

Appendix F. Supplementary Figures and Tables

APPENDIX F

Figure 1a. Consort Diagram - OAI

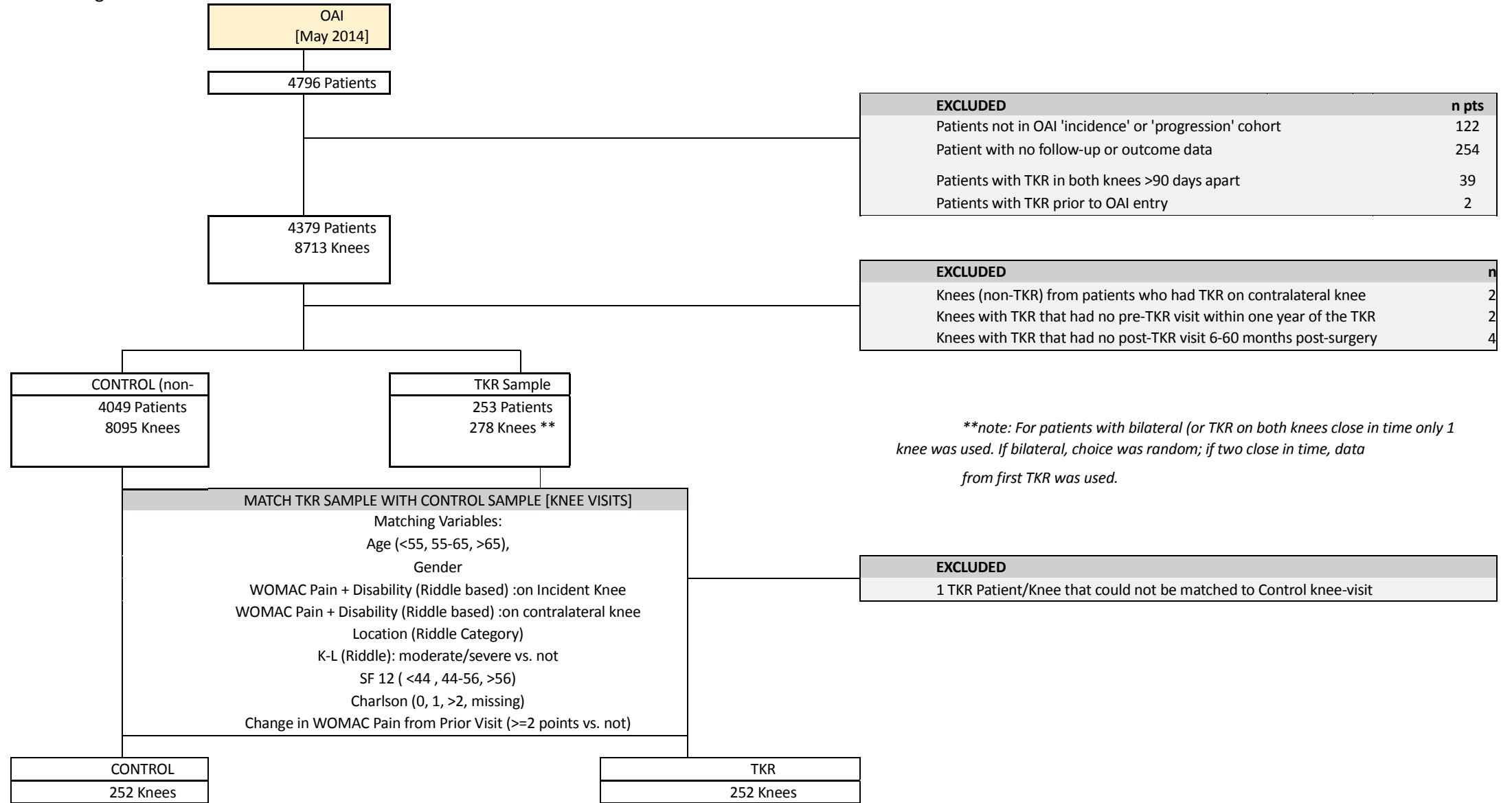


Figure 1b. Consort Diagram - MOST

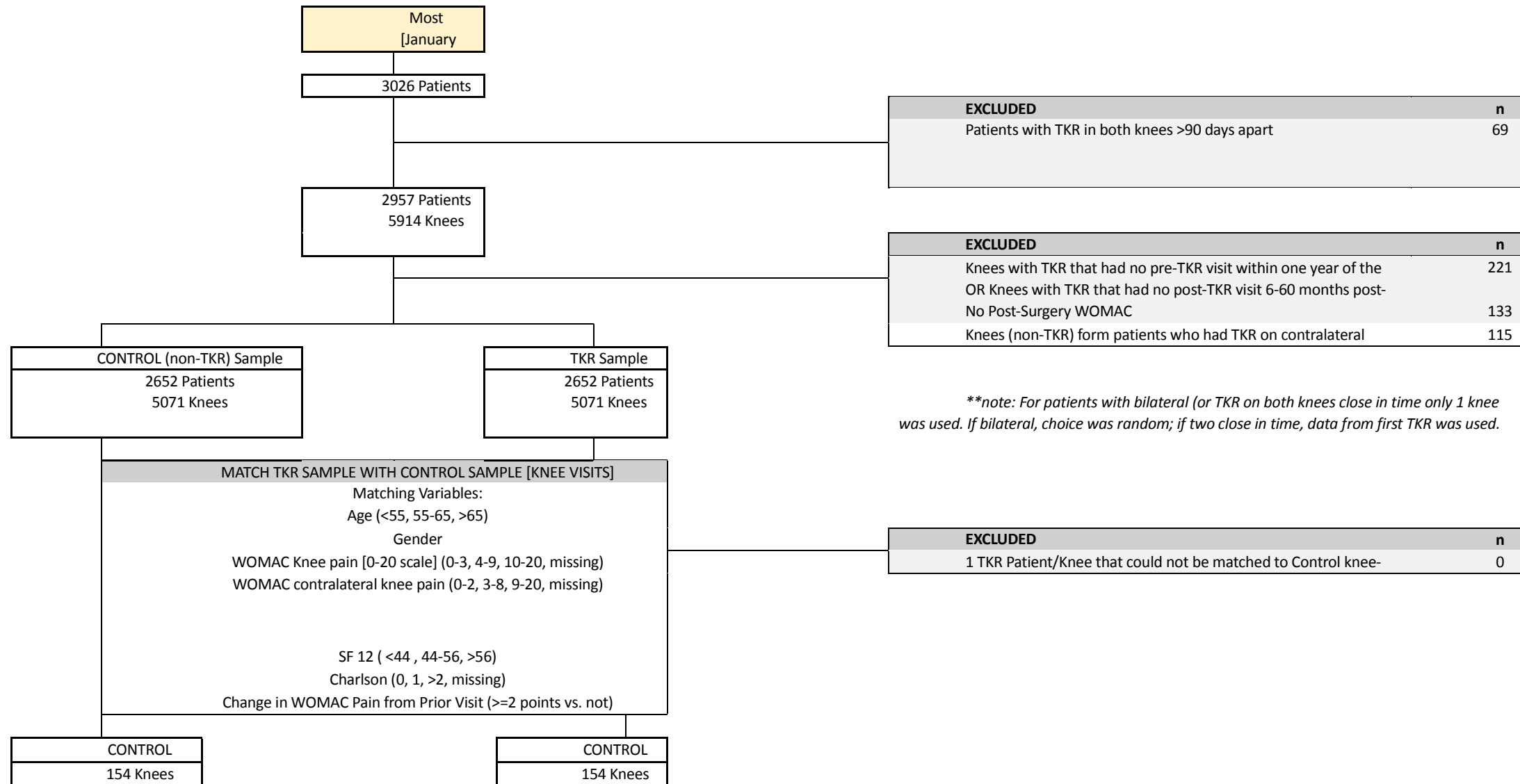


