve improvement than no treatment (summary OR 2.44, 95% CI 0.83, 7.19). Low strength of evidence.

Key Points: Improvement in Studies of Older Women

- Overall, 18 studies provided data specifically for women at least 60 years of age with either stress or urgency UI.
- Compared to alpha agonists, the triple combination of hormones and neuromodulation and behavioral therapy (OR 8.68, 95% CI 1.09 to 69.5) and behavioral therapy alone (OR 5.95, 95% CI 1.04 to 34.2) were significantly more likely to achieve improvement. Moderate strength of evidence.
- Compared to hormone therapy, triple therapy (OR 9.59, 95% CI 2.00 to 45.87), behavioral therapy alone (OR 6.57, 95% CI 1.49 to 28.95), and anticholinergics (OR 5.53, 95% CI 1.03 to 29.56) were also more effective. Moderate strength of evidence.

Satisfaction

Comparative effectiveness results for each type of intervention are given in Table I. Table J summarizes the percentage of women who had satisfaction with the achieved level of incontinence for each type of intervention. Studies reported satisfaction outcomes for only 7 of the intervention categories (behavioral therapy, anticholinergics, combination behavioral therapy and anticholinergics, BTX, neuromodulation, combination neuromodulation and behavioral therapy, and no treatment). Specific results are summarized below.

Key Points: Satisfaction in Women With Stress UI

- Overall, 12 studies reported on satisfaction.
- **First- and second-line interventions** (behavioral therapy); see Table I.
  - There were 8 studies that evaluated first- or second-line interventions used for urgency UI reported on satisfaction; 4 of these were studies specifically of women with stress UI.
  - Behavioral therapy was found to yield higher rates of satisfaction with achieved level of incontinence than no treatment (OR 5.5, 95% CI 1.8 to 16.7 from analysis of studies of women with stress UI). Analysis across all studies yielded a stronger, more precise effect. High strength of evidence.
- **Third-line interventions**; see Table I.
  - None of the studies of third-line interventions typically used for stress UI reported on satisfaction. However, neuromodulation, which is typically used for urgency UI was evaluated in studies of women with stress UI. Neuromodulation was found to be more effective to achieve satisfaction than no treatment (OR 8.4, 95% CI 4.8 to 14.7 from analysis of studies of women with stress UI). Analysis across all studies yielded a stronger, more precise effect. High strength of evidence.

Key Points: Satisfaction in Women With Urgency UI

- **First-and second-line interventions** (behavioral therapy, anticholinergics, and combination anticholinergic and behavioral therapy); see Table I.
  - There were 8 studies that evaluated first- or second-line interventions used for urgency UI reported on satisfaction; 3 of these were studies specifically of women with urgency UI.
  - Behavioral therapy was found to be significantly more likely to achieve satisfaction than anticholinergics (OR 8.2, 95% CI 1.7 to 39.4) among studies of women with urgency UI, with a similar, more precise estimate found from the analysis of all 12 studies; high strength of evidence.
  - Anticholinergics, alone and combined with behavioral therapy, were more effective to achieve satisfaction than no treatment across all studies (anticholinergics: OR 2.6, 95% CI 2.1 to 3.3, moderate strength of evidence; combination anticholinergics and behavioral therapy: OR 4.2, 95% CI 2.5 to 7.1, low strength of evidence). Similar, though imprecise, effects were seen among studies of only women with urgency UI.
  - Behavioral therapy may be more effective than combination anticholinergics and behavioral therapy, which in turn may be more effective than anticholinergics alone based on analyses across all studies (both low strength of evidence). Similar, though imprecise, effects were seen among studies of only women with urgency UI.
- **Third-line interventions** (BTX, neuromodulation, and combination of neuromodulation with behavioral therapy); see Table I.

- In total, 6 studies evaluated third-line interventions used for urgency UI reported on satisfaction; 1 of these were studies specifically of women with urgency UI.
- Neuromodulation was found to be more effective to achieve satisfaction than no treatment (OR 9.4, 95% CI 6.6 to 13.2), although no studies of only women with urgency UI evaluated neuromodulation (moderate strength of evidence).
- Based on indirect comparisons, BTX (OR 12.7, 95% CI 7.4 to 21.6) and combination neuromodulation and behavioral therapy (OR 10.7, 95% CI 2.1 to 53.9) were found to be more effective than no treatment, although no studies of only women with urgency UI evaluated these interventions (both low strength of evidence).
- BTX may be more effective to achieve satisfaction than neuromodulation (OR 1.3, 95% CI 0.93 to 2.1, from studies of women with urgency UI; low strength of evidence).

Table I. Comparative effectiveness for satisfaction from analyses of all studies and of studies specific to women with urgency UI

	Comparison*	Population	No. Studies (N)†	Odds Ratio (95% CI)‡	SoE (Reason)
Stress UI: 1st and 2nd line Tx	**Behav** vs. no Tx	All	4 (494)	**8.04 (4.91, 13.2)§**	High
		Stress UI	1 (61)	**5.45 (1.78, 16.7)§**	
Stress UI: 3rd line Tx	**Neuro** vs. no Tx	All	4 (759)	**9.37 (6.64, 13.2)§**	High
		Stress UI	4 (759)	**8.36 (4.75, 14.7)§**	
Urgency UI: 1st and 2nd line Tx	**Behav** vs. no Tx	All	4 (494)	**8.04 (4.91, 13.2)§**	High
		Urgency UI	1 (130)	**8.20 (1.70, 39.4)§**	
	Antichol vs. no Tx	All	3 (1319)	**2.60 (2.05, 3.28)§**	Moderate
		Urgency UI	1 (132)	2.60 (0.57, 11.9)	(imprecise urgency UI comparison)
	Antichol+Behav vs. no Tx	All	0	**4.18 (2.48, 7.07)§,#**	Low
		Urgency UI	0	3.24 (0.50, 20.8)#	(indirect, imprecise urgency UI comparison)
	Behav vs. antichol	All	1 (132)	**3.10 (1.86, 5.16)§**	Moderate
		Urgency UI	1 (132)	3.16 (0.71, 14.1)	(sparse)
	Behav vs. antichol+behav	All	0	*1.92 (0.96, 3.84)#,¶*	Low
		Urgency UI	0	2.53 (0.40, 15.9)#	(indirect, NS)
	Antichol+behav vs antichol	All	2 (371)	*1.61 (0.99, 2.56)¶*	Low
		Urgency UI	2 (371)	1.25 (0.40, 3.88)	(NS, imprecise urgency UI comparison)
Urgency UI: 3rd line Tx	**BTX** vs. no Tx	All	0	**12.7 (7.44, 21.6)§,#**	Low
		Urgency UI	0	*nd*	(indirect, no urgency UI comparison)
	Neuro vs. no Tx	All	4 (759)	**9.37 (6.64, 13.2)§**	Moderate
		Urgency UI	0	nd	(no urgency UI comparison)
	Neuro+Behav vs. no Tx	All	0	**10.7 (2.14, 53.9)§,#**	Low
		Urgency UI	0	nd	(indirect, no urgency UI comparison)
	BTX vs. neuro	All	1 (364)	*1.35 (0.90, 2.05)¶*	Low
		Urgency UI	1 (364)	*1.40 (0.93, 2.12)¶*	(sparse, NS)

This table provides a summary of the odds ratios for comparisons of interventions with placebo (regardless of statistical significance) and statistically significant or near-significant comparisons between active interventions.

However, comparisons of active interventions are restricted to those between 1st or 2nd line treatments and those between 3rd line treatments; comparisons between 1st or 2nd line treatments and 3rd line treatments are omitted.
Only comparisons that yield an odds ratio >1 are listed (favoring the first treatment listed in a comparison; e.g., behavioral therapy is favored over no treatment). Thus, for example, if one is interested in anticholinergics vs. behavioral therapy, one needs to also look for behavioral therapy vs. anticholinergics.
Results are reported from network meta-analysis of All studies (all UI types: stress, urgency, mixed, or a combination of types)) and those restricted to women with Urgency UI. Footnotes and shading indicate which results have direct (head-to-head, unshaded) comparisons and which are based on indirect comparisons only (shaded, see footnotes). Statistically significant comparisons are in bold font (with footnote); near-significant comparisons (lower bound of 95% confidence interval [CI] ≥0.80) are in italic font (with footnote).

Abbreviations: Antichol = anticholinergics (a 2nd line treatment used primarily for urgency UI), Behav = behavioral therapy (a 1st line treatment used for both stress and urgency UI), BTX = onabotulinum toxin A (a 3rd line treatment used primarily for urgency UI), CI = confidence interval, nd = no data,
Neuro = neuromodulation (a 3rd line treatment used primarily for urgency UI, , which has also been investigated for stress UI), no Tx = no treatment (or sham or placebo), NS = not statistically significant (in SoE column, near-significant), SoE = strength of evidence, Tx = treatment(s), UI = urinary incontinence.

* Favored intervention in bold. Rows without a bolded intervention indicate no evidence of a difference in effect.
† Number of studies (and total sample size) of studies directly comparing the interventions.
‡ Based on network meta-analysis.
§ Statistically significant (in bold text).
# Estimate is derived from indirect comparisons of the two interventions. No studies directly compared the two interventions.
¶ "Near-significant" (lower bound of 95% confidence interval ≥0.80).

Table J. Summary percent of women (across studies) with satisfaction for each intervention

	Interventions	Line of therapy*	All Studies %	Older Women Studies † %	Stress UI Studies † %	Urgency UI Studies † %
Stress and urgency UI interventions #	Behavioral therapy	1st	78.9	75.3	74.5	75.1
	Anticholinergics + behavioral therapy	2nd	66.1	.	.	54.4
	Neuromodulation + behavioral therapy	3rd	83.3	.	.	.
	Neuromodulation	3rd	81.4	.	81.8	51.1
Urgency UI interventions §	Anticholinergics	2nd	54.7	46.7	.	48.9
	BTX (onabotulinum toxin A)	3rd	85.5	.	.	59.5
No treatment	Placebo/Sham/ No Treatment	.	31.8	27.6	34.9	26.9

Empty cells (with periods) indicate that the intervention was not evaluated among the studies restricted to the given population.

Abbreviation: UI = urinary incontinence.

* The line of therapy indicates the common order in which interventions are used for women with UI.
† Restricted to studies of the given subgroup of women
‡ Intervention categories commonly used for stress UI (but not for urgency UI). No studies of these interventions reported on satisfaction with therapy (in only women with stress UI).
# Behavioral therapy is commonly used both for women with stress UI and urgency UI. Neuromodulation and anticholinergics are most commonly used for women with stress UI, but studies have evaluated them in women with urgency UI.
§ Intervention categories commonly used for urgency UI (but not for stress UI).

Key Points: Satisfaction in Studies of Women With Mixed UI

- One study reported on satisfaction in women with mixed UI.
- Women with mixed UI who used the anticholinergic tolterodine had greater satisfaction than with placebo (OR 2.60, 95% CI 1.89 to 3.57). Low strength of evidence.

Key Points: Satisfaction in Studies of Older Women

- Only 2 studies provided data specifically for women at least 60 years of age.

- Only anticholinergics, behavioral therapy, and no treatment were compared among studies of older women.
- Both anticholinergics, and behavioral therapy provided more satisfactory control of UI symptoms than no treatment (anticholinergics: OR 2.30, 95% CI 1.11 to 4.75; behavioral therapy: OR 8.01, 95% CI 4.01 to 16.0); moderate strength of evidence.
- Behavioral therapy was significantly more likely to achieve satisfactory control of UI symptoms than anticholinergics; low strength of evidence.

Evaluation of Quality of Life Outcomes

Quality of life outcomes were evaluated in 96 studies for any type of UI. The mean or median ages ranged from 32 to 85 years. Analyzed sample sizes ranged between 14 and 2393 among trials, with a median of 57 (IQR 33 to 128); one non-randomized study had 6844 participants. The studies evaluated several quality of life domains: bother, daily activities, distress, general health, mental health, pain, sexual health, and sleep/energy.

Key Points: Quality of Life

- Nonpharmacological vs. sham interventions (Key Question [KQ 1): 36 studies compared 15 nonpharmacological interventions with sham interventions.
  - Among first- and second-line interventions, none was found by *all* studies to be statistically significantly better than sham for any aspect of quality of life, but each was reported to have statistically significant improvements compared to placebo in at least one aspect of quality of life by at least one study; low strength of evidence.
  - Among the third-line interventions evaluated by more than one study, only transcutaneous electrical nerve stimulation (TENS) was found by all studies to be statistically significantly better than sham for various aspects of quality of life; low strength of evidence.
  - A combination of first- and third line interventions, TENS + PFMT (pelvic floor muscle training), had discordant results when compared to a sham intervention; but one study showed a statistically significant improvement in daily activities; low strength of evidence.
- Comparison of nonpharmacological interventions (KQ 1) with each other: 42 studies compared 19 active nonpharmacological interventions (including combinations of nonpharmacological interventions) with each other. The full results are given in Tables 15 and 16 of the main report.
  - The only comparisons of interventions evaluated by more than one study were of supervised and unsupervised PFMT (or other exercise) and of combined PFMT and biofeedback and PFMT alone. These studies mostly found discordant results or no significant differences in quality of life; insufficient strength of evidence.
- Pharmacological interventions vs. placebo (KQ 2): 16 studies compared 8 specific pharmacological interventions with placebo. The full results are given in Tables 20 and 21 of the main report.
  - In 6 studies, anticholinergics were found to improve quality of life compared with no treatment; low strength of evidence.
- Comparison of pharmacological interventions (KQ 2): 6 studies compared 8 pharmacological interventions with each other. In most instances, no differences in quality of life were reported among interventions; low strength of evidence.

- Nonpharmacological vs. pharmacological interventions (KQ 3): Sparse evidence from 4 studies suggest no significant differences in quality of life for behavioral therapy vs. anticholinergics, neuromodulation vs. anticholinergics, and neuromodulation vs. BTX; low strength of evidence. The full results are given in Table 24 of the main report.
- Combination nonpharmacological and pharmacological interventions vs. nonpharmacological interventions (KQ 4): 1 study compared combination nonpharmacological and pharmacological interventions (PFMT, electrostimulation, biofeedback, and vaginal estrogen) and nonpharmacological interventions (without the estrogen). The arm that received estrogen reported statistically significantly better quality of life; low strength of evidence.

Evaluation of Adverse Events

Adverse events outcomes were evaluated in 127 studies. Among these studies, 58 evaluated nonpharmacological interventions and 95 studies evaluated pharmacological interventions. Despite the large number of studies reporting adverse event data, in general for any specific adverse event occurring with any specific intervention, adverse event reporting was sparse. Furthermore, very few studies explicitly reported no specific adverse events. Except for BTX, adverse event rates were generally low, particularly for potentially more serious adverse events.

Key Points: Adverse Events

Nonpharmacological interventions: Full results are given in Tables 17 and 18 of the full report.

- First- and second-line interventions: Among interventions for which at least two studies reported any specific adverse event, no (undefined or nonmajor) adverse events were reported with bladder training (2 studies, 106 women), education (4 studies, 277 women), PFMT (21 studies, 1560 women), combined PFMT and biofeedback (3 studies, 83 women), and combined PFMT, TENS, and biofeedback (2 studies, 107 women) (all low strength of evidence).
- Third-line interventions: Among 10 studies of TENS, 8 reported no adverse events in 396 women, but 2 reported "any" or "moderate" adverse events (mostly undefined) in a total of 13 of 67 women (19%). Overall, adverse events were reported in 2.8% of 463 women receiving TENS, although the rates of adverse events were lower than with either anticholinergics or with BTX; low strength of evidence.
    - In 2 studies of magnetic stimulation, 3 of 110 women total (2.7%) had undefined adverse events.

Pharmacological interventions: Full results are given in Tables 22 and 23 of the full report

- Serious adverse events (as defined by study authors)
    - Second-line interventions
        - In 8 studies of anticholinergics, overall 2.4% of 2583 women had "serious" adverse events (undefined); low strength of evidence.
        - In 2 studies, 0.6% of 1390 women taking the alpha agonist duloxetine had (undefined) serious adverse events, compared with 0.2% of 2852 women taking placebo (or no treatment) in 10 studies.
    - Third-line interventions
        - The highest rate of serious adverse events occurred with periurethral bulking agents (4.7%, 3 studies, 362 women); these adverse events included erosion and need for surgical excision of the bulking agents. The one study of a periurethral bulking agent currently available in the United States (macroplastique) reported 1.6% rate of erosion. Low strength of evidence.

- Dry mouth
  - Second-line interventions
    - Anticholinergics: 21 studies reported adverse events for anticholinergics. Dry mouth was the most commonly reported adverse event (oxybutynin: median 36%); high strength of evidence.
    - Alpha agonists: 15 studies of the alpha agonist duloxetine reported dry mouth in a median of 13% of women. High strength of evidence.
  - Placebo: In 35 studies, a median of 4% of women had dry mouth with placebo treatment; high strength of evidence.
- Other adverse events
  - Second-line interventions
    - Alpha agonists: Other reported adverse events included nausea (23%, 15 studies), insomnia (13%, 13 studies), constipation (11%, 14 studies), fatigue (10%, 13 studies), dizziness (11%, 14 studies), and headache (8.3%, 11 studies). Moderate strength of evidence overall.
  - Third-line interventions
    - BTX: the most commonly reported adverse event in 6 studies was urinary tract infection in a median of 35% of women across studies (range 4% to 55%, 2304 participants). Three studies reported urinary retention or voiding dysfunction in a median of 18% of women (range 1.3% to 28%). Moderate strength of evidence overall.
    - Periurethral bulking agents: the most common adverse events were urinary tract infection (median 6.6%; range 1.3% to 24% with different specific agents) and urinary retention/voiding dysfunction (median 3.8%; range 0.9% to 9.5%). The one study (122 women) that evaluated a periurethral bulking agent currently available in the United States (macroplastique) found high rates of urinary tract infection (24%), headache (18%), and urinary retention/dysuria (16%). Low strength of evidence overall.

Discussion

Evidence Summary

This review updated the Agency for Healthcare Research and Quality's 2012 systematic review with new literature searches from 2011 through December 4, 2017. It includes UI outcomes (cure, improvement, satisfaction), quality of life, and adverse events. For UI outcomes, we conducted network meta-analyses since studies have compared a large number of specific interventions (53) and categories of interventions (16) and the majority of these interventions have not been directly compared with each other. The main findings of this systematic review update and the associated strength of evidence for each conclusion are summarized in Table K. Findings are summarized for different types of UI (stress, urgency, and mixed) and based on whether treatments are commonly used as first, second, or third-line interventions (based on current guidelines[7, 8]). A summary of the review characteristics can be found in Table L.

Briefly, in regards to patient-centered outcomes including cure, improvement, and satisfaction with UI symptoms, evidence of variable strength supports that almost all the examined active interventions are better than sham, placebo, or no treatment for at least one of these outcomes; the exceptions were hormones and periurethral bulking agents. Based on moderate to high strength of evidence, the first-line intervention behavioral therapy generally

resulted in better UI outcomes (cure, improvement, satisfaction) than second-line interventions (medications). For women with stress UI requiring third-line interventions, intravesical pressure release may be more effective to achieve improvement than combination neuromodulation and behavioral therapy; and triple combination neuromodulation, hormones, and behavioral therapy may be more effective than either periurethral bulking or combination neuromodulation and behavioral therapy; all based on low strength of evidence. For women with urgency UI requiring third-line interventions, BTX was may be more effective to achieve cure than neuromodulation, also based on low strength of evidence.

Regarding quality of life outcomes, there is low strength of evidence that behavioral therapy, anticholinergics, and neuromodulation are each more effective than no treatment. There is also low strength of evidence that supervised pelvic floor muscle training is more effective than unsupervised training.

Serious adverse events were generally rare, with the notable exception of periurethral bulking agents, which resulted in erosion or need for surgical removal of the agents in about 5 percent of women (but only 1.5% with the agent available in the U.S.; reported in one study, low strength of evidence). The most commonly reported adverse event was dry mouth, which occurred in 36 percent of women on the anticholinergic oxybutynin and 13 percent of women using the alpha agonist duloxetine (high strength of evidence). Among women who received BTX, about one-third had urinary tract infections and between 10 and 20 percent had episodes of urinary retention or voiding dysfunction (moderate strength of evidence). Women taking the alpha agonist duloxetine reported common occurrences of constitutional adverse events (e.g., nausea 23%, insomnia 12%, fatigue 10%); moderate strength of evidence.

The evidence base did not provide adequate information to suggest which women would most benefit from which intervention (or interventions) based on the etiology or severity of her UI or based on her personal characteristics (such as age or involvement with athletic activities). The studies covered a large range of women, across adult ages, geographic regions, and types of UI (urgency, stress, mixed, or undefined) that as a whole are likely applicable to the general population of nonpregnant women with UI. However, extremely few studies reported subgroup analyses. Across studies, no clear differences in the comparative effectiveness of interventions were found based on patient age or comparing studies of women with urgency UI (alone) and studies of women with stress UI (alone). In regards to subpopulations of particular interest to stakeholders, studies did not specifically analyze or report on women engaging in athletic activities or women in the military. Studies also did not report subgroup analyses based on race or ethnicity, nor were there studies restricted to ethnic minorities to allow across-study comparisons.

The strength of evidence for each conclusion presented in Table K is based on a qualitative combination of primarily the summary risk of bias across all relevant studies, the consistency of the studies, the precision of the available estimates, and the directness of the evidence. The large majority (83%) of studies were deemed to be of low risk of bias; therefore, for each conclusion, the evidence base usually had low risk of bias. Exceptions included the effect of neuromodulation versus no treatment on quality of life and most of the conclusions regarding adverse events, which were generally poorly and inconsistently reported. For most analyses studies reported consistent results regarding the comparative effectiveness of interventions or the risk of adverse events. The primary exception related to quality of life, for which studies reported some inconsistent results both within and across studies. Given the extremely large number of possible comparisons among both intervention categories and specific interventions, we provide strength of evidence ratings only for those comparisons for which summary conclusions are possible. In most instances where comparative effectiveness estimates were imprecise, no

conclusions are possible, and these comparisons are omitted. However, where feasible, conclusions were made for quality of life and adverse event outcomes despite some instances of imprecision mostly due to sparse data. For the UI outcomes, directness was summarized as variable. The directness metric covers various concepts including whether the conclusions are based on direct (head-to-head comparisons) and whether the reported outcomes are direct (true) measures of the outcome of interest. For all UI outcomes, the conclusions are based on both direct and indirect evidence, per the network meta-analysis. As noted, all network and direct comparisons were congruent and were consistent between the networks of all studies and of the subsets of stress or urgency UI, so the overall strength of evidence was not downgraded due to indirectness. Although there was some variability in the definitions of cure, improvement, and satisfaction, these were deemed to be sufficiently minor to not affect the overall directness. In contrast, some adverse event conclusions were downgraded for being indirect in that the outcomes ("any," "moderate," or "severe" adverse events) were generally not defined and likely varied across studies.

Table K. Evidence profile for nonpharmacological and pharmacological interventions for urinary incontinence

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
Cure, improvement, satisfaction	**Stress UI: 1st and 2nd line interventions (behavioral therapy, alpha agonists, hormones)**	Behavioral therapy vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy alone and in combination with hormones or alpha agonists more effective than no treatment to achieve cure, improvement, and satisfaction
		Medications vs. placebo	Low [a]	Consistent [b]	Imprecise [c]	Direct [d]	Variable (see conclusion statement column)	Alpha agonists more effective than no treatment to achieve improvement (high SoE), but not cure (moderate SoE). Hormones not demonstrated to be better than no treatment for cure (low SoE) or improvement (moderate SoE).
		Behavioral therapy vs. medications	Low [a]	Consistent [b]	Precise	Indirect	Moderate	Behavioral therapy alone and in combination with hormones more effective than alpha agonists (for cure and improvement) or hormones (for improvement) alone
		Alpha agonists vs. hormones	Low [a]	Consistent [b]	Precise	Indirect	Moderate	Alpha agonists more effective than hormones for improvement, but not cure

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
	Stress UI: 3rd line interventions (periurethral bulking agents, intravesical pressure release, neuromodulation [E])	Intravesical pressure release vs. no treatment	Low [a]	Consistent [b]	Variable (see conclusion statement column)	Direct	Variable (see conclusion statement column)	Intravesical pressure release more effective than no treatment, significantly so for improvement (moderate SoE), but not for cure (low SoE), based on sparse evidence.
		Periurethral bulking agents vs. no treatment	Low [a]	Consistent [b]	Imprecise	Indirect	Low	Periurethral bulking agents not demonstrated to be more effective than no treatment for cure or improvement.
		Neuromodulation [E] (alone) vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Neuromodulation [e] more effective than no treatment for cure, improvement, and satisfaction.
		Neuromodulation [E] in combination with 1st or 2nd line interventions vs. no treatment	Low [a]	Variable (see conclusion statement)	Precise	Direct	Variable (see conclusion statement column)	Combination neuromodulation [e] and behavioral therapy, with or without addition of hormones, more effective to achieve improvement than no treatment (double combination low SoE with sparse and inconsistent evidence; triple combination moderate SoE due to sparse studies).

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		3rd line interventions vs. each other	Low [a]	Inconsistent	Precise, but NS	Indirect	Low	To achieve improvement, intravesical pressure release may be more effective than combination neuromodulation [E] and behavioral therapy; triple combination neuromodulation [E], hormones, and behavioral therapy may be more effective than either periurethral bulking or combination neuromodulation [e] and behavioral therapy.
	Urgency UI: 1st and 2nd line interventions (behavioral	Behavioral therapy vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy more effective than no treatment to achieve cure, improvement, and satisfaction

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
	therapy, anticholinergics)	Anticholinergics vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Anticholinergics more effective than placebo for cure, improvement, and satisfaction (moderate SoE for satisfaction due to imprecision in urgency UI studies). Indirect evidence found that combination anticholinergics and behavioral therapy also more effective than no treatment for cure (moderate SoE), improvement (moderate SoE), and satisfaction (low SoE due to imprecision in urgency UI studies).
		Behavioral therapy vs. anticholinergics	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy more effective than anticholinergics for cure, improvement, and satisfaction (moderate SoE due to sparse data for satisfaction).
	Urgency UI: 3rd line interventions (BTX, neuromodulation)	3rd line interventions vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	BTX and neuromodulation more effective than no therapy for cure, improvement, and satisfaction (moderate or low SoE for improvement or satisfaction due to sparseness, indirectness, and nonsignificance).

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		BTX vs. neuromodulation	Low [a]	Consistent [b]	Precise, but NS	Direct	Low	BTX nonsignificantly more effective than neuromodulation for cure and satisfaction (sparse evidence).
	Mixed UI	1st and 2nd line interventions	Low [a]	N/A	Imprecise [f]	Direct	Low [g]	Duloxetine (alpha agonist) and tolterodine (anticholinergic) have sparse evidence of greater UI improvement and satisfaction (tolterodine only) than placebo. Consistent with overall network meta-analyses.
		3rd line interventions	Low [a]	Consistent [b]	Imprecise [f]	Direct	Low [g]	Neuromodulation has sparse evidence of greater UI improvement compared with no treatment. Consistent with overall network meta-analysis.
	Other subgroups	Older women	Low [h]	Consistent [b]	Precise	Direct	Moderate	In older women, behavioral therapy combined with hormones or neuromodulation more effective than any single intervention
		Other subgroups of interest					Insufficient	Insufficient data to determine comparative effects in subgroups of interest, including race/ethnicity, or active/veteran military personnel, athletes

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
Quality of life	**All**	Behavioral therapy vs. no treatment	Low [i]	Consistent	Imprecise [j]	Direct	Low	Behavioral therapies evaluated by more than one study were found to have a statistically significant improvement in at least one aspect of quality of life by at least one study
		Neuromodulation vs. no treatment	Moderate [k]	Consistent	Precise	Direct	Low	Neuromodulation better than sham interventions
		Anticholinergics vs. no treatment	Low [l]	Inconsistent [m]	Imprecise [j]	Direct	Low	Anticholinergics better than placebo or no treatment
		PFMT: supervised vs. unsupervised PFMT, with or without biofeedback	Low [n]	Inconsistent [m]	Imprecise [j]	Direct	Insufficient	Discordant results regarding relative effects on quality of life of supervised or unsupervised PFMT or combined with biofeedback
Adverse events	**All**	Nonpharmacological interventions	Moderate [o]	Consistent	Imprecise [o]	Direct	Low	Nonpharmacological interventions had rare adverse events
		Periurethral bulking agents	Moderate [o]	Consistent	Imprecise [p]	Indirect [q]	Low	Periurethral bulking agents resulted in serious adverse events (e.g., erosion, surgery) in 4.7% of women. With the agent available in the U.S., 1.6% had erosion.
		Anticholinergics: serious adverse events	Moderate [o]	Consistent	Precise	Indirect [r]	Low	In women taking anticholinergics, 2.4% had (mostly undefined) serious adverse events

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		Pharmacological interventions: dry mouth	Low [s]	Consistent	Precise	Direct	High	Dry mouth was the most common adverse event reported for pharmacological treatments: Anticholinergics 24% (oxybutynin 36%), Alpha agonist (duloxetine) 13%, Placebo 4%.
		BTX	Moderate [o]	Consistent	Precise	Direct	Moderate	Women receiving BTX commonly had UTIs (4-55%) and voiding dysfunction (10-20%)
		Duloxetine (alpha agonist)	Moderate [o]	Consistent	Precise	Direct	Moderate	The alpha agonist duloxetine is associated with a range of constitutional adverse events. [t]

Abbreviations: BTX = onabotulinum toxin A, N/A = not applicable, NS = not statistically significant, PFMT = pelvic floor muscle training, QoL = quality of life, RCT = randomized controlled trial(s), SoE = strength of evidence, SUI = stress urinary incontinence, UTI = urinary tract infection, UUI = urgency urinary incontinence.

[a] Most studies had low risk of bias: cure 45/55, improvement 55/62, satisfaction 5/8.
[b] No robust indications of inconsistency. Results from direct comparisons congruent with results from network meta-analysis.
[c] Except for evaluation of improvement for alpha agonists vs. placebo.
[d] Except for evaluation of cure for hormones vs. placebo.
[e] Neuromodulation is typically used for urgency UI, but has been evaluated in studies of women with stress UI.
[f] Sparse evidence specific to women with mixed UI (cure 0 studies; improvement 4 studies of 3 interventions; satisfaction 1 study).
[g] Although consistent with overall network meta-analyses, evidence is sparse and would provide insufficient evidence without indirect evidence.
[h] Most studies of older women had low risk of bias: cure 6/7, improvement 17/18, satisfaction 2/2.
[i] Most studies had low risk of bias (14/23)
[j] Sparse data for specific comparisons. Comparative benefit not seen consistently for different aspects of quality of life within and across studies.
[k] Three studies gave no information on any risk of bias criteria, one did not have adequate randomization, and one did not have adequate allocation concealment. The other four studies all had low risk of bias.
[l] All studies had low risk of bias (7/7)
[m] Inconsistency within and across studies about the comparative effectiveness for various specific aspects of quality of life.
[n] Most studies had low risk of bias (8/11)
[o] Adverse events sparsely and/or inconsistently reported and were frequently poorly or not defined.
[p] Only one study (n = 122) reported adverse events in a periurethral bulking agent available in the United States (macroplastique).
[q] Most studies evaluated periurethral agents not available in the United States.
[r] The severity and definitions of the “serious” adverse events were unclear.
[s] The data were primarily from 44 RCTs with low risk of bias and 18 large (n>100) single-arm or nonrandomized comparative studies.
[t] Nausea (23%), insomnia (12%), constipation (11%), fatigue (10%), dizziness (10%), and headache (8%).

Clinical Implications

There is evidence to support the use of most of the interventions—nonpharmacological, pharmacological, and combination interventions—in contrast to no intervention (or, in clinical practice, watchful waiting), with the exceptions of hormones and periurethral bulking agents, for which there is low strength of evidence of no difference in relative rates of cure and improvement.

For women with stress UI or with urgency UI, the first-line intervention behavioral therapy is highly effective compared with no treatment. It is also generally more effective than second-line pharmacological therapies when used alone. Nevertheless, compared with no treatment, alpha agonists (used for stress UI) significantly improve UI, although with complaints of dry mouth (duloxetine: 13%) and constitutional adverse events (including nausea in 23%). Similarly, for urgency UI, anticholinergics increase rates of cure, improvement, and satisfaction with degree of incontinence, but with associated complaints of dry mouth (oxybutynin 36%). Sparse evidence specific to women with mixed UI is consistent with the rest of the evidence base regarding effectiveness of alpha agonists and anticholinergics.

For women moving on to third-line interventions, intravesical pressure release and neuromodulation are effective options for women with stress UI, with rare adverse events. Sparse evidence specific to women with mixed UI had similar findings for neuromodulation related to UI improvement. For women with urgency UI who are interested in trying BTX (and for whom it may be indicated; e.g., those with proven detrusor overactivity who have not responded to first- and second-line intervention[7]), the evidence suggests it is the most effective pharmacological intervention; however, it is associated with urinary tract infections and urinary dysfunction after treatment. But BTX may also be considered to have the advantage of being a one-time treatment with trial evidence of effectiveness for up to 6 months. Neuromodulation may also be effective for this population. Notably, periurethral bulking agents are less effective than most other interventions and are associated with risk of erosion and need for surgical removal of the bulking agents.

Although the evidence did not adequately evaluate heterogeneity of treatment effects (how treatment effectiveness may vary in different individuals or groups of women), the relatively high satisfaction rates for all evaluated intervention categories (at least 50%) suggests that each intervention is potentially appropriate for different women, depending on their symptoms, severity of disease, prior treatment history, and their own goals and preferences.

It is also interesting to note that the rates of satisfaction (51% to 76%) are mostly higher than rates of cure (15% to 45%) or improvement (30% to 79%). Thus, women who are not reporting categorical improvement in symptoms are still reporting satisfaction with treatment. As discussed in the evaluation of the contextual question, women's treatment goals vary widely, but emphasize improvements in activities of daily living and resultant improvements in psychological, interpersonal, and related impacts. For many women, achieving cure or a researcher-defined threshold of improvement is less important than the ability to return to normal activities. Furthermore, women have described differing interest and tolerance for different types of interventions (e.g., daily drugs, invasive interventions, behavioral therapy), in part related to differences in concern about the types of adverse events associated with each intervention.

There are many variations in how UI manifests among different women, in what aspects of UI individual women find most bothersome, and in the preferences and goals, including tolerance for potential adverse events, across both women and clinicians. Available interventions

also vary substantially in how they function, their frequency and duration, their degree of invasiveness, and the amount of effort required by the women. These differences, combined with the finding that all the interventions are effective to a lesser or greater degree, suggest that each intervention may be appropriate for, and preferred by, some women. Thus, for example, while one might argue that third-line BTX is more effective (for cure and satisfaction) than second-line anticholinergics and thus should be preferentially recommended, it is likely that many women would prefer an intervention other than BTX based on their own values, preferences, lifestyle, work schedule, and concerns about adverse events and receiving a more invasive intervention.

Furthermore, the effect size that is clinically significant likely varies across women with UI and may differ based on the severity of symptoms, UI type, intervention, failure of prior interventions, and other factors. For example, those with more severe UI may be more satisfied with partial improvement than those with milder UI; similarly, women using simpler, less invasive interventions may be more satisfied with partial improvement than women using invasive, intensive, or expensive interventions. Thus, overall, women and their clinicians will likely be choosing among a limited set of options based on the women's severity of symptoms, prior treatment history, preferences for daily or one-time treatments, concerns about adverse events, etc. For example, some women may be considering only oral medications to add on to their current behavioral therapy, while other women may be considering BTX because of concerns about adverse events of daily medications. Given the large number of possible comparisons across categories of intervention (and the very large number of comparisons of specific interventions), we direct readers to read and evaluate the pertinent results in this report found in the "odds ratio tables" (e.g., Table 6 for cure; and equivalent tables for specific interventions, e.g., Appendix G, Table G-1) based on their specific interests regarding particular interventions and outcomes.

In clinical practice, the pragmatic approach of many clinicians is to start with behavioral therapy as a first-line intervention. For patients who do not respond or experience suboptimal improvement, it is common to then consider oral medications, depending on the type of UI, as a second-line intervention; for example, alpha agonists for stress UI or anticholinergics for urgency UI. Finally, neuromodulation or bladder BTX are commonly considered third-line interventions, depending on UI type. The comparative effectiveness of the various interventions (with each other) provided by the evidence, together with other considerations (such as ease of implementation, availability, and resource use), broadly supports this approach.

Although, not evident among the studies of outpatient women specifically with UI, concern has recently increased regarding cognitive changes from the continued use of anticholinergic medications in frail or elderly patients. We note as point of information that based on this concern, the American Urogynecologic Society issued the following consensus statement recommendations: (1) patients should be counselled about the risks associated with anticholinergic medications, such as cognitive impairment, dementia, and Alzheimer disease; (2) the lowest effective dose should be prescribed, and consideration should be given for alternative medications; (3) particular consideration should be taken with patients using other anticholinergic medications; and (4) bladder BTX or neuromodulation should be considered for patients at risk for adverse effects from anticholinergics.[15] In addition, evidence suggests that the majority of patients (>70%) stop using anticholinergics within 5 months, mostly because of side effects.[16-18]

In reviewing the contextual question, we identified success, as defined by both physicians and patients, based on published survey and focus group data. As might be expected, these

groups were similar with respect to domains of importance including physical symptoms and the associated impact on relationships, quality of life, activities of daily living, interpersonal relationships and psychological distress, economic implications, and sleep disturbance. Based on the literature review, we also identified that patients want to know about the balance between adverse events and symptom improvement. However, our informants did not comment on this. This finding also highlights the importance of the adverse event data described in this review. Clinicians should remember that patients are interested in possible adverse events and want to know this information to help them make informed decisions about treatment options.

Our findings are consistent with previously published systematic reviews of nonsurgical treatment of UI in women but are more complete because we have evaluated additional classes of medications and additional interventions. Furthermore, we conducted network meta-analyses to combine direct evidence, from head-to-head comparisons, with indirect evidence. We thus estimate treatment effects for all possible comparisons between intervention categories (and individual interventions). Based on the network meta-analysis model, we are able to obtain the predicted mean outcome rates per intervention in an effort to simplify the interpretation of the available evidence.

Limitations of the Evidence Base

The major limitation identified by this review is the relative dearth of direct (head-to-head trial) evidence when one considers the richness of the clinical questions that can be posed. In general, comparisons across intervention categories are not as informative as comparisons between individual interventions. Most comparisons of individual interventions are based on indirect data and small numbers of studies. In addition, the generally small sample sizes of included studies leads to concerns about generalization. Most of the comparisons between intervention categories, and between specific interventions, are indirect, through sham or no treatment. Comparisons between active interventions are sparse.

Most studies included both women with stress UI and women with urgency UI or did not adequately describe their eligibility criteria. Very few studies explicitly evaluated only women with mixed UI (with symptoms of both stress and urgency UI). Relatively few studies based their eligibility criteria on whether women had already taken (and/or did not improve with) prior treatments or described which treatments had already been used by study participants. Also, relatively few studies described or based eligibility criteria on symptom severity. Thus, it was difficult to evaluate subgroup analyses or to summarize across studies based on most of these descriptors.

We found no new information on the effectiveness of treatments among women who engage in athletic activity, older versus younger women, different racial or ethnic groups, or active military or veteran women. In addition to the sparseness, or complete lack of data for subpopulations of interest, we found inconsistent reporting of adverse events. The specific adverse events reported and their definitions varied greatly among studies and treatment modalities.

With few exceptions, and for most outcomes, individual studies were deemed to have, at most, moderate risk of confounding, selection, or measurement biases. However, since incorporating risk of bias of individual studies into network meta-analysis is complex, we opted for high level, qualitative conclusions regarding risk of bias to determine strength of evidence for UI outcomes.

Limitations of the Analytic Approach

Indirect comparisons rely on an assumption that there are no influential systematic differences in the distribution of effect modifiers in the synthesized studies. Conceptually, the corpus of studies on UI in women includes heterogeneous samples of women based on UI type (stress, urgency, and mixed), UI severity (e.g., frequency and volume of incontinence), and prior treatment history (e.g., treatment-naïve, incomplete resolution with behavioral therapy, failed medication therapy). However, as noted, most studies failed to provide data to distinguish comparative effects of interventions based on UI type, UI severity, past treatment history, or other potential effect modifiers. Thus, implicitly, they were not considering the heterogeneity of treatment effects based on these factors among their included study participants.

The overall network meta-analysis, thus, makes the same general assumptions as the majority of studies, namely that the comparative effectiveness of interventions is consistent across different subgroups. This assumption does not imply that the actual effectiveness (e.g., incidence of cure) for a given intervention is similar among different groups of women, but instead that the comparative effectiveness compared to other treatments is similar. As noted, the network meta-analysis does compare interventions used for stress UI with interventions used for urgency UI. Third-line interventions (which in theory are used primarily in women who have not improved with prior second-line interventions) are also compared with first-line or second-line interventions (which in theory are used primarily in women who have not failed to improve with prior interventions). This approach is consistent with studies of women with UI that have, for example, evaluated neuromodulation (which is primarily used to treat urgency UI) in studies of women with only stress UI. Furthermore, studies have directly compared BTX (third-line intervention) and anticholinergics (second-line), neuromodulation (third-line) and behavioral therapy (first-line), and, as mentioned, neuromodulation in women with stress UI. Such direct comparisons are consistent with the overall structure of the full network meta-analysis. We tested the appropriateness of the network meta-analysis model in a number of ways and found no evidence that the assumptions necessary for the indirect comparisons are violated. Split-node analyses, which compare direct (head-to-head) comparisons with indirect comparisons (through another intervention) for each comparison of two interventions, were consistent with a valid network model. Equivalently, network meta-analysis results were consistent with pairwise (direct) meta-analysis results in those comparisons for which there were head-to-head comparisons available. In addition, network meta-analyses that included the more homogeneous studies of women with only stress UI, urgency UI, or older women all yielded similar results as the overall network meta-analysis, providing additional evidence of the validity of the network. The network meta-analytic approach allowed us to learn across studies by aggregating the full corpus of evidence as opposed to parsing the evidence into specific subcategories of comparisons each of which have only sparse direct evidence.

Recommendations for Future Research

For future research, there is a need to adopt a set of core outcome measures for effectiveness and for safety outcomes. As an example, among studies published to date, a wide range of quality of life instruments have been used, but inconsistently reported, in the included studies. The large number of instruments, and the even larger number of subscales, hinders drawing of conclusions across studies. In addition, currently included studies inconsistently reported clearly defined UI outcomes (cure, improvement, satisfaction) and defined them variously. If all studies

had consistently reported all outcomes, our summary findings would have been much more robust and precise. A core outcome set would be maximally useful if it included standardized definitions for patient-centered outcomes directed toward patient, rather than clinician or researcher, priorities. Based on the survey and focus group studies that have been reported, future studies should collect data on those adverse events about which patients are most concerned. More data, however, are needed to determine what those adverse events may be, and to what degree patients balance potential benefits and harms.

Information to further clarify whether specific subpopulations may benefit more from, or have differential adherence to, specific interventions is still lacking. Specifically, information regarding the differential effects of interventions in women from all of the identified subgroups of interest for this review are relatively sparse. Studies should either include only women with a specific type of UI (stress, urgency, mixed) or report subgroup results for all outcomes. Studies should also report UI severity (e.g., frequency or volume) and past treatment history for included participants and, where feasible, again provide subgroup results based on severity and/or past treatment history. Additional studies are needed regarding efficacy of the various interventions including patient-specific outcome measures for female athletes, younger and older women, women in the military, and women of diverse racial/ethnic backgrounds. The possibilities for future research in these subsets of women is particularly rich and untapped.

Conclusions

Based on combined direct and indirect comparisons and with respect to patient-centered outcomes including cure, improvement, satisfaction with treatment, and quality of life, most examined active intervention categories appear to be better than sham or no treatment, and for many or most comparisons, statistically significantly so (with the exception of hormones and periurethral bulking agents). Behavioral therapy, alone or in combination with other interventions, is generally more effective than other first- and second-line interventions alone for both stress and urgency UI.

The third-line interventions BTX, neuromodulation, and intravesical pressure release are generally more effective than other interventions, but with increased risk of urinary tract infections and urinary dysfunction with BTX. Second-line pharmacological interventions, particularly when used alone, are generally less effective and are associated with nonserious but bothersome adverse events, such as dry mouth, nausea, and fatigue. However, adverse events are generally nonserious, except for erosion and need for surgical removal in about 5% of those who received periurethral bulking agents (1.6% with the agent available in the U.S.).

Large gaps remain in the literature regarding the comparison of individual interventions, and very little or no information is available on women who engage in athletic activity or women in the military or who are veterans, or about differences between older and younger women or women of different ethnicities or races. Standardized quality of life and adverse event reporting would allow significant improvement for conclusions from future systematic reviews as between-study comparisons would be more robust and conclusive.

For clinicians, patients and payers to make informed decisions, specifically for patient subgroups with sparse evidence, new evidence from studies comparing interventions is needed.

Table L. Summary of review characteristics

Population Included in the Review	**Key Inclusion Criteria**	Non-pregnant community-dwelling adult women with symptoms of urinary incontinence (UI)
	Key Exclusion Criteria	If >10% of study participants are from ineligible groups (children or adolescents, men, pregnant women, institutionalized or hospitalized participants, or have surgically-treated UI)
Key Topics & Interventions Covered by Review	Key Topic 1. The benefits and harms of nonpharmacological treatments of UI in women, and how they compare with each other	**Nonpharmacologic interventions including:** - Behavioral interventions - Neuromodulation - Intravesical pressure release devices - Combinations of these
	Key Topic 2. The benefits and harms of pharmacological treatments of UI in women, and how they compare with each other	**Pharmacologic interventions including:** - Anticholinergics - Onabotulinum toxin A (BTX) - Hormones - Alpha agonists - Beta agonists - Antidepressants - Periurethral bulking agents - Others and combinations of these
	Key Topic 3. The comparative benefits and harms of nonpharmacological versus pharmacological treatments of UI in women	**Nonpharmacologic interventions including:** - All listed for Key Topic 1 **Pharmacologic interventions including:** - All listed for Key Topic 2
	Key Topic 4. The benefits and harms of combined nonpharmacological and pharmacological treatment of UI in women	**Combination interventions including:** - Any combination of interventions listed in Key Topic 1 and Key Topic 2
Timing of the Review	Beginning Search Date	January 1, 2011
	End Search Date	December 4, 2017
Important Studies Underway	No new or ongoing trials are listed in ClinicalTrials.gov	

Introduction

Background and Objectives

This systematic review uses current methods and is an update of an earlier report published in 2012, which evaluated comparisons of nonsurgical treatments for urinary incontinence (UI) in (adult) women.[19] Given evidence that has emerged since the publication of the 2012 report, this review focuses on updating that report. The 2012 report included questions about diagnosis and treatment of UI. Based on feedback from a stakeholder panel, this update focuses on the comparative benefits and harms of nonsurgical treatments, both nonpharmacological and pharmacological. In addition, this review addresses the question of how women with UI perceive treatment success.

Epidemiology

UI is the involuntary loss of urine. About 17 percent of nonpregnant women are estimated to have UI.[1] The prevalence of UI increases with age, particularly after menopause: about 3.5 percent of women 20 to 29 years old, 22 percent of women 50 to 59 years old, and 38 percent of women over age 80 have experienced UI.[1] The prevalence also increases with higher parity, obesity, comorbidities, and history of hysterectomy.[1] UI can affect a woman's physical, psychological, and social wellbeing and can impose substantial lifestyle restrictions. The effects of UI range from slightly bothersome to debilitating. Up-to-date data on the economic costs of UI in women are lacking, but the American College of Physicians estimated the costs of UI care in the United States at $19.5 billion in 2004 in their 2014 Clinical Practice Guideline.[2] A separate analysis of urgency UI alone, however, estimated total national costs of $35.5 billion in 2007, including $28.1 billion in direct medical costs, $1.5 billion in direct nonmedical costs (e.g., for incontinence pads), and $5.9 billion in indirect costs (e.g., lost productivity).[3]

Types of UI and Etiology

The most common types of UI that affect women include stress, urgency, and mixed. Incontinence types are distinguished by their baseline mechanisms. Stress UI is associated with impaired urethral sphincter function and results in an inability to retain urine during coughing, sneezing, or other activities that increase intraabdominal pressure. Urgency UI is defined as the involuntary loss of urine associated with the sensation of a sudden, compelling urge to void that is difficult to defer. Mixed UI occurs when both stress and urgency UI are present. These definitions reflect the consensus definitions developed by the International Urogynecological Association / International Continence Society.[4] Stress UI is more common in younger women and in association with pelvic floor trauma and uterine prolapse, both of which are often related to vaginal childbirth and may require surgical treatment. Urgency and mixed UI are more common in older women and in association with overactive bladder, with or without sphincter dysfunction.

The etiology of UI is multifactorial. Risk factors include age, pregnancy, pelvic floor trauma after vaginal delivery, menopause, hysterectomy, obesity, urinary tract infections, functional and/or cognitive impairment, chronic cough, and constipation.[20] Several of these etiologies such as pelvic organ prolapse and pelvic masses, could most appropriately be treated by surgical

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The reference list follows the appendixes.

interventions and are not addressed by this review update. We also exclude atypical etiologies or those not amenable to typical treatments for stress or urgency UI, including urinary tract infection or neurogenic bladder (due to, for example, spinal cord injury, stroke, multiple sclerosis, or Parkinson disease).

Treatments

Both nonpharmacological and pharmacological interventions are available for management of UI. Some causes of UI are amenable to surgical interventions, but we focus only on nonsurgical interventions. Nonpharmacological interventions mostly (but not all) aim to strengthen the pelvic floor and change behaviors that influence bladder function, whereas pharmacological interventions mostly address bladder innervation and sphincter function. The classification of specific interventions as either nonpharmacological or pharmacological (or, for that matter, nonsurgical or surgical) is somewhat controversial and not clear-cut. For example, some electrical stimulation devices are implanted and therefore thought by some to be a surgical intervention. Also, onabotulinum toxin A (BTX) can be considered to be a pharmacological intervention, since it is an injected drug that may need to be given repeatedly, or a nonpharmacological intervention since it is not a medication people take regularly by prescription. While not all readers of this report will agree with how all interventions were categorized, the primary conclusions are based on categories of interventions (such as neuromodulation), which readers can easily assign to the overarching categories (of pharmacological, nonpharmacological, or even surgical) without loss of information.

Based on our categorization, nonsurgical, nonpharmacological UI treatments for women include: 1) pelvic floor muscle training (PFMT, to strengthen the pelvic musculature), 2) behavioral training (e.g., bladder training, to teach one to gradually hold urine for longer periods), 3) vaginal cones (to strengthen the pelvic floor muscles and relieve urgency sensation), 4) bladder supports (including pessaries, to support the bladder or urethra and relieve urgency sensation), 5) neuromodulation (including electrical and magnetic stimulation, which may strengthen musculature or to enhance neural control of the bladder), and 6) urethral bulking (to improve urethral coaptation (closure) by adding structure to the periurethral tissue), among others.

Pharmacological interventions are typically thought to work through urinary retention properties or by affecting pelvic nerves or musculature. See the eligibility criteria in the Methods section for a list of pharmacological interventions. These pharmacological treatments are best separated into classes based on the UI subtype they treat. Treatments for urgency UI decrease bladder spasms and contractility. They can be separated into three broad categories. 1) Anticholinergics act as antispasmodics; one subclassification include antimuscarinics, which target muscarinic receptors in the bladder). 2) BTX causes flaccid paralysis, reducing spasms. 3) Beta-adrenergic agonists (e.g., mirabegron) relax the bladder by activating beta-3 receptors. The available pharmacological treatments for stress UI are alpha agonists that constrict smooth muscle, helping the urethra to close and thus, preventing incontinence. Other medications are also used off-label.

Treatment Outcomes

The 2012 Agency for Healthcare Research and Quality (AHRQ) review evaluated a wide range of patient outcomes, including objective, subjective, and patient-centered outcomes, and adverse effects (harms). The review focused primarily on continence (i.e., “cure,” meaning

complete remission, not necessarily actual cure), change in symptoms (e.g., improvement), and harms. Definitions of continence (the lack of UI) are generally similar across studies and clinical settings. However, definitions of improvement in UI vary and include different degrees of change in frequency and severity of symptoms.[21]

Furthermore, patients and researchers differ as to what constitutes UI improvement. Patients' perception of improvement often amounts to reduced lifestyle restrictions or improved overall perception of bladder symptoms, especially complete resolution of urine leakage. Conversely, many research studies have defined improvement based on objective tests, including decrease in the frequency of UI episodes. However, some objective changes do not necessarily translate into clinically important changes from a patient's perspective.[21]

For clinical decisionmaking purposes, UI treatment success should be determined by patient-centered outcomes and objective measurements that translate to patient-centered outcomes. A question of particular interest noted by the 2012 AHRQ review for future research was to determine which outcomes are of greatest importance to women with UI.

Stakeholder Input

The Patient-Centered Research Outcomes Institute (PCORI) held a multi-stakeholder virtual workshop on December 7, 2016, to discuss potential scoping for the updated review, including the prioritization of key questions (KQ), a discussion of where the evidence base has accumulated since the prior review, and emerging issues of importance to the field. Stakeholders included patients, clinicians and allied health professionals, professional organizations, research funders, payers, and industry. The full participant list, presentation slides from the meeting, and an audio recording of the entire discussion can be found at the PCORI Web site (http://www.pcori.org/events/2016/updating-systematic-reviews-pcori-virtual-multi-stakeholder-workshop-nonsurgical).

Stakeholders agreed that the questions regarding treatment of UI still represented critical issues. Several specific interventions were brought up during the meeting as important for the review to address. These included (1) mirabegron, (2) Impressa®, a vaginal insert manufactured by Poise®, (3) onabotulinum toxin A (BTX) injections, (4) nerve stimulation interventions, and (5) "lifestyle" interventions (e.g., bladder irritant reductions, fluid management).

Stakeholders were particularly interested in treatment effectiveness in specific patient populations. These included (1) women athletes and those engaging in high-impact physical activity, (2) older women, (3) military women or veterans, and (4) racial and ethnic minorities.

Based on stakeholder input, the 2012 AHRQ review Key Question (KQ) 1 on the diagnostic evaluation of UI was deemed to be of lower priority for updating at this time. Stakeholders also noted that it is important to summarize information on how patients define successful treatment.

Evidence Gaps From the Prior Review

The 2012 AHRQ review found several research gaps. These included 1) whether specific subpopulations may benefit more from, or have differential adherence to, specific interventions; 2) a need for better matching of trial endpoints with outcomes that truly matter to patients; 3) a need for more research into potential harms of treatments; and 4) a need for new (and more effective) treatment options for women with UI.

Review Update

The update of the 2012 AHRQ review is similar to the original review with the following exceptions: KQ 1 (on diagnosis of UI) is not updated. KQ 2 and 3 (regarding the effectiveness, comparative effectiveness, and harms of nonpharmacological and pharmacological interventions for all types of UI in women) are reorganized for clarity. Study eligibility criteria remain essentially unchanged.

Primary Purposes of Review Update

- To update the evidence on the topic of nonsurgical treatments for UI in women. (See AHRQ Pub No. 11(12)-EHC074-EF, April 2012).
- To conduct a systematic review and meta-analyses of the comparative effectiveness and harms of nonpharmacological and pharmacological interventions for women with all forms of UI.
- To summarize information on how women with UI define a successful outcome, and to highlight data on these outcomes.

Key Questions

The following are the KQs to be addressed by the review:

Key Question 1: What are the benefits and harms of nonpharmacological treatments of UI in women, and how do they compare with each other?

1a. How do nonpharmacological treatments affect UI, UI severity and frequency, and quality of life when compared with no active treatment?

1b. What are the harms from nonpharmacological treatments when compared with no active treatment?

1c. What is the comparative effectiveness of nonpharmacological treatments when compared with each other?

1d. What are the comparative harms from nonpharmacological treatments when compared with each other?

1e. Which patient characteristics, including age, type of UI, severity of UI, baseline diseases that affect UI, adherence to treatment recommendations, and comorbidities, modify the effects of nonpharmacological treatments on patient outcomes, including continence, quality of life, and harms?

Key Question 2: What are the benefits and harms of pharmacological treatments of UI in women, and how do they compare with each other?

2a. How do pharmacological treatments affect UI, UI severity and frequency, and quality of life when compared with no active treatment?

2b. What are the harms from pharmacological treatments when compared with no active treatment?

2c. What is the comparative effectiveness of pharmacological treatments when compared with each other?

2d. What are the comparative harms from pharmacological treatments when compared with each other?

2e. Which patient characteristics, including age, type of UI, severity of UI, baseline diseases that affect UI, adherence to treatment recommendations, and comorbidities, modify the effects of the pharmacological treatments on patient outcomes, including continence, quality of life, and harms?

Key Question 3: What are the comparative benefits and harms of nonpharmacological versus pharmacological treatments of UI in women?

3a. What is the comparative effectiveness of nonpharmacological treatments when compared with pharmacological treatments?

3b. What are the comparative harms of nonpharmacological treatments when compared with pharmacological treatments?

3c. Which patient characteristics, including age, type of UI, severity of UI, baseline diseases that affect UI, adherence to treatment recommendations, and comorbidities, modify the comparative effectiveness of nonpharmacological and pharmacological treatments on patient outcomes, including continence, quality of life, and harms?

Key Question 4: What are the benefits and harms of combined nonpharmacological and pharmacological treatment of UI in women?

4a. How do combined nonpharmacological and pharmacological treatments affect UI, UI severity and frequency, and quality of life when compared with no active treatment?

4b. What are the harms from combined nonpharmacological and pharmacological treatments when compared with no active treatment?

4c. What is the comparative effectiveness of combined nonpharmacological and pharmacological treatments when compared with nonpharmacological treatment alone?

4d. What is the comparative effectiveness of combined nonpharmacological and pharmacological treatments when compared with pharmacological treatment alone?

4e. What is the comparative effectiveness of combined nonpharmacological and pharmacological treatments when compared with other combined nonpharmacological and pharmacological treatments?

4f. What are the comparative harms from combined nonpharmacological and pharmacological treatments when compared with nonpharmacological treatment alone, pharmacological treatment alone, or other combined treatments?

4g. Which patient characteristics, including age, type of UI, severity of UI, baseline diseases that affect UI, adherence to treatment recommendations, and comorbidities, modify the effects of combined nonpharmacological and pharmacological treatments on patient outcomes, including continence, quality of life, and harms?

Table 1 compares the numbering and order of the KQs in the current update with the KQs of the 2012 AHRQ review (in parentheses). Each KQ in the grid pertains to the evaluation of effects or harms for the comparison between the row and column intervention types (nonpharmacological, pharmacological, combined interventions, and placebo).

Table 1. Tabulation of which Key Questions address which intervention comparisons

Intervention		Nonpharm*	Pharm*	Nonpharm+Pharm*	No active/ Placebo*
Nonpharm	Effect:	1c (3.3)	3a (2.2)	4c (3.2)	1a (3.1)
	Harms:	1d (3.5)	3b (2.4)	4f (3†)	1b (3.4)
Pharm	Effect:		2c (2.2)	4d (2.1, 3.2 ‡)	2a (2.1)
	Harms:		2d (2.4)	4f (3†)	2b (2.3)
Nonpharm+Pharm	Effect:			4e (§)	4a (3.2)
	Harms:			4f (§)	4b (§)

Empty cells indicate comparisons that are already noted above the diagonal.

Abbreviations: Effect = effectiveness (benefits), Nonpharm = nonpharmacological treatments, Pharm = pharmacological treatments, Nonpharm+Pharm = combined nonpharmacological and pharmacological treatments, KQ = Key Question.

* The current KQ and, in parentheses, the KQs from the 2012 AHRQ review that addressed each comparison. Comparisons (cells) without 2012 KQ numbers in parentheses were not explicitly included in the 2012 AHRQ review KQs, but may have been covered in the text.
† No explicit KQ addressing this topic, but covered in the KQ 3 Results section.
‡ Addressed in the 2012 AHRQ review in the KQ 3 Results section.
§ Not explicitly included in the 2012 AHRQ review KQs and not addressed in the Results section, possibly due to a lack of evidence.

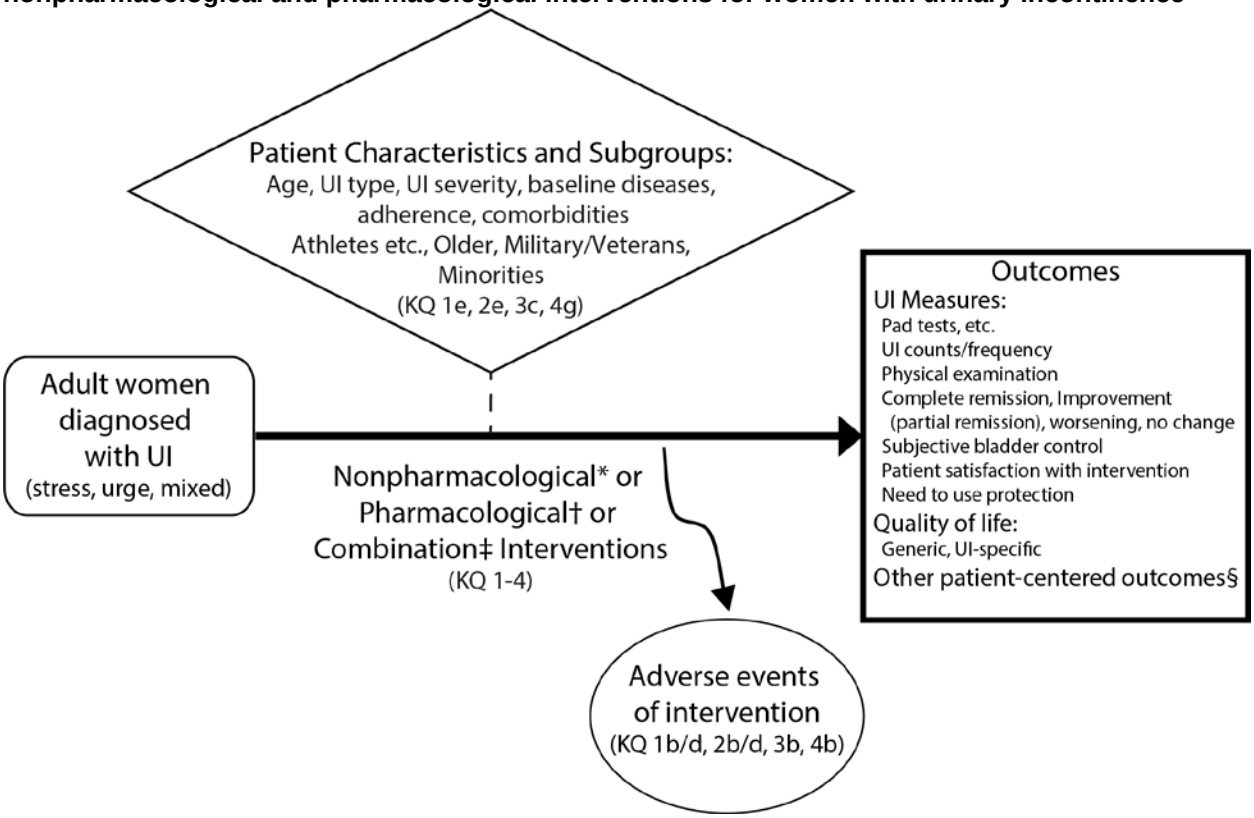
Contextual Question

Contextual Question: What is the available evidence concerning women's conceptions of what defines a successful outcome in the treatment of UI (i.e., how do patients measure treatment success)?

Analytic Framework for the Key Questions

To guide the assessment of studies that examine the effect of nonpharmacological and pharmacological interventions on clinical and patient-centered outcomes and adverse events in women with UI, the analytic framework (Figure 1) maps the specific linkages associating the populations, interventions, modifying factors, and outcomes of interest. The analytic framework depicts the chains of logic that evidence must support to link the studied interventions to outcomes of interest.

Figure 1. Analytic framework for the comparative effectiveness and adverse events of nonpharmacological and pharmacological interventions for women with urinary incontinence



Abbreviations: KQ = Key Question(s), UI = urinary incontinence.

* Health education about UI; behavioral therapy, including "lifestyle" interventions (e.g., dietary modifications, weight loss, fluid restriction), bladder training; biofeedback; pelvic floor muscle training and other physical therapy; vaginal cones/weights; bladder supports (e.g., Impressa®); therapeutic pessaries; electrical stimulation (e.g., posterior tibial nerve stimulation, sacral neuromodulation, intravaginal electrical stimulation); magnetic stimulation; urethral plugs and patches; urethral bulking, including transurethral or periurethral injections.

† Estrogen preparations (topical estrogen); antimuscarinics (e.g. oxybutynin chloride, trospium chloride, darifenacin, solifenacin succinate, fesoterodine, tolterodine, propiverine); calcium channel blockers (e.g., nimodipine); onabotulinum toxin injections; TRPV1 antagonists (e.g., resiniferatoxin); antidepressants (e.g., tricyclics, SSRI, SNRI); beta-3 adeno-receptor agonists (e.g., mirabegron).

‡ Combinations of eligible nonpharmacological and pharmacological interventions.

§ Other patient-centered outcomes based on the findings of the Contextual Question.

Methods

The Evidence-based Practice Center conducted the review based on a systematic review of the scientific literature, using established methodologies as outlined in the Agency for Healthcare Research and Quality (AHRQ) Methods Guide for Effectiveness and Comparative Effectiveness Reviews.[6] As described below, the contextual question was addressed using a nonsystematic approach. The PROSPERO registration number is CRD42017069903.

Conducting the Systematic Review (Key Questions 1–4)

We included all eligible studies included in the 2012 review. To identify relevant primary research studies published since 2011, we conducted literature searches of studies in MEDLINE®, the Cochrane Central Trials Registry, the Cochrane Database of Systematic Reviews, and Embase® databases. Final searches were conducted on December 4, 2017. We also searched the FDA Web site and ClinicalTrials.gov.

The 2012 AHRQ review identified studies published in English that were entered into electronic databases from 1990 until December 30, 2011. In the 2012 review the grey literature searches were last conducted in May 2010. Based on these search dates, we included new primary studies and existing systematic reviews in electronic databases published between January 2011 to the current search date (December 4, 2017). This time frame provided a 1-year overlap with the search done for the 2012 AHRQ review. Searches of the FDA Web site and ClinicalTrials.gov included studies entered since January 2010. For earlier studies that address the KQs covered by the update, we fully relied on the 2012 AHRQ review, making the assumption that the search for the 2012 AHRQ review was complete and accurate. Furthermore, we included additional eligible studies made known to us by AHRQ, PCORI, peer reviewers, manufacturers (via Supplemental Evidence and Data for Systematic Reviews [SEADS]/Federal Registry Notices), or other stakeholders.

To the extent possible, the current search replicated the search reported by the 2012 AHRQ review. However, we added terms for any eligible interventions that were omitted from the 2012 AHRQ review search strategies. We used the search strategies in Appendix A.

With the exception of studies in the 2012 AHRQ review, studies found from existing systematic reviews were extracted *de novo*. For studies included in the 2012 AHRQ review, we relied on their extraction and summary data for study level data, including risk of bias assessment.

All citations (abstracts) found by literature searches and other sources were independently screened by at least two researchers. At the start of abstract screening, we implemented a training session, in which all researchers screened the same articles and conflicts were discussed; this process was repeated until the team determined there was adequate consensus. During double-screening, we resolved conflicts by discussion among the team. All screening was done in the open-source, online software Abstrackr (http://abstrackr.cebm.brown.edu/). All potentially relevant studies were rescreened in full text to ensure eligibility.

Eligibility Criteria for the Key Questions

The eligibility criteria for the update are not substantially different from the criteria for the 2012 AHRQ review. The main differences relate to dropping Key Question (KQ) 1 (on diagnosis) from the 2012 AHRQ review, explicitly adding new subpopulations of interest, and

making some criteria more explicit (e.g., fleshing out and adding to the list of interventions of interest). The criteria are detailed in Table 2.

Changes from the 2012 AHRQ review include the following:

Population: Based on stakeholder input, we highlighted four specific subpopulations of interest (women athletes and those engaging in high-impact physical activities, older women, women in the military or veterans, and racial and ethnic minorities). Studies that either focused on these subpopulations or provide relevant subgroup data are summarized separately.

In addition, we applied stricter rules about the exclusion criteria, allowing only up to 10 percent of study participants to be among the excluded populations (e.g., men, children, "dry" overactive bladder [without incontinence], institutionalized people); the 2012 AHRQ review allowed up to 25 percent of participants to be men. Studies included in the 2012 AHRQ review that included between 10 and 25 percent men were excluded from the current review. We also excluded other studies included in the 2012 AHRQ review that did not meet either their or our criteria.

Interventions: The list of eligible nonpharmacological interventions is the same as in the 2012 AHRQ review, although we have added some specific interventions to the list that were not explicitly listed *a priori* in the 2012 AHRQ review (e.g., bladder training). Similarly, the list of pharmacological treatments is more complete than the *a priori* list in the 2012 AHRQ review; additional drugs known to be in use have been added, including calcium channel blockers, TRPV1 (transient receptor potential cation channel subfamily V member 1) antagonists, additional antidepressant classes, and mirabegron (a beta-3 adeno-receptor agonist). Although not listed *a priori* in the 2012 AHRQ review, calcium channel blockers and resiniferatoxin (a TRPV1 antagonist) were included in the original review. No studies of selective serotonin or serotonin-norepinephrine reuptake inhibitors (SSRI or SNRI) antidepressants or of mirabegron were included in the AHRQ 2012 review.

Comparators: No changes are made from the 2012 AHRQ review.

Outcomes: All outcomes reported in the 2012 AHRQ review's eligibility criteria (Appendix D of that document) are included in this update, except for urodynamic testing, which is used in practice only for diagnosis, not for followup outcome assessment. As per the 2012 AHRQ review, we included only categorical urinary incontinence outcomes (e.g., cure, improvement). Noneligible outcomes for the current review that were extracted for the 2012 AHRQ review were omitted from this report. For quality of life outcomes, we included both categorical and continuous (i.e., score or scale) outcomes, although the extraction and summarization of these were handled in a more summary manner than in the 2012 AHRQ review. Adverse events were also included. We searched studies for all patient-centered outcomes identified from the contextual question on how patients define outcome success.

Study Design, Timing, Setting: No substantive changes are made from the 2012 AHRQ review, except that the eligibility criteria were applied more completely (e.g., small single group studies included in the 2012 AHRQ review were omitted).

Table 2. Eligibility criteria

PICOTS	Inclusion	Exclusion
Population	Adult and elderly (as defined by authors) women with symptoms of UI (as defined by authors) *Subpopulations*: • women athletes and those engaging in high-impact physical activities • older women (whether "elderly" or just older than a younger analyzed subgroup, as defined by authors) • women in the military or veterans • racial and ethnic minorities	*If >10% of study participants* are children or adolescents, men, pregnant women, institutionalized or hospitalized participants, have UI caused by neurological disease or dual fecal and urinary incontinence, dry overactive bladder syndrome (OAB), interstitial cystitis/painful bladder syndrome (or other pain syndromes). In addition, if the percent of participants from any of these categories was not reported, we assumed that it is >10% and also excluded those studies.
Interventions	*Nonpharmacological interventions*: Health education about UI; behavioral therapy, including "lifestyle" interventions (e.g., dietary modifications, weight loss, fluid restriction), bladder training; biofeedback; pelvic floor muscle training and other physical therapy; vaginal cones/weights, bladder supports (e.g., Impressa®, therapeutic pessaries); electrical stimulation (e.g., posterior tibial nerve stimulation, sacral neuromodulation, intravaginal electrical stimulation); magnetic stimulation; urethral plugs and patches; urethral bulking, including transurethral or periurethral injections. *Pharmacological interventions*: Estrogen preparations (topical estrogen); antimuscarinics (e.g., oxybutynin chloride, trospium chloride, darifenacin, solifenacin succinate, fesoterodine, tolterodine, propiverine); calcium channel blockers (e.g., nimodipine); Onabotulinum toxin A injections; TRPV1 antagonists (e.g., resiniferatoxin); antidepressants (e.g., tricyclics, SSRI, SNRI); beta-3 adeno-receptor agonists (e.g., mirabegron). *Combinations* of eligible nonpharmacological and pharmacological interventions. All doses or variations of interventions are included, including unapproved doses. Similarly, all eligible interventions are included regardless of regulatory body approval.	Interventions not available in the United States and surgical treatments
Comparators	Other eligible nonpharmacological interventions, other eligible pharmacological interventions, other eligible combination interventions, no active treatment or placebo.	Noneligible interventions, including surgery

PICOTS	Inclusion	Exclusion
Outcomes	*Categorical measures of UI*: "Cure", improvement, and satisfaction. Cure indicates complete resolution of symptoms, as defined by authors; it does not imply permanent resolution requiring no further treatment. Improvement and satisfaction also were defined by study authors. We included outcomes that used pad tests and other measures of leakage volumes (categorized by a threshold); incontinence counts/frequency (e.g., by diary), including urgency UI counts/frequency and stress UI counts/frequency; physical examination (e.g., cough stress test); complete remission, improvement (partial remission), worsening, no change; subjective bladder control; patient satisfaction with intervention; need to use protection. Per the 2012 AHRQ report, only categorical measures of UI are included (e.g., an event [e.g., complete remission], a category [e.g., worse, same, better], above or below a threshold [e.g., ≤2 UI events/day]. *Quality of life and related questionnaires*: Generic, sexual function, UI-specific; validated. Other patient-centered outcomes, based on the findings of the contextual question (what defines a successful outcome). *Adverse events*.	Bladder and pelvic tests that do not measure UI specifically or are used for diagnostic purposes (e.g., urodynamic testing, pelvic muscle strength); urination measures that do not measure UI specifically (e.g., urinary frequency, total voids [which include nonincontinence voids], catheterization, postvoid residuals, urinary retention, perceived micturition difficulty)
Timing	Minimum 4 weeks followup (since the start of treatment)	
Settings	Interventions provided in primary care or specialized clinic or equivalent by any healthcare provider; participants are community-dwelling.	Surgical, institutionalized, or in-hospital settings
Country setting	Any geographic area	None
Study designs	*For effectiveness outcomes (UI and quality of life)*: • randomized controlled trials (RCTs), with no minimum sample size, including pooled individual patient data from RCTs; • nonrandomized comparative studies N≥50 women per group (N≥100 women total). *For harms outcomes*: • RCTs, as above; • nonrandomized comparative studies (regardless of strategies to reduce bias), including registries or large databases, N≥50 women per group (N≥100 women total); • single arm longitudinal studies, including registries, large databases, and large case series N≥100 women; case-control studies (where cases are selected based on presence of harm), N≥50 female cases and ≥50 female controls (N≥100 women total). *For all outcomes*: Published, peer-reviewed articles or unpublished data from the Food and Drug Administration (FDA) or from the Web site ClinicalTrials.gov.	For effectiveness outcomes: Single group, case-control, and case report/series studies; small nonrandomized comparative studies.
Publication language	Any	Unable to read, translate, or retrieve.

Empty cells indicate no additional exclusion criteria (beyond what is already implied by the inclusion criteria).

Abbreviations: N = sample size; PICOTS = populations, interventions, comparators, outcomes, timing, and setting; RCT = randomized controlled trial; SNRI = serotonin and norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TRPV1 = transient receptor potential cation channel subfamily V member 1; UI = urinary incontinence.

Data Extraction and Data Management

Each new study was extracted by one methodologist. The extraction was reviewed and confirmed by at least one other experienced methodologist. Disagreements were resolved by discussion among the team, as needed. Studies with UI outcome data were extracted into a customized form in Systematic Review Data Repository (SRDR) online system (https://srdr.ahrq.gov/projects/1153). Results data for categorical UI outcomes were extracted into SRDR in full. Results data for quality of life and adverse events were extracted into customized Google sheets spreadsheets. Upon completion of the review, the spreadsheets were uploaded into the SRDR database, which is accessible to the general public (with capacity to read, download, and comment on data). The basic elements and design of the extraction form are similar to those used for other AHRQ comparative effectiveness reviews. They include elements that address population and baseline characteristics; descriptions of the interventions and comparators analyzed; outcome definitions; effect modifiers; enrolled and analyzed sample sizes; study design features; funding source; results; and risk of bias questions.

Upon examination of the quality of life measures extracted for the 2012 AHRQ review and reported among the new studies, it was apparent that there is great heterogeneity of which quality of life instruments and subscales were reported and how these were analyzed. Many of the measures (e.g., Short Form 36) have a large number of subscales and ways of combining these subscales. We determined that the numerical details of differences in quality of life effects as measured by disparate instruments are unlikely to be of particular interest (e.g., a net difference of -2.1 on a scale ranging from 0-100) and will be very difficult to interpret (e.g., the interpretation of a net difference of -2.1 is different relative to a baseline score of 51 than a baseline score of 97). We believe the most pertinent questions are whether there was a statistically significant difference in quality of life between the interventions compared and which intervention is favored. Thus, for each quality of life measure, we first captured whether a statistically significant difference between interventions was found. If no, we extracted only that it was nonsignificant. However, if a significant difference were found, we calculated the net difference and 95 percent confidence interval (if possible) or difference between final values. This was done to assess the direction and magnitude of the difference.

Assessment of Methodological Risk of Bias of Individual Studies

We assessed the methodological quality of each study based on predefined criteria. For randomized controlled trials (RCTs), we used the same tools used in the 2012 AHRQ review as best we were able to determine from that review. For RCTs, we used the Cochrane risk of bias tool,[9] assessing randomization method and adequacy (high/low/unclear risk of bias), allocation concealment method and adequacy (high/low/unclear risk of bias), patient/participant blinding (high/low/unclear risk of bias), outcome assessor blinding (high/low/unclear risk of bias); if the article reported the study was "double blinded," we assumed that both patient and outcome assessor were blinded. We also captured intention-to-treat (high/low/unclear risk of bias), attrition bias (high/low/unclear risk of bias), group similarity at baseline (high/low/unclear risk of bias), adequate description of interventions (yes/no), and intervention compliance/adherence (high/low/unclear risk of bias). For observational studies, we used relevant questions from the Newcastle Ottawa Scale.[10] Note that for observational studies, the 2012 AHRQ review assessed only study strategies to reduce bias and justification of sample size. Thus, assessment of risk of

bias of observational studies differs between older and newer studies. For nonrandomized comparative studies (NRCS), we evaluated outcome assessor blinding, attrition bias, group similarity at baseline, whether groups were selected in a similar manner (high/low/unclear risk of bias), whether analyses were adjusted for differences between groups (yes/no), adequate description of interventions, compliance/adherence. For single group studies (for adverse events), we captured information on attrition bias and adequacy of intervention description. For all studies, we also included descriptions of "other" biases or issues.

Data Synthesis

All eligible studies from the 2012 AHRQ review and the updated searches were evaluated together without regard for the source of the study.

All included studies are summarized together in narrative form and in summary tables that tabulate the important features of the study populations, design, intervention, outcomes, and results. In addition, we have included descriptions of the study design, sample size, interventions, followup duration, outcomes, results, and study quality.

We analyzed both specific interventions and categories of interventions. Upon reviewing the list of evaluated interventions, we categorized them as follows:

- Behavioral therapy (nonpharmacological):
  - Bladder training, biofeedback, bladder support, cones, education, heat therapy, MBSR (mindfulness-based stress reduction), PFMT (pelvic floor muscle therapy), spheres, weight loss, yoga.
- Intravesical pressure release device (nonpharmacological).
- Neuromodulation (nonpharmacological), "the alteration of nerve activity through targeted delivery of a stimulus, such as electrical stimulation…, to specific neurological sites in the body":[22]
  - Electroacupuncture, InterStim™, magnetic stimulation, TENS (transcutaneous electrical nerve stimulation, including transvaginal, surface, and related electric stimulation).
- Periurethral bulking (nonpharmacological):
  - Autologous fat, carbonated beads, collagen, dextranomer hyaluronate, polyacrylamide, polydimethylsiloxane, porcine collagen.
- Anticholinergics (pharmacological):
  - Darifenacin, fesoterodine, flavoxate, oxybutynin, pilocarpine, propantheline, propiverine, solifenacin, tolterodine, trospium.
- Alpha agonist (pharmacological):
  - Duloxetine, midodrine, phenylpropanolamine.
- Hormones (pharmacological):
  - Vaginal estrogen, oral estrogen, subcutaneous estrogen, transdermal estrogen, raloxifene.
- Onabotulinum toxin A (BTX) (pharmacological)
- Other pharmacological:
  - Pregabalin (antiepileptic).

Urinary Incontinence Outcomes: Network Meta-Analysis

The main assumptions of network meta-analysis are:

1. Exchangeability of treatments

    a. Treatment C in a trial that compares A to C is similar to Treatment C in a trial that compares B to C.
2. Exchangeability of patients
    a. Participants included in the network could, in principle, be randomized to any of the treatments.
3. The "missing" treatments in each trial are missing at random or conditional only on known variables.
4. Trials do not differ with respect to distribution of effect modifiers
5. There are no differences between the observed and unobserved effects beyond random heterogeneity.

A large percentage of the studies (55/140, 39%) combined patients with stress and urgency UI without providing subgroup data. These included studies of treatments commonly used for only stress or only urgency UI. Thus, any analysis of the evidence, whether pairwise or network, would have to mix the two populations. However, we did conduct subgroup analyses of studies that included only patients with stress (60 studies) or urgency (25 studies) UI.

Likewise, in general, studies did not strictly distinguish between 1st, 2nd, and 3rd line therapies. For example, when recruiting patients for a trial of 2nd-line therapies, almost all studies did not report having required patients to have previously failed to improve with a 1st-line therapy. Studies also did not consistently report the severity of UI in the patients, so there was no way to account for that potential heterogeneity of populations in the analyses.

With these limitations in mind, we used network meta-analyses to summarize the study findings for UI outcomes (cure, improvement, and satisfaction) since studies have compared a large number of specific interventions (53) and categories of interventions (16) and many interventions have not been directly compared with each other. Network meta-analysis combines data from direct (head-to-head) and indirect comparisons through a common comparator. Instead of conducting numerous pairwise meta-analyses solely of interventions that have been directly compared in studies, network meta-analysis simultaneously analyzes all interventions that have been compared across studies. We used this approach because it allows efficient analysis and summarization of the corpus of evidence. It also allows estimates of comparisons that have not been directly compared in studies. For the UI outcomes, studies have compared a large number of specific interventions (51) and categories of interventions (14). Thus, across interventions, there are 1275 possible comparisons of specific interventions and 91 possible comparisons of intervention categories, Not surprisingly, the large majority of these comparisons have not been made directly in studies. Network meta-analysis provides simultaneous estimates of comparative effects among all interventions.

However, we recognize that not all comparisons are of equal interest or are clinically meaningful. We took two major approaches to ensure that our conclusions are consistent with clinical logic together with the evidence base. First, based on current guidelines[7, 8] we categorized interventions based on whether they are used primarily for stress UI or for urgency UI (or both) and also whether they are typically used as 1st, 2nd, or 3rd line therapy. From the overall network meta-analyses, we summarized six (overlapping) sets of comparisons: 1) stress UI interventions compared to no treatment, 2) 1st and 2nd line therapies used for stress UI compared to each other, 3) 3rd line therapies used for stress UI compared to each other or to 1st or 2nd line therapies, 4) urgency UI interventions compared to no treatment, 5) 1st and 2nd line therapies used for urgency UI compared to each other, and 6) 3rd line therapies used for urgency

UI compared to each other or to 1st or 2nd line therapies. Second, we sought and summarized comparisons made (directly) within studies that restricted their study participants to women with either stress UI or urgency UI. In theory, the sets of interventions evaluated by these two different approaches (selected interventions from the overall analysis and evaluated interventions from stress- or urgency-only studies) should have corresponded one to one. However, we found several studies of neuromodulation in women with stress UI, despite its being recommended only for women with urgency UI. Ideally, we would have conducted two sets of network meta-analyses, one for stress UI and one for urgency UI, but as described, the evidence base did not allow for this.

Separate network meta-analyses were conducted for each UI outcome (cure, improvement, and satisfaction). Subgroup network meta-analyses were also conducted for 1) studies of women with stress UI only, 2) studies of women with urgency UI only, and 3) studies of older women, regardless of UI type. We conducted network meta-analyses with mixed effects (random intercepts and fixed intervention slopes) or full-random effects (random intercepts and random slopes) multilevel models within the generalized linear and latent mixed models. We used the normal approximation to discrete likelihoods with a canonical (logit) link function. Treatment effect estimates from such models are odds ratios (OR). We fit models by maximizing the (restricted) likelihood. We assessed the consistency of direct and indirect effect estimates by comparing results from network meta-analyses with pairwise meta-analyses. We also qualitatively compared the results of the overall network meta-analyses with results from network meta-analyses of studies of women with either stress UI or urgency UI. See Appendix J for further details regarding network meta-analysis methodology.

We explored clinical and methodological heterogeneity in subgroup analyses. We did not conduct dose-response meta-analyses because there was substantial heterogeneity in the definitions of intervention intensity (e.g., dose) across studies, particularly among the nonpharmacological interventions. Based on their being sufficient available studies and data, we performed the following subgroup network meta-analyses: women ≥60 years of age, urgency UI only studies, and stress UI only studies. There were insufficient data to evaluate the following subgroups: women with high physical activity levels, military personnel or veterans, racial or ethnic minorities, and women with mixed UI.

Because of the relative sparseness of studies that reported data specific to either those with stress UI or urgency UI, we reevaluated the overall network meta-analyses focusing separately on those intervention categories used primarily for either stress or urgency UI. We allowed interventions to be included in both stress and urgency UI analyses (e.g., behavioral therapy, which is used to manage all types of UI). We further, assessed whether intervention categories are used as either first- or second-line therapy in one group or third-line therapy in another group. The categorization of different interventions was based on recommendations from the UK National Institute for Health and Care Excellence (NICE) and American Urological Association (AUA) guidelines.[7, 8] For stress UI, we included behavioral therapy (1st line), alpha agonists (2nd line), hormones (2nd line), periurethral bulking (3rd line), and intravesical pressure release devices (3rd line). For urgency UI, we included behavioral therapy (1st line), anticholinergics (2nd line), hormones (2nd line), BTX (3rd line), and neuromodulation (3rd line).

To aid the interpretation of these analyses we also present model-based estimates for the mean frequency of an outcome in the examined interventions, as well as forecasts of the frequency of the outcome in a new setting (e.g., a new study or in a population) that is similar to the studies in the meta-analysis. The forecast's point estimate about the frequency of the

outcome is very close to the point estimate of the mean frequency of the outcome over the meta-analyzed studies. However, the 95 percent confidence interval (CI) for a forecast of the frequency of an outcome in a new setting accounts for between-study heterogeneity, and will, thus, be broader than the corresponding 95 percent CI for the mean frequency of the outcome across the analyzed studies.

We assessed inconsistency by comparing the fit of models that do not assume consistent intervention effects versus typical network meta-analysis models that assume consistent treatment effects. Analyses did not identify statistical evidence of inconsistency. Because such analyses are known to be underpowered, we also compared qualitatively the agreement of estimates based only on direct data versus of estimates based on both direct and indirect data. Such estimates were deemed to be congruent.

Quality of Life and Adverse Events

As described above, under *Data Extraction and Data Management*, quality of life outcomes were extracted and summarized in a semiquantitative manner. Where studies reported no significant difference in quality of life measures between interventions, no further results data were extracted or summarized. Where there were significant differences between interventions, we captured and summarized net difference in quality of life measure (or difference in final values) and full information about the quality of life instrument, including scale and directionality. We calculated and summarized the percentage of people receiving each intervention who reported an adverse even as defined by the individual studies.

Presentation of Results

We present results with plots and tables, namely, evidence graphs, league tables, and comparative effects tables.

Evidence Graphs

We use evidence graphs such as the one in Figure 2 to describe which interventions have been compared with others. An evidence graph comprises nodes, which represent interventions, and edges (depicted by a line linking nodes). Edges connect a pair of nodes only if the corresponding interventions have been directly compared in at least one head-to-head study.

In Figure 2, nodes for interventions from the same intervention category (e.g., alpha agonists) are all within a bubble. For example, nodes C1 (corresponding to the anticholinergic oxybutynin) and C3 (corresponding to the anticholinergic tolterodine) are within the same yellow bubble (anticholinergics).

A "connected subgraph" describes a set of nodes that are connected to each other but not to nodes in other subgraphs. For example, Figure 2 has two connected subgraphs, which include the following nodes:

1. B (onabotulinum toxin A) and N2 (InterStim™)
2. All remaining nodes in the evidence graph.

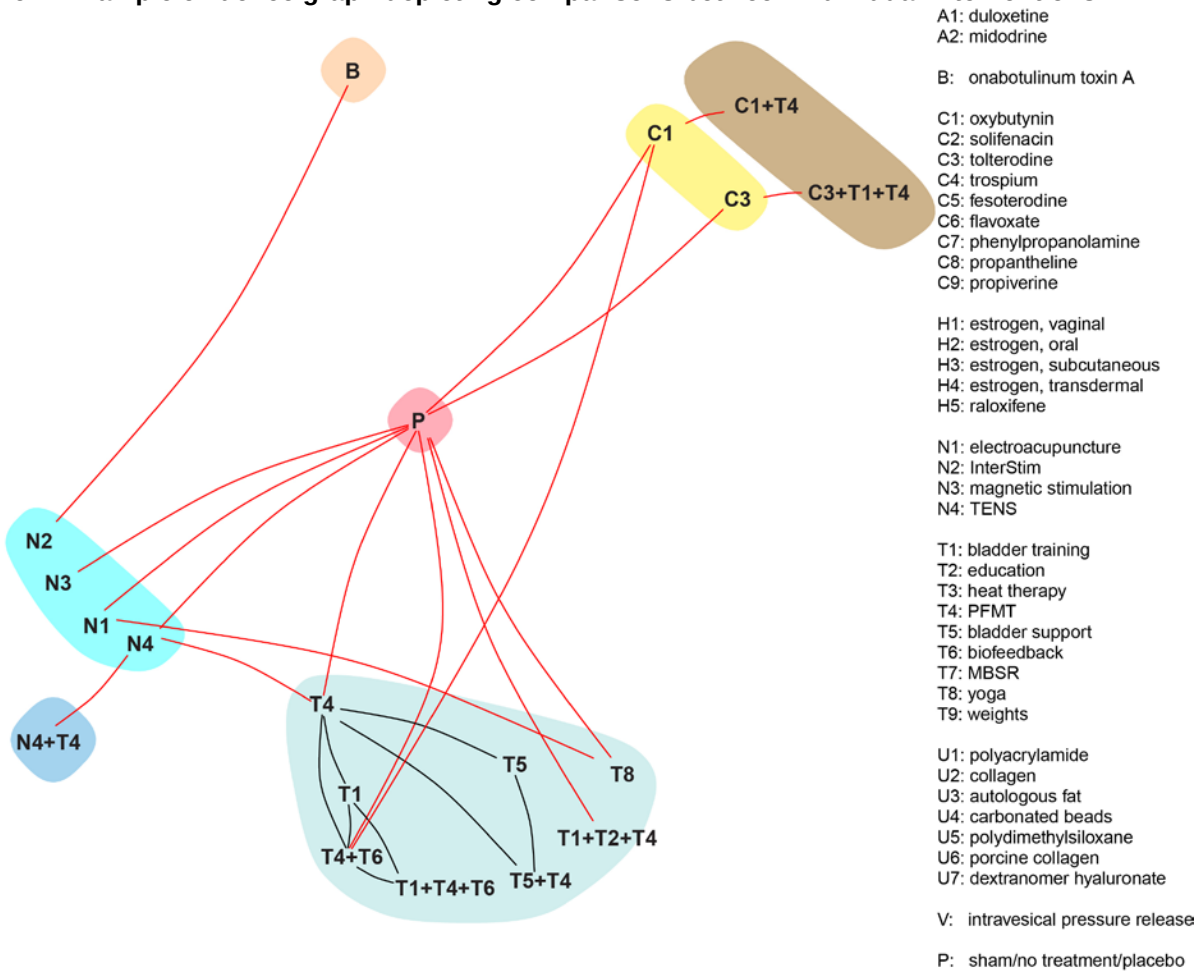
In the figure, B and N2 have been compared with each other but not to any other interventions. In the rest of the report we simplify the term to "subgraph."

Identifying subgraphs is important, because there is no statistical comparison between interventions that belong to different subgraphs.

Figure 3 is an analogous representation of the comparisons among intervention *categories* for the same network of interventions depicted in Figure 2. When one considers intervention categories, comparisons between interventions that are within the same category are not pertinent. For example, when comparing neuromodulation (node N in the figure) with placebo (node P), the comparison between electroacupuncture (node N1 in Figure 2) and transcutaneous electrical nerve stimulation (TENS, node N4) is not pertinent.

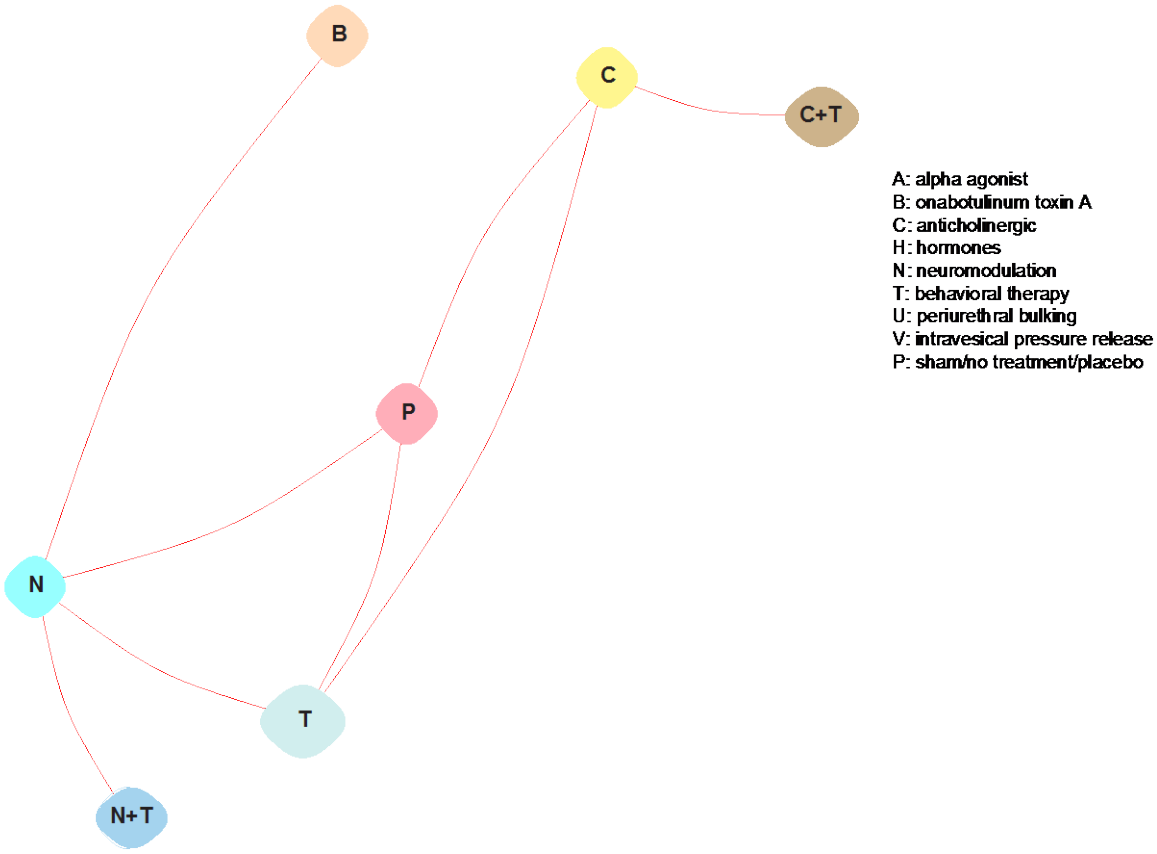
Comparisons of categories of interventions allows more studies to be included in the network meta-analysis than comparisons of individual interventions. In Figure 2, BTX (node B) is in its own subgraph with InterStim™ (node N2), so it cannot be compared with other interventions. However, in Figure 3, InterStim™ (node N2) and TENS (node N4) have been combined into the category neuromodulation (node N) and BTX (node B) is now connected to the other interventions through the intervention category neuromodulation (node N).

Figure 2. Example evidence graph depicting comparisons between individual interventions



Abbreviations: MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation.

Figure 3. Example evidence graph depicting comparisons between intervention categories



Comparative Effects Tables

Comparative effects tables describe odds ratio (OR) estimates and 95 percent CIs for all pairwise comparisons in a subgraph. As an example, Table 3 presents the results that correspond to the evidence graph on satisfaction with treatment in Figure 3. The intervention categories being compared are listed across the diagonal line of cells. Each reported OR (95% CI) represents a comparison between the two intervention categories to the left and below the cell. ORs greater than one favor the intervention category to the left of the cell (the row intervention) over the intervention below the cell (the column intervention). Statistically significant ORs are emphasized. Grey shading of the cells indicates that the OR estimate is derived only from indirect evidence (i.e., that no trials directly compared the interventions). For these estimates, the row and column interventions do not have an edge in the evidence graph (e.g., Figure 3). Cells without shading indicate that studies have reported direct (head-to-head) comparisons; the OR estimates reflect a combination of both direct and indirect comparisons from the network meta-analysis.

Note that all estimates of OR are derived from the network meta-analysis. In Table 3, the comparison between anticholinergics and behavioral therapy in informed by the studies that directly compared the two intervention categories and all the indirect comparisons from the network. These estimates are generally close to, but may not be identical to, standard pairwise meta-analysis results. Often confidence intervals are narrower.

Table 3. Example odds ratio table comparing intervention categories

Interv-entions*	OR (95% CI) †					
BTX (B)	4.89 (2.75, 8.69)‡	3.03 (1.45, 6.35)‡	1.35 (0.90, 2.05)	1.18 (0.23, 6.11)	1.58 (0.80, 3.15)	12.7 (7.44, 21.6)‡
	Antichol (C)	0.62 (0.39, 1.01)	0.28 (0.18, 0.42)‡	0.24 (0.05, 1.23)	0.32 (0.19, 0.54)‡	2.60 (2.05, 3.28)‡
		Antichol + Behavioral Tx (C+T)	0.45 (0.24, 0.83)‡	0.39 (0.07, 2.11)	0.52 (0.26, 1.04)	4.18 (2.48, 7.07)‡
			Neuromod (N)	0.87 (0.18, 4.29)	1.16 (0.67, 2.04)	9.37 (6.64, 13.2)‡
				Neuromod + Behavioral Tx (N+T)	1.34 (0.25, 7.10)	10.7 (2.14, 53.9)‡
					Behavioral Tx (T)	8.04 (4.91, 13.2)‡
						Placebo/Sham/ No Treatment (P)

Cells shaded gray indicate that the estimate is based only on indirect comparisons. Results are given as odds ratios (95% confidence intervals). Odds ratios >1 favor the row intervention (to the left) over the column intervention (below). Comparisons below the diagonal are omitted (blank cells).
This analysis is for the outcome of satisfaction with the overall result. Analyses correspond to the evidence graph in Figure 3.

Abbreviations: CI = confidence interval, OR = odds ratio.

* Interventions are listed across the diagonal line of table cells. Intervention category codes are in parentheses, corresponding with the associated figure.
† In all cells with numerical data.
‡ Statistically significant. These cells are also in bold font to improve visibility.

League Tables

League tables such as Table 4, describe additional measures derived from the network meta-analyses. The “mean percent” represents the average percentage of women with the outcome of interest for each intervention (or intervention category) across the included trials (i.e., the absolute rate). The “forecasted percent” represents an estimate of what percentage of women would have the outcome in a new setting (e.g., in a new study) that is analogous to the settings of the analyzed studies. The forecasted percent is a more conservative, less precise estimate (with wider 95% CI) than the mean percent. In this example, on average 51 percent of women treated with anticholinergics were satisfied with treatment, compared with only 29 percent of women treated with sham therapy. However, the estimates are imprecise. For the women included in the trials, on average the percent who were satisfied with anticholinergics is likely to be somewhere between 32 to 70 percent (the 95% CI). For similar women in a future trial (or in a similar setting), it is likely that between 10 and 91 percent will be satisfied. This wider interval factors in the heterogeneity (differences) among studies.

Table 4. Example mean and forecasted outcome rates by intervention category

	Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological	BTX (B)	85.5 (73.9, 92.5)	85.5 (43.6, 97.8)
	Anticholinergic (C)	54.7 (39.9, 68.8)	54.7 (14.2, 89.8)
Nonpharmacological	Neuromodulation + Behavioral Therapy (N+T)	83.3 (49.2, 96.3)	83.3 (29.0, 98.4)
	Neuromodulation (N)	81.4 (70.0, 89.1)	81.4 (37.3, 97.0)
	Behavioral Therapy (T)	78.9 (64.7, 88.5)	78.9 (33.1, 96.6)
Combination	Anticholinergic + Behavioral Therapy (C+T)	66.1 (48.4, 80.2)	66.1 (20.4, 93.7)
No treatment	Placebo/Sham/No Treatment (P)	31.8 (20.6, 45.5)	31.8 (6.0, 77.2)

Intervention category codes are in parentheses, corresponding with the associated figure.

Abbreviations: BTX = onabotulinum toxin A, CI = confidence interval.

* The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Grading the Strength of Evidence

We grade the strength of the total body of evidence (from the combined 2012 AHRQ review and update) as per the AHRQ Methods Guide on assessing the strength of evidence (SoE).[11] We assessed the strength of evidence for each outcome category (UI outcomes, quality of life, and adverse events). Many thousands of comparisons can be estimated based on the network meta-analyses, and we do not characterize the strength of evidence for each one separately. Instead, we characterized the strength of evidence for our main conclusion statements across all intervention categories. For each strength of evidence assessment, we considered the number of studies, their study designs, the study limitations (i.e., risk of bias and overall methodological quality), the directness of the evidence to the KQs, the consistency of study results, the precision of any estimates of effect, the likelihood of reporting bias, other limitations, and the overall findings across studies. Based on these assessments, we assigned a strength of evidence rating as being either high, moderate, or low, or there being insufficient evidence to estimate an effect. The data sources, basic study characteristics, and each strength of evidence dimensional rating are summarized in a "Summary of Evidence Reviewed" table detailing our reasoning for arriving at the overall strength of evidence rating.

Addressing the Contextual Question

To address the contextual question, we followed the general guidance of the U.S. Preventive Services Task Force.[5] During abstract screening, we identified any potentially relevant studies that were opportunistically found during the systematic review searches for KQs 1 to 4. To supplement the published literature, we also solicited input (via email) from several clinical and research experts in female urinary incontinence known to the authors via the Society of Gynecologic Surgeons, its Systematic Review Group, the American Urogynecologic Society, and colleagues suggested by selected members of the PCORI stakeholder panel. They were asked for their thoughts on how "patients define successful outcomes for the treatment of UI (i.e., how do patients measure treatment success)", for suggestions of relevant articles, and for any other thoughts or comments on the issue.

Based on data and input garnered from these sources, we answered the contextual question in a narrative format. We did not systematically extract or review all eligible studies, create

summary tables, or assess the strength of evidence. We did not conduct a survey or focus group of women with UI. In summarizing the evidence, we prioritized the findings with a “best evidence” approach, based on the degree to which each study appropriately evaluated ault women with UI, and their opinions and preferences.

The results of the contextual question were fed back into the assessment of studies and of the evidence base. We reviewed the list of included outcomes based on women’s conceptions of what defines a successful outcome.

Contextual Question

As described in the *Methods* chapter, we took two main approaches to find information regarding women's thoughts of what defines a successful outcome in the treatment of urinary incontinence (UI) or how patients measure treatment success. We solicited feedback from a few clinicians and nurses who treat women with UI and patient advocates to obtain insight into this question based on their experience. We also reviewed studies and other published literature known to us, found through our systematic review for the Key Questions and grey literature searches, and suggested to us by the informants.

Informant Input

The primary theme across our informants was that, in practice, the highest priority outcomes for women seeking treatment for UI are highly variable. Some of these differences are likely due to variable preferences and values. As an example, consider the difference between two women who each had to use six large incontinence pads per day prior to treatment. One woman was highly satisfied that, after treatment, she only needed to use three heavy pads per day and experienced fewer episodes of nocturia (the need to urinate overnight). In contrast, the other woman was dissatisfied because she still had to use a single light pad after treatment. Other differences in treatment goals may be attributable to differences in patients' ages, type and severity of UI, and comorbidities.

Informants described several outcome categories pertaining to different aspects of symptoms and the sequelae of and behaviors related to urgency and incontinence. These categories overlap to some extent, but can be summarized as follows:

- **UI/physical symptoms.** These primarily relate to a desired reduction in episodes and volume of *incontinence*, which may be expressed as the number and/or size of *incontinence* pads required or, simply, as avoidance of *getting wet*. One informant described this category as "comfort" (not being wet or bothered with pads). The ultimate goal is a *cure of incontinence* without the need to wear a pad. This also includes *frequency of urgency symptoms* (or need to use toilet).
- **Psychological/emotional or self-concept.** Women may be *fearful* of accidents, have *embarrassment* over wetness and odors, and have other *emotional distress*. Stated differently, women may have concerns, distress, or fear that people think they are *dirty, smelly,* or *unhygienic*. UI may also result in feelings of *low self-esteem* or that something is wrong with them. This can lead to *anxiety* and *depression*. Successful treatment can result in feelings of *freedom or liberation*, improved *self-confidence*, improved *sense of self*, and feeling more *feminine*.
    - A particular aspect that was deemed very important for some women is a sense of *control* of their lives.
- **Interpersonal relationships.** UI affects how women *interact* with family, friends, colleagues, strangers, and others. Not only are there psychological sequelae of UI, but there are also convenience and UI management issues. Examples of affected interpersonal relationships include inability to play with children or visit grandchildren without experiencing incontinence or having to urinate first; another complaint is the inability to travel without immediate/ready/prompt access to a bathroom resulting in restricted or limited activities with others.

    - An important aspect of impaired interpersonal relationships includes *sexual activities*, which may be avoided or limited because of fear of incontinence, odors, and reduced self-esteem.
- **Lifestyle restrictions.** Many aspects of typical day to day events may be affected. Treatment goals may include *return to normal activities*, "*reengaging in life*", or removal of *travel restrictions* and of *employment impediments*. Women may lose work time due to incontinence. One informant described patients who are relieved that they can decrease the number of requests for a "toilet pass". One patient required a prescription for her employer to allow her to use the toilet every 2 hours.
    - A related aspect is the ability to stay healthy. This relates primarily to a lack or complete avoidance of exercise. Women with UI may not feel able to participate in sports or exercise, including going to the gym or a public pool. In part, this may be due to the frequent need to stop exercising to go to the toilet or the embarrassment caused by leakage during exercise.
- **Inconvenience/coping.** Issues relate to the need to change clothes, carry and dispose of incontinence pads, plan bathroom trips and locations, or the need to urinate frequently.
- **Economic.** The cost of incontinence pads or other devices.
- **Sleep.** UI, in particular urgency incontinence, may lead to nocturia, which can adversely affect women's sleep, which can have important impacts on their health and wellbeing.

Literature Summary

Six articles that were particularly pertinent. Two studies conducted focus groups,[12, 23] two were surveys,[13, 24] and two were evaluations of drug studies.[25, 26] Briefly, the six studies were as follows:

- Lee 2012 (PMID 22698418) conducted a survey of patients treated for overactive bladder (OAB), among whom was a subgroup of 103 women with UI. This survey focused on treatment goals.[24]
- Sung 2011 (PMID 21400574) conducted focus groups in 35 women with UI. The primary purpose was to evaluate whether a PROMIS (Patient-Reported Outcomes Measurement Information System) questionnaire captured the concerns of women with UI.[23]
- Cardozo 2012 (PMID 22576329) reported a single-arm study of fesoterodine in which a subgroup of 128 people had urgency UI, of whom about 90 percent were women.[25]
- Heisen 2016 (PMID 26789823) conducted discrete choice experiments via a survey in 442 people with OAB to rank outcomes and potential adverse events related to oral pharmacotherapy (antimuscarinics and beta-3 adrenoceptor agonists).[13] While 90 percent of those surveyed had UI, the study included both women and men (47%). However, no statistically significant differences were found between women and men. The discrete choice experiments involved asking participants to choose between two different scenarios. The scenarios randomly varied multiple outcomes, such that across a range of scenarios and across study participants, preferences could be inferred.
- Cartwright 2011 (PMID 21279328) analyzed data from a randomized controlled trial (RCT) of oxybutynin in 96 women with OAB, with or without incontinence.[26] Among these participants was a subgroup of 62 women with urgency incontinence.

- Coyne 2014 (PMID 20579138) conducted focus groups with 16 women with lower urinary tract symptoms. However, the number of women with UI was not reported. The goal was to develop a questionnaire related to urinary urgency.[12]

Several themes and conclusions came out of these studies:

- **Symptoms.** The percentage of people who prioritized improving UI symptoms (such as incontinence, frequency, urgency) as a major treatment goal varied widely among studies, but among those studies that ranked outcomes, UI symptoms were always of the highest priorities. Cordozo 2012 found that 81 percent of study participants reported that the goal to "reduce my urine leakage" was very important.[25] Similarly, Lee 2012 reported that 80 percent of the goals discussed by women with UI were related to symptom relief. However, Cartwright 2011 found that 49 percent of women with OAB listed improved physical symptom goals and among the subset of women with urgency UI, only 45 percent cited eliminating urgency UI symptoms.[26]
    - In two studies that ranked physical symptom goals in people with UI, each reported a different goal ranking or priority order:
        - Lee 2012 (103 women with incontinence): frequency (32%), incontinence (28%), and urgency (14%).[24]
        - Heisen 2016 (442 women and men mostly with UI): incontinence, nocturia, urgency, frequency (percentages not reported).[13]
- **Physical function.** Sung 2011 performed focus group sessions that discussed physical, mental, and social health outcomes. They found that women were particularly concerned with both their level of physical functioning (i.e., their extent of participation in activities such as walking, shopping, and household chores), which they may be doing less than they would like because of UI, and their satisfaction with their activities (including comfort level and confidence with the activities).[23]
- **Social function.** Sung 2011 also reported that women were concerned with interpersonal interactions, discussing occupational, social, and community roles. Similar to physical function, there were concerns with both level of social function and satisfaction with their interactions.[23] Cartwright 2011 reported that 12 percent of the goals elicited from women with OAB related to lifestyle restrictions.[26]
- **Coping behaviors.** Lee 2012 and Cartwright 2011 reported that 13 and 19 percent, respectively, of the goals discussed by women with UI (or OAB) related to eliminating coping behaviors, such as being aware of toilet locations, fluid restriction, convenience voids, changing underwear, and wearing pads.[24, 26]
- **Psychological symptoms.** Cartwright 2011 reported that among women with OAB (with or without incontinence), 16 percent reported goals of decreasing anxiety, loss of control, stigma, depression, and sexual dysfunction and increasing self-esteem.
- **Quality of life.** Lee 2012 reported that 8 percent of patient goals related to improving health-related quality of life. Particular goals included improving sleep quality, continuing work, doing activities and travelling without worry of urinary frequency or incontinence.[24]
- **Adverse events.** Heisen 2016 ranked patients' concerns regarding potential adverse events from medication use in the following order: increased heart rate, increased blood pressure, constipation, and dry mouth.[13]
- **Symptoms versus adverse events.** Women considering treatment for UI are not only concerned about reduction of UI symptoms, but they also balance the benefits with the

risks, severity, or types of adverse event that may occur. Coyne 2014 noted that when considering medications, women thought it was important to reduce symptoms without side effects.[12] Heisen 2016 (who also surveyed clinicians) found that patients put more emphasis on limiting the risk of side effects than on improving symptoms, in contrast with physicians who put more emphasis on increasing benefits.[13]

- **Outcome ranking.** Across all reported outcomes (UI improvement and adverse events) from medication therapy (antimuscarinic/beta-agonist), Heisen 2016 ranked outcomes as follows: (1) incontinence, (2) nocturia, (3) risk of increased heart rate, (4) urgency, (5) frequency, (6) risk of increased blood pressure, (7) risk of constipation, and (8) risk of dry mouth. Sung 2011 reported that women ranked physical function, social function, and daily life function (not defined) more important than mental/emotional health (including anxiety, depression, anger) or sexual function. However, items in all domains were rated highly relevant by at least some women (including sleep/wake, fatigue).[13] Women with OAB, in Cartwright 2011, prioritized physical symptoms (49%), coping strategies (19%), psychological symptoms (16%) and lifestyle restrictions (12%).[26]
- **Outcome expectations.** Without referring to specific outcomes, Coyne 2014 reported that few women (with lower urinary tract symptoms) expected restoration to "normal", but instead had the goal of improvement to "near normal". Half of the women said that resolution of just one of their symptoms would be a favorable outcome. More than 80 percent of the women described that a 50 percent reduction in symptoms would be indicative of a meaningful change, particularly if not accompanied by bothersome side effects.[12]

In summary, we conclude that while relief of UI (or physical) symptoms is often ranked as the most important outcome (or set of outcomes) by most women with UI, it is not the highest priority for all of them (20% to 50% in three studies), and other outcomes are highly important to many women. There is no clear ranking of the specific UI symptom outcomes, but the most important ones appear to be incontinence, urgency, and frequency. However, in at least one study,[12] many women would be satisfied with improvement in their symptoms or resolution of just one of their symptoms.

Other important categories of outcomes for a large percentage of women include (1) the ability to satisfactorily participate with both physical function (physical activities such as exercise) and social function (interacting with other people), (2) reduce the need for coping behaviors (e.g., wearing pads, toilet mapping), (3) improve psychological symptoms (e.g., anxiety, depression, self-esteem, loss of control), (4) improve quality of life (e.g., sleep, worry-free travel), and (5) lessen the degree of adverse events. Economic concerns related to out-of-pocket costs (e.g., of incontinence pads) and employment are likely also important concerns for many women.

Women with UI who are considering treatment may be more concerned than clinicians about the tradeoffs between reducing UI symptoms and the risks of adverse events. This finding was identified in a discrete choice experiment conducted among both patients and clinicians.[13] None of our physician or nurse practitioner informants discussed the risk of adverse events.

Results

The structure of the Result section is as follows:

We first describe and summarize the full network meta-analyses for urinary incontinence (UI) outcomes (cure, improvement, and satisfaction). The full network meta-analyses included and compared, as possible, all interventions (or intervention categories) across Key Questions (KQ) 1 to 4. The network meta-analyses comparing intervention categories (e.g., alpha agonists, neuromodulation) are described in detail. The network meta-analyses of specific interventions are summarized briefly but are otherwise presented only in the appendixes, as described below. All presented odds ratios (ORs) for UI outcomes are based on network meta-analytic combinations of direct and indirect evidence; none are based on pairwise (standard) meta-analysis of direct evidence only.

Following the description of the full network meta-analyses, are four sections with results specific to each of the four KQs. These include results from the network meta-analyses on UI outcomes (cure, improvement, satisfaction) that are specific to each KQ, quality of life, and adverse events. The analyses and results for the UI outcomes for each KQ are identical to those presented for the full network meta-analyses, but they focus on the relevant KQ.

Overview of the Evidence Base Addressing All Key Questions

The update searches returned 7840 new citations across all databases searched, of which we excluded 7117 during abstract screening (Figure 4). Of the 723 articles screened in and reviewed in full text, 613 were found to be irrelevant, primarily because they did not include the population of interest (more than 90% women with urinary incontinence; 298 studies). Other reasons for exclusion were mostly study-type factors, including a lack of peer review (119 studies), a small sample size in nonrandomized or noncomparative studies (62 studies), a lack of primary results (61 studies), new reports from studies included in the 2012 Agency for Healthcare Research and Quality (AHRQ) review that did not give new outcomes of interest (57 studies), no intervention or comparison of interest (12 studies), and languages we could not translate (4 studies). A full list of excluded studies is in Appendix B. The 109 new studies identified were combined with the 134 studies from the original report that were deemed to meet eligibility criteria. Thus, we included a total of 233 studies in 244 articles, of which 140 reported UI outcomes, 96 reported quality of life outcomes, and 127 reported adverse events.

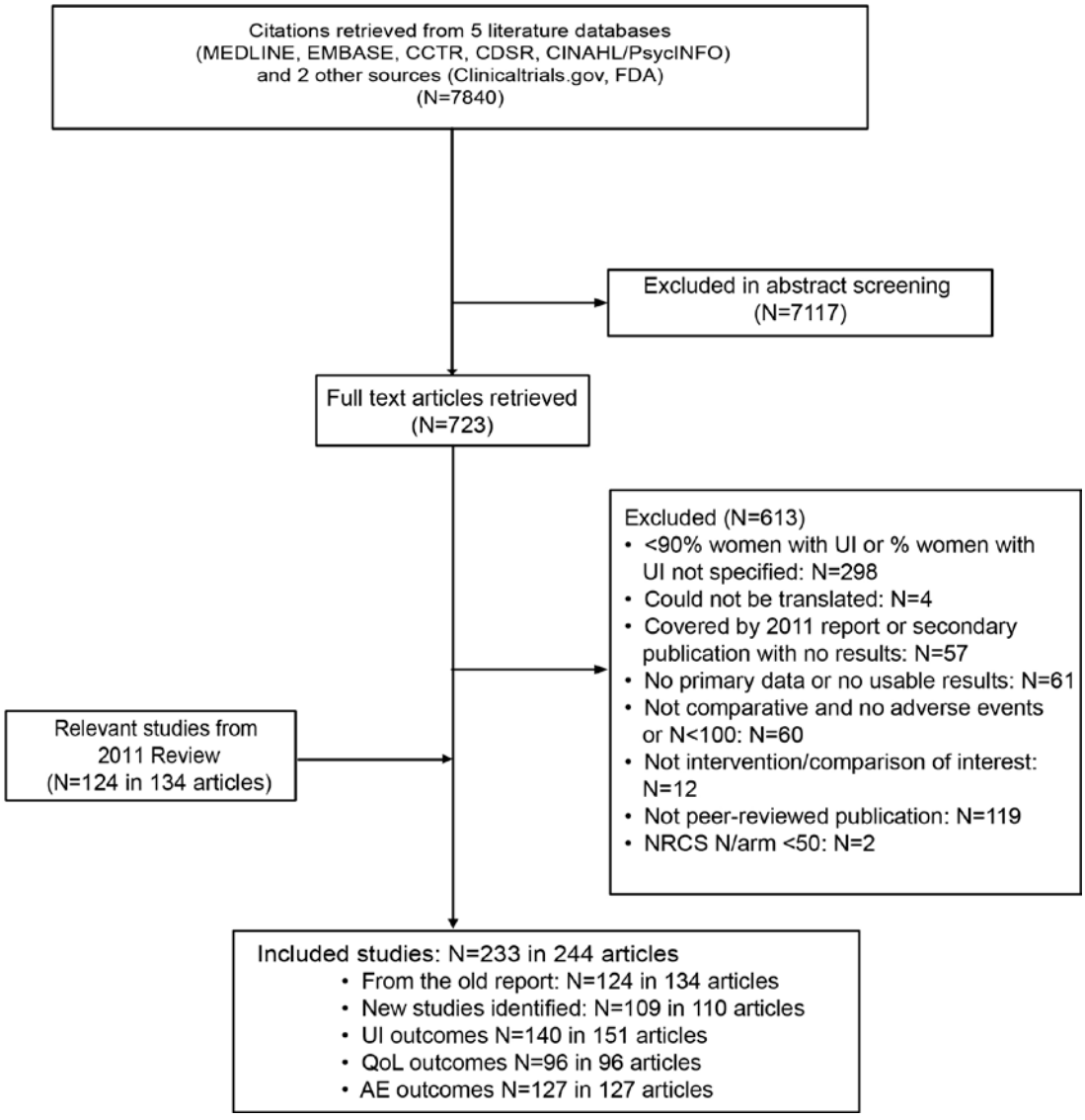
The eligible studies evaluated the following intervention categories (and combinations thereof):

- Nonpharmacological
  - Behavioral therapy
  - Intravesical pressure release
  - Neuromodulation
- Pharmacological
  - Anticholinergics
  - Alpha agonists
  - Hormones
  - Onabotulinum toxin A (BTX)
  - Antiepileptic
  - Periurethral bulking

Together with no treatment (including sham and placebo) and combinations of interventions, 16 intervention categories were evaluated. Of note, the recently Food and Drug Administration-approved beta agonist mirabegron was not evaluated for UI outcomes or quality of life by any eligible study. The antiepileptic pregabalin was also not evaluated for UI outcomes. The most common reasons for exclusion of these studies were that the population included men or people with undefined or nonincontinent ("dry") overactive bladder, or the studies were not peer reviewed.

Following Figure 4, we first describe the total body of evidence across all KQs and intervention types (nonpharmacological and pharmacological).

Figure 4. Literature flow

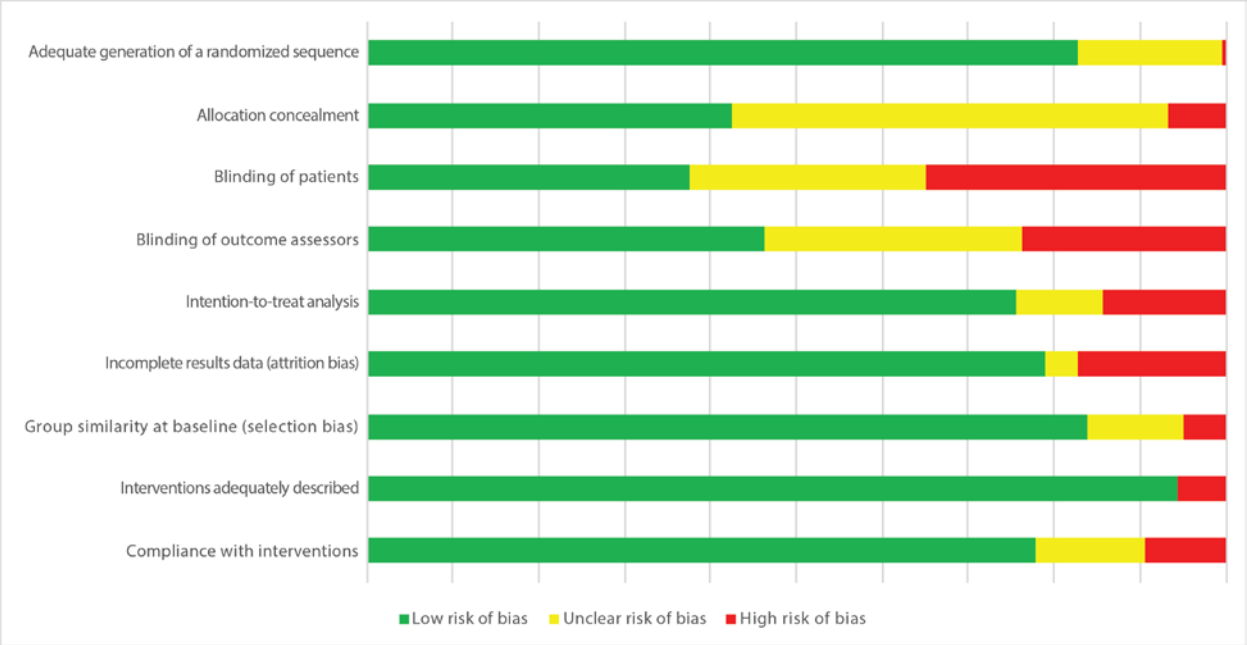


Abbreviations: AE = adverse events, NRCS = nonrandomized comparative study, QoL = quality of life, UI = urinary incontinence, CCTR = Cochrane Controlled Trials Register, CDSR = Cochrane Database of Systematic Reviews, FDA = Food and Drug Administration

Risk of Bias

Risk of bias across all studies is presented in Figure 5. Full risk of bias evaluations by study are given in Appendix D.

Figure 5. Risk of bias for all studies with urinary incontinence or quality of life outcomes



Study Characteristics of Studies With Urinary Incontinence Outcomes

The characteristics of the 140 included studies (in 151 articles) that reported UI outcomes are summarized in Appendix C, Table C-3. They are listed in alphabetical order. We identified 51 studies in the update search and included 89 from the 2012 AHRQ report.

Across all trials, the mean or median age of enrollees ranged between 33 and 85 (median 55; interquartile range [IQR] 50 to 59) years. Analyzed sample sizes ranged between 18 and 2393; median 85 (IQR 50 to 218).

Study Characteristics of Studies With Quality of Life Outcomes

Quality of life outcomes were evaluated in 96 studies. Appendix E (Table E-1) gives the baseline data for these studies. Ninety-five studies were randomized controlled trials (RCTs), and one was an nonrandomized comparative study (NRCS); 60 were newly identified in the update. The mean or median ages ranged from 32 to 85 years. Analyzed sample sizes ranged between 14 and 2393 for the RCTs, with a median of 57 (interquartile range [IQR] 33 to 128); the non-randomized study had 6844 participants. Appendix C contains details of study design and baseline (Table C-1) and interventions (Table C-2) for the new studies; information for the studies in the 2012 AHRQ report are given in the appendixes of that report.

The studies evaluated several quality of life domains: bother, daily activities, distress, general health, mental health, pain, sexual health, and sleep/energy. Results are given by KQ below. Appendix E contains summary (Table E-2) and detailed (Table E-3) quality of life results. Quality of life was not evaluated by network meta-analysis, but instead by within-study statistical significance and directionality.

Study Characteristics of Studies Reporting Adverse Events

Adverse events outcomes were evaluated in 127 studies. Most included studies are RCTs or NRCS, but 16 are single group (noncomparative) studies. Results for adverse events are given for each KQ below. Details of design and intervention for the new studies are given in Appendix C; information for the studies in the 2012 AHRQ review are given in the appendixes of that report. Full adverse events data are given in Appendix F.

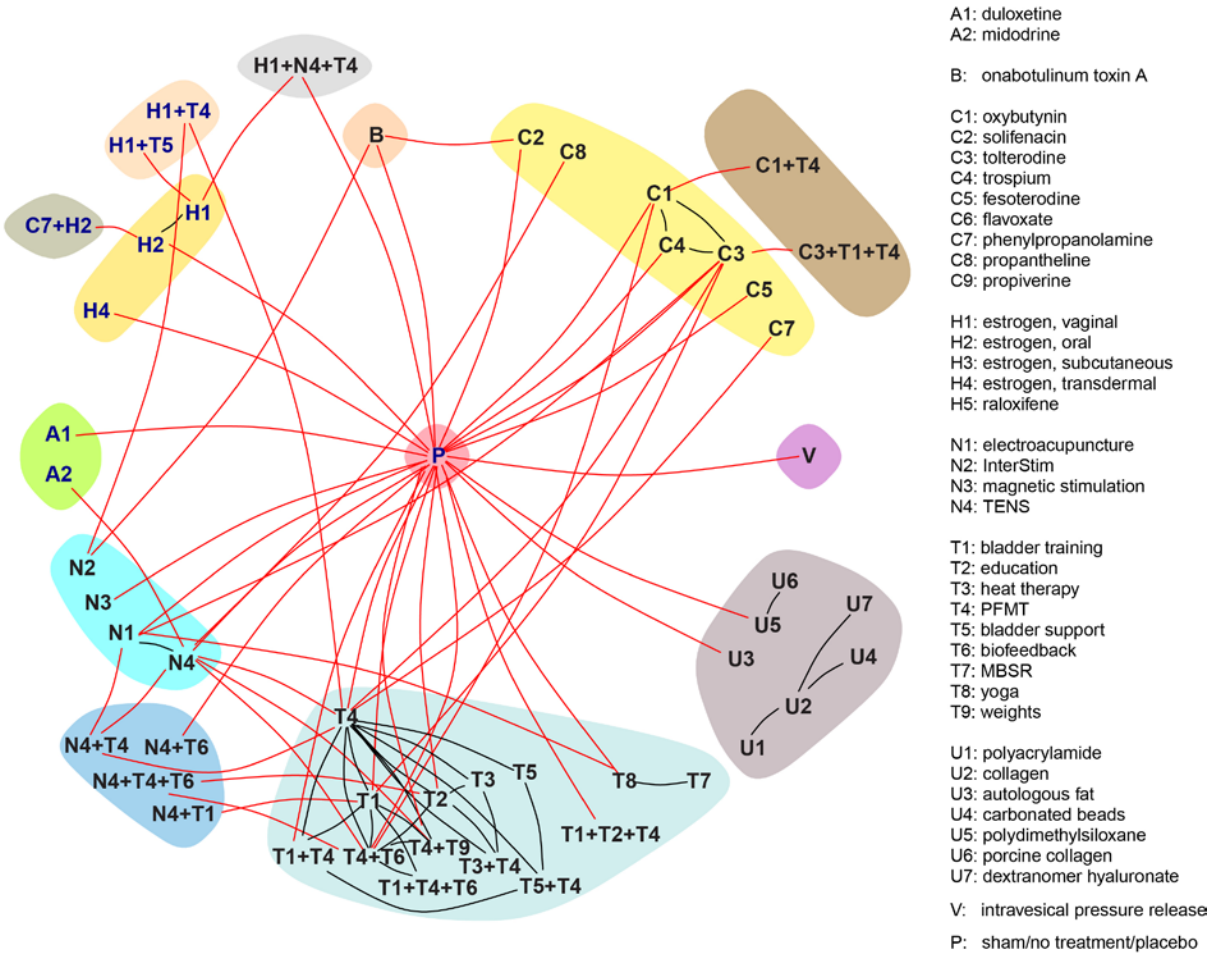
Key Questions 1 to 4: Network Meta-Analyses for Urinary Incontinence Outcomes Across All Interventions

We first describe the findings from the network meta-analyses for cure, improvement, and satisfaction with control of UI symptoms, together with subgroup analyses. In the following sections we address each Key Question separately, with a focused summary of the UI outcomes and descriptions of the quality of life and adverse event findings.

The evidence graphs in Figures 6 and 7 show that across studies there are 80 comparisons that have been conducted among 51 interventions (Figure 6), which fall into 14 intervention categories (Figure 7). Studies of antiepileptics (pregabalin) and beta-adrenergic agonists (mirabegron) did not report on UI outcomes. The 80 comparisons of specific interventions represent a small percentage of the 1275 possible combinations among the 51 interventions. Most interventions have been compared only with placebo (or sham or no treatment, node P).

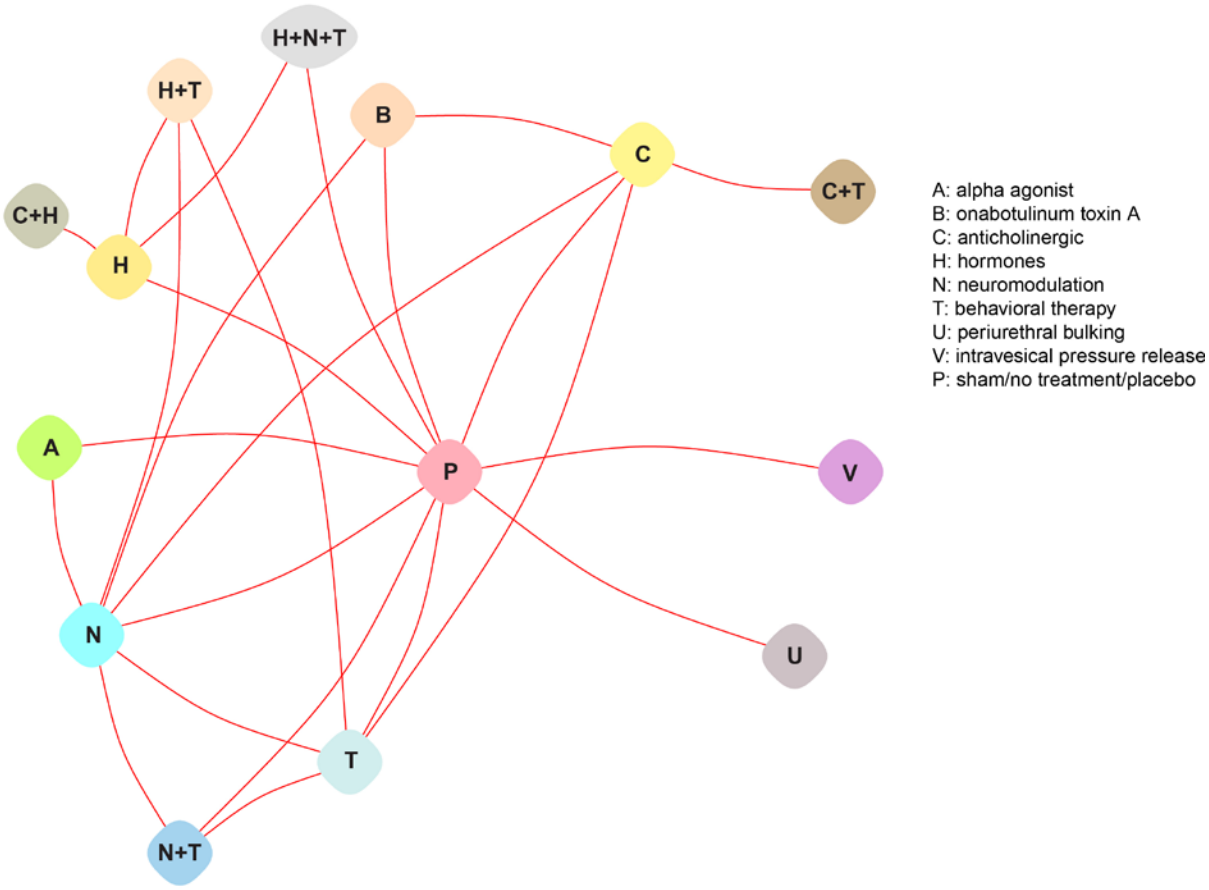
Groups of interventions that have not been compared with other groups are readily identified in the figure. For example, four periurethral bulking agents, coded U1, U2, U4, and U7 in Figure 6, have been compared with each other, but have not been compared with any other treatment in the graph. Some treatments, such as intravesical pressure release (intervention “V” in the figures) have been compared with only sham/placebo/no treatment (node P).