Figure 1c. Consort Diagram - NEBH

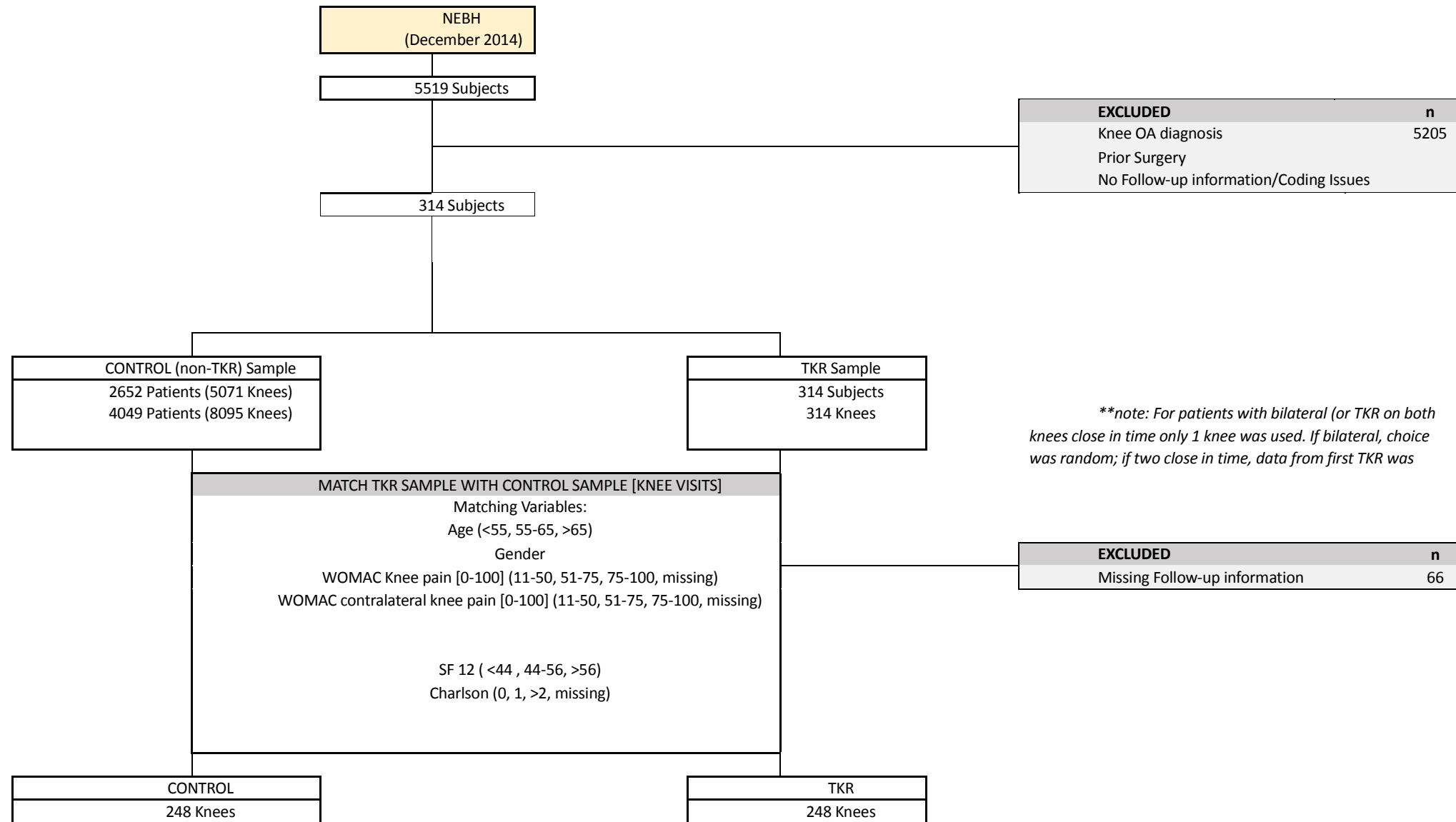


Figure 1d. Consort Diagram - TMC

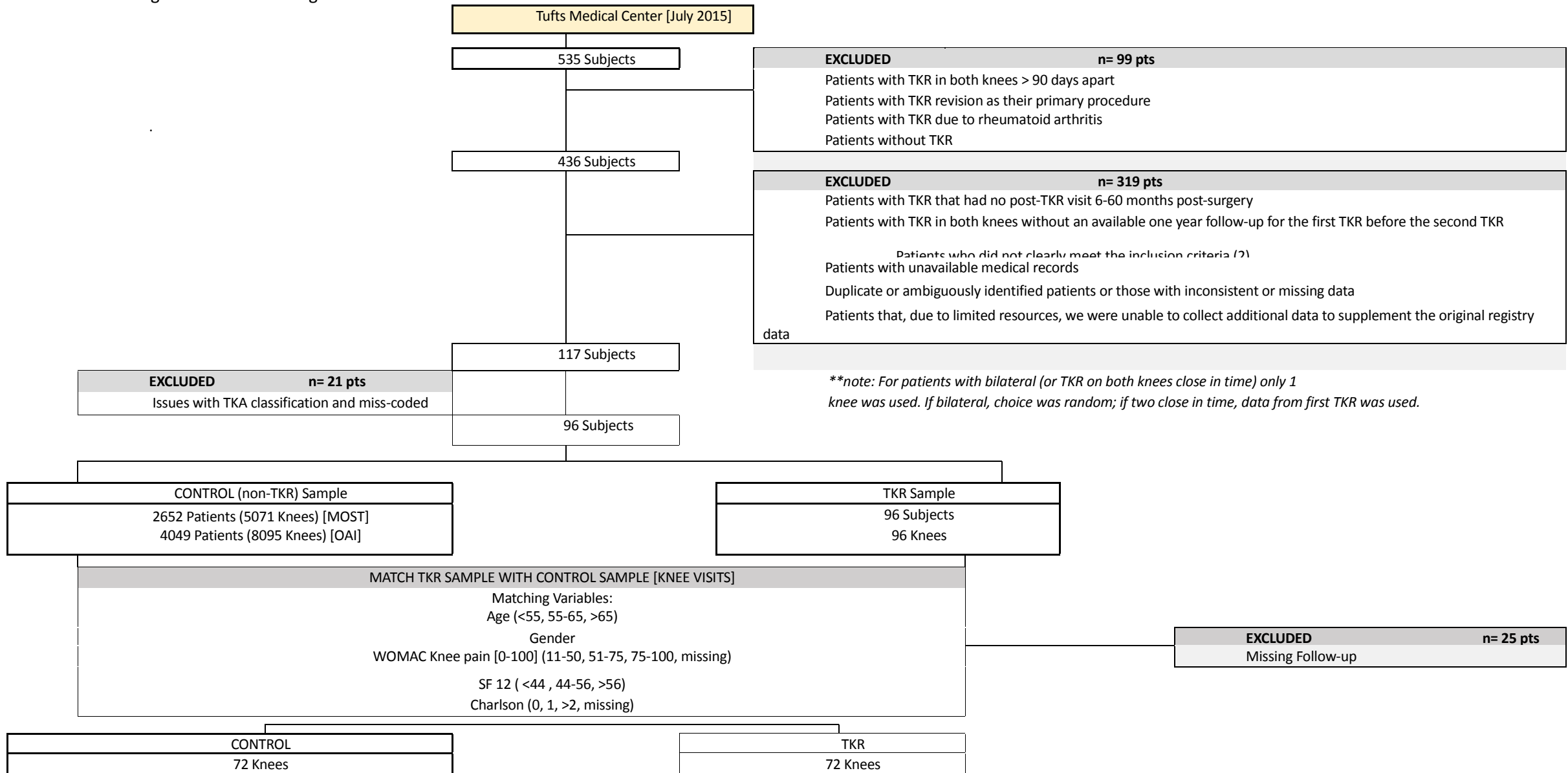


Table 1a.i - Comparison of Distribution of Variables used for Matching – OAI database