Figure 6. Evidence graph depicting all compared individual treatments in randomized controlled trials



Abbreviations: MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation.

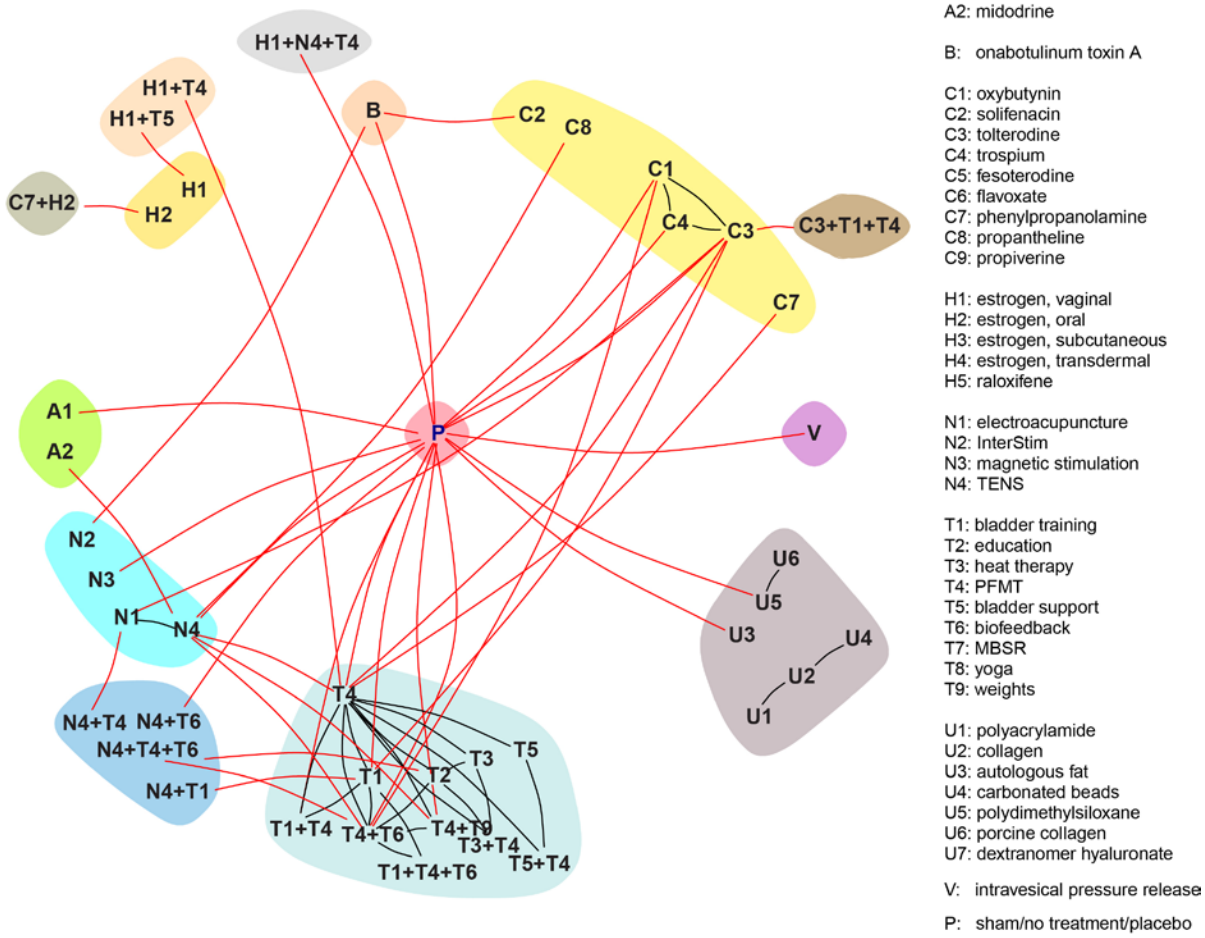
Figure 7. Evidence graph depicting all compared categories of treatments in randomized controlled trials



Network Meta-Analysis of Cure (Across All Interventions)

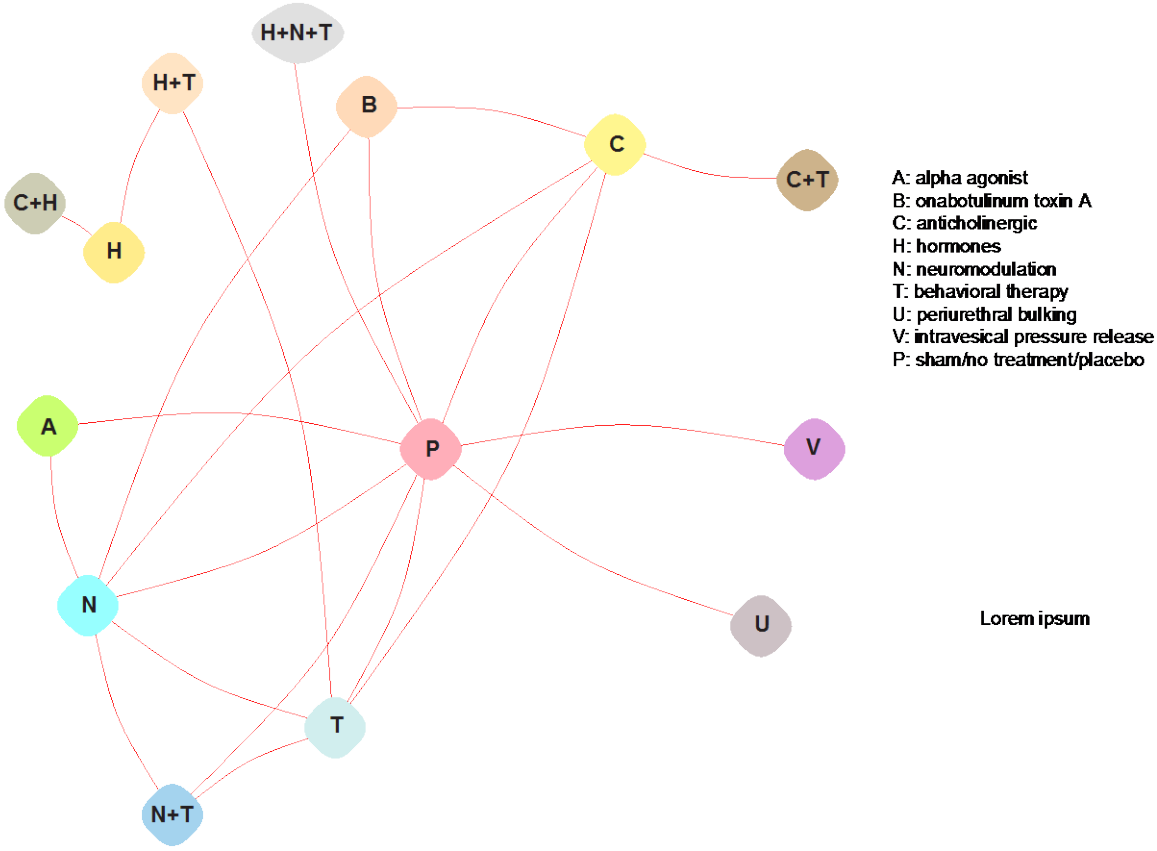
The evidence graph for cure with respect to individual treatments is relatively sparse compared to all possible comparisons among treatments (or treatment categories) (Figures 8 and 9). Of note in Figure 8, there are three subgraphs. Three periurethral bulking agents (nodes U1, U2, and U4) have only been compared with each other and not with any of the other interventions in the graph. Also, a combination of vaginal estrogen and bladder support (H1+T5) has been compared with vaginal estrogen only (H1) and not with any other treatment in the graph. All other treatments in the graph have been compared with each other directly or indirectly.

Figure 8. Evidence graph of all randomized controlled trials evaluating cure across individual interventions



Abbreviations: MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation.

Figure 9. Evidence graph of all randomized controlled trials evaluating cure across types of interventions



Comparisons Across Intervention Categories

In total, 51 RCTs (7049 women) were included in this analysis of cure; studies ranged in size from 29 to 2487 people. [3, 27-74] Table 5 describes the intervention categories compared, the number of women who received each intervention, and the numbers of studies (and women) analyzing each comparison between intervention categories. Forty-five RCTs (83%) were deemed to be at low or moderate risk of bias.

Table 5. Summary description of all studies reporting on cure

	No. Studies (N)†													
Code*	A	B	C	C+H	C+T	H	H+N+T	H+T	N	N+T	T	U	V	P
A	412								1 (90)					2 (736)
B		304	1 (231)						1 (226)					2 (119)
C			1355		1 (307)				2 (124)		3 (348)			6 (1871)
C+H				29		1 (58)								
C+T					154									
H						163		1 (251)						
H+N+T							36							1 (80)
H+T								149			1 (66)			
N									528	1 (42)	5 (240)			7 (454)

	No. Studies (N)†													
Code*	A	B	C	C+H	C+T	H	H+N+T	H+T	N	N+T	T	U	V	P
N+T										178	2 (185)			1 (93)
T											1051			15 (1530)
U												137		
V													66	1 (115)
P														2487

Comparisons below the diagonal are omitted (blank cells). Blank cells above the diagonal indicate that no studies compared the interventions.

* See Figure 9. Codes: A: alpha agonist, B: onabotulinum toxin A, C: anticholinergic, H: hormones, N: neuromodulation, T: behavioral therapy, U: periurethral bulking, V: intravesical pressure release, P: sham/no treatment/placebo.

† Number of studies (and total sample size) comparing row and column intervention categories. Numbers across the diagonal (e.g., with A as both row and column header) are the total sample size for each intervention category. Blank cells above the diagonal imply that no studies directly compared the intervention categories.

Table 6 shows the ORs for cure comparing all 14 intervention categories that have been evaluated. Further details about the network meta-analyses, including the analysis of individual interventions in each intervention category, are in Appendix G. Only 20 of 91 possible comparisons are informed by direct (head-to-head) comparisons, of which 9 are comparisons with no treatment. In Table 6, the direct comparisons are in the unshaded cells. Shaded cells correspond to comparisons that were inferred from the network meta-analysis model but had not been examined in the included RCTs. For example, alpha agonists have been compared only with neuromodulation and placebo; periurethral bulking and intravesical pressure release devices have each only been compared with no or sham treatment. Comparisons with other active intervention categories are indirect through comparisons other interventions. Indirect comparisons are more uncertain than those for which head-to-head data exist. The added uncertainty of indirect comparisons is partly reflected in the width of their respective confidence intervals, which are broader (often much broader) than for interventions with direct comparisons. For all comparisons that are empirically observed with direct comparisons (all nonshaded cells in the table), results using only head-to-head data (i.e., standard pairwise meta-analysis) agree well with the results from the network meta-analysis (data not shown).

Full Network Summary

First, we describe results from the full network regardless of their primary use for urgency or stress UI or whether they are first, second, or third line therapies. In the subgroup analyses section below, we restrict summaries to those interventions used primarily for stress UI separately from those interventions used primarily for urgency UI.

All active treatments appear to result in higher rates of cure than sham, placebo, or no treatment. The differences versus no treatment are statistically significant for the following active interventions: BTX, anticholinergics, combined hormones and behavioral therapy, neuromodulation, combined neuromodulation and behavioral therapy, and behavioral therapy (alone). There was also a near-significant effect compared with placebo (based on statistically nonsignificant ORs of >2.0 for which the lower bound of the confidence interval is ≥0.80) for combined anticholinergics and behavioral therapy and for intravesical pressure release.

Regarding comparisons of active interventions, based on only statistically significant differences, bladder BTX results in higher cure rates than alpha agonists, anticholinergics, and

periurethral bulking. Both neuromodulation (alone) and behavioral therapy (alone) result in higher cure rates than either alpha agonists or anticholinergics. Combined neuromodulation and behavioral therapy also results in higher cure rates than alpha agonists.

Other evidence of possible comparative benefits suggest that intravesical pressure release devices and combined anticholinergics and behavioral therapy each result in higher rates of cure than no treatment; combined hormones and behavioral therapy is favored over alpha agonists; combined neuromodulation and behavioral therapy is favored over anticholinergics; BTX is favored over behavioral therapy; and periurethral bulking agents result in *lower* rates of cure than neuromodulation, behavioral therapy, and the combination of the two.

Of note, the evidence regarding hormones, combined hormones and anticholinergics, combined anticholinergics and behavioral therapy, and combined hormones, neuromodulation, and behavioral therapy was generally too sparse to allow confident comparisons with other interventions (and in most instances no treatment); 95 percent confidence intervals for all comparisons with these interventions were very wide.

Table 6. Odds ratios for cure between all intervention categories

Interven -tions*	OR (95% CI) †												
Alpha Agonist (A)	0.22 (0.08, 0.57)‡	0.63 (0.29, 1.36)	3.49 (0.12, 105.16)	0.51 (0.14, 1.78)	0.42 (0.1, 1.88)	0.26 (0.03, 1.97)	0.28 (0.07, 1.02)	0.37 (0.17, 0.77)‡	0.31 (0.11, 0.83)‡	0.4 (0.19, 0.84)‡	0.9 (0.31, 2.65)	0.45 (0.11, 1.75)	1.22 (0.61, 2.45)
	BTX (B)	2.91 (1.43, 5.93)‡	16.15 (0.54, 484.33)	2.34 (0.69, 7.96)	1.96 (0.45, 8.61)	1.18 (0.15, 9.09)	1.28 (0.35, 4.69)	1.69 (0.79, 3.62)	1.42 (0.53, 3.8)	1.85 (0.88, 3.86)	4.16 (1.41, 12.3)‡	2.06 (0.52, 8.12)	5.66 (2.8, 11.43)‡
		Anticholi nergic (C)	5.55 (0.19, 158.82)	0.81 (0.29, 2.2)	0.67 (0.17, 2.64)	0.41 (0.06, 2.88)	0.44 (0.14, 1.41)	0.58 (0.35, 0.97)‡	0.49 (0.22, 1.08)	0.64 (0.41, 0.98)‡	1.43 (0.57, 3.57)	0.71 (0.2, 2.46)	1.95 (1.32, 2.88)‡
			Anticholinergic + Hormones (C+H)	0.15 (<0.005, 4.78)	0.12 (<0.005, 3.69)	0.07 (<0.005, 3.42)	0.08 (<0.005, 2.4)	0.1 (<0.005, 3.01)	0.09 (<0.005, 2.65)	0.11 (<0.005, 3.24)	0.26 (0.01, 8.05)	0.13 (<0.005, 4.41)	0.35 (0.01, 9.94)
				Anticholinergic + Behavioral Therapy (C+T)	0.84 (0.16, 4.5)	0.51 (0.06, 4.53)	0.55 (0.12, 2.51)	0.72 (0.24, 2.21)	0.61 (0.17, 2.16)	0.79 (0.27, 2.33)	1.78 (0.46, 6.85)	0.88 (0.18, 4.32)	2.42 (0.83, 7.03)
					Hormo nes (H)	0.6 (0.06, 6.18)	0.65 (0.25, 1.71)	0.86 (0.22, 3.41)	0.73 (0.16, 3.2)	0.94 (0.25, 3.54)	2.12 (0.44, 10.21)	1.05 (0.18, 6.24)	2.89 (0.76, 11.04)
						Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	1.08 (0.12, 9.9)	1.43 (0.2, 10.21)	1.2 (0.15, 9.35)	1.56 (0.22, 10.95)	3.52 (0.43, 28.77)	1.74 (0.18, 16.75)	4.78 (0.69, 33.14)
							Hormones + Behavioral Therapy (H+T)	1.33 (0.41, 4.29)	1.11 (0.3, 4.1)	1.45 (0.48, 4.39)	3.26 (0.8, 13.23)	1.62 (0.32, 8.26)	4.43 (1.42, 13.82)‡
								Neuromod ulation (N)	0.84 (0.38, 1.85)	1.09 (0.68, 1.75)	2.46 (0.96, 6.3)	1.22 (0.35, 4.3)	3.34 (2.12, 5.26)‡
									Neuromodulation + Behavioral Therapy (N+T)	1.3 (0.63, 2.67)	2.93 (0.97, 8.89)	1.45 (0.36, 5.84)	3.98 (1.89, 8.39)‡
										Behavioral Therapy (T)	2.25 (0.92, 5.52)	1.12 (0.33, 3.81)	3.06 (2.16, 4.35)‡
											Periurethral Bulking (U)	0.5 (0.12, 2.11)	1.36 (0.59, 3.13)
												Intravesical Pressure Release (V)	2.74 (0.84, 8.98)
													Placebo/Sham/ No Treatment (P)

Cells with data shaded gray indicate that the estimate is based only on indirect comparison. Results are given as odds ratios (95% confidence intervals). Odds ratios >1 favor the row intervention (to the left) over the column intervention (below). Comparisons below the diagonal are omitted (blank cells).

Abbreviations: Antichol = anticholinergic, CI = confidence interval, Neuromod = neuromodulation, OR = odds ratio, Tx = therapy, BTX = onabotulinum toxin A.

* Interventions are listed across the diagonal line of table cells. Intervention category codes are in parentheses, corresponding with the associated figure.

† In all cells with numerical data.

‡ Statistically significant. These cells are also in bold font to improve visibility.

The league table (Table 7) offers complementary information from the same analysis. For each intervention category, it shows the mean and forecasted (from the network meta-analysis model) cure rates across the included RCTs. Bladder BTX (B), neuromodulation (N), behavioral therapy (T), and their evaluated combinations (N+T, H+T, H+N+T) had mean cure rates in the 30 to 45 percent range. Anticholinergics with or without behavioral therapy (C, C+T) hormones (H), alpha-agonists (A), periurethral bulking (U) or intravesical pressure release devices (V) had mean cure rates in the 14 to 28 percent range. Sham, placebo, or no treatment had a mean cure rate of 12 percent.

It should be noted that these summary results do not take into account characteristics of the women included in the studies that may be associated with resistance to treatment; thus, the summary findings may be confounded by study. In other words, the network meta-analyses assume that the women across all studies (and all other study characteristics) are generally similar. For example, they do not account for possible differences among women being considered for (and treated with) oral medications, injected or invasive interventions, or nonpharmacological interventions. Subgroup meta-analysis results are presented in the next section.

Descriptions of the comparisons across all individual interventions can be found in Appendix G. Briefly, the results of the analyses of intervention categories are congruent with the corresponding results of the analyses of individual interventions. However, many more of the specific comparisons have very broad confidence intervals because the comparisons across individual interventions are even more sparse than for comparisons of intervention categories.

Table 7. Mean and forecasted cure rates by intervention category (all)

	Intervention Category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological	BTX (B)	43.6 (27.4, 61.2)	43.6 (7.8, 87.6)
	Hormones (H)	28.3 (9.6, 59.5)	28.3 (3.2, 82.4)
	Anticholinergic (C)	21.0 (14.6, 29.2)	21.0 (3.0, 69.4)
	Periurethral Bulking (U)	15.6 (7.1, 31.1)	15.6 (1.9, 64.4)
	Alpha Agonist (A)	14.3 (7.4, 25.8)	14.3 (1.8, 60.6)
	Anticholinergic + Hormones (C+H)	4.6 (0.2, 57.1)	4.6 (0.1, 70.9)
Nonpharmacological	Neuromodulation + Behavioral Therapy (N+T)	35.2 (20.5, 53.4)	35.2 (5.5, 83.4)
	Neuromodulation (N)	31.3 (22.3, 42.0)	31.3 (5.1, 79.6)
	Behavioral Therapy (T)	29.5 (22.2, 38.0)	29.5 (4.7, 77.9)
	Intravesical Pressure Release (V)	27.2 (9.9, 55.9)	27.2 (3.2, 80.9)
Combination	Anticholinergic + Behavioral Therapy (C+T)	24.8 (10.1, 49.2)	24.8 (3.0, 77.7)
	Hormones + Behavioral Therapy (H+T)	37.7 (16.5, 64.8)	37.7 (5.3, 86.7)
	Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	39.5 (8.7, 81.7)	39.5 (3.7, 91.8)
No treatment	Placebo/Sham/No Treatment (P)	12.0 (8.6, 16.5)	12.0 (1.6, 53.4)

Abbreviations: BTX = onabotulinum toxin A, CI = confidence interval.

* The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.

† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Subgroup Analyses

Key Question Subgroups

For most of the subgroups of particular interest to the stakeholders (women athletes and those engaging in high-impact physical activity, military women or veterans, and racial and ethnic minorities) data within or between studies were sparse or not available. Therefore, no descriptions of these subgroups are possible.

Older Women

Analyses limited to studies with mean age greater than 60 years were congruent with the overall analyses presented here; although different specific comparisons reached statistical significance. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-4, Tables H-3A and H-3B, and Table H-11. Only 7 studies provided data specifically for women at least 60 years of age. In brief, anticholinergics were found to be (statistically significantly) less likely to result in cure than combined hormones and behavioral therapy (OR 0.09, 95% confidence interval [CI] 0.02 to 0.47), combined neuromodulation and behavioral therapy (OR 0.09, 95% CI 0.02, 0.48), and behavioral therapy alone (OR 0.36, 95% CI 0.14 to 0.92). Combinations of behavioral therapy with either hormones or with neuromodulation were both significantly more likely to achieve cure than no treatment.

Other evidence of possible comparative benefits, based on statistically nonsignificant ORs of >2.0 (for which the lower bound of the confidence interval is ≥0.80) suggest that combinations of behavioral therapy with either hormones or with neuromodulation are favored over behavioral therapy alone and achieve cure in about 70 percent of older women (see Appendix H Table H-11). Cure was achieved in about 36 percent of older women using behavioral therapy alone. Lower rates of cure were found for other interventions.

Stress, Urgency, and Mixed UI Subgroups

Stress UI

Twenty-nine of the 140 studies reported on cure among women who have only stress UI. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-1A, Tables H-1A, H-1B, and Table H-10 (left side).The smaller number of studies focusing on stress UI translated into relatively fewer possible comparisons of interventions, which included alpha agonists, hormones, behavioral therapy (alone), combination hormones and behavioral therapy, combination hormones and anticholinergics, neuromodulation, combination neuromodulation and behavioral therapy, periurethral bulking, intravesical pressure release, and placebo/sham/no therapy. Of note, hormones and combination hormones and anticholinergics have been compared only with each other and form a separate subgraph than the other interventions.

Only combination hormones and behavioral therapy, behavioral therapy (alone), and neuromodulation have been found to be statistically significantly more effective than placebo/no treatment, with ORs of 11.4, 5.6, and 3.5, respectively.

Alpha agonists were found to be less effective than behavioral therapy (OR 0.22, 95% CI 0.06 to 0.74) or combination hormones and behavioral therapy (OR 0.11, 95% CI 0.01 to 0.84). Periurethral bulking was also less effective than behavioral therapy (OR 0.23, 95% CI 0.06 to 0.98). Statistically nonsignificant comparisons suggest that alpha agonists are also less effective than neuromodulation (OR 0.35, 95% CI 0.12 to 1.00), and periurethral bulking is less effective than combination hormones and behavioral therapy (OR 0.12, 95% CI 0.01, 1.03).

Overall, the studies found that 64 percent of women with stress incontinence achieved cure with combination hormones and behavioral therapy and 46 percent with behavioral therapy alone. About 30 to 35 percent of women achieved cure with neuromodulation, intravesical pressure release, and combination neuromodulation and behavioral therapy. Lower rates of cure were reported with other interventions.

Urgency UI

Only 10 studies reported on cure among women who have only urgency UI. The small number of studies focusing on urgency UI translated into relatively few possible comparisons of interventions, which included BTX, anticholinergics, behavioral therapy, combination anticholinergics and behavioral therapy, neuromodulation, and placebo/sham/no therapy. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-1B, Table H-2, and Table H-10 (right side).

All five active interventions were statistically significantly more likely result in cure than placebo/sham/no treatment, with ORs ranging from 1.80 (for anticholinergics) to 4.94 (for BTX, see Appendix H, Table H-2 for details). Among active interventions, BTX was statistically significantly more effective than anticholinergics (OR 2.7) or combination of anticholinergics and behavioral therapy (OR 2.2). No other statistically significant differences were found and none of the statistically nonsignificant findings met our criteria for possible effect (OR $\geq$2 with a lower bound of the confidence interval $\geq$0.80).

Overall, the studies found that 43 percent of women with urgency incontinence achieved cure with BTX, 25 to 30 percent achieved cure with neuromodulation, behavioral therapy (alone), and combination anticholinergic and behavioral therapy; 21 percent achieved cure with anticholinergics (alone) and 13 percent with no treatment.

Mixed UI

No study that reported cure explicitly included (or reported on) only women with mixed UI (with symptoms of both urgency and stress UI). Therefore, no conclusions are possible beyond a qualitative combination of findings for urgency and stress UI treatments.

Stress and Urgency UI Subgroups Based on Categorization of Interventions

Because only a subset of studies specifically evaluated women with either stress or urgency UI, as noted, the networks are relatively sparse, and findings are less robust than for the overall network meta-analysis. Therefore, we resummarize the overall network in two subgroups, focusing on those intervention categories typically used primarily either for urgency or for stress UI. Interventions commonly used for both are included in both subanalyses.

Stress UI Subanalysis

Among first- and second-line therapies used for stress UI (behavioral therapy, alpha agonists, and hormones, and combinations of these), behavioral therapy was found to be more than twice as effective in achieving cure as alpha agonists alone (OR 2.50, 95% CI 1.19 to 5.26). This finding is supported only by indirect evidence across studies. All other comparisons of first- and second-line therapies (with both direct and indirect comparisons) were statistically nonsignificant with wide confidence intervals.

An indirect comparison found only an imprecise estimate of the comparative effectiveness of the two third-line therapies, periurethral bulking agents and intravesical pressure release, with wide confidence intervals.

Urgency UI Subanalysis

Among first-and second-line therapies used for urgency UI (behavioral therapy, anticholinergics, hormones, and combinations of these), behavioral therapy was found to be significantly more likely to achieve cure than anticholinergics (OR 1.56, 95% CI 1.02 to 2.43). This finding is supported by both direct and indirect evidence. All other comparisons of first- and second-line therapies (with both direct and indirect comparisons) were statistically nonsignificant with wide confidence intervals.

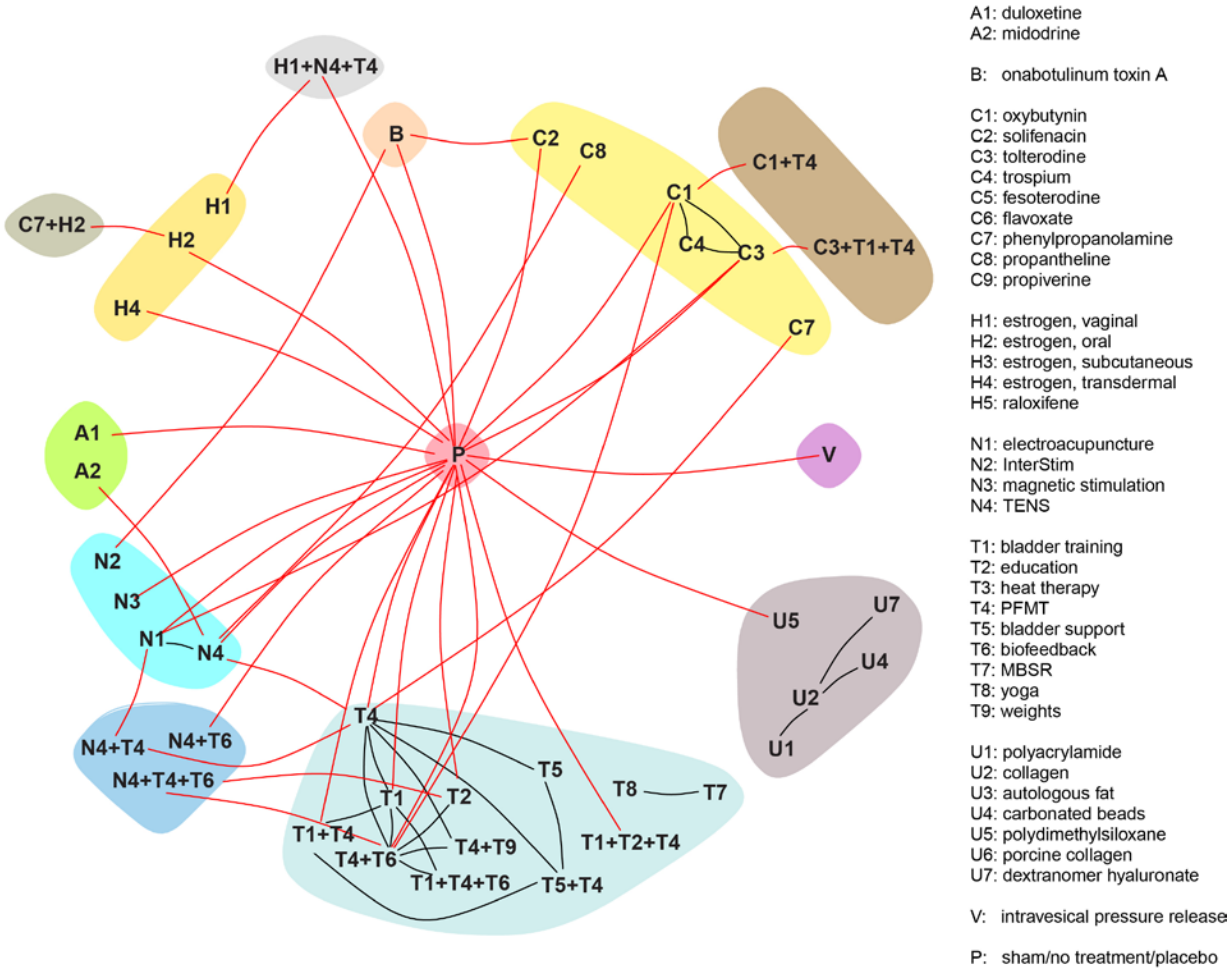
Among third-line therapies used for urgency UI (BTX, neuromodulation, and combinations of neuromodulation with first- or second-line therapies), no therapy was found to be statistically significantly more effective than others.

Of note, several studies directly compared second- with third-line therapies in the same samples of women. Among these, studies found that BTX and neuromodulation are each more likely to achieve cure than anticholinergics (BTX: OR 2.91, 95% CI 1.43 to 5.93; neuromodulation: OR 1.72, 95% CI 1.03 to 2.86; each estimate combining direct and indirect evidence).

Network Meta-Analysis of Improvement (Across All Interventions)

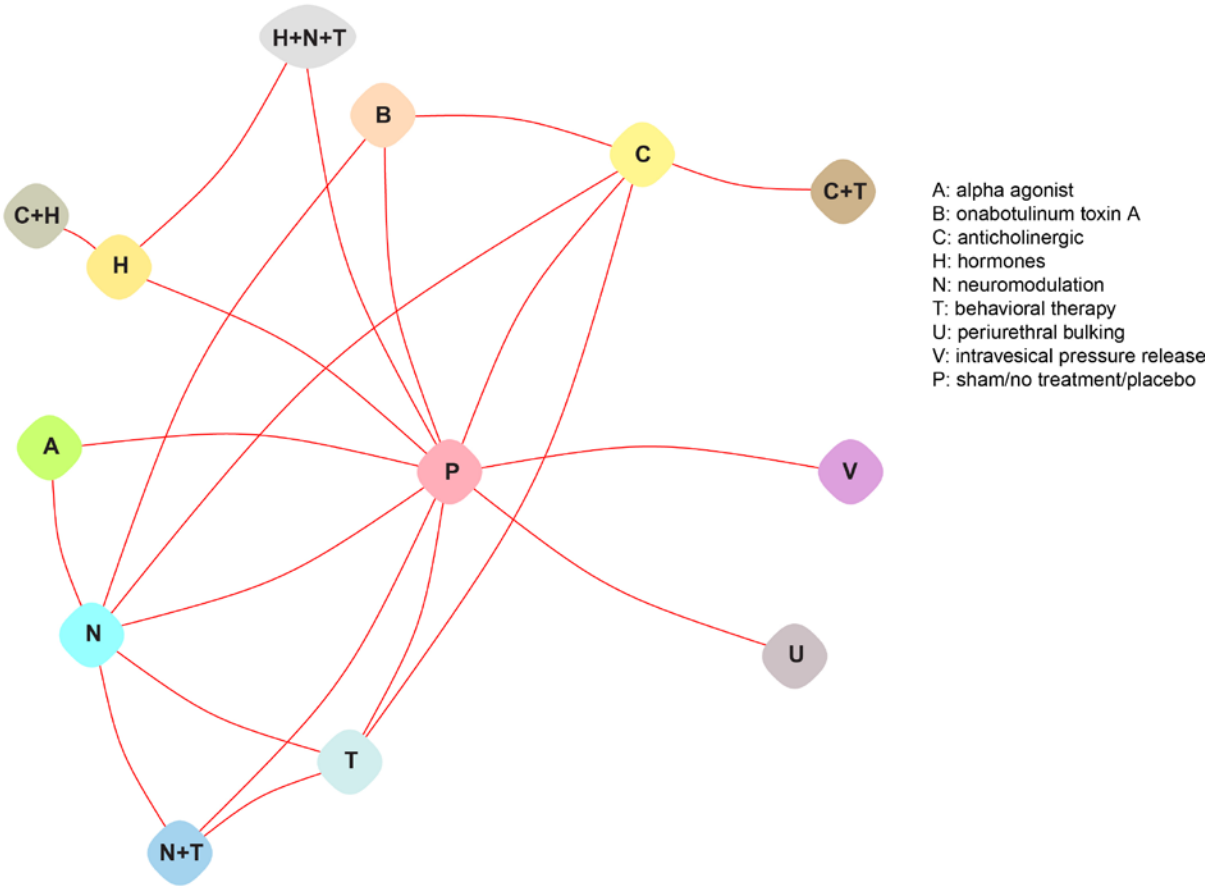
The evidence graph for improvement with respect to individual treatments is sparse (Figure 10) and comprises 2 subgraphs (U1/U2/U4/U7 and all others including U5). Figure 11 shows the evidence graph with respect to types of interventions. All intervention categories are connected in one subgraph.

Figure 10. Evidence graph of all randomized controlled trials evaluating improvement across individual interventions



Abbreviations: MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation.

Figure 11. Evidence graph of all randomized controlled trials evaluating improvement across types of interventions



Comparisons Across Intervention Categories

In total, 64 RCTs (13375 women) were included in this analysis; studies ranged in size from 29 to 5584 women. [17, 27-29, 32, 33, 36-38, 41-43, 48, 52, 54, 55, 57, 58, 60, 63, 65, 67-70, 73, 75-111] Table 8 describes the intervention categories compared, the number of women who received each intervention, and the numbers of studies (and women) analyzing each comparison between intervention categories. Studies reported improvement outcomes for evaluations of 13 intervention categories. In contrast with the cure outcome, no studies reported improvement for the combination of hormones and behavioral therapy. Fifty-five RCTs (89%) were deemed to be at low or moderate risk of bias.

Table 8. Summary description of all studies reporting on improvement

	No. Studies (N)†												
Code*	A	B	C	C+H	C+T	H	H+N+T	N	N+T	T	U	V	P
A	3035							1 (90)					10 (6112)
B		309	1 (231)					1 (358)					1 (43)
C			1320		2 (371)			2 (124)		2 (289)			7 (1470)
C+H				29		1 (58)							
C+T					186								
H						366	1 (186)						2 (466)
H+N+T							119						1 (80)
N								967	1 (42)	3 (75)			10 (1177)
N+T									198	2 (228)			1 (93)
T										1074			15 (1717)
U											122		
V												66	1 (115)
P													5584

Comparisons below the diagonal are omitted (blank cells). Blank cells above the diagonal indicate that no studies compared the interventions.

* See Figure 11. Codes: A: alpha agonist, B: onabotulinum toxin A, C: anticholinergic, H: hormones, N: neuromodulation, T: behavioral therapy, U: periurethral bulking, V: intravesical pressure release, P: sham/no treatment/placebo.

† Number of studies (and total sample size) comparing row and column intervention categories. Numbers across the diagonal (e.g., with A as both row and column header) are the total sample size for each intervention category. Blank cells above the diagonal imply that no studies directly compared the intervention categories.

Table 9 shows the ORs for improvement comparing all 13 intervention categories that have been evaluated. Further details about the network meta-analyses, including the analysis of individual interventions in each intervention category, are in Appendix G. Only 19 of 78 possible comparisons are informed by direct (head-to-head) comparisons, of which 9 are comparisons with no treatment. In Table 9, the direct comparisons are in the unshaded cells. Shaded cells correspond to comparisons that were inferred from the network meta-analysis model but had not been examined in the included RCTs. For example, alpha agonists have been compared only with neuromodulation and placebo; periurethral bulking and intravesical pressure release devices have each only been compared with no or sham treatment. Comparisons with other active intervention categories are indirect through comparisons with other interventions. Indirect comparisons are more uncertain than those for which head-to-head data exist. The added uncertainty of indirect comparisons is partly reflected in the width of their respective confidence intervals, which are broader (often much broader) than for interventions with direct comparisons. For all comparisons that are empirically observed with direct comparisons (all nonshaded cells in the table), results using only head-to-head data (i.e., standard pairwise meta-analysis) agree well with the results from the network meta-analysis (data not shown).

Full Network Summary

First, we describe results from the full network regardless of their primary use for urgency or stress UI or whether they are first, second, or third line therapies. In the subgroup analyses section below, we restrict summaries to those interventions used primarily for stress UI separately from those interventions used primarily for urgency UI.

All active treatments appear to result in higher rates of improvement than sham, placebo, or no treatment. Hormones and combined hormones and anticholinergics had estimates with wide confidence intervals not suggesting a difference compared with placebo. The differences versus no treatment are statistically significant for the following active interventions: alpha agonists, BTX, anticholinergics, combined anticholinergics and behavioral therapy, neuromodulation, combined neuromodulation and behavioral therapy, the triple combination of hormones and neuromodulation and behavioral therapy, behavioral therapy (alone), and intravesical pressure release. More interventions were found to be more effective to achieve improvement, compared with placebo, than to achieve cure. Alpha agonists and the triple combination of hormones, neuromodulation, and behavioral therapy were not significantly different than no treatment to achieve cure. Intravesical pressure release and combined anticholinergics and behavioral therapy were only nonsignificantly more likely to achieve cure.

Regarding comparisons of active interventions, based on only statistically significant differences, hormones are *less* effective than all other interventions (excepting combined hormones and anticholinergics and periurethral bulking, for which there are nonsignificant differences). Alpha agonists were found to be statistically less effective to achieve improvement than neuromodulation, behavioral therapy, and combined neuromodulation and behavioral therapy. Anticholinergics were found to be significantly less effective than behavioral therapy.

Other evidence of possible comparative benefits, based on statistically nonsignificant ORs of >2.0 (for which the lower bound of the confidence interval is ≥0.80) suggest that alpha agonists are also less effective to achieve satisfaction than the triple combination of hormones, neuromodulation and behavioral therapy. Anticholinergics are also less effective than the same triple therapy, combined neuromodulation and behavioral therapy, and behavioral therapy alone.

Of note, the evidence regarding periurethral bulking and intravesical pressure release was generally too sparse to allow confident comparisons with other interventions; 95 percent confidence intervals for almost all comparisons with these interventions were very wide.

Table 9. Odds ratios for improvement between all intervention categories

Interv-entions*	OR (95% CI) †											
Alpha Agonist (A)	0.36 (0.13, 1.01)	0.73 (0.38, 1.39)	2.11 (0.34, 13.22)	0.41 (0.12, 1.42)	4.09 (1.4, 11.89)‡	0.29 (0.08, 1.04)	0.52 (0.29, 0.94)‡	0.32 (0.12, 0.89)‡	0.4 (0.22, 0.72)‡	0.98 (0.22, 4.39)	0.47 (0.1, 2.3)	2.16 (1.37, 3.41)‡
	BTX (B)	2.04 (0.77, 5.41)	5.9 (0.79, 43.87)	1.14 (0.27, 4.88)	11.41 (2.97, 43.85)‡	0.82 (0.18, 3.71)	1.44 (0.55, 3.79)	0.91 (0.25, 3.3)	1.12 (0.41, 3.05)	2.74 (0.49, 15.21)	1.32 (0.22, 7.86)	6.03 (2.32, 15.7)‡
		Anticholinergic (C)	2.89 (0.46, 18.07)	0.56 (0.18, 1.71)	5.58 (1.91, 16.3)‡	0.4 (0.11, 1.43)	0.71 (0.39, 1.26)	0.44 (0.16, 1.21)	0.55 (0.31, 0.97)‡	1.34 (0.3, 6.04)	0.64 (0.13, 3.15)	2.95 (1.81, 4.79)‡
			Antichol+ Hormones (C+H)	0.19 (0.02, 1.61)	1.93 (0.37, 10.22)	0.14 (0.02, 1.03)	0.24 (0.04, 1.51)	0.15 (0.02, 1.12)	0.19 (0.03, 1.16)	0.46 (0.05, 4.55)	0.22 (0.02, 2.31)	1.02 (0.17, 6.1)
				Antichol + Behavioral Tx (C+T)	10.03 (2.21, 45.43)‡	0.72 (0.14, 3.78)	1.27 (0.37, 4.29)	0.8 (0.18, 3.45)	0.98 (0.29, 3.3)	2.41 (0.38, 15.25)	1.16 (0.17, 7.85)	5.30 (1.63, 17.2)‡
					Hormones (H)	0.07 (0.02, 0.25)‡	0.13 (0.04, 0.36)‡	0.08 (0.02, 0.30)‡	0.1 (0.03, 0.28)‡	0.24 (0.04, 1.35)	0.12 (0.02, 0.7)‡	0.53 (0.2, 1.41)
						Hormones + Neuromod + Behavioral Tx (H+N+T)	1.77 (0.5, 6.24)	1.11 (0.25, 4.95)	1.37 (0.39, 4.79)	3.36 (0.52, 21.66)	1.61 (0.23, 11.14)	7.39 (2.22, 24.62)‡
							Neuromod (N)	0.63 (0.24, 1.65)	0.77 (0.45, 1.32)	1.9 (0.43, 8.43)	0.91 (0.19, 4.4)	4.18 (2.7, 6.47)‡
								Neuromod + Behavioral Tx (N+T)	1.23 (0.49, 3.11)	3.02 (0.55, 16.44)	1.45 (0.25, 8.51)	6.66 (2.66, 16.67)‡
									Behavioral Therapy (T)	2.45 (0.56, 10.79)	1.18 (0.25, 5.64)	5.40 (3.60, 8.08)‡
										Periurethral Bulking (U)	0.48 (0.06, 3.88)	2.2 (0.53, 9.24)
											Intravesical Pressure Release (V)	4.59 (1, 21.01)‡
												Placebo/ Sham/No Treatment (P)

Cells with data shaded gray indicate that the estimate is based only on indirect comparison. Results are given as odds ratios (95% confidence intervals). Odds ratios >1 favor the row intervention (to the left) over the column intervention (below). Comparisons below the diagonal are omitted (blank cells).

Abbreviations: antichol = anticholinergic, BTX = onabotulinum toxin A, neuromod = neuromodulation, Tx = therapy.

* Interventions are listed across the diagonal line of table cells. Intervention category codes are in parentheses, corresponding with the associated figure.
† In all cells with numerical data.
‡ Statistically significant. These cells are also in bold font to improve visibility.

The league table (Table 10) offers complementary information from the same analysis. For each intervention category, it shows the mean and forecasted (from the network meta-analysis model) improvement rates across the included RCTs. With use of most interventions between about 60 and 70 percent of women had improvement in their symptoms (variously defined across the studies). These more successful interventions included behavioral therapy, neuromodulation, both combinations of the two and with addition of hormones, BTX, combination anticholinergics and behavioral therapy, and intravesical pressure release. With use of anticholinergics (alone), periurethral bulking, and alpha agonists, about 40 to 50 percent of women had improvement. About 25 percent of women on no treatment or placebo had improvement.

It should be noted that these summary results do not take into account characteristics of the women included in the studies that may be associated with resistance to treatment; thus, the summary findings may be confounded by study. In other words, the network meta-analyses assume that the women across all studies (and all other study characteristics) are generally similar. For example, they do not account for possible differences among women being considered for (and treated with) oral medications, injected or invasive interventions, or nonpharmacological interventions. Subgroup meta-analysis results are presented in the next section.

Descriptions of the comparisons across all individual interventions can be found in Appendix G. Briefly, the results of the analyses of intervention categories are congruent with the corresponding results of the analyses of individual interventions. However, many more of the specific comparisons have very broad confidence intervals because the comparisons across individual interventions are even more sparse than for comparisons of intervention categories.

Table 10. Mean and forecasted improvement rates by intervention category (all)

	Intervention Category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological	BTX (B)	66.6 (43.7, 83.7)	66.6 (15.6, 95.6)
	Anticholinergic (C)	49.4 (37.3, 61.5)	49.4 (9.4, 90.2)
	Periurethral Bulking (U)	42.1 (14.6, 75.7)	42.1 (5.0, 90.9)
	Alpha Agonist (A)	41.6 (30.2, 54.1)	41.6 (7.0, 87.0)
	Anticholinergic + Hormones (C+H)	25.2 (5.4, 66.6)	25.2 (2.0, 84.9)
	Hormones (H)	14.9 (6.2, 31.7)	14.9 (1.6, 65.7)
Nonpharmacological	Neuromodulation + Behavioral Therapy (N+T)	68.7 (46.9, 84.6)	68.7 (17.1, 95.9)
	Behavioral Therapy (T)	64.1 (53.8, 73.2)	64.1 (16.1, 94.3)
	Intravesical Pressure Release (V)	60.2 (24.6, 87.6)	60.2 (9.5, 95.6)
	Neuromodulation (N)	58.0 (46.9, 68.3)	58.0 (12.9, 92.8)
Combination	Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	71.0 (42.4, 89.0)	71.0 (16.8, 96.7)
	Anticholinergic + Behavioral Therapy (C+T)	63.7 (35.3, 84.9)	63.7 (12.8, 95.4)
No treatment	Placebo/Sham/No Treatment (P)	24.8 (19.4, 31.2)	24.8 (3.5, 75.0)

Intervention category codes are in parentheses, corresponding with the associated figure.

Abbreviations: BTX = onabotulinum toxin A, CI = confidence interval.

* The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.

† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Subgroup Analyses

Key Question Subgroups

For most of the subgroups of particular interest to the stakeholders (women athletes and those engaging in high-impact physical activity, military women or veterans, and racial and ethnic minorities) data within or between studies were sparse or not available. Therefore, no descriptions of these subgroups are possible.

Older Women

Analyses limited to studies with mean age greater than 60 years were congruent with the overall analyses presented here; although different specific comparisons reached statistical significance. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-5, Table H-6, and Table H-13. Only 18 studies provided data specifically for women at least 60 years of age. In brief, alpha agonists were significantly less likely to achieve improvement than the triple combination of hormones and neuromodulation and behavioral therapy (OR 0.12, 95% CI 0.01 to 0.92) and than behavioral therapy alone (OR 0.17, 95% CI 0.03 to 0.97). Hormone therapy was also less effective than either triple therapy (OR 0.10, 95% CI 0.02 to 0.50) or behavioral therapy alone (OR 0.15, 95% CI 0.03 to 0.67). In addition, hormone therapy was found to be less effective than anticholinergics (OR 0.18, 95% CI 0.03 to 0.97).

Improvement was achieved in about 50 to 70 percent of older women using combined neuromodulation and behavioral therapy, the triple therapy (with hormones), behavioral therapy alone, and anticholinergics. About one-third of older women using neuromodulation alone or combination hormones and anticholinergics were reported to have improvement. With other interventions, including no treatment, 17 or 18 percent of older women had improvement.

Stress, Urgency, and Mixed UI Subgroups

Stress UI

Fifty-two of the studies reported on improvement among women who have only stress UI. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-2A, Table H-4, and Table H-12 (left side).The small number of studies focusing on stress UI translated into relatively few possible comparisons of interventions, which included alpha agonists, anticholinergics, behavioral therapy, hormones, neuromodulation, combination neuromodulation and behavioral therapy, the triple combination of hormones and neuromodulation and behavioral therapy, intravesical pressure release, and periurethral bulking.

Most evaluated interventions were statistically more effective than placebo/no treatment, including triple therapy (OR 11.6), behavioral therapy (OR 7.0), intravesical pressure release (OR 4.4), neuromodulation (OR 4.0), and alpha agonists (OR 2.3). Other interventions had mostly imprecise estimates of effectiveness.

Across active intervention, in studies of women with stress UI alpha agonists were found to be more effective to achieve improvement than hormones (OR 4.5) but less effective than triple therapy, neuromodulation and behavioral therapy (ORs ranging from 0.2 to 0.6, see Appendix H, Table H-4 for details). Combined hormones and anticholinergics (which are typically used for urgency UI) were less effective than triple therapy and behavioral therapy (OR 0.08 and 0.13, respectively). Hormone therapy (alone) was also less effective than triple therapy, neuromodulation, behavioral therapy, and intravesical pressure release (OR ranging from 0.04 to 0.13). Combined neuromodulation and behavioral therapy was found to be less effective than

triple therapy (OR 0.09) and both neuromodulation and behavioral therapy alone (OR 0.25 and 0.14, respectively); however, the latter two comparison results are driven largely by studies that found the combination therapy to be no more effective than no treatment, together with studies that found neuromodulation alone to be highly effective compared with no treatment. Therefore, these indirect comparisons of combination neuromodulation and behavioral therapy with either neuromodulation or behavioral therapy alone are unlikely to be valid.

Statistically nonsignificant findings meeting our criteria for possible effect (OR ≥2 with a lower bound of the confidence interval ≥0.80) suggested that intravesical pressure release was possibly more effective than combination neuromodulation and behavioral therapy (OR 4.4), triple therapy was possibly more effective than periurethral bulking agents (OR 5.9), and neuromodulation was possibly more effective than combination hormones and anticholinergics (OR 4.5, see Appendix H, Table H-4 for details).

Improvement was achieved in about 50 to 80 percent of women with stress UI using triple therapy (hormones, neuromodulation, and behavioral therapy), neuromodulation alone, behavioral therapy alone, and intravesical pressure release. About 40 to 50 percent of women had improvement with alpha agonists and periurethral bulking agents.

With other interventions, including no treatment, 16 to 27 percent of women with stress UI had improvement.

Urgency UI

Only 18 of the of the 140 studies reported on improvement among women who have only urgency UI. The small number of studies focusing on urgency UI translated into relatively few possible comparisons of interventions, which included BTX, anticholinergics, behavioral therapy, combination anticholinergics and behavioral therapy, and neuromodulation. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-2B, Table H-5, and Table H-12 (right side).

All five active interventions were statistically significantly more likely result in improvement than placebo/sham/no treatment, with ORs ranging from 1.80 (for anticholinergics) to 7.50 (for behavioral therapy, see Appendix H, Table H-5 for details). Among active interventions, anticholinergics were significantly *less* effective than all other evaluated therapies, with ORs ranging from 0.24 to 0.49. No other significant differences were found.

Overall, women with urgency UI using all interventions had high rates of improvement. Among women using anticholinergics alone, 60 percent had improvement. With all other active interventions between 75 and 86 percent of women reported improvement. With no treatment, 46 percent had improvement.

Mixed UI

Four studies reported on improvement in women with mixed UI.[75, 76, 81, 112] In one study each, compared to placebo, both the alpha agonist duloxetine[76] (OR 2.10, 95% CI 1.45 to 3.05) and the anticholinergic tolterodine[112] (OR 1.85, 95% CI 1.37 to 2.51) were effective to achieve improvement. In two small studies,[75, 81] neuromodulation was nonsignificantly more likely to achieve improvement than no treatment(summary OR 2.44, 95% CI 0.83, 7.19).

Stress and Urgency UI Subgroups Based on Categorization of Interventions

Because only a subset of studies specifically evaluated women with either stress or urgency UI, as noted, the networks are relatively sparse, and findings are less robust than for the overall network meta-analysis. Therefore, we resummarize the overall network in two subgroups,

focusing on those intervention categories typically used primarily either for urgency or for stress UI. Interventions commonly used for both are included in both subanalyses.

Stress UI Subanalysis

Among first- and second-line therapies used for stress UI (behavioral therapy, alpha agonists, and hormones), behavioral therapy was found to be statistically significantly more than twice as effective in achieving improvement as alpha agonists (OR 2.50, 95% CI 1.39 to 4.55) and hormones (OR 10.0, 95% CI 3.57 to 33.3). In addition, behavioral therapy was found to possibly be more effective than combination hormones and anticholinergics (OR 5.28, 95% CI 0.86 to 32.5) across studies, with a similar estimate across studies of women with stress UI. Alpha agonists were also found to be significantly more effective than hormones (OR 4.10, 95% CI 1.40 to 11.9). The comparison with alpha agonists versus behavioral therapy is supported by both direct and indirect comparisons, but the other two comparisons are based on only indirect evidence across studies.

An indirect comparison found only an imprecise estimate of the comparative effectiveness of the two third-line therapies periurethral bulking agents and intravesical pressure release, with wide confidence intervals.

Urgency UI Subanalysis

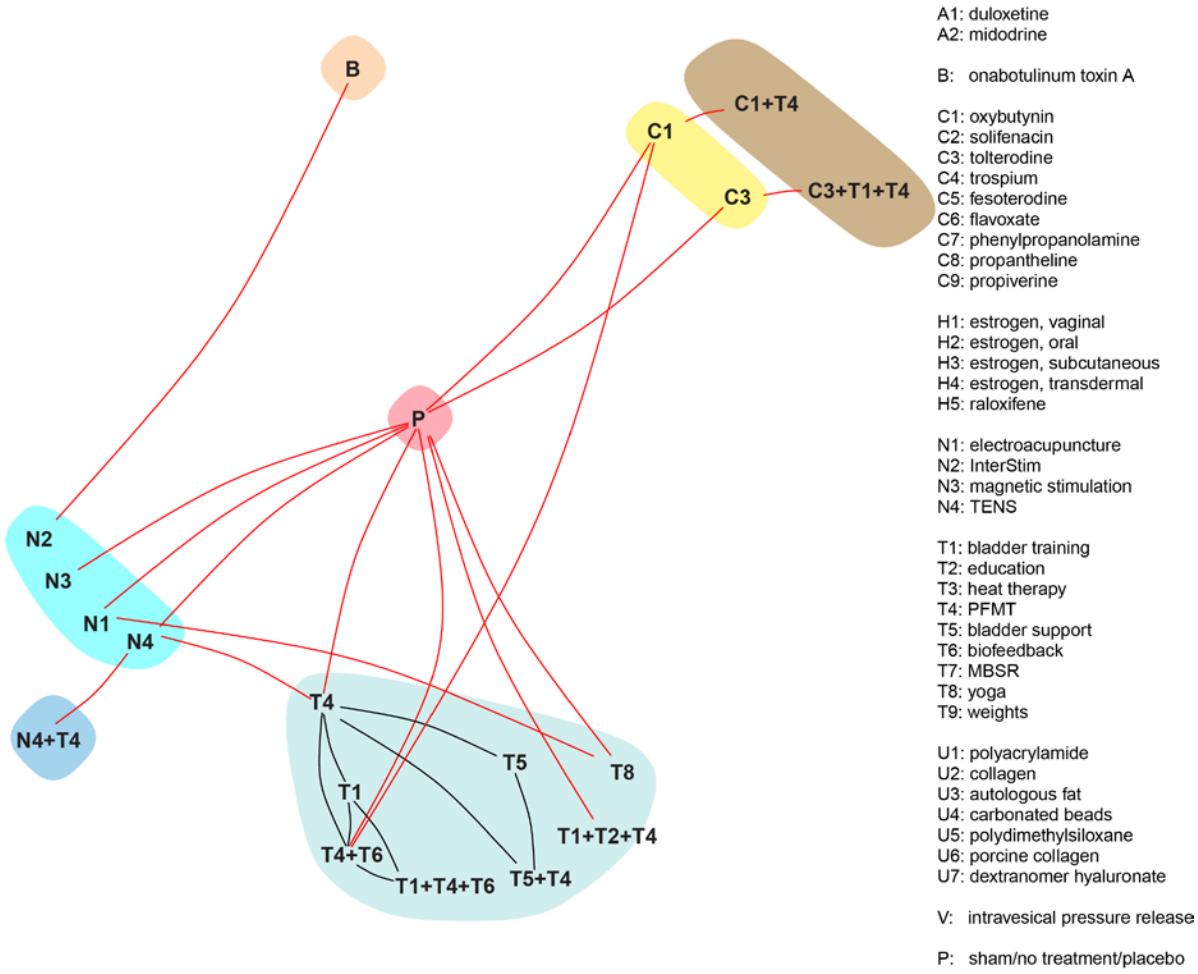
Among first-and second-line therapies used for urgency UI (behavioral therapy, anticholinergics, hormones, and combinations of these), behavioral therapy was found to be significantly more likely to achieve improvement than anticholinergics (OR 1.82, 95% CI 1.03 to 3.23) and hormones (OR 10, 95% CI 3.57 to 33.3). Hormones were found to be significantly *less* effective than combination anticholinergics and behavioral therapy (OR 0.10, 95% CI 0.02 to 0.45) or anticholinergics alone (OR 0.18, 95% CI 0.06 to 0.54). However, all these findings were supported only by indirect comparisons.

Among third-line therapies used for urgency UI (BTX, neuromodulation, and combinations of neuromodulation with first- or second-line therapies), no therapy was found to be statistically significantly more effective than others. No study directly compared BTX with the various neuromodulation therapies.

Network Meta-Analysis of Satisfaction (Across All Interventions)

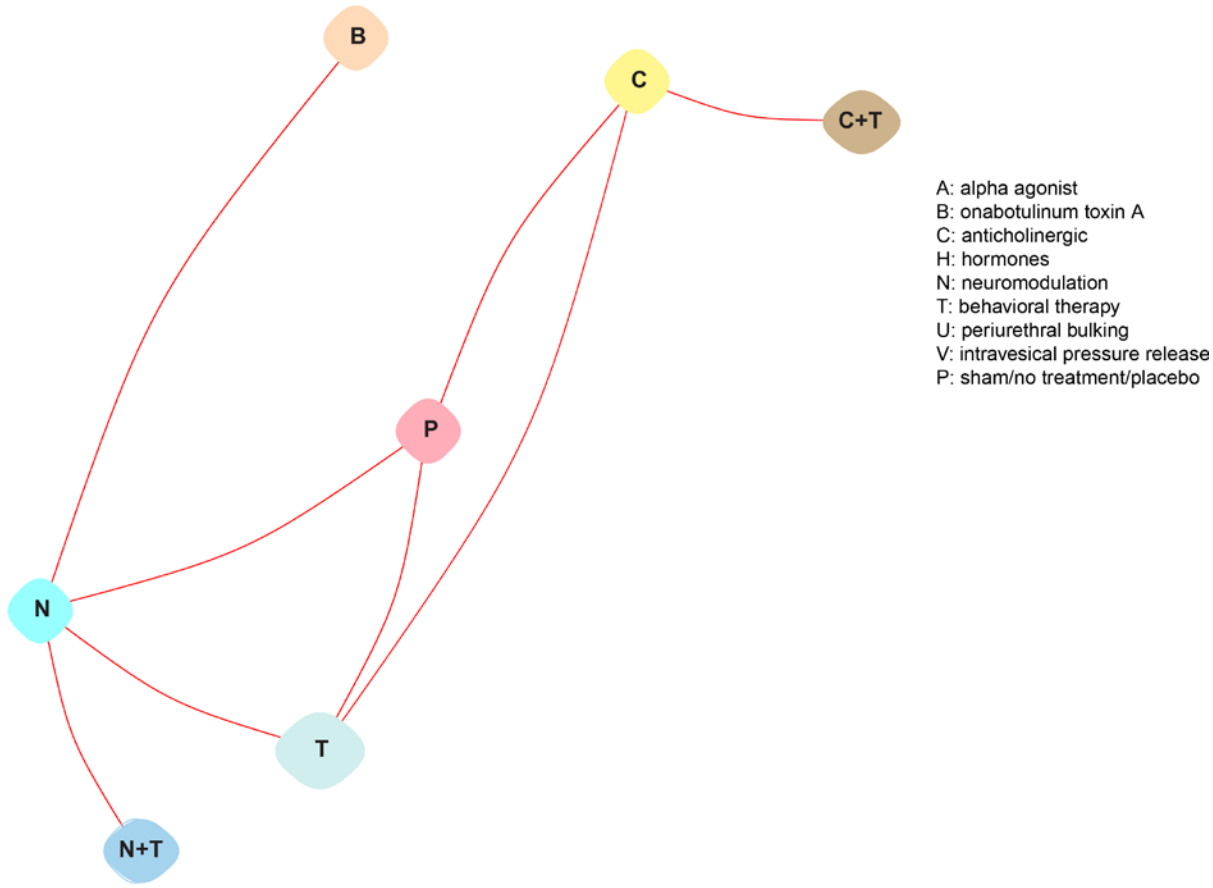
The evidence graph for improvement with respect to individual treatments is sparse (Figure 12), and comprises two subgraphs (B/N2 and all others). Figure 13 shows the evidence graph with respect to types of interventions. All intervention types are connected.

Figure 12. Evidence graph of all randomized controlled trials evaluating satisfaction across individual interventions



Abbreviations: MBSR = mindfulness-based stress reduction, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation.

Figure 13. Evidence graph of all randomized controlled trials evaluating satisfaction across intervention categories



Comparisons Across Intervention Categories

In total, 12 RCTs (3008 people) were included in this analysis; studies ranged in size from 24 to 975 women. [29, 31, 32, 35, 52, 88, 92, 103, 113, 114] Table 11 describes the intervention categories compared, the number of women who received each intervention, and the numbers of studies (and women) analyzing each comparison between intervention categories. Five RCTs (63%) were deemed to be at low or moderate risk of bias.

Table 11. Summary description of all studies reporting on satisfaction

	No. Studies (N)†						
Code*	B	C	C+T	N	N+T	T	P
B	190			1 (364)			
C		975	2 (371)			1 (132)	3 (1319)
C+T			186				
N				577	1 (48)	2 (322)	4 (759)
N+T					24		
T						128	4 (494)
P							928

Comparisons below the diagonal are omitted (blank cells). Blank cells above the diagonal indicate that no studies compared the interventions.

* See Figure 13. Codes: A: alpha agonist, B: onabotulinum toxin A, C: anticholinergic, H: hormones, N: neuromodulation, T: behavioral therapy, U: periurethral bulking, V: intravesical pressure release, P: sham/no treatment/placebo.

† Number of studies (and total sample size) comparing row and column intervention categories. Numbers across the diagonal (e.g., with A as both row and column header) are the total sample size for each intervention category. Blank cells above the diagonal imply that no studies directly compared the intervention categories.

Table 12 shows the ORs for achieving satisfaction with control of UI symptoms. The table includes all seven intervention categories evaluated. Further details about the network meta-analyses, including the analysis of individual interventions in each intervention category, are in Appendix G. Only 8 of 21 possible comparisons are informed by direct (head-to-head) comparisons, of which 3 are comparisons with no treatment. In Table 12, the direct comparisons are in the unshaded cells. Shaded cells correspond to comparisons that were inferred from the network meta-analysis model but had not been examined in the included RCTs. For example, BTX has been compared only with neuromodulation. Comparisons with other active intervention categories are indirect through comparisons with other interventions. Indirect comparisons are more uncertain than those for which head-to-head data exist. The added uncertainty in indirect comparisons is partly reflected in the width of their respective 95 percent confidence intervals, which are broader (often much broader) for comparisons without direct comparisons than for those with direct comparisons. For all comparisons that are empirically observed with direct comparisons (all nonshaded cells in the table), results using only head-to-head data (i.e., standard pairwise meta-analysis) agree well with the results from the network meta-analysis (data not shown).

Full Network Summary

First, we describe results from the full network regardless of their primary use for urgency or stress UI or whether they are first, second, or third line therapies. In the subgroup analyses section below, we restrict summaries to those interventions used primarily for stress UI separately from those interventions used primarily for urgency UI.

All active treatments appear to result in higher rates of satisfaction with control of UI symptoms than sham, placebo, or no treatment.

Regarding comparisons of active interventions, based on only statistically significant differences, treatment with either BTX or neuromodulation resulted in more women being satisfied than anticholinergics or combination anticholinergics and behavioral therapy. Behavioral therapy alone was found to be significantly more effective than anticholinergics alone.

Other evidence of possible comparative benefits, based on statistically nonsignificant ORs of >2.0 (for which the lower bound of the confidence interval is ≥0.80) suggests that anticholinergics are also less effective than combination neuromodulation and behavioral therapy.

Table 12. Odds ratios for satisfaction between all intervention categories

Interv-entions*	OR (95% CI) †					
BTX (B)	4.89 (2.75, 8.69)‡	3.03 (1.45, 6.35)‡	1.35 (0.90, 2.05)	1.18 (0.23, 6.11)	1.58 (0.80, 3.15)	12.7 (7.44, 21.6)‡
	Antichol (C)	0.62 (0.39, 1.01)	0.28 (0.18, 0.42)‡	0.24 (0.05, 1.23)	0.32 (0.19, 0.54)‡	2.60 (2.05, 3.28)‡
		Antichol + Behavioral Tx (C+T)	0.45 (0.24, 0.83)‡	0.39 (0.07, 2.11)	0.52 (0.26, 1.04)	4.18 (2.48, 7.07)‡
			Neuromod (N)	0.87 (0.18, 4.29)	1.16 (0.67, 2.04)	9.37 (6.64, 13.2)‡
				Neuromod + Behavioral Tx (N+T)	1.34 (0.25, 7.10)	10.7 (2.14, 53.9)‡
					Behavioral Tx (T)	8.04 (4.91, 13.2)‡
						Placebo/Sham/ No Treatment (P)

Cells with data shaded gray indicate that the estimate is based only on indirect comparison. Results are given as odds ratios (95% confidence intervals). Odds ratios >1 favor the row intervention (to the left) over the column intervention (below). Comparisons below the diagonal are omitted (blank cells).

Abbreviations: Antichol = anticholinergics, CI = confidence interval, OR = odds ratio; BTX = onabotulinum toxin A.

* Interventions are listed across the diagonal line of table cells. Intervention category codes are in parentheses, corresponding with the associated figure.

† In all cells with numerical data.

‡ Statistically significant. These cells are also in bold font to improve visibility.

The league table (Table 13) offers complementary information from the same analysis. For each intervention category, it shows the mean and forecasted (from the network meta-analysis model) satisfaction rates across the included RCTs. Most women were satisfied with any of the active treatments. BTX, neuromodulation, behavioral therapy, and combination neuromodulation and behavioral therapy achieved satisfaction rates of about 80 to 85 percent; 66 percent of women using combination anticholinergics and behavioral therapy, as did 55 percent of women using anticholinergics alone. Only 32 percent of women in no treatment study arms achieved satisfactory control of their UI symptoms.

It should be noted that these summary results do not take into account characteristics of the women included in the studies that may be associated with resistance to treatment; thus, the summary findings may be confounded by study. In other words, the network meta-analyses assume that the women across all studies (and all other study characteristics) are generally similar. For example, they do not account for possible differences among women being considered for (and treated with) oral medications, injected or invasive interventions, or nonpharmacological interventions. Subgroup meta-analysis results are presented in the next section.

Descriptions of the comparisons across all individual interventions can be found in Appendix G. Briefly, the results of the analyses of intervention categories are congruent with the corresponding results of the analyses of individual interventions. However, many more of the specific comparisons have very broad confidence intervals because the comparisons across individual interventions are even more sparse than for comparisons of intervention categories.

Table 13. Mean and forecasted satisfaction rates by intervention category (all)

	Intervention Category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological	BTX (B)	85.5 (73.9, 92.5)	85.5 (43.6, 97.8)
	Anticholinergic (C)	54.7 (39.9, 68.8)	54.7 (14.2, 89.8)
Nonpharmacological	Neuromodulation + Behavioral Therapy (N+T)	83.3 (49.2, 96.3)	83.3 (29.0, 98.4)
	Neuromodulation (N)	81.4 (70.0, 89.1)	81.4 (37.3, 97.0)
	Behavioral Therapy (T)	78.9 (64.7, 88.5)	78.9 (33.1, 96.6)
Combination	Anticholinergic + Behavioral Therapy (C+T)	66.1 (48.4, 80.2)	66.1 (20.4, 93.7)
No treatment	Placebo/Sham/No Treatment (P)	31.8 (20.6, 45.5)	31.8 (6.0, 77.2)

Intervention category codes are in parentheses, corresponding with the associated figure.

Abbreviations: BTX = onabotulinum toxin A, CI = confidence interval.

* The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.

† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Subgroup Analyses

Key Question Subgroups

For most of the subgroups of particular interest to the stakeholders (women athletes and those engaging in high-impact physical activity, military women or veterans, and racial and ethnic minorities) data within or between studies were sparse or not available. Therefore, no descriptions of these subgroups are possible.

Older Women

Analyses limited to studies with mean age greater than 60 years were congruent with the overall analyses presented here; although different specific comparisons reached statistical significance. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-6, Table H-9, and Table H-15. Only 2 studies provided data specifically for women at least 60 years of age. Only anticholinergics, behavioral therapy, and no treatment were compared among these studies. In brief, both active interventions were more effective than no treatment (anticholinergics: OR 2.30, 95% CI 1.11 to 4.75; behavioral therapy: OR 8.01, 95% CI 4.01 to 16.0). Behavioral therapy was significantly more likely to achieve satisfactory control of UI symptoms.

Satisfaction was achieved in about three-quarters of older women using behavioral therapy, about half of women using anticholinergics, and about one-quarter of women in no treatment study arms.

Stress, Urgency, and Mixed UI Subgroups

Stress UI

Six of the studies reported on satisfaction among women who have only stress UI. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-3A, Table H-7, and Table H-12 (left side). The small number of studies focusing on stress UI translated into relatively few possible comparisons of interventions, which included only neuromodulation, behavioral therapy, and no treatment.

Both active interventions were statistically more effective than placebo/no treatment (neuromodulation OR 8.4; behavioral therapy OR 5.5). The estimate of comparative effectiveness between the two active interventions was imprecise (with a very wide confidence interval).

Satisfaction was achieved in 82 percent of women with stress incontinence using neuromodulation, 75 percent using behavioral therapy, and 35 percent in no treatment study arms.

Urgency UI

Twelve of the studies reported on satisfaction among women who have only urgency UI. The small number of studies focusing on urgency UI translated into relatively few possible comparisons of interventions, which included anticholinergics, behavioral therapy, combination anticholinergics and behavioral therapy, BTX, and neuromodulation. The comparisons fell into two nonoverlapping subgraphs: one comparing BTX with neuromodulation; one comparing the other interventions. Evidence graphs, odds ratio tables, and league tables for these studies can be found in Appendix H, Figure H-3B, Tables H-8A and H-8B, and Table H-12 (right side).

Only behavioral therapy was found to be significantly more likely to result in satisfaction with control of UI symptoms than no treatment (OR 8.2, 95% CI 1.70 to 39.4). However, note that BTX and neuromodulation could not be directly or indirectly compared with no treatment. Among active interventions that could be compared, BTX was nonsignificantly favored over neuromodulation (OR 1.40, 95% CI 0.93 to 2.12). Note, though, that neuromodulation is typically used for stress UI.

Among women using behavioral therapy 75 percent had satisfaction. For all other active interventions between about 50 and 60 percent had satisfaction. With no treatment, 27 percent had satisfaction.

Mixed UI

One study reported on satisfaction specifically in women with mixed UI.[112] Women with mixed UI who used the anticholinergic tolterodine had greater satisfaction than with placebo (OR 2.60, 95% CI 1.89 to 3.57).

Stress and Urgency UI Subgroups Based on Categorization of Interventions

Because only a subset of studies specifically evaluated women with either stress or urgency UI, as noted, the networks are relatively sparse, and findings are less robust than for the overall network meta-analysis. Therefore, we resummarize the overall network in two subgroups, focusing on those intervention categories typically used primarily either for urgency or for stress UI. Interventions commonly used for both are included in both subanalyses.

Stress UI Subanalysis

The only intervention commonly used for stress UI that has been evaluated for satisfaction is behavioral therapy. Therefore, no comparison with other stress UI interventions can be made.

Urgency UI Subanalysis

Among first-and second-line therapies used for urgency UI (behavioral therapy, anticholinergics, and combination anticholinergic and behavioral therapy), behavioral therapy was found to be significantly more likely to achieve satisfaction than anticholinergics (OR 3.13, 95% CI 1.85 to 5.26).

Among third-line therapies used for urgency UI (BTX, neuromodulation, and combinations of neuromodulation with first- or second-line therapies), no therapy was found to be statistically significantly more effective than others.

Key Question 1: What are the benefits and harms of nonpharmacological treatments of UI in women, and how do they compare with each other?

In the sections for KQ 1 to 4, we summarize the UI outcome data (cure, improvement, satisfaction) pertinent to each KQ. In these summaries we focus on the comparisons of interventions specific to stress UI and urgency UI separately. These summaries recapitulate the findings (pertinent to each KQ) summarized in the *Subgroup Analyses* subsections of the *Key Questions 1 to 4: Network Meta-Analyses* section above. Here we also summarize the quality of life and adverse event data.

Key Points

- Trials evaluated 5 intervention categories (including sham or no intervention) and 38 specific interventions. Trials directly compared 7 of 10 possible comparisons of intervention categories, of which 3 were comparisons between active interventions (not sham or no treatment). Trials directly compared 50 of 703 possible comparisons of specific interventions, of which 30 were comparisons of active interventions.
- For women with stress UI,
  - Behavioral therapy was the only first- (or second-) line nonpharmacological treatment evaluated. Behavioral therapy was significantly more effective than no treatment to achieve cure (OR 3.1 across all studies; OR 5.6 in stress UI studies), improvement (OR 5.4 across all studies; OR 7.0 in stress UI studies), and satisfaction (OR 8.0 across all studies; OR 5.5 in stress UI studies).
  - In studies of women with stress UI, intravesical pressure release and neuromodulation were evaluated as third-line nonpharmacological treatments. Based on data from these studies, comparisons of neuromodulation or combination neuromodulation and behavioral therapy with intravesical pressure release were mostly very imprecise (based on indirect comparisons). However, intravesical pressure release may result in higher rates of improvement than combination neuromodulation and behavioral therapy (OR 4.3, 95% CI 0.9, 20.0).
    - In studies of women with stress UI, neuromodulation alone was significantly more likely than no treatment to achieve cure (OR 3.5), improvement (OR 4.0), and satisfaction (OR 8.4).
    - Intravesical pressure release may be more effect than no treatment to achieve cure based on nonsignificant summary effect (OR 2.7, 95% CI 0.8, 9.0) across all studies, but no significant difference was found in stress UI studies. However, intravesical pressure release was significantly more likely to achieve improvement than no treatment (OR 4.6 across all studies; OR 4.4 in stress UI studies). The studies of intravesical pressure release did not report satisfaction.
  - Studies of women with stress UI directly compared third-line neuromodulation and combined neuromodulation and behavioral therapy with first-line behavioral therapy. Studies found no significant differences in rates of cure, improvement, or satisfaction.

- For women with urgency UI,
  - Behavioral therapy was the only first- (or second-) line nonpharmacological treatment evaluated. Behavioral therapy was significantly more effective than no treatment to achieve cure (OR 3.1 across all studies; OR 2.8 in urgency UI studies), improvement (OR 5.4 across all studies; OR 7.5 in urgency UI studies), and satisfaction (OR 8.0 across all studies; OR 8.2 in urgency UI studies).
  - Neuromodulation and BTX were the third-line nonpharmacological treatments evaluated in women with urgency UI; although neuromodulation is typically used only for women with stress UI. Neuromodulation was significantly more effective than no treatment to achieve cure (OR 3.3 across all studies; OR 2.8 in urgency UI studies), improvement (OR 5.4 across all studies; OR 7.5 in urgency UI studies), and satisfaction (OR 8.0 across all studies; no comparison possible from urgency UI studies. BTX was nonsignificantly favored over neuromodulation to achieve satisfaction in studies of women with urgency UI (OR 1.40).
  - Studies of women with urgency UI directly compared third-line neuromodulation with first-line behavioral therapy. Studies found no significant differences in rates of cure or improvement. Satisfaction was not reported in these studies.
- There were 78 studies that reported on quality of life outcomes.
  - Studies reported on 15 nonpharmacological interventions (including combinations of interventions) that were compared with sham or no interventions. All interventions evaluated by more than one study were found to have a statistically significant improvement in at least one aspect of quality of life by at least one study, except for PFMT.
  - Studies reported on 19 nonpharmacological interventions that were compared with each other. Home, supervised, or group PFMT was found to result in better quality of life than a more basic PFMT regimen. Combined PFMT and biofeedback has been found to improve the daily activities quality of life, but not other quality of life domains, compared with PFMT alone.
- There were 58 studies that reported on adverse events of nonpharmacological treatments.
  - Among interventions for which at least two studies reported any specific adverse event, no (undefined or nonmajor) adverse events were reported with bladder training (2 studies, 106 women), education (4 studies, 277 women), PFMT (21 studies, 1560 women), combined PFMT and biofeedback (3 studies, 83 women), and combined PFMT, TENS, and biofeedback (2 studies, 107 women) (all low SoE).
  - Among 10 studies of TENS, 8 reported no adverse events in 396 women, but two reported any or any moderate adverse event in a total of 13 of 67 women (19%). Overall, adverse events were reported in 2.8% of 463 women receiving TENS (moderate SoE).
    - In 3 studies of TENS, 11% of women (n = 217) reported urinary tract infections; however, within studies, these rates were similar to or lower than urinary tract infection rates on an anticholinergic (6%) or with BTX (35%).
  - In two studies of magnetic stimulation, 3 of 110 women total (2.7%) had undefined adverse events.

Findings

Table 14 repeats simplified data from Tables 7 (cure), 10 (improvement), and 13 (satisfaction) limited to nonpharmacological treatments (pertinent to this KQ). It summarizes the mean cure rates of the nonpharmacological treatments based on the network meta-analysis models of all studies and of the two subsets of studies of women with stress UI or with urgency UI.

Cure

All nonpharmacological treatments were associated with better cure rates than sham or no treatment (Table 14). Across all studies, the point estimates for the cure rates are between 27 and 35 percent for the active treatments versus 12 percent for sham or no treatment. With one exception, cure rates were similar in the studies restricted to stress or urgency UI (among relevant interventions). Behavioral therapy (1st line therapy) was somewhat higher in studies of women with stress UI (46%) than across all studies (30%). Except for intravesical pressure release, all nonpharmacological treatments resulted in statistically significantly higher cure rates than no or sham treatment, with ORs ranging from 3.1 to 4.0 across all studies (see Table 6). Intravesical pressure release (3rd line therapy) attained near-significance against no treatment (OR 2.7, 95% CI 0.8 to 9.0) across all studies, although the estimate was highly imprecise in studies of women with stress UI only.

With respect to cure, there were no statistically significant differences between categories of nonpharmacological interventions. From Table 6, the point estimates of the ORs between any two nonpharmacological treatments are smaller than 1.45 (or greater than its inverse). However, the confidence intervals are generally broad and cannot exclude relatively large differences. Estimates of differences were similar, but less precise, from studies restricted to women with either stress UI or urgency UI (Appendix H, Tables H-1 to H-2).

Table 14. Summary league table displaying percent of women with UI outcomes for each nonpharmacological treatment

	Interventions	All Studies, %	Stress UI Studies*, %	Urgency UI Studies*, %
Cure	Neuromodulation + behavioral therapy	35.2	28.4	.
	Neuromodulation	31.3	34.9	29.4
	Behavioral therapy	29.5	46.4	30.8
	Intravesical pressure release	27.2	29.2	.
	Placebo/Sham/No treatment	12.0	13.3	13.2
Improvement	Neuromodulation + behavioral therapy	68.7	27.0	.
	Behavioral therapy	64.1	72.3	86.3
	Intravesical pressure release	60.2	62.0	.
	Neuromodulation	58.0	59.8	78.6
	Placebo/Sham/No treatment	24.8	27.2	45.7
Satisfaction	Neuromodulation + behavioral therapy	83.3	.	.
	Neuromodulation	81.4	81.8	51.1
	Behavioral therapy	78.9	74.5	75.1
	Intravesical pressure release	.	.	.
	Placebo/Sham/No Treatment	31.8	34.9	26.9

Interventions are sorted by percent of women across all studies who achieved cure (except for no treatment in the last rows). Empty cells (with periods) indicate that the intervention was not evaluated among the studies designated in the given column.

* Restricted to studies of the given subgroup of women

Improvement

All nonpharmacological treatments were associated with better improvement rates than sham or no treatment (Table 14). Across all studies, the point estimates for the improvement rates are between about 60 and 70 percent for the active treatments versus 25 percent for sham or no treatment. Improvement rates were for all evaluated nonpharmacological treatments were higher in studies of women with urgency UI only than across all studies. In studies of women with stress UI combination neuromodulation and behavioral therapy resulted in a low average rate of improvement (27%). All nonpharmacological treatments resulted in statistically significantly higher improvement rates than no or sham treatment, with ORs ranging from 4.2 to 6.7 across all studies (see Table 9). Estimates of effect compared with no or sham treatment were similar in studies restricted to women with stress UI or urgency UI, except that combination neuromodulation and behavioral therapy was not significantly different than control (see Appendix H, Tables H-4 and H-5).

With respect to improvement, there were no statistically significant differences between categories of nonpharmacological interventions. From Table 9, the point estimates of the ORs between any two nonpharmacological treatments are nonsignificant and imprecise, with confidence intervals that cannot exclude relatively large differences. Estimates of differences were mostly similar from studies restricted to women with either stress UI or urgency UI, except that in studies of stress UI, combination neuromodulation and behavioral therapy (3rd line therapy) was significantly less effective than either neuromodulation (3rd line therapy) or behavioral therapy (1st line therapy) alone (Appendix H, Tables H-4 and H-5).

Satisfaction

The three evaluated nonpharmacological treatments were associated with better satisfaction rates than sham or no treatment (Table 14). Across all studies, the point estimates for the satisfaction rates are about 80 percent for the active treatments versus 32 percent for sham or no treatment. Rates of satisfaction after behavioral therapy were similar in studies of women with only stress UI or urgency UI. Satisfaction rates after neuromodulation were also similar in studies of women with stress UI, but were lower (51%) in studies of women with urgency UI. All nonpharmacological treatments resulted in statistically significantly higher satisfaction rates than no or sham treatment, with ORs ranging from 8.0 to 10.7 across all studies (see Table 12). Estimates of effect compared with no or sham treatment were similar in studies restricted to women with stress UI or urgency UI (see Appendix H, Tables H-7 to H-8).

With respect to satisfaction, there were no statistically significant differences between categories of nonpharmacological interventions. From Table 12, the point estimates of the ORs between any two nonpharmacological treatments are nonsignificant and imprecise, with confidence intervals that cannot exclude relatively large differences. From studies restricted to women with either stress UI, the only available comparison found a nonsignificant difference between neuromodulation (3rd line therapy) and behavioral therapy (1st line therapy) among women with stress UI, based in part on direct head-to-head comparisons (Appendix H, Tables H-7 to H-8). Among studies of women with urgency UI, BTX (3rd line therapy) was

nonsignificantly favored to achieve satisfaction over neuromodulation (OR 1.40, 95% CI 0.93 to 2.12).

Quality of Life

Seventy-eight studies reported on quality of life outcomes for the comparison of nonpharmacological interventions versus placebo or other nonpharmacological interventions. [28, 31, 35, 43, 46, 49, 51-53, 56, 63, 66, 69, 74, 93, 98, 103, 108, 109, 111, 115-170] The summary results are presented in Tables 15 and 16. The table cells show the number of studies and the number of people (in parentheses), followed by the number of studies with the number of studies that found statistically significant differences and which intervention was favored, the number of studies that found discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others), and the number of studies with nonsignificant differences. Study-level details, including citations, are presented in Appendix E.

Nonpharmacological Interventions Versus Sham or No Treatment

Fifteen nonpharmacological interventions (including combinations of interventions) were compared with sham or no treatments in 36 studies (Table 15). Twenty-three of these studies evaluated behavioral interventions, which included bladder training, education, PFMT, biofeedback, electroacupuncture, weight loss, and yoga, and combinations of these interventions, [35, 49, 52, 53, 56, 69, 93, 98, 103, 109, 111, 117, 119-121, 125, 127, 134, 137, 142, 147, 148, 150, 155, 156, 162-165, 167-169] three combinations of behavioral and neuromodulation,[28, 43, 162] and one an intravesical pressure release device.[63] The studies mostly analyzed daily activity, bother, general health, and mental health.

Across interventions, the effect of the nonpharmacological interventions on various aspects of quality of life was mixed. Among interventions compared by more than one study, only TENS (alone) was found by all studies to be statistically significantly better than sham for any specific aspect of quality of life. TENS alone was found to result in better mental health quality of life (2 studies).[35, 93] All interventions evaluated by more than one study were found to have a statistically significant improvement in at least one aspect of quality of life by at least one study, except for PFMT, in which only discordant or nonsignificant results were found in daily activities and general health. Only two interventions for which any aspect of quality of life was evaluated were not found to result in better quality of life than sham: combined bladder training and PFMT, and the intravesical pressure release device. However, the data for these interventions were sparse. The two studies evaluating these two interventions each reported on only a single aspect of quality of life.

Table 15. Quality of life outcomes for nonpharmacological interventions versus sham/no treatment*

	Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/ Energy
Behavioral vs. Placebo	Acupuncture	Sham	1 (20): 1 NS							
	Bladder support	Sham	1 (46): 1 favor† A	1 (46): 1 NS			1 (46): 1 favor A		1 (46): 1 NS	
	Bladder training, PFMT	Sham	1 (108): 1 NS							
	Education, bladder training, PFMT	Sham	1 (103): 1 NS	4 (443): 2 favor A 2 NS	1 (45): 1 NS	1 (45): 1 NS	2 (148): 2 NS	1 (45): 1 NS		
	Education, weight loss	Sham		1 (48): 1 favor A	1 (48): 1 favor A	1 (48): 1 favor A	1 (48): 1 favor A			
	Electroacupuncture	Sham	2 (102): 1 favor A 1 disc							
	PFMT	Sham	6 (379): 4 favor A 2 NS	7 (513): 2 disc 5 NS	1 (247): 1 favor A	4 (327): 2 disc 2 NS	2 (85): 1 favor A 1 NS		2 (160): 1 disc 1 NS	
	PFMT, biofeedback	Sham	1 (31): 1 favor A			1 (32): 1 disc				
	PFMT, weights	Sham				1 (41): 1 disc	1 (57): 1 favor A			
	Yoga	Sham		1 (18): 1 NS	1 (18): 1 favor A					
Neuromodulation vs. Placebo	Magnetic simulation	Sham	4 (204): 2 favor A 2 disc	2 (121): 2 NS	1 (34): 1 favor A	1 (20): 1 NS	1 (20): 1 NS			1 (20): 1 NS
	TENS	Sham	1 (161): 1 favor A	1 (27): 1 NS	1 (27): 1 NS	3 (208): 1 favor A 2 disc	2 (222): 2 favor A			
Behavioral + Neuromodulation vs. Placebo	TENS, PFMT	Sham	1 (60): 1 disc	2 (122): 2 disc						
	TENS, PFMT, biofeedback	Sham		1 (30): 1 favor A						
Other vs. Placebo	Intravesical pressure release device	Sham					1 (115): 1 NS			

Empty cells indicate that the intervention was not evaluated for the outcome designated in the given column

Abbreviations: disc = discordant findings; NS = non-significant; PFMT = pelvic floor muscle training; TENS = transcutaneous electrical nerve stimulation.

* Results are given as number of studies (number of people), number of studies with significant difference and which intervention it favors, number of studies with discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others, number of studies with nonsignificant differences.

† *Favor* indicates a statistically significant (net) difference favoring the specified intervention.

Nonpharmacological Interventions Versus Other Nonpharmacological Interventions

Nineteen nonpharmacological interventions (including combinations of interventions) were compared with other active interventions (Table 16). Forty-two studies evaluated behavioral interventions versus other behavioral interventions (or combinations of behavioral interventions), including bladder training, education, PFMT, biofeedback, electroacupuncture, weight loss, and yoga. [31, 46, 51, 66, 74, 108, 115-118, 122-124, 126, 128-133, 135, 136, 138-141, 143-146, 149, 151-153, 157-162, 166, 170] One study evaluated neuromodulation (electric stimulation) versus behavioral therapy,[35] and ten evaluated combinations of behavioral therapy and neuromodulation versus behavioral therapy alone. [31, 66, 108, 116, 117, 136, 138, 159, 162] These studies mostly analyzed bother, daily activities, distress, general health, mental health, and sexual health.

Few interventions were compared by more than one study, and these contrasts generally were split between discordant or nonsignificant findings when analyzing bother, daily activities, or general health. Supervised PFMT was found to improve quality of life statistically significantly more than unsupervised PFMT or other specific types of exercise or physical therapy in one study for bother and in two studies each for the domains of daily activities and mental health. The other studies evaluating these comparisons reported discordant or nonsignificant differences between the interventions.[46, 51, 74, 117, 118, 123, 124, 126, 128-130, 133, 139, 141, 146, 149, 152, 153, 157, 170]

One study reported statistically significant improvements in the daily activities domain with PFMT and biofeedback compared with PFMT alone, and one study reported significant improvements in distress for bladder training combined with PFMT and biofeedback when compared to bladder training alone or PFMT with biofeedback[117, 166] However, nine studies either reported discordant or nonsignificant differences across all other domains for this comparison.[35, 74, 124, 128, 129, 131, 133, 138, 149]

Additionally, two studies found significant improvements among the control groups for two outcomes; bladder training alone was found to have significant improvements in bother ratings over combined TENS, PFMT, and biofeedback, and electroacupuncture alone was found to have significant improvements when compared to PFMT with weights in assessing impact on daily activities.[108, 131]

Table 16. Quality of life outcomes for nonpharmacological treatments versus other nonpharmacological treatments*

	Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/ Energy
Behavioral vs. Behavioral	Acupuncture	PFMT	1 (20): 1 NS							
	Bladder training, PFMT	Bladder training		1 (108): 1 favor† A	1 (108): 1 favor A					
	Bladder training, PFMT, biofeedback	Bladder training		1 (135): 1 disc	1 (135): 1 favor A					
	Bladder training, PFMT, biofeedback	PFMT, biofeedback		1 (136): 1 disc	1 (136): 1 favor A					
	Education, bladder training, PFMT (Group training)	Education, bladder training, PFMT (Individual training)					1 (174): 1 NS			
	Education, PFMT	PFMT		1 (63): 1 NS			1 (63): 1 NS			
	Education, PFMT, bladder training	Education		1 (55): 1 favor A						
	Education, PFMT, bladder training, TENS	Bladder training, PFMT		1 (145): 1 NS						
	Education, PFMT, bladder training, TENS	Education, bladder training		1 (145): 1 favor A	1 (145): 1 favor A					
	Education, weight loss	Education			1 (163): 1 favor B				1 (338): 1 NS	
	MBSR	Yoga	1 (30): 1 NS			1 (30): 1 NS				
	PFMT	Bladder training					1 (81): 1 NS			
	PFMT	Education		1 (48): 1 NS	1 (48): 1 NS					
	Group PFMT	Individual PFMT	1 (60): 1 NS	1 (60): 1 disc		2 (105): 1 disc 1 NS	1 (60): 1 NS			1 (60): 1 NS
	Home PFMT, supervised PFMT	Home PFMT, unsupervised PFMT	2 (122): 1 disc 1 NS	2 (106): 1 favor A 1 NS			1 (44): 1 favor A		1 (88): 1 disc	
	PFMT	Physiotherapy (incl. Paula group)	3 (246): 1 favor A 2 NS	1 (27): 1 NS		1 (33): 1 disc	2 (321): 1 favor A 1 NS			
	PFMT, weights	Bladder training				1 (51): 1 NS	1 (51): 1 NS			

	Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/ Energy
	PFMT, biofeedback	Bladder training	1 (137): 1 NS	1 (137): 1 favor B						
	PFMT, biofeedback	PFMT	3 (193): 1 disc 2 NS	2 (156): 2 favor A		2 (68): 2 NS	2 (133): 2 NS			
	PFMT, biofeedback	PFMT, weights	1 (60): 1 NS				1 (60): 1 NS			
	PFMT, weights	PFMT	1 (65): 1 NS							
	PFMT, biofeedback (supervised)	PFMT, biofeedback (unsupervised,)	1 (19): 1 NS			1 (19): 1 NS				
Behavioral vs. Neuromodulation	PFMT, weights	TENS					1 (57): 1 NS			
Neuromodulation vs. Neuromodulation	InterStim (continuous)	InterStim (cyclic)	1 (19): 1 NS			1 (19): 1 NS				
Behavioral + Neuromodulation vs. Behavioral	Education, PFMT, Bladder training, TENS	PFMT		1 (118): 1 favor A						
	TENS, weights	PFMT	1 (60): 1 NS	1 (60): 1 disc						
	TENS, PFMT	Bladder training	1 (52): 1 favor A							
	TENS, PFMT	PFMT		1 (28): 1 NS		1 (69): 1 NS				
	TENS, PFMT, functional Electrical Stimulation	PFMT, weights		1 (120): 1 NS					1 (120): 1 NS	
	TENS, PFMT, biofeedback	Electroacupuncture	1 (42): 1 favor B							
	TENS, PFMT, biofeedback (supine position, electrical stimulation)	TENS, PFMT, biofeedback (supine and upright, vaginal cones)		1 (44): 1 NS		1 (88): 1 NS				

Empty cells indicate that the intervention was not evaluated for the outcome designated in the given column.

Abbreviations: disc = discordant; MBSR = mindfulness-based stress reduction; NS = non-significant; PFMT = pelvic floor muscle training; TENS = transcutaneous electrical nerve stimulation.

* Results are given as number of studies (number of people), number of studies with significant difference and which intervention it favors, number of studies with discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others, number of studies with nonsignificant differences.

† *Favor* indicates a statistically significant (net) difference favoring the specified intervention.

Adverse Events

Fifty-two studies reported on adverse events in studies of nonpharmacological interventions.[14, 29, 32, 46, 54, 60, 69, 92, 95, 98, 109, 115, 119, 120, 123, 126, 128, 129, 132, 133, 136, 138, 140, 144, 147, 149, 150, 154, 156, 157, 160, 161, 165, 168, 169, 171-187] The results are presented in Tables 17 and 18 (parts 1 and 2, respectively). For adverse events that were reported only by a single study (arm), the table cells show the percentage of people affected by the adverse event. Where more than one study arm reported on an adverse event, the cell gives the median and range of percentages (or just the range, if only two arms reported an adverse event). Detailed results are in Appendix F.

In general, the percentages of women with adverse events were low, but reporting was sparse with only one or two studies reporting adverse events for most of the interventions. No specific adverse event (e.g., urinary tract infection, diarrhea, dry mouth) was reported in more than one study for any specific intervention (e.g., acupuncture, bladder support). The most commonly reported adverse event was the group nonmajor or undefined adverse event. In two studies of bladder training, four studies of education, and two of three studies of magnetic stimulation (with 76 women), no adverse events were reported. The other study of magnetic stimulation reported that 3 of 60 women (5%) had an undefined adverse event. In two studies of InterStim™ (a form of sacral neuromodulation), 1 of 284 women total (0.4%) had a "serious" adverse event (an implant site erosion). In two studies of electroacupuncture (287 women) one reported no adverse events in 24 women, the other reported four adverse events in 247 women. A small study of bladder support (29 women) reported no adverse events.

Among 13 studies of TENS, nine reported no adverse events in 571 women, but two reported any or any moderate adverse event in a total of 13 of 67 women (19%). Overall, adverse events were reported in 2.8 percent of 463 women receiving TENS. In three studies of TENS, 11 percent of women (n = 199) reported urinary tract infections; however, within studies, these rates were similar to or lower than urinary tract infection rates on an anticholinergic (6%) or with BTX (35%).

Table 17. Adverse events in nonpharmacological interventions, part 1 (acupuncture to MBSR)

Adverse Event*	Acupuncture	Bladder Support	Bladder Training	Education	Electroacupuncture	InterStim™	Magnetic Stimulation	MBSR
AE (undefined/ nonmajor)		0 [N = 18 (1 study)]	0 [N = 106 (2 studies)]	0 [N = 277 (4 studies)]	0, 1.6 N = 271 (2 studies)]	46.7 [N = 272 (1 study)]	0 (0, 5) [N = 136 (3 studies)]	0 N = 15 (1 study)]
AE, serious		0 [N = 29 (1 study)]			0 [N = 287 (2 studies)]	0, 0.4 [N = 284 (2 studies)]		
Allergic reaction								
Cardiac/chest Pain			2.4 [N = 41 (1 study)]					
CNS – confusion			6.3 [N = 63 (1 study)]					
D/C due to AE								
Device malfunction/revision						12.5 (4, 20.2) [N = 1360 (1 study)]		
Dry mouth			34.9 [N = 63 (1 study)]					
Fatigue/drowsiness	8.3 [N = 12 (1 study)]				0, 0.8 [N = 287 (2 studies)]			
Gastrointestinal/ abdominal symptoms			22.2 [N = 63 (1 study)]					
Gastrointestinal/ abdominal symptoms (abdominal discomfort)						8.3 [N = 12 (1 study)]		
Gastrointestinal/ abdominal symptoms (constipation)						8.3 [N = 12 (1 study)]		
Gastrointestinal/ abdominal symptoms (diarrhea)						8.3 [N = 12 (1 study)]		
Headache								
Hematuria								
Infection - implant						3.7 [N = 1272 (1 study)]		

Adverse Event*	Acupuncture	Bladder Support	Bladder Training	Education	Electroacupuncture	InterStim™	Magnetic Stimulation	MBSR
Infection - UTI	8.3 [N = 23 (1 study)]	3.4 [N = 29 (1 study)]						
Infection - yeast								
Localized reaction					0, 5 [N = 287 (2 studies)]			
Pain - bladder						8.3 [N = 24 (1 study)]		
Pain - general/undefined		0 [N = 18 (1 study)]			2.5 [N = 40 (1 study)]	8.3 [N = 12 (1 study)]		
Pain - implant						12.5 [N = 272 (1 study)]		
Pain - needle site								
Pain - pelvic						8.3 [N = 12 (1 study)]		
Pain, bladder								
Urinary retention/voiding dysfunction			6.3 [N = 63 (1 study)]					
Urinary retention/voiding dysfunction - dysuria								
Urinary retention/voiding dysfunction - urinary retention								
Vaginitis								
Visual AE			9.5 [N = 63 (1 study)]					

The median and range are based on study arms. 1 arm = actual, 2 arms = range, 3+ arms median (range). if 1 or 2 studies have 3 or more arms, a median and range is given. Empty cells indicate that the outcome was not evaluated for the intervention designated in the given column.

Abbreviations: AE = adverse event, CNS = central nervous system, D/C = discontinued, MBSR = mindfulness-based stress reduction, N = number, UTI = urinary tract infection

* Results in first line of each cell are given as percent adverse events, median (min, max). The numbers in brackets represent [total number of participants (number of studies)].

Table 18. Adverse events in nonpharmacological interventions, part 2 (PFMT to yoga)

Adverse Event*	PFMT	PFMT + Biofeedback	PFMT + Bladder Training	PFMT + Bladder Training + Biofeedback	PFMT + TENS + Biofeedback	PFMT + Weights	TENS	Weight Loss	Yoga
AE (undefined/ nonmajor)	0 N = 1594 22 studies)]	0 [N = 83 (3 studies)]	0 [N = 41 (1 study)]	0 [N = 183 (1 study)]	0 [N = 107 (2 studies)]	0 [N = 15 (1 study)]	0 (0, 18.2) [N = 571 (13 studies)	0 [N = 189]	0 [N = 15]
AE, serious	0 [N = 29 (1 study)]								
Allergic reaction						2.9 [N = 35 (1 study)]			
D/C due to AE	0 [N = 15 (1 study)]								
Device malfunction/ revision							3.4 [N = 174 (1 study)]		
Dry mouth	0 [N = 15 (1 study)]								
Fall/Injury							43 [N = 21 (1 study)]		
Infection – UTI	10 [N = 10 (1 study)]						11.2 (10, 18.2) [N = 199 (3 studies)]		
Itching						2.9 [N = 35 (1 study)]			
Localized reaction						2.9 [N = 35 (1 study)]			
Pain - general/undefined						2.9 [N = 35 (1 study)]			
Pain - musculoskeletal	0.4 [N = 250 (1 study)]								
Visual AE	0 [N = 15 (1 study)]								

The median and range are based on study arms. 1 arm = actual, 2 arms = range, 3+ arms median (range). If 1 or 2 studies have 3 or more arms, a median and range is given. Empty cells indicate that the outcome was not evaluated for the intervention designated in the given column.

Abbreviations: AE = adverse event, CNS = central nervous system, D/C = discontinued, N = number, PFMT = pelvic floor muscle training, TENS = transcutaneous electrical nerve stimulation, UTI = urinary tract infection

* Results in first line of each cell are given as percent adverse events, median (min, max). The numbers in brackets represent [total number of participants (number of studies)].

Key Question 2: What are the benefits and harms of pharmacological treatments of UI in women, and how do they compare with each other?

Key Points

- Trials evaluated 7 intervention categories (including sham/no intervention) and 31 specific interventions. Trials directly compared 7 of 21 possible comparisons of intervention categories, of which 2 were comparisons between active interventions (not placebo, or no treatment). Trials directly compared 35 of 465 possible comparisons of specific interventions, of which 21 were comparisons of active interventions.
- For women with stress UI,
  - The first- (or second-) line pharmacological treatments evaluated included alpha agonists and hormones with or without anticholinergics. Alpha agonists were found to be significantly more effective than hormones for improvement (OR 4.5, 95% CI 1.40 to 17.8). There were no significant findings among these interventions for cure or satisfaction.
  - In studies of women with stress UI, periurethral bulking agents were evaluated as third-line pharmacological treatments. Comparisons were imprecise with wide confidence intervals.
- For women with urgency UI,
  - Anticholinergics were the only first- (or second-) line nonpharmacological treatment evaluated. Compared to placebo Anticholinergics were statistically significantly more likely to result in cure (ORs 1.80, 95% CI 1.29 to 2.52) or improvement (ORs 1.79, 95% CI 1.18 to 2.7). No studies evaluated these comparisons for satisfaction.
  - BTX was the only third-line nonpharmacological treatment evaluated. BTX was significantly more effective than no treatment to achieve cure (OR 4.94, 95% CI 2.82 to 8.65), or improvement (OR 7.5, 95% CI 2.88 to 19.54). No studies evaluated these comparisons for satisfaction.
- There were16 studies that reported on quality of life outcomes.
  - Studies reported on 8 pharmacological interventions that were compared with placebo or no interventions. Studies were discordant (within studies among different measures of quality of life) or inconsistent (across studies).
  - In 6 studies, overall anticholinergics improve quality of life compared with no treatment, but there was inconsistency both within and across studies regarding the comparative effect of anticholinergics on various aspects of quality of life.
  - Other intervention categories were evaluated by only a single study each.
  - There were 6 studies that compared 8 pharmacological interventions with each other. In most instances, no differences in quality of life were reported among interventions.
- There were 95 studies that reported on adverse events of pharmacological treatments.
  - Serious adverse events (as defined by study authors)

        - The highest rate of serious adverse events occurred with periurethral bulking agents (4.7%, 3 studies, 362 women); these adverse events included erosion and need for surgical excision of the bulking agents. The one study of a periurethral bulking agent currently available in the United States (macroplastique) reported 1.6% rate of erosion.
        - In 8 studies of anticholinergics, overall 2.4% of 2,583 women had serious adverse events, although the adverse events were mostly undefined.
        - In 2 studies, 0.6% of 1,390 women taking the alpha agonist duloxetine had (undefined) serious adverse events.
        - For comparison, in 10 studies, 0.2% of 2,852 women taking placebo (or no treatment) had (mostly undefined) serious adverse events.
    - Dry mouth
        - Anticholinergics: 21 studies reported adverse events for anticholinergics. Dry mouth was the most commonly reported adverse event (oxybutynin: median 36%).
        - Alpha agonists: 15 studies of the alpha agonist duloxetine reported dry mouth in a median of 13% of women.
        - Placebo: In 35 studies, a median of 4% of women had dry mouth with placebo treatment; high strength of evidence.
    - Other adverse events
        - Alpha agonists: Other reported adverse events included nausea (23.2% (15 studies), insomnia (12.6%, 13 studies), constipation (11%, 14 studies), fatigue (10.1%, 13 studies), dizziness (10.6%, 14 studies), and headache (8.3%, 11 studies).
        - BTX: the most commonly reported adverse event in 6 studies was urinary tract infection in a median of 34.6% of women (range 3.9% to 54.5%). 3 studies reported urinary retention or voiding dysfunction in 3.9%, 18.0%, and 25.5% of women.
        - Periurethral bulking: the most common adverse events were urinary tract infection (median 6.6%; range 1.3% to 23.8%) and urinary retention/voiding dysfunction (median 3.8%; range 0.9% to 9.5%). The one study (122 women) that evaluated a periurethral bulking agent currently available in the United States (macroplastique) found high rates of urinary tract infection (23.8%), headache (18%), and urinary retention/dysuria (15.6%).

Findings

Table 19 repeats simplified data from Tables 7 (cure), 10 (improvement), and 13 (satisfaction) limited to pharmacological treatments (pertinent to this KQ). It summarizes the mean cure rates of the pharmacological treatments based on the network meta-analysis models of all studies and of the two subsets of studies of women with stress UI or with urgency UI.

Cure

Among pharmacological treatments, BTX had an average cure rate of 44 percent, hormones 28 percent, and anticholinergics 21 percent, compared with other pharmacological treatments and placebo, which all had cure rates less that 16 percent (Table 19). However, only BTX (OR 5.7) and anticholinergics (OR 2.0) had statistically significant greater likelihood of cure than

placebo; the estimate for hormones was less precise and nonsignificant (see Table 6). Estimates from studies of women with stress UI or urgency UI were generally similar, except for an atypically low cure rate for hormones in studies of stress UI. Most comparisons across were based on indirect comparisons and resulted in imprecise OR estimates. However, based in part on a direct head-to-head comparison, BTX (3rd line therapy) was significantly more likely to result in cure than anticholinergics (2nd line therapy, OR 2.91). Among studies of women with stress UI, hormones and alpha agonists had similar cure rates (no other pharmacological treatments were compared directly or indirectly). Among studies of women with stress UI, cure rates among pharmacological treatments were mostly nonsignificantly different than each (Appendix H, Tables H-1 to H-2), except for the comparison of BTX and anticholinergics described above.

Table 19. Summary league table displaying percent of women with UI outcomes for each pharmacological treatment

	Interventions	All Studies, %	Stress UI Studies*, %	Urgency UI Studies*, %
Cure	BTX (onabotulinum toxin A)	43.6	.	42.8
	Hormones	28.3	1.7	.
	Anticholinergics	21.0	.	21.4
	Periurethral bulking	15.6	16.9	.
	Alpha agonists	14.3	15.8	.
	Anticholinergics + hormones	4.6	.	.
	Placebo/Sham/No treatment	12.0	13.3	13.2
Improvement	BTX (onabotulinum toxin A)	66.6	.	75.3
	Anticholinergics	49.4	24.9	60.1
	Periurethral bulking	42.1	42.3	.
	Alpha agonists	41.6	46.0	.
	Anticholinergics + hormones	25.2	.	.
	Hormones	14.9	15.9	.
	Placebo/Sham/No treatment	24.8	27.2	45.7
Satisfaction	BTX (onabotulinum toxin A)	85.5	.	59.5
	Anticholinergics	54.7	.	48.9
	Alpha agonists	.	.	.
	Anticholinergics + hormones	.	.	.
	Hormones	.	.	.
	Periurethral bulking	.	.	.
	Placebo/Sham/No Treatment	31.8	34.9	26.9

Interventions are sorted by percent of women across all studies who achieved cure (except for no treatment in the last rows). Empty cells (with periods) indicate that the intervention was not evaluated among the studies designated in the given column.

* Restricted to studies of the given subgroup of women

Improvement

Among pharmacological treatments, BTX, anticholinergics, periurethral bulking agents, and alpha agonists had improvement rates, across studies of 42 to 67 percent. All other pharmacological treatments and placebo had improvement rates less than 25 percent (Table 19). Improvement rates in studies of women with stress UI or with urgency UI were mostly similar for the evaluated pharmacological treatments, except it was lower with anticholinergics among women with stress UI (25%). Alpha agonists (OR 2.2), BTX (OR 6.0), and anticholinergics (OR 3.0) each had significantly higher improvement rates than placebo (see Table 9). Other pharmacological interventions had imprecise OR estimates compared with placebo. Studies

restrict to women with stress UI or with urgency UI had similar findings for evaluated pharmacological treatments. (see Appendix H, Tables H-4 and H-5).

With respect to improvement, hormones were significantly less effective than other pharmacological interventions, except in comparison with the combination hormones and anticholinergics for which the estimate was imprecise. BTX (3rd line therapy) was likely more effective than alpha agonists and combination hormones and anticholinergics (both 2nd line therapy), although the differences were nonsignificant. Findings were similar across evaluated treatments for women with urgency UI. In studies of women with stress UI alpha agonists were significantly more effective than hormones (OR 4.1, see Appendix H, Tables H-4 and H-5).

Satisfaction

Among studies that reported satisfaction, the only pharmacological interventions evaluated were BTX (3rd line therapy) and anticholinergics (2nd line therapy). With BTX, 86 percent of women had satisfaction with the control of their UI (Table 19). With anticholinergics, 55 percent of women had satisfaction. These compare to placebo treatment, with which 32 percent of women had satisfaction. Both pharmacological treatments were significantly more effective than placebo (BTX OR 12.7; anticholinergics OR 2.6; see Table 12). The two pharmacological treatments were not compared directly.

Quality of Life

Sixteen RCTs reported on quality of life outcomes in pharmacological interventions versus placebo or with other pharmacological interventions.[38, 45, 62, 70, 84, 96, 114, 117, 188-195] Results are given in Table 20 and Appendix E. The table cells show the number of studies and the number of people (in parentheses), followed by the number of studies with the number of studies that found statistically significant differences and which intervention was favored, the number of studies that found discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others), and the number of studies with nonsignificant differences. Study-level details are given in Appendix E. The studies evaluated several quality of life domains, as categorized across the columns of the tables: bother, daily activities, distress, general health, mental health, and sleep/energy.

Eight pharmacological interventions were compared with placebo interventions (Table 20). Six studies evaluated anticholinergic medications,[114, 117, 190, 191, 193-195] two bladder BTX,[45, 190] and one each an alpha agonist,[84],an antiepileptic (pregabalin),[192] and a periurethral bulking agent.[38] Across interventions, the effects of the pharmacological interventions on various aspects of quality of life were mixed. Only two specific interventions (oxybutynin and tolterodine) were compared in more than one study, and none in more than two.

When anticholinergic medications were evaluated as a single group, four studies evaluated bother,[114, 117, 191, 194] and four studies evaluated daily activities.[114, 117, 193, 195] When these studies were significant they favored the anticholinergic medication over placebo,[114, 193] though most were not significant and one gave discordant results.[195]

Table 20. Quality of life outcomes for pharmacological interventions versus placebo/no treatment*

	Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/Energy
Anticholinergic vs. placebo	Fesoterodine	Placebo	1 (604): 1 favor† A							
	Oxybutynin	Placebo	1 (98): 1 NS	2 (450): 1 favor A 1 NS	1 (253): 1 favor A	1 (352): 1 disc	1 (98): 1 NS			
	Solifenacin	Placebo		1 (157): 1 favor A	1 (157): 1 favor A					
	Tolterodine	Placebo	2 (429): 1 favor A 1 NS	1 (413): 1 favor A		1 (413): 1 favor A	1 (413): 1 favor A			1 (413): 1 favor A
Onabotulinum toxin A vs. placebo	Onabotulinum Toxin A	Placebo		1 (21): 1 NS	1 (21): 1 NS	1 (268): 1 favor A (BTX doses 100 units, 150 units, 200 units, 300 units)	1 (268): 1 favor A (BTX doses 100 units, 150 units, 200 units, 300 units)			
Alpha agonist vs. placebo	Duloxetine	Placebo	1 (2758): 1 favor A	1 (2758): 1 favor A		1 (2758): 1 disc	1 (2758): 1 favor A			1 (2758): 1 NS
Other drug vs. placebo	Pregabalin (antiepileptic)	Placebo	1 (178): 1 favor A							
	Polydimethylsiloxane (bulking agent)	Sham					1 (196): 1 NS			

Empty cells indicate that the intervention was not evaluated for the outcome designated in the given column

Abbreviations: BTX = onabotulinum toxin A; disc = discordant; NS = non-significant.

* Results are given as number of studies (number of people), number of studies with significant difference and which intervention it favors, number of studies with discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others, number of studies with nonsignificant differences.

† *Favor* indicates a statistically significant (net) difference favoring the specified intervention.

Eight pharmacological interventions were compared with other pharmacological interventions (Table 21). Three studies evaluated either different anticholinergics [96, 189] or different doses of the same medication.[190] Only one found a significant difference in one aspect of quality of life, favoring 3.9 mg of oxybutynin over 2.6 mg of the same anticholinergic for improvements in daily activities. A single study evaluated an anticholinergic compared with BTX and reported a nonsignificant difference.[70] One study reported no significant difference in a comparison of an anticholinergic alone compared with an anticholinergic plus vaginal estrogen.[188] One study reported nonsignificant difference of the antiepileptic pregabalin over tolterodine in the bother domain, and the same study found no significant difference in bother between pregabalin versus pregabalin plus tolterodine.[192]

Table 21. Quality of life outcomes for pharmacological versus pharmacological interventions

	Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/ Energy
Anticholinergic vs. anticholinergic	Oxybutynin	Tolterodine	1 (90): 1 NS	1 (90): 1 NS						
	Oxybutynin	Trospium chloride	1 (90): 1 NS	1 (90): 1 NS						
	Oxybutynin 2.6 mg	Oxybutynin 3.9 mg		1 (254): 1 favor† B						
	Solifenacin	Darifenacin	1 (76): 1 NS	1 (76): 1 disc						
Anticholinergic vs. onabotulinum toxin A	Solifenacin	Onabotulinum toxin A	1 (247): 1 NS							
Anticholinergic vs. anticholinergic and hormonal therapy	Fesoterodine	Fesoterodine, vaginal estrogen	1 (18): 1 NS						1 (18): 1 NS	
Anticholinergic vs. antiepileptic	Tolterodine	Pregabalin	1 (178): 1 NS							
	Tolterodine + pregabalin	Pregabalin	1 (178): 1 NS							

Empty cells indicate that the intervention was not evaluated for the outcome designated in the given column

Abbreviations: disc = discordant findings; NS = non-significant.

* Results are given as number of studies (number of people), number of studies with significant difference and which intervention it favors, number of studies with discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others, number of studies with nonsignificant differences.

† *Favor* indicates a statistically significant (net) difference favoring the specified intervention.

Adverse Events

Ninety-five studies reported on adverse events in drugs.[29, 32, 34, 38, 39, 45, 46, 54, 57-61, 68-70, 76, 78, 82-84, 88, 89, 91, 94, 96, 98, 99, 101, 105, 106, 109, 112, 120, 147, 154, 160, 165, 168, 171-173, 188-192, 194, 196-242] Results for anticholinergics are given in Table 22, and results for all other drugs, as well as for placebo arms (56 studies[14, 32, 38, 39, 45, 54, 57-59, 61, 68, 69, 76, 78, 83, 84, 88, 89, 91, 92, 94, 98, 99, 101, 105, 106, 109, 112, 120, 147, 154, 160, 165, 168, 172, 173, 190-192, 194, 202, 204, 207-211, 214, 218, 219, 222, 230, 233, 237, 238, 242]), are given in Table 23. The table cells show the percentage of people affected by the adverse event if only a single study arm reported the event. Where more than one study arm reported on an adverse event, the cell gives the median and range of percentages (or just the range, if only two arms reported an adverse event). Detailed results are in Appendix F. Fifty-one studies evaluated adverse events in anticholinergics,[32, 34, 39, 46, 58, 60, 61, 68, 70, 88, 94, 96, 105, 112, 188-192, 194, 196-199, 201-203, 205, 206, 209-211, 213, 215-218, 220-222, 229, 231-234, 236-238, 240-242] but with the exception of oxybutynin and tolterodine, each specific adverse event was evaluated in only one to three studies.

For most pharmacological interventions, serious adverse events (as described by authors) were rare or did not occur; although few studies defined serious adverse events. However, with periurethral bulking agents, 4.7 percent of 362 women in three studies had serious adverse events, including erosion and need for surgical excision of the bulking agents. The one study of a periurethral bulking agent currently available in the United States (macroplastique) reported 1.6% rate of erosion. In eight studies of anticholinergics, overall 2.4 percent of 2,583 women had serious adverse events, although the adverse events were mostly undefined. In two studies, 0.6 percent of 1,390 women taking the alpha agonist duloxetine had (undefined) serious adverse events. By comparison, in 10 studies, 0.2 percent of 2,852 women taking placebo (or no treatment) had (mostly undefined) serious adverse events.

The most commonly reported adverse event across interventions was dry mouth. The median percentage of women reporting dry mouth in studies of anticholinergic medications was 24.2 percent; oxybutynin was evaluated in the most studies (21) with a median of 36.1 percent (range 0 to 100).[32, 34, 39, 58, 68, 105, 189, 190, 196, 198, 199, 201, 206, 215, 229, 232, 234, 238, 240, 242-244] A single study each evaluated dry mouth in beta agonist (0.7%),[200] BTX (30.8%),[70] estrogen (21.4%),[243] and antiepileptic medications (10.5%).[192] Fifteen studies evaluated dry mouth for duloxetine, an alpha agonist, and found a median of 12.9 percent (range 1.5 to 21.8). Placebo arms had a median of 4 percent across 29 studies (range 0 to 86.2).[32, 39, 57-59, 61, 68, 76, 83, 84, 89, 91, 99, 101, 105, 106, 190, 192, 204, 208-210, 214, 219, 222, 233, 238, 242] By comparison, in non-pharmaceutical treatments including PFMT and/or bladder training, dry mouth was reported in three studies with median rates that ranged from 0 to 34.9 percent.[32, 179, 245]

Among the other active drugs (see Table 23), duloxetine, an alpha agonist, was evaluated in the largest number of studies (16).[57, 59, 76, 83, 84, 89, 91, 99, 101, 106, 204, 208, 214, 219, 224, 230] In addition to dry mouth, discussed above, dizziness (10.6% 14 studies), gastrointestinal upset, specifically constipation (11%; 14 studies) and nausea (23.2%; 15 studies), fatigue (8.6%, 12 studies), headache (8.3%; 11 studies), and insomnia (12.6%; 13 studies) were all reported in more than ten studies.

Only six studies reported on adverse events in bladder BTX.[29, 45, 70, 78, 207, 227] Five reported on urinary tract infections (UTI). The percentage of women reporting UTI ranged from 33.3 to 42.9 percent in the four studies with at least 20 participants (6/11 or 55% in the fifth study), with a median of 36.4 percent.[29, 45, 70, 78, 207, 227] This compares to a reported percentage of 1.5 percent for mirabegron, between 1.4 and 23 percent for various anticholinergics, and 4.3 percent in placebo

arms. The sixth study reported hematuria in 2.3 percent of women using bladder BTX.[29, 45, 70, 78, 207, 227] Two studies reported on urine retention/voiding dysfunction in10.5 and 20.5 percent of women.[29, 45, 70, 78, 207, 227]

The most commonly reported adverse event for the periurethral bulking agents was UTI in five studies (median 6.6%; range 1.3% to 23.8%)[38, 223, 225, 226, 235] and urinary retention/voiding dysfunction in seven studies (median 3.8%; range 0.9% to 9.5%).[38, 212, 223, 225, 228, 235, 239]. However, only one of these studies (122 women) evaluated a periurethral bulking agent currently available in the United States (macroplastique). This study found high rates of urinary tract infection (23.8%), headache (18%), and urinary retention/dysuria (15.6%). Serious adverse events (erosion) were low (1.6%), as were pain (5%) and yeast infection (2.5%).[38] All other single and combination medications were evaluated in only one or two studies each.

Table 22. Adverse events reported for anticholinergics

Adverse Event*	Darifenacin	Fesoterodine	Oxybutynin	Solifenacin	Tolterodine	Trospium
AE (undefined/nonmajor)		36.6 [N = 303 (1 study)]	16.4 (0.8, 92.3) [N = 1791 (4 studies)]	27.8 (0, 69.3) [N = 351 (3 studies)]	38.8 (14.3, 62.2) [N = 980 (5 studies)]	3.5, 8.8 [N = 828 (1 study)]
AE, serious		1.9, 5.9 [N = 985 (2 studies)]	5.8 [N = 121 (1 study)]	0 [N = 127 (1 study)]	0, 3.3 [N = 227 (2 studies)]	
AE, treatment related			62.2, 65.3 [N = 290 (1 study)]			28.5 [N = 484 (1 study)]
Allergic reaction		0.8 [N = 498 (1 study)]	6.7 [N = 30 (1 study)]		0 [N = 30 (1 study)]	6.7 [N = 30 (1 study)]
Cardiac/chest Pain		0.6 [N = 498 (1 study)]	1.2 (0,13.2) [N = 587 (4 studies)]	0.8 [N = 127 (1 study)]	2.9 [N = 34 (1 study)]	
CNS - confusion			0 (0, 7.7) [N = 212 (2 studies)]		0 (0, 10.5) [N = 468 (2 studies)]	
CNS - confusion - lack of concentration	21.6 [N = 37 (1 study)]			20 [N = 40 (1 study)]		
CNS - confusion - memory problems	24.3 [N = 37 (1 study)]			25 [N = 40] (1 study)]		
CNS - confusion - Mental confusion and/or status changes				0.8 [N = 127 (1 study)]		
CNS - dizziness	0 (0, 10.8) [N = 159 (2 studies)]		3.3 (0, 42.6) [N = 2763 (12 studies)]	17.5 [N = 40 (1 study)]	1.8 (0, 16.7) [N = 2317 (9 studies)]	1.2, 20 [N = 858 (2 studies)]
CNS - general/undefined			9 [N = 391 (1 study)]		2.2 [N = 227 (1 study)]	
CNS - hypertonia			0.5 [N = 391 (1 study)]			
Cough		1.6 [N = 498 (1 study)]				
D/C due to AE	1.6 (0, 10.5) [N = 141 (2 studies)]	25 [N = 12 (1 study)]	6.7 (3.2, 31.6) [N = 743 (6 studies)]		4.6 (2.5, 8) [N = 977 (5 studies)]	5 (4, 6.4) [N = 1062 (2 studies)]
Dry eye/mucosa		0.6 [N = 498 (1 study)]	0, 2.6 [N = 92 (1 study)]	16.5 [N = 127 (1 study)]	1.3, 3.8 [N = 656 (2 studies)]	1.9 [N = 484 (1 study)]
Dry mouth	34.4 (13.1, 48.6) [N = 159 (2 studies)]	15 (2, 54.5) [N = 1720 (3 studies)]	36.1 (0, 100) [N = 6625 (21 studies)]	29.6 [N = 415 (4 studies)]	28.2 (2, 74.5) [N = 2627 (14 studies)]	18.9 (1.9, 52.9) [N = 2998 (4 studies)]
Dry skin					(0.5, 3.8) [N = 656 (2 studies)]	1 [N = 484 (1 study)]
Fatigue/drowsiness			3.1 (0, 44.7) [N = 2017 (8 studies)]	2.8 [N = 72 (1 study)]	1.9 (0, 16.7) [N = 2082 (7 studies)]	20 [N = 30 (1 study)]
Fever			26.7 [N = 30 (1 study)]	10.2 [N = 127 (1 study)]	20 [N = 30 (1 study)]	20 [N = 30 (1 study)]
Gastrointestinal/abdominal symptoms				4.2 [N = 72 (1 study)]		

Adverse Event*	Darifenacin	Fesoterodine	Oxybutynin	Solifenacin	Tolterodine	Trospium
Gastrointestinal /abdominal symptoms - abdominal distension						1.2 [N = 484 (1 study)]
Gastrointestinal/abdominal symptoms - abdominal pain		0.8 [N = 498 (1 study)]	2.1 (1.1, 3.8) [N = 714 (3 studies)]		4.3 (1, 6.2) [N = 1522 (5 studies)]	1.4 [N = 484 (1 study)]
Gastrointestinal/abdominal symptoms - constipation	21.3 (9.8, 21.6) [N = 159 (2 studies)]	5.5 (0, 9.1) [N = 1222 (3 studies)]	8.6 (0.8, 50) [N = 3095 (15 studies)]	15 (6.9, 28.3) [N = 654 (4 studies)]	6.5 (1, 40.9) [N = 3685 (12 studies)]	8.9 (0.1, 33.3) [N = 1342 (3 studies)]
Gastrointestinal/abdominal symptoms - Diarrhea		9.1 (1.4, 10) [N = 540 (2 studies)]	3.4 (0.1, 9.4) [N = 1480 (3 studies)]	11 [N = 127 (1 study)]	5.7 (1.3, 11.8) [N = 1438 (6 studies)]	1 [N = 828 (1 study)]
Gastrointestinal/abdominal symptoms - dyspepsia		0.6 [N = 498 (1 study)]	5.3 (0.1, 8.2) [N = 1373 (2 studies)]		3.8 (0.8, 14.3) [N = 1807 (5 studies)]	1.1, 1.2 [N = 1312 (2 studies)]
Gastrointestinal/abdominal symptoms - flatulence					1.9 [N = 417 (1 study)]	
Gastrointestinal/abdominal symptoms - gastric distress			11.1 [N = 63 (1 study)]			
Gastrointestinal/abdominal symptoms - GI disorder					1 [N = 104 (1 study)]	
Gastrointestinal/abdominal symptoms - heartburn		0.8 [N = 498 (1 study)]	57.1 [N = 28 (1 study)]			
Gastrointestinal/abdominal symptoms - nausea		0 [N = 42 (1 study)]	5.3 (0, 26.3) [N = 2252 (10 studies)]		1.8 (0, 8.8) [N = 1706 6 studies)]	1.1, 1.4 [N = 1312 (2 studies)]
Gastrointestinal/abdominal symptoms - vomiting			2.1 (0, 3.1) [N = 470 (1 study)]	4.7 [N = 127 (1 study)]	3 (0, 5.9) [N = 358 (2 studies)]	
Headache	8.1 [N = 37 (1 study)]	20 (1.4, 22.7) [N = 540 (2 studies)]	4.1 (0, 12.5) [N = 1352 (7 studies)]	5 (1, 16.7) [N = 3132 (11 studies)]	1.4, 3.3 [N = 514 (2 studies)]	
Hematuria		0.8 [N = 498 (1 study)]	7.9 [N = 127 (1 study)]			
Infection - kidney		0.6 [N = 498 (1 study)]				
Infection - URI		1.6 [N = 498 (1 study)]	0.8 [N = 127 (1 study)]		1.8 (0.5, 14.7) [N = 1319 (4 studies)]	
Infection - UTI		5.6 [N = 498 (1 study)]	22.8 [N = 127 (1 study)]		4.7 (0.4, 5.9) [N = 1381 (4 studies)]	1.4 [N = 484 (1 study)]
Infection - yeast						
Itching						
Liver function tests, abnormal						
Localized reaction					4.9 [N = 123 (1 study)]	
Oral ulcers						
Pain - general/undefined						
Pain - musculoskeletal		1.4 (0.6, 1.8) [N = 1882 (2 studies)]	2.4 [N = 127 (1 study)]		2.4 [N = 42 (1 study)]	

Adverse Event*	Darifenacin	Fesoterodine	Oxybutynin	Solifenacin	Tolterodine	Trospium
Pain - needle site			18.1 [N = 127 (1 study)]			
Peripheral edema					2.6 [N = 193 (1 study)]	
Psychological - anxiety			0 (0, 28.3) [455 (3 studies)]		1.1 (0, 4.8) [N = 324 (1 study)]	
Psychological - depression			0, 1.3 [N = 454 (2 studies)]		0.8 [N = 399 (1 study)]	
Rash			5.2 (3.1, 8.3) [N = 503 (2 studies)]	1.4, 3.9 [N = 199 (2 studies)		
Salivation, excessive					2.3 [N = 129 (1 study)]	
Shortness of breath		0.6 [N = 498 (1 study)]				
Sleep disorder	18.9 [N = 37 (1 study)]		1 (0, 50) [N = 783 (4 studies)]	22.5 [N = 40 (1 study)]	1.8 (0, 3.3) [N = 1372 (5 studies)]	6.7 [N = 30 (1 study)]
Urinary retention/voiding dysfunction		0 [N = 42 (1 study)]	4.1 (0, 34.2) [N = 2061 (7 studies)]		1.1 (0, 4.8) [N = 324 (1 study)]	
Vaginal bleeding			1.4, 4.1 [N = 290 (1 study)]			
Vaginitis			3.5, 4.8 [N = 290 (1 study)]			
Visual AE	0 (0, 24.3) [N = 159 (2 studies)]		6.3 (0, 50) [N = 1509 (10 studies)]	1.4, 25 [N = 112 (2 studies)	1.2 (0, 13.3) [N = 1317 (5 studies)]	20 [N = 30 (1 study)]
Weight gain		0.6 [N = 498 (1 study)]	1.6 [N = 63 (1 study)]			

The median and range are based on study arms. 1 arm = actual, 2 arms = range, 3+ arms median (range). If 1 or 2 studies have 3 or more arms, a median and range is given. Empty cells indicate that the outcome was not evaluated for the intervention designated in the given column.

Abbreviations: AE = adverse event, CNS = central nervous system, D/C = discontinued, N = number, URI = upper respiratory infection, UTI = urinary tract infection.

* Results in first line of each cell are given as percent adverse events, median (min, max). The numbers in brackets represent [total number of participants (number of studies)].

Table 23. Adverse events reported for drugs other than anticholinergics

Adverse Event*	Duloxetine	Onabotulinum Toxin A	Pregabalin	Mirabegron	Vaginal Estrogen	Pregabalin + Tolterodine	Fesoterodine + Vaginal Estrogen	Periurethral Bulking**	Placebo/ No Treatment
AE (undefined/ nonmajor)	78.1 (1.7, 90.9) [N = 3119 (10 studies)]	79.3 (73.3, 84.6) [N = 388 (2 studies)]		7.9 [N = 76 (1 study)]	0 [N = 208 1 study)]			11.9 (0.1, 67.8) [N = 8136 (5 studies)]	8.3 (0, 76.7) [N = 5215 (29 studies)]
AE, serious	0, 0.7 [N = 1390 (2 studies)]	3.3 [N = 120 (1 study)]	0 [N = 105 (1 study)]			0 [N = 207 (1 study)]		3 (1.6, 3.8) [N = 362 (3 studies)]	0.2 (0, 1.3) [N = 2852 (10 studies)]
AE, treatment related	48.3 [N = 1378 (1 study)]	37.5 (30.4, 40) [N = 268 (1 study)]							33.3 (16.4, 48.4) [N = 2040 (3 studies)]
Allergic reaction								0.6 [N = 312 (1 study)]	
Anorgasmia	1.4, 3.3 [N = 1111 (2 studies)]								0 [N = 1108 (2 studies)]
Cardiac/chest Pain		0, 9.1 [N = 131 (2 studies)]		1.3, 4.1 [N = 343 (2 studies)]					0 N = 227 (4 studies)]
CNS - confusion		2.5 [N = 120 (1 study)]							11.3 [N = 62 (1 study)]
CNS - dizziness	10.6 (2.2, 18.3) [N = 9217 (14 studies)]		10.5 [N = 105 (1 study)]			4.9, 5.7 [N = 207 (1 study)]			2.4 (0, 9.8) [N = 5479 (20 studies)]
CNS - tremor	2 [N = 1378 (1 study)]								0.3 [N = 1380 (1 study)]
CNS - vertigo			1.9 [N = 105 (1 study)]			2 [N = 207 (1 study)]			
D/C due to AE	16.2 (14.7, 32.7) [N = 1929 (5 studies)]					3.9, 4.8 [N = 207 (1 study)]	18.2 [N = 1108 (1 study)]	1.7 (0.7, 3.5) [N = 479 (2 studies)]	33.6 (0, 6.6) [N = 3393 (10 studies)]
Death									1.6 [N = 64 (1 study)]
Dry eye/mucosa		24.2 [N = 120 (1 study)]							0.2 (0, 2) [N = 1037 (3 studies)]
Dry mouth	12.9 (1.5, 21.8) [N = 9370 (15 studies)]	30.8 [N = 120 (1 study)]	10.5 [N = 105 (1 study)]	0.7 [N = 267 (1 study)]		7.8, 13.3 [N = 207 (1 study)]			4 (0, 86.2) [N = 6386 (29 studies)]
Dry skin									3 (0.2, 41.4) [N = 1041 (4 studies)]

Adverse Event*	Duloxetine	Onabotulinum Toxin A	Pregabalin	Mirabegron	Vaginal Estrogen	Pregabalin + Tolterodine	Fesoterodine + Vaginal Estrogen	Periurethral Bulking**	Placebo/ No Treatment
Fatigue/ drowsiness - asthenia	3.5 (0.7, 5.8) [N = 2500 (4 studies)]								0.2 (0, 1.6) [N = 2493 (4 studies)]
Fatigue/ drowsiness - fatigue	10.1, (1.6, 20.1) [N = 9130 (13 studies)]		4.8 [N = 105 (1 study)]			2 [N = 207 (1 study)]			2.8 (0, 11.1) [N = 4694 (17 studies)]
Fatigue/ drowsiness - somnolence	8.6 (2, 12.7) [N = 4186 (12 studies)]		1.9 [N = 105 (1 study)]			0, 1 [N = 207 (1 study)]			0.75 (0, 1.9) [N = 5709 (17 studies)]
Fever		15.8 [N = 120 (1 study)]							
Gastrointestinal/ abdominal symptoms - abdominal distension									0.4 [N = 505 (1 study)]
Gastrointestinal/ abdominal symptoms - abdominal pain			1 [N = 105 (1 study)]	1.1 [N = 267 (1 study)]					1.7 (0, 3.3) [N = 2535 (6 studies)]
Gastrointestinal/abdominal symptoms - anorexia	3.9 (3.1, 6.6) [N = 1316 (3 studies)]								0.1 (0, 0.2) [N = 1320 (3 studies)]
Gastrointestinal/abdominal symptoms - appetite decreased	3.9 (2, 6.7) [N = 1695 (5 studies)]								0.2 (0, 1.6) [N = 1684 (5 studies)]
Gastrointestinal/abdominal symptoms - constipation	11 (1.3, 16.7) [N = 9315 (14 studies)]	9.1, 20.8 [N = 131 (2 studies)]	1 [N = 105 (1 study)]	1.3 [N = 76 (1 study)]	7.1 [N = 28 (1 study)]				2.3 (0, 44.8) [N = 6886 (30 studies)]
Gastrointestinal/abdominal symptoms - diarrhea	5.1 (0.7, 16.7) [N = 6880 (8 studies)]	15 [N = 120 (1 study)]							3 (0, 8.3) [N = 2847 (12 studies)]
Gastrointestinal/abdominal symptoms - dyspepsia									0.8 (0.7, 3.3) [N = 1453 (5 studies)]

Adverse Event*	Duloxetine	Onabotulinum Toxin A	Pregabalin	Mirabegron	Vaginal Estrogen	Pregabalin + Tolterodine	Fesoterodine + Vaginal Estrogen	Periurethral Bulking**	Placebo/ No Treatment
Gastrointestinal/abdominal symptoms - flatulence									1.5 [N = 410 (1 study)]
Gastrointestinal/abdominal symptoms - gastric distress									7.7 [N = 52 (1 study)]
Gastrointestinal/abdominal symptoms - GI disorder			0 [N = 105 (1 study)]	1.3 [N = 76 (1 study)]		1, 2 [N = 207 (1 study)]			0 [N = 103 (1 study)]
Gastrointestinal/abdominal symptoms - heartburn				1.5 [N = 267 (1 study)]					44.8 [N = 29 (1 study)]
Gastrointestinal/abdominal symptoms - nausea	23.2 (7.6, 45.5) [N = 9370 (15 studies)]	6.7 [N = 120 (1 study)]	1.9 [N = 105 (1 study)]		10.7 [N = 28 (1 study)]	1, 1.9 [N = 207 (1 study)]			3.4 (0, 15) [N = 6324 (26 studies)]
Gastrointestinal/abdominal symptoms - vomiting	5.5 (1.2, 12.7) [N = 8155 (8 studies)]			0.7 [N = 267 (1 study)]					2 (1.4, 3.5) [N = 3280 (8 studies)]
Headache	8.3 (1.6, 27.3) [N = 8775 (11 studies)]	0.8 [N = 120 (1 study)]	2.9 [N = 105 (1 study)]	1.1 [N = 267 (1 study)]	25 [N = 28 (1 study)]			18 [N = 122 (1 study)]	5.2 (0, 12.8) [N = 6281 (23 studies)]
Hematuria		9.1 (2.3, 12.5) [N = 960 (2 studies)]						1 (0, 1.3) [N = 349 (2 studies)]	10 [N = 10 (1 study)]
Infection - URI		0 [N = 120 (1 study)]							1.3 (0.2, 6.1) [N = 1481 (5 studies)]
Infection - UTI		34.6 (3.9, 54.5) [N = 2304 (6 studies)]		1.5 [N = 267 (1 study)]				6.6 (1.3, 23.8) [N = 1138 (5 studies)]	4.6 (0, 40) [N = 1800 (11 studies)]
Infection - yeast								2.5 [N = 122 (1 study)]	2.4, 2.6 [N = 280 (2 studies)]
Itching				0.4 [N = 267 (1 study)]					4.3, 6.1 [N = 249 (2 studies)]

Adverse Event*	Duloxetine	Onabotulinum Toxin A	Pregabalin	Mirabegron	Vaginal Estrogen	Pregabalin + Tolterodine	Fesoterodine + Vaginal Estrogen	Periurethral Bulking**	Placebo/ No Treatment
Liver function tests, abnormal	8.3 (3.5, 15) [N = 1197 (3 studies)]								3.9 (1.3, 6.5) [N = 1341 (3 studies)]
Localized reaction								2.2, 4.4 [N = 227 (1 study)]	1.6 (0, 6) [N = 406 (3 studies)]
Oral ulcers									0 [N = 43 (1 study)]
Pain - general/ undefined		27.3 [N = 1108 (1 study)]						2.9 [N = 138 (1 study)]	1.3 (0, 20) [N = 120 (4 studies)]
Pain - implant								7.8 (3.3, 12.2) [N = 467 (2 studies)]	4 [N = 125 (1 study)]
Pain - musculoskeletal		5.8 [N = 120 (1 study)]							2.6 [N = 155 (1 study)]
Pain - needle site		20.8 [N = 120 (1 study)]						(2.6, 8.4) [N = 344 (1 study)]	
Pain - pelvic					4.9 [N = 103 (1 study)]			0, 2.6 [N = 345 (1 study)]	0 [N = 155 (1 study)]
Pain, bladder								1.6 [N = 122 (1 study)]	0, 1.6 [N = 177 (2 studies)]
Psychological - anxiety	3.3 (1.9, 4) [N = 1335 (3 studies)]								0.4 (0, 0.9) [N = 1387 (4 studies)]
Psychological - depression									1.9 [N = 52 (1 study)]
Rash		10 [N = 120 (1 study)]		0.4, 1.3 [N = 343 (2 studies)]					1.7, 2.3 [N = 249 (2 studies)]
Sleep disorder	1.2, 3.1 [N = 5044 (2 studies)]								2.1 (0, 5.7) [N = 5036 (16 studies)]
Sleep disorder - insomnia	12.6 (0.8, 14.7) [N = 9179 (13 studies)]								
Sweating, excessive	5.3 (1.2, 8.3) [N = 4891 (7 studies)]								0.6 (0, 0.9) [N = 2988 (6 studies)]

Adverse Event*	Duloxetine	Onabotulinum Toxin A	Pregabalin	Mirabegron	Vaginal Estrogen	Pregabalin + Tolterodine	Fesoterodine + Vaginal Estrogen	Periurethral Bulking**	Placebo/ No Treatment
Urinary retention/voiding dysfunction		18.2 (3.9, 25.5) [N = 1288 (3 studies)]		0.7 [N = 267 (1 study)]				3.8 (0.9, 9.5) [N = 1321 (5 studies)]	0 (0, 3.2) [N = 824 (9 studies)]
Urinary retention/voiding dysfunction - dysuria								8.8 (1.7, 14.1) [N = 582 (3 studies)]	
Urinary retention/voiding dysfunction - urinary retention								8.1 (1.3, 28.2) [N = 894 (1 study)]	
Urine abnormality - leukocyturia		2.2 [N = 829 (1 study)]							
Urine abnormality - Pollakiuria		0.8 [N = 829 (1 study)]							
Urine abnormality - Urine abnormality		0.2 [N = 829 (1 study)]							
Vaginal bleeding									2.6 [N = 155 (1 study)]
Vaginitis								0, 0.4 [N = 345 (1 study)]	
Vaginitis - discharge									3.9 [N = 155 (1 study)]
Vaginitis - erythema									1.3 [N = 155 (1 study)]
Visual AE									1.5 (0, 58.6) [N = 1017 (8 studies)]
Weight gain									1.9 [N = 52 (1 study)]

The median and range are based on study arms. 1 arm = actual, 2 arms = range, 3+ arms median (range). if 1 or 2 studies have 3 or more arms, a median and range is given. Empty cells indicate that the outcome was not evaluated for the intervention designated in the given column.

Abbreviations: AE = adverse event, CNS = central nervous system, D/C = discontinued, N = number, URI = upper respiratory infection, UTI = urinary tract infection

* Results in first line of each cell are given as percent adverse events, median (min, max). The numbers in brackets represent [total number of participants (number of studies)].

† Results given in the table are for all periurethral bulking agents. Results for the one study reporting on a periurethral bulking agent currently available in the United States are given in the text.

Key Question 3: What are the comparative benefits and harms of nonpharmacological versus pharmacological treatments of UI in women

Key Points

- Four nonpharmacological intervention categories could be compared with 6 pharmacological intervention categories and 38 specific nonpharmacological and 31 pharmacological interventions. Trials directly compared 7 of 24 possible comparisons of intervention categories. Trials directly compared 9 of 1178 possible comparisons of specific interventions.
- For women with stress UI,
  - The first- (or second-) line treatments evaluated included behavioral therapy and alpha agonists. None of the interventions were found to be different in likelihood or achieving satisfaction.
    - Alpha agonists were found to be less likely to result in cure (OR 0.22, 95% CI 0.06 to 0.74) or improvement (OR 0.33, 95% CI 0.14 to 0.77) than behavioral therapy.
    - For improvement, hormones and combined hormones and anticholinergics were less effective than behavioral therapy (ORs 0.07 and 0.13, respectively); hormones were also less effective neuromodulation and intravesical pressure release (ORs 0.13 and 0.12, respectively).
  - For third-line treatments, periurethral bulking agents were found to be less likely to result in cure than behavioral therapy (OR 0.23, 95% CI 0.06 to 0.98). Statistically nonsignificant comparisons also suggest that alpha agonists are less likely to result in cure than neuromodulation (OR 0.35, 95% CI 0.12 to 1.00) and that neuromodulation was possibly more likely to result in improvement than combination hormones and anticholinergics (OR 4.5, 95% CI 1.14 to 17.78).
- For women with urgency UI,
  - The first- (or second-) line treatments evaluated included behavioral therapy and alpha agonists. For improvement, anticholinergics were significantly less effective than behavioral therapy (0.24, 95% CI 0.09 to 0.62). No statistically significant differences were found between pharmacological and nonpharmacological treatments for cure or satisfaction.
  - For the third-line treatments, no statistically significant differences were found between pharmacological and nonpharmacological treatments for cure, improvement, or satisfaction.
- Four studies reported on quality of life outcomes, each comparing a unique nonpharmacological intervention to one of 4 pharmacological interventions. One study found discordant results for daily activities when comparing neuromodulation to BTX; all other results where nonsignificant.

Findings

Here we focus on comparisons of nonpharmacological and pharmacological interventions that have been compared in studies specific to stress UI or urgency UI (or that are typically used for either stress UI or urgency UI. We further focus only on comparisons of first- or second-line interventions separately from comparisons of third-line therapies, except where direct comparisons have been made within studies across lines of therapy.

Stress UI

Cure

Two pairs of first/second-line nonpharmacological versus pharmacological interventions used for stress UI have been compared. A single comparison of third-line nonpharmacological and pharmacological interventions can also be made by indirect comparisons.

Both across all studies and within studies of women with stress UI, behavioral therapy is significantly more effective than alpha agonists (OR 2.5 across all studies, Table 6; OR 4.5 within stress UI studies, Appendix H, Table H-1A). However, in both sets of studies the two interventions have not been compared directly (head-to-head).

Across all studies there is indirect evidence that behavioral therapy and hormones result do not have significantly different cure rates (Table 6). Hormones have not been evaluated for cure in stress UI studies. In addition, indirect comparisons provide only imprecise estimates of the comparative effectiveness of third-line intravesical pressure release devices and third-line periurethral bulking agents. Similarly, imprecise estimates are derived across all studies (Table 6) and studies of women with stress UI (Appendix H, Table H-1A)

Improvement

Three pairs of first/second-line nonpharmacological versus pharmacological interventions used for stress UI can be compared.

Similar to the findings for cure, both across studies and within studies of women with stress UI, behavioral therapy is significantly more effective than alpha agonists (OR 2.5 across all studies, Table 9; OR 3.3 within stress UI studies, Appendix H, Table H-4). However, in both sets of studies the two interventions have not been compared directly (head-to-head).

In contrast with the findings for cure, both across all studies and within stress UI studies, there is evidence that behavioral therapy is significant more effective to achieve improvement than hormones (OR 10.0 across all studies, Table 9; OR 14.2 within stress UI studies, Appendix H, Table H-4). Across all studies, there are direct head-to-head comparisons to support this finding; however, within stress UI studies, the comparison is indirect only.

By indirect comparison, behavioral therapy can been compared with combined hormones and anticholinergics (which are typically used for urgency UI). Behavioral therapy was likely more effective than the combination of drugs (OR 5.28; 95% CI 0.86 to 32.5; Appendix H, Table H-1A). A similar estimate was found among studies of women with stress UI.

Satisfaction

Only the comparison of anticholinergics (2nd line therapy) and behavioral therapy (1st line therapy) can be evaluated for satisfaction. Across all studies, there is direct evidence to support that behavioral therapy is significantly more effective than anticholinergics to achieve satisfaction with control of UI symptoms (OR 3.1, Table 12). Stress UI studies of anticholinergics have not reported on satisfaction.

Urgency UI

Cure

The first-line nonpharmacological treatment has only been directly compared with anticholinergics in head-to-head in studies; the comparison has been evaluated only in studies restricted to women with urgency UI.

Among all studies, behavioral therapy was significantly more likely to achieve cure than anticholinergics (OR 1.56, 95% CI 1.02 to 2.44; Table 6). The urgency UI studies found a similar, but not quite statistically significant finding (OR 1.52, 95% CI 0.90 to 2.56; Appendix H, Table H-2).

Third-line BTX has been directly compared with second-line neuromodulation both across all studies and within studies of only women with urgency UI. In both sets of studies, BTX was likely favored over neuromodulation, but the difference in effect was not quite statistically significant. Among urgency UI studies, the OR for cure was 1.68 (95% CI 0.80, 3.55; Appendix H, Table H-2). A slightly wider CI was found across all studies (Table 6).

Improvement

The same pairs of interventions evaluated for cure have evidence regarding rates of improvement. Similarly, there was direct (head-to-head) comparisons and evidence from urgency UI studies only for anticholinergics versus behavioral therapy and BTX versus neuromodulation.

There is evidence that behavioral therapy is more effective than any of the three pharmacological treatments. Compared with anticholinergics, the OR was 1.82 (95% CI 1.03 to 3.23) across all studies and 4.17 (95% CI 1.61 to 11.1) in urgency UI studies. Compared with hormones, the OR was 10.0 (95% CI 3.57 and 33.3). Compared with combination hormones and anticholinergics, behavioral therapy was likely more effective to achieve improvement (OR 5.26, 95% CI 0.86 to 33.3).

The direct comparisons between BTX and neuromodulation found no significant difference between the two interventions (Table 9 and Appendix H, Table H-5).

Satisfaction

Hormones have not been studied among studies reporting satisfaction. Therefore, there are only two evaluable comparisons.

Behavioral therapy was found to be significantly more effective than anticholinergics (OR 3.12, 95% CI 1.85 to 5.26) across all studies; however, the difference was similar but not statistically significant in the smaller number of urgency UI studies (OR 3.12, 95% CI 0.71 to 14.3). The direct comparisons between BTX and neuromodulation found no significant difference between the two interventions (Table 12 and Appendix H, Table H-8A).

Quality of Life

Four RCTs reported on quality of life outcomes in nonpharmacological interventions versus pharmacological interventions, one for each comparison against oxybutynin, trospium, and BTX; the remaining two RCTs reported comparisons against tolterodine.[29, 46, 60, 117] Results are given in Table 24 and Appendix E. The table cells show the number of studies and the number of people (in parentheses), followed by the number of studies with the number of studies that found statistically significant differences and which intervention was favored, the number of studies that found discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others), and the number of studies with nonsignificant differences. No significant differences

were seen, and one study found discordant results on daily activities when comparing neuromodulation to BTX.[29]

Table 24. Quality of life outcomes for nonpharmacological versus pharmacological interventions

Intervention A	Intervention B	Bother	Daily Activities	Distress	General Health	Mental Health	Pain	Sexual Health	Sleep/Energy
Behavioral vs. Anticholinergic									
Education, PFMT, bladder training	Oxybutynin	1 (109): 1 NS	1 (109): 1 NS			1 (109): 1 NS			
PFMT	Tolterodine					1 (83): 1 NS			
Neuromodulation vs. Anticholinergic									
TENS	Tolterodine	1 (87): 1 NS	1 (87): 1 NS		1 (87): 1 NS	1 (87): 1 NS			1 (87): 1 NS
Neuromodulation vs. Onabotulinum Toxin A									
InterStim™	Onabotulinum toxin A		1 (364): 1 disc						

Empty cells indicate that the intervention was not evaluated for the outcome designated in the given column.

Abbreviations: disc = discordant; NS = non-significant; PFMT = pelvic floor muscle training; TENS = transcutaneous electrical nerve stimulation.

* Results are given as number of studies (number of people), number of studies with significant difference and which intervention it favors, number of studies with discordant results (that is, within the same study, significant differences favoring one intervention were found on one scale or subscale, but nonsignificant differences were found on others, number of studies with nonsignificant differences.

Adverse Events

These comparisons have been described under the adverse events sections for KQ 1 and 2.

Key Question 4: What are the benefits and harms of combined nonpharmacological and pharmacological treatment of UI in women?

Key Points

- There were 11 studies that compared combination nonpharmacological and pharmacological interventions with other interventions; 11 report UI outcomes, 1 reports quality of life outcomes, and 7 report adverse events.
- For women with stress UI,
  - The first- (or second-) line treatments evaluated included behavioral therapy with hormones, which were found to be more likely to result in cure than alpha agonists (OR 9.36 (1.19 to 73.64) or periurethral bulking agents, though this comparison was not statistically significant (OR 8.66, 95% CI 0.97 to 76.99).
  - The third-line treatments evaluated included behavioral therapy with neurostimulation with or without hormones. No study found a statistically significant difference for cure, but alpha agonists (OR 0.02, 95% CI 0.04 to 0.96), hormones (OR 0.04, 95% CI 0,01, 0.14), and combined hormones and anticholinergics (OR 0.08, 95% CI 0.01 to 0.42) were less effective than triple therapy (behavioral therapy, neurostimulation, and hormones). Triple therapy was possibly more effective than periurethral bulking agents (OR 5.92, 95% CI 0.95 to 37.01).
- For women with urgency UI,
  - The first- (or second-) line treatments evaluated included anticholinergics with behavioral therapy. No statistically significant differences were found for this intervention compared with any other first-line treatment for cure, but anticholinergics alone were less likely to lead to improvement than anticholinergics with behavioral therapy (OR 0.46, 95% CI 0.09 to 0.62).
  - Among third-line treatments, BTX was statistically significantly more effective for improvement than the combination of anticholinergics and behavioral therapy (OR 2.17, 95% CI 1.01 to 4.67).
- One study found that addition of vaginal estrogen to a nonpharmacological intervention significantly improve UI quality of life.

Findings

All UI Outcomes

A summary of the direct comparisons between combinations intervention categories, and sham or no treatment, pharmacological and nonpharmacological intervention categories is in Table 25. Refer to Tables 6, 9, and 12 for combined direct and indirect (network meta-analysis) comparisons with all other interventions and to Tables 7, 10, and 13 for the mean event rates for the outcomes of cure, improvement, and satisfaction, respectively.

Single (separate) studies reported that combined neuromodulation, behavioral therapy, and hormones (vaginal estrogen) resulted in significantly more women cured or improved than either hormones alone[82] or no treatment.[42]

Combined anticholinergics and behavioral therapy had similar cure and improvement rates compared with anticholinergics alone, but significantly higher rates of satisfaction.[17, 79] In separate studies, combined behavioral therapy and hormones had similar cure rates as vaginal estrogen alone[246] and behavioral therapy alone.[44]

Table 25. Comparisons of cure, improvement, and satisfaction rates between intervention categories: combination versus no treatment, pharmacological, and nonpharmacological interventions

Intervention Category	Cure, %	OR (95% CI)	Improvement, %	OR (95% CI)	Satisfaction, %	OR (95% CI)
Anticholinergics + behavioral therapy (C+T)	25%	1.23 (0.45, 3.45)	.	.	66%	*1.61 (0.99, 2.56)*
Anticholinergics (C)	21%	ref	.	.	55%	ref
Anticholinergics + behavioral therapy (C+T)	.	.		0.88 (0.20, 3.70)	.	.
BTX (B)	.	.		ref	.	.
Anticholinergics + behavioral therapy (C+T)	.	.	64%	5.30 (1.63, 17.2)	.	.
No treatment (P)	.	.	25%	ref	.	.
Hormones + Neuromodulation + behavioral therapy (H+N+T)	.	.	71%	1.77 (0.50, 6.24)	.	.
Neuromodulation (N)	.	.	58%	ref	.	.
Hormones + Neuromodulation + behavioral therapy (H+N+T)	40%	4.78 (0.69, 33.1)	71%	7.39 (2.22, 24.6)	.	.
No treatment (P)	12%	ref	25%	ref	.	.
Hormones + behavioral therapy (H+T)	38%	1.54 (0.58, 4.00)	.	.	.	.
Hormones (H)	28%		.	.	.	.
Hormones + behavioral therapy (H+T)	38%	1.45 (0.48, 4.39)	.	.	.	.
Behavioral therapy (T)	30%	ref	.	.	.	.

Empty cells (with periods) indicate that the intervention was not evaluated among the studies designated in the given column. Intervention category codes are in parentheses, corresponding with the associated figure.

Abbreviations: BTX = onabotulinum toxin A, OR = odds ratio, ref = referent to which other interventions are compared.

Quality of Life

A single study of 69 people reported on quality of life in combined pharmacological and nonpharmacological versus nonpharmacological only.[177] Both arms received PFMT, electrostimulation, and biofeedback, but one arm also received vaginal estrogen. The arm that received estrogen did significantly better on the Incontinence Impact Questionnaire (IIQ-7), with a net difference of -7.8 (95% CI -9.6 to -6) on the 100-point scale.

Adverse Events

Rates of adverse events from combined interventions are presented in Table 26. Each adverse event was reported in only a single study. Detailed results are in Appendix F. One study reported on a combination of PFMT and the anticholinergic medication trospium, but reported only on three adverse events in 31 people.[179] In this study low percentages of women reported visual adverse events (3.2%) and discontinuation due to adverse events (3.2%), but more reported dry mouth (23%).[179] Four studies reported on adverse events from estrogen combined with PFMT, pessaries, and/or transcutaneous electrical nerve stimulation (TENS).[82, 171, 177, 224] Each adverse event was evaluated by only a single study, but the percentage of women reporting these adverse events were below 4 percent.

Table 26. Adverse events in combination interventions

Adverse Event*	PFMT + Trospium	PFMT + Pessaries + Vaginal Estrogen	TENS + PFMT + Vaginal Estrogen	TENS + Vaginal Estrogen
D/C due to AE	3.2 [N = 31 (1 study)]	0.9 [N = 1941 (1 study)]		
Dry mouth	22.6 [N = 31 (1 study)]	1 [N = 1941 (1 study)]		
Visual AE	3.2 [N = 31 (1 study)]			
AE (undefined/nonmajor)		3.1 [N = 1941] (1 study)]	0 [N = 137 (1 study)]	0 [N = 105] (1 study)]
AE, serious		0.1 [N = 1941 (1 study)]		
AE, treatment related		2.2 [N = 1941 (1 study)]		
CNS - dizziness		0.2 [N = 1941 (1 study)]		
Fatigue/drowsiness		0.1 [N = 1941 (1 study)]		
Gastrointestinal/abdominal symptoms (Constipation)		0.4 [N = 1941 (1 study)]		
Gastrointestinal/abdominal symptoms (Diarrhea)		0.2 [N = 1941 (1 study)]		
Gastrointestinal/abdominal symptoms (Nausea)		0.5 [N = 1941 (1 study)]		
Gastrointestinal/abdominal symptoms (Vomiting)		0.4 [N = 1941 (1 study)]		
Headache		0.3 [N = 1941 (1 study)]		
Pain - pelvic			3.9 [N = 103 (1 study)]	
Sleep disorder		0.1 [N = 1941 (1 study)]		
Sweating, excessive		0.1 [N = 1941 (1 study)]		

The median and range are based on study arms. 1 arm = actual, 2 arms = range, 3+ arms median (range). If 1 or 2 studies have 3 or more arms, a median and range is given. Empty cells indicate that the outcome was not evaluated among the interventions designated in the given column

Abbreviations: AE = adverse event, D/C = discontinued, UTI = urinary tract infection, N = number, CNS = central nervous system, TENS = transcutaneous electrical nerve stimulation , PFMT = pelvic floor muscle training

* Results in first line of each cell are given as percent adverse events, median (min, max). The numbers in brackets represent [total number of participants (number of studies)].

Discussion

Summary of Findings

This review updated the Agency for Healthcare Research and Quality's (AHRQ) 2012 systematic review with new literature searches from 2011 through December 4, 2017. It includes urinary incontinence (UI) outcomes (cure, improvement, satisfaction), quality of life, and adverse events. For UI outcomes, we conducted network meta-analyses since studies have compared a large number of specific interventions (53) and categories of interventions (16) and the majority of these interventions have not been directly compared with each other. The main findings of this systematic review update and the associated strength of evidence for each conclusion are summarized in Table 27.

The conclusions in Table 27 are general and do not cover all the analyses we explored. We estimated effects for 202 possible comparisons among intervention categories and 1514 possible comparisons among individual interventions for the UI outcomes, not counting information on quality of life and (limited comparative) information on adverse events. Providing conclusions and rating the "strength of the evidence" for each of these hundreds of comparisons is not productive. Users of our report who have specific interests should consult the pertinent results.

Briefly, in regards to patient-centered outcomes including cure, improvement, and satisfaction with UI symptoms, evidence of variable strength supports that almost all the examined active interventions are better than sham, placebo, or no treatment for at least one of these outcomes; the exceptions were hormones and periurethral bulking agents. Based on moderate to high strength of evidence, the first-line intervention behavioral therapy generally resulted in better UI outcomes (cure, improvement, satisfaction) than second-line interventions (medications). For women with stress UI requiring third-line interventions, intravesical pressure release may be more effective to achieve improvement than combination neuromodulation and behavioral therapy; and triple combination neuromodulation, hormones, and behavioral therapy may be more effective than either periurethral bulking or combination neuromodulation and behavioral therapy; all based on low strength of evidence. For women with urgency UI requiring third-line interventions, onabotulinum toxin A (BTX) may be more effective to achieve cure than neuromodulation, also based on low strength of evidence.

Regarding quality of life outcomes, there is low strength of evidence that behavioral therapy, anticholinergics, and neuromodulation are each more effective than no treatment. There is also low strength of evidence that supervised pelvic floor muscle training is more effective to improve quality of life than unsupervised training.

Serious adverse events were generally rare, with the notable exception of periurethral bulking agents which resulted in erosion or need for surgical removal of the agents in about 5 percent of women (but only 1.5% with the agent available in the U.S.; reported in in one study, low strength of evidence). The most commonly reported adverse event was dry mouth, which occurred in 24 percent of women on anticholinergics (36% of women on oxybutynin) and 13 percent of women using the alpha agonist duloxetine (high strength of evidence). Among women who received BTX, about one-third had urinary tract infections and between 10 and 20 percent had episodes of urinary retention or voiding dysfunction (moderate strength of evidence). Women taking the alpha agonist duloxetine reported common occurrences of constitutional adverse events (e.g., nausea 23%, insomnia 12%, fatigue 10%); moderate strength of evidence.

The evidence base did not provide adequate information to suggest which women would most benefit from which intervention (or interventions) based on the etiology or severity of her UI or

based on her personal characteristics (such as age or involvement with athletic activities). The studies covered a large range of women, across adult ages, geographic regions, and types of UI (urgency, stress, mixed, or undefined) that as a whole are likely applicable to the general population of nonpregnant women with UI. However, extremely few studies reported subgroup analyses. Across studies, no clear differences in the comparative effectiveness of interventions were found based on patient age or comparing studies of women with urgency UI (alone) and studies of women with stress UI (alone). In regards to subpopulations of particular interest to stakeholders, studies did not specifically analyze or report on women engaging in athletic activities or women in the military. Studies also did not report subgroup analyses based on race or ethnicity, nor were there studies restricted to ethnic minorities to allow across-study comparisons.

The clinical importance of the effect sizes between interventions likely varies among women with UI based on their personal preferences or values and may further differ related to their severity of symptoms, the UI type, intervention, and other factors. For example, those with more severe UI may be more satisfied with partial improvement than those with milder UI; similarly, women using simpler, less invasive interventions may be more satisfied with partial improvement than women using invasive, intensive, or expensive interventions. For these reasons, we would again direct readers to read and evaluate the pertinent results in this report based on their specific interests in particular interventions and outcomes.

Clinical Implications

There is evidence to support the use of most of the interventions—nonpharmacological, pharmacological, and combination interventions—in contrast to no intervention (or, in clinical practice, watchful waiting), with the exceptions of hormones and periurethral bulking agents, for which there is low strength of evidence of no difference in relative rates of cure and improvement.

For women with stress UI or with urgency UI, the first-line intervention behavioral therapy is highly effective compared with no treatment. It is also generally more effective than second-line pharmacological therapies when used alone. Nevertheless, compared with no treatment, alpha agonists (used for stress UI) significantly improve UI, although with complaints of dry mouth (13%) and constitutional adverse events (including nausea in 23%). Similarly, for urgency UI, anticholinergics increase rates of cure, improvement, and satisfaction with degree of incontinence, but with associated complaints of dry mouth (24% overall). Sparse evidence specific to women with mixed UI is consistent with the rest of the evidence base regarding effectiveness of alpha agonists and anticholinergics.

For women moving on to third-line interventions, intravesical pressure release and neuromodulation are effective options for women with stress UI, with rare adverse events. Sparse evidence specific to women with mixed UI had similar findings for neuromodulation related to UI improvement. For women with urgency UI who are interested in trying BTX (and for whom it may be indicated; e.g., those with proven detrusor overactivity who have not responded to first- and second-line intervention[7]), the evidence suggests it is the most effective pharmacological intervention; however, it is associated with urinary tract infections and urinary dysfunction after treatment. But BTX may also be considered to have the advantage of being a one-time treatment with trial evidence of effectiveness for up to 6 months. Neuromodulation may also be effective for this population. Notably, periurethral bulking agents are less effective than most other interventions and are associated with risk of erosion and need for surgical removal of the bulking agents.

Although the evidence did not adequately evaluate heterogeneity of treatment effects (how treatment effectiveness may vary in different individuals or groups of women), the relatively high satisfaction rates for all evaluated intervention categories (at least 50%) suggests that each intervention is potentially appropriate for different women, depending on their symptoms, severity of disease, prior treatment history, and their own goals and preferences.

It is also interesting to note that the rates of satisfaction (51% to 76%) are mostly higher than rates of cure (15% to 45%) or improvement (30% to 79%). Thus, women who are not reporting categorical improvement in symptoms are still reporting satisfaction with treatment. As discussed in the evaluation of the contextual question, women's treatment goals vary widely, but emphasize improvements in activities of daily living and resultant improvements in psychological, interpersonal, and related impacts. For many women, actual cure or a researcher-defined threshold of improvement is of lesser importance than ability to return to normal activities. Furthermore, women have described differing interest and tolerance for different types of interventions (e.g., daily drugs, invasive interventions, behavioral therapy), in part related to differences in concern about to the types of adverse events associated with each intervention.

There are many variations of how UI manifests in different women, of what aspects of UI women find most bothersome, and in the preferences and goals, including tolerance for potential adverse events, across both women and clinicians. Available interventions also vary substantially in how they function, their frequency and duration, their degree of invasiveness, and the amount of effort required by the women. These differences combined with the finding that all the interventions are effective to a lesser or greater degree suggest that each of the interventions may be most appropriate for different women. Thus, for example, while one might argue that third-line BTX is more effective (for cure and satisfaction) than second-line anticholinergics and thus should be preferentially recommended, it is possible that women may prefer one over the other intervention based on their own values, preferences, lifestyle, work schedule, and concerns about adverse events and receiving a more invasive intervention.

Furthermore, what effect size is clinically significant likely varies among women with UI and may further differ related to the severity of symptoms, UI type, intervention, failure of prior interventions, and other factors. For example, those with more severe UI may be more satisfied with partial improvement than those with milder UI; similarly, women using simpler, less invasive interventions may be more satisfied with partial improvement than women using invasive, intensive, or expensive interventions. Thus, overall, women and their clinicians will likely be choosing among a limited set of options based on the women's severity of symptoms, prior treatment history, preferences for daily or one-time treatments, concerns about adverse events, etc. For example, some women may be considering only oral medications to add on to their current behavioral therapy, while other women may be considering BTX because of concerns about adverse events of daily medications. Given the large number of possible comparisons across categories of intervention (and the very large number of comparisons of specific interventions), we direct readers to read and evaluate the pertinent results in this report found in the "odds ratio tables" (e.g., Table 6 for cure; and equivalent tables for specific interventions, e.g., Appendix G, Table G-1) based on their specific interests regarding particular interventions and outcomes.

In clinical practice, the pragmatic approach of many clinicians is to start with behavioral therapy as a first-line intervention. For patients who do not respond or experience suboptimal improvement, it is common to then consider oral medications, depending on the type of UI, as second-line intervention; for example alpha agonists for stress UI or anticholinergics for urgency

UI. Finally, neuromodulation or bladder BTX are commonly considered third-line interventions, depending on UI type. The comparative effectiveness of the various interventions (with each other) provided by the evidence, together with other considerations (such as ease of implementation, availability, and resource use), broadly supports this approach.

Although, not evident among the studies of outpatient women specifically with UI, concern has recently increased regarding for cognitive changes from the continued use of anticholinergic medications in frail or elderly patients.[247-251] Based on this concern, the American Urogynecologic Society issued the following consensus statement recommendations: 1) patients should be counselled about the risks associated with anticholinergic medications, such as cognitive impairment, dementia, and Alzheimer disease; 2) the lowest effective dose should be prescribed, and consideration should be given for alternative medications; 3) particular consideration should be taken with patients using other anticholinergic medications; and 4) bladder BTX or neuromodulation should be considered for patients at risk for adverse effects from anticholinergics.[15] In addition, evidence suggests that the majority of patients (>70%) stop using anticholinergics within 5 months, mostly because of side effects. [16-18]

In reviewing the contextual question, we identified success as defined by physicians (informants) and patients based on published survey and focus group data. As might be expected, these goals similar with respect to domains of importance including physical symptoms and the associated impact on relationships, quality of life, activities of daily living, interpersonal relationships and psychological distress, economic implications, and sleep disturbance. Based on the literature review, we also identified that patients want to know about the balance between adverse events and symptom improvement. However, our informants did not comment on this. This finding also highlights the importance of the adverse event data described in this review. Clinicians should remember that patients are interested in possible adverse events and want to know this information to help them make informed decisions about treatment options.

Our findings are consistent with previously published systematic reviews of nonsurgical treatment UI in women but are more complete because we have evaluated additional classes of medications and additional interventions. Furthermore, we conducted network meta-analyses to combine direct evidence, from head-to-head comparisons, with indirect evidence. We thus estimate treatment effects for all possible comparisons between intervention categories (and individual interventions). Based on the network meta-analysis model, we are able to obtain the predicted mean outcome rates per intervention, in an effort to simplify the interpretation of the available evidence.

Strength of Evidence

The strength of evidence for each conclusion presented in Table 27 is based on a qualitative combination of primarily the summary risk of bias across all relevant studies, the consistency of the studies, the precision of the available estimates, and the directness of the evidence. The large majority (83%) of studies were deemed to be of low risk of bias; therefore, for each conclusion, the evidence base usually had low risk of bias. Exceptions included the effect of neuromodulation versus no treatment on quality of life and most of the conclusions regarding adverse events, which were generally poorly and inconsistently reported. For most analyses studies reported consistent results regarding the comparative effectiveness of interventions or the risk of adverse events. The primary exception related to quality of life, for which studies reported some inconsistent results both within and across studies. Given the extremely large number of possible comparisons among both intervention categories and specific interventions, we provide strength of evidence ratings

only for those comparisons for which summary conclusions are possible. In most instances where comparative effectiveness estimates were imprecise, no conclusions are possible, and these comparisons are omitted. However, where feasible, conclusions were made for quality of life and adverse event outcomes despite some instances of imprecision mostly due to sparse data. For the UI outcomes, directness was summarized as variable. The directness metric covers various concepts including whether the conclusions are based on direct (head-to-head comparisons) and whether the reported outcomes are direct (true) measures of the outcome of interest. For all UI outcomes, the conclusions are based on both direct and indirect evidence, per the network meta-analysis. As noted, all network and direct comparisons were congruent and were consistent between the networks of all studies and of the subsets of stress or urgency UI, so the overall strength of evidence was not downgraded due to indirectness. Although there was some variability in the definitions of cure, improvement, and satisfaction, these were deemed to be sufficiently minor to not affect the overall directness. In contrast, some adverse event conclusions were downgraded for being indirect in that the outcomes ("any," "moderate," or "severe" adverse events) were generally not defined and likely varied across studies.

Table 27. Evidence profile for nonpharmacological and pharmacological interventions for urinary incontinence

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
Cure, improvement, satisfaction	**Stress UI: 1st and 2nd line interventions (behavioral therapy, alpha agonists, hormones)**	Behavioral therapy vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy alone and in combination with hormones or alpha agonists more effective than no treatment to achieve cure, improvement, and satisfaction
		Medications vs. placebo	Low [a]	Consistent [b]	Imprecise [c]	Direct [d]	Variable (see conclusion statement column)	Alpha agonists more effective than no treatment to achieve improvement (high SoE), but not cure (moderate SoE). Hormones not demonstrated to be better than no treatment for cure (low SoE) or improvement (moderate SoE).
		Behavioral therapy vs. medications	Low [a]	Consistent [b]	Precise	Indirect	Moderate	Behavioral therapy alone and in combination with hormones more effective than alpha agonists (for cure and improvement) or hormones (for improvement) alone
		Alpha agonists vs. hormones	Low [a]	Consistent [b]	Precise	Indirect	Moderate	Alpha agonists more effective than hormones for improvement, but not cure

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
	Stress UI: 3rd line interventions (periurethral bulking agents, intravesical pressure release, neuromodulation [E])	Intravesical pressure release vs. no treatment	Low [a]	Consistent [b]	Variable (see conclusion statement column)	Direct	Variable (see conclusion statement column)	Intravesical pressure release more effective than no treatment, significantly so for improvement (moderate SoE), but not for cure (low SoE), based on sparse evidence.
		Periurethral bulking agents vs. no treatment	Low [a]	Consistent [b]	Imprecise	Indirect	Low	Periurethral bulking agents not demonstrated to be more effective than no treatment for cure or improvement.
		Neuromodulation [E] (alone) vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Neuromodulation [e] more effective than no treatment for cure, improvement, and satisfaction.
		Neuromodulation [E] in combination with 1st or 2nd line interventions vs. no treatment	Low [a]	Variable (see conclusion statement)	Precise	Direct	Variable (see conclusion statement column)	Combination neuromodulation [e] and behavioral therapy, with or without addition of hormones, more effective to achieve improvement than no treatment (double combination low SoE with sparse and inconsistent evidence; triple combination moderate SoE due to sparse studies).

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		3rd line interventions vs. each other	Low [a]	Inconsistent	Precise, but NS	Indirect	Low	To achieve improvement, intravesical pressure release may be more effective than combination neuromodulation [E] and behavioral therapy; triple combination neuromodulation [E], hormones, and behavioral therapy may be more effective than either periurethral bulking or combination neuromodulation [e] and behavioral therapy.
	Urgency UI: 1st and 2nd line interventions (behavioral	Behavioral therapy vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy more effective than no treatment to achieve cure, improvement, and satisfaction

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
	therapy, anticholinergics)	Anticholinergics vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	Anticholinergics more effective than placebo for cure, improvement, and satisfaction (moderate SoE for satisfaction due to imprecision in urgency UI studies). Indirect evidence found that combination anticholinergics and behavioral therapy also more effective than no treatment for cure (moderate SoE), improvement (moderate SoE), and satisfaction (low SoE due to imprecision in urgency UI studies).
		Behavioral therapy vs. anticholinergics	Low [a]	Consistent [b]	Precise	Direct	High	Behavioral therapy more effective than anticholinergics for cure, improvement, and satisfaction (moderate SoE due to sparse data for satisfaction).
	Urgency UI: 3rd line interventions (BTX, neuromodulation)	3rd line interventions vs. no treatment	Low [a]	Consistent [b]	Precise	Direct	High	BTX and neuromodulation more effective than no therapy for cure, improvement, and satisfaction (moderate or low SoE for improvement or satisfaction due to sparseness, indirectness, and nonsignificance).

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		BTX vs. neuromodulation	Low [a]	Consistent [b]	Precise, but NS	Direct	Low	BTX nonsignificantly more effective than neuromodulation for cure and satisfaction (sparse evidence).
	Mixed UI	1st and 2nd line interventions	Low [a]	N/A	Imprecise [f]	Direct	Low [g]	Duloxetine (alpha agonist) and tolterodine (anticholinergic) have sparse evidence of greater UI improvement and satisfaction (tolterodine only) than placebo. Consistent with overall network meta-analyses.
		3rd line interventions	Low [a]	Consistent [b]	Imprecise [f]	Direct	Low [g]	Neuromodulation has sparse evidence of greater UI improvement compared with no treatment. Consistent with overall network meta-analysis.
	Other subgroups	Older women	Low [h]	Consistent [b]	Precise	Direct	Moderate	In older women, behavioral therapy combined with hormones or neuromodulation more effective than any single intervention
		Other subgroups of interest					Insufficient	Insufficient data to determine comparative effects in subgroups of interest, including race/ethnicity, or active/veteran military personnel, athletes

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
Quality of life	**All**	Behavioral therapy vs. no treatment	Low [i]	Consistent	Imprecise [j]	Direct	Low	Behavioral therapies evaluated by more than one study were found to have a statistically significant improvement in at least one aspect of quality of life by at least one study
		Neuromodulation vs. no treatment	Moderate [k]	Consistent	Precise	Direct	Low	Neuromodulation better than sham interventions
		Anticholinergics vs. no treatment	Low [l]	Inconsistent [m]	Imprecise [j]	Direct	Low	Anticholinergics better than placebo or no treatment
		PFMT: supervised vs. unsupervised PFMT, with or without biofeedback	Low [n]	Inconsistent [m]	Imprecise [j]	Direct	Insufficient	Discordant results regarding relative effects on quality of life of supervised or unsupervised PFMT or combined with biofeedback
Adverse events	**All**	Nonpharmacological interventions	Moderate [o]	Consistent	Imprecise [o]	Direct	Low	Nonpharmacological interventions had rare adverse events
		Periurethral bulking agents	Moderate [o]	Consistent	Imprecise [p]	Indirect [q]	Low	Periurethral bulking agents resulted in serious adverse events (e.g., erosion, surgery) in 4.7% of women. With the agent available in the U.S., 1.6% had erosion.
		Anticholinergics: serious adverse events	Moderate [o]	Consistent	Precise	Indirect [r]	Low	In women taking anticholinergics, 2.4% had (mostly undefined) serious adverse events

Outcomes	Subgroups	Intervention(s)	Risk of Bias	Consistency	Precision	Directness	Overall SoE	Conclusion statement
		Pharmacological interventions: dry mouth	Low [s]	Consistent	Precise	Direct	High	Dry mouth was the most common adverse event reported for pharmacological treatments: Anticholinergics 24% (oxybutynin 36%), Alpha agonist (duloxetine) 13%, Placebo 4%.
		BTX	Moderate [o]	Consistent	Precise	Direct	Moderate	Women receiving BTX commonly had UTIs (4-55%) and voiding dysfunction (10-20%)
		Duloxetine (alpha agonist)	Moderate [o]	Consistent	Precise	Direct	Moderate	The alpha agonist duloxetine is associated with a range of constitutional adverse events. [t]

Abbreviations: BTX = onabotulinum toxin A, NA = not applicable, NS = not statistically significant, PFMT = pelvic floor muscle training, QoL = quality of life, RCT = randomized controlled trial(s), SoE = strength of evidence, SUI = stress urinary incontinence, UTI = urinary tract infection, UUI = urgency urinary incontinence.

[a] Most studies had low risk of bias: cure 45/55, improvement 55/62, satisfaction 5/8.
[b] No robust indications of inconsistency. Results from direct comparisons congruent with results from network meta-analysis.
[c] Except for evaluation of improvement for alpha agonists vs. placebo.
[d] Except for evaluation of cure for hormones vs. placebo.
[e] Neuromodulation is typically used for urgency UI, but has been evaluated in studies of women with stress UI.
[f] Sparse evidence specific to women with mixed UI (cure 0 studies; improvement 4 studies of 3 interventions; satisfaction 1 study).
[g] Although consistent with overall network meta-analyses, evidence is sparse and would provide insufficient evidence without indirect evidence.
[h] Most studies of older women had low risk of bias: cure 6/7, improvement 17/18, satisfaction 2/2.
[i] Most studies had low risk of bias (14/23)
[j] Sparse data for specific comparisons. Comparative benefit not seen consistently for different aspects of quality of life within and across studies.
[k] Three studies gave no information on any risk of bias criteria, one did not have adequate randomization, and one did not have adequate allocation concealment. The other four studies all had low risk of bias.
[l] All studies had low risk of bias (7/7)
[m] Inconsistency within and across studies about the comparative effectiveness for various specific aspects of quality of life.
[n] Most studies had low risk of bias (8/11)
[o] Adverse events sparsely and/or inconsistently reported and were frequently poorly or not defined.
[p] Only one study (n = 122) reported adverse events in a periurethral bulking agent available in the United States (macroplastique).
[q] Most studies evaluated periurethral agents not available in the United States.
[r] The severity and definitions of the “serious” adverse events were unclear.
[s] The data were primarily from 44 RCTs with low risk of bias and 18 large (n>100) single-arm or nonrandomized comparative studies.
[t] Nausea (23%), insomnia (12%), constipation (11%), fatigue (10%), dizziness (10%), and headache (8%).

Limitations of the Evidence Base

With few exceptions and for most outcomes, individual studies were deemed to have, at most, moderate risk of confounding, selection, or measurement biases. The risk of bias of individual studies was not a major determinant for the conclusions in Table 27 Assessing impact of the risk of bias of individual studies on the conclusions of a network meta-analysis is not straightforward.[252, 253] The comparison effects estimated from a network meta-analysis are a combination of the estimated effects from head-to-head studies and from studies contributing through indirect comparisons. For example, assume that there is a highly biased study in a network meta-analysis: this study may raise concerns primarily regarding the comparison it directly informs on; however, it would cause little (even negligible) concern regarding comparisons that it informs indirectly. It will be of no concern for comparisons to which it contributes zero information.[253]

The major limitation identified by this review is the relative dearth of direct (head-to-head trial) evidence when one considers the richness of the clinical questions that can be posed. In general, comparisons across intervention categories are not as informative as comparisons between individual interventions. However, given the limitations of the evidence comparing specific interventions, we have provided analyses at the individual intervention level only in the Appendixes, and opted not to draw conclusions based on them. Most comparisons of individual interventions are based on indirect data and small numbers of studies. In addition, the generally small sample sizes of included studies lead to concerns about generalization.

Most studies included both women with stress UI and women with urgency UI or did not adequately describe their eligibility criteria. Very few studies explicitly evaluated only women with mixed UI (with symptoms of both stress and urgency UI). Relatively few studies based their eligibility criteria on whether women had already taken (and/or failed to improve with) prior treatments or described which treatments had already been used by study participants. Also, relatively few studies described or based eligibility criteria on symptom severity. Thus, it was difficult to evaluate subgroup analyses or to summarize across studies based on most of these descriptors.

We found no new information on the effectiveness of treatments among women who engage in athletic activity. It is known from previous research that incontinence is more common among women who engage in athletic activity.[254] Urinary incontinence depends on the type of activity, with no leakage reported with golf, and up to 80 percent among trampolinists.[254] Gymnasts and other athletes of high impact sports report more incontinence than age-related controls. It has been postulated that elite athletes need to have a stronger than normal pelvic floor to help mitigate the increased abdominal pressure that occurs with strenuous physical activity. The lack of additional data identified for this subset of women again highlights the need for additional studies specific to this group of women.

We did not identify any information regarding different treatment strategies between young and old patients. In 2015, the International Consultation on Incontinence ~ Research Society Think Tank met, discussed and published their opinion on the best treatment options for stress UI in the “very young” and “very old”.[255] They defined very young as premenopausal patients less than 40 years old and very old as more than 70 or 75 years of age. They included discussions of surgical options and did not comment on urgency UI. They reported that minimal data exist to guide the treatment in those less than 40 or more than 70 years. For young women, they recommend that risks associated with pregnancy and childbirth need to be considered and special considerations should be given regarding comorbidities in elderly women.

We found a paucity of data regarding specific treatment efficacy for additional subgroups of interest including race/ethnicity, or active/veteran military personnel. Research is clearly needed to help guide treatment strategies for these women.

In addition to the sparseness, or complete lack of data for subpopulations of interest, we found the inconsistent reporting of adverse events to be a challenge in this report. The specific adverse events reported and their definitions varied greatly among studies and treatment modalities. It is important to recognize that the evidence basis for effectiveness (primarily cure, improvement, and satisfaction from randomized trials) differs markedly from that for adverse events (which generally could not be adequately compared across interventions). However, interestingly, for mirabegron, no studies have reported comparative effectiveness for categorical outcomes in women with UI but several studies have reported adverse events in this population; most mirabegron studies have been conducted either in men only or both men and women together. Further decision analysis modeling would be needed to yield a more explicit balance between comparative benefits and harms of different interventions. Further complicating this issues, is the particular importance of patient preferences and values regarding the many intervention choices and the differing concerns about specific harms.

Limitations of the Analytic Approach

In our analyses we used indirect data to inform comparisons between interventions. However, indirect comparisons rely on an assumption that there are no influential systematic differences in the distribution of effect modifiers in the synthesized studies.

Conceptually, the corpus of studies on UI in women includes heterogeneous samples of women based on UI type (stress, urgency, and mixed), UI severity (e.g., frequency and volume of incontinence), and prior treatment history (e.g., treatment-naïve, incomplete resolution with behavioral therapy, failed medication therapy). However, as noted, most studies failed to provide data to distinguish comparative effects of interventions based on UI type, UI severity, past treatment history, or other potential effect modifiers. Thus, implicitly, they were not considering the heterogeneity of treatment effects based on these factors among their included study participants.

The overall network meta-analysis, thus, makes the same general assumptions as the majority of studies, namely that the comparative effectiveness of interventions is consistent across different subgroups. This assumption does not imply that the actual effectiveness (e.g., incidence of cure) for a given intervention is similar among different groups of women, but instead that the comparative effectiveness compared to other treatments is similar. As noted, the network meta-analysis does compare interventions used for stress UI with interventions used for urgency UI. Third-line interventions (which in theory are used primarily in women who have failed to improve with second-line intervention) are also compared with first-line or second-line interventions (which in theory are used primarily in women who have not failed to improve with prior therapies). This approach is consistent with studies of women with UI that have, for example, evaluated neuromodulation (which is primarily used to treat urgency UI) in studies of women with only stress UI. Furthermore, studies have directly compared BTX (3^{rd} line intervention) and anticholinergics (2^{nd} line), neuromodulation (3^{rd} line) and behavioral therapy (1^{st} line), and, as mentioned, neuromodulation in women with stress UI. Such direct comparisons are consistent with the overall structure of the full network meta-analysis. We tested the appropriateness of the network meta-analysis model in a number of ways and found no evidence that the assumptions necessary for the indirect comparisons are violated. Split-node analyses, which compare direct (head-to-head) comparisons with indirect comparisons (through another intervention) for each comparison of two interventions, were consistent with a valid network

model. Equivalently, network meta-analysis results were consistent with pairwise (direct) meta-analysis results in those comparisons for which there were head-to-head comparisons available. In addition, network meta-analyses that included the more homogeneous studies of women with only stress UI, urgency UI, or older women all yielded similar results as the overall network meta-analysis, providing additional evidence of the validity of the network. The network meta-analytic approach allowed us to learn across studies by aggregating the full corpus of evidence as opposed to parsing the evidence into specific subcategories of comparisons each of which have only sparse direct evidence.

Most of the comparisons between intervention categories, and between specific interventions, are indirect, through sham or no treatment. Comparisons between active interventions are sparse. Several active interventions (e.g., raloxifene, duloxetine, magnetic stimulation, and autologous fat implantation as a periurethral bulking agent) have not been directly compared with another active intervention. This observation is important because for interventions that are generally reserved as second- or third-line treatment, comparisons versus no treatment are not as informative as comparisons between active interventions.

Recommendations for Future Research

We identified gaps in the literature that merit consideration for future research. They are described briefly in the following paragraphs.

There is a need to adopt a set of core outcome measures, for effectiveness and for safety outcomes. As an example, among studies to date a wide range of quality of life instruments have been used, but inconsistently reported, in the included studies. The large number of instruments, and the even larger number of subscales, hinders drawing of conclusions across studies. In addition, currently studies inconsistently reported clearly defined UI outcomes (cure, improvement, satisfaction) and defined them variously. If all studies had consistently reported all outcomes, our summary findings would have been much more robust and precise. A core outcome set would be maximally useful if it included standardized definitions for patient-centered outcomes and if it has been demonstrated to capture the outcomes directed toward patient, rather than clinician or researcher, interests. Based on the survey and focus group studies that have been reported, future studies should be collecting data on those adverse events about which patients are concerned. More data, however, are needed to determine what those adverse events may be, and to what degree patients balance potential benefits and harms.

Information to further clarify whether specific subpopulations may benefit more from, or have differential adherence to, specific interventions is still lacking. Specifically, information regarding the differential effects of interventions in women from all of the identified subgroups of interest for this review are relatively sparse. Studies should either include only women with a specific type of UI (stress, urgency, mixed) or report subgroup results for all outcomes. Studies should also report UI severity (e.g., frequency or volume) and past treatment history for included participants and, where feasible, again provide subgroup results based on severity and/or past treatment history. Additional studies are needed regarding efficacy of the various interventions including patient-specific outcome measures for athletes, young and old, military and women of diverse racial/ethnic backgrounds. The possibilities for future research in these subsets of women is particularly rich and untapped.

Several specific intervention comparisons of interest have no or limited direct evidence. Future studies are needed to allow more robust comparisons. Notably lacking are trials of mirabegron specific to women with UI. Existing trials of mirabegron that included a sufficient number of women with UI should publish these results. Other available interventions that are not included in the evidence should be evaluated if they are promising treatments.

To allow better interpretation of the evidence, studies need to more clearly describe prior treatments used by study participants. Ideally, studies should either include only women with a particular treatment history (e.g., treatment naïve, failed to improve with a first-line therapy, failed to improve with a specific intervention) or complete subgroup data for each treatment category should be reported.

Conclusions

Based on combined direct and indirect comparisons and with respect to patient-centered outcomes including cure, improvement, satisfaction with treatment, and quality of life, most examined active intervention categories appear to be better than sham or no treatment, and for many or most comparisons, statistically significantly so (with the exception of hormones and periurethral bulking agents). Behavioral therapy, alone or in combination with other interventions, is generally more effective than other first- and second-line interventions alone for both stress and urgency UI.

The third-line interventions BTX, neuromodulation, and intravesical pressure release are generally more effective than other interventions, but with increased risk of urinary tract infections and urinary dysfunction with BTX. Second-line pharmacological interventions, particularly when used alone, are generally less effective and are associated with nonserious but bothersome adverse events, such as dry mouth, nausea, and fatigue. However, adverse events are generally nonserious, except for erosion and need for surgical removal in about 5% of those who received periurethral bulking agents (1.6% with the agent available in the U.S.).

Large gaps remain in the literature regarding the comparison of individual interventions, and very little or no information is available on women who engage in athletic activity or women in the military or who are veterans, or about differences between older and younger women or women of different ethnicities or races. Standardized quality of life and adverse event reporting would allow significant improvement for conclusions from future systematic reviews as between-study comparisons would be more robust and conclusive.

For clinicians, patients and payers to make informed decisions, specifically for patient subgroups with sparse evidence, new evidence from studies comparing interventions is needed.

Appendix A. Literature Search Strategy

PubMed (11/28/17)

(("Urinary Bladder, Overactive"[Mesh] OR "Urinary Incontinence"[Mesh] OR "Enuresis"[Mesh] OR overactive bladder OR ((bladder or urine) AND incontinen*) OR enuresis OR nocturia OR "Nocturia"[Mesh] OR ((bladder or urine or urina*) and (overactive or incontinence or urgent or urgency or frequent or frequency or detrusor or leak*)) OR detrusor instability OR "Urinary Bladder, Neurogenic"[Mesh] OR (bladder AND (neurogen* or neurologic*)) OR "Urinary Incontinence, Urge"[Mesh] OR "Urinary Incontinence, Stress"[Mesh] OR ((urine OR urina* or bladder*) and urge*))

AND

("Urinary Incontinence/Radiotherapy"[Mesh] OR "Urinary Incontinence/Rehabilitation"[Mesh] OR "Urinary Incontinence/Surgery"[Mesh] OR "Urinary Incontinence/Therapy"[Mesh] OR "Urinary Incontinence/Diet Therapy"[Mesh] OR "Urinary Incontinence/Nursing"[Mesh] OR "Urinary Incontinence/Drug"[Mesh] OR ((non pharmacologic* or nonpharmacologic*) AND "Treatment Outcome"[Mesh]) OR mirabegron OR "Adrenergic beta-3 Receptor Agonists"[Mesh] OR Resiniferatoxin OR "Botulinum Toxins"[Mesh] OR "Botulinum Toxins, Type A"[Mesh] OR botulinum OR botox OR estrogen* OR "Estrogens"[Mesh] OR Antimuscarinics OR oxybutynin chloride OR trospium chloride OR darifenacin OR solifenacin succinate OR fesoterodine OR tolterodine OR propiverine OR "Calcium Channel Blockers"[Mesh] OR Calcium Channel Blocker* OR nimodipine OR TRPV1 antagonists OR resiniferatoxin OR Tricyclic antidepressant* OR Tricyclic anti-depressant OR "Antidepressive Agents, Tricyclic"[Mesh] OR imipramine OR Beta 3 adeno-receptor agonists OR mirabegron OR "Neuromuscular Agents"[Mesh] OR neuromuscular agents OR ((pelvic floor or bladder) AND (train* or exercise or physical therapAy)) OR kegel OR "Physical Therapy Modalities"[Mesh] OR physiotherapy OR biofeedback OR "Biofeedback, Psychology"[Mesh] OR electric* stimulation OR "Electric Stimulation"[Mesh] OR nerve stimulation OR "Transcutaneous Electric Nerve Stimulation"[Mesh] OR stoller OR "Electrodes, Implanted"[Mesh] OR vesical pacing OR interstim OR "fluid therapy"[Mesh] OR (fluid AND (therapy or manage*)) OR urge suppression OR "Behavior Therapy"[Mesh] OR ((behavior* or behaviour*) AND (therapy or modif* or treat*)) OR "hypnosis"[Mesh] OR (hypnosis or hypnotherapy) OR "Drinking Behavior"[Mesh] OR "Complementary Therapies"[Mesh] OR ((alternative or complementary) AND (therapy or treatment)) OR "diet"[Mesh] OR diet OR dietary OR Vaginal cone* OR bladder support* OR (Urethra* AND (Plug or patch)) OR Pessar* OR Magnetic stimulation OR "Magnetic Field Therapy"[Mesh] OR Urethral bulking OR ((transurethral or periurethral) AND injection*) OR Posterior tibial nerve stimulation OR neuromodulation OR Coaptite OR (Vaginal AND (cone* OR weight*)) OR Impressa OR Macroplastique implants OR Milnacipran OR Savella OR Trospium OR Sanctura OR Onabotulinum toxin A OR Botox OR Paroxetine OR Paxil OR Mirabegron OR Myrbetriq OR solifenacin succinate OR vesicare OR Amitriptyline OR Elavil OR Rimabotulinum toxin B OR Myobloc OR Fluoxetine OR Prozac OR Duloxetine OR Cymbalta OR Citalopram OR Celexa OR Escitalopram OR Lexapro OR Levomilnacipran OR Fetzima OR AbobotulinumtoxinA OR Dysport OR oxybutynin chloride OR Ditropan OR Fluvoxamine OR Luvox CR OR Imipramine OR Tofranil OR Nortriptyline OR Pamelorl OR Clomipramine OR Anafranil OR IncobotulinumtoxinA OR Xeomin OR Doxepin OR Silenor OR Protriptyline OR Vivactil OR Trimipramine OR Surmontil OR 5-HT2 receptor antagonist OR Doxepin OR Silenor OR Sertraline OR Zoloft OR Tolterodine OR Detrol OR Desipramine OR Pertofrane OR

Desipramine OR Norpramin OR Darifenacin OR Enablex OR Desvenlafaxine OR Pristiq OR Topical estrogen OR premarin OR synthetic conjugated estrogens)
AND
("Cohort Studies"[Mesh] OR cohort OR "Clinical Trial" [Publication Type] OR "Clinical Trials as Topic"[Mesh] OR (follow-up or followup) OR longitudinal OR "Placebos"[Mesh] OR placebo* OR "Research Design"[Mesh] OR "Evaluation Studies" [Publication Type] OR "Evaluation Studies as Topic"[Mesh] OR "Comparative Study" [Publication Type] OR ((comparative or Intervention) AND study) OR Intervention Stud* OR pretest* OR pre test* OR posttest* OR post test* OR prepost* OR pre post* OR “before and after” OR interrupted time* OR time serie* OR intervention* OR (("quasi-experiment*" OR quasiexperiment* OR quasi or experimental) and (method or study or trial or design*)) OR "Case-Control Studies"[Mesh] OR (case and control) OR "Random Allocation"[Mesh] OR "Double-Blind Method"[Mesh] OR "Single-Blind Method"[Mesh] OR random* OR "Clinical Trial" [Publication Type] OR "Clinical Trials as Topic"[Mesh] OR "Placebos"[Mesh] OR placebo OR ((clinical OR controlled) and trial*) OR ((singl* or doubl* or trebl* or tripl*) and (blind* or mask*)) OR rct OR crossover OR cross-over OR cross-over))
NOT
(“addresses”[pt] or “autobiography”[pt] or “bibliography”[pt] or “biography”[pt] or “case reports”[pt] or “congresses”[pt] or “dictionary”[pt] or “directory”[pt] or “editorial”[pt] or “festschrift”[pt] or “government publications”[pt] or “historical article”[pt] or “interview”[pt] or “lectures”[pt] or “legal cases”[pt] or “legislation”[pt] or “news”[pt] or “newspaper article”[pt] or “patient education handout”[pt] or “periodical index”[pt] or "comment on" or ("Animals"[Mesh] NOT "Humans"[Mesh]) OR rats[tw] or cow[tw] or cows[tw] or chicken*[tw] or horse[tw] or horses[tw] or mice[tw] or mouse[tw] or bovine[tw] or sheep or ovine or murinae or ("Men"[Mesh] NOT "Women"[Mesh]) OR "Pregnant Women"[Mesh])

Limits
2011-current

<u>Cochrane (11/28/17)</u>
((mh "Urinary Bladder, Overactive" OR mh "Urinary Incontinence" OR mh Enuresis OR overactive bladder OR ((bladder or urine) AND incontinen*) OR enuresis OR nocturia OR mh Nocturia OR ((bladder or urine) and (overactive or incontinence or urgent or urgency or frequent or frequency or detrusor or leak*)) OR detrusor instability OR mh "Urinary Bladder, Neurogenic" OR (bladder AND (neurogen* or neurologic*)) OR mh "Urinary Incontinence, Urge" OR mh "Urinary Incontinence, Stress" OR ((urine OR urina* or bladder*) and urge*)) NOT ((mh Men NOT mh Women) OR mh "Pregnant Women"))
AND
(mh “Urinary Incontinence/Radiotherapy” OR mh “Urinary Incontinence/Rehabilitation” OR mh “Urinary Incontinence/Surgery” OR mh “Urinary Incontinence/Therapy” OR mh “Urinary Incontinence/Diet Therapy” OR mh “Urinary Incontinence/Nursing” OR “Urinary Incontinence/Drug” OR ((non pharmacologic* or nonpharmacologic*) AND mh “Treatment Outcome”) OR mirabegron OR mh "Adrenergic beta-3 Receptor Agonists" OR Resiniferatoxin OR mh "Botulinum Toxins" OR mh "Botulinum Toxins, Type A" OR botulinum OR botox OR estrogen* OR mh Estrogens OR Antimuscarinics OR oxybutynin chloride OR trospium chloride

OR darifenacin OR solifenacin succinate OR fesoterodine OR tolterodine OR propiverine OR mh "Calcium Channel Blockers" OR Calcium Channel Blocker* OR nimodipine OR TRPV1 antagonists OR resiniferatoxin OR Tricyclic antidepressant* OT Tricyclic anti-depressant OR mh "Antidepressive Agents, Tricyclic" OR imipramine OR Beta 3 adeno-receptor agonists OR mirabegron OR mh "Neuromuscular Agents" OR neuromuscular agents OR ((pelvic floor or bladder) AND (train* or exercise* or physical therap*)) OR kegel OR mh "Physical Therapy Modalities" OR physiotherapy OR biofeedback OR mh "Biofeedback, Psychology" OR electric* stimulation OR mh “Electric Stimulation" OR nerve stimulation OR mh “Transcutaneous Electric Nerve Stimulation" OR stoller OR mh “Electrodes, Implanted" OR (vesical pacing or interstim) OR mh “fluid therapy" OR (fluid AND (therapy or manage*)) OR urge suppression OR mh “Behavior Therapy” OR ((behavior* or behaviour*) AND (therapy or modif* or treat*)) OR mh hypnosis OR (hypnosis or hypnotherapy) OR mh “Drinking Behavior” OR mh “Complementary Therapies” OR ((alternative or complementary) AND (therapy or treatment)) OR mh diet OR diet OR mh “Quality of Life” OR biofeedback OR bladder support* OR impressa OR (Urethra* AND (Plug or patch)) OR Magnetic stimulation OR mh "Magnetic Field Therapy" OR Urethral bulking OR ((transurethral or periurethral) AND injection*) OR Pessar* OR Posterior tibial nerve stimulation OR neuromodulation OR Coaptite OR (Vaginal AND (cone* OR weight*)) OR Impressa OR Macroplastique implants OR Milnacipran OR Savella OR Trospium OR Sanctura OR Onabotulinum toxin A OR Botox OR Paroxetine OR Paxil OR Mirabegron OR Myrbetriq OR solifenacin succinate OR vesicare OR Amitriptyline OR Elavil OR Rimabotulinum toxin B OR Myobloc OR Fluoxetine OR Prozac OR Duloxetine OR Cymbalta OR Citalopram OR Celexa OR Escitalopram OR Lexapro OR Levomilnacipran OR Fetzima OR AbobotulinumtoxinA OR Dysport OR oxybutynin chloride OR Ditropan OR Fluvoxamine OR Luvox CR OR Imipramine OR Tofranil OR Nortriptyline OR Pamelorl OR Clomipramine OR Anafranil OR IncobotulinumtoxinA OR Xeomin OR Doxepin OR Silenor OR Protriptyline OR Vivactil OR Trimipramine OR Surmontil OR 5-HT2 receptor antagonist OR Doxepin OR Silenor OR Sertraline OR Zoloft OR Tolterodine OR Detrol OR Desipramine OR Pertofrane OR Desipramine OR Norpramin OR Darifenacin OR Enablex OR Desvenlafaxine OR Pristiq OR Topical estrogen OR premarin OR synthetic conjugated estrogens)

Limits
2011-

Embase (11/28/17)
urinary AND ('incontinence'/exp OR incontinence) OR 'enuresis'/exp OR enuresis OR overactive AND ('bladder'/exp OR bladder) OR 'nocturia'/exp OR nocturia AND nonpharmacological OR 'non pharmacological' OR 'mirabegron'/exp OR mirabegron OR 'beta 3 adrenergic receptor stimulating agent'/exp OR 'beta 3 adrenergic receptor stimulating agent' OR 'resiniferatoxin'/exp OR 'resiniferatoxin' OR botulinum AND ('toxins'/exp OR toxins) OR botox OR 'estrogen'/exp OR 'estrogen' OR antimuscarinics OR 'oxybutynin' OR trospium AND chloride OR darifenacin OR fesoterodine OR tolterodine OR propiverine OR solifenacin AND succinate OR 'calcium channel blocking agent'/exp OR 'calcium channel blocking agent' OR nimodipine OR trpv1 AND antagonists OR 'resiniferatoxin' OR 'antidepressant agent' OR imipramine OR 'muscle relaxant agent' OR 'physiotherapy'/exp OR physiotherapy OR 'biofeedback'/exp OR biofeedback OR electric AND ('stimulation'/exp OR stimulation) OR 'nerve'/de AND 'stimulation'/de OR 'fluid therapy' OR urge AND suppression OR 'behavior therapy' OR 'behavior therapy'/de OR

'hypnosis'/exp OR 'hypnosis' OR 'alternative medicine'/exp OR 'alternative medicine' OR 'diet'/exp OR 'diet' OR vaginal AND cone OR 'magnetic stimulation'/de OR 'magnetic stimulation' OR urethral AND bulking OR 'vagina pessary' OR impressa OR milnacipran OR savella OR trospium OR sanctura OR paroxetine OR paxil OR mirabegron OR myrbetriq OR 'solifenacin succinate' OR vesicare OR amitriptyline OR elavil OR 'rimabotulinum toxin b' OR myobloc OR fluoxetine OR prozac OR duloxetine OR cymbalta OR citalopram OR celexa OR escitalopram OR lexapro OR levomilnacipran OR fetzima OR abobotulinumtoxina OR dysport OR oxybutynin AND chloride OR ditropan OR fluvoxamine OR luvox OR imipramine OR tofranil OR nortriptyline OR pamelorl OR clomipramine OR anafranil OR incobotulinumtoxina OR xeomin OR protriptyline OR vivactil OR trimipramine OR surmontil OR doxepin OR silenor OR sertraline OR zoloft OR tolterodine OR detrol OR pertofrane OR desipramine OR norpramin OR darifenacin OR enablex OR desvenlafaxine OR pristiq OR premarin AND 'cohort analysis' OR 'controlled clinical trial'/exp OR 'controlled clinical trial' OR 'evaluation study' OR 'comparative study' OR 'intervention study' OR 'case control study' OR 'randomized controlled trial' OR 'crossover procedure' AND ([article]/lim OR [article in press]/lim OR [conference abstract]/lim OR [conference paper]/lim) AND [female]/lim AND [humans]/lim AND [2011-2017]/py

<u>CINAHL/PsycINFO (11/28/17)</u>
(("Urinary Bladder, Overactive" OR mh "Urinary Incontinence" OR mh Enuresis OR overactive bladder OR ((bladder or urine) AND incontinen*) OR enuresis OR nocturia OR mh Nocturia OR ((bladder or urine) and (overactive or incontinence or urgent or urgency or frequent or frequency or detrusor or leak*)) OR detrusor instability OR mh "Urinary Bladder, Neurogenic" OR (bladder AND (neurogen* or neurologic*)) OR mh "Urinary Incontinence, Urge" OR mh "Urinary Incontinence, Stress" OR ((urine OR urina* or bladder*) and urge*)) NOT ((mh Men NOT mh Women) OR mh "Pregnant Women"))
AND
(mirabegron OR Resiniferatoxin OR "Botulinum Toxins" OR botulinum OR botox OR estrogen* OR Antimuscarinics OR oxybutynin chloride OR trospium chloride OR darifenacin OR solifenacin succinate OR fesoterodine OR tolterodine OR propiverine OR Calcium Channel Blocker* OR nimodipine OR TRPV1 antagonists OR resiniferatoxin OR Tricyclic antidepressants OR imipramine OR Beta 3 adeno-receptor agonists OR mirabegron OR "Neuromuscular Agents" OR neuromuscular agents OR ((pelvic floor or bladder) AND (train* or exercise or physical therapy)) OR kegel OR "Physical Therapy" OR physiotherapy OR biofeedback OR electric* stimulation OR nerve stimulation OR “Transcutaneous Electric Nerve Stimulation" OR stoller OR vesical pacing OR interstim OR (fluid AND (therapy or manage*)) OR urge suppression OR ((behavior* or behaviour*) AND (therapy or modif* or treat*)) OR hypnosis OR hypnotherapy) OR “Drinking Behavior” OR ((alternative or complementary) AND (therapy or treatment)) OR diet OR “Quality of Life” OR biofeedback OR Vaginal cone* OR bladder support* OR impressa OR (Urethra* AND (Plug OR patch)) OR Magnetic stimulation OR Magnetic Field Therapy OR Urethral bulking OR ((transurethral or periurethral) AND injection*) OR Intravaginal electrical stimulation OR Magnetic stimulation OR Pessar* OR Posterior tibial nerve stimulation OR neuromodulation OR Coaptite OR Macroplastique implants OR Milnacipran OR Savella OR Trospium OR Sanctura OR Paroxetine OR Paxil OR Mirabegron OR Myrbetriq OR solifenacin succinate OR vesicare OR Amitriptyline OR Elavil OR Rimabotulinum toxin B OR Myobloc OR Fluoxetine OR Prozac OR Duloxetine OR

Cymbalta OR Citalopram OR Celexa OR Escitalopram OR Lexapro OR Levomilnacipran OR Fetzima OR AbobotulinumtoxinA OR Dysport OR oxybutynin chloride OR Ditropan OR Fluvoxamine OR Luvox CR OR Imipramine OR Tofranil OR Nortriptyline OR Pamelorl OR Clomipramine OR Anafranil OR IncobotulinumtoxinA OR Xeomin OR Doxepin OR Silenor OR Protriptyline OR Vivactil OR Trimipramine OR Surmontil OR Doxepin OR Silenor OR Sertraline OR Zoloft OR Tolterodine OR Detrol OR Desipramine OR Pertofrane OR Desipramine OR Norpramin OR Darifenacin OR Enablex OR Desvenlafaxine OR Pristiq OR Topical estrogen OR premarin OR synthetic conjugated estrogens)

ClinicalTrials.gov (6/13/17)
urinary incontinence OR overactive bladder OR enuresis OR nocturia OR detrusor instability

limit to adult and senior
limit to studies with female participants
limit first received date to 1/1/2011 to 12/31/2017

Search for retracted studies returned no matches to the list of included studies (1/10/18)

Appendix B. Excluded Studies

Table B-1. Excluded studies

PubMed or other ID	Authors	Title	Journal	Rejection Reason
22008247	A. G. Visco, L. Brubaker, H. E. Richter, I. Nygaard, M. F. Paraiso, S. A. Menefee, J. Schaffer, J. Wei, T. Chai, N. Janz, C. Spino and S. Meikle Journal Alternate Journal	Anticholinergic versus botulinum toxin A comparison trial for the treatment of bothersome urge urinary incontinence: ABC trial	nd	No primary data or no usable results
no PMID	Aaron, L. E., Morris, T. J., Jahshan, P., Reiz, J. L.	An evaluation of patient and physician satisfaction with controlled-release oxybutynin 15mg as a one-step daily dose in elderly and non-elderly patients with overactive bladder: Results of the STOP study	Current Medical Research and Opinion	<90% women with UI or % women with UI not specified
26135813	Abdelbary, A. M., El-Dessoukey, A. A., Massoud, A. M., Moussa, A. S., Zayed, A. S., Elsheikh, M. G., Ghoneima, W., Abdella, R., Yousef, M.	Combined Vaginal Pelvic Floor Electrical Stimulation (PFS) and Local Vaginal Estrogen for Treatment of Overactive Bladder (OAB) in Perimenopausal Females. Randomized Controlled Trial (RCT)	Urology	<90% women with UI or % women with UI not specified
CN-01168480	Abdelwahab, O, Sherif, H, Soliman, T, Elbarky, I, Eshazly, A	Efficacy of botulinum toxin type A 100 Units versus 200 units for treatment of refractory idiopathic overactive bladder	International braz j urol : official journal of the Brazilian Society of Urology	<90% women with UI or % women with UI not specified
CN-00891950	Abdool, Z, Thakar, R, Sultan, Ah, Oliver, Rs	Prospective evaluation of outcome of vaginal pessaries versus surgery in women with symptomatic pelvic organ prolapse	International urogynecology journal and pelvic floor dysfunction	Not comparative and no adverse events or N<100
21161179	Abdool, Z., Thakar, R., Sultan, A. H., Oliver, R. S.	Prospective evaluation of outcome of vaginal pessaries versus surgery in women with symptomatic pelvic organ prolapse	Int Urogynecol J	duplicate publication
27514371	Abrams, P., Kelleher, C., Staskin, D., Kay, R., Martan, A., Mincik, I., Newgreen, D., Ridder, A., Paireddy, A., van Maanen, R.	Combination treatment with mirabegron and solifenacin in patients with overactive bladder: exploratory responder analyses of efficacy and evaluation of patient-reported outcomes from a randomized, double-blind, factorial, dose-ranging, Phase II study (SYMPHONY)	World J Urol	<90% women with UI or % women with UI not specified
24612659	Abrams, P., Kelleher, C., Staskin, D., Rechberger, T., Kay, R., Martina, R., Newgreen, D., Paireddy, A., van Maanen, R., Ridder, A.	Combination treatment with mirabegron and solifenacin in patients with overactive bladder: efficacy and safety results from a randomised, double-blind, dose-ranging, phase 2 study (Symphony)	Eur Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
28792105	Abulseoud, A. Moussa, A. Abdelfattah, G. Ibrahim, I. Saba, E. Hassouna, M.	Transcutaneous posterior tibial nerve electrostimulation with low dose trospium chloride: Could it be used as a second line treatment of overactive bladder in females	Neurourol Urodyn	<90% women with UI or % women with UI not specified
104615426	Albers-Heitner, P. C., Lagro-Janssen, T. A., Joore, M. M., Berghmans, B. L., Nieman, F. F., Venema, P. P., Severens, J. J., Winkens, R. R.	Effectiveness of involving a nurse specialist for patients with urinary incontinence in primary care: results of a pragmatic multicentre randomised controlled trial	International Journal of Clinical Practice	Not intervention/comparison of interest
no PMID	Alloussi, S. H., Lang, C., Eichel, R., Al-Kaabneh, A., Seibold, J., Schwentner, C., Alloussi, S.	Videourodynamic changes of botulinum toxin A in patients with neurogenic bladder dysfunction (NBD) and idiopathic detrusor overactivity (IDO) refractory to drug treatment	World Journal of Urology	<90% women with UI or % women with UI not specified
21747594	Altaweel, W., Mokhtar, A., Rabah, D. M.	Prospective randomized trial of 100u vs 200u botox in the treatment of idiopathic overactive bladder	Urol Ann	<90% women with UI or % women with UI not specified
CN-01075438	Alves, Fk, Riccetto, C, Adami, Dbv, Marques, J, Pereira, Lc, Palma, P, Botelho, S	A pelvic floor muscle training program in postmenopausal women: A randomized controlled trial	Maturitas	<90% women with UI or % women with UI not specified
no PMID	Amundsen, C. L. Wilson, T. S. Wallace, D. D. Vasavada, S. P. Nguyen, J. N. Myers, D. L. Komesu, Y. M. Honeycutt, A. A. Harvie, H. S. Gregory, W. T. Chermansky, C.	Two-year outcomes of sacral neuromodulation vs. onabotulinumtoxina for refractory urgency urinary incontinence	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
CN-01290211	Amundsen, Cl, Richter, He, Menefee, Sa, Komesu, Ym, Arya, La, Gregory, Wt, Myers, Dl, Zyczynski, Hm, Vasavada, S, Nolen, Tl, Wallace, D, Meikle, Sf	Onabotulinumtoxin a vs sacral neuromodulation on refractory urgency urinary incontinence in women: a randomized clinical trial	JAMA - journal of the american medical association	duplicate publication
25586473	Andrade, A. D., Anam, R., Karanam, C., Downey, P., Ruiz, J. G.	An overactive bladder online self-management program with embedded avatars: a randomized controlled trial of efficacy	Urology	<90% women with UI or % women with UI not specified
no PMID	Andy, U. U., Arya, L. A., Smith, A. L., Propert, K. J., Bogner, H. R., Colavita, K., Harvie, H. S.	Is self-reported adherence associated with clinical outcomes in women treated with anticholinergic medication for overactive bladder?	Neurourology and Urodynamics	Not comparative and no adverse events or N<100
no PMID	Andy, U. U., Harvie, H. S., Arya, L. A.	Are baseline bowel symptoms associated with adherence to anticholinergic medication in women with urgency urinary incontinence (UUI)?	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
no PMID	Andy, U. U., Harvie, H. S., Smith, A. L., Propert, K. J., Bogner, H. R., Arya, L. A.	Validation of a self-administered instrument to measure adherence to anticholinergic drugs in women with overactive bladder	Neurourology and Urodynamics	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-01193313	anonymous	Comparison of the effectiveness of repeated injections of onabotulinum toxin A for refractory idiopathic detrusor overactivity: Analysis of an open label extension of a randomized trial (the RELAX study)	Neurourology and Urodynamics. (no pagination), 2016. Date of Publication: 2016.	<90% women with UI or % women with UI not specified
21638944	anonymous	Percutaneous tibial nerve stimulation for the treatment of voiding dysfunction	Technol Eval Cent Assess Program Exec Summ	No primary data or no usable results
no PMID	Arana, A., Varas-Lorenzo, C., McQuay, L. J., Ziemiecki, R., Bui, C. L., Gilsenan, A. W., Rothman, K. J., Jan Atsma, W., Appenteng, K., Franks, B., De Vogel, S., D'Silva, M., Margulis, A. V., Perez-Gutthann, S.	Do individual antimuscarinic drugs to treat overactive bladder have different cardiovascular risks? A UK CPRD cohort study	Pharmacoepidemiology and Drug Safety	Not peer reviewed publication
25225151	Arkalgud Rangaswamy, P., Sultana, A., Rahman, K., Nagapattinam, S.	Efficacy of Boswellia serrata L. and Cyperus scariosus L. plus pelvic floor muscle training in stress incontinence in women of reproductive age	Complement Ther Clin Pract	Not intervention/comparison of interest
25033919	Aydogmus, Y., Sunay, M., Arslan, H., Aydin, A., Adiloglu, A. K., Sahin, H.	Acupuncture versus solifenacin for treatment of overactive bladder and its correlation with urine nerve growth factor levels: a randomized, placebo-controlled clinical trial	Urol Int	<90% women with UI or % women with UI not specified
27080326	Azuri, J., Kafri, R., Ziv-Baran, T., Stav, K.	Outcomes of different protocols of pelvic floor physical therapy and anti-cholinergics in women with wet over-active bladder: A 4-year follow-up	Neurourol Urodyn	covered by 2011 review or secondary publication with no new results
no PMID	Bacsu, C. D. L., Cunningham, C., Christie, A., Zimmern, P. E.	Durability of collagen injection for stress urinary incontinence in women proven by transvaginal 3-dimensional ultrasound	Female Pelvic Medicine and Reconstructive Surgery	Not comparative and no adverse events or N<100
CN-00875265	Baessler, K	Randomised controlled trial comparing biofeedback training and specific bladder neck effective pelvic floor rehabilitation in stress urinary incontinent women - PREVENT (Trials registry number: DRKS00004218)	German Clinical Trials Register (DRKS) (http://www.drks.de/DRKS00004218)	No primary data or no usable results
25756594	Balachandran, A. A., Duckett, J. R.	The risk and severity of developing symptomatic palpitations when prescribed mirabegron for overactive bladder	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified
no PMID	Balci, B. K., Ugurlucan, F. G., Yalcin, O.	Is there a benefit of adding conservative treatment modalities on trospium chloride treatment in overactive bladder syndrome	Kuwait Medical Journal	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
116837133	Bali, Preeti, Mahalingam, Gomathi, Bala, Kanchan	Effectiveness of Kegal Exercise on Women with Urinary Incontinence	International Journal of Nursing Education	Not comparative and no adverse events or N<100
no PMID	Ballard, A. C., Richter, H. E.	Impact of obesity and weight loss on urinary and bowel incontinence symptoms in women	Sexuality, Reproduction and Menopause	No primary data or no usable results
no PMID	Basu, M., Balachandran, A., Duckett, J.	Is pretreatment cystometry important in predicting response to mirabegron in women with overactive bladder symptoms?	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
26445596	Batista, J. E., Kolbl, H., Herschorn, S., Rechberger, T., Cambronero, J., Halaska, M., Coppell, A., Kaper, M., Huang, M., Siddiqui, E.	The efficacy and safety of mirabegron compared with solifenacin in overactive bladder patients dissatisfied with previous antimuscarinic treatment due to lack of efficacy: results of a noninferiority, randomized, phase IIIb trial	Ther Adv Urol	<90% women with UI or % women with UI not specified
no PMID	Best, C., Diamond, P., Lovatsis, D.	A randomized controlled trial of the uresta continence device: Short term Uresta efficacy study (SURE STUDY)	Neurourology and Urodynamics	Not peer reviewed publication
23218404	Betschart, C., von Mandach, U., Seifert, B., Scheiner, D., Perucchini, D., Fink, D., Geissbuhler, V.	Randomized, double-blind placebo-controlled trial with Bryophyllum pinnatum versus placebo for the treatment of overactive bladder in postmenopausal women	Phytomedicine	Not intervention/comparison of interest
no pmid	Beuttenmüller, Leila, Cader, Samária Ali, Macena, Raimunda Hermelinda Maia, Araujo, Nazete dos Santos, Nunes, Érica Feio Caneiro, Dantas, Estélio Henrique Martin	Floor muscles contraction in women with stress urinary incontinence underwent to exercisesand electric stimulation therapy: a randomized study	Fisioterapia e Pesquisa	<90% women with UI or % women with UI not specified
no PMID	Beyar, N., Groutz, A.	Pelvic floor physical therapy for female stress urinary incontinence: Five years outcome	Physiotherapy (United Kingdom)	Not peer reviewed publication
no pmid	Bolinger, Rosemary	Comparing the effectiveness of pelvic floor muscle training and acupuncture for the treatment of urinary incontinence and the impact on health-related quality of life for non-homebound women >50 years of age: A secondary analysis	Dissertation	No primary data or no usable results
no PMID	Boone, T. B.	Managing the Refractory Idiopathic Overactive Bladder with OnabotulinumtoxinA: Phase 2 Trial	Current Bladder Dysfunction Reports	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
28731583	Booth, J. Connelly, L. Dickson, S. Duncan, F. Lawrence, M.	The effectiveness of transcutaneous tibial nerve stimulation (TTNS) for adults with overactive bladder syndrome: A systematic review	Neurourol Urodyn	No primary data or no usable results
23431210	Borello-France, D., Burgio, K. L., Goode, P. S., Ye, W., Weidner, A. C., Lukacz, E. S., Jelovsek, J. E., Bradley, C. S., Schaffer, J., Hsu, Y., Kenton, K., Spino, C.	Adherence to behavioral interventions for stress incontinence: rates, barriers, and predictors	Phys Ther	covered by 2011 review or secondary publication with no new results
28407338	Bray R, Cartwright R, Cardozo L, Hill S, Guan Z, Khullar V.	Tolterodine ER reduced increased bladder wall thickness in women with overactive bladder. A randomized, placebo-controlled, double-blind, parallel group study.	Neurourol Urodyn	No primary data or no usable results
no pmid	Pinheiro B, Franco G, Feitosa S, Yuaso D, Castro R, Girão M	Physiotherapy for perineal consciousness: a comparison between pelvic floor muscle training alone and with biofeedback	Fisioterapia em Movimento	<90% women with UI or % women with UI not specified
28807645	Breyer, B. N. Creasman, J. M. Richter, H. E. Myers, D. Burgio, K. L. Wing, R. R. West, D. S. Kusek, J. W. Subak, L. L.	A Behavioral Weight Loss Program and Nonurinary Incontinence Lower Urinary Tract Symptoms in Overweight and Obese Women with Urinary Incontinence: A Secondary Data Analysis of PRIDE	J Urol	No primary data or no usable results
no PMID	Brook, G., Tessema, A. B.	Obstetric fistula: The use of urethral plugs for the management of persistent urinary incontinence following successful repair	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100
22273813	Brubaker, L., Gousse, A., Sand, P., Thompson, C., Patel, V., Zhou, J., Jenkins, B., Sievert, K. D.	Treatment satisfaction and goal attainment with onabotulinumtoxinA in patients with incontinence due to idiopathic OAB	International Urogynecology Journal	covered by 2011 review or secondary publication with no new results
21181960	Brubaker, L., Lukacz, E. S., Burgio, K., Zimmern, P., Norton, P., Leng, W., Johnson, H., Kraus, S., Stoddard, A.	Mixed incontinence: comparing definitions in non-surgical patients	Neurourol Urodyn	covered by 2011 review or secondary publication with no new results
24515544	Brubaker, L., Nager, C. W., Richter, H. E., Visco, A., Nygaard, I., Barber, M. D., Schaffer, J., Meikle, S., Wallace, D., Shibata, N., Wolfe, A. J.	Urinary bacteria in adult women with urgency urinary incontinence	Int Urogynecol J	covered by 2011 review or secondary publication with no new results
no PMID	Brucker, B. Radomski, S. Rovner, E. Drake, M. Everaert, K. Chapple, C. Ginsberg, D. Aboushwareb, T. Chang, C. T. Dmochowski, R. Nitti, V.	Low incidence of clean intermittent catheterization with onabotulinumtoxinA in diverse age groups of overactive bladder patients with substantial improvements in treatment response	Canadian Urological Association Journal	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
28370541	Bunniran, S., Davis, C., Kristy, R., Ng, D., Schermer, C. R., Uribe, C., Suehs, B. T.	A prospective study of elderly initiating mirabegron versus antimuscarinics: Patient reported outcomes from the Overactive Bladder Satisfaction Scales and other instruments	Neurourol Urodyn	<90% women with UI or % women with UI not specified
CN-01015662	Burmann, R	Imipramine versus conservative treatment in women with Overactive Bladder Syndrome	http://www.ensaiosclinicos.gov.br/rg/RBR-64wczh/	<90% women with UI or % women with UI not specified
24135289	But, I., Oreskovic, S., Bratus, D., Sprem-Goldstajn, M., Hlebic, G.	Patient-reported outcome of solifenacin treatment among women experiencing urinary urgency and urgency incontinence	Int J Gynaecol Obstet	Not comparative and no adverse events or N<100
21293089	Capo, J. P., Lucente, V., Forero-Schwanhaeuser, S., He, W.	Efficacy and tolerability of solifenacin in patients aged >/ = 65 years with overactive bladder: post-hoc analysis of 2 open-label studies	Postgrad Med	<90% women with UI or % women with UI not specified
24057079	Capobianco, G., Wenger, J. M., Meloni, G. B., Dessole, M., Cherchi, P. L., Dessole, S.	Triple therapy with Lactobacilli acidophili, estriol plus pelvic floor rehabilitation for symptoms of urogenital aging in postmenopausal women	Arch Gynecol Obstet	Not intervention/comparison of interest
CN-00986323	Cardozo, L, Kaplan, S, Herschorn, S, Grenabo, L, Carlsson, M, Arumi, D, Crook, Tj, Whelan, L, Ntanios, F	Erratum: A randomised controlled trial of fesoterodine in subjects with overactive bladder and suboptimal response to tolterodine extended release: Results from the after study (European Urology (2013) 2012 (e740))	European urology	<90% women with UI or % women with UI not specified
23294801	Cardozo, L., Amarenco, G., Pushkar, D., Mikulas, J., Drogendijk, T., Wright, M., Compion, G.	Severity of overactive bladder symptoms and response to dose escalation in a randomized, double-blind trial of solifenacin (SUNRISE)	BJU Int	<90% women with UI or % women with UI not specified
no PMID	Cardozo, L., Hall, T., Ryan, J., Bitoun, C. E., Kausar, I., Darekar, A., Wagg, A.	Safety and efficacy of flexible-dose fesoterodine in British subjects with overactive bladder: Insights into factors associated with dose escalation	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
25087210	Carrion Perez, F., Rodriguez Moreno, M. S., Carnerero Cordoba, L., Romero Garrido, M. C., Quintana Tirado, L., Garcia Montes, I.	[Telerehabilitation to treat stress urinary incontinence. Pilot study]	Med Clin (Barc)	No primary data or no usable results
20626389	Cartwright, R., Srikrishna, S., Cardozo, L., Robinson, D.	Patient-selected goals in overactive bladder: A placebo controlled randomized double-blind trial of transdermal oxybutynin for the treatment of urgency and urge incontinence	BJU International	covered by 2011 review or secondary publication with no new results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Cartwright, R., Srikrishna, S., Cardozo, L., Robinson, D.	Validity and reliability of the patient's perception of intensity of urgency scale in overactive bladder	BJU International	covered by 2011 review or secondary publication with no new results
25688038	Castro-Diaz, D., Chapple, C. R., Hakimi, Z., Blauwet, M. B., Delgado-Herrera, L., Lau, W., Mujais, S.	The effect of mirabegron on patient-related outcomes in patients with overactive bladder: the results of post hoc correlation and responder analyses using pooled data from three randomized Phase III trials	Qual Life Res	<90% women with UI or % women with UI not specified
22834707	Castro-Diaz, D., Miranda, P., Sanchez-Ballester, F., Lizarraga, I., Arumi, D., Rejas, J.	Dose and aging effect on patients reported treatment benefit switching from the first overactive bladder therapy with tolterodine ER to fesoterodine: post-hoc analysis from an observational and retrospective study	BMC Urol	<90% women with UI or % women with UI not specified
no PMID	Cattoni, E., Serati, M., Braga, A., Sorice, P., Salvatore, S., Bolis, P.	Efficacyof solifenacin forthetreatment of symptomatic detrusor overactivity in obesewomen	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
109800044	Celiker Tosun, O., Kaya Mutlu, E., Ergenoglu, Am, Yeniel, Ao, Tosun, G., Malkoc, M., Askar, N., Itil, Im	Does pelvic floor muscle training abolish symptoms of urinary incontinence? A randomized controlled trial	Clinical Rehabilitation	duplicate publication
25142280	Celiker Tosun, O., Mutlu, E. Kaya, Ergenoglu, A. M., Yeniel, A. O., Tosun, G., Malkoc, M., Askar, N., Itil, I. M.	Does pelvic floor muscle training abolish symptoms of urinary incontinence? A randomized controlled trial	Clinical Rehabilitation	No primary data or no usable results
25142280	Celiker Tosun, O., Mutlu, E. Kaya, Ergenoglu, A. M., Yeniel, A. O., Tosun, G., Malkoc, M., Askar, N., Itil, I. M.	Does pelvic floor muscle training abolish symptoms of urinary incontinence? A randomized controlled trial	Clinical Rehabilitation	No primary data or no usable results
no PMID	Chai, T. Rovner, E. Jacobs, S. Christ, G. Andersson, K. Efros, M. Nitti, V. Melman, A.	Results of a phase 1B multicenter study evaluating the safety and potential activity of two escalating doses of hMaxi-K gene transfer by direct injection into the bladder wall in female participants with idiopathic (non-neurogenic) overactive bladder syndrome and detrusor overactivity: Double blind, imbalanced placebo controlled design within 2 sequential active treatment groups	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Chancellor, M. B., Migliaccio-Walle, K., Bramley, T. J., Chaudhari, S. L., Corbell, C., Globe, D.	Long-term patterns of use and treatment ure with anticholinergic agents for overactive bladder	Clinical Therapeutics	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-01087488	Chapple, C, Khullar, V, Nitti, Vw, Frankel, J, Herschorn, S, Kaper, M, Blauwet, Mb, Siddiqui, E	Efficacy of the beta3-adrenoceptor agonist mirabegron for the treatment of overactive bladder by severity of incontinence at baseline: A post hoc analysis of pooled data from three randomised phase 3 trials	European urology	<90% women with UI or % women with UI not specified
28196724	Chapple, C. R. Nazir, J. Hakimi, Z. Bowditch, S. Fatoye, F. Guelfucci, F. Khemiri, A. Siddiqui, E. Wagg, A.	Persistence and Adherence with Mirabegron versus Antimuscarinic Agents in Patients with Overactive Bladder: A Retrospective Observational Study in UK Clinical Practice	Eur Urol	<90% women with UI or % women with UI not specified
24018240	Chapple, C. R., Abrams, P., Andersson, K. E., Radziszewski, P., Masuda, T., Small, M., Kuwayama, T., Deacon, S.	Phase II study on the efficacy and safety of the EP1 receptor antagonist ONO-8539 for nonneurogenic overactive bladder syndrome	J Urol	<90% women with UI or % women with UI not specified
23424164	Chapple, C. R., Amarenco, G., Lopez Aramburu, M. A., Everaert, K., Liehne, J., Lucas, M., Vik, V., Ridder, A., Snijder, R., Yamaguchi, O.	A proof-of-concept study: mirabegron, a new therapy for overactive bladder	Neurourol Urodyn	<90% women with UI or % women with UI not specified
23471546	Chapple, C. R., Dvorak, V., Radziszewski, P., Van Kerrebroeck, P., Wyndaele, J. J., Bosman, B., Boerrigter, P., Drogendijk, T., Ridder, A., Van Der Putten-Slob, I., Yamaguchi, O.	A phase II dose-ranging study of mirabegron in patients with overactive bladder	Int Urogynecol J	<90% women with UI or % women with UI not specified
23195283	Chapple, C. R., Kaplan, S. A., Mitcheson, D., Klecka, J., Cummings, J., Drogendijk, T., Dorrepaal, C., Martin, N.	Randomized double-blind, active-controlled phase 3 study to assess 12-month safety and efficacy of mirabegron, a beta(3)-adrenoceptor agonist, in overactive bladder	Eur Urol	<90% women with UI or % women with UI not specified
24458878	Chapple, C. R., Nitti, V. W., Khullar, V., Wyndaele, J. J., Herschorn, S., van Kerrebroeck, P., Blauwet, M. B., Siddiqui, E.	Onset of action of the beta3-adrenoceptor agonist, mirabegron, in Phase II and III clinical trials in patients with overactive bladder	World J Urol	<90% women with UI or % women with UI not specified
25092537	Chapple, C., Khullar, V., Nitti, V. W., Frankel, J., Herschorn, S., Kaper, M., Blauwet, M. B. Siddiqui, E.	Efficacy of the beta3-adrenoceptor agonist mirabegron for the treatment of overactive bladder by severity of incontinence at baseline: a post hoc analysis of pooled data from three randomised phase 3 trials	Eur Urol	duplicate publication
no PMID	Chapple, C., Schneider, T., Haab, F., Sun, F., Whelan, L., Scholfield, D., Dragon, E., Mangan, E.	Superiority of fesoterodine 8mg versus fesoterodine 4 mg in reducing urgency urinary incontinence episodes in subjects with overactive bladder: Results: Of the randomized, double-blind, placebo-controlled eight trial	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Chapple, C., Schneider, T., Haab, F., Sun, F., Whelan, L., Scholfield, D., Dragon, E., Mangan, E.	Superiority of fesoterodine 8 mg vs 4 mg in reducing urgency urinary incontinence episodes in patients with overactive bladder: Results of the randomised, double-blind, placebo-controlled EIGHT trial	BJU International	Not peer reviewed publication
23608668	Chapple, C., Sievert, K. D., MacDiarmid, S., Khullar, V., Radziszewski, P., Nardo, C., Thompson, C., Zhou, J., Haag-Molkenteller, C.	OnabotulinumtoxinA 100 U significantly improves all idiopathic overactive bladder symptoms and quality of life in patients with overactive bladder and urinary incontinence: a randomised, double-blind, placebo-controlled trial	Eur Urol	<90% women with UI or % women with UI not specified
21354040	Chartier-Kastler, E., Ballanger, P., Belas, M., Biserte, J., Corbel, L., Game, X., Grise, P., Karsenty, G., Le Normand, L., Mauroy, B., Pasquale, J., Ruffion, A., Rousseau, T., Saussine, C., Suberville, M., Tollon, C.	[Sacral neuromodulation with InterStim system: Results from the French national register]	Prog Urol	<90% women with UI or % women with UI not specified
24167769	Chen, C. H., Sato, R. L., Matsuura, G. H., Wei, D. C., Chen, J. J.	Treatment of overactive bladder syndrome with urethral calibration in women	Hawaii J Med Public Health	<90% women with UI or % women with UI not specified
no PMID	Chen, Y. C., Kuo, H. C.	Difficult Urination Does Not Affect the Successful Outcome after 100U OnabotulinumtoxinA Intravesical Injection in Patients with Idiopathic Detrusor Overactivity	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
22483718	Chene, G., Mansoor, A., Jacquetin, B., Mellier, G., Douvier, S., Sergent, F., Aubard, Y., Seffert, P.	[Prospective evaluation of an intravaginal electrical stimulation in the treatment of women with pure genuine stress urinary incontinence]	Gynecol Obstet Fertil	Not comparative and no adverse events or N<100
23830965	Chene, G., Mansoor, A., Jacquetin, B., Mellier, G., Douvier, S., Sergent, F., Aubard, Y., Seffert, P.	Female urinary incontinence and intravaginal electrical stimulation: an observational prospective study	Eur J Obstet Gynecol Reprod Biol	Not comparative and no adverse events or N<100
CN-01409491	Chermansky, C Wilson, T Wallace, D Vasavada, S Nguyen, J Myers, D Komesu, Y Honeycutt, E Harvie, H Gregory, Wt Amundsen, C	Two-year outcomes of sacral neuromodulation versus onabotulinumtoxina for refractory urgency urinary incontinence	Neurourology and urodynamics. Conference: 47th annual meeting of the international continence society, ICS 2017. Italy	Not peer reviewed publication
no PMID	Chin, H. Y., Lin, K. C., Chiang, C. H., Wang, C. J.	Combination of baclofen and antimuscarinics to reduce voiding difficulty in treating women with overactive bladders	Clinical and Experimental Obstetrics and Gynecology	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no pmid	Cho, Ms, Kang, Hy	A Comparative Study on the Effects on Urinary Incontinence between Pelvic Floor Muscle Exercise and Magnetic Stimulation Therapy	J korean acad community health nurs	covered by 2011 review or secondary publication with no new results
25558419	Cho, S. Y., Lee, K. S., Kim, J. H., Seo, J. T., Choo, M. S., Kim, J. C., Choi, J. B., Song, M., Chun, J. Y., Oh, S. J.	Effect of combined systematized behavioral modification education program with desmopressin in patients with nocturia: a prospective, multicenter, randomized, and parallel study	Int Neurourol J	<90% women with UI or % women with UI not specified
no PMID	Cho, Y., Joo, K., Park, H., Kwon, C.	The efficacy of tolterodine and tamsulosin combination therapy in female OAB patients	International Urogynecology Journal and Pelvic Floor Dysfunction	No primary data or no usable results
no PMID	Chohan, N., Hilton, P., Brown, K., Dixon, L.	Efficacy and duration of response to botulinum neurotoxin A (onabotulinumA) as a treatment for detrusor overactivity in women	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
no PMID	Choi, W. S., Song, S. H., Ha, S. B., Cho, S. Y., Lee, S. B., Jeong, H., Son, H.	Early clinical outcome of fesoterodine 4 Mg treatment on 304 patients with overactive bladder	Urology	Not peer reviewed publication
27135856	Chu, C. M., Harvie, H. S., Smith, A. L., Arya, L. A.,,y, U. U.	The Impact of Treatment of Overactive Bladder on Physical Activity Limitations	Journal of Women's Health	Not comparative and no adverse events or N<100
no PMID	Chu, C. M., Harvie, H. S.,,y, U. U., Arya, L.	Impact of treatment of overactive bladder with anticholinergic medications on physical activity	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
28150436	Chua, M. E., See, M. C. th, Esmena, E. B., Balingit, J. C., Morales, M. L., Jr.	Efficacy and Safety of Gabapentin in Comparison to Solifenacin Succinate in Adult Overactive Bladder Treatment	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
25046622	Chuang, Y. C., Kaufmann, J. H., Chancellor, D. D., Chancellor, M. B., Kuo, H. C.	Bladder instillation of liposome encapsulated onabotulinumtoxina improves overactive bladder symptoms: a prospective, multicenter, double-blind, randomized trial	J Urol	<90% women with UI or % women with UI not specified
no PMID	Chung, S. D., Weng, S. S., Huang, C. Y., Lin, H. C., Kao, L. T.	Antimuscarinic Use in Females With Overactive Bladder Syndrome Increases the Risk of Depressive Disorder: A 3-Year Follow-up Study	Journal of Clinical Pharmacology	<90% women with UI or % women with UI not specified
no PMID	Collins, L., Sathiananthamoorthy, S., Fader, M., Malone-Lee, J.	Intermittent catheterisation after botulinum toxin injections: the time to reassess our practice.	International Urogynecology Journal	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
21428726	Corcos, J., Angulo, J. C., Garely, A. D., Carlsson, M., Gong, J., Guan, Z.	Effect of fesoterodine 4 mg on bladder diary and patient-reported outcomes during the first week of treatment in subjects with overactive bladder	Curr Med Res Opin	covered by 2011 review or secondary publication with no new results
no PMID	Correia, G. N., Pereira, V. S., Bastos, A. M., Hirakawa, H. S., Driusso, P.	Surface and intravaginal electrical stimulation versus no treatment in severity of stress urinary incontinence: Randomized controlled study	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Coyne, K. S., Margolis, M. K., Vats, V., Gelhorn, H., Nitti, V.	Psychometric evaluation of brief patient-reported outcome measures of overactive bladder: The ICIQ-SF, SAC, SATS, SATT, and TBS	Health Outcomes Research in Medicine	<90% women with UI or % women with UI not specified
21235700	Crosby, R. D., Mathias, S. D., Marshall, T. S.	Relationships between symptoms, symptom bother, and health-related quality of life in patients with overactive bladder taking solifenacin or placebo in the VIBRANT study	Int J Clin Pract	<90% women with UI or % women with UI not specified
no PMID	Dasen, S. E., Reape, K. Z., Hait, H. I.	Effectiveness of two doses of a monthly oxybutynin vaginal ring in menopausal women with symptoms of overactive bladder	Menopause	Not peer reviewed publication
no PMID	De Bruin, M.	A new ehealth service for women with urinary incontinence: An online diagnostic expert program combined with a consult at home by a continence nurse	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	De Sa Dantas Bezerra, D. Toledo, L. G. M. Filho, J. E. V. Auge, A. P. F.	A prospective randomized clinical trial comparing two doses of abobotulinumtoxina for idiophatic overactive bladder	Journal of Urology	Not peer reviewed publication
28953572	de Vries, A. M. Wadhwa, H. Huang, J. Farag, F. Heesakkers, Jpfa Kocjancic, E.	Complications of Urethral Bulking Agents for Stress Urinary Incontinence: An Extensive Review Including Case Reports	Female Pelvic Med Reconstr Surg	No primary data or no usable results
no PMID	Dehinbo, T. B. T., Ramphal, S, Moodley, J.	A clinical audit of female urinary incontinence at a urogynaecology clinic of a tertiary hospital in Durban, South Africa	South African Journal of Obstetrics and Gynaecology	Not intervention/comparison of interest
no PMID	Dekker, J. H., Visser, E., Vermeulen, K. M., Messelink, E. J., Schram, A. J., Kollen, B. J., Berger, M., De Bock, G. H.	Effects and cost-effectiveness of protocolized assessment and evidence-based treatment of urinary incontinence: The urinary incontinence in older women trial (URINO)	Neurourology and Urodynamics	Not peer reviewed publication
28687483	Del Rio-Gonzalez, S. Aragon, I. M. Castillo, E. Milla-Espana, F. Galacho, A. Machuca, J. Lara, M. F. Herrera-Imbroda, B.	Percutaneous Tibial Nerve Stimulation Therapy for Overactive Bladder Syndrome: Clinical Effectiveness, Urodynamic, and Durability Evaluation	Urology	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
118811284	Del Signore, Amanda	Pelvic Floor Muscle Exercise for UI in Older Women With Cognitive Impairment	Annals of Long Term Care	No primary data or no usable results
CN-01258039	Dell'Atti, L	Efficacy of Tadalafil once daily versus Fesoterodine in the treatment of overactive bladder in older patients	European review for medical and pharmacological sciences	<90% women with UI or % women with UI not specified
no PMID	Demirbas, A., Sarici, H., Kilinc, M. F., Telli, O., Ozgur, B. C., Doluoglu, O. G., Bozkurt, S.	The Relationship between Acidic Urinary pH and Overactive Bladder; Alkalization of Urine Improves the Symptoms of Overactive Bladder	Urologia Internationalis	Not comparative and no adverse events or N<100
no PMID	Denys, P., Le Normand, L., Ghout, I., Costa, P., Chartier-Kastler, E., Grise, P., Hermieu, J. F., Amarenco, G., Karsenty, G., Saussine, C., Barbot, F.	Efficacy and safety of low doses of onabotulinumtoxina for the treatment of refractory idiopathic overactive bladder: A multicentre, double-blind, randomised, placebo-controlled dose-ranging study	European Urology	<90% women with UI or % women with UI not specified
no PMID	Ding, J., Chen, C., Song, X. C., Zhang, L., Deng, M., Zhu, L.	Changes in Prolapse and Urinary Symptoms after Successful Fitting of a Ring Pessary with Support in Women with Advanced Pelvic Organ Prolapse: A Prospective Study	Urology	Not comparative and no adverse events or N<100
20952013	Dmochowski R, Chapple C, Nitti VW, Chancellor M, Everaert K, Thompson C, Daniell G, Zhou J, Haag-Molkenteller C.	Efficacy and safety of onabotulinumtoxinA for idiopathic overactive bladder: a double-blind, placebo controlled, randomized, dose ranging trial.	J. Urol	covered by 2011 review or secondary publication with no new results
no PMID	Dmochowski, R., Duchin, K., Tremblay, T., Paborji, M., Flugel, R.	Tolenix (THVD-201), a novel combination of muscarinic agonist (tolterodine) and muscarinic agonist (pilocarpine), is efficacious in OAB with less dry mouth compared to tolterodine alone	European Urology, Supplements	Not peer reviewed publication
CN-01016096	Dmochowski, Rr, Peters, Km, Morrow, Jd, Guan, Z, Gong, J, Sun, F	Randomized, double-blind, placebo-controlled trial of flexible-dose fesoterodine in subjects with overactive bladder	Urology	<90% women with UI or % women with UI not specified
CN-00894238	Dmochowski, Rr, Peters, Km, Morrow, Jd, Guan, Z, Gong, J, Sun, F, Siami, P, Staskin, Dr	Randomized, double-blind, placebo-controlled trial of flexible-dose fesoterodine in subjects with overactive bladder	Journal of urology	duplicate publication
104546062	Donahoe-Fillmore, Betsy, Chorny, Wendy, Brahler, C. Jayne, Ingley, Allison, Kennedy, Jennifer, Osterfeld, Valerie	A comparison of two pelvic floor muscle training programs in females with stress urinary incontinence: a pilot study	Journal of Applied Research	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
21564444	Dowson, C., Sahai, A., Watkins, J., Dasgupta, P., Khan, M. S.	The safety and efficacy of botulinum toxin-A in the management of bladder oversensitivity: a randomised double-blind placebo-controlled trial	Int J Clin Pract	<90% women with UI or % women with UI not specified
28670786	Drake, M. J. Nitti, V. W. Ginsberg, D. A. Brucker, B. M. Hepp, Z. McCool, R. Glanville, J. M. Fleetwood, K. James, D. Chapple, C. R.	Comparative assessment of the efficacy of onabotulinumtoxinA and oral therapies (anticholinergics and mirabegron) for overactive bladder: a systematic review and network meta-analysis	BJU Int	No primary data or no usable results
26965560	Drake, M. J., Chapple, C., Esen, A. A., Athanasiou, S., Cambronero, J., Mitcheson, D., Herschorn, S., Saleem, T., Huang, M., Siddiqui, E., Stolzel, M., Herholdt, C., MacDiarmid, S.	Efficacy and safety of mirabegron add-on therapy to solifenacin in older patient populations with overactive bladder" (BESIDE).	Eur Urol	<90% women with UI or % women with UI not specified
28419650	Drake, M. J., MacDiarmid, S., Chapple, C. R., Esen, A., Athanasiou, S., Cambronero Santos, J., Mitcheson, D., Herschorn, S., Siddiqui, E., Huang, M., Stoelzel, M.	Cardiovascular safety in refractory incontinent patients with overactive bladder receiving add-on mirabegron therapy to solifenacin (BESIDE)	Int J Clin Pract	<90% women with UI or % women with UI not specified
no PMID	Drake, M., MacDiarmid, S., Al-Shukri, S., Barkin, J., Fianu-Jonasson, A., Grise, P., Herschorn, S., Huang, M., Stölzel, M., Hemsted, C., Siddiqui, E.	Post-Void Residual (PVR) volume and urinary retention assessments in a randomized, double-blind, phase IIIb trial of mirabegron add-on treatment in incontinent overactive bladder (OAB) patients with an inadequate response to 4-week solifenacin monotherapy (BESIDE)	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
no PMID	Drug company	Myrbetriq	FDA	<90% women with UI or % women with UI not specified
no PMID	Drug company	Interstim	FDA	<90% women with UI or % women with UI not specified
no PMID	Drug company	Macroplastique	FDA	<90% women with UI or % women with UI not specified
no PMID	Drug company	Botox	FDA	<90% women with UI or % women with UI not specified
no PMID	Drug company	Coaptite	FDA	<90% women with UI or % women with UI not specified
no PMID	Drug company	Oxytrol	FDA	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00875262	Drug, company	A multicenter, randomized, double-blind, parallel group, phase II, forced dose titration study to investigate the efficacy and safety of 400 mg and 600 mg flupirtine (ELB245) given once daily for 12 weeks (8 + 4 weeks) versus placebo and versus 4 mg tolterodine given once daily in patients with incontinent overactive bladder (OAB) (Trials registry number: EUCTR2006-004854-26-SE)	EU Clinical Trials Register (EUCTR) (https://www.clinicaltrialsregister.eu)	No primary data or no usable results
CN-00873020	Drug, company	A phase IIB randomised, placebo- and active comparator (tolterodine)-controled, 2-part clinical study of the efficacy and safety of MK-4618 in patients with overactive bladder (Trials registry number: UKCRN10391)	Trial Registry	Not peer reviewed publication
22907761	DuBeau, C. E., Morrow, J. D., Kraus, S. R., Creanga, D., Bavendam, T.	Efficacy and tolerability of fesoterodine versus tolterodine in older and younger subjects with overactive bladder: a post hoc, pooled analysis from two placebo-controlled trials	Neurourol Urodyn	<90% women with UI or % women with UI not specified
CN-00959622	Dubeau, Ce, Kraus, Sr, Griebling, Tl, Newman, Dk, Wyman, Jf, Johnson, Tm, Ouslander, Jg, Sun, F, Gong, J, Bavendam, T	Effect of fesoterodine in vulnerable elderly subjects with urgency incontinence: a double-blind, placebo controlled trial	The Journal of urology	<90% women with UI or % women with UI not specified
26803838	Duckett, J., Balachandran, A.	Tolerability and persistence in a large, prospective case series of women prescribed mirabegron	Int Urogynecol J	<90% women with UI or % women with UI not specified
23554139	Dumoulin, C., Martin, C., Elliott, V., Bourbonnais, D., Morin, M., Lemieux, M. C., Gauthier, R.	Randomized controlled trial of physiotherapy for postpartum stress incontinence: 7-year follow-up	Neurourology and Urodynamics	covered by 2011 review or secondary publication with no new results
no PMID	Dumoulin, C., Sran, M., Lieblich, P., Wilson, P.	Physiotherapy significantly reduces leakage in posenopausal women with osteoporosis and urinary incontinence: Result of a parallel randomised controlled trial	Neurourology and Urodynamics	Not peer reviewed publication
2011-99240-140	Dusi, Jodi	Assessing physical therapy outcomes for women with urinary incontinence		duplicate publication
108144171	Dusi, Jodi, Borello France, Diane, George, Susan, Phelps, Amy, Somers, David	Assessing Physical Therapy Outcomes for Women With Urinary Incontinence	Journal of Women's Health Physical Therapy	Not comparative and no adverse events or N<100
21563210	Dyer, K. Y., Xu, Y., Brubaker, L., Nygaard, I., Markland, A., Rahn, D., Chai, T. C., Stoddard, A., Lukacz, E.	Minimum important difference for validated instruments in women with urge incontinence	Neurourol Urodyn	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
26945271	Ellington, D. R., Szychowski, J. M., Malek, J. M., Gerten, K. A., Burgio, K. L., Richter, H. E.	Combined Tolterodine and Vaginal Estradiol Cream for Overactive Bladder Symptoms After Randomized Single-Therapy Treatment	Female Pelvic Med Reconstr Surg	<90% women with UI or % women with UI not specified
no PMID	Elliott, C. S., Comiter, C. V.	The effect of angiotensin inhibition on urinary incontinence: Data from the National Health and Nutrition Examination Survey (2001-2008)	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
22943933	Eltink, C., Lee, J., Schaddelee, M., Zhang, W., Kerbusch, V., Meijer, J., van Marle, S., Grunenberg, N., Kowalski, D., Drogendijk, T., Moy, S., Iitsuka, H., van Gelderen, M., Matsushima, H., Sawamoto, T.	Single dose pharmacokinetics and absolute bioavailability of mirabegron, a beta(3)-adrenoceptor agonist for treatment of overactive bladder	Int J Clin Pharmacol Ther	<90% women with UI or % women with UI not specified
27163683	Engberg, S., Sereika, S. M.	Effectiveness of Pelvic Floor Muscle Training for Urinary Incontinence: Comparison Within and Between Nonhomebound and Homebound Older Adults	J Wound Ostomy Continence Nurs	<90% women with UI or % women with UI not specified
26446328	Ercan, O., Kostu, B., Bakacak, M., Aytac-Tohma, Y., Coskun, B., Avci, F., Efe, E.	Comparison of solifenacin and fesoterodine in treatment of overactive bladder	Saudi Med J	<90% women with UI or % women with UI not specified
25555041	Esin, E., Ergen, A., Cankurtaran, M., Yavuz, B. B., Halil, M., Ulger, Z., Yesil, Y., Kuyumcu, M. E., Ozcan, M., Cankurtaran, E., Ariogul, S.	Influence of antimuscarinic therapy on cognitive functions and quality of life in geriatric patients treated for overactive bladder	Aging Ment Health	<90% women with UI or % women with UI not specified
26391359	Everaert, K., Gruenenfelder, J., Schulte-Baukloh, H., Egerdie, R. B., Khalaf, K., Joshi, M., Ni, Q., Sussman, D.	Impact of onabotulinumtoxinA on quality of life and practical aspects of daily living: A pooled analysis of two randomized controlled trials	Int J Urol	<90% women with UI or % women with UI not specified
no PMID	Everaert, K., Gruenenfelder, J., Schulte-Baukloh, H., Guard, S., Zheng, Y., Sussman, D.	OnabotulinumtoxinA demonstrates similar improvements in urinary incontinence and quality of life regardless of the use of clean intermittent catheterisation or the presence of urinary tract infection in patients with overactive bladder	Neurourology and Urodynamics	Not peer reviewed publication
104175468	Fan, Hiu Lan, Chan, Symphorosa Shing Chee, Law, Tracy Sze Man, Cheung, Rachel Yau Kar, Chung, Tony Kwok Hung	Pelvic floor muscle training improves quality of life of women with urinary incontinence: a prospective study	Australian & New Zealand Journal of Obstetrics & Gynaecology	Not comparative and no adverse events or N<100
28192077	Faris, A. E., Gill, B. C., Pizarro-Berdichevsky, J., Dielubanza, E., Clifton, M. M., Okafor, H., Goldman, H. B., Moore, C. K., Rackley, R. R., Vasavada, S. P.	Impact of Age and Comorbidities on Utilization of Sacral Neuromodulation	J Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
15951736	Finazzi Agrò, Campagna A, Sciobica F, Petta F, Germani S, Zuccalà A, Miano R	Posterior tibial nerve stimulation: is the once-a-week protocol the best option?	Minerva urologica e nefrologica [Italian journal of urology and nephrology]	covered by 2011 review or secondary publication with no new results
23288261	Fitz, F. F., Resende, A. P., Stupp, L., Costa, T. F., Sartori, M. G., Girao, M. J., Castro, R. A.	[Effect the adding of biofeedback to the training of the pelvic floor muscles to treatment of stress urinary incontinence]	Rev Bras Ginecol Obstet	No primary data or no usable results
no PMID	Flugel, R., Paborji, M., Duchin, K., Tremblay, T., Dmochowski, R., Staskin, D.	Dose escalation of a muscarinic antagonist with THVD-201, a novel combination drug product containing tolterodine and pilocarpine (a muscarinic agonist and salivary stimulant)	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Foley, S. Freeman, R. Rosa, J. Vicente, E. Huang, M. Stari, A. Bowditch, S. Choudhury, N.	Assessing persistence in patients with overactive bladder prescribed mirabegron in routine clinical practice: Subanalysis of a pan-european non-interventional study	Neurourology and Urodynamics	Not peer reviewed publication
22464310	Fowler, Cj, Auerbach, S, Ginsberg, D, Hale, D, Radziszewski, P, Rechberger, T, Patel, Vd, Zhou, J, Thompson, C, Kowalski, Jw	OnabotulinumtoxinA improves health-related quality of life in patients with urinary incontinence due to idiopathic overactive bladder: a 36-week, double-blind, placebo-controlled, randomized, dose-ranging trial	European urology	covered by 2011 review or secondary publication with no new results
no pmid	Franco, Mm, Souza, Fo, Vasconcelos, Ec, Freitas, Mm, Ferreira, Ch	[Evaluation of quality of life and loss urine of women with overactive bladder treated with intravaginal or tibial nerve electro stimulation]	Fisioterapia e Pesquisa	<90% women with UI or % women with UI not specified
CN-01409591	Fritel, X Heuvel, E Wagg, A Lavoie, M Gall, A Ragot, S Tannenbaum, C	Continence across continents to upend stigma and dependency (CACTUSD): preliminary results of an international randomized controlled trial of a continence promotion intervention	Neurourology and urodynamics. Conference: 47th annual meeting of the international continence society, ICS 2017. Italy	Not peer reviewed publication
CN-00912596	Fukuda, T, Yamanishi, T, Uchiyama, T, Kamai, T	Randomized, Single-Blind, Parallel Study of the Effectiveness and Safety of Solifenacin versus Propiverine in the Treatment of Overactive Bladder	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Fuse, M., Sakata, K., Kondo, Y., Suzuki, K., Ishihara, M., Nakamura, F., Matsuzaki, A., Yuasa, J., Yamanishi, T.	Efficacy of mirabegron for the treatment of overactive bladder for more than six months with a multicenter study in Japan	Urology	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
25662706	Game, X., Karsenty, G., Ruffion, A., Amarenco, G., Ballanger, P., Chartier-Kastler, E., Cosson, M., Costa, P., Fatton, B., Deffieux, X., Haab, F., Hermieu, J. F., Le Normand, L., Saussine, C., Denys, P.	[Idiopathic overactive bladder and BOTOX((R)): Literature review]	Prog Urol	No primary data or no usable results
23374672	Garcia-Baquero, R., Madurga, B., Garcia, M. V., Fernandez, M. A., Rosety, J. M., Alvarez-Ossorio, J. L.	[New perspectives of treatment with fesoterodine fumarate in patients with overactive bladder]	Actas Urol Esp	<90% women with UI or % women with UI not specified
no pmid	M. García-Bascones, A.B. Puentes-Gutiérrez, E. Rubio-Hidalgo, M.C. López-Zarzuela, R. Puentes-Gutiérrez, G. García-Serrano	Improvement of quality of life in females suffering from urinary incontinence with rehabilitation treatment. The relationship between ICIQ-SF and pad-test?	Rehabilitacion	No primary data or no usable results
107901166	A. Geanini-Yagüez, M.E. Fernández-Cuadros, J. Nieto-Blasco, D. Ciprián-Nieto, B. Oliveros-Escudero, M.F. Lorenzo-Gómez	Electromiography-biofeedback in the treatment of urinary incontinence and quality of life	Rehabilitacion	<90% women with UI or % women with UI not specified
28067745	Geller, E. J., Dumond, J. B., Bowling, J. M., Khandelwal, C. M., Wu, J. M., Busby-Whitehead, J., Kaufer, D. I.	Effect of Trospium Chloride on Cognitive Function in Women Aged 50 and Older: A Randomized Trial	Female Pelvic Med Reconstr Surg	No primary data or no usable results
no PMID	Gezginci, E., Iyigun, E., Yilmaz, S., Aydur, E.	Comparative effectiveness of three different teaching methods in behavioral therapy program for female overactive bladder: A randomized controlled trial	Journal of Urology	Not peer reviewed publication
no pmid	Ghanbari, Z, Eftekhar, T, Esmaeili, M, Miri, E	Comparison of efficacy and side-effects of oxybutynin and tolterodine in the treatment of overactive bladder	Tehran University Medical Journal	could not be translated
no PMID	Ghoniem, G.	Review and analysis methodology of three pivotal urethral bulking agent trials: Are the analyses treated equal?	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Gibson, W. MacDiarmid, S. Huang, M. Siddiqui, E. Stölzel, M. Choudhury, N. Drake, M.	Efficacy and safety of mirabegron add-on therapy to solifenacin in older patient populations with overactive bladder	Journal of Urology	not peer reviewed publication
28916436	Gibson, W. MacDiarmid, S. Huang, M. Siddiqui, E. Stolzel, M. Choudhury, N.Drake, M. J.	Treating Overactive Bladder in Older Patients with a Combination of Mirabegron and Solifenacin: A Prespecified Analysis from the BESIDE Study	Eur Urol Focus	<90% women with UI or % women with UI not specified
21854492	Gill, B. C. Swartz, M. A. Firoozi, F. Rackley, R. R Moore, C. K. Goldman, H. B. Vasavada, S. P.	Improved sexual and urinary function in women with sacral nerve stimulation	Neuromodulation	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Gill, K., Khasriya, R., Kupelian, A., Brackenridge, L., Horsley, H., Sathiananthamoorthy, S., Malone-Lee, J.	The antibiotic treatment of OAB cohort	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
no PMID	Gill, K., Khasriya, R., Kupelian, A., Brackenridge, L., Horsley, H., Sathiananthamoorthy, S., Malone-Lee, J.	Treating OAB with antibiotics	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
28536084	Ginsberg, D. A. Drake, M. J. Kaufmann, A. Radomski, S. Gousse, A. E. Chermansky, C. J. Magyar, A. Nicandro, J. P. Nitti, V. W.	Long-Term Treatment with OnabotulinumtoxinA Results in Consistent, Durable Improvements in Health Related Quality of Life in Patients with Overactive Bladder	J Urol	covered by 2011 review or secondary publication with no new results
21268101	Ginsberg, D. A., Oefelein, M. G., Ellsworth, P. I.	Once-daily administration of trospium chloride extended release provides 24-hr coverage of nocturnal and diurnal symptoms of overactive bladder: an integrated analysis of two phase III trials	Neurourol Urodyn	<90% women with UI or % women with UI not specified
23826844	Ginsberg, D., Schneider, T., Kelleher, C., Van Kerrebroeck, P., Swift, S., Creanga, D., Martire, D. L.	Efficacy of fesoterodine compared with extended-release tolterodine in men and women with overactive bladder	BJU Int	<90% women with UI or % women with UI not specified
no PMID	Gittelman, M., Reape, K. Z., Dasen, S., Hait, H. I.	A phase 2 study evaluating the safety and efficacy of two doses of a monthly oxybutynin vaginal ring in women with symptoms of overactive bladder	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Glass, D. Hoffman, D. Enemchukwu, E. Rosenblum, N. Brucker, B. Nitti, V.	Does stress incontinence decrease the rate of catheterize after intradetrusor onabotulinumtoxina in the mixed incontinence atient?	Journal of Urology	Not peer reviewed publication
24148807	Glazener, Cma, MacArthur, C, Hagen, S, Elders, A, Lancashire, R, Herbison, Gp, Wilson, Pd	Twelve-year follow-up of conservative management of postnatal urinary and faecal incontinence and prolapse outcomes: Randomised controlled trial	Bjog	covered by 2011 review or secondary publication with no new results
no PMID	Goldfischer, E. R., Sand, P. K., Thomas, H., Peters-Gee, J.	Efficacy and safety of oxybutynin topical gel 3% in patients with urgency and/or mixed urinary incontinence: A randomized, double-blind, placebo-controlled study	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
no PMID	Goldman, H. B., Morrow, J. D., Gong, J., Tseng, L. J., Schneider, T.	Early onset of fesoterodine efficacy in subjects with overactive bladder	BJU International	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
22474864	Gollar, K. M., Young, D. G., Bailen, J., He, W., Forero-Schwanhaeuser, S.	Efficacy of solifenacin for overactive bladder symptoms, symptom bother, and health-related quality of life in patients by duration of self-reported symptoms: a secondary analysis of the VIBRANT study	Urol Nurs	<90% women with UI or % women with UI not specified
21855905	Gomes, T., Juurlink, D. N., Ho, J. M., Schneeweiss, S., Mamdani, M. M.	Risk of serious falls associated with oxybutynin and tolterodine: a population based study	J Urol	<90% women with UI or % women with UI not specified
28523400	Gonzalez Isaza, P. Jaguszewska, K. Cardona, J. L. Lukaszuk, M.	Long-term effect of thermoablative fractional CO2 laser treatment as a novel approach to urinary incontinence management in women with genitourinary syndrome of menopause	Int Urogynecol J	Not comparative and no adverse events or N<100
24304092	Gotoh M, Kobayashi T, Sogabe K	Impact of symptom improvement on patients' bother and quality of life in female patients with overactive bladder treated by solifenacin (SET-Q)	Int J Urol	<90% women with UI or % women with UI not specified
no PMID	Gotoh, M., Yokoyama, O., Nishizawa, O.	Propiverine hydrochloride in Japanese patients with overactive bladder: A randomized, double-blind, placebo-controlled trial	International Journal of Urology	<90% women with UI or % women with UI not specified
22453111	Gousse, A. E., Kanagarajah, P., Ayyathurai, R., Handa, P., Dabas, N., Gomez, C. S.	Repeat intradetrusor injections of onabotulinum toxin a for refractory idiopathic overactive bladder patients: a single-center experience	Female Pelvic Med Reconstr Surg	<90% women with UI or % women with UI not specified
no PMID	Gratzke, C. Van Maanen, R. Chapple, C. Abrams, P. Herschorn, S. Robinson, D. Ridder, A. Stoelzel, M. Paireddy, A. Mueller, E. R.	Long-term combination treatment with solifenacin and mirabegron is effective and well tolerated in patients with overactive bladder	Journal of Urology	Not peer reviewed publication
21194391	Green L, Kerney D	Patient experience with darifenacin - results of a short-term community-based survey in managing overactive bladder	Curr Med Res Opin	<90% women with UI or % women with UI not specified
28758802	Grenabo, L. Herschorn, S. Kaplan, S. A. Cardozo, L. Scholfield, D. Arumi, D. Carlsson, M. Chapman, D. Ntanios, F.	Characteristics of antimuscarinic responders versus suboptimal responders in a randomized clinical trial of patients with overactive bladder symptoms	Curr Med Res Opin	<90% women with UI or % women with UI not specified
no PMID	Griebling, T. L., Kraus, S. R., Newman, D. K., Wyman, J. F., Johnson, T. M., Sun, F., Faison, W., Bavendam, T., DuBeau, C. E.	Patient characteristics are not predictive of fesoterodine efficacy in elderly patients with urgency urinary incontinence	Journal of Urology	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Gruenenfelder, J. McCammon, K. Lucente, V. Orejudos, A.Aboushwareb, T. A. Hale, D. S.	Earlyand consistent improvements in urinary symptoms and qualityof life outcomes in female overactive bladder patients with urinary incontinence treatedwith onabotulinumtoxina in a multicenter, randomized, placebo-controlled, phase 4 trial	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
25020054	Gungor Ugurlucan F, Alper N, Ayvacikli G, Nehir A, Celik R, Yalcin O	Comparison of home-based and outpatient clinic-based intravaginal electrical stimulation for the treatment of urinary incontinence	Minerva Ginecol	Not comparative and no adverse events or N<100
23171636	Gungor Ugurlucan, F., Onal, M., Aslan, E., Ayyildiz Erkan, H., Kizilkaya Beji, N., Yalcin, O.	Comparison of the effects of electrical stimulation and posterior tibial nerve stimulation in the treatment of overactive bladder syndrome	Gynecol Obstet Invest	NRCS N/arm < 50
CN-01409583	Hagovska, M Svihra, J Bukova, A Svihrova, V	Effect of physical activity measured by the international physical activity questionnaire (IPAQ) on the prevalence of stress urinary incontinence in young women	Neurourology and urodynamics. Conference: 47th annual meeting of the international continence society, ICS 2017. Italy	Not peer reviewed publication
no PMID	Hague, M. J., Jacobson, T. J., Dong, F., Frazier, L. M. Duong, J. Palmer, P.	Urinary incontinence in women and conservative spine care a retrospective cohort study	Obstetrics and Gynecology	Not peer reviewed publication
no PMID	Hajdinjak, T., Leskovar, J.	Darifenacin in a real-world practice: Results of a 6-month phase IV. trial	Zdravniski Vestnik	<90% women with UI or % women with UI not specified
CN-01339212	Hamidi, M, Aghamir, Smk, Salavati, A, Masoomi, A	A pilot randomized study on use of oral acetazolamide in patients with refractory dysuria	International urology and nephrology	<90% women with UI or % women with UI not specified
25401784	Han, J. Y., Lee, K. S., Park, W. H., Park, C. H., Lee, J. G., Lee, J. Z., Kim, D. Y., Na, Y. G., Kwon, D. D., Choo, M. S.	A comparative study on the efficacy of solifenacin succinate in patients with urinary frequency with or without urgency	PLoS One	<90% women with UI or % women with UI not specified
21572534	Handa, V. L. Whitcomb, E. Weidner, A. C. Nygaard, I. Brubaker, L. Bradley, C. S. Paraiso, M. F. Schaffer, J. Zyczynski, H. M. Zhang, M. Richter, H. E.	Sexual function before and after non-surgical treatment for stress urinary incontinence	Female Pelvic Med Reconstr Surg	covered by 2011 review or secondary publication with no new results
no PMID	Hansen, M., Lose, G., Kesmodel, U. S., Gradel, K. O.	A national population-based cohort study of urethral injection therapy for female stress and mixed urinary incontinence-the danish urogynaecological database, 2007-2011	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
23203138	Harnett, M. D., Shipley, J., MacLean, L., Schwiderski, U., Sandage, B. W., Jr.	Study of the population pharmacokinetic characteristics of once-daily trospium chloride 60 mg extended-release capsules in patients with overactive bladder and in healthy subjects	Clin Drug Investig	<90% women with UI or % women with UI not specified
27352489	He, E. Chen, Y. Tian, H. Zhao, J.	[Effective observation of electroacupuncture with different courses for female stress urinary incontinence]	Zhongguo Zhen Jiu	No primary data or no usable results
23229417	Hegde, A. Smith, A. L. Aguilar, V. C. Davila, G. W.	Three-dimensional endovaginal ultrasound examination following injection of Macroplastique for stress urinary incontinence: outcomes based on location and periurethral distribution of the bulking agent	Int Urogynecol J	No primary data or no usable results
no PMID	Henderson, J. W. Mahajan, S. T. Mangel, J. Hijaz, A.	Overactive bladder: Utilization of third-line therapies in two specialty hospital systems	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
23769122	Herschorn, S., Barkin, J., Castro-Diaz, D., Frankel, J. M., Espuna-Pons, M., Gousse, A. E., Stolzel, M., Martin, N., Gunther, A., Van Kerrebroeck, P.	A phase III, randomized, double-blind, parallel-group, placebo-controlled, multicentre study to assess the efficacy and safety of the beta(3) adrenoceptor agonist, mirabegron, in patients with symptoms of overactive bladder	Urology	<90% women with UI or % women with UI not specified
28418102	Herschorn, S., Chapple, C. R., Abrams, P., Arlandis, S., Mitcheson, D., Lee, K. S., Ridder, A., Stoelzel, M., Paireddy, A., van Maanen, R., Robinson, D.	Efficacy and safety of combinations of mirabegron and solifenacin compared with monotherapy and placebo in patients with overactive bladder (SYNERGY study)	BJU Int	<90% women with UI or % women with UI not specified
28435033	Herschorn, S., Chapple, C. R., Snijder, R., Siddiqui, E., Cardozo, L.	Could Reduced Fluid Intake Cause the Placebo Effect Seen in Overactive Bladder Clinical Trials? Analysis of a Large Solifenacin Integrated Database	Urology	<90% women with UI or % women with UI not specified
24582119	Herschorn, S., Kaplan, S. A., Sun, F., Ntanios, F.	Do patient characteristics predict responsiveness to treatment of overactive bladder with antimuscarinic agents?	Urology	<90% women with UI or % women with UI not specified
28161352	Herschorn, S., Kohan, A., Aliotta, P., McCammon, K., Sriram, R., Abrams, S., Lam, W., Everaert, K.	The Efficacy and Safety of OnabotulinumtoxinA or Solifenacin Compared with Placebo in Solifenacin Naive Patients with Refractory Overactive Bladder: Results from a Multicenter, Randomized, Double-Blind Phase 3b Trial	J Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
21175373	Herschorn, S., Pommerville, P., Stothers, L., Egerdie, B., Gajewski, J., Carlson, K., Radomski, S., Drutz, H., Schulz, J., Barkin, J., Hirshberg, E., Corcos, J.	Tolerability of solifenacin and oxybutynin immediate release in older (> 65 years) and younger (</= 65 years) patients with overactive bladder: sub-analysis from a Canadian, randomized, double-blind study	Curr Med Res Opin	<90% women with UI or % women with UI not specified
CN-00911137	Hilde G, Stær-Jensen J, Siafarikas F, Ellström Engh M, Bø K.	Postpartum pelvic floor muscle training and urinary incontinence: a randomized controlled trial	Obstetrics and gynecology	<90% women with UI or % women with UI not specified
no PMID	Hilde G, Stær-Jensen J, Siafarikas F, Ellström Engh M, Bø K.	Effect of postpartum pelvic floor muscle training on urinary incontinence in primparous women with and without major pelvic floor muscle defects. An assessor blinded randomised controlled trial	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Hirakawa, T., Suzuki, S., Kato, K.	Effects of biofeedback using a home training device on control of stress urinary incontinence: A randomized controlled trial	Physiotherapy (United Kingdom)	Not peer reviewed publication
no PMID	Hobbs, C., Blick, C., Foley, S. J.	Withstanding the test of time; Urethral bulking injections (Deflux) for urinary stress incontinence	BJU International	Not peer reviewed publication
CN-00980128	Hodges, Sj Atala, A	A randomized, double-blind, placebo-controlled trial of anticholinergic medication for nonresponders to desmopressin for monosymptomatic nocturnal enuresis	Current Urology Reports	<90% women with UI or % women with UI not specified
no PMID	Hotta, H.	Basic and clinical studies on the effects of cutaneous stimulation on urinary system	Autonomic Neuroscience: Basic and Clinical	Not peer reviewed publication
28436145	Hsiao, S. M., Chang, T. C., Chen, C. H., Wu, W. Y., Lin, H. H.	Comparisons of the Clinical Outcomes and Urodynamic Effects of Mirabegron versus Tolterodine Treatment for Female Overactive Bladder Syndrome: A Subgroup Analysis of a Controlled, Randomised, Prospective Study	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Hsiao, S. M., Chang, T. C., Chen, C. H., Wu, W. Y., Lin, H. H.	Frequent nocturia episodes, a suboptimal response to treatment, and small bladder capacity predict the need for persistent antimuscarinic therapy or re-treatment after discontinuation of antimuscarinics in female overactive bladder	Menopause	Not comparative and no adverse events or N<100
21501328	Hsiao, S. M., Chang, T. C., Wu, W. Y., Chen, C. H., Yu, H. J., Lin, H. H.	Comparisons of urodynamic effects, therapeutic efficacy and safety of solifenacin versus tolterodine for female overactive bladder syndrome	J Obstet Gynaecol Res	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
26620899	Hsiao, S. M., Liao, C. H., Lin, H. H., Kuo, H. C.	Duration of Antimuscarinic Administration for Treatment of Overactive Bladder Before Which One Can Assess Efficacy: An Analysis of Predictive Factors	Int Neurourol J	NRCS N/arm < 50
no PMID	Hsiao, S. M., Lin, H. H., Kuo, H. C.	Factors associated with a better therapeutic effect of solifenacin in patients with overactive bladder syndrome	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
no PMID	Huang, A., Hess, R., Arya, L., Richter, H., Subak, L., Bradley, C., Rogers, R., Myers, D., Johnson, K., Gregory, W., Kraus, S., Brown, J.	Simple diagnosis and pharmacologic treatment for urgency incontinence in women	Journal of the American Geriatrics Society	Not peer reviewed publication
no PMID	Huang, A., Hess, R., Arya, L., Richter, H., Subak, L., Catherine Bradley, C., Rebecca Rogers, R., Myers, D., Johnson, K., Miller, J., ThomasGregory, W., Kraus, S., Brown, J.	A randomized controlled trial of simple diagnosis and treatment for urgency urinary incontinence in women	Journal of General Internal Medicine	Not peer reviewed publication
CN-00576729	Hui, E, Lee, Ps, Woo, J	Management of urinary incontinence in older women using videoconferencing versus conventional management: a randomized controlled trial	Journal of telemedicine and telecare	No primary data or no usable results
24521895	Huo, L. Z., Jing, H. G., Wang, T. C., Yuan, S. X., Luan, X. H., Guo, K. C., Shi, B. K.	[A combination of solifenacin succinate and naftopidil in the treatment of female overactive bladder]	Zhonghua Yi Xue Za Zhi	<90% women with UI or % women with UI not specified
23342612	Ibinaeva, I. S., Apolikhina, I. A., Makhmedzhanova, F. N., Muslimova, S. Z.	[Solifenacin in the treatment of overactive bladder: results of a randomized double-blind, placebo-controlled study]	Urologiia	could not be translated
no PMID	Ibrahim, I. K., Hameed, M. M. A., Taher, E. M., Shaheen, E. M., Elsawy, M. S. A. G.	Efficacy of biofeedback-assisted pelvic floor muscle training in females with pelvic floor dysfunction	Alexandria Journal of Medicine	Not comparative and no adverse events or N<100
no PMID	Iervolino, S. A., Pezzella, M., Grimaldi, A., Del Deo, F., Tammaro, C., Russo, C., Gallo, P., Rappa, C., Colacurci, N., Torella, M.	Efficacy and tolerability of agonist-3 mirabegron in the overactive bladder in woman with or without prior antimuscarinic therapy	Neurourology and Urodynamics	Not peer reviewed publication
27003163	Iimura, K., Watanabe, N., Masunaga, K., Miyazaki, S., Hotta, H., Kim, H., Hisajima, T., Takahashi, H., Kasuya, Y.	Effects of a Gentle, Self-Administered Stimulation of Perineal Skin for Nocturia in Elderly Women: A Randomized, Placebo-Controlled, Double-Blind Crossover Trial	PLoS One	No primary data or no usable results
no PMID	Itoh, N., Hashimoto, K., Mizuno, T., Masumori, N.	Long-term results of anticholinergic agents for the treatment of OAB by real-life clinical practice	Urology	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
25725183	Jafarabadi, M., Ghanbari, Z., Hashemi, S., Nemati, M., Haghollahi, F., Azimi Nekoo, E.	Prominent complaint: a guide to medical therapy of overactive bladder syndrome in older women	Acta Med Iran	covered by 2011 review or secondary publication with no new results
28478446	Jairam, R. Drossaerts, J. van Koeveringe, G. van Kerrebroeck, P.	The Impact of Duration of Complaints on Successful Outcome of Sacral Neuromodulation	Urol Int	<90% women with UI or % women with UI not specified
28877395	Jairam, R. Marcelissen, T. van Koeveringe, G. van Kerrebroeck, P.	Optimal Lead Positioning in Sacral Neuromodulation: Which Factors Are Related to Treatment Outcome?	Neuromodulation	<90% women with UI or % women with UI not specified
28615976	Janssen, Martens, F. M. de Wall, L. L.van Breda, H. M. Heesakkers, J. P.	Clinical utility of neurostimulation devices in the treatment of overactive bladder: current perspectives	Med Devices (Auckl)	No primary data or no usable results
27474270	Jaszczynski, J. Kojs, Z. Stelmach, A. Wohadlo, L. Luczynska, E. Heinze, S. Rys, J. Jakubowicz, J. Chlosta, P.	Post-Irradiation Bladder Syndrome After Radiotherapy of Malignant Neoplasm of Small Pelvis Organs: An Observational, Non-Interventional Clinical Study Assessing VESIcare(R)/Solifenacin Treatment Results	Med Sci Monit	Not comparative and no adverse events or N<100
no PMID	Jesse Ron Swire, T., Teng Aik, O., Su Yen, K., Razack, A. H., Ning Yi, Y., Kamal, N., Ken Lim, N., Md Latar, I. L.	A randomized controlled trial on the use of a novel physical contact biofeedback device for female stress urinary incontinence	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Jesse, T., Teng, A., Azad, R., Keng, L., Su, Y., Prevathe, P., Christina, Y., Norliah	A randomized control trial to compare the effectiveness of pelvic floor exercises with the vibrance kegel device compared to standard kegel pelvic floor exercises for the treatment of stress urinary incontinence in females	International Journal of Urology	Not peer reviewed publication
11128739	Jeyaseelan, S, Haslam, E, Winstanley, J, Roe, B, Oldham, J	An evaluation of a new pattern of electrical stimulation as a treatment for urinary stress incontinence: a randomized, double-blind, controlled trial	Clinical rehabilitation	covered by 2011 review or secondary publication with no new results
26757270	Jiang, F., Zhu, L., Xu, T., Gong, M. Y., Huang, Y. L., Li, H. F., Wang, J. J., Tong, X. W., Cheng, X. X., Bai, W. P., Li, X., Xu, X. X., Xu, H. C.	Efficacy and safety of solifenacin succinate tablets versus solifenacin succinate tablets with local estrogen for the treatment of overactive bladder in postmenopausal women--a multicenter, randomized, open-label, controlled comparison study	Menopause	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Jiang, Y. H., Ong, H. L., Kuo, H. C.	Predictive factors of adverse events after intravesical suburothelial onabotulinumtoxina injections for overactive bladder syndrome: A real-life practice of 290 cases in a single center	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
24805179	Jin, C. Zhou, X. Pang, R.	Effect of electroacupuncture combined with tolterodine on treating female mixed urinary incontinence	J Wound Ostomy Continence Nurs	Not comparative and no adverse events or N<100
29124347	Jo, J. K. Kim, K. N. Kim, D. W. Kim, Y. T. Kim, J. Y.	The effect of onabotulinumtoxinA according to site of injection in patients with overactive bladder: a systematic review and meta-analysis	World J Urol	No primary data or no usable results
15877562	Johnson, T, Burgio, K, Redden, D, Wright, K, Goode, P	Effects of behavioral and drug therapy on nocturia in older incontinent women	Journal of the american geriatrics society	covered by 2011 review or secondary publication with no new results
21046135	Jundt, K., Schreyer, K., Friese, K., Peschers, U.	Anticholinergic therapy: do the patients take the pills prescribed?	Arch Gynecol Obstet	Not comparative and no adverse events or N<100
no PMID	Junginger, B., Metz, M., Baessler, K.	Comparison of a bladder neck effective pelvic floor rehabilitation program and emg-biofeedback augmented pelvic floor muscle training: A randomized controlled trial	Neurourology and Urodynamics	No primary data or no usable results
no PMID	Kafri, R., Deutscher, D., Shames, J., Greenberg, D., Kodesh, A., Golomb, J., Melzer, I.	A randomized trial comparing rehabilitation and drug therapy for urgency urinary incontinence: 1 year follow up	Neurourology and Urodynamics	duplicate publication
no PMID	Kafri, R., Greenberg, D., Shames, J., Novack, L., Melzer, I.	Cost and cost-effectiveness of treating urgency stress incontinence-results from a randomized controlled trial	Value in Health	No primary data or no usable results
no PMID	Kajikawa, K. Kanao, K. Morinaga, S. Muramatsu, H. Saiki, H. Kobayashi, I. Kato, Y. Watanabe, M. Nakamura, K. Sumitomo, M.	A long term comparison of adherence of drug therapy in 1,917 patients with overactive bladder	Journal of Urology	Not peer reviewed publication
21598462	Kalchthaler, M., Muhlich, S., Rothe, P.	[Treatment with solifenacin reduces urinary urgency and improves quality of life. Results of the non-interventional CAP-study]	MMW Fortschr Med	<90% women with UI or % women with UI not specified
25198276	Kalder, M., Pantazis, K., Dinas, K., Albert, U. S., Heilmaier, C., Kostev, K.	Discontinuation of treatment using anticholinergic medications in patients with urinary incontinence	Obstet Gynecol	<90% women with UI or % women with UI not specified
27318184	Kallner, H. K., Christensson, A. A., Elmer, C., Flam, B., Altman, D.	Safety and efficacy of mirabegron in daily clinical practice: a prospective observational study	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Kamel, D. M., Thabet, A. A., Tantawy, S. A., Radwan, M. M.	Effect of abdominal versus pelvic floor muscle exercises in obese Egyptian women with mild stress urinary incontinence: A randomised controlled trial	Hong Kong Physiotherapy Journal	No primary data or no usable results
24898471	Kaplan, S. A., Cardozo, L., Herschorn, S., Grenabo, L., Carlsson, M., Arumi, D., Crook, T. J., Whelan, L., Scholfield, D., Ntanios, F.	Efficacy and safety of fesoterodine 8 mg in subjects with overactive bladder after a suboptimal response to tolterodine ER	Int J Clin Pract	<90% women with UI or % women with UI not specified
20860717	Kaplan, S. A., Schneider, T., Foote, J. E., Guan, Z., Carlsson, M., Gong, J.	Superior efficacy of fesoterodine over tolterodine extended release with rapid onset: a prospective, head-to-head, placebo-controlled trial	BJU Int	<90% women with UI or % women with UI not specified
21741151	Kashanian, M., Ali, S. S., Nazemi, M., Bahasadri, S.	Evaluation of the effect of pelvic floor muscle training (PFMT or Kegel exercise) and assisted pelvic floor muscle training (APFMT) by a resistance device (Kegelmaster device) on the urinary incontinence in women: a randomized trial	Eur J Obstet Gynecol Reprod Biol	covered by 2011 review or secondary publication with no new results
28762672	Kato, D. Tabuchi, H. Uno, S.	Safety, Efficacy, and Persistence of Long-Term Mirabegron Treatment for Overactive Bladder in the Daily Clinical Setting: Interim (1-Year) Report from a Japanese Post-Marketing Surveillance Study	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
28833621	Kato, D. Uno, S. Van Schyndle, J. Fan, A. Kimura, T.	Persistence and adherence to overactive bladder medications in Japan: A large nationwide real-world analysis	Int J Urol	<90% women with UI or % women with UI not specified
CN-01043976	Kaya, S, Akbayrak, T, Gursen, C, Beksac, S	Short-term effect of adding pelvic floor muscle training to bladder training for female urinary incontinence: a randomized controlled trial	International urogynecology journal	duplicate publication
20943711	Kaya, S., Akbayrak, T., Beksaç, S.	Comparison of different treatment protocols in the treatment of idiopathic detrusor overactivity: a randomized controlled trial	Clin Rehabil	<90% women with UI or % women with UI not specified
no PMID	Kaya, S., Akbayrak, T., Gürsen, C., Beksaç, S.	Pelvic floor muscle training added to bladder training versus bladder training alone for female urinary incontinence: A randomized controlled trial	Neurourology and Urodynamics	Not peer reviewed publication
CN-01012743	Kazemi, Rf	Comparison of treatment of monosymptomatic nocturnal enuresis with combination of desmopressin and tolterodine versus desmopressin alone	Iranian Registry of Clinical Trials	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Ke, Q. S., Chen, Y. C., Kuo, H. C.	Do baseline urodynamic parameters affect the treatment outcome after intravesical 100 U onabotulinumtoxinA injection in patients with idiopathic detrusor overactivity?	Tzu Chi Medical Journal	<90% women with UI or % women with UI not specified
no PMID	Keishi, K. Kanao, K. Morinaga, S. Muramatsu, H. Saiki, H. Kobayashi, I. Nishikawa, G. Kato, Y. Watanabe, M. Nakamura, K. Sumitomo, M.	Long-term comparison of adherence to drug therapy in 1,917 patients with overactive bladder	European Urology, Supplements	Not peer reviewed publication
CN-00903728	Kelleher, Cj, Dmochowski, Rr, Berriman, S, Kopp, Zs, Carlsson, M	Sustained improvement in patient-reported outcomes during long-term fesoterodine treatment for overactive bladder symptoms: Pooled analysis of two open-label extension studies	BJU international	<90% women with UI or % women with UI not specified
22453323	Kenton, K., Barber, M., Wang, L., Hsu, Y., Rahn, D., Whitcomb, E., Amundsen, C., Bradley, C. S., Zyczynski, H., Richter, H. E.	Pelvic floor symptoms improve similarly after pessary and behavioral treatment for stress incontinence	Female Pelvic Med Reconstr Surg	covered by 2011 review or secondary publication with no new results
26409403	Khedr, E. M. Elbeh, K. A. Abdel Baky, A. Abo-Elfetoh, N. El-Hammady, D. H. Korashy, F.	A double-blind randomized clinical trial on the efficacy of magnetic sacral root stimulation for the treatment of Monosymptomatic Nocturnal Enuresis	Restor Neurol Neurosci	<90% women with UI or % women with UI not specified
CN-00965026	Khullar, V, Cardozo, L, Kelleher, Cj, Hall, T, Ryan, J, Ebel, Bitoun C, Darekar, A, Arumi, D, Wagg, A	Effects of drug cessation after flexible-dose fesoterodine in patients with overactive bladder	BJU international	<90% women with UI or % women with UI not specified
26288118	Khullar, V., Amarenco, G., Angulo, J. C., Blauwet, M. B., Nazir, J., Odeyemi, I. A., Hakimi, Z.	Patient-reported outcomes with the beta3 -adrenoceptor agonist mirabegron in a phase III trial in patients with overactive bladder	Neurourol Urodyn	<90% women with UI or % women with UI not specified
23182126	Khullar, V., Amarenco, G., Angulo, J. C., Cambronero, J., Hoye, K., Milsom, I., Radziszewski, P., Rechberger, T., Boerrigter, P., Drogendijk, T., Wooning, M., Chapple, C.	Efficacy and tolerability of mirabegron, a beta(3)-adrenoceptor agonist, in patients with overactive bladder: results from a randomised European-Australian phase 3 trial	Eur Urol	<90% women with UI or % women with UI not specified
no PMID	Khullar, V., Amarenco, G., Angulo, J., Boerrigter, P., Blauwet, M., Hakimi, Z.	The potent and selective beta3-adrenoceptor agonist mirabegron improves patient-reported outcomes in the treatment of overactive bladder	Urology	<90% women with UI or % women with UI not specified
24047126	Khullar, V., Cambronero, J., Angulo, J. C., Wooning, M., Blauwet, M. B., Dorrepaal, C., Martin, N. E.	Efficacy of mirabegron in patients with and without prior antimuscarinic therapy for overactive bladder: a post hoc analysis of a randomized European-Australian Phase 3 trial	BMC Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Khullar, V., Cambronero, J., Angulo, J., Wooning, M., Blauwet, M., Siddiqui, E., Dorrepaal, C.	Onset of action of efficacy of the potent and selective beta-3-adrenoceptor agonist, mirabegron, for the treatment of overactive bladder (OAB) in a 12-week, multicentre, randomised, double-blind, parallel-group, placebo-and tolterodine slow release (SR)-controlled study in OAB patients	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
no PMID	Khullar, V., Cambronero, J., Ströberg, P., Angulo, J., Boerrigter, P., Blauwet, M. B., Wooning, M.	The efficacy and tolerability of mirabegron in patients with overactive bladder - Results from a European-Australian phase III trial	European Urology, Supplements	<90% women with UI or % women with UI not specified
22006023	Khullar, V., Foote, J., Seifu, Y., Egermark, M.	Time-to-effect with darifenacin in overactive bladder: a pooled analysis	Int Urogynecol J	<90% women with UI or % women with UI not specified
no PMID	Khullar, V., Sand, P., Parsons, M., Zhou, J., Globe, D., Nardo, C.	Onabotulinumtoxina significantly reduces urinary incontinence and improves quality of life in female patients with idiopathic overactive bladder	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
CN-00993108	Killock, D	Incontinence: Liposomal onabotulinumtoxinA instillation piloted for OAB	Nature Reviews Urology	No primary data or no usable results
21459381	Kim H, Yoshida H, Suzuki T.	The effects of multidimensional exercise treatment on community-dwelling elderly Japanese women with stress, urge, and mixed urinary incontinence: a randomized controlled trial.	Int J of Nursing Stud	No primary data or no usable results
CN-01297143	Kim, A Lee, K-S Kim, Tb Kim, Hj Yoo, Es Yun, J-H Kim, Dy Jung, Sg Lee, Jt Kim, Jm Oh, Ck Shin, Jh Jeon, Sh Lee, Sh Han, Ch Lee, Dh Cho, Hj Choo, M-S	Incidence and risk factors of recurrence of overactive bladder symptoms after discontinuation of successful medical treatment	Investigative and clinical urology	<90% women with UI or % women with UI not specified
110073908	Kim, Gwang Suk, Kim, Eun Gyeong, Shin, Ki Young, Choo, Hee Jung, Kim, Mi Ja	Combined pelvic muscle exercise and yoga program for urinary incontinence in middle-aged women	Japan Journal of Nursing Science	Not comparative and no adverse events or N<100
no PMID	Kim, T. H., Choo, M. S., Kim, Y. J., Koh, H., Lee, K. S.	Drug persistence and compliance affect patient-reported outcomes in overactive bladder syndrome	Quality of Life Research	<90% women with UI or % women with UI not specified
no PMID	Kim, T. H., Lee, S. E., Lee, H. E., Lee, K. S.	Safety and efficacy of fesoterodine fumarate in patients with overactive bladder: results of a post-marketing surveillance study in Korea	Current Medical Research and Opinion	<90% women with UI or % women with UI not specified
27028673	Kim, T. H., You, H. W., Park, J. H., Lee, J. G., Choo, M. S., Park, W. H., Lee, J. Z., Park, C. H., Na, Y. G., Kwon, D. D., Lee, K. S.	Persistence of solifenacin therapy in patients with overactive bladder in the clinical setting: a prospective, multicenter, observational study	Int J Clin Pract	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Kinjo, M. Okegawa, T. Nutahara, K.	Does mirabegron treatment affect the mental status of treatment naïve female patients with overactive bladder?	Neurourology and Urodynamics	Not peer reviewed publication
28738443	Kirchin, V. Page, T. Keegan, P. E. Atiemo, K. O. Cody, J. D. McClinton, S. Aluko, P.	Urethral injection therapy for urinary incontinence in women	Cochrane Database Syst Rev	No primary data or no usable results
0	Kistler, K. D. Xu, Y. Zou, K. H. Ntanios, F. Chapman, D. S. Luo, X.	Systematic literature review of clinical trials evaluating pharmacotherapy for overactive bladder in elderly patients: An assessment of trial quality	Neurourology and Urodynamics	No primary data or no usable results
26623150	Kizilyel, S., Karakeci, A., Ozan, T., Unus, I., Barut, O., Onur, R.	Role of percutaneous posterior tibial nerve stimulation either alone or combined with an anticholinergic agent in treating patients with overactive bladder	Turk J Urol	<90% women with UI or % women with UI not specified
no PMID	Klarskov, N., Darekar, A., Scholfield, D., Whelan, L., Lose, G.	A randomized study to assess the action of fesoterodine on urethral function in women with stress urinary incontinence using urethral pressure reflectometry	Neurourology and Urodynamics	Not peer reviewed publication
CN-00201818	Knight, S, Laycock, J, Naylor, D	Evaluation of neuromuscular electrical stimulation in the treatment of genuine stress incontinence	Physiotherapy	covered by 2011 review or secondary publication with no new results
28009939	Kobayashi, M., Nukui, A., Kamai, T.	Comparative Efficacy and Tolerability of Antimuscarinic Agents and the Selective beta3-Adrenoceptor Agonist, Mirabegron, for the Treatment of Overactive Bladder: Which is More Preferable as an Initial Treatment?	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
24932562	Kogan M, Zachoval R, Ozyurt C. Schäfer T, Christensen N.	Epidemiology and impact of urinary incontinence, overactive bladder, and other lower urinary tract symptoms: Results of the EPIC survey in Russia, Czech Republic, and Turkey	Current Medical Research and Opinion	Not comparative and no adverse events or N<100
no PMID	Komesu, Y. M., Amundsen, C., Richter, H., Erickson, S.,,y, U., Ackenbom, M., Sung, V., Albo, M., Paraiso, M., Kadima, N., Wallace, D.	Refractory urgency urinary incontinence treatment in women: Age effect on outcomes and complications	Journal of the American Geriatrics Society	Not peer reviewed publication
22453228	Komesu, Y. M., Sapien, R. E., Rogers, R. G., Ketai, L. H.	Hypnotherapy for treatment of overactive bladder: a randomized controlled trial pilot study	Female Pelvic Med Reconstr Surg	Not intervention/comparison of interest
no PMID	Kosilov, K. Loparev, S. Kuzina, I. Shakirova, O. Zhuravskaya, N. Lobodenko, A.	Self-assessment of treatment compliance with antimuscarinic drugs and lower urinary tract condition among women with urinary incontinence	International Urogynecology Journal	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
27706009	Kosilov, K. V., Alexandrovich, L. S., Gennadyevna, K. I., Viktorovna, S. O., Sergeevna, Z. N., Ivanovich, A. I.	Social, Economic, and Medical Factors Associated With Solifenacin Therapy Compliance Among Workers Who Suffer From Lower Urinary Tract Symptoms	Int Neurourol J	<90% women with UI or % women with UI not specified
25170796	Kosilov, K. V., Loparev, S. A., Ivanovskaya, M. A., Kosilova, L. V.	Comparative effectiveness of combined low- and standard-dose trospium and solifenacin for moderate overactive bladder symptoms in elderly men and women	Urol Int	<90% women with UI or % women with UI not specified
25435915	Kosilov, K. V., Loparev, S. A., Ivanovskaya, M. A., Kosilova, L. V.	Randomized controlled trial of cyclic and continuous therapy with trospium and solifenacin combination for severe overactive bladder in elderly patients with regard to patient compliance	Ther Adv Urol	<90% women with UI or % women with UI not specified
no PMID	Kosilov, K. V., Loparev, S. A., Kuzina, I. G., Shakirova, O. V., Zhuravskaya, N. S., Lobodenko, A.	Comprehensive assessment of compliance with antimuscarinic drug treatment in the case of urge urinary incontinence of older patients	Current Aging Science	<90% women with UI or % women with UI not specified
27928426	Kosilov, K. V., Loparev, S., Kuzina, I., Shakirova, O., Zhuravskaya, N., Lobodenko, A.	Treatment compliance of working persons to high-dose antimuscarinic therapies: a randomized trial	Ther Adv Urol	<90% women with UI or % women with UI not specified
24466467	Kosilov, K., Loparev, S., Ivanovskaya, M., Kosilova, L.	Maintenance of the therapeutic effect of two high-dosage antimuscarinics in the management of overactive bladder in elderly women	Int Neurourol J	<90% women with UI or % women with UI not specified
26169181	Kosilov, K., Loparev, S., Ivanovskaya, M., Kosilova, L.	A randomized, controlled trial of effectiveness and safety of management of OAB symptoms in elderly men and women with standard-dosed combination of solifenacin and mirabegron	Arch Gerontol Geriatr	<90% women with UI or % women with UI not specified
24982780	Kosilov, K., Loparev, S., Iwanowskaya, M., Kosilova, L.	Effectiveness of combined high-dosed trospium and solifenacin depending on severity of OAB symptoms in elderly men and women under cyclic therapy	Cent European J Urol	<90% women with UI or % women with UI not specified
CN-00985428	Kosilov, K, Loparev, S, Ivanovskaya, M, Kosilova, L	Therapeutic effect consolidation in overactive bladder treatment in elderly women by the use of increased antimuscarinic dosages	Sovremennye Tehnologii v Medicine	<90% women with UI or % women with UI not specified
CN-01165825	Kosilov, K, Loparev, S, Ivanovskaya, M, Kosilova, L	Influence of different doses of trospium and solifenacin on manageability of OAB symptoms with different severity in elderly men and women	Journal of Clinical Urology	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-01288243	Kosilov, K, Loparev, S, Kuzina, I, Shakirova, O, Zhuravskaya, N, Lobodenko, A	Factors of trospium treatment compliance among unemployed older persons	Journal of clinical gerontology and geriatrics	<90% women with UI or % women with UI not specified
104013958	Krause, Hannah G., Lussy, Justin P., Goh, Judith T. W.	Use of periurethral injections of polyacrylamide hydrogel for treating post-vesicovaginal fistula closure urinary stress incontinence	Journal of Obstetrics & Gynaecology Research	Not comparative and no adverse events or N<100
23870042	Krhut, J., Gartner, M., Petzel, M., Sykora, R., Nemec, D., Tvrdik, J., Skoupa, J.	Persistence with first line anticholinergic medication in treatment-naive overactive bladder patients	Scand J Urol	<90% women with UI or % women with UI not specified
26342812	Krhut, J., Martan, A., Jurakova, M., Nemec, D., Masata, J., Zvara, P.	Treatment of stress urinary incontinence using polyacrylamide hydrogel in women after radiotherapy: 1-year follow-up	Int Urogynecol J	Not comparative and no adverse events or N<100
26683536	Krhut, J., Martan, A., Zachoval, R., Hanus, T., Svabik, K., Zvara, P.	Impact of body mass index on treatment efficacy of mirabegron for overactive bladder in females	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified
27111192	Krhut, J., Navratilova, M., Sykora, R., Jurakova, M., Gartner, M., Mika, D., Pavliska, L., Zvara, P.	Intravesical instillation of onabotulinum toxin A embedded in inert hydrogel in the treatment of idiopathic overactive bladder: A double-blind randomized pilot study	Scand J Urol	<90% women with UI or % women with UI not specified
28247723	Krivoborodov, G. G., Tur, E. I., Efremov, N. S., Shkolnikov, M. E.	[High doses of trospium chloride in patients with idiopathic overactive bladder. Data of large-scale, multicenter observational program Resource]	Urologiia	could not be translated
no PMID	Kumar, A., Kumar, G., Kumar, N., Patel, M., Gupta, P.	Response of botulinum toxin in refractory idiopathic overactive bladder- our experience	Journal of Endourology	Not peer reviewed publication
CN-01069194	Kuo, H-C, Lin, H-H, Yu, H-J, Cheng, C-L, Hung, M-J, Lin, Atl	Results of a randomized, double-blind, placebo-controlled study of mirabegron in a Taiwanese population with overactive bladder and comparison with other clinical trials	Urological Science	<90% women with UI or % women with UI not specified
CN-01103158	Kuo, H-C, Lin, H-H, Yu, H-J, Cheng, C-L, Hung, M-J, Lin, Atl, Chang, C-H, Chuang, Y-C, Cha, T-L, Chen, G-D, Chen, C-S, Wu, M-P, Wu, T-L, Yu, K-J, Huang, S-T	Corrigendum to 'Results of a randomized, double-blind, placebo-controlled study of mirabegron in a Taiwanese population with overactive bladder and comparison with other clinical trials', [Urol Sci, (2015), 41-48], doi:10.1016/j.urols.2014.12.010	Urological Science	<90% women with UI or % women with UI not specified
21560152	Kuo, H. C.	Bladder base/trigone injection is safe and as effective as bladder body injection of onabotulinumtoxinA for idiopathic detrusor overactivity refractory to antimuscarinics	Neurourol Urodyn	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Kuo, H. C.	Reduction of urgency severity is associated with long-term therapeutic effect after intravesical onabotulinumtoxina injection for idiopathic detrusor overactivity	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
25130281	Kuo, H. C., Lee, K. S., Na, Y., Sood, R., Nakaji, S., Kubota, Y., Kuroishi, K.	Results of a randomized, double-blind, parallel-group, placebo- and active-controlled, multicenter study of mirabegron, a beta3-adrenoceptor agonist, in patients with overactive bladder in Asia	Neurourol Urodyn	<90% women with UI or % women with UI not specified
CN-00988533	Kuo, H, Liu, H, Chuang, Y, Birder, L, Chancellor, M	Pilot study of liposome-encapsulated onabotulinumtoxina for patients with overactive bladder: a single-center study	European urology	<90% women with UI or % women with UI not specified
no PMID	Kuo, Y., Jiang, Y., Ong, H., Kuo, H.	Comparative study between different combination of mirabegron (25 or 50 mg) and antimuscarinics in treatment of OAB patients	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
28776345	Kwon, T. Oh, T. H. Choi, S. Cho, W. Y. Min, K. Lee, J. Z. Moon, K. H.	Influence of Daytime or Nighttime Dosing with Solifenacin for Overactive Bladder with Nocturia: Impact on Nocturia and Sleep Quality	J Korean Med Sci	<90% women with UI or % women with UI not specified
no PMID	Layton, D., Tong, E., Al-Shukri, M., Shakir, S. A. W.	Potential determinants of suicidal ideation and suicide attempt in users of duloxetine	Pharmacoepidemiology and Drug Safety	Not peer reviewed publication
24246210	Lee, K. S., Park, B., Kim, J. H., Kim, H. G., Seo, J. T., Lee, J. G., Jang, Y., Choo, M. S.	A randomised, double-blind, parallel design, multi-institutional, non-inferiority phase IV trial of imidafenacin versus fesoterodine for overactive bladder	International Journal of Clinical Practice	<90% women with UI or % women with UI not specified
no PMID	Lee, K., Lee, Y., Chung, J. W., Lee, S. H., Moon, K. H., Jung, H. C., Choi, S., Choo, M.	Persistence of solifenacin treatment in overactive bladder patients in real life practice: A 12-month, prospective, multicenter, open-label, observational study	Neurourology and Urodynamics	Not peer reviewed publication
112127971	Lee, L. K., Goren, A., Zou, K. H., Odell, K., Russell, D., Araiza, A. L., Luo, X.	Potential benefits of diagnosis and treatment on health outcomes among elderly people with symptoms of overactive bladder	International Journal of Clinical Practice (Supplement)	<90% women with UI or % women with UI not specified
21849011	Lee, Y. S., Choo, M. S., Lee, J. Y., Oh, S. J., Lee, K. S.	Symptom change after discontinuation of successful antimuscarinic treatment in patients with overactive bladder symptoms: a randomised, multicentre trial	Int J Clin Pract	<90% women with UI or % women with UI not specified
no PMID	Lehmann, C. Zipponi, I. Baumann, M. U. Radlinger, L. Mueller, M. D. Kuhn, A.	Standardized pelvic floor exercises improve stress urinary incontinence in women with intrinsic sphincter deficiency	Neurourology and Urodynamics	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
27087507	Leng, J. Liao, L. Wan, B. Du, C. Li, W. Xie, K. Shen, Z. Xu, Z. Wu, S. Fang, Z. Ma, L. Han, S. Feustel, C. Yang, Y. Madersbacher, H.	Results of a randomized, double-blind, active-controlled clinical trial with propiverine extended release 30 mg in patients with overactive bladder	BJU Int	<90% women with UI or % women with UI not specified
21168881	Leong, R. K., Marcelissen, T. A., Nieman, F. H., De Bie, R. A., Van Kerrebroeck, P. E., De Wachter, S. G.	Satisfaction and patient experience with sacral neuromodulation: results of a single center sample survey	J Urol	<90% women with UI or % women with UI not specified
22777375	Levin, P. J., Wu, J. M., Siddiqui, N. Y., Amundsen, C. L.	Does obesity impact the success of an InterStim test phase for the treatment of refractory urge urinary incontinence in female patients?	Female Pelvic Med Reconstr Surg	Not comparative and no adverse events or N<100
24079114	Lewthwaite, B. J., Staley, D., Girouard, L., Maslow, K.	Characteristics of women with continued use of vaginal pessaries	Urologic nursing	<90% women with UI or % women with UI not specified
no PMID	Liao, C. H., Chen, S. F., Kuo, H. C.	Different number of intravesical onabotulinumtoxinA injections for patients with refractory detrusor overactivity do not affect treatment outcome: A prospective randomized comparative study	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
no PMID	Liao, C. H., Kuo, H. C.	Increased risk of large post-void residual urine and decreased long-term success rate after intravesical onabotulinumtoxina injection for refractory idiopathic detrusor overactivity	Journal of Urology	<90% women with UI or % women with UI not specified
no PMID	Liao, C., Jiang, Y., Kuo, H.	Prospective randomized comparative study of intravesical onabotulinumtoxin a injection with different injection number for overactive bladder syndrome	Neurourology and Urodynamics	Not peer reviewed publication
28953573	Liberman, D. Milhouse, O. Johnson-Mitchell, M. Siegel, S. W.	Real-World Retention Rates After Intravesical OnabotulinumtoxinA for Idiopathic Overactive Bladder	Female Pelvic Med Reconstr Surg	<90% women with UI or % women with UI not specified
22510279	Liebergall-Wischnitzer, Michal, Paltiel, Ora, Celnikier, Drorith Hochner, Lavy, Yuval, Manor, Orly, Woloski Wruble, Anna C.	Sexual function and quality of life of women with stress urinary incontinence: A randomized controlled trial comparing the Paula method (circular muscle exercises) to pelvic floor muscle training (PFMT) exercises	Journal of Sexual Medicine	covered by 2011 review or secondary publication with no new results
no PMID	Lim, R., Liong, M. L., Leong, W. S., Yuen, K. H.	Effect of pulsed magnetic stimulation on quality of life of patients with stress urinary incontinence	BJU International	Not peer reviewed publication
no PMID	Linder, M., Margulis, A. V., Anveden-Berglind, I., Bahmanyar, S., Bui, C. L., Atsma, W. J., Appenteng, K., Franks, B., De Vogel, S., D'Silva, M., Perez-Gutthann, S., Arana, A.	Cardiovascular risk in users of antimuscarinic drugs for overactive bladder: A cohort study in the swedish national registers	Pharmacoepidemiology and Drug Safety	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Linder, M., Margulis, A. V., Anveden-Berglind, I., Bahmanyar, S., Bui, C. L., Jan Atsma, W., Appenteng, K., Franks, B., De Vogel, S., D'Silva, M., Perez-Gutthann, S., Arana, A.	Cancer risk in users of antimuscarinic drugs for overactive bladder: A cohort study in the swedish national registers	Pharmacoepidemiology and Drug Safety	Not peer reviewed publication
21735385	Lipp, A. Shaw, C. Glavind, K.	Mechanical devices for urinary incontinence in women	Cochrane Database Syst Rev	No primary data or no usable results
24438613	Liu, M., Wang, J., Yang, Y., An, R., Wen, J., Guan, Z., Zheng, S., Wang, D., Song, B., Liao, L., Guo, H., Xiao, J., Sun, Y., Shen, Z., Kong, C., He, D., Huang, Y., Wang, X., Zhang, X., Li, H., Huang, J., Zhao, X., Zeng, P., Song, X., Ye, Z.	Overactive bladder symptom score to evaluate efficacy of solifenacin for the treatment of overactive bladder symptoms	Chin Med J (Engl)	<90% women with UI or % women with UI not specified
26964164	Liu, S., Li, N., Zhang, Y., Zhang, X., Xi, J., Zhao, M., Yu, W., Zhou, G., Li, X., Zhang, K.	[Clinical observation of acupoint application therapy on senile female bladder neck obstruction]	Zhongguo Zhen Jiu	<90% women with UI or % women with UI not specified
no PMID	Lone, F., Thakar, R., Sultan, A. H.	One-year prospective comparison of vaginal pessaries and surgery for pelvic organ prolapse using the validated ICIQ-VS and ICIQ-UI (SF) questionnaires	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100
24565934	Lopes, P., Levy-Toledano, R., Chiarelli, P., Rimbault, F., Mares, P.	[Multicentric prospective randomized study evaluating the interest of intravaginal electro-stimulation at home for urinary incontinence after prior perineal reeducation. Interim analysis]	Gynecol Obstet Fertil	duplicate publication
no PMID	Lowenstein, L., Rickey, L., Kenton, K., FitzGerald, M. P., Brubaker, L., Tulke, M., Fordham, J., Mueller, E. R.	Reliability and responsiveness of the Urgency Severity and Life Impact Questionnaire (USIQ)	International Urogynecology Journal	Not comparative and no adverse events or N<100
no PMID	Lua, L. L., Pathak, P., Dandolu, V.	Comparing anticholinergic persistence and adherence profiles in overactive bladder patients based on gender, obesity, and major anticholinergic agents	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
27063854	MacDiarmid, S., Al-Shukri, S., Barkin, J., Fianu-Jonasson, A., Grise, P., Herschorn, S., Saleem, T., Huang, M., Siddiqui, E., Stolzel, M., Hemsted, C., Nazir, J., Hakimi, Z., Drake, M. J.	Mirabegron as Add-On Treatment to Solifenacin in Patients with Incontinent Overactive Bladder and an Inadequate Response to Solifenacin Monotherapy	J Urol	<90% women with UI or % women with UI not specified
no PMID	Malde, S., Dowson, C., Fraser, O., Watkins, J., Khan, M. S., DasGupta, P., Sahai, A.	Patient experience and satisfaction with Onabotulinumtoxin A for refractory overactive bladder	BJU International	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00872027	Malone-Lee, J Denver, E	A randomised, double blind, placebo controlled, crossover trial of the adjuvant properties of imipramine for the overactive bladder (Trials Registry number: ISRCTN31004502)	ISRCTN Register (available at: http://isrctn.org/ISRCTN31004502)	Not peer reviewed publication
22078337	Manecksha, R. P. Cullen, I. M. Ahmad, S. McNeill, G. Flynn, R. McDermott, T. E. Grainger, R. Thornhill, J. A.	Prospective randomised controlled trial comparing trigone-sparing versus trigone-including intradetrusor injection of abobotulinumtoxinA for refractory idiopathic detrusor overactivity	Eur Urol	<90% women with UI or % women with UI not specified
CN-01015706	Manjunatha, R	A prospective, randomized, single blind study of ocular side effects of darifenacin and trospium in overactive bladder	Http://www.ctri.nic.in/Clinicaltrials/pmaindet2.php?trialid = 9289	Not peer reviewed publication
25954630	Manjunatha, R., Pundarikaksha, H. P., Hanumantharaju, B. K., Anusha, S. J.	A prospective, comparative study of the occurrence and severity of constipation with darifenacin and trospium in overactive bladder	J Clin Diagn Res	Not comparative and no adverse events or N<100
no PMID	Manonai, J., Kamthaworn, S., Petsarb, K., Wattanayingcharoenchai, R.	Development of a pelvic floor muscle strength evaluation device	Neurourology and Urodynamics	duplicate publication
26645117	Manriquez, V., Guzman, R., Naser, M., Aguilera, A., Narvaez, S., Castro, A., Swift, S., Digesu, G. A.	Transcutaneous posterior tibial nerve stimulation versus extended release oxybutynin in overactive bladder patients. A prospective randomized trial	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified
CN-00899433	Manshadi, Fd, Parnianpour, M, Ghanbari, Z, Sarrafzadeh, J, Kazemnejad, A	An ultrasonic investigation of stability of pelvic floor in women with and without urinary stress incontinence	Iranian Journal of Obstetrics, Gynecology and Infertility	Not comparative and no adverse events or N<100
27272312	Marcelissen, T. A., Rahnama'i, M. S., Snijkers, A., Schurch, B., De Vries, P.	Long-term follow-up of intravesical botulinum toxin-A injections in women with idiopathic overactive bladder symptoms	World J Urol	<90% women with UI or % women with UI not specified
29134254	Margulis, A. V. Hallas, J. Pottegard, A. Kristiansen, N. S. Atsma, W. J. Franks, B. D'Silva, M. Varas-Lorenzo, C. Perez-Gutthann, S. Arana, A.	Comparison of cardiovascular events among treatments for overactive bladder: a Danish nationwide cohort study	Eur J Clin Pharmacol	<90% women with UI or % women with UI not specified
no PMID	Margulis, A. V., McQuay, L. J., Perez-Gutthann, S., Kaye, J. A., Arana, A.	Use of overactive bladder medications in the adult population of the UK: A cohort study in the clinical practice research datalink	Pharmacoepidemiology and Drug Safety	<90% women with UI or % women with UI not specified
25919573	Marinkovic, S. P., Gillen, L. M., Marinkovic, C. M.	Neuromodulation for Overactive Bladder Symptoms in Women Utilizing Either Motor or Sensory/Motor Provocation With a Minimum Nine-Year Follow-Up	Neuromodulation	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Martan, A., Krhut, J., Masata, J., Hanus, T., Svabik, K., Zachoval, R., Halaska, M.	Persistence in the treatment of OAB with mirabegron in a multicenter clinical study	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
28073038	Martan, A., Masata, J., Krhut, J., Zachoval, R., Hanus, T., Svabik, K.	Persistence in the treatment of overactive bladder syndrome (OAB) with mirabegron in a multicenter clinical study	Eur J Obstet Gynecol Reprod Biol	covered by 2011 review or secondary publication with no new results
26265411	Martan, A., Masata, J., Svabik, K., Hanus, T., Krhut, J.	[Persistence in the treatment of overactive bladder (OAB) with Mirabegron in a multicentre clinical study]	Ceska Gynekol	covered by 2011 review or secondary publication with no new results
25932920	Martina, R., Kay, R., Abrams, P., van Maanen, R., Ridder, A.	A clinical perspective on the analysis and presentation of the number of incontinence episodes following treatment for OAB	Neurourol Urodyn	No primary data or no usable results
no PMID	Masumori, N., Funato, Y., Yamaguchi, Y., Itoh, K.	Evaluation of Usefulness of Propiverine Hydrochloride in Poor Responders to Previous Anticholinergics	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Medarov, B. I., Chaudhry, H., Sun, J. H., Rane, N., Judson, M. A.	Effect of SSRIs and SNRIs on Nocturnal Urinary Frequency	Annals of Pharmacotherapy	<90% women with UI or % women with UI not specified
no PMID	Meriwether, K. V. Komesu, Y. M. Craig, E. Qualls, C. Davis, H Rogers, R. G.	Sexual Function and Pessary Management among Women Using a Pessary for Pelvic Floor Disorders	Journal of Sexual Medicine	<90% women with UI or % women with UI not specified
no PMID	Meyer, C. Pucheril, D. Karabon, P. Gild, P. Von Landenberg, N. Atiemo, H. Menon, M. Chughtai, B. Fisch, M. Chun, F. Trinh, Q. D.	Antimuscarinic use in the elderly: A poisoned apple?	European Urology, Supplements	Not peer reviewed publication
21351125	Michel, M. C., Oelke, M., Vogel, M., de la Rosette, J. J.	Which single-item measures of overactive bladder symptom treatment correlate best with patient satisfaction?	Neurourol Urodyn	<90% women with UI or % women with UI not specified
no PMID	Michel, M., Von Keitz, A., Ohlstein, E.	The beta-3 adrenoceptor agonist solabegron is effective and safe for improving symptoms of overactive bladder	Journal of Urology	Not peer reviewed publication
25141907	Minardi, D Pellegrinelli, F Conti, A Fontana, D Mattia, M Milanese, G Muzzonigro, G	a1-Blockers for the treatment of recurrent urinary tract infections in women with dysfunctional voiding: a prospective randomized study	International journal of urology : official journal of the Japanese Urological Association	<90% women with UI or % women with UI not specified
27889830	Miotla, P., Cartwright, R., Skorupska, K., Bogusiewicz, M., Markut-Miotla, E., Futyma, K., Rechberger, T.	Urinary retention in female OAB after intravesical Botox injection: who is really at risk?	Int Urogynecol J	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
22672569	Mohee, A., Khan, A., Harris, N., Eardley, I.	Long-term outcome of the use of intravesical botulinum toxin for the treatment of overactive bladder (OAB)	BJU Int	<90% women with UI or % women with UI not specified
24335927	Mohktar, M. S. Ibrahim, F. Mohd Rozi, N. F. Mohd Yusof, J. Ahmad, S. A. Su Yen, K. Omar, S. Z.	A quantitative approach to measure women's sexual function using electromyography: a preliminary study of the Kegel exercise	Med Sci Monit	<90% women with UI or % women with UI not specified
no PMID	Moore, C., Kaufmann, A., Joshi, M., Zheng, Y., Herschorn, S.	Onabotulinumtoxina has a positive safety and efficacy profile in overactive bladder (OAB) patients <65 and >=65 years of age	Neurourology and Urodynamics	Not peer reviewed publication
CN-01333885	Mueller, Er Robinson, D Kelleher, C Staskin, Dr Falconer, C Wang, J Ridder, A Stoelzel, M Paireddy, A Maanen, R Hakimi, Z Herschorn, S	Patient reported outcomes from synergy, a randomized, double-blind, multicenter study evaluating combinations of mirabegron and solifenacin compared with mirabegron and solifenacin monotherapy	Neurourology and urodynamics. Conference: 2017 winter meeting of the society of urodynamics, female pelvic medicine and urogenital reconstruction, SUFU 2017. United states. Conference start: 20170228. Conference end: 20170304	Not peer reviewed publication
22453270	Myers, D. L., Sung, V. W., Richter, H. E., Creasman, J., Subak, L. L.	Prolapse symptoms in overweight and obese women before and after weight loss	Female Pelvic Med Reconstr Surg	No primary data or no usable results
28260277	Nalliah, S. Wg, P. Masten Singh, P. K. Naidu, P. Lim, V. Ahamed, A. A.	Comparison of efficacy and tolerability of pharmacological treatment for the overactive bladder in women: A network meta-analysis	Australian family physician	No primary data or no usable results
29140559	Nazir, J. Kelleher, C. Aballea, S. Maman, K. Hakimi, Z. Mankowski, C. Odeyemi, I.	Comparative efficacy and tolerability of solifenacin 5 mg/day versus other oral antimuscarinic agents in overactive bladder: A systematic literature review and network meta-analysis	Neurourol Urodyn	No primary data or no usable results
21532512	Nelken, R. S., Ozel, B. Z., Leegant, A. R., Felix, J. C., Mishell Jr, D. R.	Randomized trial of estradiol vaginal ring versus oral oxybutynin for the treatment of overactive bladder	Menopause	covered by 2011 review or secondary publication with no new results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Ng, K. L., Ting, J. R. S., Ong, T. A., Khong, S. Y., Razack, A. H.	Randomised controlled trial comparing standard pelvic floor muscle exercises versus vibrance kegel device enhanced pelvic floor muscle exercises in women with urinary stress incontinence	BJU International	Not peer reviewed publication
23246476	Nitti VW1, Dmochowski R, Herschorn S, Sand P, Thompson C, Nardo C, Yan X, Haag-Molkenteller C; EMBARK Study Group.	OnabotulinumtoxinA for the treatment of patients with overactive bladder and urinary incontinence: results of a phase 3, randomized, placebo controlled trial.	J. Urol	<90% women with UI or % women with UI not specified
no PMID	Nitti, V. Drake, M. Everaert, K. Rovner, E. Dmochowski, R. Ginsberg, D. Radomski, S. Aboushwareb, T. Chang, C. Chapple, C.	Low incidence of clean intermittent catheterisation with onabotulinumtoxina in diverse age groups of overactive bladder patients with corresponding improvements in urinary symptoms, treatment response, and quality of life	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Nitti, V. Herschorn, S. Auerbach, S. Ayers, M. Lee, M. Martin, N.	The efficacy and safety of mirabegron in patients with overactive bladder syndrome - Results from a North-American phase III trial	European Urology, Supplements	Not peer reviewed publication
no PMID	Nitti, V. Rovner, E. Drake, M. Everaert, K. Radomski, S. Chapple, C. R. Ginsberg, D. Aboushwareb, T. Chang, C. T. Dmochowski, R.	Low incidence of clean intermittent catheterization with onabotulinumtoxina in diverse age groups of overactive bladder patients with substantial improvements in treatment response	Journal of Urology	Not peer reviewed publication
23692526	Nitti, V. W. Khullar, V. van Kerrebroeck, P. Herschorn, S. Cambronero, J. Angulo, J. C. Blauwet, M. B Dorrepaal, C. Siddiqui, E. Martin, N. E.	Mirabegron for the treatment of overactive bladder: a prespecified pooled efficacy analysis and pooled safety analysis of three randomised, double-blind, placebo-controlled, phase III studies	Int J Clin Pract	<90% women with UI or % women with UI not specified
no PMID	Nitti, V. W. Rovner, E. Dmochowski, R. Chapple, C. R. Ginsberg, D. Robinson, D. Aboushwareb, T. A. Chang, C. Hale, D. S.	Low risk of clean intermittent catheterization with onabotulinumtoxina in different age groups of female patients with overactive bladder with substantial improvements in urinary symptoms and quality of life	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
23079373	Nitti, V. W., Auerbach, S., Martin, N., Calhoun, A., Lee, M., Herschorn, S.	Results of a randomized phase III trial of mirabegron in patients with overactive bladder	J Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
24703195	Nitti, V. W., Chapple, C. R., Walters, C., Blauwet, M. B., Herschorn, S., Milsom, I., Auerbach, S., Radziszewski, P.	Safety and tolerability of the beta3 -adrenoceptor agonist mirabegron, for the treatment of overactive bladder: results of a prospective pooled analysis of three 12-week randomised Phase III trials and of a 1-year randomised Phase III trial	Int J Clin Pract	<90% women with UI or % women with UI not specified
28012773	Nitti, V. W., Dmochowski, R., Herschorn, S., Sand, P., Thompson, C., Nardo, C., Yan, X., Haag-Molkenteller, C.	OnabotulinumtoxinA for the Treatment of Patients with Overactive Bladder and Urinary Incontinence: Results of a Phase 3, Randomized, Placebo Controlled Trial	J Urol	<90% women with UI or % women with UI not specified
no PMID	Nitti, V. W., Dmochowski, R., Herschorn, S., Sand, P., Thompson, C., Nardo, C., Yan, X., Haag-Molkenteller, C.	OnabotulinumtoxinA for the treatment of patients with overactive bladder and urinary incontinence: Results of a phase 3, randomized, placebo controlled trial	Journal of Urology	duplicate publication
no PMID	Nitti, V. W., Rovner, E. S., Franks, B., Muma, G. N., Berner, T., Fan, A., Ng, D. B.	Persistence with mirabegron versus tolterodine in patients with overactive bladder	American Journal of Pharmacy Benefits	<90% women with UI or % women with UI not specified
no PMID	Nitti, V., Chapple, C. R., Amarenco, G., Radziszewski, P., Angulo, J., Blauwet, M. B., Siddiqui, E., Martin, N.	The incidence of antimuscarinic-associated side effects in overactive bladder (OAB) patients treated with mirabegron: Results of a pooled analysis of 3 randomised phase 3 trials	European Urology, Supplements	Not peer reviewed publication
no PMID	Nitti, V., Dmochowski, R., Sand, P., Thompson, C., Yan, X., Herschorn, S.	Onabotulinumtoxina improves symptoms of overactive bladder, including nocturia	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Nitti, V., Herschorn, S., Auerbach, S., Ayers, M., Lee, M., Martin, N.	The selective Beta-adrenoreceptor agonist mirabegron is effective and well tolerated in patients with overactive bladder syndrome	Journal of Urology	<90% women with UI or % women with UI not specified
no PMID	Nitti, V., Herschorn, S., Auerbach, S., Khullar, V., Amarenco, G., Blauwet, M. B., Boerrigter, P., Hakimi, Z., Siddiqui, E., Martin, N.	The potent and selective Beta-adrenoceptor agonist mirabegron improves patient-reported outcomes in overactive bladder-results from two phase III studies	Neurourology and Urodynamics	Not peer reviewed publication
27491027	Noblett, K. Benson, K. Kreder, K.	Detailed analysis of adverse events and surgical interventions in a large prospective trial of sacral neuromodulation therapy for overactive bladder patients	Neurourol Urodyn	<90% women with UI or % women with UI not specified
no PMID	Noblett, K. Mangel, J. Comiter, C. Zylstra, S.Bird, E. T. Griebling, T. L. Culkin, D. Sutherland, S. E. Berg, K. Kan, F. Siegel, S.	Concomitant overactive bladder medication usage after sacral neuromodulation implant	Journal of Urology	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
25546568	Noblett, K., Siegel, S., Mangel, J., Griebling, T. L., Sutherland, S. E., Bird, E. T., Comiter, C., Culkin, D., Bennett, J., Zylstra, S., Kan, F., Berg, K. C.	Results of a prospective, multicenter study evaluating quality of life, safety, and efficacy of sacral neuromodulation at twelve months in subjects with symptoms of overactive bladder	Neurourol Urodyn	<90% women with UI or % women with UI not specified
CN-01333901	Noblett, Kl Bennett, J Mangel, J Comiter, Cv Zylstra, S Bird, Et Griebling, Tl Culkin, Dj Sutherland, Se Berg, Kc Kan, F Siegel, Sw	Evaluation of quality of life improvements at 5 years in subjects with overactive bladder treated with sacral neuromodulation using the interstim system	Neurourology and urodynamics. Conference: 2017 winter meeting of the society of urodynamics, female pelvic medicine and urogenital reconstruction, SUFU 2017. United states. Conference start: 20170228. Conference end: 20170304	Not peer reviewed publication
23052979	Notz, H. J., Hautumm, B., Werdier, D., Groves, R., Odenthal, K. P.	[Trospium chloride once daily for overactive bladder syndrome: results of a multicenter observational study]	Urologe A	<90% women with UI or % women with UI not specified
no PMID	Nozawa, Y., Kato, D., Tabuchi, H., Kuroishi, K.	Safety and Effectiveness of Mirabegron in Patients with Overactive Bladder in a Real-World Clinical Setting: A Japanese Post-Marketing Study	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
28323043	Oberg, J. Verelst, M. Jorde, R. Cashman, K. Grimnes, G.	High dose vitamin D may improve lower urinary tract symptoms in postmenopausal women	J Steroid Biochem Mol Biol	<90% women with UI or % women with UI not specified
28220521	Obloza, A. Kirby, J. Yates, D. Toozs-Hobson, P.	Indirect treatment comparison (ITC) of medical therapies for an overactive bladder	Neurourol Urodyn	No primary data or no usable results
no PMID	Oelke, M.,,erson, P., Wood, R., Holm-Larsen, T.	Nocturia is often inadequately assessed, diagnosed and treated by physicians: results of an observational, real-life practice database containing 8659 European and US-American patients	International Journal of Clinical Practice	No primary data or no usable results
21826713	Oerlemans, D. J., van Voskuilen, A. C., Marcelissen, T., Weil, E. H., de Bie, R. A., Van Kerrebroeck, P. E.	Is on-demand sacral neuromodulation in patients with OAB syndrome a feasible therapy regime?	Neurourol Urodyn	<90% women with UI or % women with UI not specified
no PMID	Ogihara, K., Kaguyama, H., Hanashima, F., Sakamoto, H., Aonuma, K., Nakahira, Y., Yanaihara, H., Asakura, H.	Persistence with mirabegron in female patients with overactive bladder: A comparative study of mirabegron and antimuscarinics	Female Pelvic Medicine and Reconstructive Surgery	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Ohlstein, E. H., Michel, M. C., Von Keitz, A.	The beta-3 adrenoceptor agonist solabegron is safe and effective for improving symptoms of overactive bladder	European Urology, Supplements	Not peer reviewed publication
28977091	Oliveira, M. Ferreira, M. Azevedo, M. J. Firmino-Machado, J. Santos, P. C.	Pelvic floor muscle training protocol for stress urinary incontinence in women: A systematic review	Rev Assoc Med Bras (1992)	No primary data or no usable results
no PMID	Orhan, C. Akbayrak, T. Kaya, S. Baran, E. Uzelpasaci, E. Nakip, G.	The effects of vaginal tampon training added to pelvic floor muscle training in women with stress urinary incontinence: A randomized controlled trial	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Osborn, D. J., Kaufman, M. R., Mock, S., Guan, M. J., Dmochowski, R. R., Reynolds, W. S.	Urinary retention rates after intravesical onabotulinumtoxinA injection for idiopathic overactive bladder in clinical practice and predictors of this outcome	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
no PMID	Osborn, D., Kaufman, M., Mock, S., Gowda, M., Okunbor, O., Zhang, X., Rice, N., Guan, M., Dmochowski, R., Reynolds, W. S.	Urinary retention rates after intravesical onabotulinumtoxina injection for overactive bladder in clinical practice and predictors of this outcome	Neurourology and Urodynamics	duplicate publication
27686226	Otsuka, A., Kageyama, S., Suzuki, T., Matsumoto, R., Nagae, H., Kitagawa, M., Furuse, H., Ozono, S.	Comparison of mirabegron and imidafenacin for efficacy and safety in Japanese female patients with overactive bladder: A randomized controlled trial (COMFORT study)	Int J Urol	<90% women with UI or % women with UI not specified
26756171	Owen, R. K., Abrams, K. R., Mayne, C., Slack, M., Tincello, D. G.	Patient factors associated with onabotulinum toxin A treatment outcome in women with detrusor overactivity	Neurourol Urodyn	<90% women with UI or % women with UI not specified
27564599	Owen, R. K., Abrams, K. R., Mayne, C., Slack, M., Tincello, D. G.	Comparison of the effectiveness of repeated injections of onabotulinum toxin A for refractory idiopathic detrusor overactivity: analysis of an open label extension of a randomized trial (the RELAX study)	Neurourol Urodyn	<90% women with UI or % women with UI not specified
20212061	Ozdedeli, S, Karapolat, H, Akkoc, Y	Comparison of intravaginal electrical stimulation and trospium hydrochloride in women with overactive bladder syndrome: a randomized controlled study	Clinical rehabilitation	covered by 2011 review or secondary publication with no new results
no PMID	Ozen Tunay, Z. Ozdemir, O. Ergintürk Acar, D. Cavkaytar, S. Ersoy, E.	Dry eye findings worsen with anticholinergic therapy in patients with urge incontinence	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Pai, A., Al-Singary, W.	Durability, safety and efficacy of polyacrylamide hydrogel (BulkamidÂ®) in the management of stress and mixed urinary incontinence: Three year follow up outcomes	Central European Journal of Urology	duplicate publication
no pmid	Pai, A., Al-Singary, W.	Polyacrylamide hydrogel (bulkamidÂ®) in the treatment of female stress urinary incontinence: Three year follow up outcomes	Journal of Urology	Not peer reviewed publication
27504918	Panman, C. M. Wiegersma, M. Kollen, B. J. Berger, M. Y. Lisman-van Leeuwen, Y. Vermeulen, K. M. Dekker, J. H.	Effectiveness and cost-effectiveness of pessary treatment compared with pelvic floor muscle training in older women with pelvic organ prolapse: 2-year follow-up of a randomized controlled trial in primary care	Menopause	duplicate publication
CN-01328270	Panman, Cmcr, Wiegersma, M, Kollen, Bj, Berger, My, Lisman-Van, Leeuwen Y, Vermeulen, Km, Dekker, Jh	Effectiveness and cost-effectiveness of pessary treatment compared with pelvic floor muscle training in older women with pelvic organ prolapse: 2-year follow-up of a randomized controlled trial in primary care	Menopause (new york, N.Y.)	<90% women with UI or % women with UI not specified
CN-00962133	Park, C, Park, J, Choo, Ms, Kim, Jc, Lee, Jg, Lee, Jz, Lee, Ks, Kim, Dy, Lee, Sj, Seo, Jt	A randomised, prospective double-blind, propiverine-controlled trial of imidafenacin in patients with overactive bladder	International journal of clinical practice	<90% women with UI or % women with UI not specified
25503446	Park, J. Chun, J. Y. Kim, J. H. Cheon, S. Y. Song, M. Choo, M. S. Lee, K. S. Oh, S. J. Kim, J. C. Choi, J. B. Seo, J. T. Cho, S. Y.	A prospective, observational study to assess the association between dry mouth and solifenacin treatment in patients with overactive bladder syndrome	Int Urol Nephrol	<90% women with UI or % women with UI not specified
no PMID	Parker-Autry, C., Houston, D., Rushing, J., Richter, H., Subak, L., Kanaya, A., Kritchevsky, S.	The decline in physical performance and onset of sarcopenia is associated with the development of urinary incontinence in older community dwelling women	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
21417653	Patel-Gadhia, R., Bhal, K., Patil, P.	Retrospective audit on tolerability and efficacy of duloxetine for stress urinary incontinence	J Obstet Gynaecol	Not comparative and no adverse events or N<100
23647446	Pavesi, M., Devlin, N., Hakimi, Z., Nazir, J., Herdman, M., Hoyle, C., Odeyemi, I. A.	Understanding the effects on HR-QoL of treatment for overactive bladder: a detailed analysis of EQ-5D clinical trial data for mirabegron	J Med Econ	<90% women with UI or % women with UI not specified
24238278	Peeters, K. Sahai, A. De Ridder, D. Van Der Aa, F.	Long-term follow-up of sacral neuromodulation for lower urinary tract dysfunction	BJU Int	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00112534	Pennisi, M Grasso-Leanza, F Panella, P Pepe, P	Rehabilitation therapy in the treatment of female urinary incontinence. Our experience with 121 patients	Minerva urologica e nefrologica [Italian journal of urology and nephrology]	Not comparative and no adverse events or N<100
no PMID	Pereira, V. S., De Melo, M. V., Correia, G. N., Driusso, P.	Pelvic floor muscle training versus vaginal cones for postmenopausal women with stress urinary incontinence: A randomized, controlled clinical trial	International Urogynecology Journal and Pelvic Floor Dysfunction	duplicate publication
no PMID	Pereira, V. S., De Melo, M. V., Correia, G. N., Driusso, P.	Vaginal cone for postmenopausal women with stress urinary incontinence: Randomized, controlled trial	Climacteric	duplicate publication
no pmid	Perez, A., Palau, M. J., Sanchez, E., Rodriguez, L., Flores, L., Hergueta, B. N., Rovira, J., EspuÃ±a-Pons, M.	Long-term study on the effect of weight loss in women with obesity and urinary incontinence	Neurourology and Urodynamics	Not peer reviewed publication
28770296	Pergialiotis, V. Prodromidou, A. Perrea, D. N. Doumouchtsis, S. K.	A systematic review on vaginal laser therapy for treating stress urinary incontinence: Do we have enough evidence?	Int Urogynecol J	No primary data or no usable results
no PMID	Peters, K. M., Killinger, K. A., Gilleran, J., Boura, J. A.	Does patient age impact outcomes of neuromodulation?	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
26669282	Pindoria, N. Malde, S. Nowers, J. Taylor, C. Kelleher, C. Sahai, A.	Persistence with mirabegron therapy for overactive bladder: A real life experience	Neurourol Urodyn	<90% women with UI or % women with UI not specified
22161726	Pinto, A. M., Subak, L. L., Nakagawa, S., Vittinghoff, E., Wing, R. R., Kusek, J. W., Herman, W. H., West, D. S., Kuppermann, M.	The effect of weight loss on changes in health-related quality of life among overweight and obese women with urinary incontinence	Quality of life research : an international journal of quality of life aspects of treatment, care and rehabilitation	covered by 2011 review or secondary publication with no new results
no PMID	Ploger, C., Stüpp, L., Skaff, D. L., Binharde, J. V., Saraiva, A., Rizzo, E. P.	Evaluation of the effectiveness of intravaginal and posterial tibial nerve electrical stimulation as a treatment option in women with overactive bladder syndrome	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100
no PMID	Pollard, E. Egerdie, B. Rangaswamy, S.	Real-world rates of clean intermittent catheterization following onabotulinumtoxinA treatment for idiopathic overactive bladder	Canadian Urological Association Journal	Not peer reviewed publication
no PMID	Porta Roda, O., Simo Gonzalez, M., Reula Blasco, M. C., Diaz Lopez, M. A., Diaz Bellido, P., Vara Paniagua, J., Sobrado Lozano, P., Muñoz Garrido, F.	Use of a vaginal spheres device in the conservative treatment of stress urinary incontinence: A randomized controlled trial	Neurourology and Urodynamics	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-01177077	Porta, Roda O, Diaz, Lopez Ma, Vara, Paniagua J, Simo, Gonzalez M, Diaz, Bellido P, Espinos, Gomez Jj	Adherence to pelvic floor muscle training with or without vaginal spheres in women with urinary incontinence: a secondary analysis from a randomized trial	International urogynecology journal and pelvic floor dysfunction	covered by 2011 review or secondary publication with no new results
26073262	Preyer, O., Umek, W., Laml, T., Bjelic-Radisic, V., Gabriel, B., Mittlboeck, M., Hanzal, E.	Percutaneous tibial nerve stimulation versus tolterodine for overactive bladder in women: a randomised controlled trial	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified
28556806	Ptak, M. Brodowska, A. Rotter, I.	Quality of life in women with stage 1 stress urinary incontinence after application of conservative treatment: a randomized trial	International Journal of Environmental Research and Public Health	Not intervention/comparison of interest
no PMID	Pucheril, D. Meyer, C. P. Karabon, P. Atiemo, H. Menon, M. Trinh, Q. D. Chughtai, B.	Antimuscarinic use in the elderly: A poisoned apple?	Journal of Urology	Not peer reviewed publication
no PMID	Quentin Clemens, J. Chen, C. I. Bavendam, T. Zou, K. H. Goren, A. Gupta, S.	Work productivity associated with treated versus never-treated overactive bladder symptoms	American Journal of Pharmacy Benefits	<90% women with UI or % women with UI not specified
28083714	Rachaneni, S. Latthe, P.	Effectiveness of BTX-A and neuromodulation in treating OAB with or without detrusor overactivity: a systematic review	Int Urogynecol J	No primary data or no usable results
no PMID	Ramsay, S. Tu, L.	Pessary use as a conservative treatment for pelvic organ prolapse	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
CN-01159295	Rana, M, Mobusher, I	Comparison of side effects of tolterodine and solifenacinsucinate in patients with urinary incontinence	Pakistan Journal of Medical and Health Sciences	<90% women with UI or % women with UI not specified
23490404	Ravindra, P., Jackson, B. L., Parkinson, R. J.	Botulinum toxin type A for the treatment of non-neurogenic overactive bladder: does using onabotulinumtoxinA (Botox) or abobotulinumtoxinA (Dysport) make a difference?	BJU Int	<90% women with UI or % women with UI not specified
no PMID	Rechberger, T., Parsons, M., Guard, S., Zheng, Y., Ginsberg, D.	Repeat treatments with onabotulinumtoxina provide long-term improvements in symptoms of overactive bladder in female patients with urinary incontinence who are inadequately managed byan anticholinergic	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Richmond, C. F., Martin, D. K., Yip, S. O., Dick, M. A., Erekson, E. A.	Effect of Supervised Pelvic Floor Biofeedback and Electrical Stimulation in Women with Mixed and Stress Urinary Incontinence	Female Pelvic Medicine and Reconstructive Surgery	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
28089729	Richter, H. E. Moalli, P. Amundsen, C. L. Malykhina, A. P. Wallace, D. Rogers, R. Myers, D. Paraiso, M. Albo, M. Shi, H. Nolen, T. Meikle, S. Word, R. A.	Urinary Biomarkers in Women with Refractory Urgency Urinary Incontinence Randomized to Sacral Neuromodulation versus OnabotulinumtoxinA Compared to Controls	J Urol	No primary data or no usable results
104041238	Riley, Mary Alyce, Organist, Linda	Streamlining Biofeedback For Urge Incontinence	Urologic Nursing	Not comparative and no adverse events or N<100
28444711	Robinson, D. Hanna-Mitchell, A. Rantell, A. Thiagamoorthy, G. Cardozo, L.	Are we justified in suggesting change to caffeine, alcohol, and carbonated drink intake in lower urinary tract disease? Report from the ICI-RS 2015	Neurourol Urodyn	No primary data or no usable results
28704584	Robinson, D. Kelleher, C. Staskin, D. Mueller, E. R. Falconer, C. Wang, J. Ridder, A. Stoelzel, M. Paireddy, A. van Maanen, R. Hakimi, Z. Herschorn, S.	Patient-reported outcomes from SYNERGY, a randomized, double-blind, multicenter study evaluating combinations of mirabegron and solifenacin compared with monotherapy and placebo in OAB patients	Neurourol Urodyn	covered by 2011 review or secondary publication with no new results
no PMID	Robinson, D., Oelke, M., Khullar, V., Wijkstra, H., Tretter, R., Stow, B., Compion, G., Tubaro, A.	Bladder wall thickness in women with symptoms of overactive bladder and detrusor overactivity: Results from the randomised, placebo-controlled shrink study	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
28812109	Rodrigues, M. P. Paiva, L. L. Ramos, J. G. L. Ferla, L.	Vibratory perineal stimulation for the treatment of female stress urinary incontinence: a systematic review	Int Urogynecol J	No primary data or no usable results
no PMID	Rogo-Gupta, L. Yang, J. Hedlin, H. Stefanick, M. L. Young-Lin, N. Chen, B.	Low-fat diet eliminates stress incontinence but worsens urge incontinence in postmenopausal women	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
23140031	Roongsirisangrat, S., Rangkla, S., Manchana, T., Tantisiriwat, N.	Rectal balloon training as an adjunctive method for pelvic floor muscle training in conservative management of stress urinary incontinence: a pilot study	J Med Assoc Thai	No primary data or no usable results
103866894	Tomasi, A, Honório, G, Azevedo dos Santos, S, Brongholi, K	O uso da eletroestimulacao no nervo tibial posterior no tratamento da incontinancia urinaria	Revista Enfermagem UERJ	Not comparative and no adverse events or N<100
no PMID	Rovner, E. S., Andersson, F., Raymond, K., Juul, K. V.	Nocturia due to nocturnal polyuria (NP) in women with overactive bladder (OAB) may be better managed by adding a low-dose desmopressin to tolterodine therapy	European Urology, Supplements	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Rovner, E., Nørgaard, J. P., Raymond, K., Juul, K.	Low dose desmopressin and tolterodine for nocturia in female patients with overactive bladder: A randomized, double-blind, placebocontrolled study	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified
23715806	S. J. Jeong, Y. Homma and S. J. Oh	Reproducibility study of Overactive Bladder Symptom Score questionnaire and its response to treatment (RESORT) in Korean population with overactive bladder symptoms	nd	Not comparative and no adverse events or N<100
no PMID	Sacomori, C., Berghmans, B., Mesters, I., de Bie, R., Cardoso, F. L.	Strategies to enhance self-efficacy and adherence to home-based pelvic floor muscle exercises did not improve adherence in women with urinary incontinence: a randomised trial	Journal of physiotherapy	Not intervention/comparison of interest
no PMID	Salvatore, S. Radomski, S. Rovner, E. Drake, M. Everaert, K. Chapple, C. Ginsberg, D. Aboushwareb, T. Chang, C. T. Dmochowski, R. Nitti, V.	Low clean intermittent catheterisation incidence withonabotulinumtoxina in diverse age groups of overactive bladder patients with substantial improvements in treatment response	Neurourology and Urodynamics	Not peer reviewed publication
24119382	Sanchez-Ballester, F. Miranda, P. Lizarraga, I. Rejas, J. Arumi, D.	Therapeutic benefit in patients switching tolterodine to other novel antimuscarinic agents	Actas Urol Esp	<90% women with UI or % women with UI not specified
28042791	Sanchez-Ballester, F., Garcia-Mediero, J. M., Sobron-Bustamante, M., Lizarraga, I., Arumi, D.	Profile of oab patient on treatment with flexible-dose antimuscarinic drugs in daily clinical practice	Arch Esp Urol	<90% women with UI or % women with UI not specified
20707790	Sand, P. K., Johnson Ii, T. M., Rovner, E. S., Ellsworth, P. I., Oefelein, M. G., Staskin, D. R.	Trospium chloride once-daily extended release is efficacious and tolerated in elderly subjects (aged >/ = 75 years) with overactive bladder syndrome	BJU Int	<90% women with UI or % women with UI not specified
no PMID	Sand, P. K., Khalaf, K. M., Yan, X., Globe, D.	OnabotulinumtoxinA improves health-related quality of life in patients with overactive bladder with urinary incontinence	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Sand, P. K., Khullar, V., Joshi, M., Zheng, Y., Nitti, V.	Long-term improvements in quality of life following onabotulinumtoxina treatment in female patients with overactive bladder and urinary incontinence	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
24198648	Sand, P. K., Macdiarmid, S. A., Thomas, H., Caramelli, K. E., Hoel, G.	Effect of baseline symptom severity on continence improvement mediated by oxybutynin chloride topical gel	Open Access J Urol	<90% women with UI or % women with UI not specified
no PMID	Sand, P. K., Peters, K., Carrico, D.	Sumit trial outcomes: Clinical insights into percutaneous tibial nerve stimulation	Neurourology and Urodynamics	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
21275440	Sand, P. K., Rovner, E. S., Watanabe, J. H., Oefelein, M. G.	Once-daily trospium chloride 60 mg extended release in subjects with overactive bladder syndrome who use multiple concomitant medications: Post hoc analysis of pooled data from two randomized, placebo-controlled trials	Drugs Aging	<90% women with UI or % women with UI not specified
no PMID	Sand, P. Khullar, V. Cardozo, L. Koelbl, H. Salvatore, S. Blauwet, M. Martin, N.	Efficacy of mirabegron for the treatment of overactive bladder in female patients: Prospective pooled analysis of 3 randomised phase 3 trials	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Sand, P., Parsons, M., Zhou, J., Globe, D., Nardo, C., Khullar, V.	Onabotulinum toxin a treatment provides significant reductions in episodes of urinary incontinence and improves quality of life in female patients with idiopathic overactive bladder syndrome	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
no PMID	Sand, P., Parsons, M., Zhou, J., Globe, D., Nardo, C., Khullar, V.	Treatment with onabotulinumtoxina significantly reduces episodes of urinary incontinence and improves quality of life in female patients with idiopathic overactive bladder syndrome	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Sand, P., Rechberger, T., James, C., Magyar, A., Khullar, V.	Durable improvements in urinary incontinence and positive treatment response in female patients with overactive bladder syndrome following long-term onabotulinumtoxina treatment: Final results of 3.5-year study	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
CN-01018801	Sand, Pk, Heesakkers, J Kraus, Sr Carlsson, M Guan, Z Berriman, S	Long-term safety, tolerability and efficacy of fesoterodine in subjects with overactive bladder symptoms stratified by age: Pooled analysis of two open-label extension studies	Drugs & aging	<90% women with UI or % women with UI not specified
CN-00894239	Sand, Pk, Johnson, Jr Tm, Rovner, Es, Ellsworth, Pi, Oefelein, Mg, Staskin, Dr	Trospium chloride once-daily extended release is efficacious and tolerated in elderly subjects (aged > 75 years) with overactive bladder syndrome	Journal of urology	<90% women with UI or % women with UI not specified
no PMID	Sarit-Apirak, S. Manonai, J.	Vaginal pessary use for pelvic organ prolapse in thai women	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
28124534	Scaldazza, C. V., Morosetti, C., Giampieretti, R., Lorenzetti, R., Baroni, M.	Percutaneous tibial nerve stimulation versus electrical stimulation with pelvic floor muscle training for overactive bladder syndrome in women: results of a randomized controlled study	Int Braz J Urol	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
21355814	Scarpero, H., Sand, P. K., Kelleher, C. J., Berriman, S., Bavendam, T., Carlsson, M.	Long-term safety, tolerability, and efficacy of fesoterodine treatment in men and women with overactive bladder symptoms	Curr Med Res Opin	covered by 2011 review or secondary publication with no new results
22914396	Schaffer, J. Nager, C. W. Xiang, F. Borello-France, D. Bradley, C. S. Wu, J. M. Mueller, E. Norton, P. Paraiso, M. F. Zyczynski, H. Richter, H. E. Schaffer, Joseph Nager, Charles W. Xiang, Fang Borello-France, Diane Bradley, Catherine S. Wu, Jennifer M. Mueller, Elizabeth Norton, Peggy Paraiso, Marie Fidela R.	Predictors of success and satisfaction of nonsurgical therapy for stress urinary incontinence	Obstetrics & Gynecology	covered by 2011 review or secondary publication with no new results
24165427	Schneider, T., Marschall-Kehrel, D., Hanisch, J. U., Michel, M. C.	Does concomitant diabetes affect treatment responses in overactive bladder patients?	Int J Clin Pract	<90% women with UI or % women with UI not specified
no PMID	Schuttler, H. J. Sklar, D. M. Morrill, M. Y.	Do pessaries increase the risk of UTI in women 40 years and older with pelvic organ prolapse and/or urinary incontinence?	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
no PMID	Schwertner-Tiepelmann, N., Schwab, F., Tunn, R.	Do predictive parameters exist for therapy with duloxetine in women with stress urinary incontinence?	International Urogynecology Journal and Pelvic Floor Dysfunction	Not comparative and no adverse events or N<100
24054438	Serati, M., Braga, A., Siesto, G., Sorice, P., Cattoni, E., Uccella, S., Cromi, A., Salvatore, S., Ghezzi, F.	Risk factors for the ure of antimuscarinic treatment with solifenacin in women with overactive bladder	Urology	Not comparative and no adverse events or N<100
24148761	Serati, M., Braga, A., Sorice, P., Siesto, G., Salvatore, S., Ghezzi, F.	Solifenacin in women with de novo overactive bladder after tension-free obturator vaginal tape--is it effective?	J Urol	<90% women with UI or % women with UI not specified
27942790	Serati, M., Leone Roberti Maggiore, U., Sorice, P., Cantaluppi, S., Finazzi Agro, E., Ghezzi, F.	Is mirabegron equally as effective when used as first- or second-line therapy in women with overactive bladder?	Int Urogynecol J	Not comparative and no adverse events or N<100
CN-00770173	Serels, Sr, Toglia, Mr, Forero-Schwanhaeuser, S, He, W	Impact of solifenacin on diary-recorded and patient-reported urgency in patients with severe overactive bladder (OAB) symptoms	Current medical research and opinion	<90% women with UI or % women with UI not specified
no PMID	Seyyedi, F., Rafiean, M., Miraj, S.	Comparison of the effects of vaginal royal jelly and vaginal estrogen on quality of life, sexual and urinary function in postmenopausal women	Journal of Clinical and Diagnostic Research	<90% women with UI or % women with UI not specified
27891403	Sharma, N., Rekha, K., Srinivasan, K. J.	Efficacy of Transcutaneous Electrical Nerve Stimulation in the Treatment of Overactive Bladder	J Clin Diagn Res	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
26623416	Shim, E. J., Yoo, E. H., Kim, Y. M., Kim, D.	Factors affecting medication discontinuation in patients with overactive bladder symptoms	Obstet Gynecol Sci	<90% women with UI or % women with UI not specified
26556482	Sicras-Mainar, A., Navarro-Artieda, R., Ruiz-Torrejon, A., Saez-Zafra, M., Coll-de Tuero, G.	Persistence and concomitant medication in patients with overactive bladder treated with antimuscarinic agents in primary care. An observational baseline study	Actas Urol Esp	<90% women with UI or % women with UI not specified
27371430	Sicras-Mainar, A., Navarro-Artieda, R., Ruiz-Torrejon, A., Saez, M., Coll-de Tuero, G., Sanchez, L.	[A retrospective, observational and multicentre study on patients with hyperactive bladder on treatment with mirabegron and oxybutinine under usual clinical practice conditions]	Semergen	<90% women with UI or % women with UI not specified
24630426	Sicras-Mainar, A., Rejas-Gutierrez, J., Navarro-Artieda, R., Aguado-Jodar, A., Ruiz-Torrejon, A.	Use of health care resources and associated costs in non-institutionalized vulnerable elders with overactive bladder treated with antimuscarinic agents in the usual medical practice	Actas Urol Esp	<90% women with UI or % women with UI not specified
28914707	Siegel, S. Kreder, K. Takacs, E. McNamara, R. Kan, F.	Prospective Randomized Feasibility Study Assessing the Effect of Cyclic Sacral Neuromodulation on Urinary Urge Incontinence in Women	Female Pelvic Med Reconstr Surg	Not intervention/comparison of interest
28709886	Siegel, S. Noblett, K. Mangel, J. Bennett, J. Griebling, T. L. Sutherland, S. E. Bird, E. T. Comiter, C. Culkin, D. Zylstra, S. Kan, F. Berg, K. C.	Five-Year Followup Results of a Prospective, Multicenter Study of Patients with Overactive Bladder Treated with Sacral Neuromodulation	J Urol	<90% women with UI or % women with UI not specified
24415559	Siegel, S., Noblett, K., Mangel, J., Griebling, T. L., Sutherland, S. E., Bird, E. T., Comiter, C., Culkin, D., Bennett, J., Zylstra, S., Berg, K. C., Kan, F., Irwin, C. P.	Results of a prospective, randomized, multicenter study evaluating sacral neuromodulation with InterStim therapy compared to standard medical therapy at 6-months in subjects with mild symptoms of overactive bladder	Neurourol Urodyn	<90% women with UI or % women with UI not specified
no PMID	Sievert, K. D., Chapple, C., Herschorn, S., Joshi, M., Zhou, J., Nardo, C., Nitti, V. W.	OnabotulinumtoxinA 100U provides significant improvements in overactive bladder symptoms in patients with urinary incontinence regardless of the number of anticholinergic therapies used or reason for inadequate management of overactive bladder	International Journal of Clinical Practice	<90% women with UI or % women with UI not specified
29134621	Simeone, J. C. Nordstrom, B. L. Appenteng, K. Huse, S. D'Silva, M.	Replication of Mini-Sentinel Study Assessing Mirabegron and Cardiovascular Risk in Non-Mini-Sentinel Databases	Drugs Real World Outcomes	<90% women with UI or % women with UI not specified
no PMID	Singh, A., Kumari, S., Jain, V.	Why behavior therapy for urinary incontinence has been ignored by doctors/women?	Climacteric	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Singh, N., Rashid, M., Bayliss, L., Graham, P.	Pelvic floor muscle training for female urinary incontinence: Does it work?	Archives of Gynecology and Obstetrics	Not comparative and no adverse events or N<100
24347521	Sjostrom, M., Umefjord, G., Lindholm, L., Samuelsson, E.	Cost-effectiveness of an Internet-based treatment program for stress urinary incontinence	Neurourol Urodyn	Not comparative and no adverse events or N<100
25683075	Sjostrom, M., Umefjord, G., Stenlund, H., Carlbring, P.,,ersson, G., Samuelsson, E.	Internet-based treatment of stress urinary incontinence: 1- and 2-year results of a randomized controlled trial with a focus on pelvic floor muscle training	BJU Int	Not comparative and no adverse events or N<100
23571145	Slovak, M, Barker, At, Chapple, Cr	The assessment of a novel electrical stimulation waveform recently introduced for the treatment of overactive bladder	Physiological measurement	<90% women with UI or % women with UI not specified
no PMID	Soderini, H. F., Lidgett, N., Amato, A., Vera, C.	Posterior tibial nerve stimulation in patients with overactive bladder. Initial experience	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
CN-01048783	Song, M, Kim, Jh, Lee, K-S, Lee, Jz, Oh, S-J, Seo, Jt, Choi, Jb, Kim, Sw, Rhee, Sj, Choo, M-S	The efficacy and tolerability of tarafenacin, a new muscarinic acetylcholine receptor M3 antagonist in patients with overactive bladder; Randomised, double-blind, placebo-controlled phase 2 study	International journal of clinical practice	<90% women with UI or % women with UI not specified
no PMID	Sorice, P., Cantaluppi, S., Passaretta, A., Grampa, M., Triacca, P., Ghezzi, F., Serati, M.	Is mirabegron equally effective as first or second line of therapy?	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Sorice, P., Cattoni, E., Braga, A., Siesto, G., Cromi, A., Ghezzi, F., Salvatore, S., Serati, M.	Risk factors for ure of first-line antimuscarinic treatment with solifenacin in women with overactive bladder	Neurourology and Urodynamics	Not peer reviewed publication
26390627	Sosnovskii, S. O. Kheifets, VKh Kagan, O. F.	[ASSESSMENT OF EFFICIENCY OF TREATMENT OF OVERACTIVE BLADDER IN ELDERLY PATIENTS]	Adv Gerontol	<90% women with UI or % women with UI not specified
23749315	Souto, S. C., Reis, L. O., Palma, T., Palma, P., Denardi, F.	Prospective and randomized comparison of electrical stimulation of the posterior tibial nerve versus oxybutynin versus their combination for treatment of women with overactive bladder syndrome	World J Urol	<90% women with UI or % women with UI not specified
no PMID	Sran, M., Wilson, P., Lieblich, P., Dumoulin, C.	Physiotherapy significantly reduces leakage in postmenopausal women with osteoporosis and urinary incontinence: Results of a randomized controlled trial	Physiotherapy (United Kingdom)	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
23982573	Starr, J. A., Drobnis, E. Z., Lenger, S., Parrot, J., Barrier, B., Foster, R.	Outcomes of a comprehensive nonsurgical approach to pelvic floor rehabilitation for urinary symptoms, defecatory dysfunction, and pelvic pain	Female Pelvic Med Reconstr Surg	Not comparative and no adverse events or N<100
CN-00811804	Staskin, D, Khullar, V, Michel, Mc, Morrow, Jd, Sun, F, Guan, Z, Dmochowski, R	Effects of voluntary dose escalation in a placebo-controlled, flexible-dose trial of fesoterodine in subjects with overactive bladder	Neurourology and urodynamics	<90% women with UI or % women with UI not specified
28620791	Staskin, D. Herschorn, S. Fialkov, J. Tu, L. M. Walsh, T. Schermer, C. R.	A prospective, double-blind, randomized, two-period crossover, multicenter study to evaluate tolerability and patient preference between mirabegron and tolterodine in patients with overactive bladder (PREFER study)	Int Urogynecol J	<90% women with UI or % women with UI not specified
no PMID	Staskin, D. R. Dave, K.	A flexible dose transdermal oxybutynin gel for the treatment of overactive bladder: Dose selection methodology and phase III results	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
no PMID	Staskin, D., Dave, K.	Dose formulation, dose selection, and phase III results for a flexible dose gel for transdermal oxybutynin delivery	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Stupp, L., Yamamoto, D., Fonseca, T., Resende, A. M., Ploger, C., Oliveira, E., Castro, R. A., GirÃ£o, M. J., Sartori, M. G.	Proprioception and awareness training prior pelvic floor muscle exercises for treatment of urinary incontinence: Randomized controlled trial	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
22474865	Sublett, C. M.	Adding to the evidence base: efficacy of solifenacin for overactive bladder symptoms, symptom bother, and health-related quality of life in patients by duration of self-reported symptoms: a secondary analysis of the VIBRANT study	Urol Nurs	duplicate publication
28540648	Suehs, B. T. Davis, C. Ng, D. B. Gooch, K.	Impact of 2015 Update to the Beers Criteria on Estimates of Prevalence and Costs Associated with Potentially Inappropriate Use of Antimuscarinics for Overactive Bladder	Drugs and Aging	<90% women with UI or % women with UI not specified
26887879	Sun Z, Zhu L, Lang J, Wang W, Shi H, Pang H, Shi X	[Continuous improvement of portable domestic pelvic floor neuromuscular electrical stimulation on the pelvic floor function of patients with urinary incontinence]	Zhonghua Fu Chan Ke Za Zhi	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Suraj, S., Rao, B., Nayak, S., Kumar, P., Kamath, V., Kamath, A.	Effect of physiotherapy interventions (tanzberger approach) in married women with urinary incontinence	Neurourology and Urodynamics	Not peer reviewed publication
CN-01125377	Surbala, L, Ratan, Khuman P, Mital, V, Devanshi, B	Neuromodulation for overactive bladder with transcutaneous electrical nerve stimulation in adults - A randomized clinical study	International Journal of Pharma and Bio Sciences	<90% women with UI or % women with UI not specified
no PMID	Sussman, D., Egerdie, B., Zhou, J., Khalaf, K., Nardo, C., Sand, P.	Onabotulinumtoxina significantly improves health-related quality of life in patients with overactive bladder syndrome: A pooled analysis of 2 phase 3 placebo-controlled trials	Neurourology and Urodynamics	Not peer reviewed publication
28371019	Sussman, D., Yehoshua, A., Kowalski, J., Lee, W., Kish, J., Chaudhari, S., Murray, B.	Adherence and persistence of mirabegron and anticholinergic therapies in patients with overactive bladder: a real-world claims data analysis	Int J Clin Pract	<90% women with UI or % women with UI not specified
28252310	Svabik, K., Masata, J., Krhut, J., Zachoval, R., Hanus, T., Halaska, M., Horcicka, L., Krofta, L., Hanakova, M., Martan, A.	[Degree of satisfaction of patients continuing overactive bladder treatment with mirabegron]	Ceska Gynekol	<90% women with UI or % women with UI not specified
no PMID	Swamy, S., Gill, K., Kupelian, A., Sathiananthamoorthy, S., Horsley, H., Collins, L., Malone-Lee, J.	Lengthy antibiotic treatment to resolve recalcitrant oab	International Urogynecology Journal and Pelvic Floor Dysfunction	<90% women with UI or % women with UI not specified
no PMID	Swierzewski, M., Seidman, L., Dasen, S., Weiss, H.	Phase 3 efficacy and safety of once-monthly oxybutynin vaginal ring delivering 4 mg/day or 6 mg/day vs placebo ring in women with urge incontinence, frequency, and urgency symptoms of overactive bladder	Journal of Urology	Not peer reviewed publication
24803217	Sze, E. H., Hobbs, G.	A retrospective comparison of ring pessary and multicomponent behavioral therapy in managing overactive bladder	Int Urogynecol J	<90% women with UI or % women with UI not specified
25236993	T. Holm-Larsen, F. Andersson, E. van der Meulen, V. Yankov, R. C. Rosen and J. P. Norgaard	The Nocturia Impact Diary: a self-reported impact measure to complement the voiding diary	nd	No primary data or no usable results
23055780	Tack, J., Wyndaele, J. J., Ligozio, G., Egermark, M.	A review and additional post-hoc analyses of the incidence and impact of constipation observed in darifenacin clinical trials	Drug Healthc Patient Saf	<90% women with UI or % women with UI not specified
no PMID	Talreja, N., Enemchukwu, E., Nitti, V.	Onabotulinumtoxina therapy for management of overactive bladder in elderly populations: Evaluation of outcomes and adverse events	Neurourology and Urodynamics	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
25194079	Tang, H., Chen, J., Wang, Y., Yu, T., Guo, C., Liao, X.	Combination of sacral neuromodulation and tolterodine for treatment of idiopathic overactive bladder in women: a clinical trial	Urol J	<90% women with UI or % women with UI not specified
24334159	Tannenbaum, C. Agnew, R. Benedetti, A. Thomas, D. van den Heuvel, E.	Effectiveness of continence promotion for older women via community organisations: a cluster randomised trial	BMJ Open	duplicate publication
26423260	Thomas-White, K. J., Hilt, E. E., Fok, C., Pearce, M. M., Mueller, E. R., Kliethermes, S., Jacobs, K., Zilliox, M. J., Brincat, C., Price, T. K., Kuffel, G., Schreckenberger, P., Gai, X., Brubaker, L., Wolfe, A. J.	Incontinence medication response relates to the female urinary microbiota	Int Urogynecol J	Not comparative and no adverse events or N<100
22236796	Tincello, D. G., Kenyon, S., Abrams, K. R., Mayne, C., Toozs-Hobson, P., Taylor, D., Slack, M.	Botulinum toxin a versus placebo for refractory detrusor overactivity in women: a randomised blinded placebo-controlled trial of 240 women (the RELAX study)	Eur Urol	<90% women with UI or % women with UI not specified
23189940	Tincello, D. G., Owen, R. K., Slack, M. C., Abrams, K. R.	Validation of the Patient Global Impression scales for use in detrusor overactivity: secondary analysis of the RELAX study	Bjog	<90% women with UI or % women with UI not specified
no PMID	Tincello, D. G., Owen, R. K., Slack, M. C., Mayne, C., Toozs-Hobson, P., Abrams, K. R.	Efficacy of repeat treatment with onabotulinum toxin for refractory detrusor overactivity: Secondaryanalysis of open label extension of a randomised trial	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
no PMID	Tincello, D. G., Slack, M. C., Kenyon, S., Mayne, C. J., Toozs-Hobson, P. M., Abrams, K. R., Taylor, D. J.	Botulinum toxin-A for refractory detrusor overactivity in women: A 240 patient randomised placebo controlled trial	European Urology, Supplements	duplicate publication
no PMID	Tincello, D., Slack, M., Kenyon, S., Mayne, C., Toozs-Hobson, P., Abrams, K., Taylor, D.	Botulinum toxin-a for refractory detrusor overactivity in women: A 240 patient randomized placebo controlled trial	Neurourology and Urodynamics	Not peer reviewed publication
27265880	Torimoto, K., Matsushita, C., Yamada, A., Goto, D., Matsumoto, Y., Hosokawa, Y., Miyake, M., Aoki, K., Hirayama, A., Tanaka, N., Fujimoto, K.	Clinical efficacy and safety of mirabegron and imidafenacin in women with overactive bladder: A randomized crossover study (the MICRO study)	Neurourol Urodyn	<90% women with UI or % women with UI not specified
no pmid	Torkzadeh, A., Pormomeny, A., Zargham, M.	The effect of two types of exercise therapy on improvement of stress urinary incontinence in women	Journal of Isfahan Medical School	could not be translated
25003623	Tosun ÖÇ, Mutlu EK, Tosun G, Ergenoğlu AM, Yeniel AÖ, Malkoç M, Aşkar N, İtil İM.	Do stages of menopause affect the outcomes of pelvic floor muscle training?	Menopause	Not comparative and no adverse events or N<100
108090176	Tremback-Ball, Amy, Levine, Alan M., Dawson, Geraldine, Perlis, Susan M.	Young Women's Self-efficacy in Performing pelvic Muscle Exercises	Journal of Women's Health Physical Therapy	Not comparative and no adverse events or N<100

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Tubaro, A., Khullar, V., Herschorn, S., Blauwet, M. B., Chapple, C. R., Nitti, V. W., Saleem, T.	Effects of mirabegron 50 mg on measures of urgency in patients with overactive bladder: Results of a 1-year trial and pooled analysis of three 12-week trials	International Urogynecology Journal and Pelvic Floor Dysfunction	Not peer reviewed publication
24383406	Tyagi, S. Resnick, N. M., Perera, S., Monk, T. H., Hall, M. H. Buysse, D. J.	Behavioral treatment of insomnia: also effective for nocturia	J Am Geriatr Soc	Not intervention/comparison of interest
no PMID	Tyagi, S., Perera, S., Tadic, S. D. Resnick, N. M.	Nocturnal polyuria in older females with urge urinary incontinence: Role of sleep interruption, time in bed and medications used	Journal of the American Geriatrics Society	Not intervention/comparison of interest
22453669	Vardy, M. D., Mitcheson, H. D., Samuels, T. A., Forero-Schwanhaeuser, S., He, W.	Efficacy of Solifenacin on Overactive Bladder Symptoms, Symptom Bother, and Other Patient-Reported Outcomes in Subjects With or Without Incontinence: A Post Hoc Analysis of Data From VIBRANT	Female Pelvic Med Reconstr Surg	<90% women with UI or % women with UI not specified
27092789	Vecchioli Scaldazza, C., Morosetti, C.	Comparison of Therapeutic Efficacy and Urodynamic Findings of Solifenacin Succinate versus Mirabegron in Women with Overactive Bladder Syndrome: Results of a Randomized Controlled Study	Urol Int	<90% women with UI or % women with UI not specified
29064651	Vecchioli-Scaldazza, C. Morosetti, C.	Effectiveness and durability of solifenacin versus percutaneous tibial nerve stimulation versus their combination for the treatment of women with overactive bladder syndrome: a randomized controlled study with a follow-up of ten months	Int Braz J Urol	<90% women with UI or % women with UI not specified
23548260	Vecchioli-Scaldazza, C., Morosetti, C., Berouz, A., Giannubilo, W., Ferrara, V.	Solifenacin succinate versus percutaneous tibial nerve stimulation in women with overactive bladder syndrome: results of a randomized controlled crossover study	Gynecol Obstet Invest	<90% women with UI or % women with UI not specified
CN-00875053	Viereck, V Rautenberge, O	Comparison of solifenacin combined with pelvic floor muscle and whole body vibration training with solifenacin alone in patients with overactive bladder syndrome - a prospective randomized parallel group trial (Trials registry number: NCT01314781)	ClinicalTrials.gov (http://clinicaltrials.gov)	No primary data or no usable results
22038939	Vijaya, G., Digesu, G. A., Derpapas, A., Hendricken, C., Fernando, R., Khullar, V.	Antimuscarinic effects on current perception threshold: a prospective placebo control study	Neurourol Urodyn	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00793360	Visco, A Meikle, S	Efficacy and impact of botulinum toxin A versus anticholinergic therapy for the treatment of bothersome urge urinary incontinence (Trials Registry number: NCT01166438)	ClinicalTrials.gov (available At: Http://clinicaltrials.gov/ct2/show/NCT01166438) [accessed 23 June 2011]	No primary data or no usable results
27564385	Visco, A. G. Zyczynski, H. Brubaker, L. Nygaard, I., Xu, X., Lukacz, E. S., Paraiso, M. F. Greer, J. Rahn, D. D. Meikle, S. F. Honeycutt, A. A.	Cost-Effectiveness Analysis of Anticholinergics Versus Botox for Urgency Urinary Incontinence: Results From the Anticholinergic Versus Botox Comparison Randomized Trial	Female Pelvic Med Reconstr Surg	covered by 2011 review or secondary publication with no new results
26516810	Visco, A. G., Brubaker, L., Jelovsek, J. E., Wilson, T. S., Norton, P., Zyczynski, H. M., Spino, C., Sirls, L., Nguyen, J. N., Rahn, D. D., Meikle, S. F., Nolen, T. L.	Adherence to Oral Therapy for Urgency Urinary Incontinence: Results from the Anticholinergic Versus Botox Comparison (ABC) Trial	Female Pelvic Med Reconstr Surg	covered by 2011 review or secondary publication with no new results
CN-00840681	Visco, A Brubaker, L Richter, H Nygaard, I Paraiso, M Menefee, S Schaffer, J Wei, J Chai, T Janz, N Spino, C Meikle, S	Anticholinergic versus botulinum toxin A comparison trial for the treatment of bothersome urge urinary incontinence: ABC trial	Contemporary clinical trials	No primary data or no usable results
27869312	Voorham, J. C., De Wachter, S., Van den Bos, T. W., Putter, H., Lycklama, A. Nijeholt G. A., Voorham-van der Zalm, P. J.	The effect of EMG biofeedback assisted pelvic floor muscle therapy on symptoms of the overactive bladder syndrome in women: A randomized controlled trial	Neurourol Urodyn	<90% women with UI or % women with UI not specified
27889591	Vouri, Scott Martin Kebodeaux, Clark D. Stranges, Paul M.Teshome, Besu F.	Adverse events and treatment discontinuations of antimuscarinics for the treatment of overactive bladder in older adults: A systematic review and meta-analysis	Archives of Gerontology & Geriatrics	No primary data or no usable results
28678009	Vozmediano-Chicharro, R. Blasco Hernandez, P. Madurga-Patuel, B.	[Tolerability, persistence and satisfaction. Retrospective cohort study in patients with overactive bladder syndrome treated with transdermal Oxybutynin under Standard ClinicAl pRactice. OSCAR Study.]	Arch Esp Urol	Not peer reviewed publication
no PMID	Wada, N., Watanabe, M., Kita, M., Osanai, H., Yamaguchi, S., Numata, A., Kakizaki, H.	Efficacy and safety of propiverine and solifenacin for the treatment of female patients with overactive bladder: A crossover study	LUTS: Lower Urinary Tract Symptoms	Not comparative and no adverse events or N<100
CN-01102852	Wagg, A, Darekar, A, Arumi, D, Khullar, V, Oelke, M	Factors associated with dose escalation of fesoterodine for treatment of overactive bladder in people >65 years of age: A post hoc analysis of data from the SOFIA study	Neurourology and urodynamics	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00872691	Wagg, A, Khullar, V, Marschall-Kehrel, D, Michel, Mc, Oelke, M, Darekar, A, Bitoun, Ce, Weinstein, D, Osterloh, I	Flexible-dose fesoterodine in elderly adults with overactive bladder: results of the randomized, double-blind, placebo-controlled study of fesoterodine in an aging population trial	Journal of the American Geriatrics Society	<90% women with UI or % women with UI not specified
CN-00910717	Wagg, A, Khullar, V, Michel, Mc, Oelke, M, Darekar, A, Bitoun, Ce	Long-term safety, tolerability and efficacy of flexible-dose fesoterodine in elderly patients with overactive bladder: open-label extension of the SOFIA trial	Neurourology and urodynamics	<90% women with UI or % women with UI not specified
0	Wagg, A. Arumi, D. Herschorn, S. Cuesta, J. A. Haab, F. Ntanios, F. Carlsson, M. Oelke, M.	A pooled analysis of the efficacy of fesoterodine for the treatment of overactive bladder, and the relationship between safety, co-morbidity and polypharmacy in patients aged 65 years or older	Age and Ageing	No primary data or no usable results
no PMID	Wagg, A. Khullar, V. Marschall-Kehrel, D. Michel, M. C. Oelke, M. Tincello, D. G. Darekar, A. Ebel Bitoun, C. Osterloh, I. Weinstein, D.	Assessment of fesoterodine treatment in older people with overactive bladder: Results of SOFIA, a double-blind, placebocontrolled pan European trial	European Urology, Supplements	<90% women with UI or % women with UI not specified
28906080	Wagg, A. S. Foley, S. Peters, J. Nazir, J. Kool-Houweling, L. Scrine, L.	Persistence and adherence with mirabegron vs antimuscarinics in overactive bladder: Retrospective analysis of a UK General Practice prescription database	Int J Clin Pract	<90% women with UI or % women with UI not specified
24610862	Wagg, A., Cardozo, L., Nitti, V. W., Castro-Diaz, D., Auerbach, S., Blauwet, M. B., Siddiqui, E.	The efficacy and tolerability of the beta3-adrenoceptor agonist mirabegron for the treatment of symptoms of overactive bladder in older patients	Age Ageing	<90% women with UI or % women with UI not specified
22409769	Wagg, A., Compion, G., Fahey, A., Siddiqui, E.	Persistence with prescribed antimuscarinic therapy for overactive bladder: a UK experience	BJU Int	<90% women with UI or % women with UI not specified
104675156	Wallis, Marianne C., Davies, Elizabeth A., Thalib, Lukman, Griffiths, Susan	Pelvic static magnetic stimulation to control urinary incontinence in older women: A randomized controlled trial	Clinical Medicine & Research	duplicate publication
107843962	Walton, Lori, Ambia, S. J. M. Ummal, Begum, Aklima, Schbley, Bassima, Parvin, Reshma	Incidence and Impact of Urinary Incontinence, Morbidities, and Health Related Quality of Life for Postpartum Bangladeshi Women: Comparison by Birth Mode...CSM 2014 SOWH Platforms, APTA	Journal of Women's Health Physical Therapy	Not comparative and no adverse events or N<100
no PMID	Wang, C. C., Jiang, Y. H., Kuo, H. C.	Efficacy and Adherence of Flexibly Adding on a Second Antimuscarinic Agent for Patients with Refractory Overactive Bladder	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified

PubMed or other ID	Authors	Title	Journal	Rejection Reason
no PMID	Wang, C., Kuo, H.	Drug adherence in treatment of OAB-factors influencing adherence rate and how to improve	Neurourology and Urodynamics	Not peer reviewed publication
24091564	Wang, S. Zhang, S. Zhao, L.	Long-term efficacy of electrical pudendal nerve stimulation for urgency-frequency syndrome in women	Int Urogynecol J	<90% women with UI or % women with UI not specified
CN-00869794	Weiss, J, Jumadilova, Z, Johnson, Tm, Fitzgerald, M, Carlsson, M, Martire, D, Malhotra, A	Efficacy and safety of flexible dose fesoterodine in men and women with overactive bladder symptoms including nocturnal urinary urgency	The Journal of urology	<90% women with UI or % women with UI not specified
26682757	Weissbart, S. J., Lewis, R., Smith, A. L., Harvie, H. S., Miller, J. M., Arya, L. A.	Impact of Dry Mouth on Fluid Intake and Overactive Bladder Symptoms in Women taking Fesoterodine	J Urol	<90% women with UI or % women with UI not specified
20680012	West, D. S. Gorin, A. A. Subak, L. L. Foster, G. Bragg, C. Hecht, J. Schembri, M. Wing, R. R.	A motivation-focused weight loss maintenance program is an effective alternative to a skill-based approach	International Journal of Obesity	covered by 2011 review or secondary publication with no new results
CN-01337943	Winkelman, Wd Huang, A Schembri, M Rogers, R Richter, H Myers, D Kraus, S Johnson, K Hess, R Gregory, T Bradley, C Arya, L Brown, J Subak, L	Modifiers of Response to Treatment with Fesoterodine for Urgency-Predominant Urinary Incontinence in a Randomized Controlled Trial	Female pelvic medicine & reconstructive surgery	Not peer reviewed publication
no PMID	Wolff, E. M. Park, S. Odem-Davis, K. Kirby, A. C.	Modern practice patterns in women treated for non-neurogenic over active bladder: How quickly do patients progress to third-line therapy?	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
no PMID	Wong, C. H. L., Chow, J. T. M., Chung, V. C. H.	Is manual acupuncture effective in reducing overactive bladder symptoms among female adults as compared to oral tolterodine tartrate?	Advances in Integrative Medicine	covered by 2011 review or secondary publication with no new results
CN-00891982	Wyndaele, J-J, Goldfischer, E, Morrow, J, Gong, J, Tseng, L-J, Choo, M-S	Patient-optimized doses of fesoterodine improve bladder symptoms in an open-label, flexible-dose study	BJU international	<90% women with UI or % women with UI not specified
27503124	Xiao, D. D., Lv, J. W., Xie, X., Jin, X. W., Lu, M. J., Shao, Y.	The combination of herbal medicine Weng-li-tong with Tolterodine may be better than Tolterodine alone in the treatment of overactive bladder in women: a randomized placebo-controlled prospective trial	BMC Urol	<90% women with UI or % women with UI not specified
28954464	Xu, Y. Liu, R. Liu, C. Cui, Y. Gao, Z.	Meta-Analysis of the Efficacy and Safety of Mirabegron Add-On Therapy to Solifenacin for Overactive Bladder	Int Neurourol J	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00887863	Yamaguchi, O, Nishizawa, O, Takeda, M, Yoshida, M, Choo, M-S, Gu, Lee J, Tong-Long, Lin A, Lin, H-H,,rew, Yip W-C, Isowa, H, Hiro, S	Efficacy, safety and tolerability of fesoterodine in asian patients with overactive bladder	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Yamaguchi, O., Ikeda, Y., Ohkawa, S.	Phase III Study to Assess Long-Term (52-Week) Safety and Efficacy of Mirabegron, a Beta-Adrenoceptor Agonist, in Japanese Patients with Overactive Bladder	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Yamaguchi, O., Kakizaki, H., Homma, Y., Igawa, Y., Takeda, M., Nishizawa, O., Gotoh, M., Yoshida, M., Yokoyama, O., Seki, N., Okitsu, A., Hamada, T., Kobayashi, A., Kuroishi, K.	Safety and efficacy of mirabegron as 'add-on' therapy in patients with overactive bladder treated with solifenacin: A post-marketing, open-label study in Japan (MILAI study)	BJU International	<90% women with UI or % women with UI not specified
26663687	Yamaguchi, O., Marui, E., Igawa, Y., Takeda, M., Nishizawa, O., Ikeda, Y., Ohkawa, S.	Efficacy and Safety of the Selective beta3 -Adrenoceptor Agonist Mirabegron in Japanese Patients with Overactive Bladder: A Randomized, Double-Blind, Placebo-Controlled, Dose-Finding Study	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
24471907	Yamaguchi, O., Marui, E., Kakizaki, H., Homma, Y., Igawa, Y., Takeda, M., Nishizawa, O., Gotoh, M., Yoshida, M., Yokoyama, O., Seki, N., Ikeda, Y., Ohkawa, S.	Phase III, randomised, double-blind, placebo-controlled study of the beta3-adrenoceptor agonist mirabegron, 50 mg once daily, in Japanese patients with overactive bladder	BJU Int	<90% women with UI or % women with UI not specified
24350662	Yamaguchi, O., Uchida, E., Higo, N., Minami, H., Kobayashi, S., Sato, H.	Efficacy and safety of once-daily oxybutynin patch versus placebo and propiverine in Japanese patients with overactive bladder: A randomized double-blind trial	Int J Urol	<90% women with UI or % women with UI not specified
no PMID	Yamaguchi, O., Uchida, E., Higo, N., Minami, H., Kobayashi, S., Sato, H.	Optimum Dose of Once-Daily Oxybutynin Patch in Japanese Patients with Overactive Bladder: A Randomized Double-Blind Trial Versus Placebo	LUTS: Lower Urinary Tract Symptoms	<90% women with UI or % women with UI not specified
11068300	Yamanishi, T, Sakakibara, R, Uchiyama, T, Suda, S, Hattori, T, Ito, H, Yasuda, K	Comparative study of the effects of magnetic versus electrical stimulation on inhibition of detrusor overactivity	Urology	covered by 2011 review or secondary publication with no new results
24118165	Yamanishi, T., Homma, Y., Nishizawa, O., Yasuda, K., Yokoyama, O.	Multicenter, randomized, sham-controlled study on the efficacy of magnetic stimulation for women with urgency urinary incontinence	Int J Urol	<90% women with UI or % women with UI not specified
no PMID	Yamanishi, T., Homma, Y., Nishizawa, O., Yasuda, K., Yokoyama, O.	Single-blind, placebo controlled, randomized controlled study of the efficacy of a high-frequency continuous magnetic stimulator for urgency incontinence	Urology	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
23141156	Yang, J. F., Han, J. S., Zhu, F. L., Wang, Y. T. Yao, Y. Qiao, J.	[Clinical study on silicone pessary in the treatment of pelvic organ prolapse]	Zhonghua Fu Chan Ke Za Zhi	<90% women with UI or % women with UI not specified
28384267	Yang, Y. W. Liu, H. H. Lin, T. H. Chuang, H. Y. Hsieh, T.	Association between different anticholinergic drugs and subsequent dementia risk in patients with diabetes mellitus	PLoS One	<90% women with UI or % women with UI not specified
CN-01001336	Yokoyama, O, Hiro, S, Hotta, S, Mogami, S, Yamagami, H	Efficacy of fesoterodine on nocturia and quality of sleep in Asian patients with overactive bladder	Urology	<90% women with UI or % women with UI not specified
no PMID	Yokoyama, O., Yamaguchi, A., Yoshida, M., Yamanishi, T., Ishizuka, O., Seki, N., Takahashi, S., Yamaguchi, O., Higo, N., Minami, H., Masegi, Y.	Once-daily oxybutynin patch improves nocturia and sleep quality in Japanese patients with overactive bladder: Post-hoc analysis of a phaseIII randomized clinical trial	International Journal of Urology	<90% women with UI or % women with UI not specified
21575976	Yokoyama, O., Yamaguchi, O., Kakizaki, H., Itoh, N., Yokota, T., Okada, H., Ishizuka, O., Ozono, S., Gotoh, M., Sugiyama, T., Seki, N., Yoshida, M., Yamada, S.	Efficacy of solifenacin on nocturia in Japanese patients with overactive bladder: impact on sleep evaluated by bladder diary	J Urol	<90% women with UI or % women with UI not specified
23207959	Yokoyama, T., Koide, T., Hara, R., Fukumoto, K., Miyaji, Y., Nagai, A.	Long-term safety and efficacy of two different antimuscarinics, imidafenacin and solifenacin, for treatment of overactive bladder: a prospective randomized controlled study	Urol Int	<90% women with UI or % women with UI not specified
no PMID	Yoo, D. S., Han, J. Y., Lee, K. S., Choo, M. S.	Prescription pattern of oxybutynin ER in patients with overactive bladder in real life practice: A multicentre, open-label, prospective observational study	International Journal of Clinical Practice	<90% women with UI or % women with UI not specified
no PMID	Yoo, E., Shim, E., Kim, Y., Kim, D.	The factors affecting medication persistence in patients with overactive bladder symptoms	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication
28901041	Yoshida, M. Nozawa, Y. Kato, D. Tabuchi, H. Kuroishi, K.	Safety and Effectiveness of Mirabegron in Patients with Overactive Bladder Aged >/ = 75 Years: Analysis of a Japanese Post-Marketing Study	Low Urin Tract Symptoms	<90% women with UI or % women with UI not specified
no PMID	Yoshida, M., Hotta, S., Hiro, S., Yamagami, H., Yokoyama, O.	Efficacy and safety of fesoterodine treatment for overactive bladder (OAB) symptoms in elderly women with and without hypertension	Neurourology and Urodynamics	Not peer reviewed publication
no PMID	Young-Lin, N. Chen, B. Yang, J. Hedlin, H. Stefanick, M. L. Rogo-Gupta, L.	Weightandweight change impact stress and urge urinary incontinence symptoms in postmenopausalwomen	Female Pelvic Medicine and Reconstructive Surgery	Not peer reviewed publication

PubMed or other ID	Authors	Title	Journal	Rejection Reason
CN-00890081	Yuan, Z, He, C, Wang, H, Huang, Y, Li, D, Ren, S, Li, X, Shen, H	Comparison of tolterodine with estazolam versus tolterodine alone for the treatment of women with overactive bladder syndrome and nocturia: A non-randomized prospective comparative study	Pakistan Journal of Medical Sciences	<90% women with UI or % women with UI not specified
25399241	Yuan, Z., He, C., Yan, S., Huang, D., Wang, H., Tang, W.	Acupuncture for overactive bladder in female adult: a randomized controlled trial	World J Urol	<90% women with UI or % women with UI not specified
26720597	Yuce, T., Dokmeci, F., Cetinkaya, S. E.	A prospective randomized trial comparing the use of tolterodine or weighted vaginal cones in women with overactive bladder syndrome	Eur J Obstet Gynecol Reprod Biol	<90% women with UI or % women with UI not specified
28199076	Zachariou, A. Filiponi, M.	The effect of extended release tolterodine used for overactive bladder treatment on female sexual function	Int Braz J Urol	<90% women with UI or % women with UI not specified
28904941	Zargham, M. Abedi, S. Alizadeh, F. Khorami, M. H. Mohamadi, M. Bahrami, F. Sharifiaghdas, F. Mazdak, H.	Is there any Relationship Between Bladder Trabeculation and Efficacy and Safety of Intravesical Botulinum Toxin A Injection in Refractory Idiopathic Overactive Bladder Women?	Adv Biomed Res	Not comparative and no adverse events or N<100
28424499	Zhang, H. L. Huang, Z. G. Qiu, Y. Cheng, X. Zou, X. Q. Liu, T. T.	Tamsulosin for treatment of lower urinary tract symptoms in women: a systematic review and meta-analysis	Int J Impot Res	No primary data or no usable results
26040492	Zhang, J., Cheng, W., Cai, M.	Effects of electroacupuncture on overactive bladder refractory to anticholinergics: a single-blind randomised controlled trial	Acupunct Med	<90% women with UI or % women with UI not specified
21956215	Zhang, Y. X., Xu, H. N., Xia, Z. J., Wu, B.	Analysis of clinical interventional strategy for women with urinary incontinence complicated with diabetes mellitus	Int Urogynecol J	Not comparative and no adverse events or N<100
24617234	Zhao, L., Wang, S. Y.	[Efficacy impacts of the different treatment frequencies on female stress urinary incontinence]	Zhongguo Zhen Jiu	Not intervention/comparison of interest
CN-00920788	Zhu, L, Jiang, F	Multi-site, Randomized, Opened and Controlled Comparison Study on the Effectiveness and Safety of Solifenacin Succinate Tablets and Solifenacin Succinate Tablets + Estrogen for Overactive Bladder in the Post-menopausal Women	ClinicalTrials.gov (http://clinicaltrials.gov/show/NCT01833663)	No primary data or no usable results

PubMed or other ID	Authors	Title	Journal	Rejection Reason
27679165	Zhu, L., Jiang, F.	Efficacy and Safety of Solifenacin Succinate Tablets Versus Solifenacin Succinate Tablets With Local Oestrogen for Overactive Bladder in Post-Menopausal Women - A Multi-Centre, Randomised, Open, Controlled Comparison Study	J Minim Invasive Gynecol	Not peer reviewed publication
23001509	Zinner, N. R., Ammann, L. P., Haas, G. P., Janning, S. W., He, W., Bukofzer, S.	Finding unrecognized information in overactive bladder clinical trial data: a new approach to understanding placebo and treatment effects	Neurourol Urodyn	No primary data or no usable results
21462240	Zinner, N. R., Dmochowski, R. R., Staskin, D. R., Siami, P. F., Sand, P. K., Oefelein, M. G.	Once-daily trospium chloride 60 mg extended-release provides effective, long-term relief of overactive bladder syndrome symptoms	Neurourol Urodyn	<90% women with UI or % women with UI not specified
108132279		Rectal balloon training in female urinary incontinence	Journal of Rehabilitation Medicine (Stiftelsen Rehabiliteringsinformation)	Not peer reviewed publication

Appendix C. Design, Arm Details, and Baselines

Table C-1. Design and baselines for the new comparative studies

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Abdelbary 2015 26135813	Egypt, 2010-2014, RCT	Explicitly not industry funded	> = 40 y/o without UTI, SUI, prior anti-incontinence or pelvic surgery, anti-incontinence meds (for at least 3 months), or malignancy	none listed, opposite of inclusion	Not reported/unclear	Urge: 100 (The primary outcome was improvement in urgency incontinence)	48.5 (6) [40-70]			315	315	0
Abdulaziz 2012	Saudi Arabia, 2010-2011, RCT	Not reported	perimenopausal (Age 40-50years), multiparous (3-6 children), obese women (BMI > 32/Kg/M2) with complaints of pelvic floor dysfunction and stress urinary incontinence.	history of genetourinary pathology, neurological disorders, chest infection, chronic cough, diabetes or having participated at aerobic training programs within recent three months	No (explicitly treatment naive)	Stress: 100	43.8 (4.4) [40, 50]			56	56	0
Ahlund 2013 23672520	Sweden, nd, RCT	Not reported	Normal term singleton vaginal delivery and having problem with SUI	Neurological bladder dysfunction or tumors in the genital area	Not reported/unclear	Stress: 100	33 (3.6)			98	82	16

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Alves 2011 21860988	Brazil, nd, RCT	Not reported	All patients had a clinical diagnosis of SUI and urinary loss for at least three months	urogenital prolapse grade III or higher18, urinary tract infection, instability of the detrusor muscle, cardiac pacemakers, devices implanted in the pelvis, vaginal inflammation/infections, pregnancy, intrinsic sphincter deficiency, use of hormone replacement therapy, pelvic or abdominal surgery within the last six months, cognitive impairment and non-attendance of the number of sessions provided	Not reported/unclear	Stress: 100	55.6 (6.5) [42]			20	20	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Amundsen 2016 27701661	U.S., 2012-2015, RCT	Explicitly not industry funded	Refractory urgency UI; a minimum of 6 urgency incontinence episodes on a baseline 3-day diary	Relevant neurologic diseases; history of using either of the study interventions; or a postvoid residual of more than 150 mL	Some supervised behavioral or physical therapy intervention; a minimum of 2 anticholinergics (or inability to tolerate or contraindications to the medication)	Urge: 100	63 (11.6)			386	364	17
Aziminekoo 2014 24971138	Iran, 2011, 2012, RCT	Explicitly not industry funded	Female outpatients with documented over active bladder syndrome [urinary frequency (>or = 8 micturations /24 hours) plus urge incontinence (>or = 5 episodes/week)] who show idiopathic detrussor overactivity (IDO) in the filling cystometry.	nd	Not reported/unclear	Urge: 100	53 (12)			100	nd	nd

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Baker 2014 24763155	U.S., 2011-2012, RCT	Explicitly not industry funded	women >18yo, 5 or more UUI on 3 day bladder diary	anticholinergic medication with the past 2 weeks, prior nonpharmacologic treatment of UUI such as supervised behavioral therapy, supervised or unsupervised physical therapy, supervised biofeedback transvaginal electrical stimulation, PTNS, Interstim, bladder botox, IC, neurological disorder.	Some had tried prior anticholinergics (~25% in each arm), ~10% had a prior midurethral sling	Urge: 100	median 58 [22, 79]			30	21	9
Beer 2017 27501593	U.S., 2012-2014, RCT	Not reported	Women who were eligible for neuromodulation surgery, over 21 years old, not currently pregnant or planning on becoming pregnant		Yes (48% with prior UI procedures)	Unclassified: 100	66.5 (12)		white 35%, black 12%, Hispanic 43%	23	23	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Berlotto 2017 28508398	Brazil 2014 RCT	Not reported	Postmenopausal status, age 50-65 years, a complaint of loss of urine on exertion, and provision of written informed consent.	Presence of a urinary tract infection, failure to understand pelvic floor muscle contraction, cognitive alterations, collagen- or muscle-related diseases, or neurological abnormalities.	No (explicitly treatment naive)	Stress: 100	58.3 (5.8)	Older women		49	45	4
Bray 2017 28407338	UK, 2004, 2006, RCT	Industry funded/industry provided materials	Age ≥18 years, had OAB symptoms for at least 6 months prior to entering the study, and had a BWT of at least 5 mm and post-micturition volume of less than 50 mL at screening.	Subjects could not be taking any anticholinergic drug or receiving any treatment for OAB. Women with significant SUI and women experiencing or with a history of urinary tract infection were also excluded from the study.	Not reported/unclear	Urge: 100	47 (11.4)		white 81%, black 11%, Asian 3%	79	65	14

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
But 2012 23390832	Slovenia, 2007-2008, RCT	Not reported	female, urgency intensity and urgency urinary incontinence of ≥3 on the Urgency Perception Scale (UPS), and frequency ≥1 urgency episodes per day, no anticholinergic drugs for at least 6 months prior to study inclusion	pregnant, angular glaucoma, urinary infection, urinary tract stones, bladder disease (stones or tumors), dementia, neurogenic OAB with sever orthopedic difficulties	Not reported/unclear	Unclassified: 101	median 54 (IQR 11.5)			77	61	16
Butt 2016	Pakistan, nd, RCT	Not reported	Patients having complaint of urinary incontinence, complaints of nocturia, and/or complaints of frequency (the number of times a women voids during her waking hours. Normally it is between 4-7 voids per day)	Patients with urinary tract infection (on urine complete examination), fistula (history of continuous dribbling of urine), pregnancy, uterovaginal prolapspe, and/or diabetes (BSF >126 mg/dl and BSR>200 mg/dl).	Not reported/unclear	Unclassified: 100	57.34 (11.54)			830	830	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Capobianco 2012 21706345	Sardinia, 2005-2010, RCT	Explicitly not industry funded	urinary stress incontinence, vaginal atrophy, and histories of recurrent urinary tract infections. None received estrogen treatment prior to the study.	pathologies or anatomical lesions of the urogenital tract such as uterovaginal prolapse, cystocele, and rectocele of grade II or III, severe systemic disorders, thromboembolic diseases, biliary lithiasis, previous breast or uterine cancer, abnormal uterine bleeding, and body mass index (BMI) > = 25 kg/m2	Not reported/unclear	Stress: 100 (direct visualization of loss of urine from the urethra during the standard stress test and by urodynamic investigation)	57.8 (4.5)		white 98.5%	206	206	20

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Castellani 2015 26043913	Italy, 2010-2014, RCT	Not reported	postmenopausal women with SUI	previous surgical treatment for SUI or prolapse, urge incontinence < = POP-Q, severe hepatic disease, breast or uterine cancer, thromboembolic diseases, abnormal uterine bleeding, BMI > = 30 kg/m3	Not reported/unclear	Stress: 100	55 (5.7)			72	69	3

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Chughtai 2016 26883688	U.S., nd, RCT	Industry funded/industry provided materials	postmenopausal women with a history of overactive bladder symptoms for at least 3 months and at least one urgency incontinence episode per 24 h	evidence of chronic urologic inflammation, uncontrolled narrow angle glaucoma, recurrent urinary tract infection, significant stress incontinence, a partner with sexual dysfunction, an anatomic disorder of sexual function, a recent major gynaecological surgery, abnormal cervical smear results, history of gynaecological malignancy, and/or uncontrolled hypertension	Not reported/unclear	Unclassified: 100	55.4 [40.7, 66.6]			23	18	5

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Chughtai 2016 26883688 ND	U.S., ND, RCT	Industry funded/industry provided materials	postmenopausal women with a history of over-active bladder symptoms for at least 3 months, including an average of 8 or more micturitions per 24 h and at least one urgency incontinence episode per 24 h recorded in 3 day bladder diaries at baseline	chronic urologic inflammation, uncontrolled narrow angle glaucoma, recurrent urinary tract infection, significant stress incontinence, partner with sexual dysfunction, an anatomic disorder of sexual function, a recent major gynaecological surgery, abnormal cervical smear results, history of gynaecological malignancy, and/or uncontrolled hypertension	Not reported/unclear	Unclassified: 103	55.4 [40.7-66.6]			23	18	5

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Cornu 2012 22588140	France, 2006-2008, RCT	Industry funded/industry provided materials	Age > = 18; SUI with at least 4 episodes/week or Mixed urinary incontinence with predominant SUI component; Postmenopausal or under contraception	Vaginal delivery in the past 2 months, bladder or vaginal active disease, acute or recurrent urinary infection; pelvic organ prolapse; surgical intervention for SUI in the past 6 months; drug treatment for urinary incontinence in the last month; pelvic floor muscle training under way	Some (14.5% previous UI surgery)	Stress: 100 (stress or mixed with primary stress component)	58.6 (13.6) [29, 88]			55	41	14

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Correia 2014 24382548	Brazil, 2012-2013, RCT	Explicitly not industry funded	women over age 50 who complained of urinary leakage on stress and who had not undergone PT for UI.	Patients with UUI or MUI. Latex allergies, vaginal or urinary infections, POP > grade 2, inability to contract pelvic muscles, cognitive or neurological disorder, uncontrolled HTN, hormone therapy, pacemaker, metal rod implant, inability to complete evaluation and treatment.	Not reported/unclear	Stress: 100	60.13 (9.35)			48	45	3

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
de Souza Abreu 2017 28346721 ND	Brazil, 2013-2014, RCT	Explicitly not industry funded	women 18 years and older with self reported urinary Underwent a cough-provocation test	absence of losses during the cough provocation test; musculoskeletal and/or neurological dysfunction that compromised the performance or understanding of the exercises; genital prolapse beyond the vaginal opening; use of anti-cholinergic drugs or hormone replacement therapy; ongoing urinary or vaginal infection. Pregnant or breastfeeding women and women undergoing treatment for SUI of effort, for pelvic floor dysfunction and for changes in spine alignment	Not reported/unclear	Stress: 100	64 (11.9)			40	33	7

Dede 2013 23086134	Germany, 2007-2008, RCT	Explicitly not industry funded	urge incontinence, mixed incontinence (motor component dominant with at least 1 unstable detrusor contraction with simultaneous urge or urge incontinence)	stress incontinence primary diagnosis, urological or gynecological surgeries < 3 months before study start,untreated tachy-arrythmia, closed angle glaucoma, outflow obstruction of any etiology, myasthenia gravis, pregnancy and lactation, acute allergies or drug intolerance towards atropine, oxy-butynin, TCI, or any adjuvant contained in the tablets,other anticholinergics ,tri-tetracyclic antidepressants , calcium antagonists (unless started at least 3 months before administration of the first dose of study medication) and b-sympathomimetics in the last 7 days before the first urodynamic assessment	Not reported/unclear	Urge: 56 (detrussor instability), mixed: 44 (motor component dominant)	51.83 (10.52)			90	90	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
				were not eligible. Disallowed concomitant medications were antihistamines, amantadine, quinidine,disopyramide.								
Delgado 2013 23640005	UK, nd, RCT	Explicitly not industry funded	women > 18 with sure SUI or stress-predominant mixed UI, no previous UI surgery	pregnancy, <12 weels post-partum, taking duloxeting, recent or current UTI, neurological disease, post-void residual ≥ 100 ml, organ prolapse	Not reported/unclear	Unclassified: 100	49.6 [36-68]			52	40	12

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Dmochowski 2014 24666884	Australia, New Zealand, South Korea, ND, RCT	Industry funded/industry provided materials	Women 18–75 years of age with a history of OAB (urge or mixed urinary incontinence with predominant urge incontinence) for at least 6 months	predominant stress incontinence or mixed incontinence post void residual urine volume > 100 ml or polyuria (> 3 l/day) underlying neurological disease responsible for OAB active urinary tract infection clinically relevant cardiac arrhythmias Pelvic or urologic abnormalities Bladder urinary tract surgery Patients taking medications with antimuscarinic or antihistaminic activity	Not reported/unclear	Urge or mixed: 100	56 (12.2) [18-75]		white 57.7%, Asian 40.8%	138	130	8

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Ferreira 2012	Portugal, nd, RCT	Not reported	a clinical history of SUI with mild to moderate severity, a pad test of more than 1 g, the ability to contract the PFM, and a 50% attendance at the training programmes	previous surgeries for SUI, neurological or psychiatric diseases, and other diseases or medication that would interfere with the outcomes of the study	Not reported/unclear	Stress: 100	52.3 (9.1)			38	34	4
Fitz 2017 28169458	Brazil, 2011-2014, RCT	Explicitly not industry funded	Predominance of SUI symptoms and≥2 g leakage measured by pad test and with capability to contract the PFM properly.	Younger than 18 years old, had chronic degenerative diseases, pelvic organ prolapse greater than stage I by POP-Q, neurologic or psychiatric diseases, inability to contract PFMs, had previous pelvic floor re-education programs and/or pelvic floor surgeries	No (explicitly treatment naive)	Stress: 100	56.4 (11.3)			72	49	23
Fürst 2014 25003921	Brazil, 2000-2002, RCT	Not reported	clinical and urodynamic SUI	none listed	Yes (patients with a history of surgical treatment for SUI, pelvic reconstruction and hysterectomy were included)	Urge: 63, stress:100, mixed: 63	49.6 (10.6)			48	35	13

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Galea 2013	Australia, nd, RCT	Explicitly not industry funded	Healthy women living in the community, aged between 60 and 85 years with symptoms of stress and/or urge UI	faecal loading, known neurological symptoms, or currently receiving physiotherapy intervention for UI	Not reported/unclear	Urge: 65, stress: 9, mixed: 26	73.5 (9) [61, 86]	older women 70%		23	22	1
Ghaderi 2016 27059833	Iran, nd, RCT	Explicitly not industry funded	Age 45-60 years old; chronic nonspecific low back pain; SUI; experience of 2 or 3 normal deliveries	Experience of the pelvic surgery or spine; malignant condition; pelvic or spine fracture; had twins or more; have low back pain with specific condition	Not reported/unclear	Stress: 100	52.9 (1.1)			60	nd	nd

Gittelman 2014 24231837 ND	U.S., Canada, 2004-2006, RCT	Industry funded/industry provided materials	≥18 years of age; OAB for ≥6 months; pure or predominant urinary urge incontinence (UUI); willing to discontinue all current OAB medications for 2 weeks prior to a placebo run-in period.	Pure or predominant stress incontinence, insensate incontinence, or overflow urinary incontinence; urinary retention;uncontrolled narrow-angle glaucoma; hypersensitivity to Oxy or silicone; pregnancy/delivery in last 6 months; infections or conditions of urinary tract, bladder, vagina, or cervix that precluded VR placement or visual inspection; cervical dysplasia or any atypical Pap smear findings; known HIV positivity; history of any other medical conditions that could worsen with Oxy administration or VR use; current use of vaginal contraceptives or devices; initiation of hormone therapy within prior 3 months;	Not reported/unclear	Unclassified: 100	57 (11.5) [21.3]		white 78.6%, black 16.7%, Hispanic 4.3%, Asian 0.3%	720	323	54

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
				prior Oxy response ure; and any use in the previous 3 months of other investigational drugs.								
Golmakani 2014 24498480	Iran, 2008-2009, RCT	Explicitly not industry funded	Women, 25-65 yo, proven SUI	Chronic degenerative diseases, vaginitis, pregnancy, active or recurrent UTIs, advanced genital prolapse, cardiac pacemakers	Not reported/unclear	Stress:100 (> = 3 episodes/wk)	45.5 (4.6) [25-65 (eligibility)]			60	51	9

Gozukara 2014 24711149	Turkey, 2008-2008, RCT	Not reported	ive or more episodes of any UI in a-3-day voiding diary and a BMI over 25 kg/m2	Women who had used medical therapy for incontinence or made any attempt at weight loss within the previous month and women with urinary tract infection, pregnancy, or parturition in the previous 6 months and previous genitourinary surgery were excluded. Patients with UI due to neurological or functional origins, or with significant systemic and genitourinary medical conditions, and women who required assistance during their daily activities were also excluded. Additionally, patients who were using any medication that potentially af-fects urinary continence (e.g., cholinergic and anticholinergic agents, certain antihypertensives, diuretics,	Not reported/unclear	Urge: 23, stress: 40, mixed: 37	43.8 (9.7)			378	321	57

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				opioids, and cer- tain psychotropic drugs) were excluded.								
Hirakawa 2013 23306768	Japan, 2008-2011, RCT	Explicitly not industry funded	SUI; leakage episode occurring more than once a week	Pelvic organ prolapse beyond the vaginal hymen; pregnancy; previous pelvic surgery for urology or gynecology in the past year, concomitant treatment for SUI during the trial period; neurological or psychiatric disease; urinary tract infection; any severe disease such as malignancy		Stress: 100	56.8 (10.6)			46	39	7

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Huang 2012 22542122	U.S., 2009-2010, RCT	Industry funded/industry provided materials	woman ≥ 18 years old, isolated urgency incontinence or mixed incontinence, ≥ 7 incontinence episodes per week in the past 3 months	self-reported complex medical history (incontinence surgery in last 5 years, pelvic surgery in last 6 months), >3 UTI in last year, urinary tract or rectal fistula, interstitial cystitis, symptomatic pelvic organ prolapse, urogenital cancer or radiation, congenital abnormalities leading to incontinence, major neurological disorder, patients with contraindications to fesoterodine therapy.	Not reported/unclear	Urge: 100 (urgency-predominant incontinence on the 3IQ)	56 (14)		white 66.2%, black 22.3%, Hispanic 7.1%, Asian 2.3%	645	604	41

Huang 2014 24763156	U.S., 2012, RCT	Explicitly not industry funded	Age > 40; experience incontinence for at least 3 months; document at least 7 episodes of incontinence on a screening 7-day voiding diary; half of those episodes being stress-type or urgency-type incontinence	Severe mobility limitations that would prevent participation in the yoga program; previous formal yoga instruction within the past year or any prior use of yoga specifically to treat incontinence; pregnancy within the past 6 months; current urinary tract infection or hematuria (assessed by urine dipstick testing) or history of 3 or more urinary tract infections in the past year; major neurologic condition such as stroke, multiple sclerosis, or Parkinson disease; history of congenital defect leading to incontinence, fistula in the bladder or rectum, pelvic cancer or radiation, or interstitial cystitis or chronic pelvic pain; current symptomatic pelvic organ	Not reported/unclear	Urge: 63, stress: 37	61.4 (8.2)			19	18	1

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
				prolapse; body mass index greater than 35 kg/m2; or prior surgery to the urinary tract. Participants also could not have used practitioner-supervised behavioral, pharmacological, or other clinical treatments (eg, pessary) for incontinence within the past 3 months or be planning to initiate new clinical incontinence treatments during the study.								

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Huebner 2011 20848671	Germany, 2004-2006, RCT	Explicitly not industry funded	clinically verified SUI and MUI with predominant SUI, ability to perform a voluntary pelvic floor contraction, age 18 or older, negative pregnancy test.	cardiac pacemaker, non-contracting/non-functioning pelvic floor, stage 2 or greater prolapse, genital anomalies, urogyn surgery in the prior 2 months, participation in other studies, OAB or MUI with predominant OAB	Not reported/unclear	Stress: 100	49.8 (12.9)			108	88	20

Jabs 2013 23343798 ND	Canada, 2008-2009, RCT	Explicitly not industry funded	Females over 18 years of age Diagnosis of urinary urge incontinence with resistance to or intolerance of anticholinergic medication Willingness and ability to use self-catheterization if necessary	Urinary urge incontinence secondary to neurologic disease Known allergy or sensitivity to any of the components in the study medication Pregnant and/or breast-feeding The medical conditions of myasthenia gravis, Eaton-Lambert syndrome, or amytrophic lateral sclerosis Symptomatic urinary retention or post-void residual of > 200 mL Anticoagulation therapy Familial bleeding disorder Previous bladder pathology Participation in another drug study Previous botulinum toxin treatment for urological condition	Yes (anticholinergics)	Urge: 100	63.4 (10.3)			21	21	0
Jafarabadi 2015 25369726	Iran, 2011-2013, RCT	Explicitly not industry funded	female outpatients age > = 45 with documented OAB (urinary frequency > =	lactation, pregnancy, glaucoma, urinary infection, stress UI, myasthenia	Not reported/unclear	Urge: 100	54.9 (9)			301	282	19

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
			micturations/24 hours plus urge incontinence > = 5 episodes/week who show IDO in the filling chemistry	gravis, neuropathy, mental disorder, gross renal, hepatic or cardiovascular disorders, obstruction in urinary bladder outlet, history of genitourinary operations, interstitial cystitis, unexplained hematuria, urinary catheterization, concomitant antimuscarinic medication, electrostimulation therapy or bladder training, allergy to oxybutynin or tolterodine, treatment with tolterodine or oxybutynin in the 3 months before randomization and exposure to any other investigational drug in the preceding 2 months.							

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Jha 2017 28801034	UK 2012-2015 RCT	Explicitly not industry funded	Sexually active, over the age of 18 yrs and with urinary incontinence attending for PFMT; greater than 25% on the urinary domain of the sexual function dimension, and/or greater than 33% for the degree of bother for the same symptom	prolapse, previous incontinence surgery, > = Grade 3 muscle strength, UTI, pacemaker, IUD, pregnant, undiagnosed pelvic pain, known sensitivity to electrodes or gel, infection of vulva or vagina, recent hemorrhage or hematoma, atrophic vaginitis	Not reported/unclear	Unlcassified: 100%	45.6 (9.5)		White: 98%, Black 1%, Asian 1%,	114	69	45
Jordre 2014	USA, nd, RCT	Not reported	Age 18-88 years; minimum of 2 SUI episodes per month	Pregnant or < 4 weeks postpartum; MMSE < 24/30; history of total hip anthroplasty; current treatment for UI; current mediciations known to impact bladder function	Not reported/unclear	Stress: 41, mixed: 59	51.5 (12.8)			30	27	3

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Kafri 2013 23160873	Israel, nd, RCT	Explicitly not industry funded	women, aged 45-75, experienced at least 3 episodes of UUI/week over the past 4 weeks; PFM contraction Oxford strength scale > = 2, no vaginal prolapse; residual urine volume < 100 ml	current UTI, neurological disease, psychiatric or depressive disorder, previous pelvic floor surgery or physical therapy	Not reported/unclear	Urge: 100 (episodes of UUI not completely explained by SUI symptoms)	56.7 (8.0)			164	135	29

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Kaya 2011 20943711 ND	Turkey, 2007-2008, RCT	Explicitly not industry funded	OAB, diagnosis of idiopathic detrusor overactivity	neurological disorder, neoplasm, second degree or greater pelvic organ prolapse, type III stress urinary incontinence, pregnancy, any mental disorder interfering the patient's cooperation during the treatment, use of a pacemaker or an intrauterine device, or previous medical, surgical treatment or physiotherapy for detrusor overactivity, contraindication to trospium chloride	Not reported/unclear	Unclassified: 100	47 (7.05)			46	45	1

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Kaya 2015 25266357	Turkey, 2012-2014, RCT	Explicitly not industry funded	Female; having symptoms of SUI, UUI, or MUI; age>18 years; being free of UI medications for at least 4 weeks before the start of the study; and sufficient literacy to complete required forms and urinary diaries.	Antenatal or postnatal women (up to 3 months after delivery), women who were unable to voluntarily contract their PFM, and women with persistent urinary tract infections, impaired mental state, pelvic organ prolapse (POP) past the vaginal introitus, neurological disorders, and who received concurrent or recent physiotherapy intervention (within the last year).	No (explicitly treatment naive)	Urge: 15, stress: 46, mixed: 39	48.7 (10.1)			132	108	24

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Kim 2011 21545385	Japan, 2006-2006, RCT	Explicitly not industry funded	(i) suffering from urge,stress or mixed UI; (ii) being 70 years or older; and (iii)having urine loss episodes more than once a month.	(i) an unclear UI type;(ii) having urine loss episodes less than once a month;(iii) impaired mental health (a Mini-Mental StateExamination score of<24);11,12and (iv) unstable cardiacconditions such as ventricular dysrhythmias, pulmo-nary edema or other musculoskeletal conditions.	Not reported/unclear	Urge: 40, stress: 34, mixed: 26	76.0 (4.09)			147	147	0
Kim 2012 21849373	Korea, nd, RCT	Explicitly not industry funded	UI after childbirth; less than 6 weeks after normal vaginal delivery; involuntary loss of urine; no genitourinary disease or infection; no other treatment administered for urinary incontinence; no obstetrical operation history	nd	Yes (no other treatment administered for urinary incontinence)	Unclassified: 100	31.7 (2.7)			20	18	2

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Klarskov 2014 24258099	Denmark, 2010, RCT	Industry funded/industry provided materials	18-65 years, stress incontinence >3 months, stress predominant mixed urinary incontinence >3 months	significant neurological disease, trauma, prescription or non-prescription drug use affecting the lower urinary tract within 14 days of first treatment period, history of lower urinary tract or pelvic surgery or irradiation to the pelvis, anatomical anomaly of the urinary tract, urinary retention or outlet obstruction, catheter, bladder training in the last 3 months, hematuria, URI, drug therapy for overactive bladder	Not reported/unclear	Unclassified: 102	47.9 (8.4)			22	18	4

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Leong 2015 25377297	China, nd, RCT	Not reported	Chinese females aged > = 65 with a clinical diagnosis of SUI, UUI, or MUI of a mild to moderate severity	active urinary tract infection, patients on diuretic medication, presence of bladder pathology or dysfunction, previous anti-incontinence surgery, significant cognitive impairment , obesity, and use of concomitant treatments during the trial.	Not reported/unclear	Urge: 16, stress: 51, mixed: 32	74.3 (4.6)	older women 70%	Asian 100%	55	55	0
Lian 2015 26054138 na	China, 2012-2014, RCT	Not reported	female, >40 yo, mild-to-moderate stress urinary incontinence, multipara (> = 1)	other types of UI, pregnancy, stroke, sever DM, spinal cord injury, UA showed hematuria or WBC, ICD	Not reported/unclear	Stress: 100	51.5 (8)		Asian 100%	90	90	0

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Lim 2017 27871927	Malaysia, 2013-2015, RCT	Not reported	female, 21yo or older, SUI with cough, ICIQ-UI SF score 6 or more, ability to perform a 1 hour pad test.	other subtypes of UI, severe cardiac arrhythmia, pacemaker, neurological condition, pelvic radiation, prior SUI surgery, prior treatment with pulsed magnetic stimulation, certain medications, stage 3 or 4 prolapse, fistula, urethral sphincter defect, PVR > 200cc, pregnancy	No (explicitly treatment naive)	Stress: 100				120	120	0

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Liu 2017 28655016	China, 2013-2015, RCT	Explicitly not industry funded	Sexually active, over the age of 18 yrs and with urinary incontinence attending for PFMT; greater than 25% on the urinary domain of the sexual function dimension, and/or greater than 33% for the degree of bother for the same symptom	prolapse, previous incontinence surgery, > = Grade 3 muscle strength, UTI, pacemaker, IUD, pregnant, undiagnosed pelvic pain, known sensitivity to electrodes or gel, infection of vulva or vagina, recent hemorrhage or hematoma, atrophic vaginitis	Not reported/unclear	Stress: 100	55.4 (8.4)		Asian 100%	504	486	18

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Lopès 2014 25444700	France, nd, RCT	Not reported	Women with stress or mixed UI (composed predominantly of stress UI) who responded favorably to the initial 10- 15 session rehabilitation. The response was defined at the same time by a clinical improvement based on the investigator's criteria, and by a ICIQ score < = 12.	Patients who had given birth less than 6 months before, who had a pelvic surgery less than a year before, presented a disorder related to neurological disease or cognitional malformation, a urinary incontinence treated with surgically, or treated with medication in the last 6 months, a perineal hypoesthesia or local conditions that interfered with the use of a inter-vaginal probe.	Yes (100% physiotherapy. Didn't have failure. This studies was just to maintain the improvement.)	Stress: 68, mixed: 32 (mixed with predominately stress UI)	51.24 (13.7) [24, 84]			161	149	12

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Lovatsis 2017 27438055 SURE study	Canada, 2011-2013, RCT	Explicitly not industry funded	urodynamically proven SUI, SUI having moderate to severe impact on life	mixed incontinence where urgency incontinence was predominant symptom, vaginal prolapse, post-voidal residual volume > 100 ml, hematuria, undiagnosed vaginal bleeding, pregnancy, past surgery for incontinence or prolapse, use of incontinence pessary had failed, physical inability to perform activities included in pad test	Not reported/unclear	Stress:100	51 (9.5)			36	36	0

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Manonai 2015 25920290	Thailand, 2012-2013, RCT	Explicitly not industry funded	SUI diagnosed according to the International Urogynecological Association (IUGA)/ International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction; leakage episode occurring more than once a week	Pregnancy; previous pelvic surgery for urology or gynecology in the past year; concomitant treatment for SUI during the trial period; neurological or psychiatric disease; urinary tract infection; any severe disease such as malignancy	Not reported/unclear	Stress: 100	47.8 (7.1)			61	59	2

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Marenca k 2011 2088657 1	Czech Republic Lithuania Norway Slovakia Sweden United Kingdom, 2005-2006, RCT	Industry funded/ind ustry provided materials	women ≥18 years, urinary frequency ≥8 micturitions on aver per 24 hours, ≥4 episodes of urgency/week, mean voided volume <300ml in a 5 day bladder diary	OAB symtoms <6 months before randomization, significant stress urinary incontinence, UTI, chronic persistent urinary tract pathology, relevant neurologic disease associated with urinary symptoms, <3 bowel movements/we ek, cystocele or other clinically significant pelvic prolapse, mean total voided volume >3000 ml in 24 hours, postvoidal residual volume of >200 ml, previous bladder radiotherapy, catheterization or assistance required for toileting	Not reported/unclea r	Urge: 100 (sudden and compelling desire to pass urine that is difficult to defer)	52.9 (13.3)			186	164	22

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McLean 2013 23861324	Canada, nd, RCT	Not reported	Age > 18 years old; symptoms of SUI with or without urge incontinence, nocturia or anterior compartment prolapse	Fecal incontinence; on medications known to increase or alleviate incontinence; known neurological impairments involving the central nervous system or the sacral nerves or known connective tissue disorder	Not reported/unclear	Urnclassified: 100	51.7 (8.6)			40	35	5
McMichael 2013 REMOTE	U.S., 2011-2012, RCT	Industry funded/industry provided materials	Women who have moderate to severe urge, stress or mixed Urinary Incontinence	History of migraines, neurologic problems, swallowing disorder, stroke, severe depression, heart failure, peripheral edema, moderate to severe asthma, chronic obstructive pulmonary disease	Not reported/unclear	Urge: 100	54.4 [22, 92]			67	67	0
Michel 2013 22816871 DUROSA	Germany, 2005-2008, NRCS	Industry funded/industry provided materials	moderate to severe stress urinary incontinence symptoms, 18 years and older	planned SUI surgery during observation period	Not reported/unclear	Stress: 100	59.4 (12.5)			12733	11733	1000

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Oldham 2013 23023996	UK, nd, RCT	Industry funded/industry provided materials	Women (18–65 years of age) with self-reported stress, urge, or mixed incontinence	Pregnancy or a baby in the last 3 months. Recent abdominal surgery and previous or current active therapy for pelvic malignancy.? Implanted pacemaker.? Manual dexterity insufficient to place the device. Previous treatment for incontinence.? Presence of a neurological condition such as MS or Parkinson's disease.	No (explicitly treatment naive)	Urge: 11, stress: 28, mixed: 61	48.1 (8.7) [18, 65]			124	95	29
Carmona 2013	Spain, NR, RCT	Explicitly not industry funded	UUI, men or women (only report on women), older than 45 younger than 75, conservative treatment had failed, symptoms for at least a year.	nerve damage, prior surgery for incontinence, pace maker, heart problems, current pregnancy, cognitive deficits, skin problems	Yes (conservative treatments had failed)	Urge: 100	60 (14.4)			24	22	2

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Ong 2015 26142713	Malaysia, 2011-2013, RCT	Industry funded/industry provided materials	Female suffering predominantly from SUI	Previous incontinence surgery; concomitant medical treatment for urinary incontinence, UTI, neurologic or psychiatric disease	Not reported/unclear	Unclassified: 100 (says SUI is inclusion, but urge is accepted and there is no numeric breakdown of these participants)	51.9 (12.7)		Asian 100%	40	37	3

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Oreskovi ć 2012 2281622 7 ND	Croatia, Slovenia, ND, RCT	Not reported	Urge incontinence, frequency of micturition (at least 8 voids per 24 hours) and urgency (a strong desire to void at least once per day).	Contraindicatio ns for the use of antimuscarinic drugs (e.g. uncontrolled narrow-angle glaucoma, urinaryor gastric retention), stress urinary incontinence (more than one episode per week), bladder outlet obstruction and /or a post-void residual volume more than 200 mL, genitourinary condition that could cause urinary symptoms, recent urogenital surgery or hepatic disease.	Not reported/unclea r	Urge: 100	56.9 (10.1)			171	157	14

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Orri 2014 24792229 REMOTE	U.S., 2011-2012, RCT	Industry funded/industry provided materials	Female age > = 21 years with overactive bladder symptoms (subject-reported) for at least 3 months	Clinically significant hepatic, renal or neurological condition such as stroke (with residual deficit), multiple sclerosis, spinal cord injury, or Parkinson's disease. History of cystitis, continence, urogenitalcancer or radiation Subjects who are pregnant, nursing, or with a positive urine pregnancy test or who are intending to become pregnant within 28 days after the completion of the trial.	Not reported/unclear	Urge: 100	47.7 [28, 66]		white 72%, black 17%, Hispanic 11%,	18	16	2

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Özlü 2017 28345778	Turkey, 2012-2014, RCT	Explicitly not industry funded	Women > = 18 with urodynamically confirmed diagnoses of SUI of mild to moderate severity. The strength of PFM 3/5 and more	Pregnancy; Current vulvovaginitis or urinary tract infections or malignancy; Previous surgery for stress incontinence; Anatomic structural disorders of genitoanal region; Neurologic or psychiatric disease; Previous conservative therapy within 6 months; More than stage 2 according to the pelvic organ prolapse quantification (POP-Q)17; Allergy to condom or lubricant gel that is used with perineometer/probe	Not reported/unclear	Stress: 100	42.4 (8.2)			53	51	2
Pereira 2011 21962461	Brazil, 2008-2009, RCT	Explicitly not industry funded	Age >18 years; urinary leakage on stress; have not undergone physical therapy for UI before	nd	Yes (physical therapy naïve)	Stress: 100	60.8 (10.5)			49	45	4

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Pereira 2012 22840592	Brazil, 2010-2011, RCT	Explicitly not industry funded	This study included women over the age of 60 years, with at least one episode of stress urine leakage during the previous month.	UUI or MUI, Exclusion criteria also included previous treatment for UI or hormone therapy, ongoing urinary tract infections, cognitive or neurological disorder, uncontrolled hypertension, inabil- ity to perform the proposed procedures, or use of pacemaker implantation or metal rods.	Not reported/unclear	Stress: 100	68.6(10.9)	older women 70%		14	14	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Pereira 2013 22674639 ND	Brazil, 2009-2011, RCT	Explicitly not industry funded	post-menopausal women (defined as absence of vaginal bleeding for 12 months), with at least one episode of SUI symptom during the previous month, reported loss of urine with physical activities such as coughing, sneezing, running	Women with urge incontinence symptoms, pelvic organ prolapse greater than grade II on Baden–Walker classification system, previous treatment for UI or hormone therapy, ongoing urinary tract infections, cognitive or neurological disorder, inability to perform the proposed procedure, uncontrolled hypertension	No (explicitly treatment naive)	Stress: 100	63 [51-85]			45	41	4
Peters 2013 26663447	U.S., 2009-2010, RCT	Industry funded/industry provided materials	females over the age of 18 who had an SNM implant with a tined lead located at S3 for at least 3 months. All study subjects had a baseline diagnosis of UF and any amount of UI over the voiding diary-reporting period	history of neurological disorders, diabetes unless it was well-controlled through diet and/or medications, or a primary diagnosis of stress incontinence, pelvic pain, or interstitial cystitis	Yes (refractory to conventional therapy, including antimuscarinic medications)	Urge: 100	60.9 (6.1)			13	12	1

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Porta-Roda 2015 25130167	Spain, 2011, RCT	Industry funded/industry provided materials	women aged 35–60 years of age with SUI or MUI, who had delivered vaginally at least once and had not previously performed pelvic floor exercises	(1) were taking any medication that could interfere in urine retention; (2) had severe pelvic organ prolapse; (3) were obese; (4) showed suspicion of complicated urinary incontinence; (5) were pregnant or in a post-partum period of under 6 months; or (6) had participated in another clinical trial in the previous 30 days	Not reported/unclear	Mixed: 100				70	65	5
Price 2015 26506165	U.S., nd,	Not reported	newly implanted with InterStim, have undergone a successful implantation and test period for Interstim	previous InterStim implantation, no InterStim device	Not reported/unclear	Unclassified: 100	64.6 (11.6)			42	32	10

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Robinson 2011 21831512	UK, 2006-2007, RCT	Industry funded/industry provided materials	Women aged 18–75 with symptomatic SUI who had a positive cough stress test and USI diagnosed by urodynamic evaluation within 36 months of screening; SUI episode frequency ?7-?21 per week	history of cardiac disease, hypertension, stroke, diabetes mellitus, recurrent urinary tract infection, significant (>grade 1) cystocele and previous pelvic surgery	Not reported/unclear	Stress: 100	49 [34, 66]			14	12	2

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Rovner 2011 21351127 ND	U.S., Canada, UK, 2005-2008, RCT	Industry funded/industry provided materials	Symptoms of idiopathic OAB with UUI for at least 6 months At least 8 UUI episodes/week (with no more than 1 incontinence-free day/week); Urinary frequency (defined as an average of at least 8 micturitions/day) At least 1 anti-cholinergic drug had failed.	Stress-predominant urinary incontinence Use of clean intermittent catheterization(CIC) History or evidence of pelvic or urologic abnormalities or diseases affecting bladder function Patients who had been treated for at least 2 urinary tract infections within 6 months 24-hr total urine volume voided>3,000 ml or post-void residual (PVR) urine volume>200 ml at screening	Yes (anticholinergics)	Urge: 100	58.8 (13.5) [18]	older women 70%	white 88.8%, black 7.3%	313	272	41

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Rovner 2013 23796570	U.S., nd, RCT	Industry funded/industry provided materials	female subjects > = 18 with SUI symptoms (demonstrated either urodynamically or by cough test)	Pregnant, Bladder infection, History of recurrent UTIs, intrinsic sphincter deficiency, artificial urinary sphincter or surgical procedure for incontinence during the past 6 months,? Cystocele with bladder descent below mid-vagina during straining,? Undergoing or anticipating a course of pelvic radiation therapy,? Severe pelvic fibrosis from previous radiation therapy, ? Urosepsis within previous 30 days,? Presence of gross hematuria and/or blood clots in the urine	Not reported/unclear	Stress: 100	52.6 (11.3)	Athletes 13.9%		166	115	51

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Rutledge 2014 24183730	U.S., nd, RCT	Not reported	Age > 30 years old; history of uterine, cervical, ovarian, or vulvar cancer; attended the gynecologic oncology clinics for routine surveillance visits; any degree of urinary incontinence	nd	Some (10% PFMT prior incontinence treatment; 20% control prior incontinence treatment)	Stress: 70, mixed: 25	57 (7.2) [37, 79]		white 62.5%, black 2.5%, Hispanic 25%	40	36	4
Samuelsson 2017	Sweden, 2013-2014, RCT	Explicitly not industry funded	women > = 18 with stress urinary incontinence, leakage once a week or more often for at least 6 months with a smartphone	participation in our previous internet study, pregnancy, former incontinence surgery, known malignancy in lower abdomen, difficulties with passing urine, visual blood in urine, intermenstrual bleeding, severe psychiatric diagnosis, neurological disease with affection on sensibility in legs or lower abdomen, urge incontinence	Not reported/unclear	Stress: 100	44.7 (9.4)			123	121	2

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Sand 2012 21963104	U.S., 2006-2007, RCT	Industry funded/industry provided materials	18 years of age or older, female, 8 or more urinary and 4 or more urge incontinence episodes per day, non-pregnant, non-lactating	treatable conditions that may cause urinary incontinence, medical conditions in which it would be unsafe to use an anti-cholinergic agent, use of concomitant drugs that would confound the efficacy evaluation, use of concomitant drugs that would be unsafe with anti-cholinergic agents.	Not reported/unclear	Urge: 100	59.1 (12.3)		white 86.6%, black 10.9%, Asian 1.4%	704	704	75
Sherburn 2011 21284022	Australia, 2003-2005, RCT	Explicitly not industry funded	Community dwelling women aged > 65 with urodynamic stress incontinence; no detrusor overactivity demonstrated on cystometry (<10 cmH2 O detrusor pressure rise); a score of more than 22 on the Mini-Mental State Examination (MMSE)	Concurrent or recent physiotherapy intervention (within last 6 months); incontinence due to neurological causes, other causes such as urinary tract infection, or voiding difficulties	Not reported/unclear	Stress: 100	71.8 (5.3)	older women 70%	white 100%	83	76	7

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Sokol 2014 24704117	U.S., Canada, 2008-2011, RCT	Industry funded/industry provided materials	Not stated "women who met study eligibility criteria were randomized"	allergy to bovine collagen	Not reported/unclear	Unclassified: 100	median 58.5 [23.3-93.4]			345	303	42
Solberg 2016 26362793	Norway, 2012, RCT	Industry funded/industry provided materials	Age > 18 years; MUI	Pregnant or planning to become pregnant; given birth within 12 months before onset of study; using medication for incontinence; undergone surgery for incontinence	Not reported/unclear	Mixed: 100	median 62.5 [29, 87]			34	20	10

Sran 2016 26886884 ND	Canada, 2006-2011, RCT	Explicitly not industry funded	postmenopausal women 55 years and older with osteoporosis or low bone density, defined by a T score of -2.0 or lower for the lumbar spine or hip, or a history of a nontraumatic hip, vertebral, wrist, or rib fracture; symptoms of stress, urge, or mixed UI for at least the past 3 months and at least two UI episodes in 3 days	previous treatments or workshops on incontinence in the past 5 years; previous UI surgeries (except for those who had had anti-incontinence surgery at least 20 y previously); fecal incontinence; continuous urine leakage; a current urinary tract infection;perineal pain or genital prolapse likely to interfere with the PFM assessment and treatment; previous pelvic irradiation; hormone therapy, use of vaginal estrogen, or an unstable hormone dose within the previous 6 months; use of concomitant treatments for UI during the trial period; severe mobility impairments requiring the use of mobility aids (that would make going to the toilet	Not reported/unclear	Urge: 17, stress: 13, mixed: 71	66.7 (7.6)			48	48	5

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
				difficult); use of high-dose diuretics or medications to improve bladder control; history of radiation for pelvic organ cancers; score of less than 24 on the Mini Mental State Exam (MMSE); any other medical problem likely to interfere with treatment and evaluation (serious cardiovascular disease, ongoing cancer treatments, neurological conditions, psychiatric conditions); and individuals performing a Valsalva manoeuvre in lieu of PFM contraction								

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Talley 2017 28248418 ND	U.S., 2012-2015, RCT	Explicitly not industry funded	UI (score of ≥1 points on the International Consultation on Incontinence Questionnaire (ICIQ)),13 being frail (score of ≥3 points on the Vulnerable Elders Survey), gait speed less than 0.8 m/s15 or using a walking assistive device, being able to participate safely in low intensity physical activity, being cognitively intact according to Mini-Cog score	UI associated with a central nervous system disorder, bladder cancer, recent bladder or incontinence surgery, or terminal illness, or if they had an ostomy, used a pessary or urinary catheter, started or changed the dose of an antiincontinence medication within 3 months, or had orthopedic surgery on the lower extremities or spine in the past year.	Not reported/unclear	Urge: 22, stress: 14, mixed: 62	84.9 (6.4)		white 98%	42	42	0
Tannenbaum 2013 24334159	UK, 2010-2012, RCT	Explicitly not industry funded	women aged 60 years and older who reported urinary incontinence at least once weekly and who were not under active treatment for incontinence.	none	Not reported/unclear	Urge: 30, stress: 19, mixed: 46, unclassified: 5	71.6 (7.5)	older women 70%		123	103	20

Terlikowski 20132344334 5	poland, 2008-2012, RCT	Not reported		exclusion factors were patients with chronic de-generative diseases that would affect muscular and nerve tissues, presence of any degree of pelvic organ prolapse (POP), active or recurrent urinary tract infections (UTI), vulvovaginitis, atrophic vaginitis, diabetes mellitus, neuro-logical disease, psychiatric illness, use of medication affect- ing micturition, history of surgical or pharmaceutical treatment of SUI, chronic debilitating disease such as renal failure, and those with cardiac pacemakers. We also exclud- ed patients with intrinsic sphincteric deficiencies identified by the Valsalva leak-point pressure ≤60 cmH20 measure- ment	Some (they could not have had prior pharmacologic or surgical treatment for SUI)	Stress: 100 (urodynamic SUI)	46.9 (6.8)			102	93	9

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
				in the sitting position with a volume of 250 ml in the bladder and/or a urethral closure pressure ≤20 cmH20 in the sitting position at maximum cystometric capacity.								

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Tsai 2014 25073008	Taipei, 2010-2012, RCT	Explicitly not industry funded	(1) a diagnosis of SUI, with or without detrusor overactivity, confirmed by urodynamic results; (2) an SUI history of at least 6 months, which remained refractory after at least 1 month of first-line management; (3) no history of surgery or hormone replacement therapy for SUI; (4) an absence of severe pelvic prolapse (>grade 3 prolapse or Qmax<15mL/s); and (5) no contraindication for SMS, such as a pacemaker or metallic device. No patients received anticholinergic medication in the 2 weeks before participation or during the follow-up period.		Yes (at least one month of first line therapy had to have failed)	Stress: 71, mixed: 29	63.3 (14.4)			40	30	10

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Visco 2012 23036134 ABC	U.S., 2010-2012, RCT	Explicitly not industry funded	women > = 5 UUI episodes/day	previously received anticholinergic drugs or up to two anticholinergic medications other than solifenacin, darifenacin, or trospium chloride; residual urine volume of > = 150 ml; previous therapy for urgency urinary incontinence with onabotulinumtoxinA	Some 59% prior anticholinergic therapy	Urge: 100, mixed: ND (some had mixed, but % not specified)	58 (11.3)		white 78.5%, black 16.6%	249	231	18
Wallis 2012 21817123	Australia, 2004-2005, RCT	Explicitly not industry funded	60 or older, experience stress, urge, or MUI at least once a week for the past 6 months	implanted electronic device, symptomatic UTI int eh past 4 weeks, pelvic surgery in the prior 3 months.	Not reported/unclear	Urge: 37, stress: 12, mixed: 51	70.1 (6.8)	older women 70%		122	101	21
Wang 2016 26921645	China, 2013-2013, RCT	Explicitly not industry funded	SUI history, positive stress test, urodynamically confirmed SUI, post void residual <50cc	UUI, MUI ,neurogenic bladder	Not reported/unclear	Stress: 100	56.9 (11.4)			42	42	0

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
Wang 2017 28153510	china, 2014-2016, RCT	Explicitly not industry funded	18 or older, UUI or urge predominant MUI >60 months, >1 UUI episode/week, 2 anticholinergics had to have failed	SUI, MUI that is stress predominant, pelvic, neurological or urological abnormalities or dz that may affect bladder function including UTI, significant prolapse, stroke or spinal cord injury.	Yes (anticholinergics)	Urge: 100 (idiopathic)			Asian 100%	120	120	5
Wiegersma 2014 25533442	Netherlands, 2009, 2012, RCT	Explicitly not industry funded	Women aged 55 years or over with symptomatic mild pelvic organ prolapse.	Current prolapse treatment or treatment in the previous year, pelvic organ malignancy, current treatment for another gynaecological disorder, severe/terminal illness, impaired mobility, cognitive impairment, and insufficient command of the Dutch language.	No (explicitly treatment naive)	Unclassified: 100	64.25 (6.66)	older women 70%		287	239	45

Xu 2016 26960195	China, 2012-2014, RCT	Explicitly not industry funded	Eligible women were aged 40 to 75 years, and met diagnosis of SUI by the International Consultation on Urological Diseases	other type of UI; symptomatic urinary tract infection; ever received UI or pelvic surgery; severe pelvic organ prolapse; residual urinary volume >30 ml; maximum flow rate ? 20 ml/s; limited in walking, stairs climbing and running; receiving specialized treatment for SUI or use of medicine affecting bladder function; serious cardiovascular, cerebral, liver, kidney, or psychiatric disease, diabetes, multiple system atrophy, injury of cauda equina, or myeleterosis; pregnant or breastfeeding; with cardiac pacemaker, metal allergy or severe needle phobia	Yes (Ever received SUI treatment)	Stress: 100	58.5 (8.2)			80	77	3
Yamanishi 2017 28961380	Japan, nd, RCT	Not reported	Women with urodynamic SUI refractory to PFMT for more than 12 weeks and who did not	UUI, complications after pelvic surgery or trauma, pacemaker,	Yes (PFMT)	Stress 100	nd			39	9	30

Author Year PMID Trial name (if given)	Country /countries Study years Study type	Funding source	Inclusion criteria	Exclusion criteria	Did participants fail to improve with previous treatment?	UI Type (%)	Age, mean (SD) [range]	Special populations	Race	enrolled	analyzed	dropouts
			want to undergo surgery	malignancy, residual urine volume ≥200 mL, pregnant								

Table C-2. Arm details for the new studies

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Abdelbary 2015 26135813	electrical stimulation	pelvic floor electrical stimulation	transvaginal, 2x a week, lasting 30 min, pulses of 20Hz for 320 milisec, pulse intensity 30-60mA		2x week	6 months	
	vaginal estrogen		2 g of 0.625mg/g premarin daily	2g	daily	6 months	
	electrical stimulation + vaginal estrogen		combination arm of the already listed interventions	both	both	6 months	
Abdulaziz 2012	pelvic floor exercise		36 sessions with 10 repetitions of 8 contractions for 6 seconds and 2 minutes rest in between each contraction. At the end of each session, three to four fast 'flicker' contractions were added.			12 weeks	
	no therapy		n/a			12 weeks	
Ahlund 2013 23672520	pelvic floor muscle training		Pelvic floor muscle training (PFMT) is recommended to be the first choice treatment (13) for UI with the aim to improve strength and function of the pelvic floor muscles (14).	The exercise program started with three fast contractions and continued with three times 8-12 slow-velocity, close to maximum contractions (six seconds) in a lying or sitting position	Once a day	6 months	
	control					6 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Alves 2011 21860988	NMES with a MF current	Neuromuscular electrical stimulation with medium frequency current	NMES was performed via intravaginal electrode biphasic frequency of 2000 Hz, pulse width of 100 ms, time on: off 4:8 s, and modulation frequency of 50 Hz		20 minutes at maximum tolerable intensity twice a week	6 weeks	
	NMES with a LF current	Neuromuscular electrical stimulation with low frequency current	NMES was performed via intravaginal electrode biphasic, 50 Hz frequency, pulse width of 700 ms, time on: off 4:8 s		20 minutes at maximum tolerable intensity twice a week	6 weeks	
Amundsen 2016 27701661	OnabotulinumtoxinA			200 U	Once	1 month	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Sacral Neuromodulation		Participants randomized to sacral neuromodulation underwent a first-stage lead placement in the operating suite under local and monitored anesthesia care. Each electrode was assessed intraoperatively for both sensory and motor responses and criteria for the number of electrodes with intraoperative response and level of voltage intensity was set across sites. During the 7- to 14-day testing phase, participants were able to change programs to optimize treatment effect. Those participants with 50% or more reduction in mean episodes of urgency incontinence on a 3-day bladder diary on the same program were a priori defined as clinical responders and were eligible for the neurostimulator implant. A reduction of more than 50% in episodes from baseline is the threshold used in clinical practice to proceed with neurostimulator implants based on US Food and Drug Administration recommendations. Those without this improvement underwent lead removal. Those found to have a technical problem with the lead were allowed a second attempt at lead placement.	7-14 day testing phase	Once	7-14 days	
Aziminekoo 2014 24971138	Oxybutynin Hydrochloride			5 mg	Every 8 hours	4 weeks	
	Tolterodin			2 mg	Twice daily	4 weeks	
Baker 2014 24763155	Yoga			class length not listed	weekly	8 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	MBSR	mindfulness based stress reduction		class length not listed	weekly	8 weeks	
Beer 2017 27501593	cycling neuromodulation		nd			3 months	
	continuous neuromodulation		nd			3 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Berlotto 2017 28508398	pelvic floor muscle training			Those in the PFME group began an 8-session protocol of pelvic floor muscle training and were assessed 4 weeks later. The proposed PFME protocol consisted of 20-min sessions twice weekly for a total of eight sessions: 1. Sustained contractions lasting 6 to 10 s, with the same resting time, 6-10 repetitions, 1-2 sets. 2. Phasic contractions lasting 2 s, with twice the resting time,10 repetitions, 1-3 sets. 3. Phasic contractions sustained for 3 to 5 s, with twice the resting time, 8-10 repetitions, 1-2 sets. 4. Guided-imagery training on a white background, asking participants to contract the pelvic floor before performing an abdominal strain, in order to generate or enhance precontraction (involuntary PFM co-contraction secondary to increased abdominal pressure).	twice a week	4 weeks	

	pelvic floor muscle training + biofeedback			Those in the PFME + BF group began an 8-session protocol of pelvic floor muscle training and were assessed 4 weeks later. The proposed PFME protocol consisted of 20-min sessions twice weekly for a total of eight sessions: 1. Sustained contractions lasting 6 to 10 s, with the same resting time, 6-10 repetitions, 1-2 sets. 2. Phasic contractions lasting 2 s, with twice the resting time,10 repetitions, 1-3 sets. 3. Phasic contractions sustained for 3 to 5 s, with twice the resting time, 8-10 repetitions, 1-2 sets. 4. Guided-imagery training on a white background, asking participants to contract the pelvic floor before performing an abdominal strain, in order to generate or enhance precontraction (involuntary PFM co-contraction secondary to increased abdominal pressure). PFME + BF group participants followed the same protocol, but combined with	twice a week	4 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
				BF (20-min sessions twice weekly for a total of eight sessions), whereby the participant looked at the EMG-BF screen during exercises, while investigator 2 monitored her progress and conducted the protocol.			
	control			The control group was assessed on day 1 and reassessed at 6 weeks, and received no treatment in the intervening period.	0	4 weeks	
Bray 2017 28407338	Tolterodine extended release			4 mg	once daily	12 weeks	
	Placebo			4 mg	once daily	12 weeks	
But 2012 23390832	Solifenacin	Solifenacin 5 mg		5 mg	daily	3 months	
	Darifenacin	Darifenacin 7.5 mg		7.5 mg	daily	3 months	
Butt 2016	Solifenacin Succinate			5 mg	nd	3 months	
	Tolterodine			4 mg	nd	3 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Capobianco 2012 21706345	Estriol + pelvic floor muscle training + electrical stimulation		1 ovule (1 mg) once daily for 2 weeks; then 2 ovules once weekly + 10 repetitions of 5-second contractions with 5 seconds of recovery time; 20 repetitions of 2-second contractions with 2 seconds of recovery; 20 repetitions of 1-second contractions with 1 second of recovery; 5 repetitions of 10-second contractions with 10 seconds of recovery followed by 5 repetitions of strong contractions together with stimulated cough with a 1-minute interval between sets for 45 minutes + 50Hz frequency, 5-second-on and 10-second-off cycle, and a pulse width of 0.5 milliseconds for 20 minutes			6 months	
	Estriol		1 ovule (1 mg) once daily for 2 weeks; then 2 ovules once weekly			6 months	
Castellani 2015 26043913	Pelvic floor muscle training + electrical stimulation + Biofeedback		Pelvic floor muscle training 30 min 10 repetitions of 5 second contractions 5 seconds recovery, 20 repetitions of 2 second contractions 2 seconds recovery, 20 repetitions of 1 second contractions 1 second recovery, 5 repetitions of 10 second contractions 10 seconds recovery + electrostimulation 20 min at 40 Hz 5 second cycle, pulse width 0.2 ms + by 10 min biofeedback twice a week			6 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Pelvic floor muscle training + electrical stimulation + Biofeedback + Estriol		Pelvic floor muscle training 30 min 10 repetitions of 5 second contractions 5 seconds recovery, 20 repetitions of 2 second contractions 2 seconds recovery, 20 repetitions of 1 second contractions 1 second recovery, 5 repetitions of 10 second contractions 10 seconds recovery + electrostimulation 20 min at 40 Hz 5 second cycle, pulse width 0.2 ms + by 10 min biofeedback twice a week + 1 mg estriol daily for 4 weeks then 2 mg weekly for 20 weeks			6 months	
Chughtai 2016 26883688	fesoterodine + estrogen			4 mg fesoterodine + 0.5 mg vaginal estrogen	daily	21 days	
	fesoterodine			4 mg	daily	21 days	
Chughtai 2016 26883688 ND	fesoterodine plus topical vaginal estrogen		fesoterodine 4 mg daily plus vaginal estrogen 0.5 mg/day	fesoterodine 4 mg daily plus vaginal estrogen 0.5 mg/day	daily	12 weeks	
	fesoterodine		4 mg daily	4 mg	daily	12 weeks	
Cornu 2012 22588140	75NC007 intravaginal device		device had to be worn at least 6 h a day, with a maximum of 24 h, then changed on a daily basis			14 days	
	untreated					14 days	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Correia 2014 24382548	Surface Electrical Stimulation Group		Two electrodes were placed in the suprapubic region and the other two electrodes were crossed on the skin and fixed medial to the ischial tuberosity, 12 individual sessions of ES, two weekly sessions of 20 min with Duplex 961, unctional electrical stimulation; frequency: 50 Hz; pulse duration: 700 ms; time: 20 min; 4-s on/8-s off cycles; rise: 2 s fall: 2 s; stimulation intensity: maximal level tolerable			6 weeks	
	Intravaginal Electrical Stimulation Group		intravaginal electrical stimulation, 12 individual sessions of ES, two weekly sessions of 20 min with Duplex 961, unctional electrical stimulation; frequency: 50 Hz; pulse duration: 700 ms; time: 20 min; 4-s on/8-s off cycles; rise: 2 s fall: 2 s; stimulation intensity: maximal level tolerable			6 weeks	
	Control Group		no active treatment during the study period			6 weeks	
de Souza Abreu 2017 28346721 ND	Pelvic floor muscle strengthening			30 minutes	twice weekly	5 weeks	
	Dynamic lumbopelvic stabilization exercise			30 minutes	twice weekly	5 weeks	
Dede 2013 23086134	Tolterodine	Tolterodine 2mg twice daily		2 mg	twice daily	6 weeks	
	Trospium Chloride	Trospium 2mg twice daily		20 mg	twice daily	6 weeks	
	Oxybutinin	oxybutynin 5 mg three times daily		5 mg	three times daily	6 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Delgado 2013 23640005	Standard Treatment Group	unresisted pelvic floor muscle training	pelvic floor muscle training. participants given leaflet for at home reference	5 "quick" and 5 "slow" pelvic floor contractions	twice daily	16 weeks	
	Pelvic toner group	pelvic training device used	device provides intravaginal resistance to increase the strength of pelvic floor contractions. given device, and instructions for use	5 "quick" and 5 "slow" pelvic floor contractions while using device	twice daily	16 weeks	
Dmochowski 2014 24666884	Tolterodine	2 mg twice daily		2 mg	twice daily	4 weeks	
	Placebo	twice daily			twice daily	4 weeks	
Ferreira 2012	Home + supervised exercise program		eight to ten PFM contractions, three times a day in different positions and in various activities of daily life + weekly session of 45 minutes with a physiotherapist: contract their muscles for up to ten seconds at a time, quickly followed by four quick contractions. A total of ten such sets were completed in different positions		3 times/day	6 months	
	Home exercise program		eight to ten PFM contractions, three times a day in different positions and in various activities of daily life		3 times/day	6 months	
Fitz 2017 28169458	BF		Pressure biofeedback (BF) is an adjunct method to PFMT for women with urinary incontinence. This method can motivate the patients to achieve a stronger muscle contraction and thus, stimulate high adherence and intensive training.	the group performed outpatient sessions of the PFMT using mano metric-based BF equipment with home PFM exercises during3 months. The six additional months (4th-9th), training was only performed at home.	twice a week	3 months (supervised), 9 months (unsupervised)	

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	PFMT		Pelvic floor muscle training (PFMT) is considered the first-line approach to treat stress urinary incontinence (SUI). The effects of PFMT include increasing muscle volume, closure of the levator hiatus, shortening muscle length, and the elevation of the bladder and rectum on resting position. These morphological changes after PFMT can directly improve the muscle strength,the measure of genital hiatus and elevate the pelvic organs.	the group performed outpatient sessions of PFMT without BF concomitantly with home PFM exercises during 3 months.The six additional months (4th-9th), training was only performed at home.	twice a week	3 months, 9 months (unsupervised)	
Fürst 2014 25003921	vaginal electrical stimulation		VES was performed with vaginal probe and stimulation device (Dualpex 961® - Quark Co.) at the outpatient unit care, under physical therapist supervision. All patients underwent 2 weekly sessions of 30 minutes stimulation with frequencies of 4Hz (15 minutes, 1ms pulse) and 50Hz (15 minutes, 700μs pulse), fixed intensity (20mA) and 4 seconds stimulation versus 8 seconds rest.			3 months	
	vaginal electrical stimulation + pelvic floor muscle training		same as above with repeated contraction/relaxation of pelvic floor muscles, during 30 minutes in the unit care. Training was performed in the day alternate to VES twice a week			3 months	
Galea 2013	pelvic floor muscle training + vaginal palpation		Standard PFMT protocol			10 weeks	
	pelvic floor muscle training + transabdominal US		Standard PFMT protocol + US monitor was positioned so that it could be viewed by the participant for feedback during training			10 weeks	

Ghaderi 2016 27059833	Routine physiotherapy		Sixty subjects were randomly assigned to the control group (n = 30 women), which received routine physiotherapy modalities including transcutaneous electrical nerve stimulation (TENS), hot pack, and therapeutic ultrasound, and regular exercises or the training group (n = 30 women), which received routine physiotherapy modalities and stabilization exercises focusing on PFM. For the control and training groups, TENS was administered to the low back area for 20 minutes each session, 3 days a week (10 sessions), at a frequency of 110 Hz, with a pulse duration of 90 μs, and at an intensity that produced a comfortable tingling sensation. Therapeutic ultrasound was then administrated to the low back area for 10 minutes per session, at a frequency of 1 MHz, with an intensity of 1 W/cm2 and a duty cycle of 50%. Following the routine physiotherapy modalities, patients in the control group performed the regular exercises including the strengthening and endurance exercises for the abdominal and paravertebral muscles 3 days a week, 3 sets a day, and 10 repetitions of each exercise. For the last 9 weeks, the patients met the physiotherapist once a week for monitoring of exercise progression (12 weeks in total) without receiving physiotherapy modalities. In both control and training groups, exercises (regular or			12 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			stabilization) were taught by a physiotherapist, and a booklet and video CD including exercise instruction were provided by the subjects.				

	Physiotherapy + PFMT		Sixty subjects were randomly assigned to the control group (n = 30 women), which received routine physiotherapy modalities including transcutaneous electrical nerve stimulation (TENS), hot pack, and therapeutic ultrasound, and regular exercises or the training group (n = 30 women), which received routine physiotherapy modalities and stabilization exercises focusing on PFM. For the control and training groups, TENS was administered to the low back area for 20 minutes each session, 3 days a week (10 sessions), at a frequency of 110 Hz, with a pulse duration of 90 μs, and at an intensity that produced a comfortable tingling sensation. Therapeutic ultrasound was then administrated to the low back area for 10 minutes per session, at a frequency of 1 MHz, with an intensity of 1 W/cm2 and a duty cycle of 50%. Following the routine physiotherapy modalities, patients in the control group performed the regular exercises including the strengthening and endurance exercises for the abdominal and paravertebral muscles 3 days a week, 3 sets a day, and 10 repetitions of each exercise. For the last 9 weeks, the patients met the physiotherapist once a week for monitoring of exercise progression (12 weeks in total) without receiving physiotherapy modalities. The training group was identical to the control group,			12 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			except that the patients performed the progressed stabilization exercises for the deep abdominal and lumbar muscles focusing on PFM at 30% of maximal voluntary contraction as shown in Figure 1. All exercises in both groups were separated by a 2-minute rest interval. In both control and training groups, exercises (regular or stabilization) were taught by a physiotherapist, and a booklet and video CD including exercise instruction were provided by the subjects.				
Gittelman 2014 24231837 ND	Oxybutynin vaginal ring 4 mg			daily	Once monthly	12 weeks	
	Oxybutynin vaginal ring 6 mg			daily	Once monthly	12 weeks	
	Placebo			ND	Once monthly	12 weeks	
Golmakani 2014 24498480	Behavioral intervention program		Training plus exercises 10-40x/day			12 wk	
	Vaginal cones		2 activities 2x/day each			12 wk	
Gozukara 2014 24711149	control group					6 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	weight loss group		calorie and fat restricted diet of 1,200–1,800 kcal daily, depending on initial weight, with less than 30 % of calories from fat, and was designed to produce an average loss of 7–9 % of initial body weight within 6 months. met monthly for 6 months in groups of 15–20 for 1-h sessions that were led by an internist in nutrition, exercise, and behavior change. The participants were provided with sample meal plans suited for their calorie restrictions. Participants were encouraged to gradually increase physical activity. ehavior modification techniques includ- ing self-monitoring of diet and exercise were emphasized throughout the program with monthly consultations with the patients			6 months	
Hirakawa 2013 23306768	PFMT		At the first visit, they individually received verbal information about pelvic floor anatomy muscle localization, and function, with the use of anatomical models and illustrations. They then learnt how to contract the PFMs correctly without contracting the adjacent muscles, such as the abdominal, gluteal, and hip adductor muscles, with verbal instruction and palpation of the perineal body.			12 weeks	All patients visited the same physical therapist five times (at 0, 2, 4, 8, and 12 weeks).

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	PFMT + biofeedback		At the first visit, they individually received verbal information about pelvic floor anatomy muscle localization, and function, with the use of anatomical models and illustrations. They then learnt how to contract the PFMs correctly without contracting the adjacent muscles, such as the abdominal, gluteal, and hip adductor muscles, with verbal instruction and palpation of the perineal body. Additionally, the women in the BF group learnt how to contract the PFMs with the assistance of an electromyographic, clinic-based BF device (FemiScan Clinic System; MegaElectronics, Kuopio, Finland). Using the BF device, muscle activity signals were visible on the computer screen. The women in the BF group confirmed correct contraction and relaxation by looking at the muscle activity signals themselves			12 weeks	All patients visited the same physical therapist five times (at 0, 2, 4, 8, and 12 weeks).
Huang 2012 22542122	placebo		no treatment		once daily	12 weeks	participants offered the option on increase or decrease dose with 4 mg to 8 mg
	fesoterodine		4 mg starting dose, may increase to 8 mg, may decrease back to 4 mg. Women were offered the option to increase their dose at 2, 4, and 8 week follow up calls.	4 mg or 8 mg daily	once daily	12 weeks	participants offered the option to increase or decrease dose within 4 mg to 8 mg

Huang 2014 24763156	Yoga		The yoga therapy program was designed to provide formal instruction and practice in a variety of yoga postures and techniques that were selected by the study's 2 yoga expert consultants (Judith Hanson Lasater, PhD, and Leslie Howard) for their potential to improve incontinence and their appropriateness for the target population. The study program was based primarily on Iyengar yoga, a form of Hatha yoga that is known for its potential therapeutic applications, has been used successfully for other health-related indications,22,24,38Y44 and differs from other Hatha yoga styles (power yoga, Bikram yoga) in ways likely to maximize both efficacy and safety in older women with incontinence; these are as follows: (1) emphasis on precise anatomical and postural alignment during practice of yoga postures; (2) incorporation of props to minimize risk of injury and accommodate those with lower strength or flexibility; and (3) emphasis on mindful awareness during practice of postures rather than rapid cycling through postures. The study program focused on a core set of 8 postures that are widely used in Hatha yoga practice, are potentially generalizable to yoga instruction across the country, and can be adapted for women of all ages, including those with decreased flexibility or mobility; these are as follows:	90 min	2x weekly	6 weeks	

			Tadasana (mountain pose), Utkatasana (chair pose), Trikonasana (triangle pose), Malasana (squat pose), Viparita Karani Variation (legs up the wall pose), Salamba Set Bandhasana (supported bridge pose), Supta Baddha Konasana (reclined cobbler's pose), and Savasana (corpse pose). While teaching these postures, instructors emphasized specific ways of practicing each posture to foster awareness of the pelvic floor structures and increase control over the pelvic floor muscles, in addition to improving general fitness and conditioning and promoting mindfulness, deep breathing, and relaxation.Women assigned to the yoga therapy program attended an introductory 90-minute orientation session that provided a general introduction to structure of the yoga therapy program, principles of Iyengar yoga, and use of yoga props. They were then scheduled to participate in two 90-minute group yoga classes per week for 6 weeks led by an experienced certified instructor and an assistant. Participants were also instructed to practice yoga at home for at least 1 additional hour per week and to record the dates and duration of practice in a home yoga diary. Participants were given a limited set of yoga props (mat, belt, and block) to take home and a manual with written descriptions and pictures depicting each of the key yoga postures featured in				

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			the classes. Tips on how to practice each posture safely and comfortably and how to adapt each posture to improve incontinence and pelvic floor function were also provided in the manual				
	Control					6 weeks	
Huebner 2011 20848671	EMG biofeedback and electrical stimulation		2x a day for 15 min	50hz, 20-80mA, stimulation 8sec, rest 15 sec, active contraction 8 sec, rest 15 sec		12 weeks	
	EMG biofeedback and dynamic electrical stimulation		2x a day for 15 min	50hz, 20-80 mA, active contraction 8 sec, then electrical stimulation was added for 8 sec, rest 15 sec		12 weeks	
	EMG biofeedback		2x a day for 15 min	active contraction 8 sec, rest 15 sec		12 weeks	
Jabs 2013 23343798 ND	Placebo	once			once	6 months	
	Botulinum toxin			100 units	once	6 months	
Jafarabadi 2015 25369726	Oxybutynin			5 mg	every 8/h	12 weeks	
	Tolterodine			2 mg	twice daily	12 weeks	
Jha 2017 28801034	PFMT + electrical stimulation		The technique for PFMT was as recommended by NICE				
	PFMT		The technique for PFMT was as recommended by NICE				

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Jordre 2014	RHR	Resisted Hip Rotation	The RHR group performed (1) hip external and internal rotation with diaphragmatic breathing for 10 breaths, (2) 10 repetitions of hip external rotation with a green resistance band holding 5 seconds and resting 5 seconds, and (3) 10 repetitions of hip internal rotation/adduction, squeezing a 9″ soft inflatable ball for 5 seconds, with 5-second rest. With hip external rotation, subjects were instructed to roll their knees out against the band, not more than shoulder width apart with feet fl at and forming a V position, heels touching and toes pointed outward. When performing hip internal rotation, subjects were instructed to squeeze the ball by rolling their knees inward and touching their toes together while sliding their heels apart. The same foot positions were used with the initial hip external and internal rotation while breathing diaphragmatically.	5 min	2x daily	6 weeks	In both groups, subjects were provided with individualized strategies and explanation as needed, both at their initial session and at recheck sessions, to successfully perform their assigned exercises. Education on PF anatomy varied on the basis of subject understanding and awareness. All exercise sets were to be performed twice daily, once early in the day and once late in the day.

	PFMT	Pelvic floor muscle training	Subjects in the PFMT group were directed in an isolated PF muscle contraction. They were instructed to perform (1) 1 set of 20 repetitions with 5-second holds and 5-second rests between each hold and (2) 1 set of 20 quick fl icks holding 1 to 2 seconds. The cues given were to contract the PF musculature with a squeeze and lift, up and in as if attempting to stop the flow of urine midstream. Individualized verbal cues were provided with additional explanation as needed. All subjects in the PFMT group were told that PFM contractions are often performed incorrectly. Thus, careful instruction was provided in avoidance of bearing down, pushing, not breathing, straining, contracting accessory muscles, or not relaxing between repetitions. Subjects were encouraged to practice stopping the flow of urine when on the toilet before the first attempt of this exercise protocol for the purposes of finding and feeling the PF muscles. Subjects were reminded that the exercises were not to be practiced on the toilet and that stopping midstream was to be used only for initial identification or later verification of correct muscle engagement. Subjects requiring additional cues were given suggestions such as inserting their finger into the vagina and squeezing during a PF muscle contraction. To maintain our attempt of a modest and generalized	5 min	2x daily	6 weeks	In both groups, subjects were provided with individualized strategies and explanation as needed, both at their initial session and at recheck sessions, to successfully perform their assigned exercises. Education on PF anatomy varied on the basis of subject understanding and awareness. All exercise sets were to be performed twice daily, once early in the day and once late in the day.

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			approach, no visual PF inspection, biofeedback, or internal palpation was provided. External palpation to identify accessory muscle substitution was performed as needed.				
Kafri 2013 23160873	Tolterodine			4 mg	nd	3 months	
	Bladder training		(1) patient education; (2) scheduled voiding, guiding participants to increase intervals between voids (goal = 3–4 h between voids) and (3) positive reinforcement			3 months	
	Pelvic floor muscle training		At each 30 min appointment: 3 sets of 8–12 slow maximal contractions sustained for 6–8 s; progressed to 10 s of contractions followed by 10 s of relaxation. Participants then continued a daily PFMT home-based program			3 months	
	Combined pelvic floor rehabilitation		(1) patient education; (2) scheduled voiding, guiding participants to increase intervals between voids (goal = 3–4 h between voids) and (3) positive reinforcement (4) At each appointment: 3 sets of 8–12 slow maximal contractions sustained for 6–8 s; progressed to 10 s of contractions followed by 10 s of relaxation. Participants then continued a daily PFMT home-based program			3 months	
Kaya 2011 20943711 ND	Trospium chloride		trospium chloride	15 mg	three times daily	8 weeks	
	Physiotherapy	interferential current therapy, pelvic floor exercises and bladder training	interferential current therapy, pelvic floor exercises and bladder training	5 days	per week	8 weeks	

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	Trospium chloride plus physiotherapy		trospium chloride plus interferential current therapy, pelvic floor exercises and bladder training			8 weeks	
Kaya 2015 25266357	BT+PFMT		In the PFMT group, participants completed a progressive home-based exercise program consisting of strength and en-durance training. They were taught both fast (2-s) and slow voluntary PFM contractions (VPFMCs). In the BT group, Urgency suppression strategies, including distraction, relaxation, and PFM contraction, were explained to each participant. Techniques to control urgency were:(1)Deep and slow breathing(2)Contracting PFMs while relaxing other body parts(3)Using mental imagery or self-motivational statements,such as"I can wait"and"I can take control"(4)Incorporating mental distractions, such as mathematical calculations. All participants were instructed not to alter fluid intake during the study period in order to test the efficacy of the training protocols.		During week 1, participants were instructed to perform five sets of exercises per day (5×10 fast and 10 slow = 50 fast and 50 slow VPFMCs daily). , which was progressively increased by five sets/week: ten sets per day at week 2; 15 at week 3;20 at week 4; 25 at week 5, and 30 at week 6 [600 VPFMCs daily (300 fast and 300 slow)]. During week 1, participants were encouraged to hold urine for 30 min beyond the initial voiding interval. Then, the schedule was increased by 15 min per week depending on the patient's tolerance to the schedule.	6 weeks	

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	BT alone		Urgency suppression strategies, including distraction, relaxation, and PFM contraction, were explained to each participant. Techniques to control urgency were:(1)Deep and slow breathing(2)Contracting PFMs while relaxing other body parts(3)Using mental imagery or self-motivational statements,such as"I can wait"and"I can take control"(4)Incorporating mental distractions, such as mathematical calculations. All participants were instructed not to alter fluid intake during the study period in order to test the efficacy of the training protocols.		During week 1, partici\pants were encouraged to hold urine for 30 min beyond the initial voiding interval. Then, the schedule was increased by 15 min per week depending on the patient's tolerance to the schedule.	6 weeks	
	control			education on cognitive function, osteoporosis, and oral hygiene.	once/month	3 months	

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Kim 2011 21545385	exercise+HSGS		The participants performed 5–10 min of warm-up and stretching exercises, including shoulder rotation, waist rotation and others. The PFM exercise was performed in the sitting, lying and standing positions with the legs apart, while emphasizing con-traction of the PFM and relaxation of the other muscles.Strength training of the thigh and abdominal muscles were performed between the PFM exercises. The exercises included chair exercises, weight-bearing exercises,ball exercises, and others. The participants in the HSGS group were asked to place the HSGS on their lower back once a day immediately after waking up. The participants recorded the time of day that they placed and removed the sheet in their urinary diary.	The participants performed 5–10 min of warm-up and stretching exercises, including shoulder rotation, waist rotation and others. The participants were initially instructed to perform 10 fast contractions (3 s)with a 5-s rest and 10 sustained contractions (8–10 s)with a 10-s rest between the contractions. Strength training of the thigh and abdominal muscles were performed between the PFM exercises. The participants in the HSGS group were asked to place the HSGS on their lower back once a day immediately after waking up. The participants recorded the time of day that they placed and removed the sheet in their urinary diary.	2 times a week + every 2 weeks	3 months	

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	HSGS only		The participants in the HSGS group were asked to place the HSGS on their lower back once a day immediately after waking up. The participants recorded the time of day that they placed and removed the sheet in their urinary diary.	The participants in the HSGS group were asked to place the HSGS on their lower back once a day immediately after waking up. The participants recorded the time of day that they placed and removed the sheet in their urinary diary.	every 2 weeks	3 months	
	education group		General education classes were held (topics including cognitive function, osteoporosis and oral hygiene) once a month, a total of three times.	n/a	once a month	3 months	
	exercise		The participants performed 5–10 min of warm-up and stretching exercises, including shoulder rotation, waist rotation and others. The PFM exercise was performed in the sitting, lying and standing positions with the legs apart, while emphasizing con-traction of the PFM and relaxation of the other muscles.Strength training of the thigh and abdominal muscles were performed between the PFM exercises. The exercises included chair exercises, weight-bearing exercises,ball exercises, and others.	The participants performed 5–10 min of warm-up and stretching exercises, including shoulder rotation, waist rotation and others. The participants were initially instructed to perform 10 fast contractions (3 s)with a 5-s rest and 10 sustained contractions (8–10 s)with a 10-s rest between the contractions. Strength training of the thigh and abdominal muscles were performed between the PFM exercises.	2 times a week	3 months	

Kim 2012 21849373	Supervised PFMT		Pelvic floor muscle training utilizing trunk stabilization for both groups was modelled after the treatment protocol described by Koumantakis et al. This training involved pelvic floor muscle contraction in various positions (supine, prone, sitting and standing), abdominal strengthening exercises and trunk stabilization exercises using a therapeutic ball (Appendix 1). In the first session of the training, a physiotherapist with a specialization in urogynaecology and women's health provided the subjects of both groups with specific knowledge on basic anatomy and pelvic floor muscle function to allow the subjects of both groups to learn how to appropriately contract the pelvic floor muscles. A perineometer was used to ensure the subjects' awareness of the contracting pelvic floor muscles, and the subjects controlled their contraction by observing the graphical representation of the force created by squeezing their vagina after the insertion of the probe transducer. Furthermore, all subjects were instructed to perform the programme daily at home and were provided with a booklet to guide self-performance of the training programme, and an exercise diary to record the frequency at which they performed self-exercise at home. The subjects from the supervised training group underwent 23 sessions of pelvic floor muscle training using trunk	1 hour	3x weekly	8 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			stabilization, for an average 1 hour each, three times per week during an eight-week period, and the training was supported by verbal instructions and manual assistance given by the physiotherapist.				

	Unsupervised PFMT		Pelvic floor muscle training utilizing trunk stabilization for both groups was modelled after the treatment protocol described by Koumantakis et al. This training involved pelvic floor muscle contraction in various positions (supine, prone, sitting and standing), abdominal strengthening exercises and trunk stabilization exercises using a therapeutic ball (Appendix 1). In the first session of the training, a physiotherapist with a specialization in urogynaecology and women's health provided the subjects of both groups with specific knowledge on basic anatomy and pelvic floor muscle function to allow the subjects of both groups to learn how to appropriately contract the pelvic floor muscles. A perineometer was used to ensure the subjects' awareness of the contracting pelvic floor muscles, and the subjects controlled their contraction by observing the graphical representation of the force created by squeezing their vagina after the insertion of the probe transducer. Furthermore, all subjects were instructed to perform the programme daily at home and were provided with a booklet to guide self-performance of the training programme, and an exercise diary to record the frequency at which they performed self-exercise at home. The subjects from the unsupervised training group followed the same exercise programme as the supervised	1 hour	3x weekly	8 weeks	

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			training group; however, after the completion of the demonstration session of the first week, they performed daily home exercises by themselves for the eight-week period without physiotherapist supervision.				
Klarskov 2014 24258099	Fesoterodine 4 mg			4 mg	once daily	7 days	each participant received this treatment; 6 different treatment sequences possible
	Fesoterodine 8 mg			8 mg	once daily	7 days	each participant received this treatment; 6 different treatment sequences possible
	Placebo				once daily	7 days	each participant received this treatment; 6 different treatment sequences possible
Leong 2015 25377297	education + PFMT + BT		30-minute individual training session a once weekly for the first 4 weeks, then bi-weekly for the remaining 8 weeks. education (anatomy of the pelvic floor muscle and urinary tract, urinary continence mechanism, and bladder care), Pelvic floor muscle training included Kegel exercise programme and neuromuscular re-education (the 'knack').Bladder training involved strategies to increase the time interval between voids by a combination of progressive void schedules, urge suppression, distraction, self-monitoring, and reinforcement.			12 weeks	
	education		received an educational pamphlet with information about management of UI			12 weeks	
Lian 2015 26054138 na	midodrine hydrochloride			2.5 mg	tid	4 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	transcutaneous acupoint electrical stimulation			30 min	5 times/week	4 weeks	
Lim 2017 27871927	Pulsed magnetic stimulation		QRS-1010 PelviCenter	50 Hz pulses 8sec on, 4 sec off	2 sessions per week (16 sessions for 20 min)	8wks	
	sham			Same device with the magnetic coil was tilted down resulting in minimal magnetic pulses	same	8wks	
Liu 2017 28655016	Electroacupuncture		acupuncture at bilateral Zhongliao (BL33, located in the third sacral foramen) and Huiyang (BL35, located 0.5 cun [≈10 mm] lateral to the extremity of the coccyx). Paired electrodes from the electroacupuncture apparatus were attached transversely to the needle handles at bilateral BL33 and BL35.	30 minutes at 50 Hz	3 sessions/week	6 weeks	
	Sham Electroacupuncture		sham electroacupuncture with a pragmatic placebo needle on sham acupoints.	30 minutes	3 sessions/week	6 weeks	
Lopès 2014 25444700	Home perineal electrostimulation [HPES]	electrostimulation sessions (GYNEFFIK1 or home perineal electrostimulation [HPES] arm)	GYNEFFIK is a home perineal electrostimulation device of the latest generation. The electrical hertz depended on the type of UI with 50Hz for stress UI, 20Hz for mixed UI, and 12.5Hz for ?pure urge for 30 minute sessions.	30 minutes at 50Hz for stress UI, 20Hz for mixed UI, and 12.5Hz for pure urge	Three times a week for six months (except during menstruation)	Each intervention lasted for 30 minutes	
	Usual care	Usual care (UC) only, without electrostimulation	Usual treatment chosen by the investigator. No specific treatment, but electrical stimulation was not allowed.	Usual treatment chosen by the investigator. No specific treatment, but electrical stimulation was not allowed.	Usual treatment chosen by the investigator. No specific treatment, but electrical stimulation was not allowed.	Usual treatment chosen by the investigator. No specific treatment, but electrical stimulation was not allowed.	

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Lovatsis 2017 27438055 SURE study	Uresta		intravaginal continence device. self positioning device inserted into the vagina to provide support beneath the urethra	one device			time from baseline to pad test unknown
	Placebo			once device			time from baseline to pad test unknown
Manonai 2015 25920290	BF + PFMT	biofeedback and pelvic floor muscle training	Each participant in the BF + PFMT group received individual verbal information about pelvic floor anatomy, muscle localization, and function, with the use of illustrations from the primary investigator. Additionally, they learnt how to contract the pelvic floor muscle with the assistance of the pelvic floor muscle strength evaluation device. Using the device, the vaginal squeeze pressure and abdominal muscle activity signals were visible on the computer screen. They confirmed correct contraction and relaxation by looking at the vaginal pressure and muscle activity signals themselves. This was considered as a non-intensive biofeedback since the whole process took 15 minutes. They were asked to exercise three times every day for 16 weeks. Each time consisted of sustained maximal contractions with at least 5-second hold and 10-second relaxation for 5-10 minutes, followed by 3-5 rapid maximal contractions with 2-second hold and 4-second relaxation as strength and endurance training.	Biofeedback 15 min; PFMT		16 weeks	At first session: They were asked to exercise three times every day for 16 weeks. Each time consisted of sustained maximal contractions with at least 5-second hold and 10-second relaxation for 5-10 minutes, followed by 3-5 rapid maximal contractions with 2-second hold and 4-second relaxation as strength and endurance training.

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	PFMT	pelvic floor muscle training				16 weeks	At first session: They were asked to exercise three times every day for 16 weeks. Each time consisted of sustained maximal contractions with at least 5-second hold and 10-second relaxation for 5-10 minutes, followed by 3-5 rapid maximal contractions with 2-second hold and 4-second relaxation as strength and endurance training.
Marencak 2011 20886571	Standard-dose pregabalin and tolterodine	pregabalin 150 mg twice daily + tolterodine ER 4 mg once daily		pregabalin 150 mg + tolterodine ER 4 mg	pregabalin twice daily + tolterodine ER once daily	4 weeks	three-period (4 weeks/period), five-treatment crossover study
	Low-dose pregabalin and tolterodine	pregabalin 75 mg twice daily + tolterodine ER 2 mg once daily		pregabalin 75 mg + tolterodine ER 2 mg	pregabalin twice daily + tolterodine ER once daily	4 weeks	three-period (4 weeks/period), five-treatment crossover study
	Pregabalin 150 mg	Pregabalin 150mg twice daily		150 mg	twice daily	4 weeks	three-period (4 weeks/period), five-treatment crossover study
	Tolterodine ER 4 mg	Tolterodine ER 4 mg once daily		4 mg	once daily	4 weeks	three-period (4 weeks/period), five-treatment crossover study
	Placebo	No treatment		no intervention	once daily	4 weeks	three-period(4 weeks/period), five-treatment crossover study

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
McLean 2013 23861324	PFMT + home exercise		The women assigned to the PFM strength training group attended weekly private physiotherapy sessions. In the first session, participants learned to perform a proper PFM contraction using manual palpation and feedback to optimize PFM contraction quality, and in which they learned to contract their PFMs before tasks that increase intra-abdominal pressure including coughing, laughing, sneezing, and postural perturbations. These women were instructed to practice three sets of 12 PFM contractions daily until their next visit 1 week later. At subsequent weekly visits, the physiotherapist reviewed and reinforced the proper PFM contraction technique, evaluated PFM strength using a modified Oxford scale to provide feedback about progress, reviewed the technique of contracting the PFMs before coughing or postural perturbations, and encouraged the participant to continue with her home exercise program. Each session lasted approximately 30 min.			30 min	
	Control						
McMichael 2013 REMOTE	tolterodine			1 drop	3 times/day	4 weeks	
	placebo			1 drop	3 times/day	4 weeks	
Michel 2013 22816871 DUROSA	Dulox-12	treatment with duloxetine for 12 weeks		80 mg	once daily	12 weeks	no indication if 80mg dose was always acheived

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Other-12	Treatment with treatment other than duloxetine for 12 weeks			variable	12 weeks	Other could include pharmacotherapy, pelvic floor muscle training, pessaries, and hormonal treatment
	Dulox-24	treatment with duloxetine for 24 weeks		80 mg	once daily	12 weeks	no indication if 80mg dose was always acheived
	Other-24	Treatment other than duloxetine for 24 weeks			variable	12 weeks	Other could include pharmacotherapy, pelvic floor muscle training, pessaries, and hormonal treatment
Oldham 2013 23023996	exercise		10 slow and controlled squeezing and lifting contractions and 10 quick contractions each repeated 3–4 times a day			12 weeks	
	Pelviva + exercise		10 slow and controlled squeezing and lifting contractions and 10 quick contractions each repeated 3–4 times a day + 10 sec stimulation followed by 10 sec rest that runs for a period of 30 min			12 weeks	
Carmona 2013	PTNS		neuromodulation model AWQ-104L, frequency 20 Hz, pulse 320 μs, 10 mA PTNS, 30 min/ week for 12 weeks			12 weeks	
	sham PTNS		sham: needle inserted, amps increased until the toe moved, then amps turned down low for the remaining 30 min			12 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Ong 2015 26142713	PFMT + biofeedback	pelvic floor muscle training + biofeedback with Vibrance Kegel Device	All of the participants underwent a standardized pelvic floor muscle training protocol, which consists of endurance and speed training. Endurance training involved slow velocity close to maximum contraction for 3-10 seconds, followed by relaxation for 3-10 seconds. Speed training involved quick, moderately strong contractions for 2 seconds followed by relaxation for 2 seconds. The participants were required to complete 3-5 sets of each type of training; that is, 10 contractions in a row or until fatigue. The participants were treated individually by the physiotherapist in monthly sessions of 20 minutes for 16 weeks. During the sessions, the participants were re-educated on pelvic floor training and their progression was noted. During the initial training under the physiotherapist's supervision, the device was placed inside the vagina and the participant conducted PFME training according to the standard protocol. Encouraged to do daily pelvic floor training at home, with biofeedback.	20 minutes	once a month	16 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	PFMT	pelvic floor muscle training	All of the participants underwent a standardized pelvic floor muscle training protocol, which consists of endurance and speed training. Endurance training involved slow velocity close to maximum contraction for 3-10 seconds, followed by relaxation for 3-10 seconds. Speed training involved quick, moderately strong contractions for 2 seconds followed by relaxation for 2 seconds. The participants were required to complete 3-5 sets of each type of training; that is, 10 contractions in a row or until fatigue. The participants were treated individually by the physiotherapist in monthly sessions of 20 minutes for 16 weeks. During the sessions, the participants were re-educated on pelvic floor training and their progression was noted.	20 minutes	once a month	16 weeks	
Oresković 2012 22816227 ND	Solifenacin	5 mg daily	solifenacin 5 mg once daily	5 mg	daily	4 weeks	
	Placebo	daily			daily	4 weeks	
Orri 2014 24792229 REMOTE	tolterodine			4 mg	once daily	12 weeks	
	placebo			nd	once daily	12 weeks	
Özlü 2017 28345778	home exercise		in the first 2 weeks 30 contractions daily, in following 2 weeks 60 contractions daily and upward 4th weeks, 90 contractions daily with progressively increasing intensity			8 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	home exercise + intravaginal biofeedback		intravaginal P-BF assisted PFM exercises; three times in a week, for 8 weeks. Every session lasted 20min and consisted of 40 cycles of 10 s of contraction followed by 20 s of relaxation. The vaginal probe was used with condom cover for each patient.			8 weeks	
	home exercise + perineal EMG biofeedback		perineal EMG-BF assisted PFM exercises; three times in a week, for 8 weeks. Every session lasted 20 min and consisted of 40 cycles of 10 s of contraction followed by 20 s of relaxation. In this application, three surface electrodes which had 2 cm diameters were used; two electrodes symmetrically at the perianal region (medial to ischial tuberosity); and one electrode at the leg (ground-neutral electrode) (Fig. 2). Surface electrodes were used individually for each patient			8 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Pereira 2011 21962461	Group PFMT		Taught to contract the pelvic floor muscles correctly, and the proper contractions were confirmed by vaginal palpation. The subjects of group PFMT were divided into groups of 8–10 people for treatment. During the sessions, volunteers received instructions about anatomy of the pelvic floor muscles and continence mechanisms and carried out exercises to strengthen the pelvic floor muscles in supine, sitting and standing positions. The difficulty degree progressed according to the positions adopted, increasing the number of repetitions and time of sustained contraction. An average of 100 contractions were performed per session, with phasic contractions, lasting three seconds with six seconds of rest, and tonic contractions, lasting 5–10 s followed by 10–20 s of rest	1 hr	2x weekly	6 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Individual PFMT		Taught to contract the pelvic floor muscles correctly, and the proper contractions were confirmed by vaginal palpation. During the sessions, volunteers received instructions about anatomy of the pelvic floor muscles and continence mechanisms and carried out exercises to strengthen the pelvic floor muscles in supine, sitting and standing positions. The difficulty degree progressed according to the positions adopted, increasing the number of repetitions and time of sustained contraction. An average of 100 contractions were performed per session, with phasic contractions, lasting three seconds with six seconds of rest, and tonic contractions, lasting 5–10 s followed by 10–20 s of rest	1 hr	2x weekly	6 weeks	
	Control					6 weeks	
Pereira 2012 22840592	surface electrical stimulation		12 PT supervised 20 min sessions twice a week for 6 weeks. The surface electrical stimulation used Dualpex 961 (Quark Medical Products, Piracicaba, Brazil). Four surface electrodes, two placed suprapubically and two at the ischial tuberosity, frequency at 50 Hz, a 4-s to 8-s work-rest cycle, and a 700- s pulse width.			6 weeks	
	Control Group		no treatment			6 weeks	
Pereira 2013 22674639 ND	Vaginal cones			80 minutes	per week	6 weeks	
	Pelvic floor muscle training			80 minutes	per week	6 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Placebo						
Peters 2013 26663447	Sacral Neuromodulation 5.2 Hz			5.2 Hz		1 week	The subjects' other SNM settings [pulse width, amplitude, and cycling] were held constant for the duration of the study. Study subjects were asked to maintain their baseline liquid intake and medication levels.
	Sacral Neuromodulation 14 Hz			12 Hz		1 week	The subjects' other SNM settings [pulse width, amplitude, and cycling] were held constant for the duration of the study. Study subjects were asked to maintain their baseline liquid intake and medication levels.
	Sacral Neuromodulation 25 Hz			25 Hz		1 week	The subjects' other SNM settings [pulse width, amplitude, and cycling] were held constant for the duration of the study. Study subjects were asked to maintain their baseline liquid intake and medication levels.
Porta-Roda 2015 25130167	Pelvic Floor Muscle Training + vaginal spheres		Kegel exercises for 15 min, twice daily, at least 5 days a week, using vaginal spheres			6 months	
	Pelvic Floor Muscle Training		Kegel exercises for 15 min, twice daily, at least 5 days a week.			6 months	
Price 2015 26506165	Continuous Stimulation	using InterStim implant		pulse width 210 milliseconds at rate of 14 Hz	nd	4 weeks	amplitude and polarity individualized for optimizing patient sensation of stimulation in the vaginal/perineal/rectal area
	Cyclic Stimulation	using InterStim implant		pulse width 210 milliseconds at rate of 14 Hz	nd	4 weeks	amplitude and polarity individualized for optimizing patient sensation of stimulation in the vaginal/perineal/rectal area
Robinson 2011 21831512	phenylephrine			0.25 ml	twice	3-10 days	
	placebo			0.25 ml	twice	3-10 days	
Rovner 2011 21351127 ND	Placebo	once			once	12 weeks	
	OnabotulinumtoxinA 50 units	50 units once		50 units	once	12 weeks	
	OnabotulinumtoxinA 100 units	100 units once		100 units	once	12 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	OnabotulinumtoxinA 150 units	150 units once		150 units	once	12 weeks	
	OnabotulinumtoxinA 200 units	200 units once		200 units	once	12 weeks	
	OnabotulinumtoxinA 300 units	300 units once		300 units	once	12 weeks	
	Tolterodine/Pilocarpine			2 mg / 9 mg	twice daily	4 weeks	
Rovner 2013 23796570	Intravesical pressure attenuation device		pressure attenuation device inserted on day 0 and removed and replaced every 90 days for the duration of the study			6 months	
	sham device		identical procedures other than a balloon was not deployed from the delivery system.			6 months	

Rutledge 2014 24183730	PFMT		Women were given a handout and instruction describing behavioral management tips for urinary incontinence. This included information and suggestions about optimal volume fluid intake, constipation management, measures to reduce urinary urgency by decreasing fluid intake, and avoiding caffeine and other bladder irritants that have proved effective in other intervention trials. The provider then conducted a training session during the clinic visit designed to teach the participant to contract her pelvic floor muscles correctly. The training session required approximately 15 min. The provider confirmed appropriate contraction of the pelvic floor by palpation of the levator ani during a contraction and rated the strength of the contraction using the Brink's scale. The Brink's scale rates pelvic floor contractions from 3 to 12 and has been validated for the evaluation of pelvic floor strength. Appropriate feedback was given to avoid contraction of abdominal, gluteal, or adductor muscles. The provider performing the training attended two pelvic floor physical therapy sessions with experienced pelvic floor physical therapists. The pelvic floor muscle training program was explained to the participant verbally and in written form. The training program consisted of the participant performing 10 pelvic floor muscle contractions with a			12 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			goal of holding the contraction for 5 s; women were asked to perform 3 sets daily for the twelve week study period. To promote adherence to the training program, the participants in the training group received a reminder phone call approximately four weeks after the first study visit. The phone call reviewed the training instructions and addressed any concerns or questions the participant had.				
	Control		If randomized to the control group, the participant did not have the above training program and did not undertake exercises. This is representative of usual care in our gynecologic oncology clinics. The control participants completed the same questionnaires as the treatment group participants both at enrollment and at 12 weeks and underwent assessment of pelvic floor muscle strength using the Brink's scale. Because incontinent women may be interested in treatment, we did offer the training program to the women in the control group after they completed the study.			12 weeks	
Samuelsson 2017	Smartphone treatment with PFMT		A smartphone application with information on SUI, life style information, different programmes of PFMT with increasing severity, possibility to save statistics on training. Possibility to set reminders			3 months	
	Waiting list					3 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Sand 2012 21963104	oxybutynin cholide topical gel		1 gram applied once daily to rotating sites on the abdomen, upper/arms shoulders, and thighs	1 gram	once daily	12 weeks	
	Placebo		1 gram applied once daily to rotating sites on the abdomen, upper/arms shoulders, and thighs	1 gram	once daily	12 weeks	
Sherburn 2011 21284022	PFMT	pelvic floor muscle training	Each weekly group session comprised an education component and exercise to music class incorporating PFM exercise. The exercise class followed previously described methods,2 and aimed to provide intensive PFMT, combining motor control, strength, endurance, power and functional training in a variety of different body positions. The general exercise component was varied by the treating physiotherapist to meet the needs and physical abilities of the class members at the time. Participants then continued a daily PFMT program at home and recorded their home exercise sessions in an exercise diary. The education topics included: functional use of the PFMs, including use of a pre-contraction, weight management strategies, normal bladder control and voiding parameters, fluids and fluid intake, optimal toileting position, voiding dynamics, and benefits of general exercise.	1 hour	Once weekly	5 months	All participants were requested to refrain from seeking other forms of treatment (such as medication, natural therapies, or surgery) during the study. Participants who were taking medication which may have affected their continence status (e.g., vaginal estrogen) were asked to maintain their regimen and not to alter it unless on medical advice. They were also requested not to take up any new exercise program during the study.

	BT	bladder training	As with the PFMT group, each weekly group session began with an education component followed by a gentle exercise to music class. The education topics did not follow a pre-determined pattern, and they formed a larger component of the class than for the PFMT group. Discussions about deferral techniques formed the greatest part of the edu-cation component and they were discussed at each group session. However, to differentiate the two groups, use of PFM contractions was not taught as a deferral mechanism. Cognitive methods only were taught. Timed voiding parameters were individually set and progressed for each participant. Other education topics included: normal bladder control and voiding parameters, skin care, pad usage, fluids and fluid intake, optimal toileting position, voiding dynamics, and relaxation, distraction and breath control as part of the deferral strategies. An exercise component was included for this group to provide equivalence in the study. It was formatted so as to not provide a therapeutic benefit for the PFMs. The exercise component comprised gentle exercise including stretches, with breath awareness and relaxation. There was no specific strengthening of the PFM, in order to determine the relative effectiveness of PFMT and BT. Participants followed a voiding deferment	1 hour	Once weekly	5 months	All participants were requested to refrain from seeking other forms of treatment (such as medication, natural therapies, or surgery) during the study. Participants who were taking medication which may have affected their continence status (e.g., vaginal estrogen) were asked to maintain their regimen and not to alter it unless on medical advice. They were also requested not to take up any new exercise program during the study.

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			program at home and recorded their voiding schedule in a 3-day bladder diary which was completed six times during the 20-week intervention (baseline and 4 weekly thereafter)				
Sokol 2014 24704117	Hydrogel	Polyacrylamide hydrogel bulking agent	Polyacrylamide hydrogel bulking	injections once a month, up to 3x	injections once a month, up to 3x		
	Collagen gel	Contigen collagen gel (no longer available)	Contigen collagen gel	injections once a month, up to 3x	injections once a month, up to 3x		
Solberg 2016 26362793	Acupunture			1 session	once weekly	12 weeks	
	PFMT	pelvic floor muscle training		1 hour	once weekly	12 weeks	
	Waitlist control					12 weeks	
Sran 2016 26886884 ND	Physical therapy			1 session	weekly	12 weeks	
	Education			once	once	3 hours	
Talley 2017 28248418 ND	Behavioral and phsyical activity			30 minutes per day	5 days per week	12 weeks	
	Placebo						
Tannenbaum 2013 24334159	Continence education		60-90 min lecture that incorporated elements of constructivist learning that challenged older adults' erroneous beliefs about accepting incontinence as a normal part of ageing, and aimed to change attitudes and create new knowledge about the different types, aetiology, risk factors and treatment options for urine loss			once	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
	Self-management training		60-90 min workshop that reviewed the self-management theory in an interactive format, and provided a customised evidence-based self-management programme for risk factor modification for incontinence to each participant.			once	
	Continence education + Self-management		60-90 min total including a lecture that incorporated elements of constructivist learning that challenged older adults' erroneous beliefs about accepting incontinence as a normal part of ageing, and aimed to change attitudes and create new knowledge about the different types, aetiology, risk factors and treatment options for urine loss + workshop that reviewed the self-management theory in an interactive format, and provided a customised evidence-based self-management programme for risk factor modification for incontinence to each participant.			once	
	Control		60-90 min lecture on health promotion for older women that addressed topics other than incontinence.			once	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Terlikowski 2013 23443345	transvaginal electrical stimulation with surface-electromyography-assisted biofeed- back		frequency10 to 40 Hz, impulse width from 200 to 250 μs, and runtime/decontraction in configuration of 15 s/30 s for 20 min. The treatment lasted for 8 weeks and was performed twice a day. The introduction took place in the clinic, and the actual treatment was performed by patients at home, with a gradual increase to a daily maximum of 40 min.			8 weeks	
	placebo		The same type of electrode and hand-held unit as described for TVES. Frequency of 2 Hz, a pulse width of 50 μs, 2 s of stimulation, and 60 s of no stimulation, with a ramp of 8 s gradual increase to a daily maximum of 40 min. for 8 weeks			8 weeks	
Tsai 2014 25073008	sacral magnetic stimulation		Magstim Rapid2a and a 70-mm figure-8 coil positioned over the third sacral neural foramen, stimulation frequency, burst length, and interburst intervals were fixed at 5Hz, 10 seconds, and 20 seconds, respectively.			12 days	
	sham (control)		the sham group was identical to that of the experimental group, except that a placebo coila was used for sham stimulation, delivering <5% of the magnetic output with audible click-on discharge				
Visco 2012 23036134 ABC	solifenacin			5 mg	daily	6 months	if inadequate control of symptoms continued at month 4, the drug was changed to trospium XR at a dose of 60 mg
	onabotulinumtoxinA			100 U	once	once	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Wallis 2012 21817123	magnetic stimulation		Pts were instructed to wear the garment for a minimum of 6 consecutive hours during the day and 6 hours at night			12 weeks	
	placebo		Pts were instructed to wear the garment for a minimum of 6 consecutive hours during the day and 6 hours at night			12 weeks	

Wang 2016 26921645	Electrical pudendal nerve stimulation		Four sa- crococcygeal points were selected for deep insertion of long acu- puncture needles (Suzhou Shenlong Medical Apparatus Factory, China). The two upper points are located about 1 cm bilateral to the sacrococcygeal joint. On the upper points, a needle of 0.40 × 100 mm was inserted perpendicularly to a depth of 80 to 90 mm to produce a sensation referred to the urethra or the anus by stimulating the main trunk of the PN. The locations of the two lower points are about 1 cm bilateral to the tip of the coccyx. On the lower points, a needle of 0.40 × 100 or 125 mm was in- serted obliquely toward the ischiorectal fossa to a depth of 90 to 110 mm to produce a sensation referred to the urethra by stimu- lating the perineal nerve. two pairs of electrodes from a G6805-2 Multi-Purpose Health Device (Shanghai Medical Instruments High-Techno, China) was con- nected with the two ipsilaterally inserted needles, with the anode to the upper needle and the cathode to the lower needle. The device was set to produce electrical stimulation (biphasic 2-ms pulse duration) at a frequency of 2.5 Hz and an intensity (45~55 mA) as high as the patient could tolerate without dis- comfort. The electrostimulation was set for 60 minutes each time. Strong rhythmic and cephalad PFM contraction around the urethra must be maintained during the entire			4 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
			electrostimulation. In group I, EPNS was given 3 times a week for a total of 4 weeks				
	electromyogram biofeedback assisted pelvic floor muscle training, + transvaginal electrical stimulation		Electromyogram BF-assisted PFMT (using a nerve function reconstruction treatment system [AM1000B; Shenzhen Creative Industry Co. Ltd, China]) and following TES (using a neuromuscular stimulation therapy system (PHENIX USB 4, Electronic Concept Lignon Innovation, France)) at a current intensity of < 60 mA (as high as possible to get a PFM contrac- tion) and frequencies of 15 Hz and 85 Hz (alternate 3-minute periods of stimulation) were performed by a specially trained thera- pist, 20 minutes each time, respectively (a total of 40 minutes), 3 times a week for a total of 4 weeks. The patients also con- ducted 30 maximal high-intensity PFM contractions for 2-6 seconds (with 2-6 seconds rest), 3 sessions every day at home for a total of 4 weeks.			4 months	
Wang 2017 28153510	Electrical pudendal nerve stimulation		Long acupuncture needles were used in 4 sacrococcygeal points	2ms pulse and frequency of 2hz, 25-35 mAmps for 60 min	3 times a week	3 weeks	
	transvaginal electrical stimulation		PHENIX USB 4 neuromuscular stimulation system	less than 60 mA, frequency 12.5-30 Hz for 45 min	3 x a week	3 weeks	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Wiegersma 2014 25533442	Pelvic floor muscle training		For all participants, the intervention started with an explanation of the function of the pelvis and the pelvic floor and about pelvic floor dysfunctions; illustrations and three dimensional models of the pelvis were used. Pelvic floor muscle function was assessed by digital palpation. During this examination, the physiotherapists also checked whether participants were able to correctly contract ("squeeze and lift") and relax their pelvic floor muscles. If necessary, they used breathing exercises to increase awareness of the pelvic floor. Participants who were not able to contract or relax their pelvic floor muscles were first instructed how to do this by being given feedback during digital palpation or, if necessary, by application of myofeedback or electrical stimulation. Participants who were able to control their pelvic floor consciously but whose pelvic floor muscles were too weak started training their pelvic floor by doing exercises. All participants started with the same basic exercise scheme, to which specific exercises could be added (web appendix 2).	All participants were taught to contract their pelvic floor muscles before and during any increases in abdominal pressure ("the knack"), and attention was paid to lifestyle (diet, body weight) and toilet habits (web appendix 2). Initially, participants visited the pelvic physiotherapist on a weekly basis, but when they were able to correctly contract and relax their pelvic floor muscles the intervals between appointments were extended (two to three weeks).	three to five times a week, twice or three times each day.	3 months	
	Watchful waiting		Participants randomized to watchful waiting received no treatment and no recommendations.	n/a	n/a	3 months	

Author Year PMID Trial name (if given)	Arm	Arm Description	Intervention description (non-pharmacological)	Dose or regimen	Frequency	Duration	Notes
Xu 2016 26960195	electroacupuncture		participants were needled at bilateral BL33 at an angle of 30 to 45 degree inward and downward, and at bilateral BL35 slightly toward upside and outside, to a depth of 50 to 60 mm using acupuncture needles of size 0.30×75 mm		3 sessions/week	6 weeks	
	sham electroacupuncture		participants were needled at sham BL33 and sham BL35, which were approximately 20mm lateral to BL33 and BL35, respectively, with blunt needle tips		3 sessions/week	6 weeks	
Yamanishi 2017 28961380	magnetic stimulation	The magnetic coil was positioned beneath the seat of the chair. Active stimulation was set at 50 Hz in 5-s on/5-s off cycles.	50 Hz in 5-s on/5-s off cycles	20 min/week	10 weeks		
	sham stimulation	The magnetic coil was positioned beneath the seat of the chair. Sham stimulation was set at 1 Hz in 5-s on/5-s off cycles, with a maximum output of ≤42% of the active stimulation	1 Hz in 5-s on/5-s off cycles	20 min/week	10 weeks		

Table C-3. All studies with urinary incontinence outcomes

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Abdulaziz 2012 no PMID	PFMT vs. control	56	Stress: 100	43.8 (4.4) [40, 50]
Ahlund 2013 23672520	PFMT vs. control	82	Stress: 100	33 (3.6)
Aksac 2003 12867764	PFMT vs. control	50	Stress: 100	ND
Alewijnse 2003 12808702	PFMT vs. PFMT + bladder training	129	Urgency: 9 Stress: 37 Mixed: 31 Unclassified: 23	55.6 (10.9)
Alvez 2011 21860988	InterStim vs. InterStim	20	Stress: 100	55.6 (6.5) [42, 64]
Amaro 2006 16752244	TENS vs. control	40	Mixed: 100	48 [40, 79]
Amundsen 2016 27701661	Onabotulinum toxin A vs. InterStim	364	Urgency: 100	63 (11.6)
Andersen 2002	Durasphere vs. contigen	52	Stress: 100	ND
Anderson 1999 10332441 OPERA†	Oxybutynin vs. tolterodine	97	Urgency: 100	59 (10.3)
Arvonen 2001 11574936	PFMT vs. PFMT + weights	37	Stress: 100	48 [28, 65]
Aziminekoo 2014 24971138	Oxybutynin vs. oxybutynin	nd	Urgency: 100	53 (12)
Baker 2014 24763155	Yoga vs. MBSR	21	Urgency: 100	median 58 [22, 79]
Bano 2005 15378234	Permacol vs. Macroplastique	50	Stress: 100	61 [28, 80]
Beer 2017 27501593	InterStim vs. InterStim	23	Unclassified: 100	66.5 (12)
Bent 2008 17580357	Duloxetine vs. control	554	Mixed: 100	53.7 (11.9) [19, 85]
Berghmans 1996 8696355	PFMT vs. PFMT + biofeedback	40	Stress: 100	48.4 (11.5)
Bo 1999 10024253	TENS vs. PFMT vs. PFMT + weights vs. control	107	Stress: 100	49.5 (10)
Borawski 2007 17123297	Neuromodulation vs. neuromodulation	30	Urgency: 100	69.9
Borello-France 2006 16813477	PFMT + biofeedback vs. PFMT + biofeedback	44	Stress: 100	52.6 (8.5)
Burgio 1998 9863850	Oxybutynin vs. control	197	Urgency: 100	67.5 [55, 92]
Burgio 2002 12425706	PFMT vs. PFMT + biofeedback	222	Urgency: 100	65.4 (7.7) [55, 92]
Burgio 2008 18678843 BE-DRI	Tolterodine vs. tolterodine + PFMT + bladder training	307	Urgency: 100	56.9 (13.9)
Burgio 2010 20639023	Oxybutynin vs. oxybutynin + PFMT	64	Urgency: 100	58.4 (11.9)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Burns 1993 8315230		135	Stress: 91 Mixed: 9	62
But 2003 12639647	Neuromodulation vs. control	52	Urgency: 42.3 Stress: 17.3 Mixed: 40.4	55.8 [34, 78]
But 2005 15821527	Neuromodulation vs. control	39	Mixed: 100	54 [28, 70]
Capobianco 2012 21706345	Vaginal estrogen + PFMT + TENS vs. vaginal estrogen	206	Stress: 100	57.8 (4.5) [55, 70]
Cardozo 2004 15339761	Duloxetine vs. control	109	Stress: 100	53 [33, 75]
Cardozo 2010 19929591	Duloxetine vs. control	2393	Stress: 100	55
Castro 2008 18719756	TENS vs. PFMT vs. PFMT + weights vs. control	101	Stress: 100	54.2 (12.1)
Dede 2013 23086134	Tolterodine vs. trospium vs. oxybutynin	90	Urgency: 56 Mixed: 44	51.83 (10.52)
Delgado 2013 23640005	PFMT (with device) vs. PFMT	40	Unclassified: 100	49.6 [36, 68]
Fantl 1991 1987410	Bladder training vs. control	131	Unclassified: 100	67 (8.6)
Felicissimo 2010 20179901	PFMT (supervised) vs. PFMT (unsupervised)	59	Stress: 100	49.6 (8.7)
Ferreira 2012	PFMT (supervised) vs. PFMT (unsupervised)	34	Stress: 100	52.3 (9.1)
Fitz 2017 28169458	PFMT vs. PFMT + biofeedback	49	Stress: 100	56.4 (11.3)
Fujishiro 2000 10992380	Neuromodulation vs. control	62	Stress: 100	58 [37, 79]
Fürst 2014 25003921	TENS + PFMT vs. PFMT	35	Stress: 37 Mixed: 63	49.6 (10.6)
Ghoniem 2009 19013613	Macroplastique vs. control	247	Stress: 100	61 (12)
Gittelman 2014 24231837	Oxybutynin vs. control	323	Unclassified: 100	57 (11.5) [21.3, 83.8]
Glavind 1996 9203484	PFMT vs. PFMT + biofeedback	40	Stress: 100	45 [40, 48]
Golmakani 2014 24498480	PFMT + weights vs. bladder training	51	Stress: 100	45.5 (4.6) [25, 65]
Goode 2003 12865375	TENS + PFMT + biofeedback vs. PFMT + biofeedback vs. education	200	Stress: 33.5 Mixed: 66.5	56.2 (9.8) [40, 78]
Hahn 1991 10.1002/nau.1930100604	TENS vs. PFMT	20	Stress: 100	47.2 [34, 64]

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Harvey 2002 318	PFMT + biofeedback vs. PFMT + biofeedback	nd	nd	47.2 [34, 64]
Hirakawa 2013 23306768	PFMT vs. PFMT + biofeedback	39	Stress: 100	56.8 (10.6)
Holtedahl 1998 9688247	Vaginal estrogen + TENS + PFMT vs. control	87	Urgency: 6.9 Stress: 57 Mixed: 35.6	61 [50, 74]
Huang 2012 22542122	Fesoterodine vs. control	604	Urgency: 100	56 (14)
Huang 2014 24763156	Yoga vs. MBSR	18	Urgency: 63 Stress: 37	61.4 (8.2)
Hung 2010 20185357	PFMT vs. control	64	Urgency: 56.3 Stress: 43.7	48.8 (6.4)
Ishiko 2001 11304861	Vaginal estrogen + PFMT vs. PFMT	73	Stress: 100	[54, 75]
Jabs 2013 23343798	Onabotulinum toxin A vs. control	21	Urgency: 100	63.4 (10.3)
Jackson 1999 10428529	PO estrogen vs. control	67	Stress: 100	63 (7.6)
Janssen 2001 11167642	PFMT (group) vs. PFMT (individual)	414	Urgency: 8 Stress: 60 Mixed: 32	47.8 (10.5)
Kafri 2013 23160873	Tolterodine vs. bladder training vs. PFMT vs. PFMT + bladder training	164	Urgency: 100	56.7 (8.0)
Kaya 2015 25266357	PFMT vs. PFMT + bladder training	108	Urgency: 15 Stress: 46 Mixed: 39	48.7 (10.1)
Kerrebroeck 2004 14961887	Duloxetine vs. control	494	Stress: 100	53 (11)
Khullar 2004 15302476	Tolterodine vs. control	854	Mixed: 100	58.2 (13.3)
Kim 2001 11251875	PFMT vs. control	48	Unclassified: 100	53.5 [20, 75]
Kim 2007 17944890	PFMT vs. control	70	Unclassified: 100	76.6 (4.4)
Kim 2011 21545385	PFMT vs. exercise	147	Urgency: 40 Stress: 34 Mixed: 26	76.0 (4.09)
Kinchen 2005 15662490	Duloxetine vs. control	451	Stress: 100	53 (13)
Konstantinidou 2007 17245777	PFMT (group) vs. PFMT (individual)	30	Stress: 100	47.8 (7.5) [34, 60]
Kumari 2008 18755458	PFMT + bladder training vs. control	198	Unclassified: 100	44.7 (13)
Lagro-Janssen 1991 1807303	PFMT + bladder training vs. control	66	Stress: 100	45 (9)
Lagro-Janssen 1992 1459383	PFMT + bladder training vs. control	110	Urgency: 17 Stress: 62 Mixed: 21	43.4 (10.3)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Lamb 2009 19751517	PFMT + bladder training vs. PFMT + bladder support	174	Unclassified: 100	51.3 (12)
Lee 2001 11125386	autologous fat vs. control	68	Stress: 100	57 (12)
Lian 2015 26054138	Midodrine vs. education	90	Stress: 100	51.5 (8)
Liebergall-Wischnitzer 2009 19281321	PFMT (Paula) vs. PFMT	245	Stress: 100	47.6 (8.4)
Lightner 2001 11445471	Durasphere vs. contigen	355	Stress: 100	57.4
Lightner 2009 19660800	Zuidex vs. contigen	344	Stress: 100	56.1 (12.1)
Lim 2017 27871927	Magnetic stimulation vs. control	120	Stress: 100	ND
Lin 2008 18221532	Duloxetine vs. control	121	Stress: 100	54.4 (10.8)
Liu 2017 28655016	Electroacupuncture vs. control	486	Stress: 100	55.4 (8.4)
Long 2006 16412747	PO estrogen vs. vaginal estrogen	35	Unclassified: 100	55.3 (6.3)
Lopès 2014 25444700	TENS vs. control	149	Stress: 100	51.24 (13.7) [24, 84]
Lose 2000 10955437	Vaginal estrogen + bladder support vs. vaginal estrogen	133	Unclassified: 100	66
Lovatsis 2017 27438055	Bladder support vs. control	36	Stress:100	51 (9.5)
Luber 1997 9353803	TENS vs. control	54	Stress: 100	53.9 (10.3)
Manonai 2015 25920290	PFMT vs. PFMT + biofeedback	59	Stress: 100	47.8 (7.1)
McFall 2000 11067699	PFMT + bladder training vs. control	145	Unclassified: 100	75 (6)
McMichael 2013 REMOTE	Tolterodine vs. control	67	Urgency: 100	54.4 [22, 92]
Millard 2004 14764128	Duloxetine vs. control	458	Stress: 100	53
Moore 2003 12842055	Bladder training + PFMT vs. PFMT	145	Urgency: 11.6 Stress: 65.5 Mixed: 22.8	60 [46, 71]
Moore 1990 2249115	Oxybutynin vs. control	53	Urgency: 100	46
Morkved 2002 12383542	PFMT + biofeedback vs. PFMT	94	Stress: 100	46.6 (8.2)
Ng 2008 18004495	PFMT (supervised) vs. PFMT (unsupervised)	88	Mixed: 100	53 (14) [24, 87]
Norton 2002 12114886	Duloxetine vs. control	553	Stress: 100	51

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Oldham 2013 23023996	TENS + PFMT vs. PFMT	95	Urgency: 11 Stress: 28 Mixed: 61	48.1 (8.7) [18, 65]
Ong 2015 26142713	PFMT vs. PFMT + biofeedback	37	Stress: 100	51.9 (12.7)
Oreskovic 2012 22816227	Solifenacin vs. control	157	Urgency: 100	56.9 (10.1)
Ozlu 2017 28345778	PFMT vs. PFMT + biofeedback	51	Stress: 100	42.4 (8.2)
Pages 2001 11421517	PFMT + biofeedback vs. PFMT	51	Stress: 100	51.1 [27, 80]
Pereira 2011 21962461	PFMT vs. control	45	Stress: 100	60.8 (10.5)
Peters 2009 19616802†	Electroacupuncture vs. tolterodine	67	Urgency: 100	58
Porta-Roda 2015 25130167	PFMT vs. PFMT + weights	65	Mixed: 100	[35, 60]
Richter 2010 20177294	PFMT + bladder support vs. PFMT vs. bladder support	446	Stress: 45.8 Mixed: 54.2	49.8 (11.9)
Rogers 2008 18685795	Tolterodine vs. control	413	Urgency: 100	48
Rogers 2009 19601704	Tolterodine vs. control	372	Unclassified: 100	48 (12)
Rovner 2011 21351127	Onabotulinum toxin A vs. control	272	Urgency: 100	58.8 (13.5) [18]
Rovner 2013 23796570	Intravesical pressure release vs. control	115	Stress: 100	52.6 (11.3)
Rutledge 2014 24183730	PFMT vs. control	36	Stress: 70 Mixed: 25 Unclassified: 5	57 (7.2) [37, 79]
Samuelsson 2017	PFMT vs. control	121	Stress: 100	44.7 (9.4)
Sand 1995 7631730	TENS vs. control	52	Stress: 100	53.2 (11.4)
Sand 2009 19727537	Trospium vs. control	989	Unclassified: 100	58
Schagen van Leeuwena 2008 18547757	Duloxetine vs. control	265	Urgency: 3.7 Stress: 39.6 Mixed: 56.6	71
Schreiner 2010 20458465	TENS + bladder training vs. bladder training	52	Urgency: 23.5 Mixed: 76.5	68.3 (5.3)
Seo 2004 15515199	PFMT + biofeedback vs. PFMT + weights vs. PFMT	120	Stress: 100	43.6 (11.7)
Shepherd 1983 6611720	PFMT + biofeedback vs. PFMT	22	Stress: 100	48 [23, 67]
Sherburn 2011 21284022	PFMT vs bladder training	76	Stress: 100	71.8 (5.3)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Smith 1996 7490809	TENS vs. PFMT; Propantheline bromide vs. TENS	57	Urgency: 67.9 Stress: 32.1	[24, 82]
Sokol 2014 24704117	Bulkamide vs. contigen	303	Unclassified: 100	median 58.5 [23.3, 93.4]
Spruijt 2003 14616279	TENS vs. PFMT	51	Unclassified: 100	[65+]
Steers 2007 17511767	Duloxetine vs. control	306	Unclassified: 100	54.6
Subak 2002 12100806	PFMT vs. control	123	Urgency: 38.2 Stress: 24.4 Mixed: 37.4	69.3 (7.6)
Subak 2005 15947625	Education + weight loss vs. control	40	Urgency: 12 Stress: 12 Mixed: 76	median 52 [IQR 47, 59]
Subak 2009 19179316 PRIDE	Education + weight loss vs. control	338	Urgency: 12.1 Stress: 5.3 Mixed: 82.6	53 (11)
Szonyi G. 1995 7484484†	Oxybutynin vs. control	60	Urgency: 100	82 (6.06)
Talley 2017 28248418	PFMT vs. control	42	Urgency: 22 Stress: 14 Mixed: 62 Unclassified: 2	84.9 (6.4)
Tannenbaum 2013 24334159	Education vs. control	103	Urgency: 30 Stress: 19 Mixed: 46 Unclassified: 5	71.6 (7.5)
Tejero 2008 no PMID	PFMT + biofeedback vs. PFMT	62	Stress: 100	median 55
Terlikowski 2013 23443345	TENS vs. control	93	Stress: 100	46.9 (6.8)
Thüroff 1991 2005707†	Oxybutynin vs. control	154	Urgency: 100	50 [16, 83]
Tsai 2014 25073008	Magnetic stimulation vs. control	30	Stress: 71 Mixed: 29	63.3 (14.4)
Visco 2012 23036134 ABC	Solifenacin vs. onabotulinum toxin A	231	Urgency: 100	58 (11.3)
Waetjen 2004 14754693 MORE	Raloxifene vs. control	561	Unclassified: 100	68.3 (6.7)
Wang 2004 14751349	TENS vs. PFMT vs. PFMT + biofeedback	120	Urgency: 100	52.7 (13.8)
Wang 2016 26921645	TENS + PFMT vs. PFMT	42	Stress: 100	56.9 (11.4)
Wang 2017 28153510	TENS vs. electroacupuncture	120	Urgency: 100	ND
Weil 2000 10705194†	InterStim vs. control	43	Urgency: 100	43 [20, 66]
Wells 1991 2071809	Phenylpropanolamine vs. PFMT	157	Unclassified: 100	66 (8) [55, 90]
Wiegersma 2014 25533442	PFMT vs. control	239	Unclassified: 100	64.25 (6.66)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Williams 2006 17034605	PFMT vs. PFMT + weights vs. control	238	Stress: 69.7 Mixed 30.3	56.9 (9.6)
Wyman 1998 9790388	PFMT + biofeedback + bladder training vs. PFMT + biofeedback vs. PFMT vs. bladder training	204	Urgency: 30 Stress: 70	61 (10)
Xu 2016 26960195	Electroacupuncture vs. control	77	Stress: 100	58.5 (8.2)
Yalcin 2006 16750246 (2 trials)	Duloxetine vs. control	1133	Stress: 100	51.1
Zanetti 2007 18094892	PFMT (supervised) vs. PFMT (unsupervised)	44	Stress: 100	median 55
Zhao 2013 24617234	Electroacupuncture vs. electroacupuncture	60	Stress: 100	57 (12)
Zimmern 2009 19912207	Tolterodine vs. tolterodine	307	Urgency: 100	55.8 (13.8)

Abbreviations: IQR = interquartile range, MBSR = mindfulness-based stress reduction, ND = no data, PFMT = pelvic floor muscle training, PO = *per os* (by mouth), SD = standard deviation, TENS = transcutaneous electric nerve stimulation (including transvaginal, surface, and related electric stimulation).

* Study ID is the PubMed or other database unique identifier.

† Sample includes up to 10% men

Table C-4. Design and baselines for the single-group studies evaluated for adverse events

Study Author, Year PMID	% Men	Direction	Funding source	Eligibility	UI type	Age	Special Population	Race/ Ethnicity	Attrition bias	Intervention adequately described
Balachandran 2016 26978321	0	prospective	industry funded	Females > 18 y/o with symptoms of urgency with or without urgency incontinence.	86% UUI, 7% SUI, 7% mixed	54.71 +/- 14.82	N/A	N/A	All patients included in AE analysis, 8.6% of patients d/c medication prematurely due to AEs	Yes
Betschart 2013 23797521	0	prospective	none	eligible patients showed a urodynamically proven diagnosis of SUI, MUI, or UUI, on urodynamics	30% SUI, 18.3% UUI, 51.6% MUI	40.8 +/-3.8, 73.7+/- 6.3	79 of 120 postmenopausal	not listed (german)	14.70%	yes
Frencl 2012 21905086	0	prospective	Merck	post-menopausal women in good physical and mental health between the ages of 40 and 75 from two urologic research centers. All patients were required to have a history of OAB for at least 6 months prior to enrollment and meet voiding diary criteria of an average number of daily micturitions ≥8 and daily urge incon- tinence episodes ≥1 on each diary day. Post-menopausal was defined as 6 months of spontaneous amenorrhea with serum FSH levels ≥85% of the lower limit of normal for PMW, or 12 months of spontaneous amenorrhea.	UUI	59	postmenopausal	not listed	0%	yes

Study Author, Year PMID	% Men	Direction	Funding source	Eligibility	UI type	Age	Special Population	Race/ Ethnicity	Attrition bias	Intervention adequately described
Futyma 2015 26106616	0	prospective	partially supported by the National Science Centre, Grant no. 2011/01/D/ NZ7/04708	women, SUI, bladder capacity of >300cc, PVR<100cc		63	none	not reported (dutch/polish)	0%	yes
Hess 2013 23659987	0	prospective	industry funded	women 18 yrs and older with UUI	UUI 100%	56.9 +/- 13.8	NA	white 68.3%, black 20.7%, latina 2.2%, asian/pacific islander 6.4%, multiethnic/other 2.4%	all patients analyzed for AEs	yes
Labrie 2013 24047061	0	prospective	Not industry (Funded by ZonMw, the Nether-lands Organizati on for Health Research and Developm ent; Dutch Trial Register number, NTR1248.)	No prior treatment or PFMT >6 months ago. Demonstrated SUI. Prior incontinence surgery or stage 2 prolapse were excluded	SUI 100%	50	none	none (dutch)	ITT	yes
Mohr 2013 22707004	0	retrospective	none	elderly women with SUI or mixed urinary incontinence (MUI)	67% SUI or 33% MUI	79	elderly	not reported	11%	yes
Mohr, 2017 28417154	0	prospective	no conflicts	components of SUI and OAB had to be within the limits of 60–40% either way to avoid	MUI 100%	68	none	not reported	7.80%	no

Study Author, Year PMID	% Men	Direction	Funding source	Eligibility	UI type	Age	Special Population	Race/ Ethnicity	Attrition bias	Intervention adequately described
				predominance of one aspect						
Nitti 2016 27038769	9.7	prospective	Allergan (manufacturer of botox)	12 weeks or more since previous treatment, 2 or more UUI episodes during a 3-day diary and PVR volume less than 200 ml SUI	68% SUI 32% MUI	60	none	NR	0%	yes
Pai 2015 26855795	0	prospective	hospital grant			59.8	none	not reported	0%	yes
Resnick 2013 23168606	0	prospective	NIH			73.6	avg age 73 range 60-93, so elderly	not reported	16%	yes
Saks 2012 22288516	0	prospective	no conflicts	chief complaint of UUI: excluded if they were currently taking an anticholinergic medication or had a contraindication to anticholinergic medications, known neurologic disease, interstitial cystitis, or current urinary tract infection	UUI 100%	60	non3	71% white, 20% black, 1.2% Asian, other 3%	11%	yes
Segal 2016 27636211	0	prospective	none, no conflicts	ncluded all patients referred for treatment of uri- nary stress incontinence or pelvic floor weakness for complete- ness and to avoid any selection bias. We excluded patients with a cardiac pacemaker, active infection, or current pregnancy	SUI 100%	54.4	none	not reported	40%	yes
Siegel 2016 27131966	9	prospective	Medtronic (company that makes InterStim)	Diagnosis of OAB: 3-day voiding diary demonstrating ≥ 8 voids per day and/or ≥ 2 involuntary leaking episodes in 72 hours	OAB/UUI	57	none	not listed	0%	yes

Study Author, Year PMID	% Men	Direction	Funding source	Eligibility	UI type	Age	Special Population	Race/ Ethnicity	Attrition bias	Intervention adequately described
Sjostrom 23350826	0	prospective	The Swedish Council for Working Life and Social Research, The Swedish Society of Medicine	female, age 18-70, SUI> = 1x/week,	SUI 100%	48	none	NR, swedish	12%	yes
Sung 2015 26215431	0	prospective	Pfizer (manufacturer of fesoterodine)	>18yo with OAB. Exclusion criteria: contraindications for anticholinergics, urinary tract infection (UTI), interstitial cystitis, recent anticholinergic use, pregnancy or parturition and uncontrolled diabetes or hypertension.	UUI 100%	56	none	not reported	0.00%	yes

Appendix D. Risk of Bias

Table D-1. Risk of bias items for the new randomized controlled trials

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Abdulaziz 2012 no pmid	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	Low RoB	Low RoB	Unclear RoB (very few baselines given)	Yes	Unclear RoB ("Some women who missed their sessions were requested for compliance in future.")	No
Ahlund 2013 23672520	Low RoB	High RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Aksac 2003 12867764	Low RoB	High RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	No (Unclear)	Unclear RoB	No
Alewijnse 2003 12808702	Unclear RoB	Unclear RoB	Unclear RoB	High RoB	Low RoB	Low RoB	High RoB (women in control group used heabier pads and greater frequency of wet episodes than intervention groups, women in one intervention group experienced more sx distress and impact)	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Alvez 2011 21860988	Low RoB	Unclear RoB (not reported)	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Amaro 2006 16752244	Low RoB	Unclear RoB	Low RoB	Low RoB	Unclear RoB	Low RoB	Unclear RoB (no baselines described)	yes	Low RoB	No
Amundsen 2016 27701661	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Andersen 2002	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB (no baselines described)	yes	Low RoB	No
Anderson 1999 10332441 OPERA	Unclear RoB	Unclear RoB	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	yes	Low RoB	No
Arvonen 2001 11574936	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Aziminekoo 2014 24971138	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB (no information reported)	Unclear RoB (no information reported)	Yes	Unclear RoB (no information reported)	No
Baker 2014 24763155	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Unclear RoB	Low RoB	Yes	Unclear RoB	No
Bano 2005 15378234	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Unclear RoB (no baselines given)	yes	Low RoB	No
Beer 2017 27501593	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB	No	Low RoB	No
Bent 2008 17580357	Low RoB	Unclear RoB	Low RoB	High RoB	Low RoB	High RoB (differential attrition)	Low RoB	yes	Low RoB	No
Berghmans 1996 8696355	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Bertotto 2017 28508398	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Bo 1999 10024253	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Borawski 2007 17123297	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Borello-France 2006 16813477	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	High RoB (differential attrition)	Low RoB	yes	Low RoB	No
Burgio 1998 9863850	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (subjects in behavior gorup had more children, less likely to have HS education, more likely to have rectocele)	yes	Low RoB	No
Burgio 2002 12425706	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Burgio 2008 18678843 BE-DRI	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	High RoB (tx compliance 68%)	No
Burgio 2010 20639023	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Burns 1993 8315230	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
But 2003 12639647	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
But 2005 15821527	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (baselines differ consistently in the same direction)	yes	Low RoB	No
But 2012 23390832	Low RoB	High RoB (open label study)	High RoB (open label study)	High RoB (open label study)	Low RoB	Low RoB	Unclear RoB (baseline characteristics not described)	Yes	Low RoB	No
Cammu 1998 9550207	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	High RoB (differential attrition)	Low RoB	yes	Low RoB	No
Capobianco 2012 21706345	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Cardozo 2004 15339761	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Cardozo 2010 19929591	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Carmona 2013 no PMID	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Carrión Pérez 2015 25087210	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB (small study, 19 patients total, 9 in one arm 10 in the other some outcomes only had 2 pts f/u so it depends on the outcome)	Low RoB	Low RoB	Yes	Low RoB	Yes

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Castellani 2015 26043913	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Castro 2008 18719756	Low RoB	Unclear RoB	High RoB	Low RoB	High RoB	Low RoB	Low RoB	yes	Low RoB	No
Chughtai 2016 26883688	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Cornu 2012 22588140	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	High RoB (differential dropout, some for tx reasons. excluded in analysis)	High RoB (differential dropout >20% in one arm)	Low RoB	Yes	Low RoB	No
Correia 2014 24382548	Low RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
de Oliveira Carmargo 2009 19690792	Low RoB	Unclear RoB	High RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	yes	Low RoB	No
de Souza Abreu 2017 28346721	Low RoB	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Dede 2013 23086134	Low RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Delgado 2013 23640005	Low RoB	Low RoB	(not possible with study interventions)	Low RoB (assessors blinded)	Low RoB	Low RoB	Low RoB	Yes	Unclear RoB (pt completing intervention at home on own over 16 weeks)	No
Dmochowski 2002 12131314	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Du Moulin 2013 23554139	Low RoB	High RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Fantl 1991 1987410	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Felicissimo 2010 20179901	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Ferreira 2012	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	High RoB (dropouts for possible tx reasons not included in analysis)	Low RoB	Low RoB	Yes	Low RoB	No
Fitz 2012 23288261	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB (3/40 drop-outs)	Low RoB	Low RoB	Yes	Unclear RoB	No
Fitz 2017 28169458	Low RoB	High RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	High RoB	No
Fujishiro 2000 10992380	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB	yes	Low RoB	No
Fürst 2014 25003921	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Galea 2013	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Ghaderi 2016 27059833	Unclear RoB (not described)	Unclear RoB (not described)	Unclear RoB (not described)	Unclear RoB (not described)	Unclear RoB (dropouts and method of analysis not described)	Low RoB	Low RoB	Yes	Unclear RoB (not described)	Yes (participant flow not provided)
Ghoniem 2009 19013613	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (>20% attrition)	Low RoB	yes	Low RoB	No
Gittelman 2014 24231837	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Glavind 1996 9203484	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Golmakani 2014 24498480	Low RoB	High RoB	High RoB	Low RoB	High RoB	High RoB (Loss to f/up due to intervention-specific reasons; 15% overall)	Low RoB	Yes	High RoB (Loss to f/up due to non-adherence (4/60))	No
Goode 2003 12865375	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	High RoB (High RoB and discrepant attrition)	Low RoB	yes	Unclear RoB	No
Gozukara 2014 24711149	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Hahn 1991 10.1002/nau.1930100604	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Harvey 2002 318	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	No (Unclear)	Unclear RoB	No
Hirakawa 2013 23306768	Low RoB	Low RoB	High RoB (unblinded)	High RoB (unblinded assessors)	Low RoB	Low RoB	Low RoB	Yes	High RoB (Dropouts due to intervention components)	No
Holtedahl 1998 9688247	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Huang 2012 22542122	Low RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Huang 2014 24763156	Low RoB	High RoB	High RoB	Low RoB	High RoB (only completers above certain threshold analyzed)	Low RoB	Low RoB	Yes	Low RoB	No
Huebner 2011 20848671	High RoB	Unclear RoB	Unclear RoB	Unclear RoB	High RoB	Low RoB	Low RoB	Yes	High RoB	No
Hung 2010 20185357	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Ishiko 2001 11304861	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Jabs 2013 23343798	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Jackson 1999 10428529	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Janssen 2001 11167642	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	High RoB	Low RoB	yes	Low RoB	No
Jeyaseelan 2000 11128739	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Jha 2017 28801034	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	High RoB (44% dropout)	Low RoB	no	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Jordre 2014	High RoB ("randomly assigned" with no further description, but in discussion says "not randomized")	Unclear RoB (not described)	Unclear RoB (not described)	Unclear RoB (not described)	High RoB (dropouts not analyzed)	Low RoB	Low RoB	Yes	Low RoB	Yes (many baseline characteristics not included in analyses or reported; discussion states study was not randomized after all)
Kafri 2013 23160873	Low RoB	Low RoB	High RoB (Patients we not blinded)	Low RoB	Low RoB	High RoB (much High RoBer dropout rate in the drug arm than any other (36%))	Low RoB	Yes	High RoB (adherence to drug = 64%; others 85-95%)	No
Kaya 2015 25266357	Low RoB	High RoB	High RoB	High RoB	Low RoB	High RoB	Low RoB	Yes	Low RoB	No
Kerrebroeck 2004 14961887	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Khullar 2004 15302476	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Kim 2001 11251875	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	High RoB (differential between groups)	No
Kim 2007 17944890	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Kim 2011 21545385	Low RoB	Low RoB	Low RoB	High RoB	High RoB (2 drop outs in the intervention arm were potentially treatment related)	Low RoB	Low RoB	Yes	Low RoB (mean attendance at classes = 70%)	No
Kim 2012 21849373	Low RoB	Low RoB	High RoB	Low RoB	High RoB (dropouts not analyzes (n = 2))	Low RoB	Low RoB	Yes	Low RoB	No
Kinchen 2005 15662490	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	High RoB (High RoB and differential attrition)	Low RoB	yes	Low RoB	No
Konstantinidou 2007 17245777	Unclear RoB	Unclear RoB	Unclear RoB	High RoB	High RoB (as treated analysis)	High RoB (High RoB attrition)	Low RoB	yes	Unclear RoB	No
Kumari 2008 18755458	Low RoB	Low RoB	High RoB	High RoB	High RoB (as treated analysis)	High RoB (High RoB and differential attrition)	Low RoB	yes	Unclear RoB	No
Lagro-Janssen 1991 1807303	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	High RoB (67% at least good comliance)	No
Lagro-Janssen 1992 1459383	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Lamb 2009 19751517	Low RoB	High RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Lee 2001 11125386	Low RoB	Unclear RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Leong 2015 25377297	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Lian 2015 26054138 na	Unclear RoB	Unclear RoB	High RoB	Unclear RoB	Unclear RoB	Low RoB	Unclear RoB	Yes	Unclear RoB	No
Liebergall-Wischnitzer 2005 15660184	Low RoB	Low RoB	Unclear RoB	Low RoB	High RoB	Low RoB	Low RoB	yes	Low RoB	No
Liebergall-Wischnitzer 2009 19281321	Low RoB	Low RoB	Unclear RoB	Low RoB	High RoB	High RoB (High RoB attrition)	Low RoB	yes	High RoB	No
Lightner 2001 11445471	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Unclear RoB	High RoB (High RoB attrition)	Unclear RoB	yes	Unclear RoB	No
Lightner 2009 19660800	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	High RoB (High RoB attrition)	Low RoB	yes	High RoB	No
Lim 2017 27871927	Low RoB	Unclear RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Unclear RoB	Yes	Low RoB	No
Lin 2008 18221532	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (High RoB attrition)	High RoB(difference in Mean time between voids, p = 0.048)	yes	High RoB (differed between groups)	No
Liu 2017 28655016	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Long 2006 16412747	Unclear RoB	Unclear RoB	High RoB (patients were not blinded)	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	No (Unclear)	Unclear RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Lopès 2014 25444700	Low RoB	Unclear RoB	Low RoB	Unclear RoB	Low RoB (2/163 drop-outs)	Low RoB	High RoB (IMC and ICIQ score significantly differed between groups at baseline.)	Yes	Unclear RoB	No
Lose 2000 10955437	Low RoB	Unclear RoB	High RoB (patients were not blinded)	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	No (Unclear)	Unclear RoB	No
Lovatsis 2017 27438055	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Luber 1997 9353803	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB	High RoB	Low RoB	yes	Unclear RoB (not described)	No
Manganotti 2007 17259914	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Unclear RoB (no baselines given)	yes	Low RoB	No
Manonai 2015 25920290	Low RoB	Low RoB	High RoB	Low RoB	Low RoB (Baseline observations carried forward for dropouts)	Low RoB	Low RoB	Yes	Low RoB	No
Marencak 2011 20886571	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
McFall 2000 11067699	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	High RoB	High RoB (High RoB attrition)	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
McLean 2013 23861324	Low RoB	High RoB (No data)	High RoB (No data)	High RoB (No data)	High RoB (Dropouts due to time commitment of intervention)	Low RoB	Low RoB	No (Unclear RoB details for home exercise program)	Low RoB	No
McMichael 2013 REMOTE	Low RoB	Unclear RoB (not reported)	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB (very few baselines given)	No (dosage not given in mg)	Unclear RoB (not reported)	No
Millard 2004 14764128	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (High RoB attrition)	High RoB (dissimilar rates of currently using PFMT - 5.7% in duloxetine, 12.1% in placebo, p = 0.0017)	yes	High RoB (differed between groups)	No
Moore 2003 12842055	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (High RoB attrition)	Low RoB	yes	Low RoB	No
Moore 1990 2249115	Low RoB	Low RoB	Low RoB	Low RoB	Unclear RoB	High RoB (High RoB attrition due to side effects)	Low RoB	yes	High RoB (differed between groups)	No
Morkved 2002 12383542	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Ng 2008 18004495	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Norton 2002 12114886	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	High RoB (differed between groups)	No
Oldham 2013 23023996	Low RoB	Unclear RoB (not reported)	High RoB	Low RoB	Unclear RoB (reasons for dropouts not given)	High RoB (20% drop out)	Low RoB	Yes	Low RoB	No
Ong 2015 26142713	Low RoB	Unclear RoB (concealment not described)	High RoB	Unclear RoB	High RoB (dropouts not analyzed)	Low RoB	Low RoB	Yes	Low RoB	Yes (Potentially a typo, but results for certain outcomes report more dropouts than participant flow)
Oresković 2012 22816227	Low RoB	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Orri 2014 24792229 REMOTE	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (differential dropout 1 for tx related AE)	Low RoB	Low RoB	Yes	Low RoB	No
Ozlu 2017 28345778	Low RoB	Unclear RoB (not reported)	High RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Pages 2001 11421517	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Unclear RoB (no baselines given)	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Pereira 2011 21962461	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (dropouts not analyzed)	Low RoB	Low RoB	Yes	Low RoB	No
Pereira 2012 22840592	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	Yes
Pereira 2013 22674639	Low RoB	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Peters 2009 19616802	Low RoB	Unclear RoB	open-label	Low RoB	Unclear RoB	Low RoB	Low RoB	yes	Low RoB	No
Porta-Roda 2015 25130167	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	High RoB (compliance was <70% at beginning and <50% at end of study)	No
Price 2015 26506165	Low RoB	Low RoB	High RoB (pts could not be blinded, stimulation from device felt.)	Low RoB (surgeon blinded until after device implanted)	Low RoB	Low RoB	Low RoB	No (unsure how many cycles a day for cyclin group)	Low RoB	No
Richter 2010 20177294	Adequate	Not adequate	open-label	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Rogers 2008 18685795	Low RoB	Unclear RoB	double-blind	Low RoB	Low RoB (nodified ITT on > = 1 dose of study drug taken)	Low RoB	Low RoB	yes	Low RoB	No
Rogers 2009 19601704	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Unclear RoB (no information reported)	Low RoB	yes	Unclear RoB (not described)	No
Rovner 2011 21351127	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No

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Rovner 2013 23796570	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (11% dropout for device or proceedure issue. Not included in analysis)	High RoB (differential dropout)	Low RoB	Yes	Low RoB	No
Rutledge 2014 24183730	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Samuelsson 2017	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Unclear RoB (not reported)	No
Sand 1995 7631730	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	High RoB (age differed between interventions)	yes	Low RoB	No
Sand 2009 19727537	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Sand 2012 21963104	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Unclear RoB (outpatient treatment, adherence Unclear RoB.)	Yes (industry funded)
Schagen van Leeuwena 2008 18547757	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Schreiner 2010 20458465	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	yes	Unclear RoB (not described)	No
Seo 2004 15515199	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Shepherd 1983 6611720	Unclear RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Sherburn 2011 21284022	Low RoB	Low RoB	High RoB	Low RoB	High RoB (completers only assessed)	Low RoB	Low RoB	Yes	Low RoB	No
Smith 1996 7490809	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Sokol 2014 24704117	Low RoB	Unclear RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Solberg 2016 26362793	Low RoB	Low RoB	High RoB	Unclear RoB	High RoB (dropouts not analyzed)	High RoB (High RoB dropout rates)	High RoB (Incontinence score significantly different between groups at baseline)	Yes	High RoB (High RoB dropouts due to intervention components)	No
Spruijt 2003 14616279	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Sran 2016 26886884	Low RoB	High RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Steers 2007 17511767	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	High RoB	Low RoB	yes	Low RoB	No
Subak 2002 12100806	Low RoB	Low RoB	Unclear RoB	High RoB	High RoB (per protocol analysis, 18% dropout)	Low RoB	Low RoB	yes	Low RoB	No
Subak 2005 15947625	Low RoB	Low RoB	High RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Subak 2009 19179316 PRIDE	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Sung 2000 10817026	Unclear RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Unclear RoB (no baselines given)	yes	Low RoB	No
Sung 2000 10895973	Unclear RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Unclear RoB (no baselines given)	yes	Low RoB	No
Szonyi G. 1995 7484484	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Talley 2017 28248418	Low RoB	Low RoB	High RoB (patients were not blinded)	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Tannenbaum 2013 24334159	Low RoB	Unclear RoB (not reported)	High RoB	High RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Tejero 2008 no PMID	High RoB	High RoB	High RoB	Unclear RoB	High RoB	High RoB	Low RoB	yes	Low RoB	No
Terlikowski 2013 23443345	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Thüroff 1991 2005707	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Tibaek 2007 16673051	Low RoB	Unclear RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Tsai 2014 25073008	Unclear RoB	Unclear RoB	Low RoB	Low RoB	High RoB	High RoB	Low RoB	Yes	Low RoB	No
Visco 2012 23036134 ABC	Low RoB	Unclear RoB (not reported)	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Waetjen 2004 14754693 MORE	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Wallis 2012 21817123	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Wang 2004 14751349	Low RoB	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Wang 2016 26921645	Unclear RoB	Unclear RoB	High RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Wang 2017 28153510	Low RoB	Low RoB	High RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Weil 2000 10705194	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Wells 1991 2071809	Low RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Wiegersma 2014 25533442	Low RoB	Low RoB	Low RoB	Unclear RoB	Low RoB	High RoB	Low RoB	Yes	Low RoB	No
Williams 2006 17034605	Low RoB	Low RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Wyman 1997 9449301	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Wyman 1998 9790388	Unclear RoB	Unclear RoB	Unclear RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	yes	High RoB (differed between groups)	No
Xu 2016 26960195	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	Yes	Low RoB	No
Yalcin 2006 16750246 (2 trials)	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Yamanishi 2017 28961380	Low RoB	Unclear RoB	Low RoB	Low RoB	High RoB (differential dropout no ITT analysis)	High RoB (differential dropout, High RoB in intervention arm)	Low RoB	yes	Low RoB	No
Zanetti 2007 18094892	Low RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No
Zellner 2009 20109997	Low RoB	Unclear RoB	Low RoB	Low RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Study	Adequate generation of a randomized sequence	Allocation concealment	Blinding of patients	Blinding of outcome assessors (or "double blind")	Intention-to-treat-analysis	Incomplete results data (attrition bias)	Group similarity at baseline (selection bias)	Were interventions adequately described?	Compliance with interventions	Other issues
Zhao 2013 24617234	Unclear RoB	Unclear RoB	High RoB	Unclear RoB	Unclear RoB	Low RoB	Unclear RoB	No	Unclear RoB	No
Zimmern 2009 19912207	Unclear RoB	Unclear RoB	High RoB	High RoB	Low RoB	Low RoB	Low RoB	yes	Low RoB	No

Table D-2. Risk of Bias items for the new nonrandomized comparative studies

Author Year PMID Trial name	**Blinding of outcome assessors**	**Incomplete results data (attrition bias)**	**Group similarity at baseline (selection bias)**	**Were interventions adequately described?**	**Compliance with interventions**	**Patients in different intervention groups selected in an equivalent manner**	**Baseline differences between groups accounted for (Adjusted analysis)?**	**Other issues**
Michel 2013 22816871 DUROSA	High (open-label)	Low	High (baseline characteristics differed between groups)	Yes	Unclear (drop-outs with missing data, no patient compliance measures noted.)	Unsure (placed in group based on doctor prescribing. Patient placed in groups based on doctor decision)	Unsure (no mention of adjusting for baseline characteristic differences)	No

Appendix E. Quality of Life

Table E-1. Baseline data for all quality of life studies

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Aksac 2003 12867764	PFMT vs. control	50	Stress: 100	ND
Amundsen 2016 27701661	Onabotulinum toxin A vs. InterStim	364	Urgency: 100	63 (11.6)
Baker 2014 24763155	Yoga vs. MBSR	21	Urgency: 100	median 58 [22, 79]
Bertotto 2017 28508398	PFMT + biofeedback vs. PFMT vs. control	45	Stress: 100	58.3 (5.8)
Bo 1999 10024253	TENS vs. PFMT vs. PFMT + weights vs. control	107	Stress: 100	49.5 (10)
Borello-France 2006 16813477	PFMT + biofeedback vs. PFMT + biofeedback	44	Stress: 100	52.6 (8.5)
Burgio 2001 11192337	Oxybutynin vs. control	197	Urgency: 100	67.5 [55, 92]
Burgio 2002 12425706	PFMT vs. PFMT + biofeedback	222	Urgency: 100	65.4 (7.7) [55, 92]
But 2012 23390832	Solifenacin vs. darifenacin	61	Urgency: 100	median 54 (IQR 11.5)
Cammu 1998 9550207	PFMT + biofeedback vs. PFMT + weights	60	Stress: 100	56.2 (10.2)
Cardozo 2010 19929591	Duloxetine vs. control	2393	Stress: 100	55
Carmona 2013 no PMID	Electroacupuncture vs. control	22	Urgency: 100	60 (14.4)
Carrión Pérez 2015 25087210	PFMT vs. PFMT + biofeedback	16	Stress: 100	median 49 [47, 56]
Castellani 2015 26043913	TENS + PFMT + biofeedback + vaginal estrogen vs. TENS + PFMT + biofeedback	69	Stress: 100	60 (14.4)
Castro 2008 18719756	TENS vs. PFMT vs. PFMT + weights vs. control	101	Stress: 100	54.2 (12.1)
Chughtai 2016 26883688	Fesoterodine + vaginal estrogen vs. fesoterodine	18	Urgency: 100	55.4 [40.7, 66.6]
Cornu 2012 22588140	Bladder support vs. control	41	Stress: 100	58.6 (13.6) [29, 88]
Correia 2014 24382548	TENS vs. control	45	Stress: 100	60.13 (9.35)
de Oliveira Carmargo 2009 19690792	PFMT (group) vs. PFMT (individual)	60	Stress: 100	51 (9.2)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
de Souza Abreu 2017 28346721	PFMT vs. bladder training	33	Stress: 100	64 (11.9)
Dede 2013 23086134	Tolterodine vs. trospium vs. oxybutynin	90	Urgency: 56 Mixed: 44	51.83 (10.52)
Delgado 2013 23640005	PFMT (with device) vs. PFMT	40	Unclassified: 100	49.6 [36, 68]
Dmochowski 2002 1213131†	Oxybutynin vs. control	411	Unclassified: 100	61.4
Du Moulin 2013 23554139	TENS + PFMT vs. PFMT	35	Stress: 100	median 36 [33, 39]
Ferreira 2012	PFMT (supervised) vs. PFMT (unsupervised)	34	Stress: 100	52.3 (9.1)
Fitz 2012 23288261	PFMT vs. PFMT + biofeedback	32	Stress: 100	58.1 (9.3)
Fitz 2017 28169458	PFMT vs. PFMT + biofeedback	49	Stress: 100	56.4 (11.3)
Galea 2013	PFMT vs. PFMT + biofeedback	22	Urgency: 65 Stress: 9 Mixed: 26	73.5 (9) [61, 86]
Ghaderi 2016 27059833	TENS + PFMT vs. PFMT	60	Stress: 100	52.9 (1.1)
Ghoniem 2009 19013613	Macroplastique vs. control	247	Stress: 100	61 (12)
Golmakani 2014 24498480	PFMT + weights vs. bladder training	51	Stress: 100	45.5 (4.6) [25, 65]
Gozukara 2014 24711149	Education + weight loss vs. education	321	Urgency: 23 Stress: 40 Mixed: 37	43.8 (9.7)
Hirakawa 2013 23306768	PFMT vs. PFMT + biofeedback	39	Stress: 100	56.8 (10.6)
Huang 2012 22542122	Fesoterodine vs. control	604	Urgency: 100	56 (14)
Huang 2014 24763156	Yoga vs. MBSR	18	Urgency: 63 Stress: 37	61.4 (8.2)
Huebner 2011 20848671	TENS + PFMT + biofeedback vs. PFMT + biofeedback	88	Stress: 100	49.8 (12.9)
Hung 2010 20185357	PFMT vs. control	64	Urgency: 56.3 Stress: 43.7	48.8 (6.4)
Jabs 2013 23343798	Onabotulinum toxin A vs. control	21	Urgency: 100	63.4 (10.3)
Jeyaseelan 2000 11128739	Electrostimulation vs. control	24	Stress: 100	ND
Jha 2017 28801034	PFMT vs. PFMT + electrical stimulation	69	Unclassified: 100	45.6 (9.5)
Jordre 2014	PFMT vs. education	27	Stress: 41 Mixed: 59	51.5 (12.8)
Kafri 2013 23160873	Tolterodine vs. bladder training vs. PFMT vs. PFMT + bladder training	164	Urgency: 100	56.7 (8.0)
Kaya 2015 25266357	PFMT vs. PFMT + bladder training	108	Urgency: 15 Stress: 46 Mixed: 39	48.7 (10.1)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Kim 2012 21849373	PFMT (supervised) vs. PFMT (unsupervised)	18	Unclassified: 100	31.7 (2.7)
Kumari 2008 18755458	PFMT + bladder training vs. control	198	Unclassified: 100	44.7 (13)
Lagro-Janssen 1991 1807303	PFMT + bladder training vs. control	66	Stress: 100	45 (9)
Lamb 2009 19751517	PFMT + bladder training vs. PFMT + bladder support	174	Unclassified: 100	51.3 (12)
Leong 2015 25377297	PFMT + bladder training + education vs. education	55	Urgency: 16 Stress: 51 Mixed: 32	74.3 (4.6)
Liebergall-Wischnitzer 2005 15660184	PFMT (Paula) vs. PFMT	59	Unclassified: 100	[20, 65]
Liebergall-Wischnitzer 2009 19281321	PFMT (Paula) vs. PFMT	245	Stress: 100	47.6 (8.4)
Lim 2017 27871927	Magnetic stimulation vs. control	120	Stress: 100	ND
Lopès 2014 25444700	TENS vs. control	149	Stress: 100	51.24 (13.7) [24, 84]
Manganotti 2007 17259914	Magnetic stimulation vs. control	20	Stress: 100	50.1 (2.9)
Manonai 2015 25920290	PFMT vs. PFMT + biofeedback	59	Stress: 100	47.8 (7.1)
Marencak 2011 20886571	Pregabalin + tolterodine vs. pregabalin vs. tolterodine	164	Urgency: 100	52.9 (13.3)
McFall 2000 11067699	PFMT + bladder training vs. control	145	Unclassified: 100	75 (6)
McLean 2013 23861324	PFMT vs. control	35	Stress: 100	51.7 (8.6)
Michel 2013 22816871	Duloxetine vs. current treatment	6844	Stress: 100	59 (13)
Moore 2003 12842055	Bladder training + PFMT vs. PFMT	145	Urgency: 11.6 Stress: 65.5 Mixed: 22.8	60 [46, 71]
Ng 2008 18004495	PFMT (supervised) vs. PFMT (unsupervised)	88	Mixed: 100	53 (14) [24, 87]
Oreskovic 2012 22816227	Solifenacin vs. control	157	Urgency: 100	56.9 (10.1)
Orri 2014 24792229 REMOTE	Tolterodine vs. control	16	Urgency: 100	47.7 [28, 66]
Ozlu 2017 28345778	PFMT vs. PFMT + biofeedback	51	Stress: 100	42.4 (8.2)
Pereira 2011 21962461	PFMT vs. control	45	Stress: 100	60.8 (10.5)
Pereira 2012 22840592	TENS vs. control	14	Stress: 100	68.6(10.9)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Pereira 2013 22674639	PFMT vs. PFMT + weights vs. control	41	Stress: 100	63 [51, 85]
Peters 2009 19616802†	Electroacupuncture vs. tolterodine	67	Urgency: 100	58
Porta-Roda 2015 25130167	PFMT vs. PFMT + weights	65	Mixed: 100	[35, 60]
Price 2015 26506165	InterStim vs. InterStim	32	Urgency: 100	64.6 (11.6)
Rogers 2009 19601704	Tolterodine vs. control	372	Unclassified: 100	48 (12)
Rovner 2011 21351127	Onabotulinum toxin A vs. control	272	Urgency: 100	58.8 (13.5) [18]
Rovner 2013 23796570	Intravesical pressure release vs. control	115	Stress: 100	52.6 (11.3)
Samuelsson 2017	PFMT vs. control	121	Stress: 100	44.7 (9.4)
Sand 2012 21963104	Oxybutynin vs. control	704	Urgency: 100	59.1 (12.3)
Schreiner 2010 20458465	TENS + bladder training vs. bladder training	52	Urgency: 23.5 Mixed: 76.5	68.3 (5.3)
Seo 2004 15515199	PFMT + biofeedback vs. PFMT + weights vs. PFMT	120	Stress: 100	43.6 (11.7)
Solberg 2016 26362793	Acupuncture vs. PFMT vs. control	20	Mixed: 100	median 62.5 [29, 87]
Sran 2016 26886884	PFMT vs. control	48	Urgency: 17 Stress: 13 Mixed: 70	66.7 (7.6)
Subak 2005 15947625	Education + weight loss vs. control	40	Urgency: 12 Stress: 12 Mixed: 76	median 52 [IQR 47, 59]
Sung 2000 10817026	PFMT + biofeedback vs. PFMT	90	Stress: 100	median 50
Sung 2000 10895973	PFMT + biofeedback vs. PFMT	60	Stress: 100	ND
Talley 2017 28248418	PFMT vs. control	42	Urgency: 22 Stress: 14 Mixed: 62 Unclassified: 2	84.9 (6.4)
Terlikowski 2013 23443345	TENS vs. control	93	Stress: 100	46.9 (6.8)
Tibaek 2007 16673051	PFMT vs. control	24	Unclassified: 100	median 60 [IQR 56, 74]
Tsai 2014 25073008	Magnetic stimulation vs. control	30	Stress: 71 Mixed: 29	63.3 (14.4)
Visco 2012 23036134 ABC	Solifenacin vs. onabotulinum toxin A	231	Urgency: 100	58 (11.3)
Wallis 2012 21817123	Magnetic stimulation vs. control	101	Urgency: 37 Stress: 12 Mixed: 51	70.1 (6.8)

Author, Year, Study ID*	Interventions	N	UI Type (%)	Age, mean (SD) [range]
Wang 2016 26921645	TENS + PFMT vs. PFMT	42	Stress: 100	56.9 (11.4)
Wiegersma 2014 25533442	PFMT vs. control	239	Unclassified: 100	64.25 (6.66)
Williams 2006 17034605	PFMT vs. PFMT + weights vs. control	238	Stress: 69.7 Mixed 30.3	56.9 (9.6)
Wyman 1997 9449301	Bladder training vs. control	131	Urgency: 28.5 Stress: 71.5	67 (9)
Wyman 1998 9790388	PFMT + biofeedback + bladder training vs. PFMT + biofeedback vs. PFMT vs. bladder training	204	Urgency: 30 Stress: 70	61 (10)
Xu 2016 26960195	Electroacupuncture vs. control	77	Stress: 100	58.5 (8.2)
Yamanishi 2017 28961380	Magnetic stimulation vs. control	30	Stress: 100	ND
Zanetti 2007 18094892	PFMT (supervised) vs. PFMT (unsupervised)	44	Stress: 100	median 55
Zellner 2009 20109997†	Trospium vs. oxybutynin	1658	Urgency: 100	61.6 (12) [20, 91]

Abbreviations: IQR = interquartile range, MBSR = mindfulness-based stress reduction, ND = no data, PFMT = pelvic floor muscle therapy, SD = standard deviation, TENS = transcutaneous electric nerve stimulation (including transvaginal, surface, and related electric stimulation).

* Study ID is the PubMed or other database unique identifier.
† Sample includes up to 10% men.

Table E-2. Quality of life comparisons summary findings (statistically significant or nonsignificant)

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
Behavioral v Placebo	bladder support v Sham	bother	CONTILIFE total, overall QOL, self-image	1 (46)	1 (Bladder support)	0	22588140
		daily activities	CONTILIFE effort, daily activities	1 (46)	0	1	22588140
		mental health	CONTILIFE emotional consequences	1 (46)	1 (Bladder support)	0	22588140
		sexual health	CONTILIFE Sexuality	1 (46)	0	1	22588140
Behavioral v Behavioral	Bladder training, PFMT v Bladder training	daily activities	IIQ-7	1 (108)	1 (bladder training, PFMT)	0	25266357
		distress	UDI-6	1 (108)	1 (bladder training, PFMT)	0	25266357
Behavioral v Placebo	bladder training, PFMT v Sham	bother	Self reported Bothersomeness of urinary incontinence	1 (108)	0	1	11067699
Behavioral v Behavioral	bladder training, PFMT, biofeedback v bladder training	daily activities	IIQ-R	1 (135)	1 (bladder training, PFMT, biofeedback)	0	9790388
		distress	UDI	1 (135)	1 (bladder training, PFMT, biofeedback)	0	9790388
Behavioral v Behavioral	bladder training, PFMT, biofeedback v PFMT, biofeedback	daily activities	IIQ-R	1 (136)	0	1	9790388
		distress	UDI	1 (136)	1 (bladder training, PFMT, biofeedback)	0	9790388
Behavioral v Behavioral	education, bladder training, PFMT v education, bladder training, PFMT	mental health	IQOL	1 (174)	0	1	19751517
Behavioral v Placebo	education, bladder training, PFMT v Sham	bother	Global Severity	1 (103)	0	1	11192337
		daily activities	IIQ, physical, social, interpersonal sensitivity, self-reported QoL, UDI, Eq-5D	3 (279)	1 (education, bladder training, PFMT)	2	18030102; 11192337; 9449301
		distress	UDI	1 (45)	0	1	18030102
		general health	EQ-5D	1 (45)	0	1	18030102

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		mental health	embarassment, emotional, IQOL, Anxiety, Depression, Hostility, obsessive-compulsive, paranoid ideation, phobia, psychoticism	2 (148)	0	1	18030102; 11192337
		pain	pain/discomfort	1 (45)	0	1	18030102
Behavioral v Behavioral	Education, PFMT v PFMT	daily activities	Change from baseline in quality of life-avoidance, limiting behaviors scores (8 items), Change from baseline in quality of life-avoidance, social embarrassment scores (5 items)	1 (63)	0	1	15660184
		mental health	IQOL	1 (63)	0	1	15660184
Behavioral v Behavioral	education, PFMT, bladder training v Education	daily activities	IIQ	1 (55)	1 (education, PFMT, bladder training)	0	25377297
Behavioral v Behavioral	education, PFMT, bladder training, TENS v bladder training, PFMT	daily activities	IIQ	1 (145)	0	1	12842055
Behavioral v Behavioral	education, PFMT, bladder training, TENS v education, bladder training	daily activities	IIQ-7	1 (145)	1 (education, PFMT, bladder training, TENS)	0	12842055
		distress	UDI	1 (145)	1 (education, PFMT, bladder training, TENS)	0	12842055
Behavioral & Neuromodulation v Behavioral	education, PFMT, bladder training, TENS v PFMT	daily activities	Urinary incontinence does not restrict daily activities	1 (118)	1 (education, PFMT, bladder training, TENS)	0	12425706
Behavioral v Behavioral	education, weight loss v Education	distress	UDI-6	1 (163)	1 (education)	0	24711149
		sexual health	difficulty with sexual activity, frequency of sexual activity, level of sexual desire, overall sexual satisfaction, urine leakage during sex	1 (338)	0	1	19296980
Behavioral v Placebo	education, weight loss v Sham	daily activities	IIQ score	1 (48)	1 (education, weight loss)	0	15947625

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		distress	UDI score	1 (48)	1 (education, weight loss)	0	15947625
		general health	SF-36 physical component	1 (48)	1 (education, weight loss)	0	15947625
		mental health	SF-36 mental component score	1 (48)	1 (education, weight loss)	0	15947625
Behavioral v Placebo	Electroaccupunture v Sham	bother	ICIQ-SF, B-SAQ	2 (102)	1 (electroaccupunture)	1	26960195; 122951 (no PMID)
Other v Placebo	Inravessical pressure release device v Sham	mental health	IQOL	1 (115)	0	1	23796570
Neuromodulation v Placebo	Magnetic stimulation v Sham	bother	OAB-q, ICIQ-UI-SF, ICIQ-LUTSqol, SEAPI-QMM	3 (114)	2 (magnetic stimulation)	1	25073008; 27871927; 17259914
		daily activities	BFLUTS, social limitation, IIQ, personal relationships	2 (121)	1 (magnetic stimulation)	1	21817123; 17259914
		general health	general health	1 (20)	0	1	17259914
		mental health	emotions	1 (20)	0	1	17259914
		sleep/energy	sleep/energy	1 (20)	0	1	17259914
Behavioral v Behavioral	MBSR (mindfulness based stress reduction) v Yoga	bother	OABq-SF	1 (30)	0	1	24763155
		general health	HRQL	1 (30)	0	1	24763155
Behavioral v Behavioral	PFMT (pelvic floor muscle therapy) v Bladder training	mental health	IQOL	1 (81)	0	1	23160873
Behavioral v Behavioral	PFMT (pelvic floor muscle therapy) v Educatoin	daily activities	IIQ	1 (48)	0	1	26886884
		distress	UDI	1 (48)	0	1	26886884
Behavioral v Behavioral	PFMT (pelvic floor muscle therapy) v PFMT	bother	final gravity, final incontinence impact, Ditrovie scale, smell of urine, impact score, mild or no problem, UDI-6, ICIQ-UI-SF	6 (433)	2 (home/supervised PFMT, physiotherapy PFMT)	4	19690792; 122483 (no PMID); 18004495; 17034605; 23861324; 27059833
		daily activities	final physical limitations, final personal relationships, final social limitations, holidays/recreation, interests/hobbies, social activities, IIQ-7, BFLUTS, IIQ	5 (225)	2 (individual, supervised PFMT)	2	19690792; 18004495; 23861324; 21849373; 122935 (no PMID)

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		distress	UDI	1 (27)	0	1	122935 (no PMID)
		general health	KHQ, final general health	3 (138)	2 (group PFMT; stabilization exercise PFMT)	1	21962461; 28346721; 19690792
		mental health	IQOL, emotions	4 (425)	2 (PFMT)	2	19281321; 17034605; 18094892; 19690792
		sexual health	Sexual quality, sexual life	1 (88)	discordant -- one sexual health outcome sig, one NS	discordant -- one sexual health outcome sig, one NS	18004495
		sleep/energy	final sleep/disposition	1 (60)	0	1	19690792
Behavioral v Placebo	PFMT v Sham	bother	Discomfort due to incontinence (/5-very serious problem), Discomfort due to wearing a protection (/5-very serious problem), discomfort due to avoidance of places & situations, ICIQ-LUTSqol, ICIQ-UI-SF, unsatisfied if you had to spend the rest of your life with symptoms as now	4 (302)	2 (PFMT)	2	10817026; 10895973; NCT01848938; 10929962

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		daily activities	Avoidance of places and situations (/5-very serious problem), discomfort due to fluid intake restriction, IIQ, Improvement in restrictions of activities, interference in physical activity, interference in relations with other people, overall interference with life, PFIQ-7, physical functioning, problems on daily tasks, Problems because of avoiding places and situations, Problems with interference with social life, Problem with interference with physical activity, role limitaiton due to physical problems, social functioning	6 (481)	discordant in study 1807303, 10929962	4	10895973; 28248418; 1807303; 10929962; 25533442; 16673051
		distress	UDI	2 (42 + 247)	1 (PFMT)	1	28248418; 25533442
		general health	general health perceptions, KHQ, MOS SF-12, improvement in psychological impact of urinary incontinence, IQOL, mental health, role limitation due to emotional problems	6 (454)	2 (PFMT) discordant in study 21962461; 22674639	2	21962461; 22674639; 16673051; 25533442; 1807303; 18719756
		sexual health	PISQ, problem with sex-life spoilt by urinary symptoms, problem with pain in intercourse, sex-life spoilt by urinary symptoms	2 (160)	discordant in study 10929962	1	25533442; 10929962
Behavioral v Behavioral	PFMT, biofeedback v Bladder training	bother	UDI	1 (137)	0	1	9790388
		daily activities	IIQ-R	1 (137)	1 (bladder training, PFMT, biofeedback)	0	9790388
		General health	KHQ	1 (51)	0	1	24498480
		mental health	IQOL	1 (51)	0	1	24498480

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
Behavioral v Behavioral	PFMT, biofeedback v PFMT	bother	ICIQ-FLUTS, ICIQ-SF, mild or no problem, impact score, ICIQ-UI-SF, ICIQ-LUTSqol	3 (172)	discordant study 17034605	2	23640005; 23306768; 17034605
		daily activities	Urinary incontinence does not restrict daily activities, social activities index, IIQ	2 (156)	2 (PFMT, biofeedback)	0	12425706; 28345778
		general health	KHQ	2 (46 + 22)	0	2	23306768; 122907 (no PMID)
		mental health	IQOL	3 (194)	0	3	28169458; 25920290; 18719756
Behavioral v Behavioral	PFMT, biofeedback v PFMT, biofeedback	bother	Visual analogue scale (0–10)Severity of incontinence	1 (60)	0	1	9550207
		daily activities	social activities index, IIQ	1 (34)	0	1	28345778
		mental health	Visual analogue scale (0–10)Psychological distress	1 (60)	0	1	9550207
Behavioral v Placebo	PFMT, biofeedback v Sham	general health	KHQ	1 (28)	discordant PFMT, biofeedback favored for some subscales, NS for others.	discordant PFMT, biofeedback favored for some subscales, NS for others.	22674639
		mental health	IQOL	1 (57)	1 (PFMT, biofeedback)	0	18719756
Neuromodulation v Behavioral	PFMT, biofeedback v TENS	mental health	IQOL	1 (57)	0	1	18719756
Neuromodulation v Placebo	TENS v Sham	bother	Ditrovie scale	1 (161)	1 (TENS)	0	25444700
		daily activities	IIQ	1 (27)	0	1	11128739
		distress	UDI	1 (27)	0	1	11128739
		general health	KHQ, SF-12	4 (310)	3 (TENS) and discordant sudy 25444700	0	19013613; 24382548; 22840592; 25444700
		mental health	IQOL, HADS	3 (292)	3 (TENS)	0	18719756; 19013613; 25444700
Behavioral & Neuromodulation v Behavioral	TENS, biofeedback v PFMT	bother	changing overwear, discomfort due to incontinence	1 (60)	0	1	10895973

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		daily activities	discomfort due to fluid intake restriction, problems on daily tasks, avoidance of places& situations, discomfort due to avoidance of places & situations, interference in physical activity, interference in relations with other people	1 (60)	discordant	0	10895973
Behavioral v Behavioral	TENS, PFMT v Bladder training	bother	ICIQ-SF	1 (52)	1 (TENS, PFMT)	0	20458465
Behavioral & Neuromodulation v Behavioral	TENS, PFMT v PFMT	daily activities	IIQ-7	1 (28)	0	1	18820095
Behavioral & Neuromodulation v Placebo	TENS, PFMT v Sham	bother	problems on daily tasks, Discomfort due to incontinence (/5-very serious problem), Avoidance of places and situations (/5-very serious problem)	2 (120)	1 (TENS, PFMT) and discordant 10817026	0	10895973; 10817026
		daily activities	discomfort due to fluid intake restriction	3 (182)	discordant 10895973, 20185357	1	10895973; 10817026; 20185357
Behavioral v Behavioral	TENS, PFMT, biofeedback v Electroaccupunture	bother	Stress incontinence index and quality of life index	1 (42)	1 (electroaccupunture)	0	26921645
Behavioral & Neuromodulation v Behavioral	TENS, PFMT, biofeedback v PFMT, biofeedback	daily activities	daily life, difficulty in personal relationships, Changes in scores :Avoiding places due to urinary incontinence, Changes in scores :Restriction in exercise due to incontinence	1 (120)	0	1	15515199
		sexual health	sexual life	1 (120)	0	1	15515199
Behavioral & Neuromodulation v Placebo	TENS, PFMT, biofeedback v Sham	daily activities	Visual analog scale based social activity index: 0 = can not undertake any social activity, 10- does not have any problem.	1 (30)	1 (TENS, PFMT, biofeedback)	0	12867764
Behavioral & Neuromodulation v Placebo	TENS, PFMT, biofeedback v TENS, PFMT, biofeedback	daily activities	IIQ, daily life	2 (164)	1 (TENS, PFMT, biofeedback)	1	16813477; 15515199

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		general health	KHQ	1 (88)	0	1	20848671
Behavioral v Placebo	yoga v Sham	daily activities	IIQ	1 (18)	0	1	24763156
		distress	UDI	1 (18)	1 (yoga)	0	24763156
Medication: Anticholinergic v Placebo	fesoterodine v Sham	bother	OABq, OBQ, Patient perception of bladder condition, Patient perception of urgency scale	1 (604)	1 (fesoterodine)	0	22542122
Medication: Anticholinergic v Placebo	oxybutynin v Sham	mental health	Anxiety, depression, hositility, phobia, obessive-compulsive, paranoid ideation	1 (98)	0	1	11192337
		bother	Global severity	1 (98)	0	1	11192337
		general health	KHQ	1 (352)	discordant		21963104
		daily activities	IIQ, interpersonal sensitivity	2 (450)	discordant	1	11192337; 21963104
		distress	UDI	1 (253)	1 (oxybutynin)	0	12131314
Medication: Anticholinergic v Placebo	solifenacin v Sham	daily activities	IIQ	1 (157)	1 (solifenacin)	0	22816227
		distress	UDI	1 (157)	1 (solifenacin)	0	22816227
Medication: Anticholinergic v Placebo	tolterodine v Sham	bother	OABq	1 (16)	0	1	24792229
		bother	Concern domain of the HRQL scale	1 (413)	1 (tolterodine)	0	19601704
Medication: Anticholinergic v Placebo	tolterodine v Sham	bother		2 (429)	1 (tolterodine)	1	
		mental health	Coping domain of the HRQL scale, Emotional Health domain of the IIQ instrument	1 (413)	1 (tolterodine)	0	19601704

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		daily activities	Physical actitvity domain of the IIQ instrument: change from baseline to week 12, Social intervention domain of the HRQL scale, Social relationships domain of the IIQ instrument: change from baseline to week 14, Total IIQ score:change from baseline to week 12, Travel domain of the IIQ instrument: change from baseline to week 13	1 (413)	1 (tolterodine)	0	19601704
		Sleep/energy	Sleep domain of the HRQL scale	1 (413)	1 (tolterodine)	0	19601704
		general health	Total HRQL score	1 (413)	1 (tolterodine)	0	19601704
Medication: bladder botox v Placebo	botox v Sham	daily activities	IIQ	1 (21)	0	1	23343798
		mental health	IQOL	1 (268)	1 (Botox doses 100 units, 150 units, 200 units, 300 units)	0	21351127
		general health	KHQ, SF-36, PPBC	1 (268)	1 (Botox doses 100 units, 150 units, 200 units, 300 units)	0	21351127
		distress	UDI	1 (21)	0	1	23343798
Medication: Hormonal Therapy v Placebo	transdermal estrogen v Sham	general health	Change from baseline in Incontinence scores	1 (186)	0	1	10714909
Medication: other v Placebo	duloxetine v Sham	mental health	Emotions	1 (2758)	1 (duloxetine)	0	19929591
		daily activities	Incontinence impact, Physical /social limitations, Role limitations, Personal relationships	1 (2758)	1 (duloxetine)	0	19929591
		general health	General health perception	1 (2758)	0	1	19929591
		Sleep/energy	Sleep/energy	1 (2758)	0	0	19929591

KQ delineation	Comparison	QoL category	QoL scale(s)	n(N)	Sig (Favor) *	NS †	Accession number ‡
		bother	Severity	1 (2758)	1 (duloxetine)	0	19929591
		general health	Total score:KHQ	1 (2758)	1 (duloxetine)	1	19929591
		general health		1 (2758)	1 (duloxetine)	1	
Periurethral bulking v Placebo	macroplastique V Sham	mental health	IQOL	1 (196)	0	1	19013613
Medication: Anticholinergic v Placebo	pregabalin v Sham	bother	OABq, OABqSF	1 (178)	1 (pregabalin)	0	20886571
	PFMT, biofeedback, TENS vs PFMT, biofeedback, TENS, vaginal estrogen	daily activities	IIQ-7	1 (69)	1 (PFMT, biofeedback, TENS vs PFMT, biofeedback, TENS, vaginal estrogen)	0	26043913

* The number of statistically significant studies (which intervention these studies favor).
† The number of nonsignificant (NS) studies.
‡ PubMed unique identifier or other database accession number.

Table E-3. Quality of life results (calculated net differences for statistically significant results)

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, PFMT, bladder training, TENS	Behavioral Therapy	bladder training, PFMT	Quality of life incontinence impact questionnaire	145	NS				
Behavioral Therapy	education, PFMT, bladder training, TENS	Behavioral Therapy	education, bladder training	Quality of life Urogenital distress inventory	145	<0.05	education, PFMT, bladder training, TENS	0.4443748 (0.114725, 0.7740246)	0-100	Lower
Behavioral Therapy	education, PFMT, bladder training, TENS	Behavioral Therapy	education, bladder training	Short incontinence impact questionnaire 7	145	<0.05	education, PFMT, bladder training, TENS	0.5290598 (0.1977349, 0.8603848)	0-100	Lower
Behavioral Therapy	education, PFMT, bladder training, TENS	Behavioral Therapy	education, bladder training	Short Urogenital distress inventory 16	145	<0.05	education, PFMT, bladder training, TENS	0.9749671 (0.6303161, 1.319618)	0-100	Lower
Behavioral Therapy	education, PFMT, bladder training, TENS	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Urinary incontinence does not restrict daily activities	118	0.029	education, PFMT, bladder training, TENS	2.32 (1.09, 4.94)	0-1	Lower
Behavioral Therapy	TENS, PFMT, biofeedback	Sham/no treatment	control	Visual analog scale based social activity index: 0 = can not undertake any social activity, 10- does not have any problem.	30	<0.05	TENS, PFMT	6.067799 (4.306591, 7.829007)	0-10	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	TENS, PFMT, biofeedback	Sham/no treatment	control	Visual analog scale based social activity index: 0 = can not undertake any social activity, 10- does not have any problem.	30	<0.05	TENS, PFMT	3.730636 (2.493327, 4.967946)	0-10	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	problem with sex-life spoilt by urinary symptoms	59	0.021	PFMT (pelvic floor muscle therapy)	4.83 (1.26, 18.47)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Problems because of avoiding places and situations	59	0.021	PFMT (pelvic floor muscle therapy)	4.83 (1.26, 18.47)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	sex-life spoilt by urinary symptoms	59	0.021	PFMT (pelvic floor muscle therapy)	4.83 (1.26, 18.47)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Problems with interference with social life	59	0.022	PFMT (pelvic floor muscle therapy)	11.6 (1.42, 95)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	unsatisfied if you had to spend the rest of your life with symptoms as now	59	0.028	PFMT (pelvic floor muscle therapy)	10.63 (1.28, 87.69)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	overall interference with life	59	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Problem with interference with physical activity	59	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	problem with pain in intercourse	59	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Quality of Life Scale	59	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Anxiety	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Depression	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Global Severity	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Hostility	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Interpersonal Sensitivity	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Obsessive-Compulsive	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Paranoid Ideation	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Phobia	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Psychoticism	103	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Somatization	103	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Anxiety	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Depression	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Global Severity	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Hostility	98	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Interpersonal Sensitivity	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Obsessive-Compulsive	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Paranoid Ideation	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Phobia	98	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Psychoticism	98	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Anxiety	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Depression	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Global Severity	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Hostility	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Interpersonal Sensitivity	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Obsessive-Compulsive	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Paranoid Ideation	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Phobia	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Psychoticism	109	NS				
Behavioral Therapy	education, PFMT, bladder training	Medication: Anticholinergic	oxybutynin	Somatization	109	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	Somatization	98	NS				
Medication: other	duloxetine	Sham/no treatment	control	Emotions	2758	0.001	duloxetine	4.41 (2.68, 6.14)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Incontinence impact	2758	0.001	duloxetine	4.44 (2.35, 6.52)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Physical /social limitations	2758	0.001	duloxetine	5.18 (3.49, 6.87)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Role limitations	2758	0.001	duloxetine	5.56 (3.49, 7.63)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Severity	2758	0.001	duloxetine	4.07 (2.69, 5.45)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Total score:KHQ	2758	0.001	duloxetine	3.4 (2.32, 4.48)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	Personal relationships	2758	0.015	duloxetine	1.99 (0.39, 3.59)	0-100	Lower
Medication: other	duloxetine	Sham/no treatment	control	General health perception	2758	NS				
Medication: other	duloxetine	Sham/no treatment	control	Sleep/energy	2758	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	I-QoL	72	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	I-QoL	72	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	I-QoL	72	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Urinary incontinence does not restrict daily activities	122	0.002	PFMT, biofeedback	3.37 (1.55, 7.31)		
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	IQoL questionnaire	60	0.001	TENS (transcutaneous electrical nerve stimulation)	-25.8 (-37.01, -14.59)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) DI+-GSI immediately after treatment	135	0.001	bladder training, PFMT	49.4 (26.43, 72.37)	0-100	lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI (Urogenital Distress Inventory) :GSI(Genuine stress incontinence) immediately after treatment	135	0.001	bladder training, PFMT	36 (18.33, 53.67)	0-100	lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI overall(Urogenital Distress Inventory) overall immediately after treatment	135	0.001	bladder training, PFMT	31.1 (13.53, 48.67)	0-100	lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI (Urogenital Distress Inventory) :DI (Detrusor instability)+-GSI(Genuine stress incontinence) immediately after treatment	135	0.033	bladder training, PFMT	19.2 (1.57, 36.83)	0-100	lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R overall (Incontinence Impact Questionnaire - Revised) immediately after treatment	135	0.037	bladder training, PFMT	25.5 (1.5, 49.49)	0-100	lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life 3 months after treatment	135	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) :GSI immediately after treatment	135	NS				
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life 3 months after treatment	136	NS				
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) :GSI immediately after treatment	136	NS				
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: IIQ-R overall (Incontinence Impact Questionnaire - Revised) immediately after treatment	136	NS				
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) DI+-GSI immediately after treatment	136	0.001	bladder training, PFMT	58.1 (37.24, 78.96)	0-100	Lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: UDI (Urogenital Distress Inventory) :DI (Detrusor instability)+-GSI(Genuine stress incontinence) immediately after treatment	136	0.001	bladder training, PFMT	47.2 (26.66, 67.74)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: UDI overall(Urogenital Distress Inventory) overall immediately after treatment	136	0.003	bladder training, PFMT	26.4 (9.32, 43.48)	0-100	Lower
Behavioral Therapy	bladder training, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Quality of life: UDI (Urogenital Distress Inventory) :GSI(Genuine stress incontinence) immediately after treatment	136	0.02	bladder training, PFMT	18 (2.87, 33.13)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	IQoL questionnaire	61	0.001	PFMT (pelvic floor muscle therapy)	-24.6 (-36.6, -12.59)	0-100	Lower
Behavioral Therapy	PFMT, biofeedback	Sham/no treatment	control	IQoL questionnaire	57	0.001	PFMT (pelvic floor muscle therapy)	-25.1 (-37.16, -13.04)	0-100	Lower
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE total	46	0.023	75NC007 intravaginal device	0.8 (0.1, 1.5)	0-100	Lower
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE emotional consequences	46	0.036	75NC007 intravaginal device	-2.9 (-5.6, -0.2)	0-100	Lower
Behavioral Therapy	bladder training	Behavioral Therapy	bladder training, PFMT	UDI-6	108	0.001	BT + PFMT	18.8 (15.8, 21.8)	0-100	Lower
Behavioral Therapy	bladder training	Behavioral Therapy	bladder training, PFMT	IIQ-7	108	0.005	BT + PFMT	16.7 (13.6, 19.8)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	bladder training	IQoL	81	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE Sexuality	46	NS				
Neuromodulation	InterStim	Neuromodulation	InterStim	UDI	30	0.167		-5.58 (-13.493,2.333)	0-100	Lower
Neuromodulation	InterStim	Neuromodulation	InterStim	UIIQ	30	0.307		-5.58 (-16.292,5.132)	0-100	Lower
Neuromodulation	InterStim	Neuromodulation	InterStim	UIIQ	32	NS				
Neuromodulation	InterStim	Neuromodulation	InterStim	UDI	32	NS				
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE overal QoL	46	NS				
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE self-image	46	NS				
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE effort	46	NS				
Behavioral Therapy	bladder support	Sham/no treatment	control	CONTILIFE daily activities	46	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.005	IVES	-33.88 (-57.546, -10.214)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.007	IVES	-39.44 (-68.145, -10.735)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.014	IVES	-17.92 (-32.187,-3.653)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.048	IVES	-21.67 (-43.177, -0.163)	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.122		-18.70 (-42.422, 5.022)	0-100	lower
Neuromodulation	electroacupuncture	Behavioral Therapy	TENS, PFMT, biofeedback	Stress incontinence index and quality of life index		42	<0.01	electrical pudendal nerve stimulation		lower
Neuromodulation	electroacupuncture	Neuromodulation	TENS	urgency incontinence index	120	0.035	electrical pudendal nerve stimulation		0-8	lower
Neuromodulation	electroacupuncture	Neuromodulation	TENS	quality of life index	120		electrical pudendal nerve stimulation		0-16	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	PFMT, biofeedback	IQoL questionnaire	57	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	0.266		-14.44 (-39.907, 11.027)	0-100	lower
Behavioral Therapy & Neuromodulation	TENS, PFMT	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Satisfaction	48	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	<0.001	IVES	-62.78 (-86.025, -39.535)	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	<0.001	IVES	-52.6 (-74.992, -30.208)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	33	<0.001	IVES	-48.00 (-64.106, -31.894)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.003	IVES	-39.44 (-65.009, -13.871)	0-100	lower
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	TENS, PFMT, biofeedback	KHQ	88	NS				
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	TENS, PFMT, biofeedback	KHQ	88	NS				
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	TENS, PFMT, biofeedback	KHQ	88	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	TENS, PFMT, biofeedback	Marked Improvement	21	0.91		NS		
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	TENS, PFMT, biofeedback	Score	42	<0.001	EPNS	8.00 (6.488, 9.512)		lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	TENS, PFMT, biofeedback	Complete Resolution	21	<0.01	EPNS	NS		lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	TENS, PFMT, biofeedback	Improvement	21	NS		NS		
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	discomfort due to fluid intake restriction	60	0.035	TENS (transcutaneous electrical nerve stimulation)	-0.3 (-0.58, -0.02)	0-5	Lower
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	problems on daily tasks	60	0.035	TENS (transcutaneous electrical nerve stimulation)	-0.3 (-0.58, -0.022)	0-5	Lower
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	avoidance of places& situations	60	NS				
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	changing overwear	60	NS				
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	discomfort due to avoidance of places & situations	60	NS				
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	discomfort due to incontinence	60	NS				
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	interference in physical activity	60	NS				
Neuromodulation	TENS, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	interference in relations with other people	60	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.007	IVES	-32.60 (-56.127, -9.073)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.03	IVES	-31.66 (-60.199, -3.121)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.064		-27.77 (-57.164, 1.624)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.103		-12.78 (-28.149, 2.589)	0-100	lower
Medication: Anticholinergic & Hormonal Therapy	fesoterodine, vaginal estrogen	Medication: Anticholinergic	fesoterodine	OAB-Q SF	18	NS				
Medication: Anticholinergic & Hormonal Therapy	fesoterodine, vaginal estrogen	Medication: Anticholinergic	fesoterodine	SQOL-F	18	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.177		-12.92 (-31.676, 5.836)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	0.234		-13.89 (-36.780,9.000)	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	<0.001	IVES	-53.90 (-76.640, -31.160)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	32	<0.001	IVES	-40.79 (-58.686, -22.894)	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	UDI score	253	0.014	oxybutynin	15.9 (6.4, 3.28)	0-100	Lower
Periurethral bulking	macroplastique	Sham/no treatment	control	I-QOL improvement	196	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	I-QOL score	70	0.001	TENS (transcutaneous electrical nerve stimulation)	11.9 (9.86, 13.94)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ score	70	0.001	TENS (transcutaneous electrical nerve stimulation)	-3.9 (-5.755, -2.04)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	0.002	Group PFMT	32.2 (12.2, 52.2)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	0.017	Group PFMT	17.9 (3.1, 32.6)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final physical limitations	60	0.041	individual PFMT	6.2 (0.26, 12.14)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final physical activities limitations	60	0.045	individual PFMT	7.3 (0.15, 14.45)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final emotions	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final general health	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final gravity	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final incontinence impact	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final personal relationships	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final sleep/disposition	60	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	final social limitations	60	NS				
Medication: Anticholinergic	fesoterodine	Sham/no treatment	control	OABq	604	<0.001	fesoterodine	-5.1 (-7.8, -2.4)	0-100	Lower
Medication: Anticholinergic	fesoterodine	Sham/no treatment	control	OBQ	604	<0.001	fesoterodine	-5.58 (-8.01,-3.16)	0-100	Lower
Medication: Anticholinergic	fesoterodine	Sham/no treatment	control	Patient perception of bladder condition	604	<0.001	fesoterodine	-0.5 (-0.69,-0.32)	0-100	
Medication: Anticholinergic	fesoterodine	Sham/no treatment	control	Patient perception of urgency scale	604	<0.001	fesoterodine	-0.21 (-0.12,-0.3)	0-100	
Behavioral Therapy	yoga	Sham/no treatment	control	UDI-6	18	0.004	Yoga	-0.9 (-1.4, -0.3)	0-100	Lower
Behavioral Therapy	yoga	Sham/no treatment	control	PPBC	18	NS				
Behavioral Therapy	yoga	Sham/no treatment	control	IIQ-7	18	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activity due to needing a toilet: Never	62	0.021	TENS, PFMT	3.66 (1.22, 10.96)	0-100	Lower
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activities due to worrying about leaking: Never	62	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	0.015	Home + supervised exercise	-0.6 (-1.1, -0.1)	10-50	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Ditrovie scale	34	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	social activity index	34	0.003	home exercise + perineal EMG biofeedback	1.23	0-10	higher
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	social activity index	34	0.015	home exercise + intravaginal biofeedback	1.77	0-10	higher
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	IIQ-7	34	0.029	home exercise + intravaginal biofeedback	-3.71	0-100	lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	IIQ-8	34	0.038	home exercise + perineal EMG biofeedback	-3.59	0-100	lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	social activity index	34	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	IIQ-9	34	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	sexual quality	88	0.03	Home practice PFME + Telephone check-ups	0.52 (0.29, 0.95)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	holidays/recreation	88	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	interests/hobbies	88	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	sexual life	88	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	smell of urine	88	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	social activities	88	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activities due to worrying about leaking: Often	62	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activities due to worrying about leaking: Sometimes	62	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activity due to needing a toilet: Often	62	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoiding activity due to needing a toilet: Sometimes	62	NS				
Medication: bladder botox	botox	Sham/no treatment	control	UDI-6	21	NS				
Medication: bladder botox	botox	Sham/no treatment	control	IIQ-7	21	NS				
Medication: bladder botox	botox	Sham/no treatment	control	IIUS	21	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: bladder botox	botox	Sham/no treatment	control	PPBC	21	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	incontinence impact questionnaire (IIQ)	27	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	Urogenital Distress Inventory (UDI)	27	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	quality of life	224	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	IIQ score	164	0.001	education, PFMT, bladder training	6.97 (6.64, 7.29)	0-300	Lower
Periurethral bulking	Bulkamide	Periurethral bulking	Contigen	No Change	188	0.2019		NS		
Periurethral bulking	Bulkamide	Periurethral bulking	Contigen	ICIQ-UI-SF	303	NS				
Periurethral bulking	Bulkamide	Periurethral bulking	Contigen	I-QOL	303	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	IIQ score	164	0.001	education, PFMT, bladder training	1.97 (1.66, 2.28)	0-300	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Improvement in urinary incontinence	66	0.001	PFMT (pelvic floor muscle therapy)	-85 (-96.48, -73.52)	0-100	Higher
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Improvement in psychological impact of urinary incontinence	66	0.001	PFMT (pelvic floor muscle therapy)	-70 (-79.46, -60.54)	0-100	Higher

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Improvement in restrictions of activities	66	0.001	PFMT (pelvic floor muscle therapy)	-67 (-76.94, -57.06)	0-100	Higher
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	43	0.002	PMS + additional PMS	-3.34 (-5.5, -1.18)	0-21	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	52	0.019	PMS + additional PMS	-1.51 (-2.78, -0.24)	0-21	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	54	0.044	PMS + additional PMS	-5.28 (-10.69, 0.13)	19-76	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	35	<0.001	PMS + additional PMS	-2.5 (-3.86, -1.14)	19-76	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	43	0.001	PMS + no additional PMS	-3.67 (-5.76, -1.58)	0-21	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	54	0.001	PMS + no additional PMS	-9.05 (-14.27, -3.83)	19-76	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	52	<0.001	PMS + no additional PMS	-2.48 (-3.71, -1.25)	0-21	lower
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	35	<0.001	PMS + no additional PMS	-2.32 (-3.63, -1.01)	19-76	lower
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	difficulty with sexual activity	338	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	frequency of sexual activity	338	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	level of sexual desire	338	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	overall sexual satisfaction	338	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	urine leakage during sex	338	NS				
Neuromodulation	magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	120	0.002	magnetic stimulation	-3.03 (-4.34, -1.72)	0-21	lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	35	0.002	sham + additional PMS	-1.78 (-3.08, -0.48)	19-76	lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	ICIQ-LUTSqol	54	0.004	sham + additional PMS	-7.02 (-12.18, -1.86)	19-76	lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	52	0.027	sham + additional PMS	-1.32 (-2.53, -0.11)	0-21	lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	ICIQ-UI-SF	43	0.027	sham + additional PMS	-2.17 (-4.24, -0.1)	0-21	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	<0.01	HPES	11.3	0-100	Higher
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	HADS	161	<0.01	HPES	-2.8	0- 21	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	HADS	161	<0.01	HPES	-1.4	0- 21	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Behavioral Therapy	PFMT, biofeedback	QoLQ score	41	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	<0.05	HPES	5.8	0-100	Higher
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	HADS	161	<0.05	HPES	-1.2	0- 21	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	Ditrovie	161	<0.05	HPES	-3.8 (-6.09, -1.50)	10-50	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	SF-12	161	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	emotions, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	emotions, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	general health perception, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	general health perception, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	incontinence impact, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	incontinence impact, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	personal relationships, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	personal relationships, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	physical limitation, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	physical limitation, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	role limitation, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	role limitation, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	SEAPI-QMM, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	SEAPI-QMM, 1 WEEK (T2)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	sleep/energy, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	sleep/energy, 1 WEEK (T2)	20	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	social limitation, 1 MONTH (T3)	20	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	social limitation, 1 WEEK (T2)	20	NS				
Medication: Anticholinergic	pregabalin	Sham/no treatment	control	OABq	178	0.0003	pregabalin	-6.0 (-8.8, -3.1)		
Medication: Anticholinergic	pregabalin	Sham/no treatment	control	OABq-SF	178	<0.0001	pregabalin	6.2 (3.5, 8.8)		
Behavioral Therapy	bladder training, PFMT	Sham/no treatment	control	Self reported Bothersomeness of urinary incontinence	108	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	embarrassment	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	embarrassment	45	NS				
Behavioral Therapy	MBSR (mindfulness based stress reduction)	Behavioral Therapy	yoga	OABq-SF	15	0.18	MBSR (mindfulness based stress reduction)	-49.49 (-77.78, 0.00)	0-100	Lower
Behavioral Therapy	MBSR (mindfulness based stress reduction)	Behavioral Therapy	yoga	HRQL	15	0.34	MBSR (mindfulness based stress reduction)	30.61 (0.00, 50.00)	0-100	Lower
Behavioral Therapy	MBSR (mindfulness based stress reduction)	Behavioral Therapy	yoga	OAB-HRQL	30	NS				
Behavioral Therapy	MBSR (mindfulness based stress reduction)	Behavioral Therapy	yoga	OABq-SF	30	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	emotional	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	emotional	45	NS				
Medication: bladder botox	Botox	Neuromodulation	InterStim	OBQ-SF	364	0.002	onabotulinumtoxinA	8.1 (3.0, 13.3)	0-100	Higher
Medication: bladder botox	Botox	Neuromodulation	InterStim	OBQ-SF	364	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	EQ-5D	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	EQ-5D	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	IIQ (impact) mobility	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	IIQ (impact) mobility	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	pain/discomfort	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	pain/discomfort	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	physical	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	physical	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	prolapse	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	prolapse	45	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	social	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	social	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	UDI (bother) incontinence	45	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	UDI (bother) incontinence	45	NS				
Neuromodulation	electroacupuncture	Sham/no treatment	control	B-SAQ	22	0.029	PTNS	-2 (-3.8, -0.2)	0-12	Lower
Neuromodulation	electroacupuncture	Sham/no treatment	control	ICIQ1-SF	22	NS				
Neuromodulation	electroacupuncture	Sham/no treatment	control	B-SAQ	22	NS				
Medication: Anticholinergic	solifenacin	Sham/no treatment	control	IIQ	157	<0.001	Solifenacin	-10.6 (-13.4, -7.9)	0-100	Lower
Medication: Anticholinergic	solifenacin	Sham/no treatment	control	UDI	157	<0.001	Solifenacin	-7.4 (-9.6, -5.1)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	OAB-q	16	NS				
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	OAB-q	16	NS				
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	OAB-q	16	NS				
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	OAB-q	16	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	0.045	Group PFMT	-22.4 (-44.2, -0.50)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	0.004	Individual PFMT	-25.4 (-42.5, -8.2)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	0.01	Individual PFMT	-31.2 (-55.0, -7.40)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	0.045	Individual PFMT	-20.7 (-41, -0.4)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	45	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	14	0.001	surface electrical stimulation	-38.1 (-60.5, -15.6)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	7	0.001	TENS (transcutaneous electrical nerve stimulation)	-38.05 (-60.499,-15.601)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	14	0.016	surface electrical stimulation	-38.1 (-69.1, -7.1)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	7	0.016	TENS (transcutaneous electrical nerve stimulation)	-38.09 (-69.056, -7.124)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	7	0.65		3.57 (-11.843,18.9983)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	KHQ	14	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	26	0.03	Pelvic floor muscle training	-12.95	0-100	lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	26	NS			0-100	lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	KHQ	26	NS			0-100	lower
Behavioral Therapy	PFMT, biofeedback	Sham/no treatment	control	KHQ	28	0.03	vaginal cones	-49.85	0-100	lower
Behavioral Therapy	PFMT, biofeedback	Sham/no treatment	control	KHQ	28	NS			0-100	lower
Behavioral Therapy	PFMT, biofeedback	Sham/no treatment	control	KHQ	28	NS			0-100	lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Improvement:UPS score from baseline to week 12	413	0.013	Tolterodine	1.69 (1.12, 2.56)	1-4	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Concern domain of the HRQL scale	413	0.001	tolterodine-ER	-10.3 (-10.64, -9.96)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Coping domain of the HRQL scale	413	0.001	tolterodine-ER	-8.9 (-9.21, -8.59)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Emotional Health domain of the IIQ instrument	413	0.001	tolterodine-ER	6.4 (6.11, 6.69)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Improved scores from baseline to week 12 on the OAB-q Symptom Bother scale	413	0.001	tolterodine-ER	6.9 (6.57, 7.23)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Physical actitvity domain of the IIQ instrument: change from baseline to week 12	413	0.001	tolterodine-ER	1.8 (1.49, 2.11)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Sleep domain of the HRQL scale	413	0.001	tolterodine-ER	-5.9 (-6.25, -5.55)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Social intervention domain of the HRQL scale	413	0.001	tolterodine-ER	-3.7 (-3.92, -3.48)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Social relationships domain of the IIQ instrument: change from baseline to week 14	413	0.001	tolterodine-ER	2.7 (2.44, 2.96)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Total HRQL score	413	0.001	tolterodine-ER	-7.8 (-8.08, -7.52)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Total IIQ score:change from baseline to week 12	413	0.001	tolterodine-ER	12.4 (11.29, 13.5)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Travel domain of the IIQ instrument: change from baseline to week 13	413	0.001	tolterodine-ER	0.8 (0.43, 1.17)	0-100	Lower
Medication: Anticholinergic	tolterodine	Sham/no treatment	control	Improvement:UPS score from baseline to week 12	413	0.013	tolterodine-ER	1.69 (1.12, 2.56)	0-100	Lower
Medication: bladder botox	Botox	Sham/no treatment	control	PGA	55					
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	55	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	55	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	PGA	50					
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	50	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	50	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	PGA	52					
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	52	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	52	<0.05	onabotulinumtoxinA			

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: bladder botox	Botox	Sham/no treatment	control	PGA	55					
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	55	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	55	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	PGA						
Medication: Anticholinergic	oxybutynin	Medication: Anticholinergic	Tolterodine	IIQ-7	90	NS				
Medication: Anticholinergic	oxybutynin	Medication: Anticholinergic	Tolterodine	UDI-6	90	NS				
Medication: Anticholinergic	oxybutynin	Medication: Anticholinergic	trospium	IIQ-7	90	NS				
Medication: Anticholinergic	oxybutynin	Medication: Anticholinergic	trospium	UDI-6	90	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	56	<0.05	onabotulinumtoxinA			
Medication: bladder botox	Botox	Sham/no treatment	control	OAB-PSTQ	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	I-QOL	55	<0.05	onabotulinumtoxinA	15	0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	KHQ	55	<0.05	onabotulinumtoxinA		0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	<0.05	onabotulinumtoxinA	5.5	0-100	higher
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: Anticholinergic	oxybutynin	Medication: Hormonal Therapy	vaginal estrogen	IIQ-7 score	59	NS				
Medication: Anticholinergic	oxybutynin	Medication: Hormonal Therapy	vaginal estrogen	UDI-6 score	59	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: Anticholinergic	oxybutynin	Medication: Anticholinergic	oxybutynin	mean reduction in the IIQ	254	0.033	oxybutynin 3.9mg	-20.9 (-40.14, -1.66)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	I-QOL overall score	240	0.001	PFMT (pelvic floor muscle therapy)	-19.8 (-24.58, -15.02)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	mean I-QOL improvement	240	0.014	PFMT (pelvic floor muscle therapy)	-1 (-1.79, -0.2)	0-100	Lower
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	TENS, PFMT, biofeedback	Change in Incontinence Impact Questionnaire score(400 with poorer perceived quality of life)	44	NS				
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	daily life	120	0.001	PFMT (pelvic floor muscle therapy)	0.15 (0.1, 0.19)		
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	difficulty in personal relationships	120	0.001	PFMT (pelvic floor muscle therapy)	0.23 (0.19, 0.27)		

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	quality of life	120	0.001	PFMT (pelvic floor muscle therapy)	-0.15 (-0.19, -0.1)		
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	sexual life	120	0.001	PFMT (pelvic floor muscle therapy)	0.08 (0.03, 0.13)		
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Changes in scores :Avoiding places due to urinary incontinence	120	<0.05	PFMT (pelvic floor muscle therapy)	-1.102793 (-1.487298, -0.7182874)		
Behavioral Therapy	TENS, PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Changes in scores :Restriction in exercise due to incontinence	120	<0.05	PFMT (pelvic floor muscle therapy)	-1.313749 (-1.708898, -0.9186008)		
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education, PFMT	Change from baseline in quality of life-avoidance, limiting behaviors scores (8 items)	63	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education, PFMT	Change from baseline in quality of life-avoidance, social embarrassment scores (5 items)	63	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education, PFMT	I-QOL psychosocial impact score	63	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education, PFMT	I-QOL total score	63	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: bladder botox	Botox	Sham/no treatment	control	I-QOL	50	<0.05	onabotulinumtoxinA	17.3	0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	KHQ	50	<0.05	onabotulinumtoxinA		0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	modified Oxford scale	159	0.044	PFMT (pelvic floor muscle therapy)	0.33 (0.01, 0.65)		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	median (interquartile range) impact score	159	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	mild or no problem	159	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	median (interquartile range) impact score	106	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	mild or no problem	106	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	modified Oxford scale	106	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	IQoL questionnaire	61	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	50	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	I-QOL	52	<0.05	onabotulinumtoxinA	19.2	0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	KHQ	52	<0.05	onabotulinumtoxinA		0-100	lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	IQoL questionnaire	61	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	<0.05	onabotulinumtoxinA	10.6	0-100	higher
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI (Urogenital Distress Inventory) :DI (Detrusor instability)+-GSI(Genuine stress incontinence) immediately after treatment	137	0.01	bladder training, PFMT	-28 (-49.32, -6.68)	0-100	lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) :GSI immediately after treatment	137	0.016	bladder training, PFMT	24.9 (4.79, 45.01)	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI (Urogenital Distress Inventory) :GSI(Genuine stress incontinence) immediately after treatment	137	0.028	bladder training, PFMT	18 (1.94, 34.06)	0-100	lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life 3 months after treatment	137	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R (Incontinence Impact Questionnaire - Revised) DI+-GSI immediately after treatment	137	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: IIQ-R overall (Incontinence Impact Questionnaire - Revised) immediately after treatment	137	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	Quality of life: UDI overall(Urogenital Distress Inventory) overall immediately after treatment	137	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-FLUTS	40	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Medication: Anticholinergic	Tolterodine	concern	87	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Medication: Anticholinergic	Tolterodine	coping	87	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Medication: Anticholinergic	Tolterodine	health related QoL score	87	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Medication: Anticholinergic	Tolterodine	sleep	87	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Medication: Anticholinergic	Tolterodine	social	87	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	bladder training	IQoL	81	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQoL	81	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.001	stablization exercise	-22.9 (-36.4, -9.4)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.002	stablization exercise	-17.9 (-29.5, -6.3)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.002	stablization exercise	-35.4 (-58.1, -12.7)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.004	stablization exercise	-28.3 (-47.3, -9.3)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.02	stablization exercise	-23.4 (-43.7, -3.1)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	0.048	stablization exercise	-17.9 (-35.6, -0.2)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IIQ-7	32	<0.001	PFMT	-33.6 (-48.4, -18.8)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	UDI-6	32	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	ICIQ-FLUTS	19	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	ICIQ-UI-SF	19	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT, biofeedback	ICIQ-LUTSqol	19	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	33	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	52	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	0.001	onabotulinumtoxinA	9.7	0-100	higher
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	0.01	onabotulinumtoxinA	6.1	0-100	higher

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	0.02	onabotulinumtoxinA	8.4	0-100	higher
Medication: bladder botox	Botox	Sham/no treatment	control	I-QOL	55	<0.05	onabotulinumtoxinA	21.8	0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	KHQ	55	<0.05	onabotulinumtoxinA		0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	<0.05	onabotulinumtoxinA	9.1	0-100	higher
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	55	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	I-QOL	56	NS			0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	KHQ	56	NS			0-100	lower
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-SF	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-SF	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-SF	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-SF	46	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQOL	61	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQOL	61	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQOL	61	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQOL	61	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT, biofeedback, TENS	Behavioral Therapy	TENS, PFMT, biofeedback, vaginal estrogen	IIQ-7	69	<0.001	PFMT + ES + biofeed back + intravaginal estriol	-7.8 (-9.6, -6)	0-100	Lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	KHQ	22	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-UI-SF	65	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education	UDI	48	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	education	IIQ	48	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	ICIQ-UI-SF	60	<0.001	Physiotherapy + PFMT	-2.9 (-3.1, -2.8)	0-21	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IIQ	27	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	UDI	27	NS				
Neuromodulation	magnetic stimulation	Neuromodulation	magnetic stimulation	ICIQ-UI-SF	52	NS				
Neuromodulation	magnetic stimulation	Neuromodulation	magnetic stimulation	ICIQ-UI-SF	43	NS				
Neuromodulation	magnetic stimulation	Neuromodulation	magnetic stimulation	ICIQ-LUTSqol	35	NS				
Neuromodulation	magnetic stimulation	Neuromodulation	magnetic stimulation	ICIQ-LUTSqol	54	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Medication: bladder botox	Botox	Sham/no treatment	control	SF-36	56	NS				
Other	intravessical pressure release	Sham/no treatment	control	IQOL	115	NS				
Medication: Anticholinergic	pregabalin	Medication: Anticholinergic	pregabalin, tolterodine	OABq	178	NS				
Medication: Anticholinergic	pregabalin	Medication: Anticholinergic	pregabalin, tolterodine	OABq-SF	178	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	pregabalin	Medication: Anticholinergic	Tolterodine	OABq	178	0.002	pregabalin	-5.1 (-7.9, -2.2)		
Medication: Anticholinergic	Pregabalin	Medication: Anticholinergic	Tolterodine	OABq-SF	178	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	ICIQ-LUTSqol	123	0.005	PFMT	-4.6	19-76	lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	ICIQ-UI-SF	123	<0.001	PFMT	-3.3	0-21	lower
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin	OABq	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin	OABq-SF	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq-SF	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	Tolterodine	OABq	178	0.024	pregabalin + tolterodine ED	-3.5 (-6.5, -0.6)		
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	Tolterodine	OABq-SF	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin	OABq	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin	OABq-SF	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq-SF	178	NS				
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	Tolterodine	OABq	178	0.005	pregabalin + tolterodine ER	-4.6 (-7.4, -1.7)		
Medication: Anticholinergic	pregabalin, tolterodine	Medication: Anticholinergic	Tolterodine	OABq-SF	178	0.012	pregabalin + tolterodine ER	3.6 (1.0, 6.3)		

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.0003	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	IIQ	352	0.0005	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-300	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.002	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	IIQ	352	0.0021	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-300	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.0021	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.089		20.00 (-3.079, 43.079)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.288		8.89 (-7.502, 25.282)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.299		-13.33 (-38.488,11.828)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.377		8.88 (-10.807, 28.567)	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.382		7.21 (-8.968, 23.388)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.575		5.0 (-12.483, 22.483)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.667		4.81 (-17.133, 26.753)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	0.861		2.22 (-22.591, 27.031)	0-100	lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	KHQ	31	1		0.00 (-23.766, 23.766)	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	IIQ	352	0.003	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-300	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.0044	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.0088	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	0.0161	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-100	lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	IIQ	352	<0.0001	oxybutinin topical gel	graphical data only -- can pull from digitizer	0-300	lower
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	NS				
Medication: Anticholinergic	oxybutynin	Sham/no treatment	control	KHQ	352	NS				
Behavioral Therapy	education, weight loss	Sham/no treatment	control	IIQ score	48	0.001	education, weight loss	-43 (-53.37, -32.63)	0-100	Lower
Behavioral Therapy	education, weight loss	Sham/no treatment	control	SF-36 physical component	48	0.001	education, weight loss	-18 (-22.65, -13.35)		Lower
Behavioral Therapy	education, weight loss	Sham/no treatment	control	UDI score	48	0.001	education, weight loss	-36 (-42.12, -29.88)	0-100	Lower
Behavioral Therapy	education, weight loss	Sham/no treatment	control	SF-36 mental component score	48	0.003	education, weight loss	3.33 (1.18, 5.47)		Lower
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	discomfort due to fluid intake restriction	60	0.035	TENS, PFMT	-0.3 (-0.58, -0.02)		
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	problems on daily tasks	60	0.035	TENS, PFMT	-0.3 (-0.58, -0.02)		
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Discomfort due to incontinence (/5-very serious problem)	60	<0.05	TENS, PFMT	-0.5656856 (-1.08211, -0.0492609)		

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Avoidance of places and situations (/5-very serious problem)	60	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	Discomfort due to wearing a protection (/5-very serious problem)	60	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	discomfort due to avoidance of places & situations	60	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	interference in physical activity	60	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	IIQ	76	0.018	solifenacin	-35.9 (-53.7, -18.1)	0-300	Lower
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	IIQ	76	0.02	solifenacin	-8.7 (-12.7, -4.7)	0-300	Lower
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	IIQ	76	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	IIQ	76	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	IIQ	76	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	UDI	76	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	UDI	76	NS				
Medication: Anticholinergic	solifenacin	Medication: Anticholinergic	darifenacin	UDI	76	NS				
Medication: Anticholinergic	solifenacin	Medication: bladder botox	Botox	OABq-SF	247	NS				
Medication: Anticholinergic	solifenacin	Medication: bladder botox	Botox	PFIQ-SF	247	NS				
Medication: Anticholinergic	solifenacin	Medication: bladder botox	Botox	PFDI-SF	247	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Sham/no treatment	control	interference in relations with other people	60	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Discomfort due to incontinence (/5-very serious problem)	60	NS				
Medication: Anticholinergic	trospium	Neuromodulation	TENS, biofeedback	IIQ-7 (Incontinence Impact Questionnaire Short Form) at 18 weeks	35	0.001	TENS	-26.98 (-39.62, -14.33)	0-100	Lower
Medication: Anticholinergic	trospium	Neuromodulation	TENS, biofeedback	BDI (Beck Depression Inventory) at 18 weeks	35	0.039	TENS	-5.75 (-11.18, -0.32)	0-100	Lower
Medication: Anticholinergic	trospium	Neuromodulation	TENS, biofeedback	BDI (Beck Depression Inventory) at 6 weeks	35	NS			0-100	Lower
Medication: Anticholinergic	trospium	Neuromodulation	TENS, biofeedback	IIQ-7 (Incontinence Impact Questionnaire Short Form) at 6 weeks	35	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	BFLUTS	18	0.001	Supervised PFMT	-3.6 (-5.7, -1.4)		Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	I-QoL	44	0.045	supervised PMFE	NA (NA, NA)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	change in Brink score	24	NS				
Behavioral Therapy & Neuromodulation	TENS, PFMT	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	change in incontinence impact questionnaire score	28	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Discomfort due to wearing a protection (/5-very serious problem)	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	Avoidance of places and situations (/5-very serious problem)	60	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	discomfort due to avoidance of places & situations	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	discomfort due to fluid intake restriction	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	interference in physical activity	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	interference in relations with other people	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	problems on daily tasks	60	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	UDI	42	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	IIQ	42	NS				
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	I-QOL	64	<0.001	Magnetic stimulation	34.60 (25.450,43.750)	0-100	Lower
Neuromodulation	TENS (transcutaneous electrical nerve stimulation)	Sham/no treatment	control	I-QOL	93	<0.001	electrical stimulation with surface-electromyography-assisted biofeedback	34.6 (25.45, 43.75)	0-100	higher
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	general health perceptions	24	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, bladder training, PFMT	Behavioral Therapy	education, bladder training, PFMT	IQOL:adjusted mean	174	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	mental health	24	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	physical functioning	24	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	physical functioning	24	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	role limitaiton due to physical problems	24	NS				
Medication: Anticholinergic	tolterodine	Behavioral Therapy	bladder training	IQoL	83	NS				
Medication: Anticholinergic	tolterodine	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQoL	83	NS				
Medication: Anticholinergic	tolterodine	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	IQoL	82	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	oxybutynin	IIQ-7	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	oxybutynin	UDI-6	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	trospium	IIQ-7	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	trospium	UDI-6	90	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	role limitation due to emotional problems	24	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin	OABq	178	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin	OABq-SF	178	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq	178	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq-SF	178	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq	178	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	pregabalin, tolterodine	OABq-SF	178	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	role limitation due to physical problems	24	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	social functioning	24	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	vitality	24	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	U-UDI	20	<0.001	Magnetic stimulation	-2 (-2.703,-1.297)	0-100	Lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	OAB-q	20	<0.001	Magnetic stimulation	-18.9 (-29.338,-8.462)	0-100	Lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	OAB-q	34	0.001	magnetic stimulation	-18.9 (-30.73, -7.07)	0-100	lower
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	U-UDI	34	<0.001	magnetic stimulation	-2 (-2.79, -1.21)	0-4	lower
Medication: Hormonal Therapy	transdermal estrogen	Sham/no treatment	control	Change from baseline in Incontinence scores	186	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	101	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	50	0.07		NS		
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	50	0.28		NS		

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	50	0.51		NS		
Behavioral Therapy & Neuromodulation	TENS, PFMT	Behavioral Therapy	bladder training	Average score on international questionnaire (ICIQ-SF) after treatment	52	0.033	TENS, PFMT	2.7 (0.22, 5.18)	0-21	lower
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	oxybutynin	IIQ-7	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	oxybutynin	UDI-6	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	Tolterodine	IIQ-7	90	NS				
Medication: Anticholinergic	tolterodine	Medication: Anticholinergic	Tolterodine	UDI-6	90	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	50	0.8		NS		
Behavioral Therapy	education, PFMT, bladder training	Behavioral Therapy	education	IIQ	55	<0.001	Urinary Continence Physiotherapy Programme	-6 (-7.8, -4.2)	0-300	Lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	mild or no problem	107	0.005	PFMT, biofeedback	0.15 (0.04, 0.56)		
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	modified Oxford scale	107	0.027	PFMT, biofeedback	0.67 (0.08, 1.26)		
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT (pelvic floor muscle therapy)	median (interquartile range) impact score	107	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	IQOL	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	bladder training	KHQ	51	NS				
Neuromodulation	Magnetic stimulation	Sham/no treatment	control	BFLUTS	50	0.8		NS		
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	UDI-6	247	0.002	PFMT	-6.5 (-10.6, -2.4)	0-100	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	PFDI-20	244	0.015	PFMT	-10.6 (-19.1, -2.1)	0-300	Lower
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Visual analogue scale (0–10)	60	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Visual analogue scale (0–10)Psychological distress	60	NS				
Behavioral Therapy	PFMT, biofeedback	Behavioral Therapy	PFMT, biofeedback	Visual analogue scale (0–10)Severity of incontinence	60	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	PFDI-20	321	0.001	weight loss	-6.5 (-16.6, 3.6)	0-100	lower
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	PFDI-20	321	0.02	weight loss	-4.3 (-11.08, 2.48)	0-100	lower
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	PFDI-20	321	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	PFDI-20	321	NS				
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	UDI-6	163	<0.001	education	1.6 (1.073,2.127)	0-100	Lower

Intervention category	Intervention specific	Comparator category	Comparator specific	Scale name	N Analyzed	P (Net)	Favors	Net Difference (95% CI)	Scale Range	Higher/ Lower Better
Behavioral Therapy	education, weight loss	Behavioral Therapy	education	POPDI-6	163	<0.001	education, weight loss	6.5 (5.705,7.295)	0-300	Lower
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	PFIQ-7	230	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	MOS SF-12	232	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	MOS SF-12	232	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	PISQ	101	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	POPDI-6	247	NS				
Behavioral Therapy	PFMT (pelvic floor muscle therapy)	Sham/no treatment	control	CRADI-8	246	NS				
Behavioral Therapy	education, bladder training, PFMT	Sham/no treatment	control	Self reported quality of life measures (Incontinence Impact Questionnaire (IIQ)	131	<0.05	education, PFMT, bladder training	-0.5144017 (-0.8626016, -0.1662019)	0-100	Lower
Neuromodulation	electroacupuncture	Sham/no treatment	control	ICIQ-SF	80	<0.001	electroacupuncture	4.4 (2.7, 6.1)	0-21	Lower

Appendix F. Adverse Events

Table F-1. Adverse events extracted outcomes

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Abdelbary 2015 26135813	pelvic floor electrical stimulation + local vaginal estrogen	neuromodulation & Medication: Hormonal therapy	AE (undefined/nonmajor)	Any AE	0/105	0			
Abdelbary 2015 26135813	pelvic floor electrical stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/105	0			
Abdelbary 2015 26135813	local vaginal estrogen	Medication: Hormonal Therapy	AE (undefined/nonmajor)	Any AE	0/105	0			
Abdulaziz 2012 no pmid	pellvic floor physical therapy	Behavioral Therapy	AE, serious	any long lasting or debilitating adverse effects	0/29	0			
Abdulaziz 2012 no pmid	control group	Sham/no treatment	AE, serious	any long lasting or debilitating adverse effects	0/27	0			
Ahlund 2013 23672520	Control with limited PFMT teaching	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/42	0			
Ahlund 2013 23672520	PFMT structured teaching	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/40	0			
Alvez 2011 21860988	NMES with a LF current	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/10	0			
Alvez 2011 21860988	NMES with a MF current	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/10	0		NA	
Amundsen 2016 27701661	onabotulinumtoxin	Medication: bladder botox	Infection - UTI	UTI	66/191	34.6			0.22

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Amundsen 2016 27701661	onabotulinumtoxin	Medication: bladder botox	Urinary retention/voiding dysfunction	Intermittent catheterization	20/191	10.5			<0.001
Amundsen 2016 27701661	sacral neuromodulation	Neuromodulation	Device malfunction/revision	device revised or removed	6/174	3.4			<0.001
Amundsen 2016 27701661	sacral neuromodulation	Neuromodulation	Infection - UTI	UTI	20/178	11.2			0.22
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	CNS - dizziness	Dizziness	15/46	32.6	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	CNS - dizziness	Dizziness	20/47	42.6	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Dry mouth	Dry mouth	36/46	78.3	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Dry mouth	Dry mouth	45/47	95.7	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Dry mouth	Moderate to severe dry mouth	13/46	28.3	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Dry mouth	Moderate to severe dry mouth	24/47	51.1	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Fatigue/drowsiness	Somnolence	20/46	43.5	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Fatigue/drowsiness	Somnolence	21/47	44.7	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	16/46	34.8	ND		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	16/47	34	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	10/46	21.7	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	9/47	19.1	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Psychological - anxiety	Nervousness	13/46	28.3	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Psychological - anxiety	Nervousness	12/47	25.5	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Urinary retention/voiding dysfunction	Impaired urination	13/46	28.3	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Urinary retention/voiding dysfunction	Impaired urination	15/47	31.9	ND		
Anderson, 1999 10332441	CR-oxybutynin 20 mg	medication: anticholinergic	Visual AE	Blurred vision	15/46	32.6	ND		
Anderson, 1999 10332441	IR-oxybutynin 10 mg	medication: anticholinergic	Visual AE	Blurred vision	9/47	19.1	ND		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	9/180	5	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	6/193	3.1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Dry mouth	dry mouth (any degree)	58/180	32.2	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Dry mouth	dry mouth (any degree)	58/180	32.2	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Dry mouth	dry mouth (any degree)	89/193	46.1	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	2/180	1.1	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	11/180	6.1	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	14/180	7.8	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	12/193	6.2	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	14/180	7.8	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	17/180	9.4	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	10/193	5.2	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	21/193	10.9	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	11/193	5.7	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	14/193	7.3	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Headache	headache	8/180	4.4	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Headache	headache	14/180	7.8	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	13/180	7.2	12 weeks		
Anderson, 2006 16724169	Oxybutynin 10 mg	Medication: Anticholinergic	Peripheral edema	peripheral edema	9/180	5	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	10/193	5.2	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	14/193	7.3	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	11/193	5.7	12 weeks		
Anderson, 2006 16724169	tolterodine 4 mg	Medication: Anticholinergic	Peripheral edema	peripheral edema	5/193	2.6	12 weeks		
Apell, 1997 9426760	Oxybutynin 5 mg	medication: anticholinergic	D/C due to AE	withdrew due to adverse events	70/349	20.1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Apell, 1997 9426760	Tolterodine 1 mg	medication: anticholinergic	D/C due to AE	withdrew due to adverse events	3/121	2.5			
Armstrong, 2005 16142551	Oxybutynin 10 mg	Medication: Anticholinergic	Dry mouth	dry mouth	110/391	28.1	12 weeks		
Armstrong, 2005 16142551	Tolterodine -ER 4 mg	Medication: Anticholinergic	Dry mouth	dry mouth	86/300	28.7	12 weeks		
Aziminekoo 2014 24971138	Oxybutynin	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	6/100	6			0.82
Aziminekoo 2014 24971138	Oxybutynin	Medication: Anticholinergic	Dry mouth	Dry mouth	2/100	2			
Aziminekoo 2014 24971138	Tolterodine	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	8/100	8			0.82
Aziminekoo 2014 24971138	Tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	2/100	2			
Baker, 2014 24763155	mindfullness-based stress reduction	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/15	0			
Baker, 2014 24763155	yoga	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/15	0			
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Cardiac/chest Pain	Palpitations	11/267	4.1		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Dry mouth	Dry mouth	2/267	0.7		yes	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Gastrointestinal/ abdominal symptoms - abdominal pain	Abdominal pain	3/267	1.1		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Gastrointestinal/ abdominal symptoms - heartburn	Heartburn	4/267	1.5		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Gastrointestinal/ abdominal symptoms - vomiting	Vomiting	2/267	0.7		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Headache	Migraines	3/267	1.1		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Infection - UTI	UTI	4/267	1.5		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Itching	Pruritis	1/267	0.4		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Rash	Rash	1/267	0.4		yes	
Balachandran 2016 26978321	Mirabegron 50 mg PO daily x 6 weeks	Medication: Beta agonist	Urinary retention/voiding dysfunction	Unable to void	2/267	0.7		yes	
Beer 2017 27501593	SNS continuous	Neuromodulation	AE (undefined/nonmajor)	Surgery post SNS placement	2/10	20		no	1
Beer 2017 27501593	SNS cycling	Neuromodulation	AE (undefined/nonmajor)	Surgery post SNS placement	2/11	18.2		no	1

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Beer 2017 27501593	SNS continuous	Neuromodulation	Fall/Injury	falls	5/10	50		no	0.67
Beer 2017 27501593	SNS cycling	Neuromodulation	Fall/Injury	falls	4/11	36.4		no	0.67
Beer 2017 27501593	SNS continuous	Neuromodulation	Infection - UTI	UTI	1/10	10		no	1
Beer 2017 27501593	SNS cycling	Neuromodulation	Infection - UTI	UTI	2/11	18.2		no	1
Bent, 2007 17580357	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	5/288	1.7	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	5/300	1.7	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	29/300	9.7	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	D/C due to AE	Discontinuation due to AE	47/300	15.7	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	36/300	12	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	7/288	2.4	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	20/300	6.7	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	9/288	3.1	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Dry mouth	Dry mouth	8/288	2.8	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	8/288	2.8	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	8/300	2.7	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	1/288	0.3	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Appetite decreased	6/300	2	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	25/300	8.3	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Appetite decreased	Appetite decreased	0/288	0	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	12/288	4.2	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	54/300	18	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	13/288	4.5	8 weeks		
Bent, 2007 17580357	duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	7/300	2.3	8 weeks		
Bent, 2007 17580357	Placebo	Sham/no treatment	Sleep disorder	Insomnia	7/288	2.4	8 weeks		
Betschart 2013 23797521	PFMT	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/223	0	30-102 months		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	37/607	6.1	12 weeks		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg (dose adjusted)	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	21/193	10.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Bodekar 2010 20840754	Trospium chloride 45-90 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	23/261	8.8	12 weeks		
Bodekar 2010 20840754	Trospium chloride 45-90 mg Dose adjusted)	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	20/567	3.5	12 weeks		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	9/223	4	12 weeks		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	50/607	8.2	12 weeks		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	136/223	61	12 weeks		
Bodekar 2010 20840754	Oxybutynin chloride 5-7.5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	359/607	59.1	12 weeks		
Bodekar 2010 20840754	Trospium chloride 45-90 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	32/261	12.3	12 weeks		
Bodekar 2010 20840754	Trospium chloride 45-90 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	107/567	18.9	12 weeks		
Bodekar 2010 20840754	Trospium chloride 45-90 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	138/261	52.9	12 weeks		
Bodekar 2010 20840754	Trospium chloride 45-90 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	262/567	46.2	12 weeks		
Bray 2017 28407338	Tolterodine for 24 wks	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	23/37	62.2			no difference

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Bray 2017 28407338	placebo for 12wk then Tolterodine for 12 wks	Sham/no treatment	AE (undefined/nonmajor)	Any AE	1/42	2.4			no difference
Bray 2017 28407338	placebo for 12wk then Tolterodine for 12 wks	Sham/no treatment	AE (undefined/nonmajor)	Any AE	29/42	69			
Bray 2017 28407338	Tolterodine for 24 wks	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	1/37	2.7			
Brubaker, 2008 18499184	Botulinum Toxin type A 200 units	Medication: bladder botox	Infection - UTI	UTI	12/28	42.9	52 weeks		
Brubaker, 2008 18499184	Botulinum Toxin type A 200 units	Medication: bladder botox	Infection - UTI	UTI without increased PVR	3/28	10.7	52 weeks		
Brubaker, 2008 18499184	Placebo	Sham/no treatment	Infection - UTI	UTI	3/15	20	52 weeks		
Brubaker, 2008 18499184	Placebo	Sham/no treatment	Infection - UTI	UTI without increased PVR	3/15	20	52 weeks		
Burgio, 1998 9863850	oxybutinin 7.5 - 15 mg	Medication: Anticholinergic	CNS - confusion	confusion	5/65	7.7	8 weeks		
Burgio, 1998 9863850	behavioral training	Behavioral therapy	CNS - confusion	confusion	4/63	6.3	8 weeks		
Burgio, 1998 9863850	behavioral training	Behavioral therapy	Dry mouth	Dry mouth	22/63	34.9	8 weeks		
Burgio, 1998 9863850	behavioral training	Behavioral therapy	Gastrointestinal/ abdominal symptoms	constipation	14/63	22.2	8 weeks		
Burgio, 1998 9863850	behavioral training	Behavioral therapy	Urinary retention/voiding dysfunction	urinary retention	4/63	6.3	8 weeks		
Burgio, 1998 9863850	behavioral training	Behavioral therapy	Visual AE	blurred vision	6/63	9.5	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Burgio, 1998 9863850	placebo	Sham/no treatment	CNS - confusion	confusion	7/62	11.3	8 weeks		
Burgio, 1998 9863850	oxybutinin 7.5 - 15 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	63/65	96.9	8 weeks		
Burgio, 1998 9863850	placebo	Sham/no treatment	Dry mouth	Dry mouth	36/62	58.1	8 weeks		
Burgio, 1998 9863850	oxybutinin 7.5 - 15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	26/65	40	8 weeks		
Burgio, 1998 9863850	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	24/62	38.7	8 weeks		
Burgio, 1998 9863850	oxybutinin 7.5 - 15 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	urinary retention	14/65	21.5	8 weeks		
Burgio, 1998 9863850	oxybutinin 7.5 - 15 mg	Medication: Anticholinergic	Visual AE	blurred vision	10/65	15.4	8 weeks		
Burgio, 1998 9863850	placebo	Sham/no treatment	Urinary retention/voiding dysfunction	urinary retention	2/62	3.2	8 weeks		
Burgio, 1998 9863850	placebo	Sham/no treatment	Visual AE	blurred vision	6/62	9.7	8 weeks		
But 2012 23390832	darifenacin	Medication: Anticholinergic	CNS - confusion - lack of concentration	lack of concentration	8/37	21.6			
But 2012 23390832	darifenacin	Medication: Anticholinergic	CNS - confusion - memory problems	memory problems	9/37	24.3			
But 2012 23390832	darifenacin	Medication: Anticholinergic	CNS - dizziness	dizziness	4/37	10.8			
But 2012 23390832	solifenacin	Medication: Anticholinergic	CNS - confusion - lack of concentration	lack of concentration	8/40	20			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
But 2012 23390832	solifenacin	Medication: Anticholinergic	CNS - confusion - memory problems	memory problems	10/40	25			
But 2012 23390832	solifenacin	Medication: Anticholinergic	CNS - dizziness	dizziness	7/40	17.5			
But 2012 23390832	darifenacin	Medication: Anticholinergic	Dry mouth	Dry mouth	18/37	48.6			
But 2012 23390832	darifenacin	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms	constipation	8/37	21.6			
But 2012 23390832	solifenacin	Medication: Anticholinergic	Dry mouth	Dry mouth	13/40	32.5			
But 2012 23390832	darifenacin	Medication: Anticholinergic	Headache	headache	3/37	8.1			
But 2012 23390832	solifenacin	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	8/40	20			
But 2012 23390832	darifenacin	Medication: Anticholinergic	Sleep disorder	insomnia	7/37	18.9			
But 2012 23390832	solifenacin	Medication: Anticholinergic	Headache	headache	5/40	12.5			
But 2012 23390832	solifenacin	Medication: Anticholinergic	Sleep disorder	insomnia	9/40	22.5			
But 2012 23390832	solifenacin	Medication: Anticholinergic	Visual AE	blurred vision	10/40	25			
But 2012 23390832	darifenacin	Medication: Anticholinergic	Visual AE	blurred vision	9/37	24.3			
Butt 2016 no pmid	Tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	101/415	24.3		yes	0.085
Butt 2016 no pmid	Solifenacin	Medication: Anticholinergic	Dry mouth	Dry mouth				yes	0.085
Butt 2016 no pmid	Tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	21/415	5.1		yes	0.000

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Butt 2016 no pmid	Solifenacin	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	Constipation	41/415	9.9		yes	0.000
Capobianco 2012 21706345	Estriol +PT + electrical stimulation	Medication: Hormonal therapy & Behavioral Therapy & Neuromodulation	AE (undefined/nonmajor)	Any systemic adverse reactions	0/103	0			1
Capobianco 2012 21706345	Estriol +PT + electrical stimulation	Medication: Hormonal therapy & Behavioral Therapy & Neuromodulation	Pain - pelvic	Vaginal irritation or burning	4/103	3.9			no difference
Capobianco 2012 21706345	Estriol	Medication: Hormonal therapy	AE (undefined/nonmajor)	Any systemic adverse reactions	0/103	0			1
Capobianco 2012 21706345	Estriol	Medication: Hormonal therapy	Pain - pelvic	Vaginal irritation or burning	5/103	4.9			no difference
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	50/55	90.9	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	39/54	72.2	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	9/55	16.4	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	D/C due to AE	Discontinuation due to AE	18/55	32.7	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Dry mouth	Dry mouth	12/55	21.8	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	2/54	3.7	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	10/55	18.2	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Cardozo 2004 15339761	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	3/54	5.6	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Dry mouth	Dry mouth	0/54	0	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	6/54	11.1	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	7/55	12.7	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	1/54	1.9	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	25/55	45.5	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	7/55	12.7	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Headache	Headache	15/55	27.3	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/54	13	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	1/54	1.9	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Headache	Headache	5/54	9.3	8 weeks		
Cardozo 2004 15339761	Duloxetine 80-120 mg	Medication: alpha agonist	Sleep disorder	Insomnia	7/55	12.7	8 weeks		
Cardozo 2004 15339761	Placebo	Sham/no treatment	Sleep disorder	Insomnia	3/54	5.6	8 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	666/1378	48.3	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Cardozo, 2010 19929591	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	460/1380	33.3	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	AE, serious	Serious AE	9/1378	0.7	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	AE, treatment related	TEAEs	666/1378	48.3	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	68/1378	4.9	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	CNS - tremor	tremor	28/1378	2	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	D/C due to AE	Discontinuation due to AE	203/1378	14.7	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	117/1378	8.5	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	AE, serious	Serious AE	1/1380	0.1	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	AE, treatment related	TEAEs	460/1380	33.3	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	23/1380	1.7	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	asthenia	27/1378	2	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	65/1378	4.7	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Cardozo, 2010 19929591	Placebo	Sham/no treatment	CNS - tremor	tremor	4/1380	0.3	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	28/1380	2	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Dry mouth	Dry mouth	47/1380	3.4	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Fatigue/drowsiness	asthenia	6/1380	0.4	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	21/1380	1.5	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	28/1378	2	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	12/1380	0.9	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	125/1378	9.1	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	31/1380	2.2	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	279/1378	20.2	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	54/1378	3.9	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	113/1380	8.2	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Headache	Headache	109/1378	7.9	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	19/1380	1.4	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Headache	Headache	64/1380	4.6	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	63/1378	4.6	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Sleep disorder	Insomnia	24/1380	1.7	6 weeks		
Cardozo, 2010 19929591	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	13/1380	0.9	6 weeks		
Cardozo, 2010 19929591	duloxetine 80 mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	45/1378	3.3	6 weeks		
Castellani 2015 26043913	Pelvic floor muscle training + Electrical stimulation + biofeedback	Behavioral Therapy & Neuromodulation	AE (undefined/nonmajor)	Any systemic adverse reactions	0/35	0			ND
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	14/136	10.3	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	D/C due to AE	Discontinuation due to AE	22/136	16.2	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	22/136	16.2	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	1/120	0.8	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	7/120	5.8	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Dry mouth	Dry mouth	5/120	4.2	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	15/136	11	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	2/120	1.7	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	16/136	11.8	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	1/136	0.7	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	6/120	5	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	40/136	29.4	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	4/120	3.3	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/120	5.8	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Headache	Headache	11/136	8.1	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Headache	Headache	11/120	9.2	12 weeks		
Castro-Diaz 2007 17160693	Duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	14/136	10.3	12 weeks		
Castro-Diaz 2007 17160693	Placebo	Sham/no treatment	Sleep disorder	Insomnia	6/120	5	12 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	6/391	1.5	4 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - general/undefined	All CNS Aes	17/391	4.3	2 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - general/undefined	any CNS AE	35/391	9	12 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - general/undefined	other CNS AEs- at 4 weeks	5/391	1.3	8 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	CNS - hypertonia	hypertonia	2/391	0.5	12 weeks		
Chu, 2005 15970828	Tolterodine -ER 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness- at 2 weeks	7/399	1.8	2 weeks		
Chu, 2005 15970828	Tolterodine -ER 4 mg	Medication: Anticholinergic	CNS - general/undefined	any CNS AE	33/399	8.3	4 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	4/391	1	12 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence- at 2 weeks	3/391	0.8	2 weeks		
Chu, 2005 15970828	Tolterodine -ER 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	9/399	2.3	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	Psychological - depression	depression	5/391	1.3	12 weeks		
Chu, 2005 15970828	Oxybutynin 10 mg	Medication: Anticholinergic	Sleep disorder	insomnia	7/391	1.8	12 weeks		
Chu, 2005 15970828	Tolterodine -ER 4 mg	Medication: Anticholinergic	Psychological - depression	depression	3/399	0.8	12 weeks		
Chu, 2005 15970828	Tolterodine -ER 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	3/399	0.8	12 weeks		
Chughtai 2016 26883688	fesoterodine	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	3/12	25			
Chughtai 2016 26883688	fesoterodine +vaginal estrogen	Medication: Anticholinergic + Hormonal Therapy	D/C due to AE	Discontinuation due to AE	2/11	18.2			
Cornu 2012 22588140	control (no treatment)	Sham/no treatment	AE, serious	Any serious AE	0/26	0			
Cornu 2012 22588140	Intravaginal device	Behavioral Therapy	AE, serious	Any serious AE	0/29	0			
Cornu 2012 22588140	Intravaginal device	Behavioral Therapy	Infection - UTI	UTI	1/29	3.4			
Cornu 2012 22588140	control (no treatment)	Sham/no treatment	Infection - UTI	UTI	0/26	0			
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Cardiac/chest Pain	Palpitation	3/38	7.9	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Cardiac/chest Pain	Palpitation	5/38	13.2	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	CNS - dizziness	Dizziness	6/38	15.8	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	CNS - dizziness	Dizziness	10/38	26.3	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Dry mouth	Dry mouth	15/38	39.5	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Dry mouth	Dry mouth	31/38	81.6	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Fatigue/drowsiness	Somnolence	7/38	18.4	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Fatigue/drowsiness	Somnolence	14/38	36.8	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	8/38	21.1	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	19/38	50	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	3/38	7.9	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	10/38	26.3	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Urinary retention/voiding dysfunction	retention	9/38	23.7	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Urinary retention/voiding dysfunction	retention	9/38	23.7	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Urinary retention/voiding dysfunction	retention	9/38	23.7	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Urinary retention/voiding dysfunction	retention	13/38	34.2	6 weeks		
Davila, 2001 11435842	Oxybutynin	medication: anticholinergic	Visual AE	Blurred vision	7/38	18.4	6 weeks		
Davila, 2001 11435842	Oxybutynin transdermal	medication: anticholinergic	Visual AE	Blurred vision	9/38	23.7	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
de Souza Abreu 2017 28346721	Dynamic lumbopelvic stabilization exercise	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/17	0		NA	
de Souza Abreu 2017 28346721	Pelvic floor muscle strengthening	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/16	0			
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Allergic reaction	allergic reaction	2/30	6.7			0.18
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Allergic reaction	allergic reaction	0/30	0			0.18
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	CNS - dizziness	dizziness	1/30	3.3			0.08
Dede 2013 23086134	trospium	Medication: Anticholinergic	Allergic reaction	allergic reaction	2/30	6.7			0.18
Dede 2013 23086134	trospium	Medication: Anticholinergic	CNS - dizziness	dizziness	6/30	20			0.08
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	CNS - dizziness	dizziness	5/30	16.7			0.08
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Dry mouth	Dry mouth	30/30	100			<0.001
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	17/30	56.7			<0.001
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	3/30	10			0.5
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Fever	Fever	8/30	26.7			0.77
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	5/30	16.7			0.3
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	5/30	16.7			0.5
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Fever	Fever	6/30	20			0.77

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	9/30	30			0.3
Dede 2013 23086134	trospium	Medication: Anticholinergic	Dry mouth	Dry mouth	10/30	33.3			<0.001
Dede 2013 23086134	trospium	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	6/30	20			0.5
Dede 2013 23086134	trospium	Medication: Anticholinergic	Fever	Fever	6/30	20			0.77
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Headache	headache	1/30	3.3			0.09
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Sleep disorder	Insomnia	15/30	50			<0.001
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Headache	headache	5/30	16.7			0.09
Dede 2013 23086134	trospium	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	10/30	33.3			0.3
Dede 2013 23086134	trospium	Medication: Anticholinergic	Headache	headache	1/30	3.3			0.09
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Sleep disorder	Insomnia	1/30	3.3			<0.001
Dede 2013 23086134	trospium	Medication: Anticholinergic	Sleep disorder	Insomnia	2/30	6.7			<0.001
Dede 2013 23086134	trospium	Medication: Anticholinergic	Visual AE	visual problems	6/30	20			0.72
Dede 2013 23086134	tolterodine	Medication: Anticholinergic	Visual AE	visual problems	4/30	13.3			0.72
Dede 2013 23086134	oxybutynin	Medication: Anticholinergic	Visual AE	visual problems	4/30	13.3			0.72
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	255/344	74.1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski 2003 14501737	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	170/339	50.1	12 weeks		13.8
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	CNS - dizziness	Dizziness	26/344	7.6	12 weeks		
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Dry mouth	Dry mouth	42/344	12.2	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	8/339	2.4	12 weeks		20.1
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	51/344	14.8	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Dry mouth	Dry mouth	3/339	0.9	12 weeks		8.3
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	13/339	3.8	12 weeks		1.6
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	30/344	8.7	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	1/339	0.3	12 weeks		10.1
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	33/344	9.6	12 weeks		
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	20/344	5.8	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	7/339	2.1	12 weeks		7.1

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	9/339	2.7	12 weeks		14.5
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	78/344	22.7	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/339	2.1	12 weeks		10.5
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Headache	Headache	25/344	7.3	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Headache	Headache	12/339	3.5	12 weeks		
Dmochowski 2003 14501737	Duloxetine 80mg	Medication: alpha agonist	Sleep disorder	Insomnia	49/344	14.2	12 weeks		
Dmochowski 2003 14501737	Placebo	Sham/no treatment	Sleep disorder	Insomnia	8/339	2.4	12 weeks		
Dmochowski 2010 20952013	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	33/43	76.7	12 weeks		
Dmochowski 2010 20952013	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	8/43	18.6	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 100 units	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	44/55	80	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 150 units	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	39/50	78	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 200 units	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	44/52	84.6	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski 2010 20952013	Onabolulin umtoxinA 300 units	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	46/55	83.6	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 50 units	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	44/56	78.6	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 100 units	Medication: bladder botox	AE, treatment related	Tx related AE	20/55	36.4	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 150 units	Medication: bladder botox	AE, treatment related	Tx related AE	20/50	40	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 200 units	Medication: bladder botox	AE, treatment related	Tx related AE	20/52	38.5	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 300 units	Medication: bladder botox	AE, treatment related	Tx related AE	22/55	40	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 50 units	Medication: bladder botox	AE, treatment related	Tx related AE	17/56	30.4	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 100 units	Medication: bladder botox	Infection - UTI	UTI	20/55	36.4	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 150 units	Medication: bladder botox	Infection - UTI	UTI	22/50	44	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 200 units	Medication: bladder botox	Infection - UTI	UTI	25/52	48.1	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 300 units	Medication: bladder botox	Infection - UTI	UTI	19/55	34.5	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 50 units	Medication: bladder botox	Infection - UTI	UTI	19/56	33.9	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski 2010 20952013	Onabolulin umtoxinA 100 units	Medication: bladder botox	Urinary retention/voiding dysfunction	Urinary retention	10/55	18.2	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 150 units	Medication: bladder botox	Urinary retention/voiding dysfunction	Urinary retention	14/50	28	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 200 units	Medication: bladder botox	Urinary retention/voiding dysfunction	Urinary retention	12/52	23.1	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 300 units	Medication: bladder botox	Urinary retention/voiding dysfunction	Urinary retention	14/55	25.5	12 weeks		
Dmochowski 2010 20952013	Onabolulin umtoxinA 50 units	Medication: bladder botox	Urinary retention/voiding dysfunction	Urinary retention	5/56	8.9	12 weeks		
Dmochowski 2010 20952013	Placebo	Sham/no treatment	Infection - UTI	UTI	7/43	16.3	12 weeks		
Dmochowski 2010 20952013	Placebo	Sham/no treatment	Urinary retention/voiding dysfunction	Urinary retention	1/43	2.3	12 weeks		
Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	10/129	7.8			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Dry mouth	Dry mouth	5/129	3.9		NA	
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Dry mouth	Dry mouth	7/131	5.3			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	1/131	0.8			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	1/131	0.8			

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Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	1/129	0.8			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	4/129	3.1			
Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	Nausea	2/129	1.6			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	4/129	3.1			
Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Headache	Headache	2/129	1.6			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Headache	Headache	5/129	3.9			
Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Infection - URI	Nasopharyngitis	4/129	3.1			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Infection - URI	Nasopharyngitis	2/129	1.6			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Headache	Headache	3/131	2.3			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Infection - URI	Nasopharyngitis	1/131	0.8			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Infection - URI	Upper respiratory tract infection	3/131	2.3			

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Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Infection - URI	Upper respiratory tract infection	2/129	1.6			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Infection - URI	Upper respiratory tract infection	2/129	1.6			
Dmochowski 2014 24666884	Placebo	Sham/no treatment	Salivation, excessive	Salivary hypersecretion	0/131	0			
Dmochowski 2014 24666884	Tolterodine	Medication: Anticholinergic	Salivation, excessive	Salivary hypersecretion	0/129	0			
Dmochowski 2014 24666884	Tolterodine/ Pilocarpine	Medication: Anticholinergic	Salivation, excessive	Salivary hypersecretion	3/129	2.3			
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Cardiac/chest Pain	palpitations	1/128	0.8	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Cardiac/chest Pain	palpitations	0/131	0	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Cardiac/chest Pain	palpitations	1/123	0.8	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	2/128	1.6	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	4/131	3.1	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	5/123	4.1	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Cardiac/chest Pain	palpitations	0/132	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski, 2002 12131314	placebo	Sham/no treatment	CNS - dizziness	dizziness	5/132	3.8	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	6/128	4.7	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	9/131	6.9	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	12/123	9.8	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Dry mouth	Dry mouth	11/132	8.3	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	1/128	0.8	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	0/131	0	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	2/123	1.6	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	7/128	5.5	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	3/131	2.3	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/123	0.8	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Fatigue/drowsiness	somnolence	1/132	0.8	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	4/132	3	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	6/128	4.7	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	5/131	3.8	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	2/123	1.6	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	7/132	5.3	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Itching	pruritis	14/128	10.9	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Itching	pruritis	17/131	13	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Itching	pruritis	21/123	17.1	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Rash	erythema	4/128	3.1	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Rash	erythema	6/131	4.6	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Rash	erythema	7/123	5.7	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	dysuria	1/128	0.8	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	dysuria	3/131	2.3	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Itching	pruritis	8/132	6.1			
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	dysuria	3/123	2.4	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Rash	erythema	3/132	2.3	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Urinary retention/voiding dysfunction	dysuria	0/132	0	12 weeks		
Dmochowski, 2002 12131314	oxybutinin TDS 1.3 mg	Medication: Anticholinergic	Visual AE	visual disturbances	3/128	2.3	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 2.6 mg	Medication: Anticholinergic	Visual AE	visual disturbances	2/131	1.5	12 weeks		
Dmochowski, 2002 12131314	Oxybutinin TDS 3.9 mg	Medication: Anticholinergic	Visual AE	visual disturbances	0/123	0	12 weeks		
Dmochowski, 2002 12131314	placebo	Sham/no treatment	Visual AE	visual disturbances	2/132	1.5	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	AE (undefined/nonmajor)	Mild or moderate systemic adverse events	22/121	18.2	12 weeks		

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Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	AE, serious	Severe localized application site reactions	6/121	5	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	AE, serious	severe systemic adverse events	1/121	0.8	12 weeks		
Dmochowski, 2003 12893326	tolteroding ER 4 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Mild or moderate systemic adverse events	26/123	21.1	12 weeks		
Dmochowski, 2003 12893326	tolteroding ER 4 mg	Medication: Anticholinergic	AE, serious	Any serious AE	4/123	3.3	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	AE (undefined/nonmajor)	Mild or moderate systemic adverse events	13/117	11.1	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	AE, serious	Severe localized application site reactions	1/117	0.9	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	AE, serious	severe systemic adverse events	1/117	0.9	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	Dry mouth	Dry mouth	5/121	4.1	12 weeks		
Dmochowski, 2003 12893326	tolteroding ER 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	9/123	7.3	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	Dry mouth	Dry mouth	2/117	1.7	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	4/121	3.3	12 weeks		
Dmochowski, 2003 12893326	tolteroding ER 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	7/123	5.7	12 weeks		

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Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	Itching	pruritis	17/121	14	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	Localized reaction	Mild or moderate localized application site reactions	26/121	21.5	12 weeks		
Dmochowski, 2003 12893326	oxybutinin TDS 3.9	Medication: Anticholinergic	Rash	erythema	10/121	8.3	12 weeks		
Dmochowski, 2003 12893326	tolterodine ER 4 mg	Medication: Anticholinergic	Localized reaction	Mild or moderate localized application site reactions	6/123	4.9	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	Itching	pruritis	5/117	4.3	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	Localized reaction	Mild or moderate localized application site reactions	7/117	6	12 weeks		
Dmochowski, 2003 12893326	placebo	Sham/no treatment	Rash	erythema	2/117	1.7	12 weeks		
DuBeau 2005 15570576	Tolterodine 4 mg	Medication: Anticholinergic	D/C due to AE	withdrew for AE	26/569	4.6	12 weeks		
DuBeau 2005 15570576	Placebo	Sham/no treatment	D/C due to AE	withdrew for AE	16/285	5.6	12 weeks		
DuBeau 2005 15570576	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	3/285	1.1	12 weeks		
DuBeau 2005 15570576	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	6/569	1.1	12 weeks		
DuBeau 2005 15570576	Tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	17/569	3	12 weeks		

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DuBeau 2005 15570576	Placebo	Sham/no treatment	Headache	headache	7/285	2.5	12 weeks		
Ferreira 2012 no pmid	home PFMT only	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/20	0			
Ferreira 2012 no pmid	supervised with home PFMT	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/18	0			
Ferreira 2012 none	supervised PFPT	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/17	0			
Ferreira 2012 none	unsupervised PFPT	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/17	0			
Fitz 2017 28169458	outpatient BF + home PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/35	0			
Fitz 2017 28169458	outpatient PFMT + home PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/37	0			
Frencl 2012 21905086	placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/20	0			
Frencl 2012 21905086	tolterodine	medication: anticholinergic	Dry mouth	Dry mouth	1/20	5	7 days		
Frencl 2012 21905086	tolterodine	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	1/20	5			
Frencl 2012 21905086	tolterodine	medication: anticholinergic	Urinary retention/voiding dysfunction	difficulty with micturition	1/20	5	7 days		
Futyma 2015 26106616	Urolastic (periurethral bulking)	Periurethral bulking	AE (undefined/nonmajor)	Any AE (all minor)	17/105	16.2	12 month		

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Futyma 2015 26106616	Urolastic (periurethral bulking)	Periurethral bulking	AE, serious	removal of urolastic from the bladder wall secondary to UTI	3/105	2.9			
Futyma 2015 26106616	Urolastic (periurethral bulking)	Periurethral bulking	AE, serious	surgery to remove urolastic secondary to obstruction	4/105	3.8			
Futyma 2015 26106616	Urolastic (periurethral bulking)	Periurethral bulking	AE, serious	surgical removal of urolastic because of pain	4/105	3.8			
Futyma 2015 26106616	Urolastic (periurethral bulking)	Periurethral bulking	Urinary retention/voiding dysfunction	bladder outlet obstruction from urolastic	10/105	9.5			
Galea 2013 none	PFMT with abdominal u/s	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/11	0			
Galea 2013 none	PFMT with vaginal palpation	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/11	0			
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	19/104	18.3	12 weeks		
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	19/104	18.3	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	5/97	5.2	12 weeks		10.5
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	asthenia	6/104	5.8	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Dry mouth	Dry mouth	3/97	3.1	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Fatigue/drowsiness	asthenia	0/97	0	12 weeks		

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Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	11/104	10.6	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	1/97	1	12 weeks		
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	15/104	14.4	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	3/97	3.1	12 weeks		
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	40/104	38.5	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	5/97	5.2	12 weeks		
Ghoneim 2005 15821528	Duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	12/104	11.5	12 weeks		
Ghoneim 2005 15821528	Placebo	Sham/no treatment	Sleep disorder	Insomnia	1/97	1	12 weeks		
Ghoniem 2009 19013613	control	Sham/no treatment	AE, serious	urethral erosion	1/125	0.8	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	AE, serious	urethral erosion	2/122	1.6	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Headache	other, including headache +nausea	22/122	18	ND		

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Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Infection - UTI	urinary tract infection (0-365 days after implantation)	29/122	23.8	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Infection - yeast	yeast infection	3/122	2.5	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Pain - implant	implantation site pain	4/122	3.3	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Pain, bladder	bladder pain	2/122	1.6	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Urinary retention/voiding dysfunction - dysuria	dysuria	11/122	9	ND		
Ghoniem 2009 19013613	macroplastique	Periurethral bulking	Urinary retention/voiding dysfunction - urinary retention	urinary retention	8/122	6.6	ND		
Ghoniem 2009 19013613	control	Sham/no treatment	Headache	other, including headache +nausea	16/125	12.8	ND		
Ghoniem 2009 19013613	control	Sham/no treatment	Infection - UTI	urinary tract infection (0-365 days after implantation)	31/125	24.8	ND		
Ghoniem 2009 19013613	control	Sham/no treatment	Infection - yeast	yeast infection	3/125	2.4	ND		
Ghoniem 2009 19013613	control	Sham/no treatment	Pain - implant	implantation site pain	5/125	4	ND		
Ghoniem 2009 19013613	control	Sham/no treatment	Pain, bladder	bladder pain	2/125	1.6	ND		

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Ghoniem 2009 19013613	control	Sham/no treatment	Urinary retention/voiding dysfunction	dysuria or urinary retention	10/125	8	ND		
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	AE, treatment related	Any AE	89/143	62.2		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	AE, treatment related	Any AE	96/147	65.3		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	AE, treatment related	Any AE	75/155	48.4		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Dry mouth	Dry mouth	7/143	4.9		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Dry mouth	Dry mouth	15/147	10.2		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Dry mouth	Dry mouth	4/155	2.6		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Abdominal pain	Abdominal pain	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Abdominal pain	Abdominal pain	3/147	2		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	2/143	1.4		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	4/147	2.7		yes	

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Gittelman 2014 24231837	Placebo	sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	Abdominal pain	3/155	1.9		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	2/155	1.3		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Diarrhea	Diarrhea	2/143	1.4		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Diarrhea	Diarrhea	5/147	3.4		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Gastrointestinal/ abdominal symptoms - Diarrhea	Diarrhea	6/155	3.9		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	4/143	2.8		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	2/147	1.4		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	1/155	0.6		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Headache	Headache	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Headache	Headache	6/147	4.1		yes	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Infection - URI	Upper respiratory tract infection	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Infection - URI	Upper respiratory tract infection	1/147	0.7		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Infection - UTI	UTI	13/143	9.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Infection - UTI	UTI	17/147	11.6		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Infection - yeast	Vulvovaginal mycotic infection	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Infection - yeast	Vulvovaginal mycotic infection	6/147	4.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Liver function tests, abnormal	Hepatic enzyme increased	0/143	0		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Liver function tests, abnormal	Hepatic enzyme increased	3/147	2		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Pain - musculoskeletal	Back pain	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Pain - musculoskeletal	Back pain	1/147	0.7		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Pain - pelvic	Vaginal pain	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Pain - pelvic	Vaginal pain	0/147	0		yes	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Gittelman 2014 24231837	Placebo	sham/no treatment	Headache	Headache	2/155	1.3		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Infection - URI	any		1.3		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Infection - UTI	UTI	7/155	4.5		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Infection - yeast	Vulvovaginal mycotic infection	4/155	2.6		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Liver function tests, abnormal	Hepatic enzyme increased	2/155	1.3		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Urinary retention/voiding dysfunction	Dysuria	3/143	2.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Urinary retention/voiding dysfunction	Dysuria	2/147	1.4		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Vaginal bleeding	Vaginal hemorrhage	2/143	1.4		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Pain - musculoskeletal	Back pain	4/155	2.6		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Pain - pelvic	Vaginal pain	0/155	0		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Vaginal bleeding	Vaginal hemorrhage	6/147	4.1		yes	
Gittelman 2014 24231837	Oxybutynin vaginal ring 4 mg	medication: anticholinergic	Vaginitis	Vaginal discharge	5/143	3.5		yes	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Gittelman 2014 24231837	Oxybutynin vaginal ring 6 mg	medication: anticholinergic	Vaginitis	Vaginal discharge	7/147	4.8		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Urinary retention/voiding dysfunction	Dysuria	0/155	0		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Vaginal bleeding	Vaginal hemorrhage	4/155	2.6		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Vaginitis - discharge	Vaginal discharge	6/155	3.9		yes	
Gittelman 2014 24231837	Placebo	sham/no treatment	Vaginitis - erythema	Vaginal erythema	2/155	1.3		yes	
Gozukara 2014 24711149	structured education programs	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/189	0			
Gozukara 2014 24711149	behavioral weight loss	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/189	0			
Gupta 1999	Immediate-release oxybutynin 5mg	medication: anticholinergic	AE (undefined/nonmajor)	Any AE	12/13	92.3	1 week		
Gupta 1999	OROS oxybutynin chloride 5mg	medication: anticholinergic	AE (undefined/nonmajor)	Any AE	6/13	46.2	1 week		
Gupta 1999	Immediate-release oxybutynin 5mg	medication: anticholinergic	Dry mouth	Dry mouth	10/13	76.9	1 week		
Gupta 1999	OROS oxybutynin chloride 5mg	medication: anticholinergic	Dry mouth	Dry mouth	6/13	46.2	1 week		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Allergic reaction	allergic reaction	4/498	0.8		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Cardiac/chest Pain	chest pain	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	CNS - dizziness	vertigo	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Cough	cough	8/498	1.6		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Dry eye/mucosa	Dry eye	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Dry mouth	Dry mouth	30/498	6		yes	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Dry mouth	dry throat	10/498	2		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	4/498	0.8		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	23/498	4.6		yes	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	7/498	1.4		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - heartburn	heartburn	4/498	0.8		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Headache	headache	7/498	1.4		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Hematuria	hematuria	4/498	0.8		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Infection - kidney	kidney infection	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	infection - URI	respiratory infection	8/498	1.6		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Infection - UTI	UTI	28/498	5.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Musculoskeletal AE	back strain	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Pain - musculoskeletal	back pain	9/498	1.8		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Pain - musculoskeletal	sciatica	3/498	0.6		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Shortness of breath	shortness of breath	3/498	0.6		NA	
Hess 2013 23659987	Fesoterodine 4-8 mg daily x 12 weeks - this study is a 9 month open-label follow-up of initial trial	medication: anticholinergic	Weight gain	weight gain	3/498	0.6		NA	
Hirakawa 2013 23306768	PFMT without biofeedback	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/20	0			
Hirakawa 2013 23306768	PFMT with biofeedback	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/19	0			
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	CNS - dizziness	Dizziness	6/244	2.5	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	CNS - dizziness	Dizziness	4/239	1.7	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	2/122	1.6	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	7/244	2.9	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	3/239	1.3	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	131/244	53.7	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Dry mouth	dry mouth	131/244	53.7	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Homma 2003 14616458	Placebo	Sham/no treatment	Dry eye/mucosa	Dry eye	0/122	0	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Dry skin	Dry skin	4/244	1.6	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	80/239	33.5	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Dry mouth	Dry mouth	12/122	9.8	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Dry mouth	dry mouth	12/122	9.8	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Fatigue/drowsiness	Somnolence	4/244	1.6	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Abdominal pain/tenderness	Abdominal pain/tenderness	12/244	4.9	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Dry skin	Dry skin	1/122	0.8	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	15/244	6.1	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Dry skin	Dry skin	0/239	0	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	Somnolence	1/239	0.4	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	4/122	3.3	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	Abdominal pain/tenderness	4/122	3.3	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	6/122	4.9	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	20/244	8.2	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Abdominal pain/tenderness	Abdominal pain/tenderness	14/239	5.9	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	17/239	7.1	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	4/122	3.3	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Headache	Headache	11/244	4.5	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Hot flushes	Flushing/hot flushes	11/244	4.5	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	Difficulty in micturition	21/244	8.6	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	9/239	3.8	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Headache	Headache	10/239	4.2	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Hot flushes	Flushing/hot flushes	2/239	0.8	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Headache	Headache	8/122	6.6	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Hot flushes	Flushing/hot flushes	0/122	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	Urinary hesitation	1/244	0.4	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	Urinary retention	8/244	3.3	12 weeks		
Homma 2003 14616458	Oxybutynin 9 mg	Medication: Anticholinergic	Visual AE	Blurred vision	8/244	3.3	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction		5/239	1.3	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Urinary retention/voiding dysfunction	Urinary hesitation	0/122	0	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Urinary retention/voiding dysfunction	Urinary retention	0/122	0	12 weeks		
Homma 2003 14616458	Placebo	Sham/no treatment	Visual AE	Blurred vision	0/122	0	12 weeks		
Homma 2003 14616458	Tolterodine ER 4 mg	Medication: Anticholinergic	Visual AE	Blurred vision	3/239	1.3	12 weeks		
Huang 2012 22542122	placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE (constipation, dry mouth, tachycardia, drowsiness, or urinary hesitancy or retention)	41/301	13.6			<0.001
Huang 2012 22542122	placebo	Sham/no treatment	AE, serious	Serious AE	1/303	0.3		yes	
Huang 2012 22542122	placebo	Sham/no treatment	AE, serious	Severe AE (prevented participants from participating in one or more daily activities)	4/301	1.3			0.23

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Huang 2012 22542122	placebo	Sham/no treatment	AE, serious	Severe AEs (resulted in death, disability, or hospitalization)	4/301	1.3			1.00
Huang 2012 22542122	fesoterodine	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE (constipation, dry mouth, tachycardia, drowsiness, or urinary hesitancy or retention)	111/303	36.6			<0.001
Huang 2012 22542122	fesoterodine	Medication: Anticholinergic	AE, serious	Severe AE (prevented participants from participating in one or more daily activities)	18/303	5.9			0.23
Huebner 2011 20848671	EMG biofeedback-assisted PFMT	Behavioral Therapy & Neuromodulation	AE (undefined/nonmajor)	Any AE	0/36	0			
Huebner 2011 20848671	EMG biofeedback-assisted PFMT and conventional Electrical Stimulation	Behavioral Therapy & Neuromodulation	AE (undefined/nonmajor)	Any AE	0/36	0			
Huebner 2011 20848671	EMG biofeedback-assisted PFMT and dynamic Electrical Stimulation	Behavioral Therapy & Neuromodulation	AE (undefined/nonmajor)	Any AE	0/36	0			
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Anorgasmia	Anorgasmia	13/958	1.4	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	91/958	9.5	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	128/958	13.4	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Anorgasmia	Anorgasmia	0/955	0	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	25/955	2.6	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	asthenia	7/958	0.7	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	122/958	12.7	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Dry mouth	Dry mouth	14/955	1.5	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Fatigue/drowsiness	asthenia	0/955	0	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	36/955	3.8	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	65/958	6.8	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	anorexia	37/958	3.9	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Appetite decreased	22/958	2.3	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	1/955	0.1	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - anorexia	anorexia	2/955	0.2	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	105/958	11	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Appetite decreased	Appetite decreased	2/955	0.2	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	22/955	2.3	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	49/958	5.1	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	26/955	2.7	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	222/958	23.2	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	46/958	4.8	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	35/955	3.7	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Headache	Headache	93/958	9.7	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Liver function tests, abnormal	ALT, AST, or bilirubin above ULN		15	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	15/955	1.6	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Headache	Headache	63/955	6.6	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Psychological - anxiety	Anxiety	18/958	1.9	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	121/958	12.6	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Liver function tests, abnormal	Total bilirubin, ALT or AST above ULN	62/955	6.5	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Psychological - anxiety	Anxiety	7/955	0.7	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Sleep disorder	Insomnia	18/955	1.9	12 weeks		
Hurley 2006 16188367	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	8/955	0.8	12 weeks		
Hurley 2006 16188367	Duloxetine 80 mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	43/958	4.5	12 weeks		
Jabs 2013 23343798	Placebo	Sham/no treatment	Cardiac/chest Pain	Cardiac event	0/10	0			
Jabs 2013 23343798	Botulinum toxin	Medication: bladder botox	Cardiac/chest Pain	Cardiac event	1/11	9.1			
Jabs 2013 23343798	Botulinum toxin	Medication: bladder botox	Gastrointestinal/ abdominal symptoms - constipation	Constipation	1/11	9.1			
Jabs 2013 23343798	Botulinum toxin	Medication: bladder botox	Hematuria	Hematuria	1/11	9.1			
Jabs 2013 23343798	Botulinum toxin	Medication: bladder botox	Infection - UTI	Urinary tract infection	6/11	54.5		NA	NS
Jabs 2013 23343798	Botulinum toxin	Medication: bladder botox	Pain - general/undefined	Pain/discomfort	3/11	27.3			
Jabs 2013 23343798	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	0/10	0			
Jabs 2013 23343798	Placebo	Sham/no treatment	Hematuria	Hematuria	1/10	10			
Jabs 2013 23343798	Placebo	Sham/no treatment	Infection - UTI	Urinary tract infection	4/10	40			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Jabs 2013 23343798	Placebo	Sham/no treatment	Pain - general/undefined	Pain/discomfort	2/10	20			
Jafarabadi 2015 25369726	Oxybutynin	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	11/151	7.3			0.82
Jafarabadi 2015 25369726	Tolterodine	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	8/150	5.3			0.82
Jha 2017 28801034	PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/34	0	6 months		
Jha 2017 28801034	PFMT + electrostimulation	Behavioral therapy + Neuromodulation	AE (undefined/nonmajor)	Any AE	0/30	0	6 months		
Kafri 2013 23160873	tolterodine	Medication: Anticholinergic	CNS - dizziness	dizziness	1/42	2.4			
Kafri 2013 23160873	bladder training	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/41	0			
Kafri 2013 23160873	PFMT	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/40	0			
Kafri 2013 23160873	Combined therapy (bladder training + PFMT)	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/41	0			
Kafri 2013 23160873	tolterodine	Medication: Anticholinergic	Pain - musculoskeletal	back pain, acute	1/42	2.4			
Kaya 2011 20943711	Trospium chloride +- physical therapy	Behavioral Therapy & Medication: Anticholinergic	D/C due to AE	any leading to discontinuation	1/31	3.2			
Kaya 2011 20943711	Trospium chloride +- physical therapy	Behavioral Therapy & Medication: Anticholinergic	Dry mouth	Dry mouth	7/31	22.6		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kaya 2011 20943711	Trospium chloride +- physical therapy	Behavioral Therapy & Medication: Anticholinergic	Visual AE	Visual impairment	1/31	3.2			
Kaya 2011 20943711	Physical therapy	Behavioral Therapy	D/C due to AE	Discontinuation due to AE	0/15	0			
Kaya 2011 20943711	Physical therapy	Behavioral Therapy	Dry mouth	Dry mouth	0/15	0			
Kaya 2011 20943711	Physical therapy	Behavioral Therapy	Visual AE	Visual impairment	0/15	0			
Kaya 2015 25266357	Bladder therapy alone	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/65	0		NA	
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	200/247	81	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	158/247	64	12 weeks		9.6
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	30/247	12.1	12 weeks		
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	48/247	19.4	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	8/247	3.2	12 weeks		14.4
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	34/247	13.8	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Dry mouth	Dry mouth	6/247	2.4	12 weeks		11
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	10/247	4	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	11/247	4.5	12 weeks		14.2
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	0/247	0	12 weeks		8.9
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	35/247	14.2	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	10/247	4	12 weeks		16.7
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	69/247	27.9	12 weeks		
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	16/247	6.5	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	16/247	6.5	12 weeks		1.3
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Headache	Headache	24/247	9.7	12 weeks		
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	5/247	2	12 weeks		12.8
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Headache	Headache	19/247	7.7	12 weeks		4.3
Kerrebroeck, 2004 14961887	Duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	31/247	12.6	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kerrebroeck, 2004 14961887	Placebo	Sham/no treatment	Sleep disorder	Insomnia	3/247	1.2	12 weeks		10.7
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	221/569	38.8	8 weeks		13.7
Khullar 15302476	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	16/285	5.6	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	96/285	33.7	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	6/569	1.1	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	CNS - dizziness	dizziness	3/285	1.1	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	1/569	0.2	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Fatigue/drowsiness	somnolence	2/285	0.7	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	abdominal pain generalized	2/285	0.7	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	2/285	0.7	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain generalized	abdominal pain generalized	12/569	2.1	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	3/285	1.1	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	9/569	1.6	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	2/285	0.7	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	5/285	1.8	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	10/569	1.8	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	7/569	1.2	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	7/569	1.2	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	22/569	3.9	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Headache	headache	8/285	2.8	8 weeks		
Khullar 15302476	Placebo	Sham/no treatment	Infection - UTI	urinary tract infection	2/285	0.7	8 weeks		
Khullar 15302476	Tolterodine 4 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	2/569	0.4	8 weeks		
Kim 2011 21459381	Control	Sham/no treatment	Death	death	1/64	1.6		no	no difference
Kim 2011 21459381	education	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/36	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kim 2011 21459381	exercise only	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/37	0			
Kim 2011 21459381	exercize +heat and steam generating sheet (HSGS)	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/37	0			
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	198/224	88.4	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	159/227	70	36 weeks		8.5
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	30/224	13.4	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	26/224	11.6	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	8/227	3.5	36 weeks		0.7
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	45/224	20.1	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Dry mouth	Dry mouth	5/227	2.2	36 weeks		2.9
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	23/224	10.3	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	12/227	5.3	36 weeks		16.7
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Appetite decreased	10/224	4.5	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	4/227	1.8	36 weeks		6.5
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	20/224	8.9	36 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Appetite decreased	Appetite decreased	2/227	0.9	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	5/227	2.2	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	19/224	8.5	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	8/227	3.5	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	70/224	31.3	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	19/224	8.5	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	13/227	5.7	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Headache	Headache	28/224	12.5	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	8/227	3.5	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Headache	Headache	14/227	6.2	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Psychological - anxiety	Anxiety	9/224	4	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Sleep disorder	Insomnia	33/224	14.7	36 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Psychological - anxiety	Anxiety	2/227	0.9	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Sleep disorder	Insomnia	13/227	5.7	36 weeks		
Kinchen, 2005 15662490	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	1/227	0.4	36 weeks		
Kinchen, 2005 15662490	duloxetine 80 mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	15/224	6.7	36 weeks		
Kinjo 2016 27911988	Solifenacin	Medication: Anticholinergic	AE (undefined/nonmajor)	any AE	20/72	27.8			
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Dry mouth	Dry mouth	7/72	9.7			
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Fatigue/drowsiness	somnolence	2/72	2.8			
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Gastrointestinal/ abdominal symptoms	GI symptoms	3/72	4.2			
Kinjo 2016 27911988	Mirabegron	Medication: Beta agonist	AE (undefined/nonmajor)	any AE	6/76	7.9			
Kinjo 2016 27911988	mirabegron	Medication: Beta agonist	Cardiac/chest Pain	palpation	1/76	1.3			
Kinjo 2016 27911988	mirabegron	Medication: Beta agonist	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/76	1.3			
Kinjo 2016 27911988	mirabegron	Medication: Beta agonist	Gastrointestinal/ abdominal symptoms - GI disorder	GI symptoms	1/76	1.3			
Kinjo 2016 27911988	mirabegron	Medication: Beta agonist	Rash	rash	1/76	1.3			
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	5/72	6.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Rash	rash	1/72	1.4			
Kinjo 2016 27911988	solifenacin	medication: anticholinergic	Visual AE	blurred vision	1/72	1.4			
Klarskov 2014 24258099	placebo	Sham/no treatment	Dry mouth	Dry mouth	2/20	10			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	3/20	15			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	12/22	54.5			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constpation	constpation	0/20	0			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constpation	constpation	2/22	9.1			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Diarrhea	Diarrhea	2/20	10			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	2/22	9.1			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/20	0			
Klarskov 2014 24258099	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constpation	1/20	5			
Klarskov 2014 24258099	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	0/20	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Klarskov 2014 24258099	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	3/20	15			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/22	0			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Headache	Headache	4/20	20			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Headache	headache	5/22	22.7			
Klarskov 2014 24258099	placebo	Sham/no treatment	Headache	headache	2/20	10			
Klarskov 2014 24258099	fesoterodine 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	urinary retention	0/20	0			
Klarskov 2014 24258099	fesoterodine 8 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	urinary retention	0/22	0			
Klarskov 2014 24258099	placebo	Sham/no treatment	Urinary retention/voiding dysfunction	urinary retention	0/20	0			
Labrie 2013 24047061	PFMT	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/202	0	1 year		
Leong 2015 25377297	education group	Behavioral Therapy	AE (undefined/nonmajor)	Any AE or discomfort	0/28	0			
Leong 2015 25377297	Physiotherapy	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/27	0			
Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	AE (undefined/nonmajor)	Any AE	59/117	50.4	ND		

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Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	D/C due to AE	withdraw due to adverse events	2/117	1.7	ND		
Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	Infection - UTI	urinary tract infection	12/117	10.3	ND		
Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	Pain - needle site	injection site pain	3/117	2.6	ND		
Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	Urinary retention/voiding dysfunction	dysuria	10/117	8.5	ND		
Lightner, 2009 19660800	Contigen Endoscopic guidance	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention	33/117	28.2	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	AE (undefined/nonmajor)	Any AE	154/227	67.8	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	D/C due to AE	withdraw due to adverse events	8/227	3.5	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Infection - UTI	urinary tract infection	30/227	13.2	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Localized reaction	injection site mass	10/227	4.4	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Localized reaction	pseudocyst	5/227	2.2	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Pain - needle site	injection site pain	19/227	8.4	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Urinary retention/voiding dysfunction	dysuria	32/227	14.1	ND		
Lightner, 2009 19660800	Zuidex Implacer	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention	64/227	28.2	ND		

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Lim 2017 27871927	sham pulsed magnetic stimulation	Sham/no treatment	AE (undefined/nonmajor)	Any AE	5/60	8.3			0.72
Lim 2017 27871927	pulsed magnetic stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	3/60	5			0.72
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	48/60	80	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	27/61	44.3	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	8/60	13.3	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	D/C due to AE	Discontinuation due to AE	16/60	26.7	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Dry mouth	Dry mouth	10/60	16.7	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	6/61	9.8	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	asthenia	3/60	5	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	4/61	6.6	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	5/60	8.3	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Dry mouth	Dry mouth	2/61	3.3	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Fatigue/drowsiness	asthenia	1/61	1.6	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	9/60	15	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	0/61	0	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Appetite decreased	4/60	6.7	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	0/61	0	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	10/60	16.7	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Appetite decreased	Appetite decreased	1/61	1.6	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	0/61	0	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	9/60	15	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	0/61	0	8 weeks		
Lin 2008 18221532	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	0/61	0	8 weeks		
Lin 2008 18221532	Duloxetine 80 mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	5/60	8.3	8 weeks		
Liu 2017 28655016		Sham/no treatment	Fatigue/drowsiness	fatigue	1/249	0.4	6 weeks		
Liu 2017 28655016		Sham/no treatment	Localized reaction	hematoma at the needling site	4/249	1.6	6 weeks		
Liu 2017 28655016	electroacupuncture	Neuromodulation	AE (undefined/nonmajor)	Any AE	4/247	1.6	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Liu 2017 28655016		Sham/no treatment	AE (undefined/nonmajor)	Any AE	5/249	2	6 weeks		
Liu 2017 28655016	electroacupuncture	Neuromodulation	AE, serious	Serious AE	0/247	0	6 weeks		
Liu 2017 28655016	electroacupuncture	Neuromodulation	Fatigue/drowsiness	fatigue	2/247	0.8	6 weeks		
Liu 2017 28655016	electroacupuncture	Neuromodulation	Localized reaction	hematoma at the needling site	0/247	0	6 weeks		
Lovatsis 2017 27438055	placebo vaginal silastic ring	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/18	0			
Lovatsis 2017 27438055	Uresta device	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/18	0			
Lovatsis 2017 27438055	Uresta device	Behavioral Therapy	Pain - general/undefined	Any discomfort	0/18	0			
Lovatsis 2017 27438055	placebo vaginal silastic ring	Sham/no treatment	Pain - general/undefined	Any discomfort	0/18	0			
Manonai 2015 25920290	PFMT without biofeedback	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/31	0			
Manonai 2015 25920290	PFMT with biofeedback	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/28	0			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	AE, serious	Any serious AE	0/104	0			
Marencak 2011 20886571	placebo	Sham/no treatment	AE, serious	Any serious AE	0/103	0			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	CNS - dizziness	dizziness	2/104	1.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Marencak 2011 20886571	placebo	Sham/no treatment	CNS - dizziness	dizziness	0/103	0			
Marencak 2011 20886571	placebo	Sham/no treatment	CNS - dizziness	vertigo	1/103	1			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Dry mouth	Dry mouth	9/104	8.7			
Marencak 2011 20886571	placebo	Sham/no treatment	Dry mouth	Dry mouth	9/103	8.7			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Fatigue/drowsiness	fatigue	4/104	3.8			
Marencak 2011 20886571	placebo	Sham/no treatment	Fatigue/drowsiness	fatigue	2/103	1.9			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	0/104	0			
Marencak 2011 20886571	placebo	Sham/no treatment	Fatigue/drowsiness	somnolence	1/103	1			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	1/104	1			
Marencak 2011 20886571	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	upper abd pain	2/103	1.9			
Marencak 2011 20886571	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/103	1			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	AE, serious	Any serious AE	0/105	0			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	AE, serious	Any serious AE	0/102	0			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	CNS - dizziness	dizziness	6/105	5.7			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	CNS - dizziness	dizziness	5/102	4.9			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	CNS - vertigo	vertigo	2/105	1.9			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	CNS - vertigo	vertigo	2/102	2			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	D/C due to AE	Discontinuation due to AE	5/105	4.8			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	D/C due to AE	Discontinuation due to AE	4/102	3.9			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Dry mouth	Dry mouth	14/105	13.3			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	Dry mouth	Dry mouth	8/102	7.8			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	Fatigue/drowsiness	fatigue	2/102	2			
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	Fatigue/drowsiness	somnolence	0/102	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Fatigue/drowsiness - fatigue	fatigue	2/105	1.9			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Fatigue/drowsiness - somnolence	somnolence	1/105	1			
Marencak 2011 20886571	pregabalin75mg+toltterodine2mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms	constipation	1/102	1			
Marencak 2011 20886571	pregabalin75mg+toltterodine2mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms	GI disorder	2/102	2			
Marencak 2011 20886571	pregabalin75mg+toltterodine2mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms	nausea	1/102	1			
Marencak 2011 20886571	pregabalin75mg+toltterodine2mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms	upper abd pain	2/102	2			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms - abdominal pain	upper abd pain	2/105	1.9			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms - constipation	constipation	5/105	4.8			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms - GI disorder	GI disorder	1/105	1			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Gastrointestinal/ abdominal symptoms - nausea	nausea	2/105	1.9			
Marencak 2011 20886571	pregabalin150mg+tolterodine 4mg	Medication: Anticholinergic + Antiepileptic	Headache	headache	3/105	2.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Marencak 2011 20886571	pregabalin75mg+tolterodine2mg	Medication: Anticholinergic + Antiepileptic	Headache	headache	1/102	1			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	AE, serious	Any serious AE	0/105	0			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	CNS - dizziness	dizziness	11/105	10.5			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	CNS - vertigo	vertigo	2/105	1.9			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Dry mouth	Dry mouth	11/105	10.5			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Fatigue/drowsiness - fatigue	fatigue	5/105	4.8			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Fatigue/drowsiness - somnolence	somnolence	2/105	1.9			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Gastrointestinal/ abdominal symptoms - abdominal pain	upper abd pain	1/105	1			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/105	1			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Gastrointestinal/ abdominal symptoms - GI disorder	GI disorder	0/105	0			
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Gastrointestinal/ abdominal symptoms - nausea	nausea	2/105	1.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Marencak 2011 20886571	pregabalin alone	Medication: Antiepileptic	Headache	headache	3/105	2.9			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/104	1			
Marencak 2011 20886571	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - GI disorder	GI disorder	0/103	0			
Marencak 2011 20886571	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/103	1			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - GI disorder	GI disorder	1/104	1			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/104	0			
Marencak 2011 20886571	tolterodine alone	Medication: Anticholinergic	Headache	headache	1/104	1			
Marencak 2011 20886571	placebo	Sham/no treatment	Headache	headache	1/103	1			
McLean 2013 23861324	home exercise	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/17	0			
McLean 2013 23861324	PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/18	0			
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Cardiac/chest Pain	atrial fibrillation	1/34	2.9		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Cardiac/chest Pain	atrial fibrillation	0/33	0		NA	
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	2/33	6.1		NA	
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/33	0		NA	
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	1/33	3		NA	
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	4/34	11.8		NA	
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	3/34	8.8		NA	
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	2/34	5.9		NA	
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Headache	headache	2/34	5.9		NA	
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Headache	headache	2/33	6.1		NA	
McMichael 2013 NCT01340066	placebo	Sham/no treatment	Infection - URI	upper respiratory infection	2/33	6.1		NA	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
McMichael 2013 NCT01340066	tolterodine	medication: anticholinergic	Infection - URI	upper respiratory infection	5/34	14.7		NA	
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	CNS - dizziness	Dizziness	106/4913	2.2			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Dry mouth	Dry mouth	74/4913	1.5			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	81/4913	1.6			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Constipation	62/4913	1.3			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Diarrhea	33/4913	0.7			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	AE (undefined/nonmajor)	Any AE	61/1941	3.1			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	AE, serious		1/1941	0.1			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	AE, treatment related		43/1941	2.2			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries, and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	CNS - dizziness	Dizziness	4/1941	0.2			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	D/C due to AE		18/1941	0.9			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Dry mouth	Dry mouth	19/1941	1			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Fatigue/drowsiness	Fatigue	1/1941	0.1			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Gastrointestinal/ abdominal symptoms (Constipation)	Constipation	8/1941	0.4			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Gastrointestinal/ abdominal symptoms (Diarrhea)	Diarrhea	4/1941	0.2			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Gastrointestinal/ abdominal symptoms (Nausea)	Nausea	10/1941	0.5	12 weeks	yes	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Gastrointestinal/ abdominal symptoms (Vomiting)	Vomiting	7/1941	0.4			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Headache	Headache	5/1941	0.3			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Sleep disorder	Insomnia	0/1941	0			
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Sleep disorder	Sleep Disorder	1/1941	0.1			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Michel, 2012 22816871	pelvic floor muscle training (PMFT), pessaries and hormonal treatment. 12 week	Behavioral therapy + Hormonal Therapy	Sweating, excessive	Hyperhydrosis	1/1941	0.1			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	402/4913	8.2	12 weeks	yes	
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Vomiting	58/4913	1.2			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Headache	Headache	77/4913	1.6			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Sleep disorder	Insomnia	41/4913	0.8			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Sleep disorder	Sleep Disorder	61/4913	1.2			
Michel, 2012 22816871	Duloxetine 12 week	Medication: alpha agonist	Sweating, excessive	Hyperhydrosis	57/4913	1.2			
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	173/227	76.2	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	167/231	72.3	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	CNS - dizziness	Dizziness	25/227	11	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Dry mouth	Dry mouth	28/227	12.3	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	6/231	2.6	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	23/227	10.1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Millard 2004 14764128	Placebo	Sham/no treatment	Dry mouth	Dry mouth	4/231	1.7	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	19/227	8.4	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	anorexia	15/227	6.6	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	8/231	3.5	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	0/231	0	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	29/227	12.8	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - anorexia	anorexia	0/231	0	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	4/231	1.7	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	57/227	25.1	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	14/227	6.2	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	9/231	3.9	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Headache	Headache	33/227	14.5	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Millard 2004 14764128	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	4/231	1.7	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Headache	Headache	20/231	8.7	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Liver function tests, abnormal	Abnormal elevation in bilirubin, alanine aminotransferase or aspartate aminotransferase		3.5	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Sleep disorder	Insomnia	31/227	13.7	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Liver function tests, abnormal	Abnormal elevation in bilirubin, alanine aminotransferase, aspartate aminotransferase	9/231	3.9	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Sleep disorder	Insomnia	6/231	2.6	12 weeks		
Millard 2004 14764128	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	2/231	0.9	12 weeks		
Millard 2004 14764128	Duloxetine 80mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	13/227	5.7	12 weeks		
Mohr 2013 22707004	Periurethral bullking (collagen)	Periurethral bulking	AE (undefined/nonmajor)	Any AE	10/312	3.2	12 months		
Mohr 2013 22707004	Periurethral bullking (collagen)	Periurethral bulking	Allergic reaction	allergic reaction	2/312	0.6			
Mohr 2013 22707004	Periurethral bullking (ethylene vinyl alcohol)	Periurethral bulking	Hematuria	hematuria (for 3 days postop)	1/104	1			
Mohr 2013 22707004	Periurethral bullking (collagen)	Periurethral bulking	Infection - UTI	UTI	4/312	1.3			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Mohr 2013 22707004	Periurethral bullking (ethylene vinyl alcohol)	Periurethral bulking	Infection - UTI	UTI	3/104	2.9			
Mohr 2013 22707004	Periurethral bullking (collagen)	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention	4/312	1.3			
Mohr, 2017 28417154	polyacrylamide hydrogel	Periurethral bulking	Infection - UTI	lower UTIs	12/138	8.7	3 months		
Mohr, 2017 28417154	polyacrylamide hydrogel	Periurethral bulking	Pain - general/undefined	pain requiring additional pain medication	4/138	2.9			
Mohr, 2017 28417154	polyacrylamide hydrogel	Periurethral bulking	Urinary retention/voiding dysfunction	temporary retention <48 h	3/138	2.2			
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	CNS - dizziness	Dizziness	2/48	4.2	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	3/43	7	ND		
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Dry mouth	Dry mouth	42/48	87.5	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Dry mouth	Dry mouth	14/43	32.6	ND		
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Fatigue/drowsiness	drowsiness	6/48	12.5	ND		
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	6/48	12.5	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Fatigue/drowsiness	drowsiness	3/43	7	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	0/43	0	ND		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	4/48	8.3	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/43	2.3	ND		
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Oral ulcers	mouth ulcers	8/48	16.7	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Oral ulcers	mouth ulcers	0/43	0	ND		
Moore,1990 2249115	Oxybutynin 3 mg	medication: anticholinergic	Urinary retention/voiding dysfunction	initial hesitancy	2/48	4.2	ND		
Moore,1990 2249115	Placebo	Sham/no treatment	Urinary retention/voiding dysfunction	initial hesitancy	1/43	2.3	ND		
Nitti 2016 27038769	onabotulinumtoxinA	Medication: bladder botox	Hematuria	hematuria	19/829	2.3			
Nitti 2016 27038769	onabotulinumtoxinA	Medication: bladder botox	Urine abnormality - leukocyturia	leukocyturia	18/829	2.2			
Nitti 2016 27038769	onabotulinumtoxinA	Medication: bladder botox	Urine abnormality - Pollakiuria	Pollakiuria	7/829	0.8			
Nitti 2016 27038769	onabotulinumtoxinA	Medication: bladder botox	Urine abnormality - Urine abnormality	Urine abnormality	2/829	0.2			
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	CNS - dizziness	Dizziness	7/140	5	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Dry mouth	Dry mouth	7/140	5	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	2/138	1.4	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	10/140	7.1	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Dry mouth	Dry mouth	1/138	0.7	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	3/138	2.2	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	6/140	4.3	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/138	0.7	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	4/140	2.9	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	3/138	2.2	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	13/140	9.3	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	2/138	1.4	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Headache	Headache	8/140	5.7	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Headache	Headache	9/138	6.5	12 weeks		
Norton 2002 12114886	Duloxetine 80mg	Medication: alpha agonist	Sleep disorder	Insomnia	7/140	5	12 weeks		
Norton 2002 12114886	Placebo	Sham/no treatment	Sleep disorder	Insomnia	1/138	0.7	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Oldham 2013 23023996	Electrostimulation device	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/64	0			
Oldham 2013 23023996	unsupervised PFMT	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/60	0			
Olmo 2013 no pmid	percutaneous stimulation of the posterior tibial nerve	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/12	0			
Olmo 2013 no pmid	electroacupuncture of SP 6 (Sanyinjiao)	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/24	0			
Orri 2014 24792229	Placebo	Sham/no treatment	AE (undefined/nonmajor)	any AE	0/6	0			
Orri 2014 24792229	Tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	1/12	8.3			
Orri 2014 24792229	Tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	diarrea	1/12	8.3			
Pai 2015 26855795	Bulkamid periurethral bulking	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention	1/256	0.4	3 months		
Pereira 2012 22840592	surface electricl stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/7	0			
Pereira 2012 22840592	no treatment	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/7	0			
Pereira 2013 22674639	pelvic floor muscle training	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/13	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Pereira 2013 22674639	vaginal cones	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/15	0			
Peters 2009 19616802	Tolterodine tartrate	Medication: Anticholinergic	AE (undefined/nonmajor)	at least 1 moderate adverse event	7/49	14.3	ND		
Peters 2009 19616802	Percutaneous Tibial Nerve Stimulation	Neuromodulation	AE (undefined/nonmajor)	at least 1 moderate adverse event	8/49	16.3	ND		
Peters 2013 26663447	Interstim 14 Hz	Neuromodulation	AE, serious	serious or an unanticipated adverse device effect	0/12	0			
Peters 2013 26663447	Interstim 25 Hz	Neuromodulation	AE, serious	serious or an unanticipated adverse device effect	0/12	0			
Peters 2013 26663447	Interstim 5.2 Hz	Neuromodulation	AE, serious	serious or an unanticipated adverse device effect	0/12	0			
Peters 2013 26663447	Interstim 5.2 Hz	Neuromodulation	Gastrointestinal/ abdominal symptoms (abdominal discomfort)	abdominal discomfort	1/12	8.3			
Peters 2013 26663447	Interstim 25 Hz	Neuromodulation	Gastrointestinal/ abdominal symptoms (constipation)	constipation	1/12	8.3			
Peters 2013 26663447	Interstim 5.2 Hz	Neuromodulation	Gastrointestinal/ abdominal symptoms (diarrhea)	diarrhea	1/12	8.3			
Peters 2013 26663447	Interstim 25 Hz	Neuromodulation	Pain - general/undefined	pain	1/12	8.3			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Peters 2013 26663447	Interstim 25 Hz	Neuromodulation	Pain - pelvic	pelvic pain	1/12	8.3			
Peters 2013 26663447	Interstim 25 Hz	Neuromodulation	Pain, bladder	bladder discomfort	1/12	8.3			
Peters 2013 26663447	Interstim 5.2 Hz	Neuromodulation	Pain, bladder	bladder discomfort	1/12	8.3			
Porta-Roda 2015 25130167	Kegels with spheres	Behavioral Therapy	Allergic reaction	hypersensitivity	1/35	2.9		yes	
Porta-Roda 2015 25130167	Kegels with spheres	Behavioral Therapy	Itching	itching	1/35	2.9		yes	
Porta-Roda 2015 25130167	Kegels with spheres	Behavioral Therapy	Localized reaction	irritation	1/35	2.9		yes	
Porta-Roda 2015 25130167	Kegels with spheres	Behavioral Therapy	Pain - general/undefined	local discomfort	1/35	2.9		yes	
Preik, 2004 15476516	oxybutinin CR 5 -30 mg	Medication: Anticholinergic	Dry mouth	dry mouth	11/46	23.9	7 weeks		
Preik, 2004 15476516	oxybutinin IR 5-30 mg	Medication: Anticholinergic	Dry mouth	dry mouth	21/47	44.7	7 weeks		
Resnick 2013 23168606	biofeedback-assisted pelvic muscle training (4 biweekly visits)	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/183	0	12 weeks		
Robinson 2011 21831512	PSD503 (phenylephrine vaginal gel)	Medication: alpha agonist	AE, serious	Any serious adverse events	0/12	0		blindly assigned as either possibly or probably treatment related	
Robinson 2011 21831512	Placebo	Sham/no treatment	AE, serious	Any serious adverse events	0/12	0		blindly assigned as either possibly or probably treatment related	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Robinson 2011 21831512	PSD503 (phenylephrine vaginal gel)	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Diarrhea	2/12	16.7		blindly assigned as either possibly or probably treatment related	
Robinson 2011 21831512	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	1/12	8.3		blindly assigned as either possibly or probably treatment related	
Robinson 2011 21831512	PSD503 (phenylephrine vaginal gel)	Medication: alpha agonist	Liver function tests, abnormal	elevated ALT/AST	1/12	8.3		blindly assigned as either possibly or probably treatment related	
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any ae	114/202	56.4	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any ae	111/211	52.6	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	26/202	12.9	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	Dry mouth	Dry mouth	19/211	9	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	8/211	3.8	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	7/202	3.5	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	7/202	3.5	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Infection - URI	nasopharyngitis	9/202	4.5	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	Headache	headache	6/211	2.8	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Rogers, 2008 18685795	Placebo	Sham/no treatment	Infection - URI	nasopharyngitis	10/211	4.7	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	Infection - UTI	urinary tract infection	5/211	2.4	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	12/202	5.9	12 weeks		
Rogers, 2008 18685795	Placebo	Sham/no treatment	Sleep disorder	insomnia	0/211	0	12 weeks		
Rogers, 2008 18685795	Tolterodine 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	5/202	2.5	12 weeks		
Saks 2012 22288516	Anticholinergic	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	0/152	0			
Salvatore, 2005 15808387	oxybutinin 2.5 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	3/27	11.1	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	4/39	10.3	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Cardiac/chest Pain	tachycardia	1/39	2.6	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Cardiac/chest Pain	tachycardia	0/27	0	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	2/39	5.1	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	0/27	0	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	1/39	2.6	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	0/27	0	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry eye/mucosa	dry nose	1/39	2.6	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry eye/mucosa	dry nose	0/27	0	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	4/39	10.3	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	1/27	3.7	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Dry mouth	dry throat	2/27	7.4	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	4/39	10.3	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/27	0	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Headache	headache	1/39	2.6	6 weeks		
Salvatore, 2005 15808387	oxybutinin 5 mg	Medication: Anticholinergic	Headache	headache	0/27	0	6 weeks		
Samuelsson 2017 NCT01848938	Waiting list	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/61	0			
Samuelsson 2017 NCT01848938	PFMT	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/62	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/96	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/32	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/19	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/101	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/39	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	1/96	1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - confusion	confusion	0/21	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	3/32	9.4	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	6/152	3.9	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	0/21	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	1/101	1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	7/163	4.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	6/19	31.6	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	14/32	43.8	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	23/96	24	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	43/152	28.3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	9/21	42.9	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	11/39	28.2	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	35/101	34.7	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	55/163	33.7	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	2/32	6.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	3/96	3.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	5/152	3.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	3/19	15.8	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	4/32	12.5	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	6/96	6.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	13/152	8.6	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	0/21	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	1/39	2.6	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	2/101	2	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	3/163	1.8	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	1/32	3.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	1/19	5.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	6/96	6.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	8/152	5.3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/39	2.6	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	3/21	14.3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	7/101	6.9	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	11/163	6.7	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/32	3.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/19	5.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	3/96	3.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	5/152	3.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	1/32	3.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	2/96	2.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	3/152	2	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Headache	headache	0/19	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Headache	headache	2/32	6.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Headache	headache	12/96	12.5	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Headache	headache	14/152	9.2	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	0/96	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	0/32	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	0/152	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Sleep disorder	insomnia	0/32	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Sleep disorder	insomnia	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Sleep disorder	insomnia	1/96	1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Sleep disorder	insomnia	1/152	0.7	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	2/39	5.1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	3/21	14.3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	7/101	6.9	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	10/163	6.1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/21	4.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	2/101	2	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	3/163	1.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	0/39	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	0/21	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	3/101	3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	3/163	1.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Headache	headache	1/21	4.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Headache	headache	5/39	12.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Headache	headache	11/101	10.9	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Headache	headache	17/163	10.4	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	2/96	2.1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	4/32	12.5	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	6/152	3.9	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Visual AE	blurred vision	0/19	0	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Visual AE	blurred vision	1/96	1	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Visual AE	blurred vision	2/32	6.3	12 weeks		
Sand 2004 15517668	ER-Oxybutynin chloride 10 mg	Medication: Anticholinergic	Visual AE	blurred vision	4/152	2.6	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	1/101	1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	1/21	4.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Psychological - anxiety	nervousness	2/163	1.2	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	0/21	0	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	3/101	3	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	3/163	1.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	1/101	1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	1/21	4.8	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Urinary retention/voiding dysfunction	impaired urination/urinary retention	2/163	1.2	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Visual AE	blurred vision	0/39	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Visual AE	blurred vision	0/21	0	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Visual AE	blurred vision	1/101	1	12 weeks		
Sand 2004 15517668	tolterodine tartrate 4 mg	Medication: Anticholinergic	Visual AE	blurred vision	1/163	0.6	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	AE, treatment related	Total subjects with> = 1 TEAE	138/484	28.5	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	AE, treatment related	Total subjects with> = 1 TEAE	83/505	16.4	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	D/C due to AE	adverse events leading to discontinuation	24/484	5	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	9/484	1.9	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	D/C due to AE	adverse events leading to discontinuation	18/505	3.6	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Dry eye/mucosa	Dry eye	1/505	0.2	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Dry mouth	Dry mouth	19/505	3.8	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Dry skin	dry skin	1/505	0.2	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - abdominal distension	abdominal distension	2/505	0.4	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	abdominal pain	2/505	0.4	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	6/505	1.2	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	4/505	0.8	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	55/484	11.4	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	1/505	0.2	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Dry skin	dry skin	5/484	1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal distension	abdominal distension	6/484	1.2	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	7/484	1.4	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	43/484	8.9	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	6/484	1.2	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	7/484	1.4	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Headache	headache	7/484	1.4	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Headache	headache	14/505	2.8	12 weeks		
Sand 2009 19727537	Placebo	Sham/no treatment	Infection - UTI	urinary tract infection	4/505	0.8	12 weeks		
Sand 2009 19727537	Trospium 60 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	7/484	1.4	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	58/131	44.3	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	49/134	36.6	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	CNS - dizziness	Dizziness	12/131	9.2	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Dry mouth	Dry mouth	26/131	19.8	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	6/134	4.5	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Dry mouth	Dry mouth	2/134	1.5	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	19/131	14.5	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	anorexia	4/131	3.1	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	7/134	5.2	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	14/131	10.7	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - anorexia	anorexia	0/134	0	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	1/134	0.7	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	10/131	7.6	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	4/134	3	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Sleep disorder	Sleep disorder	4/131	3.1	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Sleep disorder	Sleep disorder	1/134	0.7	12 weeks		
Schagen van Leeuwena 2008 18547757	Placebo	Sham/no treatment	Sweating, excessive	hyperhidrosis	0/134	0	12 weeks		
Schagen van Leeuwena 2008 18547757	Duloxetine 73 mg	Medication: alpha agonist	Sweating, excessive	hyperhidrosis	7/131	5.3	12 weeks		
Segal 2016 27636211	PFMT (FemiScan Pelvic Floor Therapy Sys- tem uses office electromyo graphy and an in-home programma ble device)	behavioral therapy	AE (undefined/nonm ajor)	Any AE	0/361	0	16 weeks		
Sherburn 2011 21284022	bladder training	Behavioral therapy	Cardiac/chest Pain	MI	1/41	2.4		no	

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sherburn 2011 21284022	PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/43	0			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	AE (undefined/nonmajor)	any device-related AEs	127/272	46.7			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	AE, serious	Serious AE: implant site erosion	1/272	0.4			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Device malfunction/revision	device replacement	55/272	20.2	36 months		
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Device malfunction/revision	device revision	11/272	4			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Device malfunction/revision	Lead migration	12/272	4.4			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Device malfunction/revision	permanent explant	34/272	12.5			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Device malfunction/revision	undesirable change in stimulation	49/272	18			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Infection - implant	Implant site infections	10/272	3.7			
Siegel 2016 27131966	Neuromodulation (InterStim)	Neuromodulation	Pain - implant	implant site pain	34/272	12.5			
Sjostrom 23350826	PFMT	behavioral therapy	Pain - musculoskeletal	lower abdominal pain when conducting pelvic floor muscle training	1/250	0.4	3 months		
Sokol 2014 24704117	Bulkamid	Periurethral bulking	AE (undefined/nonmajor)	other	6/229	2.6			0.43

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Hematuria	hematuria	3/229	1.3			0.55
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Infection - UTI	UTI	8/229	3.5			0.27
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Pain - implant	implantation site pain	28/229	12.2			0.26
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Pain - pelvic	pelvic pain	0/229	0			0.03
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Urinary retention/voiding dysfunction	dysuria	2/229	0.9			0.6
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Urinary retention/voiding dysfunction	nonacute urinary retention longer than 7 days	0/229	0			0.03
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention, acute	13/229	5.7			0.26
Sokol 2014 24704117	Bulkamid	Periurethral bulking	Vaginitis	vaginal infection/irritation /lichen sclerosis	1/229	0.4			1
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	AE (undefined/nonmajor)	other	1/116	0.9			0.43
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Hematuria	hematuria	0/116	0			0.55
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Infection - UTI	UTI	7/116	6			0.27
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Pain - implant	implantation site pain	9/116	7.8			0.26
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Pain - pelvic	pelvic pain	3/116	2.6			0.03

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Urinary retention/voiding dysfunction	dysuria	2/116	1.7			0.6
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Urinary retention/voiding dysfunction	urinary retention, acute	11/116	9.5			0.26
Sokol 2014 24704117	Contigen collagen gel	Periurethral bulking	Vaginitis	vaginal infection/irritation /lichen sclerosis	0/116	0			1
Solberg 2016 26362793	control (wait list)	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/12	0			
Solberg 2016 26362793	accupuncture	Alternative medicine	Fatigue/drowsiness	tired right after treatment	1/12	8.3			
Solberg 2016 26362793	accupuncture	Alternative medicine	Infection - UTI	more UTI symptoms	1/12	8.3			
Solberg 2016 26362793	PFMT	Behavioral therapy	Infection - UTI	more UTI symptoms	1/10	10			
Sran 2016 26886884	education	behavioral therapy	AE (undefined/nonmajor)	Any AE	0/24	0			
Sran 2016 26886884	physical therapy	Behavioral Therapy	AE (undefined/nonmajor)	Any AE	0/24	0			
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	AE (undefined/nonmajor)	Any AE	121/153	79.1	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Anorgasmia	Anorgasmia	5/153	3.3	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	1/153	0.7	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	85/153	55.6	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Steers 2007 17511767	Placebo	Sham/no treatment	Anorgasmia	Anorgasmia	0/153	0	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Dry mouth	Dry mouth	25/153	16.3	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Dry mouth	Dry mouth	2/153	1.3	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Fatigue/drowsiness	Fatigue	16/153	10.5	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Fatigue/drowsiness	Somnolence	6/153	3.9	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Fatigue/drowsiness	Fatigue	3/153	2	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Appetite decreased	6/153	3.9	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Fatigue/drowsiness	Somnolence	0/153	0	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	constipation	21/153	13.7	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Appetite decreased	Appetite decreased	0/153	0	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	5/153	3.3	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	diarrhea	10/153	6.5	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Steers 2007 17511767	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhea	diarrhea	5/153	3.3	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	Nausea	47/153	30.7	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Gastrointestinal/ abdominal symptoms	vomiting	5/153	3.3	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/153	4.6	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Headache	Headache	13/153	8.5	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - vomiting	vomiting	3/153	2	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Headache	Headache	8/153	5.2	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Psychological - anxiety	Anxiety	5/153	3.3	12 weeks		
Steers 2007 17511767	Duloxetine 80-120 mg/day	Medication: alpha agonist	Sleep disorder	Insomnia	20/153	13.1	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Psychological - anxiety	Anxiety	0/153	0	12 weeks		
Steers 2007 17511767	Placebo	Sham/no treatment	Sleep disorder	Insomnia	5/153	3.3	12 weeks		
Sung 2015 26215431	Fesoterodine	medication: anticholinergic	AE, serious	serious adverse events (not further defined)	13/682	1.9			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Sung 2015 26215431	Fesoterodine	medication: anticholinergic	Dry mouth	Dry mouth	162/682	23.8	24 weeks		
Sung 2015 26215431	Fesoterodine	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	43/682	6.3			
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	CNS - dizziness	dizziness	7/417	1.7	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	CNS - dizziness	dizziness	4/410	1	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Dry eye/mucosa	xerophthalmia	16/417	3.8	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Dry eye/mucosa	xerophthalmia	8/410	2	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Dry skin	dry skin	2/417	0.5	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Dry skin	dry skin	1/410	0.2	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Fatigue/drowsiness	somnolence	8/410	2	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Fatigue/drowsiness	somnolence	12/417	2.9	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - abdominal pain	abdominal pain	18/417	4.3	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Abdominal pain	abdominal pain	7/410	1.7	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	14/410	3.4	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - diarrhoea	diarrhoea	9/410	2.2	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	6/410	1.5	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - flatulence	flatulence	6/410	1.5	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	9/410	2.2	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	27/417	6.5	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhoea	diarrhoea	10/417	2.4	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	dyspepsia	11/417	2.6	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - flatulence	flatulence	8/417	1.9	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	7/417	1.7	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Headache	headache	29/417	7	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Swift, 2003 12601517	Placebo	Sham/no treatment	Headache	headache	19/410	4.6	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Infection - URI	sinusitis	1/410	0.2	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Infection - URI	sinusitis	3/410	0.7	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Infection - UTI	urinary tract infection	19/410	4.6	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Infection - URI	sinusitis	2/408	0.5	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Infection - URI	sinusitis	8/417	1.9	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Infection - UTI	urinary tract infection	15/417	3.6	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Sleep disorder	insomnia	9/410	2.2	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Sleep disorder	insomnia	7/417	1.7	12 weeks		
Swift, 2003 12601517	Tolterodine 4 mg	Medication: Anticholinergic	Visual AE	abnormal vision	5/417	1.2	12 weeks		
Swift, 2003 12601517	Placebo	Sham/no treatment	Visual AE	abnormal vision	2/410	0.5	12 weeks		
Szonyi G. 1995 7484484	Oxybutynin 5mg	medication: anticholinergic	Dry mouth	Dry mouth	26/28	92.9	6 weeks		
Szonyi G. 1995 7484484	Oxybutynin 5mg	medication: anticholinergic	Dry skin	dry skin	14/28	50	6 weeks		
Szonyi G. 1995 7484484	Placebo	Sham/no treatment	Dry mouth	Dry mouth	25/29	86.2	6 weeks		
Szonyi G. 1995 7484484	Placebo	Sham/no treatment	Dry skin	dry skin	12/29	41.4	6 weeks		
Szonyi G. 1995 7484484	Oxybutynin 5mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	14/28	50	6 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Szonyi G. 1995 7484484	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation	13/29	44.8	6 weeks		
Szonyi G. 1995 7484484	Oxybutynin 5mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - heartburn	heartburn	16/28	57.1	6 weeks		
Szonyi G. 1995 7484484	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - heartburn	heartburn	13/29	44.8	6 weeks		
Szonyi G. 1995 7484484	Oxybutynin 5mg	medication: anticholinergic	Visual AE	Blurred vision	14/28	50	6 weeks		
Szonyi G. 1995 7484484	Placebo	Sham/no treatment	Visual AE	Blurred vision	17/29	58.6	6 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	29/31	93.5	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	29/37	78.4			
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	29/37	78.4	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry skin	dry skin	13/31	41.9	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry skin	dry skin	13/37	35.1			
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Dry skin	dry skin	13/37	35.1	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry mouth	Dry mouth	10/31	32.3	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry mouth	Dry mouth	10/33	30.3			
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry mouth	Dry mouth	10/33	30.3	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry skin	dry skin	1/31	3.2	2 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry skin	dry skin	1/33	3			
Tapp, 1990 2198921	Placebo	Sham/no treatment	Dry skin	dry skin	1/33	3	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	13/31	41.9	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	13/37	35.1			
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	13/37	35.1	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	6/31	19.4	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/31	22.6	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/37	18.9			
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	7/37	18.9	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	0/31	0	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Visual AE	Blurred vision	1/31	3.2	2 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Visual AE	Blurred vision	8/31	25.8	2 weeks		
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Visual AE	Blurred vision	8/37	21.6			
Tapp, 1990 2198921	Oxybutynin 20 mg	Medication: Anticholinergic	Visual AE	Blurred vision	8/37	21.6	2 weeks		
Tapp, 1990 2198921	Placebo	Sham/no treatment	Visual AE	Blurred vision	1/33	3			
Tapp, 1990 2198921	Placebo	Sham/no treatment	Visual AE	Blurred vision	1/33	3	2 weeks		
Terlikowski 2013 23443345	(TVES+sEMG) transvaginal electrical stimulation with surface-electromyography-assisted biofeed-back	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/68	0			
Terlikowski 2013 23443345	Placebo	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/34	0			
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Cardiac/chest Pain	heart disturbance-mild	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Cardiac/chest Pain	heart disturbance-mild	0/52	0	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	CNS - dizziness	dizziness-mild + moderate	2/63	3.2	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	D/C due to AE	Incomplete treatment due to adverse events	2/63	3.2	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	CNS - dizziness	dizziness-mild + moderate	1/52	1.9	4 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Dry mouth	dry mouth-mild + severe	30/63	47.6	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	D/C due to AE	Incomplete treatment due to adverse events	0/52	0	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Fatigue/drowsiness	fatigue-mild	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Dry mouth	dry mouth-mild + severe	6/52	11.5	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Fatigue/drowsiness	fatigue-mild	0/52	0	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - constipation-moderate	constipation-moderate	2/63	3.2	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - gastric distress-mild + moderate	gastric distress-mild + moderate	7/63	11.1	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	constipation-moderate	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - gastric distress	gastric distress-mild + moderate	4/52	7.7	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	nausea	4/63	6.3	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - nausea	nausea	4/52	7.7	4 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Headache	headache-moderate	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Pain - general/undefined	increased polyr. pain-mild	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Pain, bladder	bladder pain-moderate	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Psychological - anxiety	nervousness-mild	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Psychological - depression	depression-moderate	0/63	0	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Sleep disorder	sleep disturbance-mild	0/63	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Headache	headache-moderate	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Pain - general/undefined	increased polyr. pain-mild	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Pain, bladder	bladder pain-moderate	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Psychological - anxiety	nervousness-mild	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Psychological - depression	depression-moderate	1/52	1.9	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Sleep disorder	sleep disturbance-mild	1/52	1.9	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Visual AE	vision disturbances-mild	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Visual AE	vision disturbances-moderate	1/63	1.6	4 weeks		
Thüroff 1991 2005707	Oxybutynin 15mg	medication: anticholinergic	Weight gain	weight gain-mild	1/63	1.6	4 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Thüroff 1991 2005707	Placebo	Sham/no treatment	Visual AE	vision disturbances-mild	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Visual AE	vision disturbances-moderate	0/52	0	4 weeks		
Thüroff 1991 2005707	Placebo	Sham/no treatment	Weight gain	weight gain-mild	1/52	1.9	4 weeks		
Toozs-Hobson, 2012 22531952	polyacrylamide hydrogel	Periurethral bulking	AE (undefined/nonmajor)	nonserious AEs	16/135	11.9		no	
Toozs-Hobson, 2012 22531952	polyacrylamide hydrogel	Periurethral bulking	AE, serious	serious AEs	4/135	3		no	
Toozs-Hobson, 2012 22531952	polyacrylamide hydrogel	Periurethral bulking	D/C due to AE	withdrawal due to aggravated UI	1/135	0.7	24-month	unclear	
Toozs-Hobson, 2012 22531952	polyacrylamide hydrogel	Periurethral bulking	Urinary retention/voiding dysfunction	impaired bladder emptying based on postvoid residuals	0/135	0		no	
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	AE (undefined/nonmajor)	Any AE	88/127	69.3			0.79
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	AE, serious	Respiratory muscle weakness and/or paresis	0/127	0			0.12
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Cardiac/chest Pain	Chest Pain	1/127	0.8		No	
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	CNS - confusion - Mental confusion and/or status changes	Mental confusion and/or status changes	1/127	0.8			0.41
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Dry eye/mucosa	Dry eye	21/127	16.5			0.12

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Dry mouth	Dry mouth	58/127	45.7			0.02
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Fever	Fever, Chills and/or Other flu like symptoms	13/127	10.2			0.13
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	Constipation	36/127	28.3			0.06
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	Diarrhea	14/127	11			0.21
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - vomiting/nausea	Vomiting and/or Nausea	6/127	4.7			0.55
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Headache	Headache; delirium	0/127	0		No	
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Hematuria	Visible blood in urine	10/127	7.9			0.15
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Infection - URI	Dehydration; pneumonia	1/127	0.8		No	
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Infection - UTI	Cloudy urine, Unusual urine odor and/or UTI	29/127	22.8			0.01
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Pain - musculoskeletal - back pain	Back pain	0/127	0		No	
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Pain - musculoskeletal - flank pain	Flank pain	3/127	2.4			0.08
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Pain - needle site	Pain at injection site	23/127	18.1			0.41

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Visco, 2012 23036134	Anticholinergic	Medication: Anticholinergic	Rash	Rash/hives and/or Other type of allergic reaction	5/127	3.9			0.09
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	AE (undefined/nonmajor)	Any AE	88/120	73.3			0.79
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	AE, serious	At least 1 SAE	4/120	3.3		No	0.7
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Cardiac/chest Pain	Chest Pain	0/120	0		No	
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	CNS - confusion	Mental confusion and/or status changes	3/120	2.5			0.41
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Dry eye/mucosa	Dry eye	29/120	24.2			0.12
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Dry mouth	Dry mouth	37/120	30.8			0.02
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Fever	Fever, Chills and/or Other flu like symptoms	19/120	15.8			0.13
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Gastrointestinal/ abdominal symptoms	Constipation	25/120	20.8			0.06
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Gastrointestinal/ abdominal symptoms - diarrhea	Diarrhea	18/120	15			0.21
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Gastrointestinal/ abdominal symptoms - vomiting/nausea	Vomiting and/or Nausea	8/120	6.7			0.55
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Headache	Headache; delirium	1/120	0.8		No	
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Hematuria	Visible blood in urine	15/120	12.5			0.15

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Infection - URI	Dehydration; pneumonia	0/120	0		No	
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Infection - UTI	Urinary tract infection	40/120	33.3			<0.001
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Pain - musculoskeletal - back	Back pain	1/120	0.8		No	
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Pain - musculoskeletal - flank	Flank pain	7/120	5.8			0.08
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Pain - needle site	Pain at injection site	25/120	20.8			0.41
Visco, 2012 23036134	OnabotulinumtoxinA	Medication: bladder botox	Rash	Rash/hives and/or Other type of allergic reaction	12/120	10			0.09
Wallis 2012 21817123	Placebo	Sham/no trealment	AE (undefined/nonmajor)	Any AE	0/51	0			
Wallis 2012 21817123	static magnetic stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/50	0			
Wang 2017 28153510	electrical pudendal nerve stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/80	0			
Wang 2017 28153510	transvaginal electrical stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/40	0			
Wiegersma 2014 25533442	watchful waiting	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/124	0			
Wiegersma 2014 25533442	PFMT	Behavioral therapy	AE (undefined/nonmajor)	Any AE	0/106	0			
Xu, 2016 26960195	sham	Sham/no treatment	AE, serious	Serious AE	0/40	0			

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Xu, 2016 26960195	sham	Sham/no treatment	Fatigue/drowsiness	fatigue	1/40	2.5			
Xu, 2016 26960195	sham	Sham/no treatment	Localized reaction	hematoma at the needling site	0/40	0			
Xu, 2016 26960195	sham	Sham/no treatment	Pain - general/undefined	persistent pain	1/40	2.5			
Xu, 2016 26960195	electroacupuncture therapy	Neuromodulation	AE, serious	Serious adverse events	0/40	0			
Xu, 2016 26960195	electroacupuncture therapy	Neuromodulation	Fatigue/drowsiness	fatigue	0/40	0			
Xu, 2016 26960195	electroacupuncture therapy	Neuromodulation	Localized reaction	hematoma at the needling site	2/40	5			
Xu, 2016 26960195	electroacupuncture therapy	Neuromodulation	Pain - general/undefined	persistent pain after electroacupuncture	1/40	2.5			
Yamanishi 2017 28961380	sham pulsed magnetic stimulation	Sham/no treatment	AE (undefined/nonmajor)	Any AE	0/12	0	10 weeks		
Yamanishi 2017 28961380	pulsed magnetic stimulation	Neuromodulation	AE (undefined/nonmajor)	Any AE	0/26	0	10 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	CNS - dizziness	Vertigo: Possibly related to drug	4/830	0.5	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	CNS - dizziness	Vertigo: Possibly related to drug	10/828	1.2	12 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Dry mouth	Dry mouth: Possibly related to drug	11/830	1.3	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Dry mouth	Mouth Dryness	631/830	76	12 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	10/830	1.2	12 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Diarrhea	Diarrhea	1/830	0.1	12 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Dyspepsia	Dyspepsia	1/830	0.1	12 weeks		
Zellner 2009 20109997	Oxybutynin Hydrochloride 7.5-15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Nausea	Nausea	8/830	1	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	Dry mouth	Dry mouth: Possibly related to drug	16/828	1.9	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	Constipation: Probably related to drug	1/828	0.1	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - diarrhea	Diarrhea: Possibly related to drug	8/828	1	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - dyspepsia	Dyspepsia: Possibly related to drug	9/828	1.1	12 weeks		
Zellner 2009 20109997	Trospium chloride 45-90 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - nausea	Nausea: Possibly related to drug	9/828	1.1	12 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Zimmern 2009 19912207	tolterodine	Medication: Anticholinergic	CNS - confusion	Confusion	14/154	9.1	10 weeks		
Zimmern 2009 19912207	tolterodine-extended release	Medication: Anticholinergic	CNS - confusion	Confusion	16/153	10.5	10 weeks		
Zimmern 2009 19912207	tolterodine	Medication: Anticholinergic	Dry mouth	Dry mouth	103/154	66.9	10 weeks		
Zimmern 2009 19912207	tolterodine-extended release	Medication: Anticholinergic	Dry mouth	Dry mouth	114/153	74.5	10 weeks		
Zimmern 2009 19912207	tolterodine	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	63/154	40.9	10 weeks		
Zimmern 2009 19912207	tolterodine-extended release	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - constipation	constipation	64/153	41.8	10 weeks		
Zimmern 2009 19912207	tolterodine	Medication: Anticholinergic	Visual AE	Blurred vision	14/154	9.1	10 weeks		
Zimmern 2009 19912207	tolterodine-extended release	Medication: Anticholinergic	Visual AE	Blurred vision	15/153	9.8	10 weeks		
Zinner 2005	Darifenacin control release 15mg	medication: anticholinergic	D/C due to AE	Discontinuation due to AE	2/19	10.5	8 weeks		
Zinner 2005	Oxybutynin 15mg	medication: anticholinergic	D/C due to AE	Discontinuation due to AE	6/19	31.6	8 weeks		
Zinner 2005 16096831	Darifenacin 15 mg	Medication: Anticholinergic	CNS - dizziness	Dizziness	0/61	0	8 weeks		
Zinner 2005 16096831	Darifenacin 30 mg	Medication: Anticholinergic	CNS - dizziness	Dizziness	0/61	0	8 weeks		
Zinner 2005 16096831	Darifenacin 15 mg	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	0/61	0	8 weeks		
Zinner 2005 16096831	Darifenacin 30 mg	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	1/61	1.6	8 weeks		

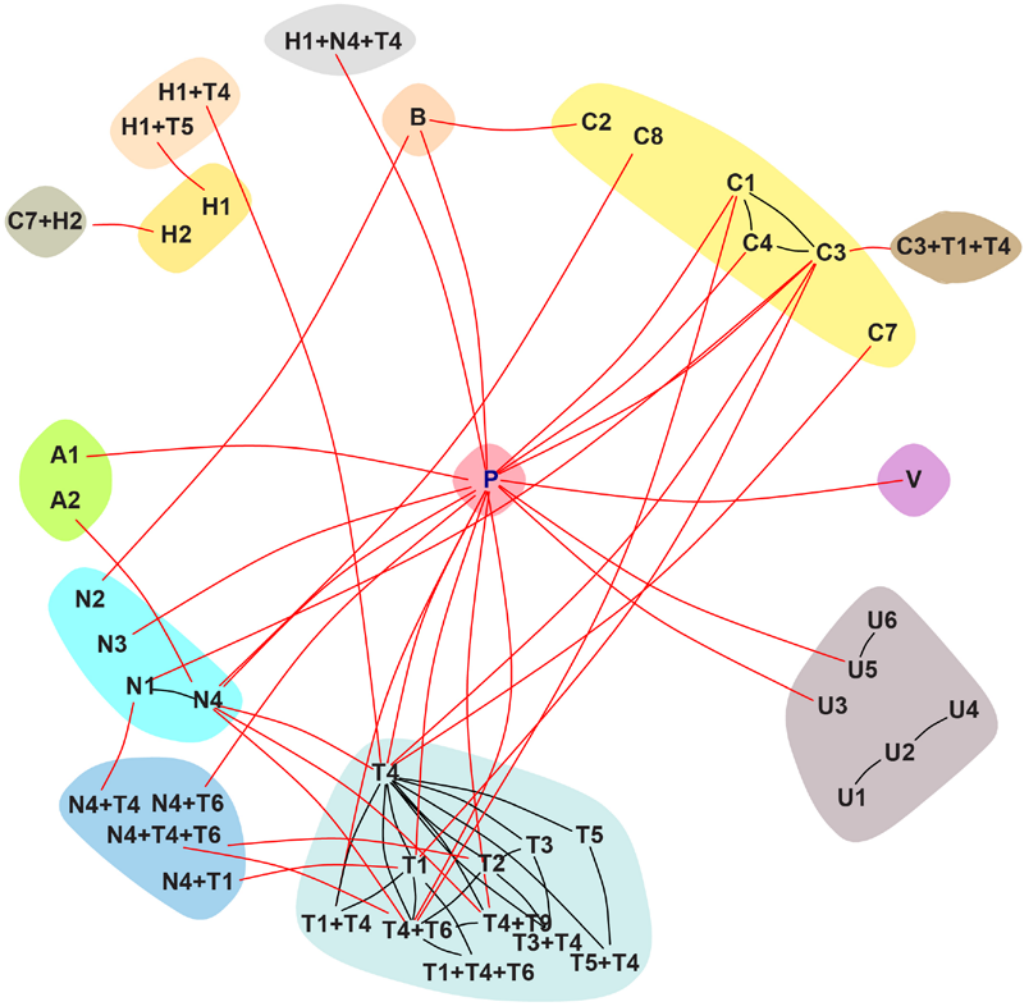
Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Zinner 2005 16096831	Darifenacin 15 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	8/61	13.1	8 weeks		
Zinner 2005 16096831	Oxybutynin 15 mg	Medication: Anticholinergic	CNS - dizziness	Dizziness	1/61	1.6	8 weeks		
Zinner 2005 16096831	Oxybutynin 15 mg	Medication: Anticholinergic	D/C due to AE	Discontinuation due to AE	3/61	4.9	8 weeks		
Zinner 2005 16096831	Darifenacin 30 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	21/61	34.4	8 weeks		
Zinner 2005 16096831	Placebo	Sham/no treatment	CNS - dizziness	Dizziness	0/61	0	8 weeks		
Zinner 2005 16096831	Oxybutynin 15 mg	Medication: Anticholinergic	Dry mouth	Dry mouth	22/61	36.1	8 weeks		
Zinner 2005 16096831	Placebo	Sham/no treatment	D/C due to AE	Discontinuation due to AE	0/61	0	8 weeks		
Zinner 2005 16096831	Placebo	Sham/no treatment	Dry mouth	Dry mouth	3/61	4.9	8 weeks		
Zinner 2005 16096831	Oxybutynin 15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms - Constipation	Constipation	5/61	8.2	8 weeks		
Zinner 2005 16096831	Placebo	Sham/no treatment	Gastrointestinal/ abdominal symptoms - constipation	Constipation	2/61	3.3	8 weeks		
Zinner 2005 16096831	Darifenacin 15 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms	Constipation	6/61	9.8	8 weeks		
Zinner 2005 16096831	Darifenacin 30 mg	Medication: Anticholinergic	Gastrointestinal/ abdominal symptoms	Constipation	13/61	21.3	8 weeks		
Zinner 2005 16096831	Oxybutynin 15 mg	Medication: Anticholinergic	Visual AE	Blurred vision	2/61	3.3	8 weeks		
Zinner 2005 16096831	Darifenacin 15 mg	Medication: Anticholinergic	Visual AE	Blurred vision	0/61	0	8 weeks		
Zinner 2005 16096831	Darifenacin 30 mg	Medication: Anticholinergic	Visual AE	Blurred vision	0/61	0	8 weeks		

Study Author, Year PMID	Intervention	Intervention Category	AE Category	AE	n w/Events/ N Analyzed	% w/Events	Time	Related to Intervention?	P Between Arms
Zinner 2005 16096831	Placebo	Sham/no treatment	Visual AE	Blurred vision	0/61	0	8 weeks		

Appendix G. Urinary Incontinence Results for Individual Interventions

Cure

Figure G-1. Evidence graph of RCTs evaluating cure across individual interventions



A1: duloxetine
A2: midodrine

B: onabotulinum toxin A

C1: oxybutynin
C2: solifenacin
C3: tolterodine
C4: trospium
C5: fesoterodine
C6: flavoxate
C7: phenylpropanolamine
C8: propantheline
C9: propiverine

H1: estrogen, vaginal
H2: estrogen, oral
H3: estrogen, subcutaneous
H4: estrogen, transdermal
H5: raloxifene

N1: electroacupuncture
N2: InterStim
N3: magnetic stimulation
N4: TENS

T1: bladder training
T2: education
T3: heat therapy
T4: PFMT
T5: bladder support
T6: biofeedback
T7: MBSR
T8: yoga
T9: weights

U1: polyacrylamide
U2: collagen
U3: autologous fat
U4: carbonated beads
U5: polydimethylsiloxane
U6: porcine collagen
U7: dextranomer hyaluronate

V: intravesical pressure release

P: sham/no treatment/placebo

Comparisons Across Individual Interventions

Table G-1. Comparative odds ratios for cure between interventions – part 1

A1	A1	0.78 (0.15, 3.98)	0.34 (0.1, 1.16)	0.56 (0.19, 1.59)	0.92 (0.18, 4.69)	0.49 (0.17, 1.39)	0.42 (0.1, 1.85)	0.63 (0.19, 2.15)	0.87 (0.19, 4.09)
A2	1.29 (0.25, 6.59)	A2	0.44 (0.09, 2.2)	0.72 (0.16, 3.17)	1.18 (0.17, 8.21)	0.63 (0.14, 2.77)	0.54 (0.09, 3.32)	0.81 (0.16, 4.14)	1.12 (0.18, 7.16)
B	2.94 (0.86, 9.96)	2.28 (0.45, 11.46)	B	1.63 (0.58, 4.58)	2.69 (0.81, 8.93)	1.45 (0.52, 3.99)	1.23 (0.28, 5.35)	1.85 (0.55, 6.26)	2.56 (0.56, 11.76)
C1	1.8 (0.63, 5.13)	1.4 (0.32, 6.2)	0.61 (0.22, 1.72)	C1	1.65 (0.37, 7.34)	0.89 (0.45, 1.75)	0.76 (0.21, 2.7)	1.14 (0.42, 3.1)	1.57 (0.39, 6.29)
C2	1.09 (0.21, 5.59)	0.85 (0.12, 5.92)	0.37 (0.11, 1.24)	0.61 (0.14, 2.71)	C2	0.54 (0.12, 2.37)	0.46 (0.07, 2.84)	0.69 (0.14, 3.52)	0.95 (0.15, 6.17)
C3	2.03 (0.72, 5.72)	1.58 (0.36, 6.9)	0.69 (0.25, 1.91)	1.13 (0.57, 2.23)	1.86 (0.42, 8.19)	C3	0.85 (0.28, 2.6)	1.28 (0.48, 3.4)	1.77 (0.45, 7)
C3 + T1 + T4	2.38 (0.54, 10.5)	1.85 (0.3, 11.38)	0.81 (0.19, 3.52)	1.32 (0.37, 4.73)	2.18 (0.35, 13.47)	1.17 (0.39, 3.57)	C3 + T1 + T4	1.5 (0.35, 6.41)	2.07 (0.37, 11.78)
C4	1.58 (0.47, 5.38)	1.23 (0.24, 6.26)	0.54 (0.16, 1.82)	0.88 (0.32, 2.41)	1.45 (0.28, 7.39)	0.78 (0.29, 2.07)	0.67 (0.16, 2.83)	C4	1.38 (0.3, 6.43)
C7	1.15 (0.24, 5.38)	0.89 (0.14, 5.7)	0.39 (0.09, 1.8)	0.64 (0.16, 2.56)	1.05 (0.16, 6.81)	0.57 (0.14, 2.24)	0.48 (0.08, 2.74)	0.72 (0.16, 3.38)	C7
C8	1.48 (0.2, 11.08)	1.15 (0.13, 10.38)	0.5 (0.07, 3.71)	0.82 (0.12, 5.5)	1.35 (0.14, 13.11)	0.73 (0.11, 4.81)	0.62 (0.07, 5.41)	0.93 (0.13, 6.96)	1.29 (0.14, 11.6)
H1 + N4 + T4	3.45 (0.45, 26.22)	2.68 (0.27, 26.31)	1.18 (0.16, 8.81)	1.92 (0.28, 13.06)	3.16 (0.32, 31.04)	1.7 (0.25, 11.46)	1.45 (0.16, 12.85)	2.18 (0.29, 16.5)	3.01 (0.33, 27.73)
H1 + T4	6.49 (1.2, 34.96)‡	5.04 (0.7, 36.23)	2.21 (0.42, 11.69)	3.61 (0.77, 16.89)	5.94 (0.82, 43.22)	3.19 (0.69, 14.76)	2.72 (0.42, 17.53)	4.1 (0.76, 21.95)	5.65 (0.87, 36.77)
N1	9.45 (2.6, 34.3)‡	7.35 (1.43, 37.82)‡	3.22 (0.91, 11.4)	5.26 (1.8, 15.38)‡	8.65 (1.64, 45.61)‡	4.65 (1.75, 12.38)‡	3.97 (0.93, 17.02)	5.97 (1.68, 21.2)‡	8.24 (1.72, 39.51)‡
N2	0.21 (0.03, 1.66)	0.16 (0.02, 1.66)	0.07 (0.01, 0.41)‡	0.12 (0.02, 0.83)‡	0.19 (0.02, 1.58)	0.1 (0.01, 0.73)‡	0.09 (0.01, 0.81)‡	0.13 (0.02, 1.05)	0.18 (0.02, 1.75)
N3	4.11 (1.13, 14.94)‡	3.2 (0.6, 16.99)	1.4 (0.39, 5.01)	2.29 (0.75, 6.97)	3.77 (0.71, 20.03)	2.03 (0.68, 6.08)	1.73 (0.38, 7.95)	2.6 (0.72, 9.39)	3.59 (0.74, 17.48)
N4	2.05 (0.72, 5.81)	1.59 (0.43, 5.9)	0.7 (0.25, 1.93)	1.14 (0.51, 2.54)	1.88 (0.43, 8.27)	1.01 (0.47, 2.19)	0.86 (0.23, 3.2)	1.29 (0.46, 3.64)	1.79 (0.46, 6.97)
N4 + T1	11.03 (1.95, 62.31)‡	8.57 (1.14, 64.7)‡	3.76 (0.68, 20.87)	6.14 (1.24, 30.24)‡	10.1 (1.33, 76.58)‡	5.43 (1.12, 26.29)‡	4.63 (0.69, 31.01)	6.97 (1.24, 39.1)‡	9.61 (1.37, 67.29)‡
N4 + T4	1.3 (0.17, 9.89)	1.01 (0.1, 9.79)	0.44 (0.06, 3.31)	0.72 (0.11, 4.86)	1.19 (0.12, 11.67)	0.64 (0.1, 4.13)	0.55 (0.06, 4.69)	0.82 (0.11, 6.18)	1.13 (0.12, 10.4)
N4 + T4 + T6	1.7 (0.35, 8.22)	1.32 (0.2, 8.67)	0.58 (0.12, 2.75)	0.95 (0.23, 3.9)	1.56 (0.23, 10.34)	0.84 (0.2, 3.43)	0.71 (0.12, 4.17)	1.07 (0.22, 5.16)	1.48 (0.25, 8.91)
N4 + T6	7.2 (1.31, 39.54)‡	5.6 (0.75, 41.73)	2.45 (0.45, 13.34)	4.01 (0.83, 19.36)	6.59 (0.88, 49.19)	3.55 (0.74, 16.97)	3.03 (0.46, 20.04)	4.55 (0.83, 24.88)	6.28 (0.9, 43.59)
T1	2.37 (0.83, 6.77)	1.84 (0.42, 8.11)	0.81 (0.29, 2.25)	1.32 (0.59, 2.94)	2.17 (0.49, 9.62)	1.17 (0.55, 2.5)	1 (0.27, 3.69)	1.5 (0.53, 4.22)	2.07 (0.52, 8.17)
T1 + T4	2.81 (1.02, 7.8)‡	2.19 (0.5, 9.5)	0.96 (0.35, 2.61)	1.57 (0.72, 3.42)	2.58 (0.59, 11.25)	1.39 (0.65, 2.95)	1.18 (0.32, 4.35)	1.78 (0.65, 4.89)	2.45 (0.63, 9.56)
T1 + T4 + T6	3.89 (0.91, 16.64)	3.02 (0.51, 17.99)	1.32 (0.32, 5.56)	2.16 (0.6, 7.8)	3.56 (0.59, 21.42)	1.91 (0.54, 6.8)	1.63 (0.31, 8.53)	2.45 (0.58, 10.42)	3.39 (0.62, 18.46)
T2	1.17 (0.27, 5.04)	0.91 (0.15, 5.42)	0.4 (0.09, 1.68)	0.65 (0.18, 2.36)	1.07 (0.18, 6.47)	0.58 (0.16, 2.07)	0.49 (0.09, 2.59)	0.74 (0.17, 3.16)	1.02 (0.19, 5.53)
T3	1.88 (0.37, 9.57)	1.46 (0.21, 10)	0.64 (0.13, 3.2)	1.05 (0.24, 4.59)	1.72 (0.25, 11.94)	0.93 (0.21, 4.01)	0.79 (0.13, 4.82)	1.19 (0.24, 6)	1.64 (0.27, 10.14)
T3 + T4	7.2 (1.51, 34.41)‡	5.6 (0.86, 36.33)	2.45 (0.52, 11.49)	4.01 (0.98, 16.41)	6.59 (1, 43.38)‡	3.55 (0.88, 14.34)	3.02 (0.52, 17.47)	4.55 (0.96, 21.59)	6.27 (1.07, 36.74)‡
T4	2.5 (0.97, 6.45)	1.94 (0.48, 7.83)	0.85 (0.34, 2.13)	1.39 (0.71, 2.7)	2.29 (0.55, 9.44)	1.23 (0.65, 2.32)	1.05 (0.3, 3.61)	1.58 (0.62, 4.03)	2.18 (0.63, 7.49)
T4 + T6	3.2 (1.2, 8.54)‡	2.49 (0.6, 10.28)	1.09 (0.42, 2.82)	1.78 (0.9, 3.55)	2.93 (0.7, 12.36)	1.58 (0.8, 3.11)	1.35 (0.38, 4.74)	2.02 (0.77, 5.33)	2.79 (0.76, 10.23)
T4 + T9	2.47 (0.63, 9.67)	1.92 (0.35, 10.43)	0.84 (0.22, 3.22)	1.37 (0.42, 4.5)	2.26 (0.4, 12.65)	1.22 (0.38, 3.93)	1.04 (0.21, 5.03)	1.56 (0.4, 6.06)	2.15 (0.43, 10.79)

T5	2.16 (0.52, 8.9)	1.68 (0.29, 9.64)	0.73 (0.18, 2.97)	1.2 (0.34, 4.17)	1.97 (0.34, 11.54)	1.06 (0.31, 3.64)	0.91 (0.18, 4.6)	1.36 (0.33, 5.58)	1.88 (0.37, 9.62)
T5 + T4	1.93 (0.47, 7.99)	1.5 (0.26, 8.65)	0.66 (0.16, 2.66)	1.08 (0.31, 3.74)	1.77 (0.3, 10.34)	0.95 (0.28, 3.26)	0.81 (0.16, 4.12)	1.22 (0.3, 5.01)	1.68 (0.33, 8.63)
U3	0.92 (0.17, 5.14)	0.72 (0.09, 5.44)	0.31 (0.06, 1.74)	0.51 (0.1, 2.53)	0.85 (0.11, 6.41)	0.46 (0.09, 2.22)	0.39 (0.06, 2.61)	0.58 (0.11, 3.24)	0.81 (0.11, 5.69)
U5	1.76 (0.47, 6.55)	1.37 (0.25, 7.45)	0.6 (0.16, 2.21)	0.98 (0.31, 3.08)	1.61 (0.3, 8.78)	0.87 (0.28, 2.69)	0.74 (0.16, 3.49)	1.11 (0.3, 4.12)	1.53 (0.31, 7.67)
U6	5.69 (0.93, 34.64)	4.42 (0.54, 35.91)	1.94 (0.32, 11.67)	3.16 (0.59, 17.07)	5.21 (0.64, 42.34)	2.8 (0.52, 14.96)	2.39 (0.33, 17.35)	3.59 (0.59, 21.8)	4.96 (0.65, 37.62)
V	2.42 (0.53, 11.11)	1.88 (0.29, 12.16)	0.82 (0.18, 3.77)	1.35 (0.34, 5.38)	2.21 (0.34, 14.32)	1.19 (0.3, 4.71)	1.02 (0.18, 5.77)	1.53 (0.33, 7)	2.11 (0.35, 12.63)
P	0.86 (0.36, 2.07)	0.67 (0.17, 2.72)	0.29 (0.12, 0.71)‡	0.48 (0.26, 0.88)‡	0.79 (0.2, 3.19)	0.43 (0.24, 0.77)‡	0.36 (0.11, 1.22)	0.55 (0.23, 1.3)	0.75 (0.21, 2.74)

Shaded cells indicate indirect comparisons

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T5: bladder support, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-2. Comparative odds ratios for cure between interventions – part 2

A1	0.68 (0.09, 5.07)	0.29 (0.04, 2.2)	0.15 (0.03, 0.83)‡	0.11 (0.03, 0.38)‡	4.78 (0.6, 37.93)	0.24 (0.07, 0.88)‡	0.49 (0.17, 1.38)	0.09 (0.02, 0.51)‡	0.77 (0.1, 5.86)
A2	0.87 (0.1, 7.86)	0.37 (0.04, 3.66)	0.2 (0.03, 1.43)	0.14 (0.03, 0.7)‡	6.14 (0.6, 62.73)	0.31 (0.06, 1.66)	0.63 (0.17, 2.33)	0.12 (0.02, 0.88)‡	0.99 (0.1, 9.59)
B	1.99 (0.27, 14.64)	0.85 (0.11, 6.38)	0.45 (0.09, 2.39)	0.31 (0.09, 1.1)	14.02 (2.43, 80.78)‡	0.71 (0.2, 2.55)	1.43 (0.52, 3.96)	0.27 (0.05, 1.48)	2.26 (0.3, 16.91)
C1	1.22 (0.18, 8.12)	0.52 (0.08, 3.55)	0.28 (0.06, 1.3)	0.19 (0.07, 0.56)‡	8.59 (1.2, 61.24)‡	0.44 (0.14, 1.33)	0.88 (0.39, 1.95)	0.16 (0.03, 0.8)‡	1.38 (0.21, 9.29)
C2	0.74 (0.08, 7.16)	0.32 (0.03, 3.11)	0.17 (0.02, 1.23)	0.12 (0.02, 0.61)‡	5.22 (0.63, 43.08)	0.27 (0.05, 1.41)	0.53 (0.12, 2.35)	0.1 (0.01, 0.75)‡	0.84 (0.09, 8.25)
C3	1.37 (0.21, 9.08)	0.59 (0.09, 3.97)	0.31 (0.07, 1.45)	0.21 (0.08, 0.57)‡	9.7 (1.37, 68.55)‡	0.49 (0.16, 1.48)	0.99 (0.46, 2.15)	0.18 (0.04, 0.89)‡	1.56 (0.24, 10.09)
C3 + T1 + T4	1.61 (0.18, 14.03)	0.69 (0.08, 6.12)	0.37 (0.06, 2.36)	0.25 (0.06, 1.08)	11.37 (1.23, 105.08)‡	0.58 (0.13, 2.66)	1.16 (0.31, 4.32)	0.22 (0.03, 1.44)	1.83 (0.21, 15.74)
C4	1.07 (0.14, 7.99)	0.46 (0.06, 3.48)	0.24 (0.05, 1.31)	0.17 (0.05, 0.6)‡	7.56 (0.96, 59.83)	0.38 (0.11, 1.39)	0.77 (0.27, 2.17)	0.14 (0.03, 0.81)‡	1.22 (0.16, 9.18)
C7	0.78 (0.09, 6.99)	0.33 (0.04, 3.07)	0.18 (0.03, 1.15)	0.12 (0.03, 0.58)‡	5.48 (0.57, 52.64)	0.28 (0.06, 1.36)	0.56 (0.14, 2.18)	0.1 (0.01, 0.73)‡	0.88 (0.1, 8.11)
C8	C8	0.43 (0.03, 5.6)	0.23 (0.02, 2.27)	0.16 (0.02, 1.18)	7.06 (0.52, 95.5)	0.36 (0.05, 2.77)	0.72 (0.12, 4.3)	0.13 (0.01, 1.39)	1.14 (0.09, 14.71)
H1 + N4 + T4	2.33 (0.18, 30.46)	H1 + N4 + T4	0.53 (0.05, 5.41)	0.37 (0.05, 2.84)	16.47 (1.2, 225.66)‡	0.84 (0.11, 6.57)	1.68 (0.25, 11.36)	0.31 (0.03, 3.3)	2.65 (0.2, 35.05)
H1 + T4	4.39 (0.44, 43.67)	1.88 (0.18, 19.14)	H1 + T4	0.69 (0.12, 3.78)	30.98 (2.93, 327.88)‡	1.58 (0.28, 8.8)	3.17 (0.69, 14.45)	0.59 (0.08, 4.61)	4.99 (0.49, 50.59)

N1	6.39 (0.85, 48.2)	2.74 (0.35, 21.31)	1.46 (0.26, 8.02)	N1	45.13 (5.55, 366.78)‡	2.3 (0.6, 8.73)	4.61 (1.62, 13.13)‡	0.86 (0.15, 4.94)	7.27 (1.3, 40.67)‡
N2	0.14 (0.01, 1.92)	0.06 (<0.005, 0.83)‡	0.03 (<0.005, 0.34)‡	0.02 (<0.005, 0.18)‡	N2	0.05 (0.01, 0.42)‡	0.1 (0.01, 0.72)‡	0.02 (<0.005, 0.21)‡	0.16 (0.01, 2.2)
N3	2.78 (0.36, 21.47)	1.19 (0.15, 9.35)	0.63 (0.11, 3.54)	0.44 (0.11, 1.65)	19.65 (2.4, 160.82)‡	N3	2.01 (0.67, 6.04)	0.37 (0.06, 2.18)	3.17 (0.4, 24.8)
N4	1.39 (0.23, 8.25)	0.59 (0.09, 4.01)	0.32 (0.07, 1.44)	0.22 (0.08, 0.62)‡	9.79 (1.38, 69.19)‡	0.5 (0.17, 1.5)	N4	0.19 (0.04, 0.91)‡	1.58 (0.24, 10.44)
N4 + T1	7.46 (0.72, 77.38)	3.2 (0.3, 33.72)	1.7 (0.22, 13.32)	1.17 (0.2, 6.73)	52.68 (4.81, 577.22)‡	2.68 (0.46, 15.69)	5.38 (1.1, 26.25)‡	N4 + T1	8.49 (0.81, 89.12)
N4 + T4	0.88 (0.07, 11.36)	0.38 (0.03, 4.97)	0.2 (0.02, 2.03)	0.14 (0.02, 0.77)‡	6.21 (0.45, 84.88)	0.32 (0.04, 2.47)	0.63 (0.1, 4.2)	0.12 (0.01, 1.24)	N4 + T4
N4 + T4 + T6	1.15 (0.12, 10.59)	0.49 (0.05, 4.64)	0.26 (0.04, 1.78)	0.18 (0.04, 0.89)‡	8.12 (0.83, 79.65)	0.41 (0.08, 2.08)	0.83 (0.21, 3.36)	0.15 (0.02, 1.1)	1.31 (0.14, 12.27)
N4 + T6	4.87 (0.47, 50)	2.09 (0.2, 21.72)	1.11 (0.14, 8.63)	0.76 (0.13, 4.34)	34.4 (3.18, 371.72)‡	1.75 (0.31, 10.02)	3.52 (0.73, 16.86)	0.65 (0.08, 5.28)	5.54 (0.53, 57.65)
T1	1.61 (0.24, 10.65)	0.69 (0.1, 4.66)	0.37 (0.08, 1.69)	0.25 (0.08, 0.74)‡	11.33 (1.6, 80.46)‡	0.58 (0.19, 1.75)	1.16 (0.53, 2.54)	0.22 (0.05, 0.91)‡	1.83 (0.27, 12.3)
T1 + T4	1.9 (0.29, 12.51)	0.82 (0.12, 5.47)	0.43 (0.1, 1.98)	0.3 (0.1, 0.87)‡	13.44 (1.91, 94.38)‡	0.68 (0.23, 2.03)	1.37 (0.64, 2.94)	0.26 (0.05, 1.2)	2.17 (0.32, 14.48)
T1 + T4 + T6	2.63 (0.31, 22.31)	1.13 (0.13, 9.77)	0.6 (0.1, 3.71)	0.41 (0.09, 1.81)	18.56 (2.05, 167.86)‡	0.94 (0.21, 4.22)	1.9 (0.53, 6.73)	0.35 (0.06, 2.19)	2.99 (0.35, 25.82)
T2	0.79 (0.09, 6.72)	0.34 (0.04, 2.95)	0.18 (0.03, 1.11)	0.12 (0.03, 0.55)‡	5.59 (0.62, 50.69)	0.28 (0.06, 1.28)	0.57 (0.16, 2.03)	0.11 (0.02, 0.69)‡	0.9 (0.1, 7.8)
T3	1.27 (0.13, 12.14)	0.55 (0.06, 5.32)	0.29 (0.04, 2.03)	0.2 (0.04, 1.03)	8.99 (0.88, 91.27)	0.46 (0.09, 2.41)	0.92 (0.21, 3.93)	0.17 (0.02, 1.27)	1.45 (0.15, 14.07)
T3 + T4	4.87 (0.53, 44.46)	2.09 (0.22, 19.5)	1.11 (0.17, 7.36)	0.76 (0.16, 3.72)	34.39 (3.53, 334.57)‡	1.75 (0.35, 8.69)	3.51 (0.88, 14.02)	0.65 (0.09, 4.64)	5.54 (0.6, 51.54)
T4	1.69 (0.27, 10.51)	0.72 (0.11, 4.64)	0.38 (0.09, 1.58)	0.26 (0.1, 0.71)‡	11.92 (1.77, 80.3)‡	0.61 (0.22, 1.67)	1.22 (0.67, 2.22)	0.23 (0.05, 1.03)	1.92 (0.3, 12.26)
T4 + T6	2.17 (0.34, 13.71)	0.93 (0.14, 6.05)	0.49 (0.11, 2.13)	0.34 (0.12, 0.94)‡	15.3 (2.24, 104.61)‡	0.78 (0.27, 2.21)	1.56 (0.82, 2.99)	0.29 (0.06, 1.34)	2.46 (0.38, 15.97)
T4 + T9	1.67 (0.21, 13.17)	0.72 (0.09, 5.85)	0.38 (0.07, 2.19)	0.26 (0.07, 1.05)	11.79 (1.38, 100.54)‡	0.6 (0.15, 2.45)	1.2 (0.39, 3.72)	0.22 (0.04, 1.37)	1.9 (0.23, 15.43)
T5	1.46 (0.18, 12.03)	0.63 (0.07, 5.29)	0.33 (0.06, 1.95)	0.23 (0.05, 0.97)‡	10.3 (1.17, 90.9)‡	0.52 (0.12, 2.26)	1.05 (0.31, 3.55)	0.2 (0.03, 1.24)	1.66 (0.2, 13.97)

T5 + T4	1.31 (0.16, 10.79)	0.56 (0.07, 4.74)	0.3 (0.05, 1.75)	0.2 (0.05, 0.87)‡	9.23 (1.05, 81.51)‡	0.47 (0.11, 2.02)	0.94 (0.28, 3.18)	0.18 (0.03, 1.11)	1.49 (0.18, 12.53)
U3	0.63 (0.06, 6.51)	0.27 (0.03, 2.83)	0.14 (0.02, 1.13)	0.1 (0.02, 0.57)‡	4.42 (0.4, 48.34)	0.22 (0.04, 1.31)	0.45 (0.09, 2.21)	0.08 (0.01, 0.69)‡	0.71 (0.07, 7.51)
U5	1.19 (0.15, 9.38)	0.51 (0.06, 4.08)	0.27 (0.05, 1.55)	0.19 (0.05, 0.73)‡	8.41 (1.01, 70.14)‡	0.43 (0.11, 1.68)	0.86 (0.28, 2.68)	0.16 (0.03, 0.96)‡	1.36 (0.17, 10.83)
U6	3.85 (0.35, 42.53)	1.65 (0.15, 18.47)	0.88 (0.1, 7.41)	0.6 (0.1, 3.78)	27.16 (2.34, 315.82)‡	1.38 (0.22, 8.74)	2.78 (0.52, 14.85)	0.52 (0.06, 4.53)	4.38 (0.39, 49)
V	1.64 (0.18, 14.88)	0.7 (0.08, 6.46)	0.37 (0.06, 2.52)	0.26 (0.05, 1.24)	11.55 (1.2, 110.79)‡	0.59 (0.12, 2.84)	1.18 (0.3, 4.69)	0.22 (0.03, 1.55)	1.86 (0.2, 17.17)
P	0.58 (0.09, 3.64)	0.25 (0.04, 1.58)	0.13 (0.03, 0.57)‡	0.09 (0.03, 0.24)‡	4.13 (0.62, 27.34)	0.21 (0.08, 0.55)‡	0.42 (0.23, 0.77)‡	0.08 (0.02, 0.35)‡	0.66 (0.1, 4.22)

Shaded cells indicate indirect comparisons

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T5: bladder support, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-3. Comparative odds ratios for cure between interventions – part 3

A1	0.59 (0.12, 2.84)	0.14 (0.03, 0.76)‡	0.42 (0.15, 1.2)	0.36 (0.13, 0.98)‡	0.26 (0.06, 1.1)	0.85 (0.2, 3.68)	0.53 (0.1, 2.7)	0.14 (0.03, 0.66)‡	0.4 (0.16, 1.03)
A2	0.76 (0.12, 4.96)	0.18 (0.02, 1.33)	0.54 (0.12, 2.38)	0.46 (0.11, 1.98)	0.33 (0.06, 1.97)	1.1 (0.18, 6.55)	0.68 (0.1, 4.68)	0.18 (0.03, 1.16)	0.52 (0.13, 2.08)
B	1.73 (0.36, 8.18)	0.41 (0.07, 2.22)	1.24 (0.44, 3.44)	1.04 (0.38, 2.84)	0.76 (0.18, 3.17)	2.51 (0.59, 10.58)	1.56 (0.31, 7.78)	0.41 (0.09, 1.91)	1.18 (0.47, 2.95)
C1	1.06 (0.26, 4.36)	0.25 (0.05, 1.21)	0.76 (0.34, 1.69)	0.64 (0.29, 1.39)	0.46 (0.13, 1.67)	1.54 (0.42, 5.57)	0.96 (0.22, 4.19)	0.25 (0.06, 1.02)	0.72 (0.37, 1.4)
C2	0.64 (0.1, 4.27)	0.15 (0.02, 1.13)	0.46 (0.1, 2.04)	0.39 (0.09, 1.69)	0.28 (0.05, 1.69)	0.93 (0.15, 5.64)	0.58 (0.08, 4.02)	0.15 (0.02, 1)	0.44 (0.11, 1.81)
C3	1.19 (0.29, 4.89)	0.28 (0.06, 1.35)	0.86 (0.4, 1.83)	0.72 (0.34, 1.53)	0.52 (0.15, 1.86)	1.74 (0.48, 6.24)	1.08 (0.25, 4.67)	0.28 (0.07, 1.14)	0.81 (0.43, 1.54)
C3 + T1 + T4	1.4 (0.24, 8.16)	0.33 (0.05, 2.19)	1 (0.27, 3.71)	0.85 (0.23, 3.11)	0.61 (0.12, 3.2)	2.03 (0.39, 10.71)	1.27 (0.21, 7.72)	0.33 (0.06, 1.91)	0.95 (0.28, 3.29)
C4	0.93 (0.19, 4.47)	0.22 (0.04, 1.2)	0.67 (0.24, 1.88)	0.56 (0.2, 1.55)	0.41 (0.1, 1.73)	1.35 (0.32, 5.79)	0.84 (0.17, 4.25)	0.22 (0.05, 1.04)	0.63 (0.25, 1.62)
C7	0.67 (0.11, 4.05)	0.16 (0.02, 1.11)	0.48 (0.12, 1.91)	0.41 (0.1, 1.59)	0.3 (0.05, 1.61)	0.98 (0.18, 5.32)	0.61 (0.1, 3.77)	0.16 (0.03, 0.93)‡	0.46 (0.13, 1.58)
C8	0.87 (0.09, 8)	0.21 (0.02, 2.11)	0.62 (0.09, 4.13)	0.53 (0.08, 3.45)	0.38 (0.04, 3.23)	1.26 (0.15, 10.74)	0.79 (0.08, 7.5)	0.21 (0.02, 1.87)	0.59 (0.1, 3.69)
H1 + N4 + T4	2.03 (0.22, 19.09)	0.48 (0.05, 4.98)	1.45 (0.21, 9.85)	1.23 (0.18, 8.21)	0.89 (0.1, 7.7)	2.95 (0.34, 25.64)	1.83 (0.19, 17.89)	0.48 (0.05, 4.48)	1.38 (0.22, 8.87)
H1 + T4	3.81 (0.56, 25.9)	0.9 (0.12, 7)	2.73 (0.59, 12.61)	2.3 (0.51, 10.51)	1.67 (0.27, 10.34)	5.54 (0.9, 34.2)	3.45 (0.49, 24.08)	0.9 (0.14, 5.98)	2.6 (0.63, 10.65)
N1	5.56 (1.12, 27.45)‡	1.31 (0.23, 7.48)	3.98 (1.35, 11.79)‡	3.36 (1.15, 9.83)‡	2.43 (0.55, 10.67)	8.08 (1.83, 35.63)‡	5.02 (0.97, 26.09)	1.31 (0.27, 6.42)	3.79 (1.41, 10.17)‡
N2	0.12 (0.01, 1.21)	0.03 (<0.005, 0.31)‡	0.09 (0.01, 0.63)‡	0.07 (0.01, 0.52)‡	0.05 (0.01, 0.49)‡	0.18 (0.02, 1.62)	0.11 (0.01, 1.13)	0.03 (<0.005, 0.28)‡	0.08 (0.01, 0.56)‡

N3	2.42 (0.48, 12.14)	0.57 (0.1, 3.27)	1.73 (0.57, 5.25)	1.46 (0.49, 4.33)	1.06 (0.24, 4.73)	3.52 (0.78, 15.78)	2.19 (0.41, 11.53)	0.57 (0.12, 2.84)	1.65 (0.6, 4.54)
N4	1.2 (0.3, 4.87)	0.28 (0.06, 1.36)	0.86 (0.39, 1.89)	0.73 (0.34, 1.56)	0.53 (0.15, 1.87)	1.75 (0.49, 6.21)	1.09 (0.25, 4.66)	0.28 (0.07, 1.14)	0.82 (0.45, 1.49)
N4 + T1	6.48 (0.91, 46.38)	1.53 (0.19, 12.38)	4.65 (1.1, 19.61)‡	3.92 (0.84, 18.36)	2.84 (0.46, 17.61)	9.43 (1.44, 61.6)‡	5.86 (0.78, 43.78)	1.53 (0.22, 10.89)	4.42 (0.97, 20.13)
N4 + T4	0.76 (0.08, 7.16)	0.18 (0.02, 1.88)	0.55 (0.08, 3.69)	0.46 (0.07, 3.09)	0.33 (0.04, 2.89)	1.11 (0.13, 9.61)	0.69 (0.07, 6.71)	0.18 (0.02, 1.68)	0.52 (0.08, 3.32)
N4 + T4 + T6	N4 + T4 + T6	0.24 (0.03, 1.68)	0.72 (0.18, 2.92)	0.6 (0.15, 2.45)	0.44 (0.08, 2.4)	1.45 (0.38, 5.55)	0.9 (0.15, 5.57)	0.24 (0.04, 1.38)	0.68 (0.18, 2.53)
N4 + T6	4.23 (0.6, 30.12)	N4 + T6	3.04 (0.63, 14.62)	2.56 (0.54, 12.13)	1.85 (0.29, 11.98)	6.16 (0.95, 39.98)	3.83 (0.52, 28.36)	1 (0.14, 7.05)	2.89 (0.64, 13.02)
T1	1.4 (0.34, 5.68)	0.33 (0.07, 1.59)	T1	0.84 (0.43, 1.64)	0.61 (0.19, 1.96)	2.03 (0.57, 7.25)	1.26 (0.29, 5.45)	0.33 (0.08, 1.33)	0.95 (0.51, 1.78)
T1 + T4	1.65 (0.41, 6.7)	0.39 (0.08, 1.85)	1.19 (0.61, 2.31)	T1 + T4	0.72 (0.21, 2.5)	2.41 (0.68, 8.54)	1.5 (0.35, 6.4)	0.39 (0.1, 1.56)	1.13 (0.62, 2.05)
T1 + T4 + T6	2.28 (0.42, 12.5)	0.54 (0.08, 3.49)	1.64 (0.51, 5.25)	1.38 (0.4, 4.77)	T1 + T4 + T6	3.32 (0.67, 16.42)	2.07 (0.35, 12.09)	0.54 (0.1, 2.99)	1.56 (0.48, 5.04)
T2	0.69 (0.18, 2.63)	0.16 (0.03, 1.06)	0.49 (0.14, 1.76)	0.42 (0.12, 1.48)	0.3 (0.06, 1.49)	T2	0.62 (0.12, 3.26)	0.16 (0.03, 0.8)‡	0.47 (0.15, 1.5)
T3	1.11 (0.18, 6.82)	0.26 (0.04, 1.94)	0.79 (0.18, 3.43)	0.67 (0.16, 2.86)	0.48 (0.08, 2.84)	1.61 (0.31, 8.43)	T3	0.26 (0.06, 1.1)	0.75 (0.2, 2.89)
T3 + T4	4.23 (0.73, 24.7)	1 (0.14, 7.05)	3.03 (0.75, 12.24)	2.56 (0.64, 10.2)	1.85 (0.33, 10.25)	6.15 (1.25, 30.34)‡	3.83 (0.91, 16.04)	T3 + T4	2.88 (0.81, 10.26)
T4	1.47 (0.4, 5.44)	0.35 (0.08, 1.56)	1.05 (0.56, 1.97)	0.89 (0.49, 1.62)	0.64 (0.2, 2.08)	2.13 (0.67, 6.83)	1.33 (0.35, 5.09)	0.35 (0.1, 1.23)	T4
T4 + T6	1.88 (0.53, 6.72)	0.44 (0.1, 2.05)	1.35 (0.7, 2.61)	1.14 (0.59, 2.2)	0.82 (0.26, 2.6)	2.74 (0.88, 8.55)	1.7 (0.42, 6.83)	0.44 (0.12, 1.66)	1.28 (0.84, 1.97)
T4 + T9	1.45 (0.28, 7.5)	0.34 (0.06, 2.07)	1.04 (0.32, 3.36)	0.88 (0.27, 2.8)	0.63 (0.14, 2.95)	2.11 (0.45, 9.77)	1.31 (0.24, 7.12)	0.34 (0.07, 1.75)	0.99 (0.35, 2.83)
T5	1.27 (0.24, 6.83)	0.3 (0.05, 1.88)	0.91 (0.27, 3.1)	0.77 (0.23, 2.58)	0.55 (0.11, 2.69)	1.84 (0.38, 8.9)	1.15 (0.21, 6.37)	0.3 (0.06, 1.57)	0.86 (0.3, 2.52)
T5 + T4	1.14 (0.21, 6.13)	0.27 (0.04, 1.69)	0.81 (0.24, 2.78)	0.69 (0.2, 2.31)	0.5 (0.1, 2.42)	1.65 (0.34, 7.98)	1.03 (0.18, 5.71)	0.27 (0.05, 1.41)	0.77 (0.27, 2.26)
U3	0.54 (0.08, 3.93)	0.13 (0.02, 1.03)	0.39 (0.08, 1.91)	0.33 (0.07, 1.58)	0.24 (0.04, 1.56)	0.79 (0.12, 5.22)	0.49 (0.07, 3.7)	0.13 (0.02, 0.92)‡	0.37 (0.08, 1.71)
U5	1.04 (0.2, 5.33)	0.24 (0.04, 1.43)	0.74 (0.24, 2.33)	0.63 (0.2, 1.91)	0.45 (0.1, 2.08)	1.5 (0.33, 6.94)	0.94 (0.17, 5.06)	0.24 (0.05, 1.25)	0.71 (0.25, 2.02)
U6	3.34 (0.43, 25.97)	0.79 (0.09, 6.81)	2.4 (0.45, 12.88)	2.02 (0.38, 10.7)	1.46 (0.21, 10.38)	4.86 (0.68, 34.6)	3.02 (0.37, 24.41)	0.79 (0.1, 6.08)	2.28 (0.45, 11.52)
V	1.42 (0.23, 8.75)	0.34 (0.05, 2.31)	1.02 (0.26, 4.07)	0.86 (0.22, 3.36)	0.62 (0.11, 3.45)	2.07 (0.37, 11.52)	1.29 (0.2, 8.26)	0.34 (0.06, 2.05)	0.97 (0.26, 3.59)
P	0.51 (0.13, 1.92)	0.12 (0.03, 0.52)‡	0.36 (0.2, 0.67)‡	0.31 (0.18, 0.54)‡	0.22 (0.07, 0.73)‡	0.74 (0.22, 2.43)	0.46 (0.11, 1.84)	0.12 (0.03, 0.45)‡	0.35 (0.23, 0.53)‡

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T5: bladder support, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

G-4. Comparative odds ratios for cure between interventions – part 4

A1	0.31 (0.12, 0.83)‡	0.41 (0.1, 1.59)	0.46 (0.11, 1.91)	0.52 (0.13, 2.14)	1.08 (0.19, 6.01)	0.57 (0.15, 2.11)	0.18 (0.03, 1.07)	0.41 (0.09, 1.9)	1.16 (0.48, 2.77)
A2	0.4 (0.1, 1.66)	0.52 (0.1, 2.84)	0.6 (0.1, 3.43)	0.67 (0.12, 3.83)	1.39 (0.18, 10.54)	0.73 (0.13, 3.98)	0.23 (0.03, 1.84)	0.53 (0.08, 3.44)	1.49 (0.37, 6.02)
B	0.92 (0.35, 2.37)	1.19 (0.31, 4.56)	1.36 (0.34, 5.5)	1.52 (0.38, 6.14)	3.17 (0.57, 17.57)	1.67 (0.45, 6.14)	0.52 (0.09, 3.11)	1.21 (0.27, 5.55)	3.4 (1.41, 8.17)‡
C1	0.56 (0.28, 1.12)	0.73 (0.22, 2.39)	0.83 (0.24, 2.9)	0.93 (0.27, 3.24)	1.94 (0.4, 9.56)	1.02 (0.32, 3.21)	0.32 (0.06, 1.71)	0.74 (0.19, 2.97)	2.08 (1.13, 3.82)‡
C2	0.34 (0.08, 1.44)	0.44 (0.08, 2.48)	0.51 (0.09, 2.96)	0.57 (0.1, 3.31)	1.18 (0.16, 8.95)	0.62 (0.11, 3.38)	0.19 (0.02, 1.56)	0.45 (0.07, 2.92)	1.26 (0.31, 5.11)
C3	0.63 (0.32, 1.25)	0.82 (0.25, 2.66)	0.94 (0.28, 3.22)	1.05 (0.31, 3.6)	2.2 (0.45, 10.69)	1.15 (0.37, 3.58)	0.36 (0.07, 1.91)	0.84 (0.21, 3.32)	2.35 (1.31, 4.23)‡
C3 + T1 + T4	0.74 (0.21, 2.62)	0.96 (0.2, 4.69)	1.1 (0.22, 5.6)	1.23 (0.24, 6.26)	2.57 (0.38, 17.32)	1.35 (0.29, 6.38)	0.42 (0.06, 3.04)	0.98 (0.17, 5.6)	2.76 (0.82, 9.3)
C4	0.49 (0.19, 1.3)	0.64 (0.16, 2.5)	0.73 (0.18, 3.01)	0.82 (0.2, 3.36)	1.71 (0.31, 9.49)	0.9 (0.24, 3.33)	0.28 (0.05, 1.69)	0.65 (0.14, 3)	1.83 (0.77, 4.36)
C7	0.36 (0.1, 1.31)	0.47 (0.09, 2.33)	0.53 (0.1, 2.72)	0.59 (0.12, 3.04)	1.24 (0.18, 8.76)	0.65 (0.13, 3.26)	0.2 (0.03, 1.53)	0.47 (0.08, 2.84)	1.33 (0.36, 4.84)
C8	0.46 (0.07, 2.92)	0.6 (0.08, 4.73)	0.69 (0.08, 5.66)	0.77 (0.09, 6.32)	1.6 (0.15, 16.64)	0.84 (0.11, 6.61)	0.26 (0.02, 2.88)	0.61 (0.07, 5.56)	1.71 (0.27, 10.65)
H1 + N4 + T4	1.08 (0.17, 7.02)	1.4 (0.17, 11.42)	1.6 (0.19, 13.53)	1.78 (0.21, 15.11)	3.73 (0.35, 39.32)	1.96 (0.25, 15.66)	0.61 (0.05, 6.8)	1.43 (0.15, 13.15)	3.99 (0.63, 25.22)
H1 + T4	2.03 (0.47, 8.75)	2.63 (0.46, 15.1)	3.01 (0.51, 17.62)	3.36 (0.57, 19.68)	7.01 (0.89, 55.38)	3.68 (0.64, 21.07)	1.14 (0.13, 9.64)	2.68 (0.4, 18.15)	7.51 (1.75, 32.23)‡
N1	2.95 (1.07, 8.16)‡	3.83 (0.95, 15.37)	4.38 (1.03, 18.55)‡	4.89 (1.15, 20.72)‡	10.22 (1.76, 59.33)‡	5.37 (1.37, 21.03)‡	1.66 (0.26, 10.45)	3.91 (0.81, 18.87)	10.94 (4.13, 28.97)‡
N2	0.07 (0.01, 0.45)‡	0.08 (0.01, 0.72)‡	0.1 (0.01, 0.86)‡	0.11 (0.01, 0.96)‡	0.23 (0.02, 2.48)	0.12 (0.01, 0.99)‡	0.04 (<0.005, 0.43)‡	0.09 (0.01, 0.83)‡	0.24 (0.04, 1.61)
N3	1.28 (0.45, 3.64)	1.67 (0.41, 6.82)	1.91 (0.44, 8.22)	2.13 (0.49, 9.18)	4.45 (0.77, 25.86)	2.34 (0.59, 9.19)	0.72 (0.11, 4.57)	1.7 (0.35, 8.22)	4.76 (1.81, 12.52)‡
N4	0.64 (0.33, 1.23)	0.83 (0.27, 2.56)	0.95 (0.28, 3.2)	1.06 (0.31, 3.58)	2.22 (0.45, 10.84)	1.16 (0.37, 3.63)	0.36 (0.07, 1.93)	0.85 (0.21, 3.37)	2.37 (1.29, 4.35)‡
N4 + T1	3.44 (0.74, 15.92)	4.47 (0.73, 27.3)	5.11 (0.81, 32.42)	5.71 (0.9, 36.2)	11.93 (1.45, 97.88)‡	6.26 (1.05, 37.51)‡	1.94 (0.22, 17.03)	4.56 (0.65, 32.17)	12.76 (2.82, 57.82)‡
N4 + T4	0.41 (0.06, 2.63)	0.53 (0.06, 4.28)	0.6 (0.07, 5.07)	0.67 (0.08, 5.66)	1.41 (0.13, 14.83)	0.74 (0.09, 5.9)	0.23 (0.02, 2.56)	0.54 (0.06, 4.96)	1.5 (0.24, 9.53)
N4 + T4 + T6	0.53 (0.15, 1.9)	0.69 (0.13, 3.57)	0.79 (0.15, 4.25)	0.88 (0.16, 4.75)	1.84 (0.25, 13.3)	0.97 (0.19, 4.97)	0.3 (0.04, 2.32)	0.7 (0.11, 4.33)	1.97 (0.52, 7.44)
N4 + T6	2.25 (0.49, 10.35)	2.92 (0.48, 17.62)	3.34 (0.53, 20.99)	3.73 (0.59, 23.44)	7.79 (0.97, 62.49)	4.09 (0.7, 23.89)	1.27 (0.15, 10.93)	2.98 (0.43, 20.49)	8.34 (1.91, 36.33)‡
T1	0.74 (0.38, 1.43)	0.96 (0.3, 3.11)	1.1 (0.32, 3.76)	1.23 (0.36, 4.2)	2.57 (0.52, 12.6)	1.35 (0.43, 4.23)	0.42 (0.08, 2.24)	0.98 (0.25, 3.92)	2.75 (1.49, 5.07)‡
T1 + T4	0.88 (0.46, 1.7)	1.14 (0.36, 3.64)	1.31 (0.39, 4.39)	1.46 (0.43, 4.91)	3.04 (0.63, 14.67)	1.6 (0.52, 4.89)	0.49 (0.09, 2.62)	1.16 (0.3, 4.55)	3.26 (1.87, 5.68)‡
T1 + T4 + T6	1.21 (0.38, 3.83)	1.58 (0.34, 7.31)	1.8 (0.37, 8.75)	2.01 (0.41, 9.77)	4.2 (0.64, 27.63)	2.21 (0.48, 10.12)	0.68 (0.1, 4.85)	1.61 (0.29, 8.91)	4.5 (1.38, 14.67)‡
T2	0.37 (0.12, 1.14)	0.47 (0.1, 2.2)	0.54 (0.11, 2.62)	0.61 (0.13, 2.93)	1.27 (0.19, 8.36)	0.66 (0.14, 3.07)	0.21 (0.03, 1.47)	0.48 (0.09, 2.7)	1.35 (0.41, 4.46)
T3	0.59 (0.15, 2.36)	0.76 (0.14, 4.14)	0.87 (0.16, 4.85)	0.97 (0.18, 5.41)	2.03 (0.27, 15.32)	1.07 (0.2, 5.78)	0.33 (0.04, 2.67)	0.78 (0.12, 5)	2.18 (0.54, 8.74)

T3 + T4	2.25 (0.6, 8.38)	2.92 (0.57, 14.93)	3.34 (0.64, 17.49)	3.73 (0.71, 19.53)	7.79 (1.09, 55.8)‡	4.09 (0.8, 20.83)	1.27 (0.16, 9.75)	2.98 (0.49, 18.14)	8.33 (2.23, 31.08)‡
T4	0.78 (0.51, 1.2)	1.01 (0.35, 2.89)	1.16 (0.4, 3.38)	1.29 (0.44, 3.77)	2.7 (0.59, 12.44)	1.42 (0.5, 4.06)	0.44 (0.09, 2.22)	1.03 (0.28, 3.83)	2.89 (1.88, 4.43)‡
T4 + T6	T4 + T6	1.3 (0.44, 3.82)	1.49 (0.47, 4.66)	1.66 (0.53, 5.21)	3.46 (0.74, 16.27)	1.82 (0.62, 5.36)	0.56 (0.11, 2.9)	1.32 (0.35, 5.03)	3.71 (2.26, 6.08)‡
T4 + T9	0.77 (0.26, 2.27)	T4 + T9	1.14 (0.26, 5.08)	1.28 (0.29, 5.68)	2.67 (0.43, 16.4)	1.4 (0.33, 5.9)	0.43 (0.07, 2.88)	1.02 (0.2, 5.25)	2.86 (0.98, 8.35)
T5	0.67 (0.21, 2.11)	0.87 (0.2, 3.88)	T5	1.12 (0.36, 3.42)	2.33 (0.36, 14.91)	1.22 (0.28, 5.42)	0.38 (0.05, 2.62)	0.89 (0.17, 4.79)	2.5 (0.8, 7.79)
T5 + T4	0.6 (0.19, 1.9)	0.78 (0.18, 3.48)	0.9 (0.29, 2.75)	T5 + T4	2.09 (0.33, 13.37)	1.1 (0.25, 4.87)	0.34 (0.05, 2.35)	0.8 (0.15, 4.3)	2.24 (0.72, 6.99)
U3	0.29 (0.06, 1.36)	0.37 (0.06, 2.3)	0.43 (0.07, 2.74)	0.48 (0.07, 3.06)	U3	0.53 (0.09, 3.11)	0.16 (0.02, 1.42)	0.38 (0.05, 2.66)	1.07 (0.24, 4.72)
U5	0.55 (0.19, 1.62)	0.71 (0.17, 3.01)	0.82 (0.18, 3.62)	0.91 (0.21, 4.04)	1.9 (0.32, 11.27)	U5	0.31 (0.07, 1.31)	0.73 (0.15, 3.59)	2.04 (0.75, 5.51)
U6	1.78 (0.34, 9.14)	2.3 (0.35, 15.31)	2.64 (0.38, 18.2)	2.94 (0.43, 20.32)	6.15 (0.7, 53.74)	3.23 (0.76, 13.67)	U6	2.35 (0.31, 17.74)	6.58 (1.34, 32.37)‡
V	0.76 (0.2, 2.87)	0.98 (0.19, 5.04)	1.12 (0.21, 6.03)	1.25 (0.23, 6.73)	2.62 (0.38, 18.2)	1.37 (0.28, 6.77)	0.43 (0.06, 3.21)	V	2.8 (0.8, 9.84)
P	0.27 (0.16, 0.44)‡	0.35 (0.12, 1.02)	0.4 (0.13, 1.25)	0.45 (0.14, 1.4)	0.93 (0.21, 4.12)	0.49 (0.18, 1.33)	0.15 (0.03, 0.75)‡	0.36 (0.1, 1.26)	P

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T5: bladder support, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-5. Comparative odds ratios for cure between interventions – subgraphs

C7 + H2	1 (0.02, 52.09)
1 (0.02, 52.09)	H2

H1	0.85 (0.5, 1.43)
1.18 (0.7, 2)	H1+T5

U1	1.07 (0.61, 1.87)	0.47 (0.2, 1.13)
0.94 (0.53, 1.64)	U2	0.44 (0.18, 1.11)
2.11 (0.88, 5.02)	2.25 (0.9, 5.63)	U4

Shaded cells indicate indirect comparisons.

Abbreviations: C7: phenylpropanolamine, H1: vaginal estrogen, H2: oral estrogen, U1: polyacrylamide, U2: collagen, U4: carbonated beads.

Table G-6. Mean and forecasted cure rates by intervention

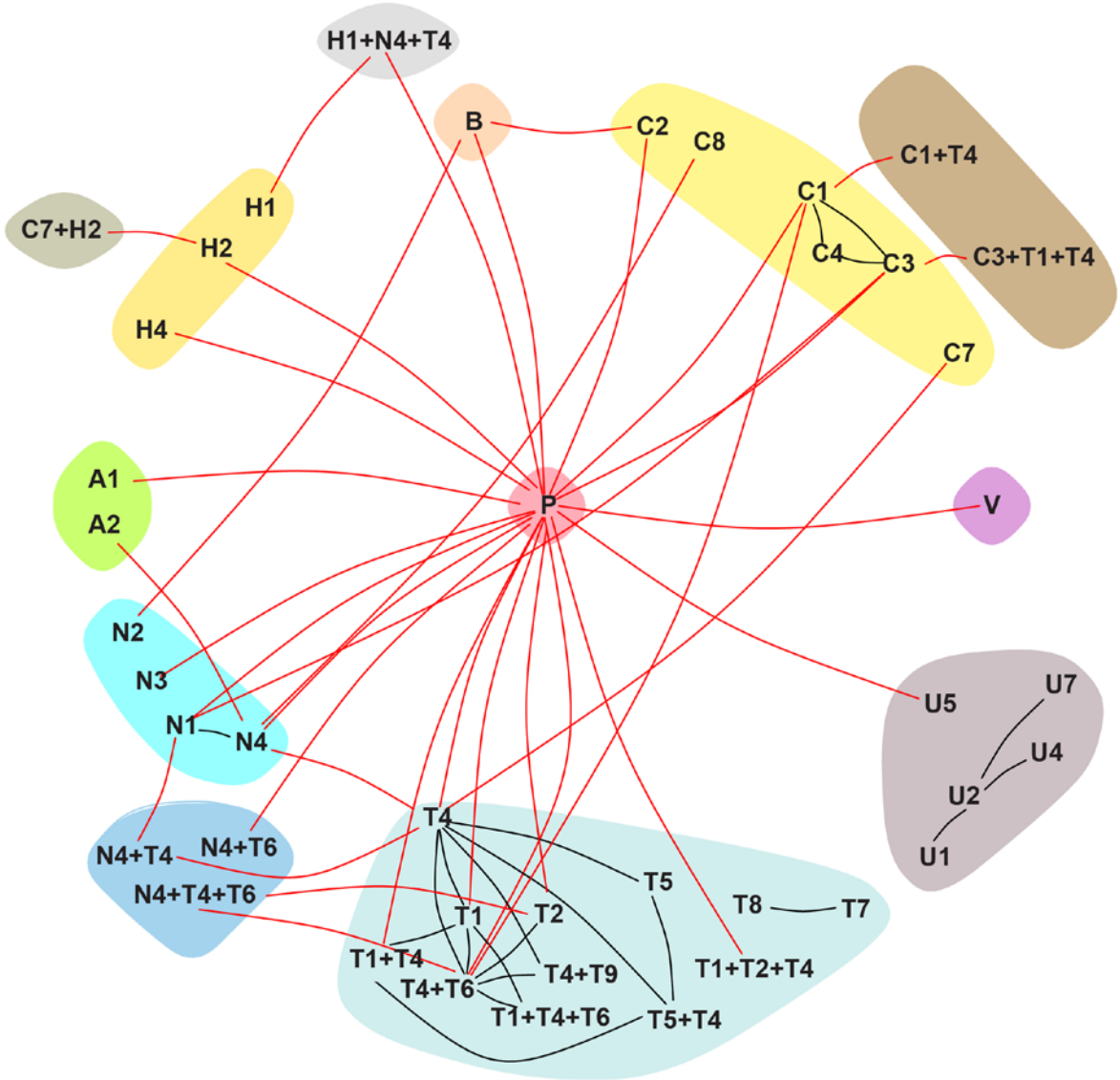
Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
First subgraph		
Pharmacological		
Porcine Collagen (U6)	48.0 (15.8, 81.9)	48.0 (7.3, 91.5)
BTX (B)	32.2 (16.8, 52.9)	32.2 (5.7, 78.9)
Tolterodine (C3)	24.8 (15.7, 36.8)	24.8 (4.4, 70.0)
Oxybutynin (C1)	22.6 (13.7, 34.8)	22.6 (3.9, 67.6)
Polydimethylsiloxane (U5)	22.2 (9.4, 43.9)	22.2 (3.3, 70.6)
Trospium (C4)	20.4 (9.5, 38.6)	20.4 (3.1, 67.2)
Propantheline (C8)	19.3 (3.8, 59.4)	19.3 (1.7, 76.4)
Midodrine (A2)	17.3 (5.0, 45.2)	17.3 (2.0, 68.1)
Phenylpropanolamine (C7)	15.7 (5.0, 39.8)	15.7 (1.9, 64.1)
Solifenacin (C2)	15.0 (4.3, 41.3)	15.0 (1.7, 64.5)
Duloxetine (A1)	13.9 (6.2, 28.6)	13.9 (2.0, 56.5)
Autologous Fat (U3)	13.0 (3.2, 40.2)	13.0 (1.3, 62.3)
Nonpharmacological		
TENS + Bladder Training (N4+T1)	64.1 (28.7, 88.8)	64.1 (14.0, 95.1)
Electroacupuncture (N1)	60.5 (37.5, 79.6)	60.5 (15.8, 92.6)
TENS + Biofeedback (N4+T6)	53.9 (21.1, 83.6)	53.9 (9.7, 92.7)
Heat Therapy + PFMT (T3+T4)	53.8 (24.3, 80.9)	53.8 (10.7, 91.9)
Magnetic Stimulation (N3)	40.0 (20.3, 63.6)	40.0 (7.5, 84.6)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	38.6 (16.5, 66.7)	38.6 (6.5, 85.1)
PFMT + Biofeedback (T4+T6)	34.2 (25.2, 44.5)	34.2 (7.0, 78.1)
Bladder Training + PFMT (T1+T4)	31.3 (20.8, 44.2)	31.3 (6.1, 76.3)
PFMT (T4)	28.8 (22.0, 36.8)	28.8 (5.7, 73.2)
PFMT + Weights (T4+T9)	28.6 (12.4, 53.1)	28.6 (4.5, 77.3)
Intravesical Pressure Release (V)	28.2 (9.8, 58.5)	28.2 (3.9, 79.1)
Bladder Training (T1)	27.8 (17.7, 40.8)	27.8 (5.1, 73.3)
Bladder Support (T5)	25.9 (10.3, 51.5)	25.9 (3.8, 75.5)
TENS (N4)	24.9 (15.9, 36.9)	24.9 (4.5, 70.2)
Bladder Support + PFMT (T5+T4)	23.8 (9.3, 48.8)	23.8 (3.4, 73.5)
Heat Therapy (T3)	23.4 (7.2, 54.4)	23.4 (2.9, 75.6)

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
TENS + PFMT + Biofeedback (N4+T4+T6)	21.6 (7.0, 50.4)	21.6 (2.7, 73.0)
TENS + PFMT (N4+T4)	17.4 (3.3, 56.6)	17.4 (1.5, 74.2)
Education (T2)	15.9 (5.6, 37.7)	15.9 (2.0, 63.3)
InterStim (N2)	3.3 (0.5, 18.2)	3.3 (0.2, 32.5)
Combination		
Estrogen,Vaginal + PFMT (H1+T4)	51.2 (20.0, 81.5)	51.2 (9.0, 91.8)
Estrogen,Vaginal + TENS + PFMT (H1+N4+T4)	35.9 (8.2, 77.7)	35.9 (3.9, 88.5)
Tolterodine + Bladder Training + PFMT (C3+T1+T4)	27.8 (10.4, 56.2)	27.8 (4.0, 78.1)
No treatment		
Placebo/Sham/No Treatment (P)	12.3 (9.0, 16.5)	12.3 (2.0, 48.5)
Second subgraph		
Pharmacological		
Phenylpropanolamine + Estrogen,Oral (C7+H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Estrogen,Oral (H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Third subgraph		
Pharmacological		
Estrogen,Vaginal (H1)	31.3 (24.1, 39.7)	NE
Combination		
Estrogen,Vaginal + Bladder Support (H1+T5)	35.0 (27.0, 44.1)	NE
Fourth subgraph		
Pharmacological		
Carbonated Beads (U4)	40.0 (23.0, 59.7)	40.0 (23.0, 59.7)
Polyacrylamide (U1)	24.0 (18.4, 30.8)	24.0 (18.4, 30.8)
Collagen (U2)	22.8 (15.9, 31.6)	22.8 (15.9, 31.6)

PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval. NE: not estimable.

Improvement

Figure G-2. Evidence graph of RCTs evaluating improvement across individual interventions



A1: duloxetine
A2: midodrine

B: onabotulinum toxin A

C1: oxybutynin
C2: solifenacin
C3: tolterodine
C4: trospium
C5: fesoterodine
C6: flavoxate
C7: phenylpropanolamine
C8: propantheline
C9: propiverine

H1: estrogen, vaginal
H2: estrogen, oral
H3: estrogen, subcutaneous
H4: estrogen, transdermal
H5: raloxifene

N1: electroacupuncture
N2: InterStim
N3: magnetic stimulation
N4: TENS

T1: bladder training
T2: education
T3: heat therapy
T4: PFMT
T5: bladder support
T6: biofeedback
T7: MBSR
T8: yoga
T9: weights

U1: polyacrylamide
U2: collagen
U3: autologous fat
U4: carbonated beads
U5: polydimethylsiloxane
U6: porcine collagen
U7: dextranomer hyaluronate

V: intravesical pressure release

P: sham/no treatment/placebo

Table G-7. Comparative odds ratios for improvement between interventions – part 1

A1	A1	0.87 (0.23, 3.25)	0.24 (0.08, 0.71)‡	0.7 (0.36, 1.35)	0.89 (0.17, 4.6)	0.51 (0.18, 1.49)	0.99 (0.5, 1.96)	0.33 (0.1, 1.11)
A2	1.15 (0.31, 4.33)	A2	0.28 (0.05, 1.42)	0.8 (0.2, 3.22)	1.03 (0.13, 7.94)	0.59 (0.12, 2.99)	1.14 (0.28, 4.61)	0.38 (0.07, 2.13)
B	4.16 (1.4, 12.33)‡	3.6 (0.7, 18.39)	B	2.89 (0.9, 9.31)	3.7 (0.55, 24.74)	2.14 (0.83, 5.54)	4.11 (1.26, 13.4)‡	1.38 (0.3, 6.45)
C1	1.44 (0.74, 2.78)	1.24 (0.31, 4.99)	0.35 (0.11, 1.11)	C1	1.28 (0.27, 6.13)	0.74 (0.24, 2.33)	1.42 (0.67, 3.03)	0.48 (0.14, 1.67)
C1 + T4	1.12 (0.22, 5.82)	0.97 (0.13, 7.53)	0.27 (0.04, 1.81)	0.78 (0.16, 3.76)	C1 + T4	0.58 (0.09, 3.83)	1.11 (0.21, 6.04)	0.37 (0.05, 2.66)
C2	1.94 (0.67, 5.61)	1.68 (0.33, 8.47)	0.47 (0.18, 1.21)	1.35 (0.43, 4.25)	1.73 (0.26, 11.43)	C2	1.92 (0.6, 6.13)	0.65 (0.14, 2.97)
C3	1.01 (0.51, 2)	0.88 (0.22, 3.54)	0.24 (0.07, 0.79)‡	0.7 (0.33, 1.5)	0.9 (0.17, 4.88)	0.52 (0.16, 1.66)	C3	0.34 (0.12, 0.94)‡
C3 + T1 + T4	3 (0.9, 9.99)	2.6 (0.47, 14.38)	0.72 (0.16, 3.37)	2.09 (0.6, 7.28)	2.67 (0.38, 18.95)	1.55 (0.34, 7.08)	2.97 (1.06, 8.32)‡	C3 + T1 + T4
C4	0.82 (0.22, 3.03)	0.71 (0.12, 4.23)	0.2 (0.04, 1)	0.57 (0.16, 2.01)	0.73 (0.1, 5.31)	0.42 (0.08, 2.1)	0.81 (0.23, 2.84)	0.27 (0.05, 1.36)
C7	5.19 (1.52, 17.74)‡	4.5 (0.8, 25.16)	1.25 (0.26, 5.91)	3.61 (0.99, 13.22)	4.62 (0.63, 33.58)	2.67 (0.57, 12.45)	5.14 (1.38, 19.07)‡	1.73 (0.33, 8.92)
C7 + H2	0.67 (0.09, 5.12)	0.58 (0.05, 6.18)	0.16 (0.02, 1.51)	0.46 (0.06, 3.72)	0.59 (0.05, 7.7)	0.34 (0.04, 3.21)	0.66 (0.08, 5.33)	0.22 (0.02, 2.23)
C8	1.16 (0.23, 5.75)	1.01 (0.15, 6.99)	0.28 (0.04, 1.8)	0.81 (0.15, 4.24)	1.03 (0.11, 9.66)	0.6 (0.09, 3.8)	1.15 (0.22, 6.06)	0.39 (0.06, 2.67)
H1	0.11 (0.02, 0.58)‡	0.1 (0.01, 0.75)‡	0.03 (<0.005, 0.18)‡	0.08 (0.01, 0.43)‡	0.1 (0.01, 0.97)‡	0.06 (0.01, 0.38)‡	0.11 (0.02, 0.61)‡	0.04 (0.01, 0.27)‡
H1 + N4 + T4	2.77 (0.8, 9.53)	2.4 (0.42, 13.61)	0.67 (0.14, 3.18)	1.93 (0.52, 7.14)	2.46 (0.34, 18.06)	1.42 (0.3, 6.7)	2.74 (0.73, 10.27)	0.92 (0.18, 4.8)
H2	0.43 (0.06, 2.84)	0.37 (0.04, 3.5)	0.1 (0.01, 0.85)‡	0.3 (0.04, 2.07)	0.38 (0.03, 4.4)	0.22 (0.03, 1.81)	0.42 (0.06, 2.97)	0.14 (0.02, 1.26)
H4	0.32 (0.11, 0.92)‡	0.27 (0.05, 1.4)	0.08 (0.02, 0.32)‡	0.22 (0.07, 0.7)‡	0.28 (0.04, 1.88)	0.16 (0.04, 0.68)‡	0.31 (0.1, 1.01)	0.11 (0.02, 0.49)‡
N1	3.89 (1.87, 8.06)‡	3.36 (0.84, 13.52)	0.93 (0.28, 3.13)	2.7 (1.17, 6.26)‡	3.45 (0.62, 19.36)	2 (0.61, 6.54)	3.84 (1.75, 8.42)‡	1.29 (0.36, 4.6)
N2	4.6 (1.09, 19.34)‡	3.98 (0.61, 26.13)	1.11 (0.38, 3.25)	3.2 (0.71, 14.32)	4.09 (0.49, 34.05)	2.36 (0.59, 9.52)	4.55 (1, 20.57)‡	1.53 (0.25, 9.28)
N3	2.61 (1.17, 5.82)‡	2.26 (0.52, 9.78)	0.63 (0.18, 2.21)	1.82 (0.73, 4.54)	2.32 (0.4, 13.51)	1.34 (0.39, 4.62)	2.58 (1.02, 6.56)‡	0.87 (0.22, 3.38)
N4	1.46 (0.8, 2.64)	1.26 (0.38, 4.23)	0.35 (0.11, 1.08)	1.01 (0.49, 2.11)	1.29 (0.24, 6.9)	0.75 (0.25, 2.27)	1.44 (0.68, 3.04)	0.48 (0.14, 1.67)
N4 + T4	13.07 (3.48, 49.05)‡	11.32 (1.9, 67.5)‡	3.14 (0.62, 16.02)	9.09 (2.27, 36.38)‡	11.62 (1.51, 89.67)‡	6.72 (1.34, 33.81)‡	12.93 (3.24, 51.66)‡	4.35 (0.79, 23.86)
N4 + T4 + T6	8.89 (2.5, 31.6)‡	7.7 (1.33, 44.6)‡	2.14 (0.44, 10.47)	6.19 (1.63, 23.45)‡	7.9 (1.06, 58.94)‡	4.57 (0.95, 22.06)	8.79 (2.28, 33.94)‡	2.96 (0.56, 15.76)
N4 + T6	0.58 (0.14, 2.48)	0.51 (0.08, 3.37)	0.14 (0.02, 0.8)‡	0.41 (0.09, 1.84)	0.52 (0.06, 4.39)	0.3 (0.05, 1.69)	0.58 (0.13, 2.65)	0.19 (0.03, 1.19)
T1	2.64 (1.32, 5.29)‡	2.29 (0.56, 9.3)	0.64 (0.19, 2.08)	1.84 (0.82, 4.15)	2.35 (0.43, 12.99)	1.36 (0.43, 4.35)	2.62 (1.13, 6.04)‡	0.88 (0.24, 3.21)
T1 + T2 + T4	2.87 (0.58, 14.26)	2.48 (0.33, 18.68)	0.69 (0.11, 4.48)	2 (0.38, 10.53)	2.55 (0.27, 24)	1.48 (0.23, 9.45)	2.84 (0.53, 15.11)	0.95 (0.14, 6.66)
T1 + T4	2.01 (0.98, 4.14)	1.74 (0.42, 7.19)	0.48 (0.15, 1.61)	1.4 (0.6, 3.25)	1.79 (0.32, 10.02)	1.03 (0.32, 3.37)	1.99 (0.84, 4.71)	0.67 (0.18, 2.48)
T1 + T4 + T6	4.91 (1.59, 15.13)‡	4.25 (0.81, 22.25)	1.18 (0.27, 5.16)	3.41 (1.03, 11.31)‡	4.36 (0.64, 29.81)	2.52 (0.59, 10.87)	4.85 (1.44, 16.4)‡	1.63 (0.34, 7.83)
T2	2.53 (1.1, 5.8)‡	2.19 (0.5, 9.59)	0.61 (0.17, 2.17)	1.76 (0.69, 4.47)	2.25 (0.38, 13.2)	1.3 (0.37, 4.54)	2.5 (0.96, 6.5)	0.84 (0.21, 3.32)
T4	2.92 (1.78, 4.81)‡	2.53 (0.69, 9.33)	0.7 (0.24, 2.06)	2.03 (1.06, 3.89)‡	2.6 (0.51, 13.34)	1.5 (0.52, 4.32)	2.89 (1.46, 5.7)‡	0.97 (0.29, 3.22)
T4 + T6	3.66 (2.11, 6.35)‡	3.17 (0.84, 11.99)	0.88 (0.29, 2.65)	2.55 (1.3, 5)‡	3.26 (0.63, 16.92)	1.88 (0.64, 5.55)	3.62 (1.77, 7.42)‡	1.22 (0.36, 4.13)
T4 + T9	3.78 (1.41, 10.13)‡	3.27 (0.69, 15.57)	0.91 (0.23, 3.57)	2.63 (0.9, 7.65)	3.36 (0.53, 21.21)	1.94 (0.5, 7.52)	3.74 (1.26, 11.1)‡	1.26 (0.29, 5.46)

T5	2.55 (0.87, 7.49)	2.2 (0.44, 11.15)	0.61 (0.15, 2.58)	1.77 (0.56, 5.64)	2.26 (0.34, 15.07)	1.31 (0.32, 5.44)	2.52 (0.78, 8.14)	0.85 (0.18, 3.93)
T5 + T4	2.96 (1.21, 7.28)‡	2.56 (0.57, 11.6)	0.71 (0.19, 2.65)	2.06 (0.76, 5.57)	2.63 (0.43, 15.95)	1.52 (0.42, 5.56)	2.93 (1.06, 8.06)‡	0.99 (0.24, 4.05)
U5	0.97 (0.32, 2.9)	0.84 (0.16, 4.36)	0.23 (0.05, 1.01)	0.67 (0.21, 2.2)	0.86 (0.13, 5.85)	0.5 (0.12, 2.12)	0.96 (0.29, 3.17)	0.32 (0.07, 1.52)
V	2.2 (0.64, 7.49)	1.9 (0.34, 10.8)	0.53 (0.11, 2.53)	1.53 (0.41, 5.64)	1.95 (0.27, 14.33)	1.13 (0.24, 5.31)	2.17 (0.58, 8.12)	0.73 (0.14, 3.8)
P	0.49 (0.35, 0.69)‡	0.42 (0.12, 1.52)	0.12 (0.04, 0.33)‡	0.34 (0.19, 0.6)‡	0.43 (0.09, 2.17)	0.25 (0.09, 0.69)‡	0.48 (0.27, 0.88)‡	0.16 (0.05, 0.52)‡

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-8. Comparative odds ratios for improvement between interventions – part 2

A1	1.22 (0.33, 4.51)	0.19 (0.06, 0.66)‡	1.5 (0.2, 11.5)	0.86 (0.17, 4.26)	8.71 (1.73, 43.87)‡	0.36 (0.1, 1.24)	2.35 (0.35, 15.7)	3.15 (1.08, 9.15)‡
A2	1.41 (0.24, 8.42)	0.22 (0.04, 1.24)	1.73 (0.16, 18.51)	0.99 (0.14, 6.89)	10.06 (1.33, 76.18)‡	0.42 (0.07, 2.37)	2.71 (0.29, 25.79)	3.64 (0.71, 18.53)
B	5.08 (1, 25.71)‡	0.8 (0.17, 3.79)	6.23 (0.66, 58.74)	3.58 (0.56, 23.02)	36.21 (5.54, 236.73)‡	1.5 (0.31, 7.17)	9.77 (1.17, 81.3)‡	13.1 (3.09, 55.5)‡
C1	1.76 (0.5, 6.2)	0.28 (0.08, 1.01)	2.15 (0.27, 17.25)	1.24 (0.24, 6.47)	12.52 (2.35, 66.76)‡	0.52 (0.14, 1.92)	3.38 (0.48, 23.63)	4.53 (1.42, 14.39)‡
C1 + T4	1.37 (0.19, 10.02)	0.22 (0.03, 1.58)	1.69 (0.13, 21.87)	0.97 (0.1, 9.04)	9.8 (1.03, 92.77)‡	0.41 (0.06, 2.98)	2.64 (0.23, 30.77)	3.54 (0.53, 23.66)
C2	2.37 (0.48, 11.83)	0.37 (0.08, 1.74)	2.91 (0.31, 27.23)	1.67 (0.26, 10.63)	16.93 (2.62, 109.31)‡	0.7 (0.15, 3.3)	4.57 (0.55, 37.67)	6.12 (1.47, 25.43)‡
C3	1.23 (0.35, 4.33)	0.19 (0.05, 0.72)‡	1.52 (0.19, 12.23)	0.87 (0.17, 4.58)	8.81 (1.64, 47.4)‡	0.37 (0.1, 1.37)	2.38 (0.34, 16.75)	3.19 (0.99, 10.26)
C3 + T1 + T4	3.67 (0.73, 18.34)	0.58 (0.11, 2.99)	4.5 (0.45, 45.27)	2.58 (0.37, 17.85)	26.16 (3.72, 184.02)‡	1.08 (0.21, 5.65)	7.06 (0.79, 62.88)	9.46 (2.05, 43.8)‡
C4	C4	0.16 (0.03, 0.88)‡	1.23 (0.12, 13.06)	0.7 (0.1, 5.21)	7.13 (0.95, 53.62)	0.3 (0.05, 1.66)	1.92 (0.2, 18.2)	2.58 (0.51, 12.98)
C7	6.34 (1.14, 35.37)‡	C7	7.78 (0.77, 78.91)	4.47 (0.64, 31.18)	45.23 (6.35, 322.21)‡	1.88 (0.35, 9.92)	12.2 (1.36, 109.67)‡	16.36 (3.46, 77.32)‡
C7 + H2	0.81 (0.08, 8.67)	0.13 (0.01, 1.3)	C7 + H2	0.57 (0.05, 7.23)	5.81 (0.46, 74.1)	0.24 (0.02, 2.46)	1.57 (0.39, 6.31)	2.1 (0.22, 19.93)
C8	1.42 (0.19, 10.5)	0.22 (0.03, 1.56)	1.74 (0.14, 21.96)	C8	10.13 (1.1, 92.8)‡	0.42 (0.06, 2.97)	2.73 (0.24, 30.85)	3.66 (0.57, 23.54)
H1	0.14 (0.02, 1.05)	0.02 (<0.005, 0.16)‡	0.17 (0.01, 2.19)	0.1 (0.01, 0.91)‡	H1	0.04 (0.01, 0.14)‡	0.27 (0.02, 3.08)	0.36 (0.06, 2.36)
H1 + N4 + T4	3.38 (0.6, 19.03)	0.53 (0.1, 2.82)	4.15 (0.41, 42.39)	2.38 (0.34, 16.84)	24.11 (7.1, 81.89)‡	H1 + N4 + T4	6.51 (0.72, 58.93)	8.72 (1.84, 41.46)‡
H2	0.52 (0.05, 4.91)	0.08 (0.01, 0.74)‡	0.64 (0.16, 2.56)	0.37 (0.03, 4.13)	3.71 (0.32, 42.34)	0.15 (0.02, 1.39)	H2	1.34 (0.16, 11.21)
H4	0.39 (0.08, 1.95)	0.06 (0.01, 0.29)‡	0.48 (0.05, 4.51)	0.27 (0.04, 1.75)	2.76 (0.42, 18.04)	0.11 (0.02, 0.54)‡	0.75 (0.09, 6.24)	H4
N1	4.74 (1.19, 18.98)‡	0.75 (0.2, 2.83)	5.82 (0.71, 47.64)	3.34 (0.64, 17.57)	33.84 (6.17, 185.49)‡	1.4 (0.37, 5.39)	9.13 (1.28, 65.34)‡	12.24 (3.7, 40.55)‡

N2	5.61 (0.86, 36.58)	0.89 (0.14, 5.44)	6.89 (0.61, 78.35)	3.95 (0.49, 31.81)	40.03 (4.91, 326.59)‡	1.66 (0.27, 10.28)	10.8 (1.07, 109.56)‡	14.48 (2.59, 81.11)‡
N3	3.19 (0.75, 13.63)	0.5 (0.13, 2)	3.92 (0.46, 33)	2.25 (0.4, 12.54)	22.76 (4.01, 129.08)‡	0.94 (0.24, 3.78)	6.14 (0.83, 45.34)	8.23 (2.38, 28.51)‡
N4	1.78 (0.46, 6.81)	0.28 (0.08, 0.98)‡	2.18 (0.28, 17.09)	1.25 (0.27, 5.72)	12.68 (2.44, 65.86)‡	0.53 (0.15, 1.88)	3.42 (0.5, 23.36)	4.59 (1.5, 14.07)‡
N4 + T4	15.96 (2.69, 94.8)‡	2.52 (0.46, 13.85)	19.59 (1.84, 208.88)‡	11.24 (1.52, 83.07)‡	113.84 (15.05, 860.89)‡	4.72 (0.83, 26.77)	30.72 (3.24, 291.11)‡	41.18 (8.08, 209.88)‡
N4 + T4 + T6	10.86 (1.89, 62.33)‡	1.71 (0.32, 9.09)	13.32 (1.28, 138.37)‡	7.65 (1.06, 55.04)‡	77.42 (10.58, 566.67)‡	3.21 (0.59, 17.52)	20.89 (2.27, 192.56)‡	28.01 (5.74, 136.64)‡
N4 + T6	0.71 (0.11, 4.71)	0.11 (0.02, 0.7)‡	0.88 (0.08, 10.13)	0.5 (0.06, 4.1)	5.09 (0.62, 42.08)	0.21 (0.03, 1.33)	1.37 (0.13, 14.17)	1.84 (0.33, 10.39)
T1	3.23 (0.8, 12.98)	0.51 (0.14, 1.86)	3.96 (0.49, 31.98)	2.27 (0.43, 12.03)	23.03 (4.27, 124.24)‡	0.96 (0.25, 3.59)	6.22 (0.88, 43.82)	8.33 (2.57, 27.02)‡
T1 + T2 + T4	3.5 (0.47, 26.12)	0.55 (0.08, 3.91)	4.3 (0.34, 54.65)	2.47 (0.27, 22.47)	24.98 (2.71, 230.51)‡	1.04 (0.15, 7.38)	6.74 (0.59, 76.8)	9.04 (1.4, 58.27)‡
T1 + T4	2.46 (0.6, 10.03)	0.39 (0.1, 1.45)	3.01 (0.37, 24.6)	1.73 (0.32, 9.28)	17.52 (3.21, 95.7)‡	0.73 (0.19, 2.78)	4.73 (0.66, 33.73)	6.34 (1.92, 20.9)‡
T1 + T4 + T6	5.99 (1.15, 31.1)‡	0.94 (0.2, 4.49)	7.35 (0.76, 70.86)	4.22 (0.64, 27.78)	42.72 (6.37, 286.36)‡	1.77 (0.36, 8.71)	11.53 (1.35, 98.2)‡	15.46 (3.54, 67.45)‡
T2	3.09 (0.71, 13.37)	0.49 (0.12, 1.94)	3.79 (0.45, 32.18)	2.18 (0.39, 12.26)	22.03 (3.84, 126.38)‡	0.91 (0.22, 3.71)	5.94 (0.8, 44.25)	7.97 (2.26, 28.15)‡
T4	3.57 (0.97, 13.11)	0.56 (0.18, 1.75)	4.38 (0.58, 33.27)	2.51 (0.51, 12.27)	25.43 (5.07, 127.55)‡	1.05 (0.31, 3.61)	6.86 (1.04, 45.4)‡	9.2 (3.15, 26.91)‡
T4 + T6	4.47 (1.2, 16.72)‡	0.71 (0.21, 2.33)	5.49 (0.71, 42.24)	3.15 (0.63, 15.7)	31.89 (6.26, 162.53)‡	1.32 (0.38, 4.63)	8.6 (1.28, 57.69)‡	11.54 (3.85, 34.59)‡
T4 + T9	4.61 (0.98, 21.82)	0.73 (0.17, 3.08)	5.66 (0.63, 50.93)	3.25 (0.54, 19.67)	32.91 (5.33, 203.35)‡	1.36 (0.31, 6.09)	8.88 (1.12, 70.29)‡	11.91 (3.03, 46.84)‡
T5	3.11 (0.62, 15.65)	0.49 (0.11, 2.2)	3.81 (0.41, 35.9)	2.19 (0.34, 13.98)	22.17 (3.4, 144.47)‡	0.92 (0.19, 4.37)	5.98 (0.72, 49.68)	8.02 (1.9, 33.77)‡
T5 + T4	3.62 (0.8, 16.26)	0.57 (0.14, 2.3)	4.44 (0.51, 38.57)	2.55 (0.44, 14.77)	25.79 (4.36, 152.63)‡	1.07 (0.25, 4.52)	6.96 (0.91, 53.12)	9.33 (2.52, 34.53)‡
U5	1.18 (0.23, 6.07)	0.19 (0.04, 0.9)‡	1.45 (0.15, 13.95)	0.83 (0.13, 5.45)	8.43 (1.27, 55.98)‡	0.35 (0.07, 1.7)	2.27 (0.27, 19.32)	3.05 (0.71, 13.01)
V	2.68 (0.48, 15.07)	0.42 (0.08, 2.24)	3.29 (0.32, 33.78)	1.89 (0.27, 13.36)	19.13 (2.67, 137.3)‡	0.79 (0.15, 4.22)	5.16 (0.57, 46.96)	6.92 (1.47, 32.66)‡
P	0.6 (0.17, 2.11)	0.09 (0.03, 0.31)‡	0.73 (0.1, 5.48)	0.42 (0.09, 2.01)	4.25 (0.87, 20.72)	0.18 (0.05, 0.58)‡	1.15 (0.18, 7.47)	1.54 (0.56, 4.22)

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-9. Comparative odds ratios for improvement between interventions – part 3

A1	0.26 (0.12, 0.53)‡	0.22 (0.05, 0.92)‡	0.38 (0.17, 0.85)‡	0.69 (0.38, 1.24)	0.08 (0.02, 0.29)‡	0.11 (0.03, 0.4)‡	1.71 (0.4, 7.26)	0.38 (0.19, 0.76)‡
A2	0.3 (0.07, 1.19)	0.25 (0.04, 1.65)	0.44 (0.1, 1.91)	0.79 (0.24, 2.66)	0.09 (0.01, 0.53)‡	0.13 (0.02, 0.75)‡	1.98 (0.3, 13.14)	0.44 (0.11, 1.77)
B	1.07 (0.32, 3.58)	0.9 (0.31, 2.65)	1.59 (0.45, 5.58)	2.86 (0.92, 8.83)	0.32 (0.06, 1.62)	0.47 (0.1, 2.29)	7.11 (1.25, 40.46)‡	1.57 (0.48, 5.14)
C1	0.37 (0.16, 0.86)‡	0.31 (0.07, 1.4)	0.55 (0.22, 1.37)	0.99 (0.47, 2.06)	0.11 (0.03, 0.44)‡	0.16 (0.04, 0.61)‡	2.46 (0.54, 11.15)	0.54 (0.24, 1.23)
C1 + T4	0.29 (0.05, 1.62)	0.24 (0.03, 2.04)	0.43 (0.07, 2.5)	0.77 (0.14, 4.12)	0.09 (0.01, 0.66)‡	0.13 (0.02, 0.94)‡	1.92 (0.23, 16.23)	0.43 (0.08, 2.35)
C2	0.5 (0.15, 1.64)	0.42 (0.11, 1.7)	0.74 (0.22, 2.55)	1.33 (0.44, 4.04)	0.15 (0.03, 0.75)‡	0.22 (0.05, 1.05)	3.32 (0.59, 18.63)	0.73 (0.23, 2.35)
C3	0.26 (0.12, 0.57)‡	0.22 (0.05, 1)	0.39 (0.15, 0.98)‡	0.69 (0.33, 1.47)	0.08 (0.02, 0.31)‡	0.11 (0.03, 0.44)‡	1.73 (0.38, 7.92)	0.38 (0.17, 0.88)‡
C3 + T1 + T4	0.77 (0.22, 2.75)	0.65 (0.11, 3.96)	1.15 (0.3, 4.47)	2.06 (0.6, 7.12)	0.23 (0.04, 1.26)	0.34 (0.06, 1.8)	5.14 (0.84, 31.53)	1.14 (0.31, 4.14)
C4	0.21 (0.05, 0.84)‡	0.18 (0.03, 1.16)	0.31 (0.07, 1.34)	0.56 (0.15, 2.15)	0.06 (0.01, 0.37)‡	0.09 (0.02, 0.53)‡	1.4 (0.21, 9.23)	0.31 (0.08, 1.25)
C7	1.34 (0.35, 5.06)	1.13 (0.18, 6.94)	1.99 (0.5, 7.9)	3.57 (1.02, 12.52)‡	0.4 (0.07, 2.19)	0.58 (0.11, 3.1)	8.88 (1.42, 55.41)‡	1.96 (0.54, 7.16)
C7 + H2	0.17 (0.02, 1.41)	0.15 (0.01, 1.65)	0.26 (0.03, 2.15)	0.46 (0.06, 3.59)	0.05 (<0.005, 0.54)‡	0.08 (0.01, 0.78)‡	1.14 (0.1, 13.19)	0.25 (0.03, 2.04)
C8	0.3 (0.06, 1.57)	0.25 (0.03, 2.04)	0.44 (0.08, 2.48)	0.8 (0.17, 3.65)	0.09 (0.01, 0.66)‡	0.13 (0.02, 0.94)‡	1.99 (0.24, 16.21)	0.44 (0.08, 2.33)
H1	0.03 (0.01, 0.16)‡	0.02 (<0.005, 0.2)‡	0.04 (0.01, 0.25)‡	0.08 (0.02, 0.41)‡	0.01 (<0.005, 0.07)‡	0.01 (<0.005, 0.09)‡	0.2 (0.02, 1.62)	0.04 (0.01, 0.23)‡
H1 + N4 + T4	0.71 (0.19, 2.74)	0.6 (0.1, 3.73)	1.06 (0.26, 4.24)	1.9 (0.53, 6.82)	0.21 (0.04, 1.2)	0.31 (0.06, 1.7)	4.74 (0.75, 29.72)	1.05 (0.28, 3.94)
H2	0.11 (0.02, 0.78)‡	0.09 (0.01, 0.94)‡	0.16 (0.02, 1.2)	0.29 (0.04, 1.99)	0.03 (<0.005, 0.31)‡	0.05 (0.01, 0.44)‡	0.73 (0.07, 7.5)	0.16 (0.02, 1.13)
H4	0.08 (0.02, 0.27)‡	0.07 (0.01, 0.39)‡	0.12 (0.04, 0.42)‡	0.22 (0.07, 0.67)‡	0.02 (<0.005, 0.12)‡	0.04 (0.01, 0.17)‡	0.54 (0.1, 3.06)	0.12 (0.04, 0.39)‡
N1	N1	0.85 (0.18, 3.9)	1.49 (0.57, 3.91)	2.67 (1.29, 5.52)‡	0.3 (0.08, 1.12)	0.44 (0.11, 1.72)	6.64 (1.42, 31.09)‡	1.47 (0.61, 3.52)
N2	1.18 (0.26, 5.46)	N2	1.76 (0.37, 8.44)	3.16 (0.73, 13.71)	0.35 (0.05, 2.3)	0.52 (0.08, 3.27)	7.86 (1.09, 56.73)‡	1.74 (0.38, 7.88)
N3	0.67 (0.26, 1.77)	0.57 (0.12, 2.73)	N3	1.79 (0.75, 4.28)	0.2 (0.05, 0.86)‡	0.29 (0.07, 1.21)	4.47 (0.92, 21.67)	0.99 (0.39, 2.53)
N4	0.37 (0.18, 0.78)‡	0.32 (0.07, 1.38)	0.56 (0.23, 1.33)	N4	0.11 (0.03, 0.43)‡	0.16 (0.04, 0.6)‡	2.49 (0.56, 10.98)	0.55 (0.26, 1.18)
N4 + T4	3.36 (0.89, 12.7)	2.84 (0.43, 18.62)	5 (1.16, 21.63)‡	8.98 (2.35, 34.3)‡	N4 + T4	1.47 (0.26, 8.46)	22.35 (3.36, 148.72)‡	4.94 (1.23, 19.93)‡
N4 + T4 + T6	2.29 (0.58, 9.03)	1.93 (0.31, 12.24)	3.4 (0.83, 14.03)	6.11 (1.66, 22.47)‡	0.68 (0.12, 3.91)	N4 + T4 + T6	15.2 (2.37, 97.52)‡	3.36 (0.89, 12.76)
N4 + T6	0.15 (0.03, 0.7)‡	0.13 (0.02, 0.92)‡	0.22 (0.05, 1.09)	0.4 (0.09, 1.77)	0.04 (0.01, 0.3)‡	0.07 (0.01, 0.42)‡	N4 + T6	0.22 (0.05, 1.02)
T1	0.68 (0.28, 1.63)	0.58 (0.13, 2.61)	1.01 (0.4, 2.59)	1.82 (0.85, 3.88)	0.2 (0.05, 0.82)‡	0.3 (0.08, 1.13)	4.52 (0.98, 20.8)	T1
T1 + T2 + T4	0.74 (0.14, 4.01)	0.62 (0.08, 5.06)	1.1 (0.2, 6.16)	1.97 (0.38, 10.13)	0.22 (0.03, 1.65)	0.32 (0.04, 2.34)	4.9 (0.6, 40.17)	1.08 (0.2, 5.8)
T1 + T4	0.52 (0.21, 1.27)	0.44 (0.1, 2.01)	0.77 (0.29, 2.01)	1.38 (0.63, 3.04)	0.15 (0.04, 0.63)‡	0.23 (0.06, 0.88)‡	3.44 (0.74, 16.03)	0.76 (0.35, 1.64)
T1 + T4 + T6	1.26 (0.36, 4.37)	1.07 (0.19, 6.14)	1.88 (0.52, 6.82)	3.37 (1.05, 10.79)‡	0.38 (0.07, 1.95)	0.55 (0.11, 2.68)	8.39 (1.44, 48.97)‡	1.85 (0.64, 5.36)
T2	0.65 (0.24, 1.75)	0.55 (0.11, 2.67)	0.97 (0.34, 2.75)	1.74 (0.71, 4.23)	0.19 (0.04, 0.84)‡	0.28 (0.09, 0.94)‡	4.33 (0.88, 21.28)	0.96 (0.37, 2.46)
T4	0.75 (0.37, 1.54)	0.64 (0.15, 2.65)	1.12 (0.5, 2.5)	2.01 (1.15, 3.51)‡	0.22 (0.06, 0.8)‡	0.33 (0.1, 1.13)	4.99 (1.18, 21.22)‡	1.1 (0.58, 2.09)
T4 + T6	0.94 (0.44, 2.01)	0.8 (0.19, 3.38)	1.4 (0.61, 3.23)	2.51 (1.36, 4.67)‡	0.28 (0.08, 1.04)	0.41 (0.12, 1.37)	6.26 (1.45, 27.1)‡	1.38 (0.72, 2.67)

T4 + T9	0.97 (0.32, 2.96)	0.82 (0.16, 4.32)	1.45 (0.45, 4.66)	2.6 (0.93, 7.21)	0.29 (0.06, 1.36)	0.43 (0.1, 1.89)	6.46 (1.21, 34.6)‡	1.43 (0.49, 4.14)
T5	0.66 (0.2, 2.17)	0.55 (0.1, 3.09)	0.97 (0.28, 3.4)	1.75 (0.57, 5.32)	0.19 (0.04, 0.97)‡	0.29 (0.06, 1.37)	4.35 (0.77, 24.66)	0.96 (0.31, 3.02)
T5 + T4	0.76 (0.27, 2.16)	0.64 (0.13, 3.23)	1.13 (0.38, 3.4)	2.03 (0.79, 5.22)	0.23 (0.05, 1.01)	0.33 (0.08, 1.43)	5.06 (0.99, 25.83)	1.12 (0.43, 2.95)
U5	0.25 (0.07, 0.85)‡	0.21 (0.04, 1.2)	0.37 (0.1, 1.32)	0.66 (0.21, 2.1)	0.07 (0.01, 0.39)‡	0.11 (0.02, 0.54)‡	1.66 (0.29, 9.51)	0.37 (0.11, 1.22)
V	0.57 (0.15, 2.16)	0.48 (0.08, 2.97)	0.84 (0.21, 3.35)	1.51 (0.42, 5.39)	0.17 (0.03, 0.95)‡	0.25 (0.05, 1.35)	3.76 (0.6, 23.49)	0.83 (0.22, 3.12)
P	0.13 (0.07, 0.24)‡	0.11 (0.03, 0.43)‡	0.19 (0.09, 0.39)‡	0.34 (0.2, 0.55)‡	0.04 (0.01, 0.13)‡	0.05 (0.02, 0.19)‡	0.83 (0.2, 3.41)	0.18 (0.1, 0.34)‡

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-10. Comparative odds ratios for improvement between interventions – part 4

A1	0.35 (0.07, 1.73)	0.5 (0.24, 1.02)	0.2 (0.07, 0.63)‡	0.4 (0.17, 0.91)‡	0.34 (0.21, 0.56)‡	0.27 (0.16, 0.47)‡	0.26 (0.1, 0.71)‡	0.39 (0.13, 1.16)
A2	0.4 (0.05, 3.03)	0.57 (0.14, 2.37)	0.24 (0.04, 1.23)	0.46 (0.1, 2)	0.4 (0.11, 1.46)	0.32 (0.08, 1.19)	0.31 (0.06, 1.45)	0.45 (0.09, 2.29)
B	1.45 (0.22, 9.42)	2.07 (0.62, 6.88)	0.85 (0.19, 3.71)	1.64 (0.46, 5.86)	1.42 (0.48, 4.18)	1.14 (0.38, 3.42)	1.1 (0.28, 4.33)	1.63 (0.39, 6.89)
C1	0.5 (0.09, 2.64)	0.71 (0.31, 1.66)	0.29 (0.09, 0.97)‡	0.57 (0.22, 1.44)	0.49 (0.26, 0.94)‡	0.39 (0.2, 0.77)‡	0.38 (0.13, 1.11)	0.56 (0.18, 1.8)
C1 + T4	0.39 (0.04, 3.69)	0.56 (0.1, 3.13)	0.23 (0.03, 1.57)	0.44 (0.08, 2.61)	0.39 (0.07, 1.98)	0.31 (0.06, 1.6)	0.3 (0.05, 1.88)	0.44 (0.07, 2.94)
C2	0.68 (0.11, 4.34)	0.97 (0.3, 3.15)	0.4 (0.09, 1.71)	0.77 (0.22, 2.68)	0.67 (0.23, 1.91)	0.53 (0.18, 1.56)	0.51 (0.13, 1.99)	0.76 (0.18, 3.17)
C3	0.35 (0.07, 1.88)	0.5 (0.21, 1.19)	0.21 (0.06, 0.7)‡	0.4 (0.15, 1.04)	0.35 (0.18, 0.68)‡	0.28 (0.13, 0.57)‡	0.27 (0.09, 0.79)‡	0.4 (0.12, 1.29)
C3 + T1 + T4	1.05 (0.15, 7.31)	1.49 (0.4, 5.54)	0.61 (0.13, 2.93)	1.19 (0.3, 4.69)	1.03 (0.31, 3.41)	0.82 (0.24, 2.78)	0.79 (0.18, 3.45)	1.18 (0.25, 5.47)
C4	0.29 (0.04, 2.13)	0.41 (0.1, 1.66)	0.17 (0.03, 0.87)‡	0.32 (0.07, 1.4)	0.28 (0.08, 1.03)	0.22 (0.06, 0.84)‡	0.22 (0.05, 1.02)	0.32 (0.06, 1.62)
C7	1.81 (0.26, 12.82)	2.58 (0.69, 9.65)	1.06 (0.22, 5.04)	2.05 (0.52, 8.17)	1.78 (0.57, 5.54)	1.42 (0.43, 4.7)	1.37 (0.32, 5.81)	2.04 (0.45, 9.17)
C7 + H2	0.23 (0.02, 2.96)	0.33 (0.04, 2.71)	0.14 (0.01, 1.31)	0.26 (0.03, 2.24)	0.23 (0.03, 1.74)	0.18 (0.02, 1.4)	0.18 (0.02, 1.59)	0.26 (0.03, 2.47)
C8	0.41 (0.04, 3.69)	0.58 (0.11, 3.1)	0.24 (0.04, 1.56)	0.46 (0.08, 2.59)	0.4 (0.08, 1.94)	0.32 (0.06, 1.58)	0.31 (0.05, 1.86)	0.46 (0.07, 2.92)
H1	0.04 (<0.005, 0.37)‡	0.06 (0.01, 0.31)‡	0.02 (<0.005, 0.16)‡	0.05 (0.01, 0.26)‡	0.04 (0.01, 0.2)‡	0.03 (0.01, 0.16)‡	0.03 (<0.005, 0.19)‡	0.05 (0.01, 0.29)‡
H1 + N4 + T4	0.97 (0.14, 6.87)	1.38 (0.36, 5.26)	0.56 (0.11, 2.78)	1.09 (0.27, 4.45)	0.95 (0.28, 3.25)	0.76 (0.22, 2.65)	0.73 (0.16, 3.27)	1.09 (0.23, 5.17)
H2	0.15 (0.01, 1.69)	0.21 (0.03, 1.51)	0.09 (0.01, 0.74)‡	0.17 (0.02, 1.25)	0.15 (0.02, 0.96)‡	0.12 (0.02, 0.78)‡	0.11 (0.01, 0.89)‡	0.17 (0.02, 1.39)
H4	0.11 (0.02, 0.71)‡	0.16 (0.05, 0.52)‡	0.06 (0.01, 0.28)‡	0.13 (0.04, 0.44)‡	0.11 (0.04, 0.32)‡	0.09 (0.03, 0.26)‡	0.08 (0.02, 0.33)‡	0.12 (0.03, 0.53)‡
N1	1.35 (0.25, 7.35)	1.93 (0.79, 4.74)	0.79 (0.23, 2.74)	1.54 (0.57, 4.12)	1.33 (0.65, 2.72)	1.06 (0.5, 2.26)	1.03 (0.34, 3.13)	1.53 (0.46, 5.05)
N2	1.6 (0.2, 13.01)	2.29 (0.5, 10.51)	0.94 (0.16, 5.39)	1.82 (0.37, 8.82)	1.57 (0.38, 6.57)	1.26 (0.3, 5.33)	1.22 (0.23, 6.4)	1.81 (0.32, 10.07)
N3	0.91 (0.16, 5.11)	1.3 (0.5, 3.39)	0.53 (0.15, 1.94)	1.03 (0.36, 2.94)	0.89 (0.4, 2)	0.71 (0.31, 1.65)	0.69 (0.21, 2.23)	1.03 (0.29, 3.58)

N4	0.51 (0.1, 2.61)	0.72 (0.33, 1.59)	0.3 (0.09, 0.95)‡	0.58 (0.24, 1.4)	0.5 (0.28, 0.87)‡	0.4 (0.21, 0.74)‡	0.39 (0.14, 1.07)	0.57 (0.19, 1.74)
N4 + T4	4.56 (0.61, 34.27)	6.5 (1.58, 26.7)‡	2.66 (0.51, 13.83)	5.17 (1.19, 22.51)‡	4.48 (1.24, 16.11)‡	3.57 (0.96, 13.31)	3.46 (0.74, 16.22)	5.14 (1.03, 25.58)‡
N4 + T4 + T6	3.1 (0.43, 22.53)	4.42 (1.13, 17.26)‡	1.81 (0.37, 8.8)	3.51 (1.06, 11.65)‡	3.04 (0.89, 10.45)	2.43 (0.73, 8.1)	2.35 (0.53, 10.44)	3.49 (0.73, 16.73)
N4 + T6	0.2 (0.02, 1.67)	0.29 (0.06, 1.35)	0.12 (0.02, 0.7)‡	0.23 (0.05, 1.14)	0.2 (0.05, 0.85)‡	0.16 (0.04, 0.69)‡	0.15 (0.03, 0.83)‡	0.23 (0.04, 1.3)
T1	0.92 (0.17, 4.93)	1.31 (0.61, 2.83)	0.54 (0.19, 1.56)	1.05 (0.41, 2.69)	0.91 (0.48, 1.71)	0.72 (0.37, 1.39)	0.7 (0.24, 2.03)	1.04 (0.33, 3.27)
T1 + T2 + T4	T1 + T2 + T4	1.43 (0.26, 7.71)	0.58 (0.09, 3.89)	1.13 (0.2, 6.44)	0.98 (0.2, 4.88)	0.78 (0.15, 3.96)	0.76 (0.12, 4.66)	1.13 (0.17, 7.29)
T1 + T4	0.7 (0.13, 3.79)	T1 + T4	0.41 (0.12, 1.36)	0.8 (0.3, 2.11)	0.69 (0.35, 1.37)	0.55 (0.26, 1.14)	0.53 (0.18, 1.6)	0.79 (0.26, 2.42)
T1 + T4 + T6	1.71 (0.26, 11.38)	2.44 (0.73, 8.11)	T1 + T4 + T6	1.94 (0.54, 6.97)	1.68 (0.57, 4.94)	1.34 (0.47, 3.83)	1.3 (0.33, 5.09)	1.93 (0.45, 8.17)
T2	0.88 (0.16, 5.01)	1.26 (0.47, 3.34)	0.52 (0.14, 1.85)	T2	0.87 (0.39, 1.93)	0.69 (0.31, 1.52)	0.67 (0.21, 2.14)	0.99 (0.28, 3.48)
T4	1.02 (0.2, 5.06)	1.45 (0.73, 2.89)	0.6 (0.2, 1.75)	1.15 (0.52, 2.57)	T4	0.8 (0.54, 1.19)	0.77 (0.32, 1.89)	1.15 (0.43, 3.08)
T4 + T6	1.28 (0.25, 6.45)	1.82 (0.88, 3.78)	0.75 (0.26, 2.13)	1.45 (0.66, 3.19)	1.25 (0.84, 1.86)	T4 + T6	0.97 (0.39, 2.43)	1.44 (0.5, 4.11)
T4 + T9	1.32 (0.21, 8.09)	1.88 (0.63, 5.63)	0.77 (0.2, 3.02)	1.49 (0.47, 4.78)	1.29 (0.53, 3.17)	1.03 (0.41, 2.59)	T4 + T9	1.48 (0.39, 5.59)
T5	0.89 (0.14, 5.74)	1.27 (0.41, 3.88)	0.52 (0.12, 2.2)	1.01 (0.29, 3.52)	0.87 (0.32, 2.34)	0.7 (0.24, 1.99)	0.67 (0.18, 2.53)	T5
T5 + T4	1.03 (0.18, 6.06)	1.47 (0.62, 3.49)	0.6 (0.16, 2.25)	1.17 (0.39, 3.54)	1.01 (0.45, 2.29)	0.81 (0.34, 1.95)	0.78 (0.24, 2.59)	1.16 (0.42, 3.19)
U5	0.34 (0.05, 2.22)	0.48 (0.14, 1.63)	0.2 (0.04, 0.88)‡	0.38 (0.11, 1.39)	0.33 (0.11, 1)	0.26 (0.09, 0.82)‡	0.26 (0.06, 1.03)	0.38 (0.09, 1.64)
V	0.77 (0.11, 5.44)	1.09 (0.29, 4.16)	0.45 (0.09, 2.2)	0.87 (0.21, 3.52)	0.75 (0.22, 2.58)	0.6 (0.17, 2.1)	0.58 (0.13, 2.6)	0.86 (0.18, 4.11)
P	0.17 (0.04, 0.82)‡	0.24 (0.13, 0.46)‡	0.1 (0.03, 0.29)‡	0.19 (0.09, 0.41)‡	0.17 (0.11, 0.24)‡	0.13 (0.09, 0.21)‡	0.13 (0.05, 0.33)‡	0.19 (0.07, 0.54)‡

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-11. Comparative odds ratios for improvement between interventions – part 5

A1	0.34 (0.14, 0.83)‡	1.03 (0.34, 3.09)	0.46 (0.13, 1.55)	2.05 (1.45, 2.89)‡
A2	0.39 (0.09, 1.76)	1.19 (0.23, 6.2)	0.53 (0.09, 2.98)	2.37 (0.66, 8.51)
B	1.4 (0.38, 5.21)	4.3 (0.99, 18.62)	1.89 (0.4, 9.05)	8.52 (3.02, 24.05)‡
C1	0.49 (0.18, 1.31)	1.49 (0.45, 4.86)	0.65 (0.18, 2.41)	2.94 (1.67, 5.2)‡
C1 + T4	0.38 (0.06, 2.3)	1.16 (0.17, 7.9)	0.51 (0.07, 3.76)	2.3 (0.46, 11.54)
C2	0.66 (0.18, 2.39)	2.01 (0.47, 8.54)	0.88 (0.19, 4.16)	3.98 (1.45, 10.91)‡
C3	0.34 (0.12, 0.94)‡	1.04 (0.32, 3.46)	0.46 (0.12, 1.72)	2.07 (1.14, 3.76)‡
C3 + T1 + T4	1.01 (0.25, 4.17)	3.1 (0.66, 14.68)	1.37 (0.26, 7.1)	6.15 (1.94, 19.54)‡
C4	0.28 (0.06, 1.24)	0.85 (0.16, 4.35)	0.37 (0.07, 2.09)	1.68 (0.47, 5.94)
C7	1.75 (0.44, 7.06)	5.37 (1.11, 25.91)‡	2.36 (0.45, 12.51)	10.64 (3.25, 34.79)‡

C7 + H2	0.23 (0.03, 1.96)	0.69 (0.07, 6.63)	0.3 (0.03, 3.12)	1.37 (0.18, 10.24)
C8	0.39 (0.07, 2.28)	1.2 (0.18, 7.86)	0.53 (0.07, 3.74)	2.38 (0.5, 11.4)
H1	0.04 (0.01, 0.23)‡	0.12 (0.02, 0.79)‡	0.05 (0.01, 0.38)‡	0.24 (0.05, 1.15)
H1 + N4 + T4	0.93 (0.22, 3.95)	2.86 (0.59, 13.89)	1.26 (0.24, 6.71)	5.67 (1.72, 18.67)‡
H2	0.14 (0.02, 1.1)	0.44 (0.05, 3.73)	0.19 (0.02, 1.76)	0.87 (0.13, 5.67)
H4	0.11 (0.03, 0.4)‡	0.33 (0.08, 1.4)	0.14 (0.03, 0.68)‡	0.65 (0.24, 1.79)
N1	1.31 (0.46, 3.71)	4.01 (1.18, 13.67)‡	1.77 (0.46, 6.77)	7.96 (4.16, 15.24)‡
N2	1.55 (0.31, 7.79)	4.75 (0.83, 27.12)	2.09 (0.34, 12.99)	9.42 (2.32, 38.21)‡
N3	0.88 (0.29, 2.65)	2.7 (0.76, 9.6)	1.19 (0.3, 4.74)	5.35 (2.59, 11.08)‡
N4	0.49 (0.19, 1.26)	1.5 (0.48, 4.75)	0.66 (0.19, 2.37)	2.98 (1.82, 4.89)‡
N4 + T4	4.41 (0.99, 19.71)	13.51 (2.6, 70.24)‡	5.95 (1.05, 33.79)‡	26.78 (7.43, 96.55)‡
N4 + T4 + T6	3 (0.7, 12.84)	9.19 (1.84, 45.76)‡	4.05 (0.74, 22.07)	18.21 (5.35, 62.03)‡
N4 + T6	0.2 (0.04, 1.01)	0.6 (0.11, 3.47)	0.27 (0.04, 1.66)	1.2 (0.29, 4.89)
T1	0.89 (0.34, 2.35)	2.73 (0.82, 9.12)	1.2 (0.32, 4.52)	5.42 (2.94, 9.98)‡
T1 + T2 + T4	0.97 (0.16, 5.69)	2.96 (0.45, 19.45)	1.31 (0.18, 9.27)	5.88 (1.22, 28.2)‡
T1 + T4	0.68 (0.29, 1.61)	2.08 (0.61, 7.05)	0.92 (0.24, 3.49)	4.12 (2.17, 7.82)‡
T1 + T4 + T6	1.66 (0.44, 6.18)	5.07 (1.14, 22.62)‡	2.23 (0.45, 10.98)	10.05 (3.42, 29.53)‡
T2	0.85 (0.28, 2.58)	2.61 (0.72, 9.48)	1.15 (0.28, 4.67)	5.18 (2.42, 11.1)‡
T4	0.99 (0.44, 2.23)	3.02 (1, 9.1)‡	1.33 (0.39, 4.56)	5.98 (4.11, 8.72)‡
T4 + T6	1.24 (0.51, 2.97)	3.78 (1.22, 11.69)‡	1.67 (0.48, 5.84)	7.5 (4.81, 11.69)‡
T4 + T9	1.28 (0.39, 4.21)	3.9 (0.97, 15.74)	1.72 (0.38, 7.69)	7.74 (3.05, 19.67)‡
T5	0.86 (0.31, 2.35)	2.63 (0.61, 11.33)	1.16 (0.24, 5.51)	5.21 (1.86, 14.59)‡
T5 + T4	T5 + T4	3.06 (0.81, 11.61)	1.35 (0.32, 5.7)	6.07 (2.62, 14.03)‡
U5	0.33 (0.09, 1.24)	U5	0.44 (0.09, 2.12)	1.98 (0.7, 5.63)
V	0.74 (0.18, 3.14)	2.27 (0.47, 10.94)	V	4.5 (1.38, 14.64)‡
P	0.16 (0.07, 0.38)‡	0.5 (0.18, 1.43)	0.22 (0.07, 0.72)‡	P

Shaded cells indicate indirect comparisons.

Abbreviations: A1: duloxetine, A2: midodrine, B: onabotulinum toxin A (BTX), C1: oxybutynin, C2: solifenacin, C3: tolterodrine, C4 trospium, C5: fesoterodine, C6: flavoxate, C7: phenylpropanolamine, C8: propantheline, C9: propiverine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N2: InterStim, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T3: heat therapy, T4: pelvic floor muscle training, T6: biofeedback, T7: mindfulness-based stress reduction (MBSR), T8: yoga, T9: weights, U1: polyacrylamide, U2: collagen, U3: autologous fat, U4: carbonated beads, U5: polydimethylsiloxane, U6: porcine collagen, U7: dextranomer hyaluronate, V: intravesical pressure release, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-12. Comparative odds ratios for improvement between interventions – subgraphs

T7	19.71 (0.95, 409.72)		
0.05 (<0.005, 1.05)	T8		
U1	1.14 (0.58, 2.24)	0.95 (0.39, 2.33)	2.78 (0.97, 8.01)
0.88 (0.45, 1.74)	U2	0.84 (0.46, 1.52)	2.45 (1.08, 5.57)‡
1.05 (0.43, 2.58)	1.2 (0.66, 2.17)	U4	2.93 (1.07, 8)‡
0.36 (0.12, 1.04)	0.41 (0.18, 0.93)‡	0.34 (0.12, 0.93)‡	U7

Shaded cells indicate indirect comparisons.

Abbreviations: T7: mindfulness-based stress reduction (MBSR), T8: yoga, U1: polyacrylamide, U2: collagen, U4: carbonated beads, U7: dextranomer hyaluronate.

‡ Statistically significant difference.

Table G-13. Mean and forecasted improvement rates by intervention

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Pharmacological		
Phenylpropanolamine (C7)	76.7 (50.4, 91.4)	76.7 (22.7, 97.4)
BTX (B)	72.5 (48.6, 88.0)	72.5 (20.2, 96.5)
Solifenacin (C2)	55.2 (31.0, 77.2)	55.2 (10.6, 92.7)
Oxybutynin (C1)	47.7 (33.5, 62.3)	47.7 (9.2, 89.1)
Propantheline (C8)	42.4 (13.4, 77.9)	42.4 (5.1, 91.1)
Midodrine (A2)	42.3 (16.9, 72.5)	42.3 (5.8, 89.6)
Tolterodine (C3)	39.1 (25.7, 54.3)	39.1 (6.6, 85.2)
Duloxetine (A1)	38.8 (29.4, 49.1)	38.8 (6.9, 84.5)
Polydimethylsiloxane (U5)	38.0 (17.4, 64.2)	38.0 (5.4, 86.7)
Trospium (C4)	34.2 (12.7, 64.9)	34.2 (4.2, 85.9)
Phenylpropanolamine + Estrogen, Oral (C7+H2)	29.7 (5.4, 75.7)	29.7 (2.3, 88.5)
Estrogen, Oral (H2)	21.3 (4.0, 63.3)	21.3 (1.6, 81.8)
Estrogen, Transdermal (H4)	16.8 (6.6, 36.3)	16.8 (1.9, 67.9)
Estrogen, Vaginal (H1)	6.8 (1.5, 26.1)	6.8 (0.5, 50.4)
Nonpharmacological		
TENS + PFMT (N4+T4)	89.2 (69.9, 96.7)	89.2 (41.4, 99.0)
TENS + PFMT + Biofeedback (N4+T4+T6)	84.9 (62.4, 95.0)	84.9 (33.0, 98.5)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	75.7 (51.5, 90.1)	75.7 (22.6, 97.1)
InterStim (N2)	74.5 (42.1, 92.1)	74.5 (18.9, 97.3)
Electroacupuncture (N1)	71.1 (55.9, 82.7)	71.1 (21.3, 95.7)

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
PFMT + Weights (T4+T9)	70.6 (48.9, 85.7)	70.6 (19.4, 96.0)
PFMT + Biofeedback (T4+T6)	69.9 (60.2, 78.1)	69.9 (21.2, 95.2)
Bladder Support + PFMT (T5+T4)	65.3 (44.9, 81.2)	65.3 (16.3, 94.8)
PFMT (T4)	64.9 (56.2, 72.7)	64.9 (17.9, 94.0)
Bladder Training + Education + PFMT (T1+T2+T4)	64.5 (27.3, 89.8)	64.5 (11.5, 96.2)
Bladder Training (T1)	62.6 (47.5, 75.7)	62.6 (15.7, 93.8)
Magnetic Stimulation (N3)	62.4 (43.9, 77.9)	62.4 (15.0, 94.0)
Bladder Support (T5)	61.7 (36.7, 81.8)	61.7 (13.4, 94.4)
Education (T2)	61.6 (42.6, 77.6)	61.6 (14.5, 93.8)
Intravesical Pressure Release (V)	58.2 (29.5, 82.3)	58.2 (10.9, 94.0)
Bladder Training + PFMT (T1+T4)	56.1 (39.9, 71.0)	56.1 (12.3, 92.1)
TENS (N4)	48.0 (35.8, 60.5)	48.0 (9.5, 89.0)
TENS + Biofeedback (N4+T6)	27.1 (8.2, 60.5)	27.1 (2.8, 82.5)
Combination		
Tolterodine +Bladder Training + PFMT (C3+T1+T4)	65.6 (37.4, 85.9)	65.6 (14.6, 95.5)
Estrogen,Vaginal + TENS + PFMT (H1+N4+T4)	63.7 (34.8, 85.3)	63.7 (13.5, 95.2)
Oxybutynin + PFMT (C1+T4)	41.6 (12.5, 78.1)	41.6 (4.8, 91.0)
No treatment		
Sham/No Treatment/Placebo (P)	23.6 (18.9, 29.2)	23.6 (3.6, 72.2)
Second subgraph		
Nonpharmacological		
MBSR (T7)	46.2 (22.4, 71.8)	46.2 (22.4, 71.8)
Yoga (T8)	4.2 (0.3, 42.5)	4.2 (0.3, 42.5)
Third subgraph		
Pharmacological		
Polyacrylamide (U1)	63.0 (35.4, 84.1)	63.0 (15.8, 93.9)
Collagen (U2)	60.0 (36.0, 80.0)	60.0 (15.1, 92.7)
Carbonated Beads (U4)	64.2 (38.0, 84.0)	64.2 (16.9, 94.0)
Dextranomer Hyaluronate (U7)	38.0 (15.7, 66.8)	38.0 (6.2, 85.1)

MBSR: mindfulness-based stress reduction, PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval.

Satisfaction

Figure G-3. Evidence graph of RCTs evaluating satisfaction across individual interventions

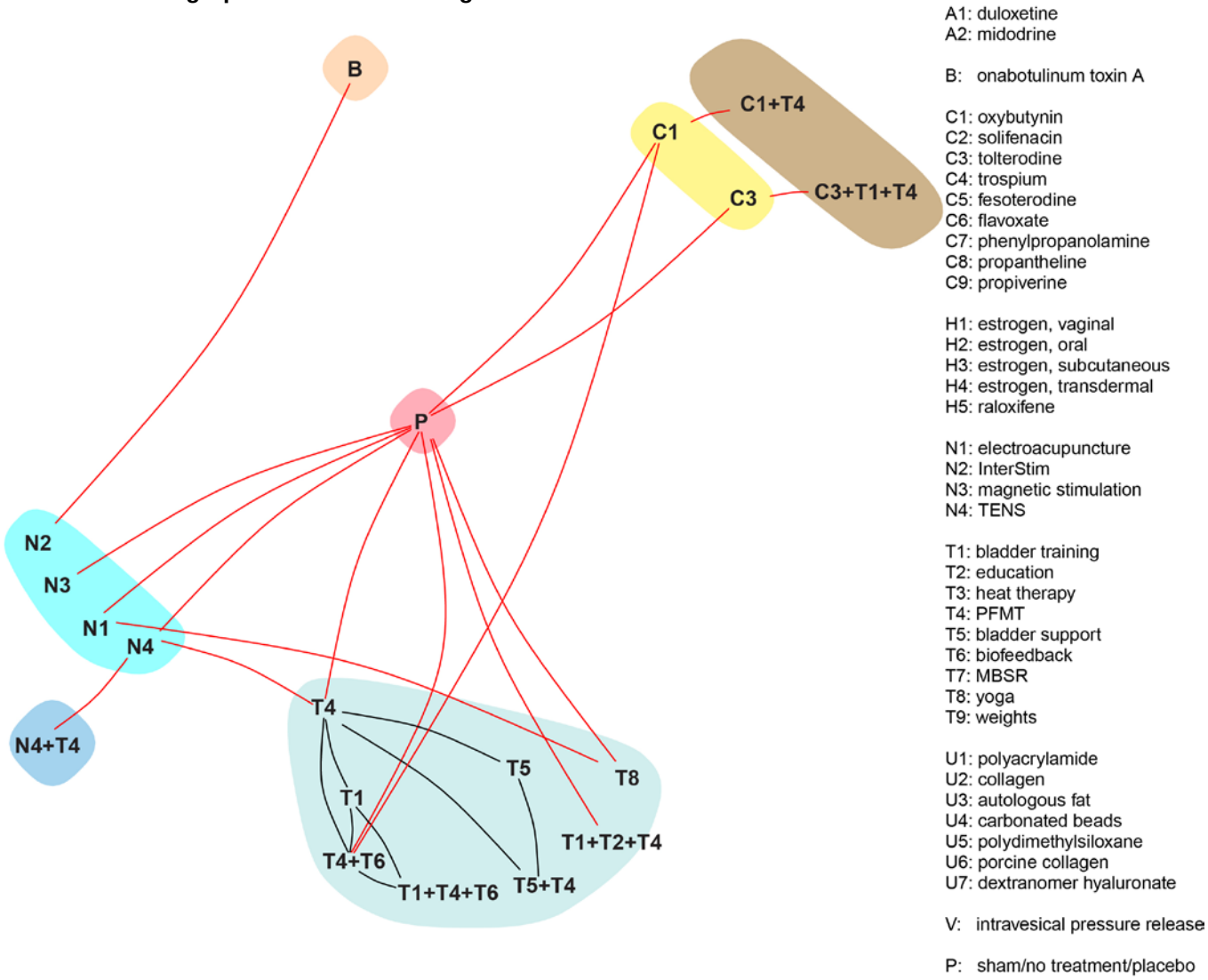


Table G-14. Comparative odds ratios for satisfaction between interventions

C1	C1	1.2 (0.35, 4.12)	0.96 (0.47, 1.97)	0.54 (0.23, 1.29)	0.2 (0.09, 0.45)‡	0.44 (0.15, 1.28)	0.51 (0.18, 1.49)	0.36 (0.06, 2.1)	0.79 (0.34, 1.81)	0.29 (0.07, 1.32)	0.37 (0.15, 0.92)‡	0.67 (0.28, 1.56)	0.39 (0.2, 0.76)‡	0.79 (0.3, 2.05)	0.69 (0.27, 1.79)	0.05 (<0.005, 1.03)	2.48 (1.26, 4.88)‡
C1+T4	0.84 (0.24, 2.88)	C1+T4	0.81 (0.21, 3.12)	0.45 (0.11, 1.9)	0.17 (0.04, 0.68)‡	0.37 (0.08, 1.76)	0.43 (0.09, 2.04)	0.3 (0.04, 2.43)	0.66 (0.16, 2.74)	0.25 (0.04, 1.62)	0.31 (0.07, 1.35)	0.56 (0.13, 2.31)	0.33 (0.08, 1.25)	0.66 (0.15, 2.91)	0.58 (0.13, 2.55)	0.05 (<0.005, 1.07)	2.07 (0.55, 7.86)
C3	1.04 (0.51, 2.12)	1.24 (0.32, 4.79)	C3	0.56 (0.34, 0.93)‡	0.21 (0.13, 0.34)‡	0.45 (0.19, 1.09)	0.53 (0.21, 1.37)	0.37 (0.07, 2.03)	0.82 (0.37, 1.79)	0.31 (0.08, 1.21)	0.38 (0.16, 0.93)‡	0.69 (0.33, 1.45)	0.4 (0.21, 0.78)‡	0.82 (0.35, 1.92)	0.72 (0.31, 1.68)	0.06 (<0.005, 1)	2.57 (2, 3.29)‡
C3+T1+T4	1.85 (0.77, 4.42)	2.21 (0.53, 9.3)	1.78 (1.07, 2.97)‡	C3+T1+T4	0.37 (0.19, 0.75)‡	0.81 (0.29, 2.22)	0.95 (0.33, 2.75)	0.66 (0.11, 3.87)	1.46 (0.58, 3.67)	0.54 (0.13, 2.35)	0.68 (0.25, 1.87)	1.23 (0.51, 2.99)	0.72 (0.31, 1.64)	1.46 (0.55, 3.9)	1.28 (0.48, 3.41)	0.1 (0.01, 1.85)	4.58 (2.61, 8.04)‡
N1	4.94 (2.24, 10.92)‡	5.91 (1.47, 23.8)‡	4.77 (2.94, 7.73)‡	2.67 (1.33, 5.38)‡	N1	2.16 (0.84, 5.53)	2.53 (0.93, 6.92)	1.75 (0.31, 10)	3.9 (1.66, 9.15)‡	1.45 (0.35, 5.99)	1.81 (0.7, 4.7)	3.3 (1.46, 7.43)‡	1.92 (0.91, 4.05)	3.91 (1.56, 9.76)‡	3.42 (1.37, 8.55)‡	0.27 (0.02, 4.72)	12.24 (8.07, 18.57)‡
N3	2.29 (0.78, 6.69)	2.73 (0.57, 13.12)	2.2 (0.92, 5.3)	1.24 (0.45, 3.4)	0.46 (0.18, 1.18)	N3	1.17 (0.34, 4.03)	0.81 (0.12, 5.33)	1.8 (0.59, 5.51)	0.67 (0.14, 3.31)	0.84 (0.25, 2.77)	1.53 (0.52, 4.52)	0.89 (0.31, 2.51)	1.81 (0.56, 5.79)	1.58 (0.49, 5.07)	0.12 (0.01, 2.45)	5.66 (2.44, 13.15)‡
N4	1.95 (0.67, 5.69)	2.33 (0.49, 11.07)	1.88 (0.73, 4.84)	1.06 (0.36, 3.06)	0.39 (0.14, 1.08)	0.85 (0.25, 2.94)	N4	0.69 (0.14, 3.38)	1.54 (0.55, 4.3)	0.57 (0.11, 2.89)	0.72 (0.23, 2.23)	1.3 (0.54, 3.15)	0.76 (0.28, 2.05)	1.54 (0.58, 4.13)	1.35 (0.5, 3.61)	0.11 (0.01, 2.14)	4.83 (1.93, 12.11)‡
N4+T4	2.82 (0.48, 16.66)	3.37 (0.41, 27.54)	2.72 (0.49, 14.96)	1.52 (0.26, 8.98)	0.57 (0.1, 3.25)	1.23 (0.19, 8.09)	1.44 (0.3, 7.05)	N4+T4	2.22 (0.38, 12.93)	0.83 (0.1, 7.1)	1.03 (0.17, 6.39)	1.88 (0.34, 10.29)	1.09 (0.19, 6.22)	2.23 (0.39, 12.86)	1.95 (0.34, 11.26)	0.15 (0.01, 4.25)	6.98 (1.28, 37.93)‡
T1	1.27 (0.55, 2.92)	1.52 (0.37, 6.29)	1.22 (0.56, 2.67)	0.69 (0.27, 1.73)	0.26 (0.11, 0.6)‡	0.55 (0.18, 1.7)	0.65 (0.23, 1.82)	0.45 (0.08, 2.62)	T1	0.37 (0.08, 1.72)	0.47 (0.24, 0.92)‡	0.85 (0.42, 1.7)	0.49 (0.27, 0.89)‡	1 (0.44, 2.28)	0.88 (0.39, 2)	0.07 (<0.005, 1.33)	3.14 (1.48, 6.65)‡
T1+T2+T4	3.4 (0.76, 15.24)	4.06 (0.62, 26.7)	3.28 (0.83, 12.97)	1.84 (0.43, 7.94)	0.69 (0.17, 2.84)	1.49 (0.3, 7.31)	1.74 (0.35, 8.77)	1.21 (0.14, 10.34)	2.68 (0.58, 12.34)	T1+T2+T4	1.25 (0.26, 6.09)	2.27 (0.51, 10.19)	1.32 (0.3, 5.77)	2.69 (0.56, 12.79)	2.35 (0.49, 11.2)	0.19 (0.01, 4.38)	8.42 (2.17, 32.64)‡
T1+T4+T6	2.72 (1.09, 6.81)‡	3.26 (0.74, 14.28)	2.63 (1.08, 6.39)‡	1.47 (0.53, 4.07)	0.55 (0.21, 1.43)	1.19 (0.36, 3.93)	1.4 (0.45, 4.34)	0.97 (0.16, 5.98)	2.15 (1.09, 4.23)‡	0.8 (0.16, 3.91)	T1+T4+T6	1.82 (0.76, 4.35)	1.06 (0.54, 2.08)	2.15 (0.81, 5.7)	1.89 (0.71, 4.99)	0.15 (0.01, 2.93)	6.75 (2.85, 15.95)‡
T4	1.5 (0.64, 3.51)	1.79 (0.43, 7.42)	1.44 (0.69, 3.02)	0.81 (0.33, 1.96)	0.3 (0.13, 0.68)‡	0.66 (0.22, 1.94)	0.77 (0.32, 1.86)	0.53 (0.1, 2.91)	1.18 (0.59, 2.37)	0.44 (0.1, 1.98)	0.55 (0.23, 1.32)	T4	0.58 (0.29, 1.18)	1.18 (0.75, 1.86)	1.04 (0.66, 1.63)	0.08 (<0.005, 1.55)	3.71 (1.84, 7.5)‡
T4+T6	2.57 (1.32, 5.01)‡	3.08 (0.8, 11.82)	2.48 (1.28, 4.82)‡	1.39 (0.61, 3.18)	0.52 (0.25, 1.1)	1.13 (0.4, 3.18)	1.32 (0.49, 3.56)	0.91 (0.16, 5.19)	2.03 (1.12, 3.67)‡	0.76 (0.17, 3.3)	0.94 (0.48, 1.86)	1.72 (0.85, 3.48)	T4+T6	2.03 (0.89, 4.65)	1.78 (0.78, 4.07)	0.14 (0.01, 2.61)	6.37 (3.41, 11.9)‡
T5	1.27 (0.49, 3.28)	1.51 (0.34, 6.66)	1.22 (0.52, 2.85)	0.68 (0.26, 1.82)	0.26 (0.1, 0.64)‡	0.55 (0.17, 1.77)	0.65 (0.24, 1.74)	0.45 (0.08, 2.59)	1 (0.44, 2.27)	0.37 (0.08, 1.77)	0.46 (0.18, 1.23)	0.84 (0.54, 1.33)	0.49 (0.22, 1.12)	T5	0.88 (0.56, 1.38)	0.07 (<0.005, 1.35)	3.13 (1.38, 7.13)‡
T5+T4	1.44 (0.56, 3.74)	1.73 (0.39, 7.61)	1.39 (0.6, 3.26)	0.78 (0.29, 2.08)	0.29 (0.12, 0.73)‡	0.63 (0.2, 2.02)	0.74 (0.28, 1.98)	0.51 (0.09, 2.96)	1.14 (0.5, 2.59)	0.42 (0.09, 2.02)	0.53 (0.2, 1.4)	0.96 (0.61, 1.52)	0.56 (0.25, 1.28)	1.14 (0.73, 1.8)	T5+T4	0.08 (<0.005, 1.54)	3.58 (1.57, 8.13)‡

T8	18.31 (0.97, 344.56)	21.89 (0.94, 511.19)	17.66 (1, 310.46) ‡	9.9 (0.54, 181.94)	3.71 (0.21, 64.87)	8.01 (0.41, 157.34)	9.39 (0.47, 188.32)	6.5 (0.24, 179.63)	14.44 (0.75, 276.38)	5.39 (0.23, 127.07)	6.72 (0.34, 132.56)	12.22 (0.65, 231.23)	7.12 (0.38, 132.33)	14.47 (0.74, 282.27)	12.68 (0.65, 247.2)	T8	45.36 (2.61, 788.94)‡
P	0.4 (0.2, 0.8)‡	0.48 (0.13, 1.83)	0.39 (0.3, 0.5)‡	0.22 (0.12, 0.38)‡	0.08 (0.05, 0.12)‡	0.18 (0.08, 0.41)‡	0.21 (0.08, 0.52)‡	0.14 (0.03, 0.78)‡	0.32 (0.15, 0.67)‡	0.12 (0.03, 0.46)‡	0.15 (0.06, 0.35)‡	0.27 (0.13, 0.54)‡	0.16 (0.08, 0.29)‡	0.32 (0.14, 0.73)‡	0.28 (0.12, 0.64)‡	0.02 (<0.005, 0.38)‡	P

Shaded cells indicate indirect comparisons.

Abbreviations: C1: oxybutynin, C3: tolterodrine, H1: vaginal estrogen, H2: oral estrogen, H3: subcutaneous estrogen, H4: transdermal estrogen, H5: raloxifene, N1: electroacupuncture, N3: magnetic stimulation, N4: transcutaneous electrical nerve stimulation (TENS), T1: bladder training, T2: education, T4: pelvic floor muscle training, T5: bladder support, T6: biofeedback, T8: yoga, P: sham/no treatment/placebo.

‡ Statistically significant difference.

Table G-15. Comparative odds ratios for satisfaction between interventions – subgraph

B	1.4 (0.93, 2.12)
0.71 (0.47, 1.08)	N2

Abbreviations: B: onabotulinum toxin A (BTX), N2: InterStim.

Table G-16. Mean and forecasted satisfaction rates by intervention

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Pharmacological		
Tolterodine (C3)	56.6 (42.9, 69.4)	56.6 (18.7, 88.1)
Oxybutynin (C1)	55.7 (37.6, 72.5)	55.7 (17.2, 88.4)
Nonpharmacological		
Yoga (T8)	95.8 (55.9, 99.8)	95.8 (45.1, 99.8)
Electroacupuncture (N1)	86.2 (76.4, 92.3)	86.2 (51.4, 97.3)
Bladder Training + Education + PFMT (T1+T2+T4)	81.1 (51.2, 94.6)	81.1 (33.0, 97.4)
TENS + PFMT (N4+T4)	78.0 (40.2, 94.9)	78.0 (25.5, 97.4)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	77.4 (59.2, 89.0)	77.4 (34.9, 95.6)
PFMT + Biofeedback (T4+T6)	76.4 (62.7, 86.2)	76.4 (35.5, 95.0)
Magnetic Stimulation (N3)	74.2 (52.3, 88.3)	74.2 (29.9, 95.1)
TENS (N4)	71.1 (49.7, 85.9)	71.1 (27.2, 94.2)
PFMT (T4)	65.4 (49.0, 78.8)	65.4 (24.1, 91.8)

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
Bladder Support + PFMT (T5+T4)	64.5 (45.2, 80.1)	64.5 (22.6, 91.9)
Bladder Training (T1)	61.5 (43.2, 77.0)	61.5 (20.8, 90.7)
Bladder Support (T5)	61.4 (41.9, 77.9)	61.4 (20.4, 90.8)
Combination		
Tolterodine +Bladder Training + PFMT (C3+T1+T4)	70.0 (52.9, 82.9)	70.0 (27.8, 93.4)
Oxybutynin + PFMT (C1+T4)	51.3 (21.9, 79.9)	51.3 (11.3, 89.7)
No treatment		
Sham/No Treatment/Placebo (P)	33.7 (23.2, 46.0)	33.7 (8.3, 74.1)
Second subgraph		
Pharmacological		
BTX (B)	59.5 (52.3, 66.2)	NE
Nonpharmacological		
InterStim (N2)	51.1 (43.8, 58.5)	NE

PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval. NE: not estimable.

Key Question 1: What are the benefits and harms of nonpharmacological treatments of UI in women, and how do they compare with each other?

Cure

Table G-17. Mean and forecasted cure rates for nonpharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
TENS + Bladder Training (N4+T1)	64.1 (28.7, 88.8)	64.1 (14.0, 95.1)
Electroacupuncture (N1)	60.5 (37.5, 79.6)	60.5 (15.8, 92.6)
TENS + Biofeedback (N4+T6)	53.9 (21.1, 83.6)	53.9 (9.7, 92.7)
Heat Therapy + PFMT (T3+T4)	53.8 (24.3, 80.9)	53.8 (10.7, 91.9)
Magnetic Stimulation (N3)	40.0 (20.3, 63.6)	40.0 (7.5, 84.6)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	38.6 (16.5, 66.7)	38.6 (6.5, 85.1)
PFMT + Biofeedback (T4+T6)	34.2 (25.2, 44.5)	34.2 (7.0, 78.1)
Bladder Training + PFMT (T1+T4)	31.3 (20.8, 44.2)	31.3 (6.1, 76.3)
PFMT (T4)	28.8 (22.0, 36.8)	28.8 (5.7, 73.2)
PFMT + Weights (T4+T9)	28.6 (12.4, 53.1)	28.6 (4.5, 77.3)
Intravesical Pressure Release (V)	28.2 (9.8, 58.5)	28.2 (3.9, 79.1)
Bladder Training (T1)	27.8 (17.7, 40.8)	27.8 (5.1, 73.3)
Bladder Support (T5)	25.9 (10.3, 51.5)	25.9 (3.8, 75.5)
TENS (N4)	24.9 (15.9, 36.9)	24.9 (4.5, 70.2)
Bladder Support + PFMT (T5+T4)	23.8 (9.3, 48.8)	23.8 (3.4, 73.5)
Heat Therapy (T3)	23.4 (7.2, 54.4)	23.4 (2.9, 75.6)
TENS + PFMT + Biofeedback (N4+T4+T6)	21.6 (7.0, 50.4)	21.6 (2.7, 73.0)
TENS + PFMT (N4+T4)	17.4 (3.3, 56.6)	17.4 (1.5, 74.2)
Education (T2)	15.9 (5.6, 37.7)	15.9 (2.0, 63.3)
InterStim (N2)	3.3 (0.5, 18.2)	3.3 (0.2, 32.5)
Placebo/Sham/No Treatment (P)	12.3 (9.0, 16.5)	12.3 (2.0, 48.5)

Abbreviations: CI = confidence interval, PFMT = Pelvic floor muscle therapy, TENS = transcutaneous electrical stimulation therapy.
*Statistically significantly better than sham or no treatment.

Improvement

Table G-18. Mean and forecasted improvement rates for nonpharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
TENS + PFMT (N4+T4)	89.2 (69.9, 96.7)	89.2 (41.4, 99.0)
TENS + PFMT + Biofeedback (N4+T4+T6)	84.9 (62.4, 95.0)	84.9 (33.0, 98.5)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	75.7 (51.5, 90.1)	75.7 (22.6, 97.1)
InterStim (N2)	74.5 (42.1, 92.1)	74.5 (18.9, 97.3)
Electroacupuncture (N1)	71.1 (55.9, 82.7)	71.1 (21.3, 95.7)
PFMT + Weights (T4+T9)	70.6 (48.9, 85.7)	70.6 (19.4, 96.0)
PFMT + Biofeedback (T4+T6)	69.9 (60.2, 78.1)	69.9 (21.2, 95.2)
Bladder Support + PFMT (T5+T4)	65.3 (44.9, 81.2)	65.3 (16.3, 94.8)
PFMT (T4)	64.9 (56.2, 72.7)	64.9 (17.9, 94.0)
Bladder Training + Education + PFMT (T1+T2+T4)	64.5 (27.3, 89.8)	64.5 (11.5, 96.2)
Bladder Training (T1)	62.6 (47.5, 75.7)	62.6 (15.7, 93.8)
Magnetic Stimulation (N3)	62.4 (43.9, 77.9)	62.4 (15.0, 94.0)
Bladder Support (T5)	61.7 (36.7, 81.8)	61.7 (13.4, 94.4)
Education (T2)	61.6 (42.6, 77.6)	61.6 (14.5, 93.8)
Intravesical Pressure Release (V)	58.2 (29.5, 82.3)	58.2 (10.9, 94.0)
Bladder Training + PFMT (T1+T4)	56.1 (39.9, 71.0)	56.1 (12.3, 92.1)
TENS (N4)	48.0 (35.8, 60.5)	48.0 (9.5, 89.0)
TENS + Biofeedback (N4+T6)	27.1 (8.2, 60.5)	27.1 (2.8, 82.5)
Sham/No Treatment/Placebo (P)	23.6 (18.9, 29.2)	23.6 (3.6, 72.2)
Second subgraph		
MBSR (T7)	46.2 (22.4, 71.8)	46.2 (22.4, 71.8)
Yoga (T8)	4.2 (0.3, 42.5)	4.2 (0.3, 42.5)

MBSR: mindfulness-based stress reduction, PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval.

*Statistically significantly better than sham or no treatment (see Appendix Table G11)

Satisfaction

Table G-19. Mean and forecasted satisfaction rates for nonpharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Yoga (T8)	95.8 (55.9, 99.8)	95.8 (45.1, 99.8)
Electroacupuncture (N1)	86.2 (76.4, 92.3)	86.2 (51.4, 97.3)
Bladder Training + Education + PFMT (T1+T2+T4)	81.1 (51.2, 94.6)	81.1 (33.0, 97.4)
TENS + PFMT (N4+T4)	78.0 (40.2, 94.9)	78.0 (25.5, 97.4)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	77.4 (59.2, 89.0)	77.4 (34.9, 95.6)
PFMT + Biofeedback (T4+T6)	76.4 (62.7, 86.2)	76.4 (35.5, 95.0)
Magnetic Stimulation (N3)	74.2 (52.3, 88.3)	74.2 (29.9, 95.1)
TENS (N4)	71.1 (49.7, 85.9)	71.1 (27.2, 94.2)
PFMT (T4)	65.4 (49.0, 78.8)	65.4 (24.1, 91.8)
Bladder Support + PFMT (T5+T4)	64.5 (45.2, 80.1)	64.5 (22.6, 91.9)
Bladder Training (T1)	61.5 (43.2, 77.0)	61.5 (20.8, 90.7)
Bladder Support (T5)	61.4 (41.9, 77.9)	61.4 (20.4, 90.8)
Sham/No Treatment/Placebo (P)	33.7 (23.2, 46.0)	33.7 (8.3, 74.1)
Second subgraph		
InterStim (N2)	51.1 (43.8, 58.5)	NE

PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval.

*Statistically significantly better than sham or no treatment (see Appendix Table G13)

Key Question 2: What are the benefits and harms of pharmacological treatments of UI in women, and how do they compare with each other?

Cure

G-20. Mean and forecasted cure rates for pharmacological interventions

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
First subgraph		
Porcine Collagen (U6)	48.0 (15.8, 81.9)	48.0 (7.3, 91.5)
BTX (B)	32.2 (16.8, 52.9)	32.2 (5.7, 78.9)
Tolterodine (C3)	24.8 (15.7, 36.8)	24.8 (4.4, 70.0)
Oxybutynin (C1)	22.6 (13.7, 34.8)	22.6 (3.9, 67.6)
Polydimethylsiloxane (U5)	22.2 (9.4, 43.9)	22.2 (3.3, 70.6)
Trospium (C4)	20.4 (9.5, 38.6)	20.4 (3.1, 67.2)
Propantheline (C8)	19.3 (3.8, 59.4)	19.3 (1.7, 76.4)
Midodrine (A2)	17.3 (5.0, 45.2)	17.3 (2.0, 68.1)
Phenylpropanolamine (C7)	15.7 (5.0, 39.8)	15.7 (1.9, 64.1)
Solifenacin (C2)	15.0 (4.3, 41.3)	15.0 (1.7, 64.5)
Duloxetine (A1)	13.9 (6.2, 28.6)	13.9 (2.0, 56.5)
Autologous Fat (U3)	13.0 (3.2, 40.2)	13.0 (1.3, 62.3)
Placebo/Sham/No Treatment (P)	12.3 (9.0, 16.5)	12.3 (2.0, 48.5)
Second subgraph		
Phenylpropanolamine + Estrogen, Oral (C7+H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Estrogen, Oral (H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Third subgraph		
Estrogen, Vaginal (H1)	31.3 (24.1, 39.7)	NE
Fourth subgraph		
Carbonated Beads (U4)	40.0 (23.0, 59.7)	40.0 (23.0, 59.7)
Polyacrylamide (U1)	24.0 (18.4, 30.8)	24.0 (18.4, 30.8)
Collagen (U2)	22.8 (15.9, 31.6)	22.8 (15.9, 31.6)

CI: confidence interval. NE: not estimable.

*Statistically significantly better than sham or no treatment (see Appendix Table G5)
** Cannot be compared statistically to sham or no treatment, because results are from disjoint analyses.

Improvement

Table G-21. Mean and forecasted improvement rates for pharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Phenylpropanolamine (C7)	76.7 (50.4, 91.4)	76.7 (22.7, 97.4)
BTX (B)	72.5 (48.6, 88.0)	72.5 (20.2, 96.5)
Solifenacin (C2)	55.2 (31.0, 77.2)	55.2 (10.6, 92.7)
Oxybutynin (C1)	47.7 (33.5, 62.3)	47.7 (9.2, 89.1)
Propantheline (C8)	42.4 (13.4, 77.9)	42.4 (5.1, 91.1)
Midodrine (A2)	42.3 (16.9, 72.5)	42.3 (5.8, 89.6)
Tolterodine (C3)	39.1 (25.7, 54.3)	39.1 (6.6, 85.2)
Duloxetine (A1)	38.8 (29.4, 49.1)	38.8 (6.9, 84.5)
Polydimethylsiloxane (U5)	38.0 (17.4, 64.2)	38.0 (5.4, 86.7)
Trospium (C4)	34.2 (12.7, 64.9)	34.2 (4.2, 85.9)
Phenylpropanolamine + Estrogen, Oral (C7+H2)	29.7 (5.4, 75.7)	29.7 (2.3, 88.5)
Estrogen, Oral (H2)	21.3 (4.0, 63.3)	21.3 (1.6, 81.8)
Estrogen, Transdermal (H4)	16.8 (6.6, 36.3)	16.8 (1.9, 67.9)
Estrogen, Vaginal (H1)	6.8 (1.5, 26.1)	6.8 (0.5, 50.4)
Sham/No Treatment/Placebo (P)	23.6 (18.9, 29.2)	23.6 (3.6, 72.2)
Third subgraph		
Polyacrylamide (U1)	63.0 (35.4, 84.1)	63.0 (15.8, 93.9)
Collagen (U2)	60.0 (36.0, 80.0)	60.0 (15.1, 92.7)
Carbonated Beads (U4)	64.2 (38.0, 84.0)	64.2 (16.9, 94.0)
Dextranomer Hyaluronate (U7)	38.0 (15.7, 66.8)	38.0 (6.2, 85.1)

CI: confidence interval.

*Statistically significantly better than sham or no treatment (see Appendix Table G11)
** Not statistically compared to sham or no treatment; results are from disjoint analyses.

Satisfaction

Table G-22. Mean and forecasted satisfaction rates for pharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Tolterodine (C3)	56.6 (42.9, 69.4)	56.6 (18.7, 88.1)
Oxybutynin (C1)	55.7 (37.6, 72.5)	55.7 (17.2, 88.4)
Sham/No Treatment/Placebo (P)	33.7 (23.2, 46.0)	33.7 (8.3, 74.1)
Second subgraph		
BTX (B)	59.5 (52.3, 66.2)	NE

CI: confidence interval. NE: not estimable.

*Statistically significantly better than sham or no treatment (see Appendix Table G13)

Key Question 3: What are the comparative benefits and harms of nonpharmacological versus pharmacological treatments of UI in women?

Cure

Table G-23. Mean and forecasted cure rates for pharmacological and nonpharmacological interventions

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
First subgraph		
Pharmacological		
Porcine,Collagen (U6)	48.0 (15.8, 81.9)	48.0 (7.3, 91.5)
BTX (B)	32.2 (16.8, 52.9)	32.2 (5.7, 78.9)
Tolterodine (C3)	24.8 (15.7, 36.8)	24.8 (4.4, 70.0)
Oxybutynin (C1)	22.6 (13.7, 34.8)	22.6 (3.9, 67.6)
Polydimethylsiloxane (U5)	22.2 (9.4, 43.9)	22.2 (3.3, 70.6)
Trospium (C4)	20.4 (9.5, 38.6)	20.4 (3.1, 67.2)
Propantheline (C8)	19.3 (3.8, 59.4)	19.3 (1.7, 76.4)
Midodrine (A2)	17.3 (5.0, 45.2)	17.3 (2.0, 68.1)
Phenylpropanolamine (C7)	15.7 (5.0, 39.8)	15.7 (1.9, 64.1)
Solifenacin (C2)	15.0 (4.3, 41.3)	15.0 (1.7, 64.5)
Duloxetine (A1)	13.9 (6.2, 28.6)	13.9 (2.0, 56.5)
Autologous Fat (U3)	13.0 (3.2, 40.2)	13.0 (1.3, 62.3)
Nonpharmacological		

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
TENS + Bladder Training (N4+T1)	64.1 (28.7, 88.8)	64.1 (14.0, 95.1)
Electroacupuncture (N1)	60.5 (37.5, 79.6)	60.5 (15.8, 92.6)
TENS + Biofeedback (N4+T6)	53.9 (21.1, 83.6)	53.9 (9.7, 92.7)
Heat Therapy + PFMT (T3+T4)	53.8 (24.3, 80.9)	53.8 (10.7, 91.9)
Magnetic Stimulation (N3)	40.0 (20.3, 63.6)	40.0 (7.5, 84.6)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	38.6 (16.5, 66.7)	38.6 (6.5, 85.1)
PFMT + Biofeedback (T4+T6)	34.2 (25.2, 44.5)	34.2 (7.0, 78.1)
Bladder Training + PFMT (T1+T4)	31.3 (20.8, 44.2)	31.3 (6.1, 76.3)
PFMT (T4)	28.8 (22.0, 36.8)	28.8 (5.7, 73.2)
PFMT + Weights (T4+T9)	28.6 (12.4, 53.1)	28.6 (4.5, 77.3)
Intravesical Pressure Release (V)	28.2 (9.8, 58.5)	28.2 (3.9, 79.1)
Bladder Training (T1)	27.8 (17.7, 40.8)	27.8 (5.1, 73.3)
Bladder Support (T5)	25.9 (10.3, 51.5)	25.9 (3.8, 75.5)
TENS (N4)	24.9 (15.9, 36.9)	24.9 (4.5, 70.2)
Bladder Support + PFMT (T5+T4)	23.8 (9.3, 48.8)	23.8 (3.4, 73.5)
Heat Therapy (T3)	23.4 (7.2, 54.4)	23.4 (2.9, 75.6)
TENS + PFMT + Biofeedback (N4+T4+T6)	21.6 (7.0, 50.4)	21.6 (2.7, 73.0)
TENS + PFMT (N4+T4)	17.4 (3.3, 56.6)	17.4 (1.5, 74.2)
Education (T2)	15.9 (5.6, 37.7)	15.9 (2.0, 63.3)
InterStim (N2)	3.3 (0.5, 18.2)	3.3 (0.2, 32.5)
Second subgraph		
Pharmacological		
Phenylpropanolamine + Estrogen, Oral (C7+H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Estrogen, Oral (H2)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Third subgraph		
Pharmacological		
Estrogen, Vaginal (H1)	31.3 (24.1, 39.7)	NE
Fourth subgraph		
Pharmacological		
Carbonated Beads (U4)	40.0 (23.0, 59.7)	40.0 (23.0, 59.7)
Polyacrylamide (U1)	24.0 (18.4, 30.8)	24.0 (18.4, 30.8)
Collagen (U2)	22.8 (15.9, 31.6)	22.8 (15.9, 31.6)

PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval. NE: not estimable.

Improvement

Table G-24. Mean and forecasted improvement rates for pharmacological and nonpharmacological interventions

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Pharmacological		
Phenylpropanolamine (C7)	76.7 (50.4, 91.4)	76.7 (22.7, 97.4)
BTX (B)	72.5 (48.6, 88.0)	72.5 (20.2, 96.5)
Solifenacin (C2)	55.2 (31.0, 77.2)	55.2 (10.6, 92.7)
Oxybutynin (C1)	47.7 (33.5, 62.3)	47.7 (9.2, 89.1)
Propantheline (C8)	42.4 (13.4, 77.9)	42.4 (5.1, 91.1)
Midodrine (A2)	42.3 (16.9, 72.5)	42.3 (5.8, 89.6)
Tolterodine (C3)	39.1 (25.7, 54.3)	39.1 (6.6, 85.2)
Duloxetine (A1)	38.8 (29.4, 49.1)	38.8 (6.9, 84.5)
Polydimethylsiloxane (U5)	38.0 (17.4, 64.2)	38.0 (5.4, 86.7)
Trospium (C4)	34.2 (12.7, 64.9)	34.2 (4.2, 85.9)
Phenylpropanolamine + Estrogen, Oral (C7+H2)	29.7 (5.4, 75.7)	29.7 (2.3, 88.5)
Estrogen, Oral (H2)	21.3 (4.0, 63.3)	21.3 (1.6, 81.8)
Estrogen, Transdermal (H4)	16.8 (6.6, 36.3)	16.8 (1.9, 67.9)
Estrogen, Vaginal (H1)	6.8 (1.5, 26.1)	6.8 (0.5, 50.4)
Nonpharmacological		
TENS + PFMT (N4+T4)	89.2 (69.9, 96.7)	89.2 (41.4, 99.0)
TENS + PFMT + Biofeedback (N4+T4+T6)	84.9 (62.4, 95.0)	84.9 (33.0, 98.5)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	75.7 (51.5, 90.1)	75.7 (22.6, 97.1)
InterStim (N2)	74.5 (42.1, 92.1)	74.5 (18.9, 97.3)
Electroacupuncture (N1)	71.1 (55.9, 82.7)	71.1 (21.3, 95.7)
PFMT + Weights (T4+T9)	70.6 (48.9, 85.7)	70.6 (19.4, 96.0)
PFMT + Biofeedback (T4+T6)	69.9 (60.2, 78.1)	69.9 (21.2, 95.2)
Bladder Support + PFMT (T5+T4)	65.3 (44.9, 81.2)	65.3 (16.3, 94.8)
PFMT (T4)	64.9 (56.2, 72.7)	64.9 (17.9, 94.0)
Bladder Training + Education + PFMT (T1+T2+T4)	64.5 (27.3, 89.8)	64.5 (11.5, 96.2)
Bladder Training (T1)	62.6 (47.5, 75.7)	62.6 (15.7, 93.8)
Magnetic Stimulation (N3)	62.4 (43.9, 77.9)	62.4 (15.0, 94.0)
Bladder Support (T5)	61.7 (36.7, 81.8)	61.7 (13.4, 94.4)
Education (T2)	61.6 (42.6, 77.6)	61.6 (14.5, 93.8)
Intravesical Pressure Release (V)	58.2 (29.5, 82.3)	58.2 (10.9, 94.0)
Bladder Training + PFMT (T1+T4)	56.1 (39.9, 71.0)	56.1 (12.3, 92.1)

Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
TENS (N4)	48.0 (35.8, 60.5)	48.0 (9.5, 89.0)
TENS + Biofeedback (N4+T6)	27.1 (8.2, 60.5)	27.1 (2.8, 82.5)
Sham/No Treatment/Placebo (P)	23.6 (18.9, 29.2)	23.6 (3.6, 72.2)
Second subgraph		
Nonpharmacological		
MBSR (T7)	46.2 (22.4, 71.8)	46.2 (22.4, 71.8)
Yoga (T8)	4.2 (0.3, 42.5)	4.2 (0.3, 42.5)
Third subgraph		
Pharmacological		
Polyacrylamide (U1)	63.0 (35.4, 84.1)	63.0 (15.8, 93.9)
Collagen (U2)	60.0 (36.0, 80.0)	60.0 (15.1, 92.7)
Carbonated Beads (U4)	64.2 (38.0, 84.0)	64.2 (16.9, 94.0)
Dextranomer Hyaluronate (U7)	38.0 (15.7, 66.8)	38.0 (6.2, 85.1)

MBSR: mindfulness-based stress reduction, PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval.

Satisfaction

Table G-25. Mean and forecasted satisfaction rates for pharmacological and nonpharmacological interventions

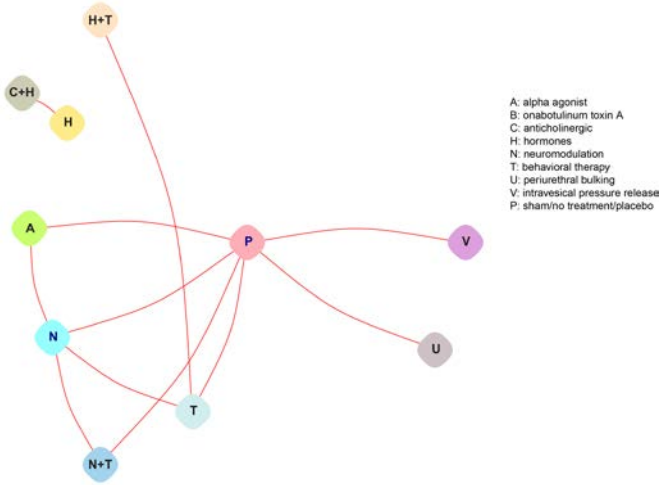
Intervention	Mean Percent (95% CI)	Forecast Percent (95% CI)
First subgraph		
Pharmacological		
Tolterodine (C3)	56.6 (42.9, 69.4)	56.6 (18.7, 88.1)
Oxybutynin (C1)	55.7 (37.6, 72.5)	55.7 (17.2, 88.4)
Nonpharmacological		
Yoga (T8)	95.8 (55.9, 99.8)	95.8 (45.1, 99.8)
Electroacupuncture (N1)	86.2 (76.4, 92.3)	86.2 (51.4, 97.3)
Bladder Training + Education + PFMT (T1+T2+T4)	81.1 (51.2, 94.6)	81.1 (33.0, 97.4)
TENS + PFMT (N4+T4)	78.0 (40.2, 94.9)	78.0 (25.5, 97.4)
Bladder Training + PFMT + Biofeedback (T1+T4+T6)	77.4 (59.2, 89.0)	77.4 (34.9, 95.6)
PFMT + Biofeedback (T4+T6)	76.4 (62.7, 86.2)	76.4 (35.5, 95.0)
Magnetic Stimulation (N3)	74.2 (52.3, 88.3)	74.2 (29.9, 95.1)
TENS (N4)	71.1 (49.7, 85.9)	71.1 (27.2, 94.2)
PFMT (T4)	65.4 (49.0, 78.8)	65.4 (24.1, 91.8)
Bladder Support + PFMT (T5+T4)	64.5 (45.2, 80.1)	64.5 (22.6, 91.9)
Bladder Training (T1)	61.5 (43.2, 77.0)	61.5 (20.8, 90.7)
Bladder Support (T5)	61.4 (41.9, 77.9)	61.4 (20.4, 90.8)
Second subgraph		
Pharmacological		
BTX (B)	59.5 (52.3, 66.2)	NE
Nonpharmacological		
InterStim (N2)	51.1 (43.8, 58.5)	NE

PFMT: Pelvic floor muscle therapy, TENS: transcutaneous electrical stimulation therapy.
CI: confidence interval. NE: not estimable.

Appendix H. Results of Subgroup Analyses by Type of UI

Figure H-1. Evidence graphs for cure in studies of stress and urgency urinary incontinence

1A Studies of women with stress UI



1B Studies of women with urgency UI

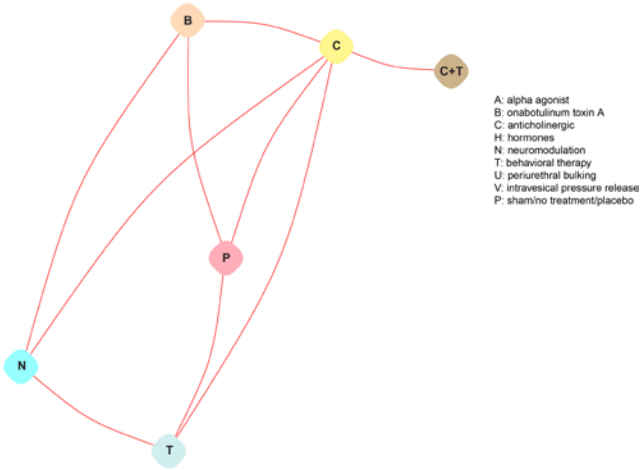
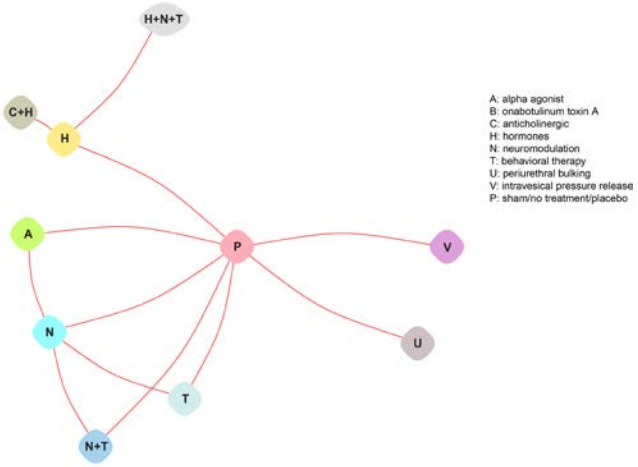


Figure H-2. Evidence graphs for improvement in studies of stress and urgency urinary incontinence

2A Studies of women with stress UI



2B Studies of women with urgency UI

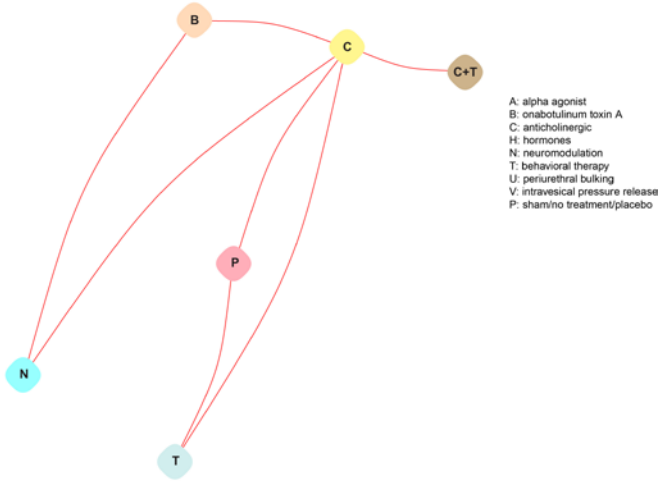
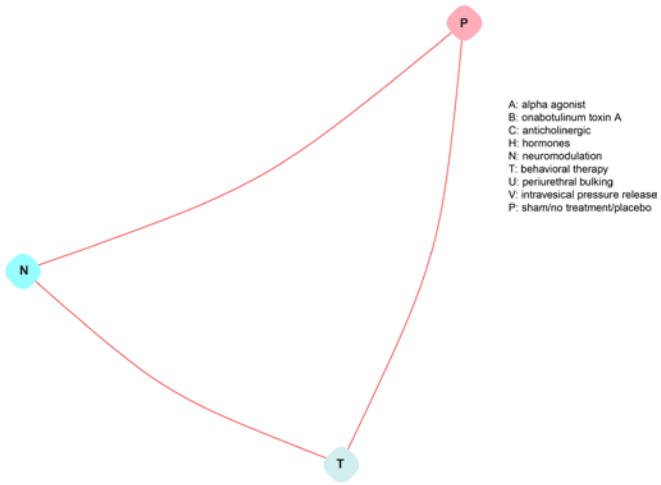


Figure H-3. Evidence graphs for satisfaction in studies of stress and urgency urinary incontinence

3A Studies of women with stress UI



3B Studies of women with urgency UI

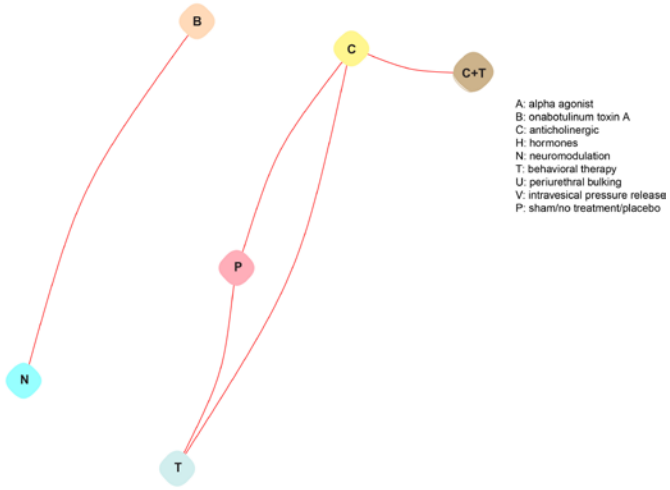


Figure H-4. Evidence graphs for cure in studies of older women

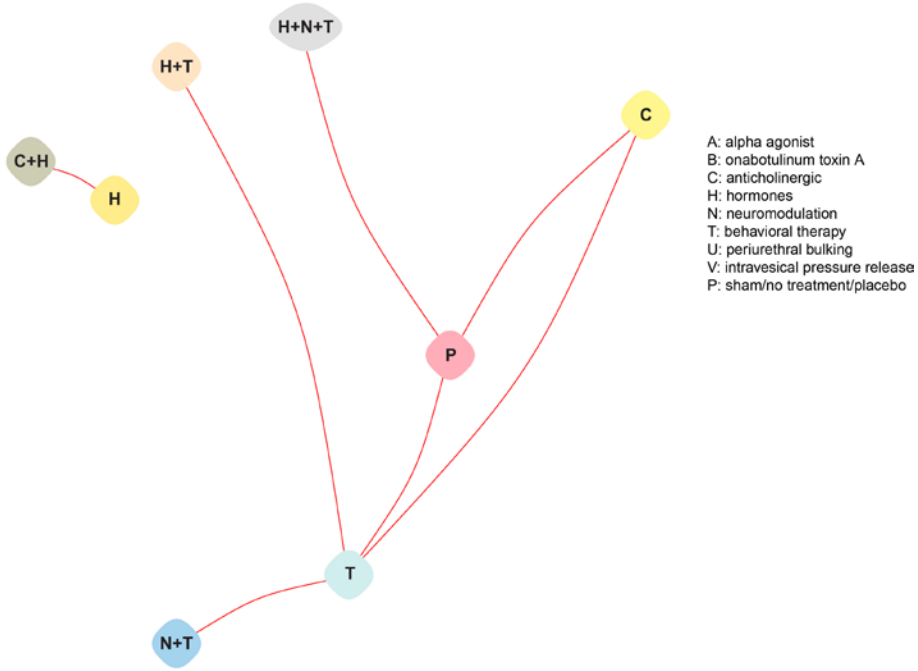


Figure H-5. Evidence graphs for improvement in studies of older women

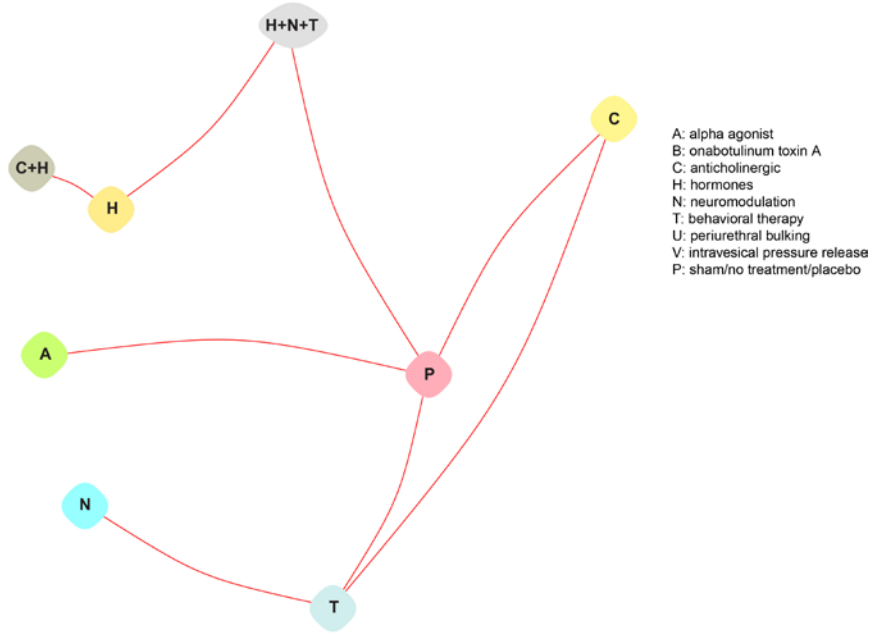


Figure H-6. Evidence graphs for satisfacton in studies of older women

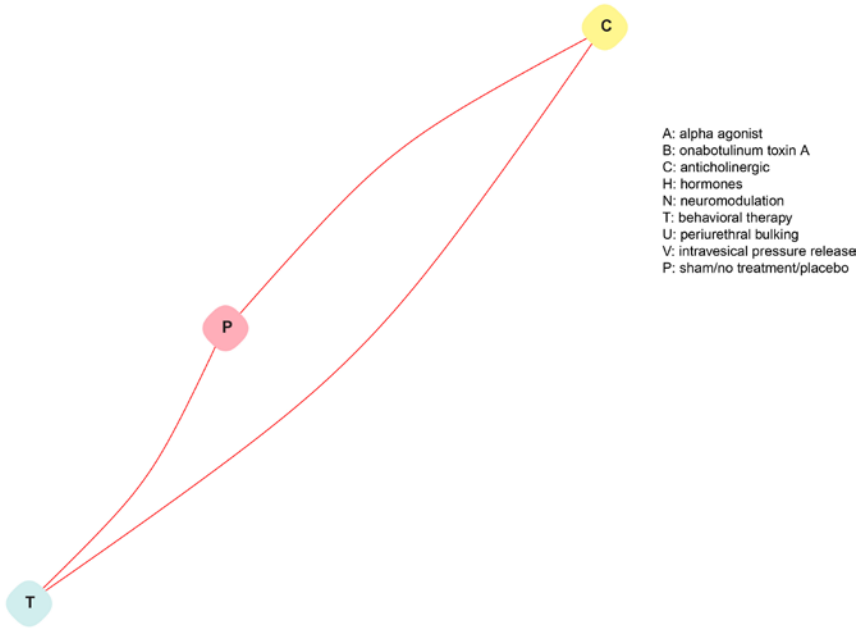


Table H-1A. Odds ratios for cure between all intervention categories: stress UI (subgraph 1)

A	A	0.11 (0.01, 0.84)‡	0.35 (0.12, 1)	0.47 (0.09, 2.4)	0.22 (0.06, 0.74)‡	0.92 (0.21, 4.05)	0.45 (0.07, 2.88)	1.22 (0.47, 3.18)
H+T	9.36 (1.19, 73.64)‡	H+T	3.27 (0.48, 22.15)	4.42 (0.45, 43.02)	2.03 (0.36, 11.4)	8.66 (0.97, 76.99)	4.25 (0.37, 49.28)	11.42 (1.72, 75.57)‡
N	2.86 (1, 8.16)‡	0.31 (0.05, 2.07)	N	1.35 (0.33, 5.5)	0.62 (0.24, 1.6)	2.65 (0.7, 10.06)	1.3 (0.23, 7.38)	3.49 (1.67, 7.3)‡
N+T	2.12 (0.42, 10.76)	0.23 (0.02, 2.2)	0.74 (0.18, 3.01)	N+T	0.46 (0.1, 2.2)	1.96 (0.33, 11.65)	0.96 (0.12, 7.86)	2.58 (0.64, 10.42)
T	4.61 (1.35, 15.79)‡	0.49 (0.09, 2.77)	1.61 (0.62, 4.15)	2.18 (0.46, 10.41)	T	4.26 (1.02, 17.77)‡	2.09 (0.34, 12.77)	5.62 (2.28, 13.85)‡
U	1.08 (0.25, 4.74)	0.12 (0.01, 1.03)	0.38 (0.1, 1.44)	0.51 (0.09, 3.04)	0.23 (0.06, 0.98)‡	U	0.49 (0.07, 3.49)	1.32 (0.42, 4.16)
V	2.2 (0.35, 14)	0.24 (0.02, 2.73)	0.77 (0.14, 4.38)	1.04 (0.13, 8.51)	0.48 (0.08, 2.92)	2.04 (0.29, 14.48)	V	2.69 (0.54, 13.33)
P	0.82 (0.31, 2.14)	0.09 (0.01, 0.58)‡	0.29 (0.14, 0.6)‡	0.39 (0.1, 1.56)	0.18 (0.07, 0.44)‡	0.76 (0.24, 2.39)	0.37 (0.08, 1.84)	P

See Figure H-1A for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-1B. Odds ratios for cure between all intervention categories: stress UI (subgraph 2)

C+H	**C+H**	1 (0.02, 52.09)
H	1 (0.02, 52.09)	**H**

See Figure H-1A for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-2. Odds ratios for cure between all intervention categories: urgency UI

B	B	2.74 (1.62, 4.63)‡	2.17 (1.01, 4.67)‡	1.68 (0.8, 3.55)	1.8 (0.89, 3.63)	4.94 (2.82, 8.65)‡
C	0.36 (0.22, 0.62)‡	C	0.79 (0.45, 1.4)	0.61 (0.32, 1.16)	0.66 (0.39, 1.11)	1.8 (1.29, 2.52)‡
C+T	0.46 (0.21, 0.99)‡	1.26 (0.72, 2.23)	C+T	0.77 (0.33, 1.81)	0.83 (0.38, 1.8)	2.28 (1.18, 4.39)‡
N	0.59 (0.28, 1.25)	1.63 (0.86, 3.09)	1.29 (0.55, 3.02)	N	1.07 (0.55, 2.08)	2.94 (1.47, 5.88)‡
T	0.56 (0.28, 1.12)	1.53 (0.9, 2.6)	1.21 (0.56, 2.62)	0.94 (0.48, 1.82)	T	2.75 (1.53, 4.92)‡
P	0.2 (0.12, 0.35)‡	0.56 (0.4, 0.78)‡	0.44 (0.23, 0.85)‡	0.34 (0.17, 0.68)‡	0.36 (0.2, 0.65)‡	P

See Figure H-1B for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-3A. Odds ratios for cure between all intervention categories: older women (subgraph 1)

C	C	0.58 (0.1, 3.27)	0.09 (0.02, 0.47)‡	0.09 (0.02, 0.48)‡	0.36 (0.14, 0.92)‡	1.38 (0.49, 3.83)
H+N+T	1.71 (0.31, 9.6)	H+N+T	0.15 (0.02, 1.18)	0.15 (0.02, 1.22)	0.62 (0.13, 2.96)	2.36 (0.48, 11.71)
H+T	11.71 (2.15, 63.72)‡	6.83 (0.85, 55)	H+T	1.03 (0.13, 8.1)	4.24 (0.95, 18.94)	16.1 (3.29, 78.7)‡
N+T	11.37 (2.09, 61.97)‡	6.63 (0.82, 53.44)	0.97 (0.12, 7.64)	N+T	4.12 (0.92, 18.46)	15.64 (3.2, 76.55)‡
T	2.76 (1.09, 6.99)‡	1.61 (0.34, 7.69)	0.24 (0.05, 1.05)	0.24 (0.05, 1.09)	T	3.8 (1.87, 7.73)‡
P	0.73 (0.26, 2.03)	0.42 (0.09, 2.1)	0.06 (0.01, 0.3)‡	0.06 (0.01, 0.31)‡	0.26 (0.13, 0.54)‡	P

See Figure H-4 for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-3B. Odds ratios for cure between all intervention categories: older women (subgraph 2)

C+H	**C+H**	1 (0.02, 52.09)
H	1 (0.02, 52.09)	**H**

See Figure H-4 for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-4. Odds ratios for improvement between all intervention categories: stress UI

A	A	2.57 (0.48, 13.84)	4.5 (1.14, 17.78)‡	0.2 (0.04, 0.96)‡	0.57 (0.34, 0.97)‡	2.3 (0.73, 7.22)	0.33 (0.14, 0.77)‡	1.16 (0.41, 3.27)	0.52 (0.16, 1.67)	2.28 (1.6, 3.27)‡
C+H	0.39 (0.07, 2.1)	C+H	1.75 (0.47, 6.53)	0.08 (0.01, 0.42)‡	0.22 (0.04, 1.21)	0.9 (0.13, 6.37)	0.13 (0.02, 0.78)‡	0.45 (0.07, 3.08)	0.2 (0.03, 1.48)	0.89 (0.17, 4.71)
H	0.22 (0.06, 0.88)‡	0.57 (0.15, 2.12)	H	0.04 (0.01, 0.14)‡	0.13 (0.03, 0.51)‡	0.51 (0.09, 2.8)	0.07 (0.02, 0.33)‡	0.26 (0.05, 1.34)	0.12 (0.02, 0.65)‡	0.51 (0.13, 1.96)
H+N+T	5.09 (1.04, 24.98)‡	13.07 (2.39, 71.59)‡	22.91 (7.24, 72.5)‡	H+N+T	2.91 (0.59, 14.41)	11.71 (1.79, 76.75)‡	1.66 (0.3, 9.29)	5.92 (0.95, 37.01)	2.66 (0.39, 17.88)	11.64 (2.42, 55.87)‡
N	1.75 (1.03, 2.97)‡	4.49 (0.83, 24.44)	7.87 (1.97, 31.47)‡	0.34 (0.07, 1.7)	N	4.02 (1.3, 12.49)‡	0.57 (0.24, 1.36)	2.03 (0.7, 5.9)	0.91 (0.28, 3.01)	4.00 (2.56, 6.24)‡
N+T	0.43 (0.14, 1.37)	1.12 (0.16, 7.93)	1.96 (0.36, 10.73)	0.09 (0.01, 0.56)‡	0.25 (0.08, 0.77)‡	N+T	0.14 (0.04, 0.54)‡	0.51 (0.12, 2.18)	0.23 (0.05, 1.08)	0.99 (0.33, 2.99)
T	3.07 (1.3, 7.25)‡	7.88 (1.29, 48.17)‡	13.81 (3, 63.52)‡	0.6 (0.11, 3.37)	1.75 (0.73, 4.19)	7.06 (1.85, 26.86)‡	T	3.57 (1.02, 12.47)‡	1.6 (0.41, 6.25)	7.01 (3.16, 15.58)‡
U	0.86 (0.31, 2.42)	2.21 (0.32, 15)	3.87 (0.74, 20.13)	0.17 (0.03, 1.06)	0.49 (0.17, 1.42)	1.98 (0.46, 8.54)	0.28 (0.08, 0.98)‡	U	0.45 (0.1, 1.97)	1.97 (0.74, 5.2)
V	1.92 (0.6, 6.16)	4.92 (0.67, 35.88)	8.63 (1.53, 48.7)‡	0.38 (0.06, 2.53)	1.1 (0.33, 3.61)	4.41 (0.93, 20.94)	0.62 (0.16, 2.44)	2.23 (0.51, 9.77)	V	4.38 (1.44, 13.37)‡
P	0.44 (0.31, 0.63)‡	1.12 (0.21, 5.94)	1.97 (0.51, 7.59)	0.09 (0.02, 0.41)‡	0.25 (0.16, 0.39)‡	1.01 (0.33, 3.03)	0.14 (0.06, 0.32)‡	0.51 (0.19, 1.35)	0.23 (0.07, 0.7)‡	P

See Figure H-2A for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-5. Odds ratios for improvement between all intervention categories: urgency UI

B	**B**	2.02 (1.14, 3.6)‡	0.94 (0.42, 2.1)	0.83 (0.45, 1.53)	0.48 (0.16, 1.47)	3.62 (1.8, 7.28)‡
C	0.49 (0.28, 0.88)‡	**C**	0.46 (0.26, 0.82)‡	0.41 (0.21, 0.81)‡	0.24 (0.09, 0.62)‡	1.79 (1.18, 2.7)‡
C+T	1.07 (0.48, 2.4)	2.16 (1.22, 3.85)‡	**C+T**	0.89 (0.37, 2.15)	0.52 (0.17, 1.57)	3.87 (1.92, 7.8)‡
N	1.21 (0.65, 2.23)	2.44 (1.23, 4.83)‡	1.13 (0.46, 2.74)	**N**	0.58 (0.18, 1.87)	4.36 (1.98, 9.59)‡
T	2.07 (0.68, 6.31)	4.2 (1.61, 10.94)‡	1.94 (0.64, 5.91)	1.72 (0.53, 5.55)	**T**	7.5 (2.88, 19.54)‡
P	0.28 (0.14, 0.56)‡	0.56 (0.37, 0.85)‡	0.26 (0.13, 0.52)‡	0.23 (0.1, 0.5)‡	0.13 (0.05, 0.35)‡	**P**

See Figure H-2B for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-6. Odds ratios for improvement between all intervention categories: older women

A	A	0.20 (0.03, 1.36)	0.46 (0.04, 5.66)	1.10 (0.13, 9.45)	0.12 (0.01, 0.92)‡	0.39 (0.03, 4.74)	0.17 (0.03, 0.97)‡	1 (0.19, 5.37)
C	5.01 (0.74, 34.06)	C	2.31 (0.28, 19.18)	5.53 (1.03, 29.56)‡	0.58 (0.12, 2.84)	1.94 (0.24, 15.82)	0.84 (0.3, 2.4)	5.03 (1.77, 14.34)‡
C+H	2.17 (0.18, 26.62)	0.43 (0.05, 3.6)	C+H	2.4 (0.36, 15.83)	0.25 (0.03, 2.14)	0.84 (0.06, 11.83)	0.36 (0.05, 2.61)	2.18 (0.31, 15.47)
H	0.91 (0.11, 7.75)	0.18 (0.03, 0.97)‡	0.42 (0.06, 2.76)	H	0.1 (0.02, 0.5)‡	0.35 (0.03, 3.53)	0.15 (0.03, 0.67)‡	0.91 (0.21, 3.95)
H+N+T	8.68 (1.09, 69.47)‡	1.73 (0.35, 8.52)	4 (0.47, 34.31)	9.59 (2, 45.87)‡	H+N+T	3.36 (0.35, 32.07)	1.46 (0.36, 5.84)	8.72 (2.27, 33.49)‡
N	2.58 (0.21, 31.61)	0.52 (0.06, 4.2)	1.19 (0.08, 16.76)	2.85 (0.28, 28.68)	0.3 (0.03, 2.83)	N	0.43 (0.06, 2.9)	2.59 (0.37, 18.14)
T	5.95 (1.04, 34.21)‡	1.19 (0.42, 3.38)	2.74 (0.38, 19.62)	6.57 (1.49, 28.95)‡	0.69 (0.17, 2.74)	2.3 (0.35, 15.39)	T	5.98 (3, 11.91)‡
P	1 (0.19, 5.32)	0.2 (0.07, 0.57)‡	0.46 (0.06, 3.26)	1.1 (0.25, 4.77)	0.11 (0.03, 0.44)‡	0.39 (0.06, 2.7)	0.17 (0.08, 0.33)‡	P

See Figure H-5 for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-7. Odds ratios for satisfaction between all intervention categories: stress UI

N	N	1.53 (0.51, 4.59)	8.36 (4.75, 14.72)‡
T	0.65 (0.22, 1.95)	T	5.45 (1.78, 16.69)‡
P	0.12 (0.07, 0.21)‡	0.18 (0.06, 0.56)‡	P

See Figure H-3A for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-8A. Odds ratios for satisfaction between all intervention categories: urgency UI (subgraph 1)

C	C	0.8 (0.26, 2.5)	0.32 (0.07, 1.41)	2.6 (0.57, 11.87)
C+T	1.25 (0.4, 3.88)	C+T	0.39 (0.06, 2.48)	3.24 (0.5, 20.75)
T	3.16 (0.71, 14.09)	2.53 (0.4, 15.93)	T	8.2 (1.7, 39.43)‡
P	0.39 (0.08, 1.76)	0.31 (0.05, 1.98)	0.12 (0.03, 0.59)‡	P

See Figure H-3B for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-8B. Odds ratios for satisfaction between all intervention categories: urgency UI (subgraph 2)

B	B	1.4 (0.93, 2.12)
N	0.71 (0.47, 1.08)	N

See Figure H-3B for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-9. Odds ratios for satisfaction between all intervention categories: older women

C	C	0.29 (0.14, 0.57)‡	2.3 (1.11, 4.75)‡
T	3.48 (1.74, 6.96)‡	T	8.01 (4.01, 15.98)‡
P	0.43 (0.21, 0.9)‡	0.12 (0.06, 0.25)‡	P

See Figure H-6 for code. Results are given as odds ratios (95% confidence intervals). Values above the diagonal >1 favor the row intervention (to the left) over the column intervention (below). Shaded cells indicate indirect comparisons.

Table H-10. Estimated and forecast rates of cure by intervention category: stress and urgency UI

Stress UI			Urgency UI		
Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)	Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological			*Pharmacological*		
			BTX (B)	42.8 (27.2, 60.0)	42.8 (8.9, 85.1)
			Anticholinergic (C)	21.4 (12.8, 33.6)	21.4 (3.5, 67.0)
Periurethral Bulking (U)	16.9 (5.3, 42.4)	16.9 (1.0, 80.2)			
Alpha Agonist (A)	15.8 (6.1, 35.3)	15.8 (1.0, 77.4)			
Anticholinergic + Hormones (C+H)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)			
Hormones (H)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)			
Nonpharmacological			*Nonpharmacological*		
Behavioral Therapy (T)	46.4 (25.8, 68.3)	46.4 (4.8, 93.7)	Behavioral Therapy (T)	30.8 (16.7, 49.8)	30.8 (5.3, 77.9)
Neuromodulation (N)	34.9 (19.5, 54.4)	34.9 (3.1, 90.0)	Neuromodulation (N)	29.4 (16.6, 46.5)	29.4 (5.1, 76.3)
Intravesical pressure release (V)	29.2 (7.0, 69.3)	29.2 (1.7, 91.0)			
Neuromodulation + Behavioral Therapy (N+T)	28.4 (8.7, 62.2)	28.4 (1.8, 89.4)			
Combination			*Combination*		
Hormones + Behavioral Therapy (H+T)	63.7 (21.4, 91.9)	63.7 (6.2, 97.9)			
			Anticholinergic + Behavioral Therapy (C+T)	25.7 (13.2, 43.8)	25.7 (4.1, 73.4)
No Treatment			*No Treatment*		
Placebo/Sham/No Treatment (P)	13.3 (6.9, 24.2)	13.3 (0.9, 71.7)	Placebo/Sham/No Treatment (P)	13.2 (7.3, 22.7)	13.2 (2.0, 53.3)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Table H-11. Estimated and forecast rates of cure by intervention category: older women

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
First Subgraph		
Pharmacological		
Anticholinergic (C)	16.7 (7.7, 32.5)	16.7 (4.1, 48.6)
Nonpharmacological		
Neuromodulation + Behavioral Therapy (N+T)	69.5 (34.5, 90.8)	69.5 (24.6, 94.1)
Behavioral Therapy (T)	35.6 (25.2, 47.7)	35.6 (12.3, 68.6)
Combination		
Hormones + Behavioral Therapy (H+T)	70.1 (35.1, 91.0)	70.1 (25.1, 94.3)
Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	25.6 (7.2, 60.3)	25.6 (4.6, 71.0)
No treatment		
Placebo/Sham/No Treatment (P)	12.7 (7.1, 21.8)	12.7 (3.4, 38.0)
Second Subgraph		
Pharmacological		
Hormones (H)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)
Anticholinergic + Hormones (C+H)	1.7 (0.1, 21.7)	1.7 (0.1, 21.7)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Table H-12. Estimated and forecast rates of improvement by intervention category: stress and urgency UI

Stress UI			Urgency UI		
Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)	Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological			*Pharmacological*		
Alpha Agonist (A)	46.0 (34.1, 58.4)	46.0 (11.1, 85.3)			
Periurethral Bulking (U)	42.3 (20.6, 67.4)	42.3 (8.0, 86.0)			
Anticholinergic + Hormones (C+H)	24.9 (6.2, 62.5)	24.9 (2.8, 79.5)			
Hormones (H)	15.9 (5.0, 40.6)	15.9 (1.9, 64.4)			
			BTX (B)	75.3 (58.5, 86.8)	75.3 (28.6, 95.9)
			Anticholinergic (C)	60.1 (45.2, 73.3)	60.1 (17.3, 91.5)
Nonpharmacological			*Nonpharmacological*		
Behavioral Therapy (T)	72.3 (53.3, 85.7)	72.3 (25.6, 95.2)	Behavioral Therapy (T)	86.3 (67.8, 95.0)	86.3 (41.8, 98.2)
Intravesical Pressure Release (V)	62.0 (33.8, 84.0)	62.0 (15.5, 93.6)			
Neuromodulation (N)	59.8 (46.8, 71.7)	59.8 (17.8, 91.1)	Neuromodulation (N)	78.6 (61.4, 89.4)	78.6 (31.9, 96.6)
Neuromodulation + Behavioral Therapy (N+T)	27.0 (10.8, 53.1)	27.0 (4.1, 76.3)			
Combination			*Combination*		
Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	81.3 (48.9, 95.2)	81.3 (28.4, 97.9)			
			Anticholinergic + Behavioral Therapy (C+T)	76.5 (59.7, 87.7)	76.5 (29.8, 96.1)
No Treatment			*No Treatment*		
Placebo/Sham/No Treatment (P)	27.2 (19.5, 36.4)	27.2 (5.3, 71.4)	Placebo/Sham/No Treatment (P)	45.7 (30.2, 62.1)	45.7 (10.3, 86.1)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Table H-13. Estimated and forecast rates of improvement by intervention category: older women

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological		
Anticholinergic (C)	52.3 (28.7, 75.0)	52.3 (11.7, 90.1)
Anticholinergic + Hormones (C+H)	32.2 (6.9, 75.4)	32.2 (3.3, 86.8)
Alpha Agonist (A)	18.0 (3.9, 54.0)	18.0 (1.8, 72.8)
Hormones (H)	16.6 (4.9, 43.3)	16.6 (2.0, 66.3)
Nonpharmacological		
Neuromodulation + Behavioral Therapy (N+T)	69.5 (34.5, 90.8)	69.5 (24.6, 94.1)
Behavioral Therapy (T)	56.6 (40.9, 71.1)	56.6 (15.5, 90.3)
Neuromodulation (N)	36.1 (8.0, 78.7)	36.1 (3.9, 88.8)
Combination		
Hormones + Neuromodulation + Behavioral Therapy (H+N+T)	65.5 (35.0, 87.0)	65.5 (16.8, 94.7)
No treatment		
Placebo/Sham/No Treatment (P)	17.9 (10.5, 28.9)	17.9 (3.0, 60.7)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Table H-14. Estimated and forecast rates of satisfaction by intervention category: stress and urgency UI

Stress UI			Urgency UI		
Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)	Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological			*Pharmacological*		
			BTX (B)	59.5 (52.3, 66.2)	59.5 (52.3, 66.2)
			Anticholinergic (C)	48.9 (16.3, 82.5)	48.9 (4.1, 95.6)
Nonpharmacological			*Nonpharmacological*		
Neuromodulation (N)	81.8 (62.2, 92.4)	81.8 (35.3, 97.4)	Neuromodulation (N)	51.1 (43.8, 58.5)	51.1 (43.8, 58.5)
Behavioral Therapy (T)	74.5 (43.1, 91.8)	74.5 (22.8, 96.7)	Behavioral Therapy (T)	75.1 (29.1, 95.7)	75.1 (9.7, 98.8)
Combination			*Combination*		
			Anticholinergic + Behavioral Therapy (C+T)	54.4 (17.9, 86.7)	54.4 (4.7, 96.6)
No Treatment			*No Treatment*		
Placebo/Sham/No Treatment (P)	34.9 (16.9, 58.6)	34.9 (6.2, 81.3)	Placebo/Sham/No Treatment (P)	26.9 (4.7, 73.4)	26.9 (1.3, 91.3)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Table H-15. Estimated and forecast rates of satisfaction by intervention category: older women

Intervention category	Mean Percent* (95% CI)	Forecast Percent† (95% CI)
Pharmacological		
Anticholinergic (C)	46.7 (27.2, 67.3)	46.7 (20.6, 74.7)
Nonpharmacological		
Behavioral Therapy (T)	75.3 (57.8, 87.2)	75.3 (48.3, 90.9)
No treatment		
Placebo/Sham/No Treatment (P)	27.6 (14.6, 46.0)	27.6 (10.5, 55.4)

*The summary mean percentage (with confidence interval) of women in the trials receiving the intervention with the outcome.
† The predicted percentage (with confidence interval) of women who receive the intervention in future trials, or in similar settings, who will have the outcome.

Appendix I. Expert Guidance and Review

The authors gratefully acknowledge the contribution of the Georgios Markozannes, Katherine Corsim, Amanda Mogul, Mengyang Di, Gowri Raman, Esther Avendano, Andrew Zullo, Jenni Quiroz, Anya Wallack for their contribution to the literature search and citation retrieval process. We would like to acknowledge the affiliations of our content experts:

Vivian Sung, MD (Brown)
Blair Washington, MD (Virginia Mason)
Heidi Brown, MD (Wisconsin)
Donna Thompson (Soc Urologic Nurses and Associates)
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Stakeholder Input in Formulating the Research Protocol

Stakeholders, including Key Informants and Technical Experts, participated in a virtual workshop by the Patient-Centered Research Outcomes Institute (PCORI) in December 2016 to help formulate the research protocol. Details on the virtual workshop, including a list of participants, can be found at https://www.pcori.org/events/2016/updating-systematic-reviews-pcori-virtual-multi-stakeholder-workshop-nonsurgical.

Key Informants in the workshop included end users of research, such as patients and caregivers, practicing clinicians, relevant professional and consumer organizations, purchasers of health care, and others with experience in making health care decisions. Technical Experts in the workshop included multidisciplinary groups of clinical, content, and methodological experts who provided input in defining populations, interventions, comparisons, and outcomes and identified particular studies or databases to search. They were selected to provide broad expertise and perspectives specific to the topic under development.

During the virtual workshop, stakeholders reviewed scoping for the updated review, prioritized key questions, and discussed where the evidence base has accumulated since the prior review and emerging issues in urinary incontinence. A protocol on nonpharmacological and pharmacological treatments of urinary incontinence was developed based upon findings from the workshop.

Key Informants and Technical Experts do not do analysis of any kind nor do they contribute to the writing of the report. They have not reviewed the report, except as given the opportunity to do so through the peer or public review mechanisms.

Peer Reviewers

Prior to publication of the final evidence report, EPCs sought input from independent Peer reviewers without financial conflicts of interest. However, the conclusions and synthesis of the scientific literature presented in this report does not necessarily represent the views of individual reviewers.
Peer Reviewers must disclose any financial conflicts of interest greater than $10,000 and any other relevant business or professional conflicts of interest. Because of their unique clinical or content expertise, individuals with potential non-financial conflicts may be retained. The TOO and the EPC work to balance, manage, or mitigate any potential non-financial conflicts of interest identified.
The list of Peer Reviewers follows who participated in reviewing the report follows.

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Appendix J. Network Meta-Analysis Model and Inconsistency Analysis Results

The meta-analysis models used in this report are described here in a technical manner. We describe the network meta-analysis model, noting that the simple meta-analysis model is a special case of the network model, setting the number of treatments (nodes) to 2.

Network Meta-Analysis Model

The network meta-analysis model is a hierarchical model that has an observational and a structural part (model).

Observational Model

$y_{kj} \sim N(\mu_{kj}, \sigma^2_{kj})$, and

$\mu_{kj} = \mu_k + \mathbf{X}\mathbf{T}_k$,

with $k = 1, \ldots, K$ indexing the K studies, and $j = 1, 2, \ldots$ indexing treatment arms. y_{kj} is the mean of the modeled continuous outcome in arm j of study k. $\mathbf{X}$ is a design matrix corresponding arms to treatment effects. $\mathbf{T}_k = (T_{k1}, \ldots, T_{k,N-1})'$ is a column vector of study-specific treatment effects for the $N-1$ treatments versus a reference treatment, which is chosen arbitrarily. μ_k is the mean in study k for the reference treatment.

Structural Model

Between studies, the study-specific treatment effects are modeled with a multivariate normal distribution

$\mathbf{T}_k \sim N(\mathbf{T}, \boldsymbol{\Omega})$,

where $\boldsymbol{\Omega}$ is a compound symmetry matrix of dimension $N-1$, with all diagonal elements equal to τ^2 and all off diagonal elements equal to $\tau^2/2$, and $\mathbf{T} = (T_1, \ldots, T_{N-1})'$ is a column vector of $N-1$ between-study effect means.

Hyperparameters

We used normal hyperpriors for means and a uniform prior for standard deviations. Specifically,

$\mathbf{T} \sim N(\mathbf{0}, c\mathbf{I})$ and

$\tau \sim U(0, m)$

where $\mathbf{0}$ is a column vector of zeros, $\mathbf{I}$ a conformal identity matrix and c and m scaling factors that are set to 15 and 5 times the range of observed effects, respectively.

To check for inconsistency we conducted split node analyses. We replaced each treatment effect $T_j, j > 0$ that compares the j-th treatment with the baseline one $(j = 0)$, with a direct effect, and an indirect effect, separating the contributions of head-to-head evidence and indirect evidence and examined whether the difference between them was beyond 0.

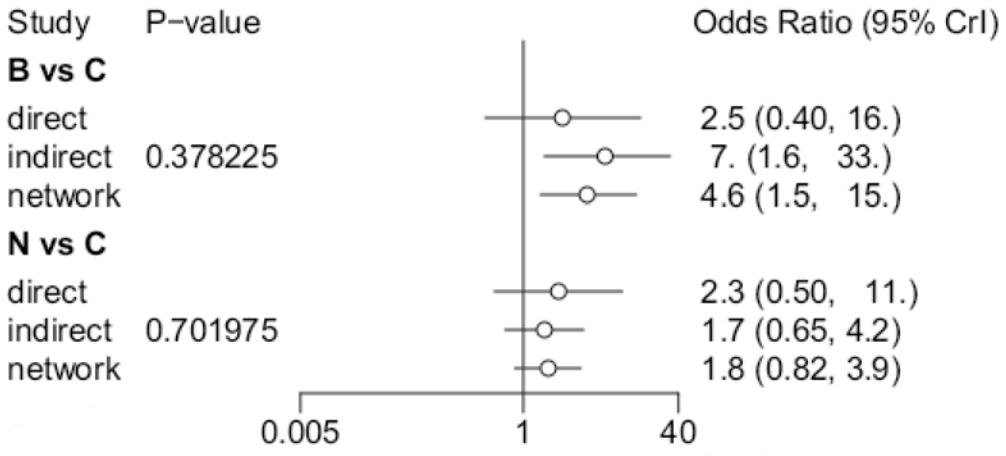
Software

We used a variety of packages in R to conduct the analyses, most notably `gemtc` and `metafor`. Evidence graphs were created using `igraph` and a number of internally developed functions.

Inconsistency Analysis Results

An ensemble of relevant node-splitting models were generated. Results of direct vs. indirect vs. entire network are plotted below along with inconsistency Bayesian P values for each split comparison.

Figure J-1. Example inconsistency analysis



Appendix K. PCORI Methodology Standards Checklist

PCORI Methodology Standards Checklist: SER Update					
Contract No.	**HHSA290201500002I**				
Task Order No.	**10**				
EPC	**Brown Evidence-based Practice Center**				
Project Title	**Nonsurgical Treatments for Urinary Incontinence in Women: A Systematic Review Update**				
Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
Cross-Cutting Standards					
Standards for Formulating Research Questions	RQ-1	Identify Gaps in Evidence	Yes	3	
	RQ-2	Develop a Formal Study Protocol	Yes	7	
	RQ-3	Identify Specific Populations and Health Decision(s) Affected by the Research	Yes	9	
	RQ-4	Identify and Assess Participant Subgroups	Yes	9	
	RQ-5	Select Appropriate Interventions and Comparators	Yes	10	
	RQ-6	Measure Outcomes that People Representing the Population of Interest Notice and Care About	Yes	10	

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Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
Standards Associated with Patient-Centeredness	PC-1	Engage people representing the population of interest and other relevant stakeholders in ways that are appropriate and necessary in a given research context.	Yes	3	
	PC-2	Identify, Select, Recruit, and Retain Study Participants Representative of the Spectrum of the Population of Interest and Ensure that Data Are Collected Thoroughly and Systematically from All Study Participants	No		
	PC-3	Use Patient-Reported Outcomes When Patients or People at Risk of a Condition Are the Best Source of Information	Yes	21 - 107	We used patient reported outcomes any time studies gave them
	PC-4	Support dissemination and implementation of study results	No		
Standards for Data Integrity	IR-1	Assess Data Source Adequacy	No		
	IR-2	Describe Data Linkage Plans, if Applicable	No		

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Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
and Rigorous Analyses	IR-3	A priori, Specify Plans for Data Analysis that Correspond to Major Aims	No		
	IR-4	Document Validated Scales and Tests	No		
	IR-5	Use Sensitivity Analyses to Determine the Impact of Key Assumptions	No		
	IR-6	Provide Sufficient Information in Reports to Allow for Assessments of the Study's Internal and External Validity	No		
Standards for Preventing and Handling Missing Data	MD-1	Describe in Protocol Methods to Prevent and Monitor Missing Data	No		
	MD-2	Describe Statistical Methods to Handle Missing Data in Protocol	No		
	MD-3	Use Validated Methods to Deal with Missing Data that Properly Account for Statistical Uncertainty Due to Missingness	No		

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	MD-4	Record and Report All Reasons for Dropout and Missing Data, and Account for All Patients in Reports	No		
	MD-5	Examine Sensitivity of Inferences to Missing Data Methods and Assumptions, and Incorporate into Interpretation	No		
Standards for Heterogeneity of Treatment Effect (HTE)	HT-1	State the Goals of HTE Analyses	No		
	HT-2	For all HTE Analyses, Pre-specify the analysis plan; for Hypothesis driven HTE Analyses, Pre-specify Hypotheses and supporting evidence base	No		
	HT-3	All HTE claims must be based on appropriate statistical contrasts among groups being compared, such as interaction tests or estimates of differences in treatment effect	No		

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	HT-4	For Any HTE Analysis, Report All Pre-specified Analyses and, at Minimum, the Number of Post-hoc Analyses, Including all Subgroups and Outcomes Analyzed	No		
Standards for Specific Study Designs and Methods					
Standards for Data Registries	DR-1	Requirements for the Design and Features of Registries	No		
	DR-2	Standards for Selection and Use of Registries	No		
	DR-3	Robust Analysis of Confounding Factors	No		
Standards for Data Networks as Research-Facilitating Structures	DN-1	Requirements for the Design and Features of Data Networks	No		
	DN-2	Standards for Selection and Use of Data Networks	No		
	CI-1	Define Analysis Population Using Covariate Histories	No		

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Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
Causal Inference Standards	CI-2	Describe Population that Gave Rise to the Effect Estimate(s)	No		
	CI-3	Precisely Define the Timing of the Outcome Assessment Relative to the Initiation and Duration of Exposure	No		
	CI-4	Measure Confounders before Start of Exposure. Report data on confounders with study results	No		
	CI-5	Report the assumptions underlying the construction of Propensity Scores and the comparability of the resulting groups in terms of the balance of covariates and overlap	No		
	CI-6	Assess the Validity of the Instrumental Variable (i.e. how the assumption are met) and report the balance of covariates in the groups created by the IV for all IV analyses	No		
Standards for Adaptive and Bayesian Trial Designs	AT-1	Specify Planned Adaptations and Primary Analysis	No		
	AT-2	Evaluate Statistical Properties of Adaptive Design	No		

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Project Title	**Nonsurgical Treatments for Urinary Incontinence in Women: A Systematic Review Update**				
Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
	AT-3	Specify Structure and Analysis Plan for Bayesian Adaptive Randomized Clinical Trial Designs	No		
	AT-4	Ensure Clinical Trial Infrastructure Is Adequate to Support Planned Adaptation(s)	No		
	AT-5	Use the CONSORT statement, with Modifications, to Report Adaptive Randomized Clinical Trials	No		
Standards for Studies of Diagnostic Tests	DT-1	Specify Clinical Context and Key Elements of Diagnostic Test Study Design	No		
	DT-2	Study Design Should be Informed by Investigations of the Clinical Context of Testing	No		
	DT-3	Assess the Effect of Factors Known to Affect Diagnostic Performance and Outcomes	No		
	DT-4	Structured Reporting of Diagnostic Comparative Effectiveness Study Results	No		

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Standard Category	**Abbrev.**	**Standard**	**Is this standard applicable to this SER update?**	**List sections and pages of the SER report where you address this standard**	**If applicable, describe how and why the SER update deviated from this standard?**
	DT-5	Focus studies of diagnostic tests on patient centered outcomes, using rigorous study designs with preference for randomized controlled trials	No		
Standards for Systematic Reviews	SR-1	Adopt the Institute of Medicine (IOM) standards for systematic reviews of comparative effectiveness research, with some qualifications.	Yes	7 - 19	

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