Variable	TKR	Non-TKR
MATCHING VARIABLES		
Age riddle category	N=252	N=252
1. <55	7.9% (20)	7.5% (19)
2. 55-65	32.5% (82)	32.9% (83)
3. >65	59.5% (150)	59.5% (150)
Gender (% , fraction male)	42.9% (108/252)	43.7% (110/252)
WOMAC riddle based _sum pain+dis	N=252	N=252
1. slight: p+d <=11	8.3% (21)	9.1% (23)
2. mod: p+d 12-22	18.3% (46)	19.4% (49)
3. intense: p+d 23-33	25.0% (63)	24.6% (62)
4. severe: p+d >33	46.0% (116)	44.4% (112)
99. N/A	2.4% (6)	2.4% (6)
WOMAC cat on contralat	N=252	N=252
1. slight: p+d <=11	54.8% (138)	54.8% (138)
2. mod: p+d 12-22	18.7% (47)	18.7% (47)
3. intense: p+d 23-33	12.3% (31)	12.3% (31)
4. severe: p+d >33	12.7% (32)	12.7% (32)
99. N/A	1.6% (4)	1.6% (4)
Location riddle category	N=252	N=252
0. Unicomp tibio-fem	1.2% (3)	2.8% (7)
1. Unicomp+ patello-fem	47.6% (120)	46.4% (117)
2. Tricompart	1.2% (3)	0.8% (2)
99. N/A	50.0% (126)	50.0% (126)
K-L riddle category	N=252	N=252
0. not mod/sev	20.2% (51)	21.8% (55)
1. yes mod/sev	29.8% (75)	28.2% (71)
99. N/A	50.0% (126)	50.0% (126)
Base SF-12 Physical groups	N=252	N=252
1. 0 to <43	50.4% (127)	49.2% (124)
2. >=43 to <56	23.4% (59)	24.6% (62)
3. >=56	2.0% (5)	2.0% (5)
99. N/A	24.2% (61)	24.2% (61)
Base Charlson Comorbidity score	N=252	N=252
0. none	34.1% (86)	34.9% (88)
1. one	11.1% (28)	10.3% (26)
2. two or more	5.6% (14)	5.6% (14)
99. N/A	49.2% (124)	49.2% (124)
Delta WOMAC pain category (on 20pt scale)	N=252	N=252
0. no more than 1 point increase	26.6% (67)	27.0% (68)
1. increase of at least 2 points	64.7% (163)	64.3% (162)
99. N/A	8.7% (22)	8.7% (22)

Table 1a.ii - Comparison of Distribution of Variables used for Matching – MOST database

Variable	TKR	Non-TKR
MATCHING VARIABLES		
Age (riddle category)	N=154	N=154
01. <55	8.4% (13)	8.4% (13)
02. 55-65	40.3% (62)	42.9% (66)
03. >65	51.3% (79)	48.7% (75)
Gender (% , fraction male)	31.2% (48/154)	30.5% (47/154)
Base WOMAC knee pain groups	N=154	N=154
01. 0 to 3	5.8% (9)	5.8% (9)
02. 4 to 9	39.6% (61)	40.3% (62)
03. 10- 20 (max)	25.3% (39)	24.7% (38)
99. N/A	29.2% (45)	29.2% (45)
Base WOMAC contra knee pain groups	N=154	N=154
01. 0 to 2	26.0% (40)	26.0% (40)
02. 3 to 8	35.7% (55)	35.7% (55)
03. 9- 20 (max)	9.1% (14)	9.1% (14)
99. N/A	29.2% (45)	29.2% (45)
Base WOMAC disability score groups	N=154	N=154
01. 0 to 17	7.8% (12)	8.4% (13)
02. 18 to 32	39.0% (60)	40.9% (63)
03. >=33	21.4% (33)	18.8% (29)
99. N/A	31.8% (49)	31.8% (49)
Base SF-12 Physical groups	N=154	N=154
01. 0 to 43	51.3% (79)	49.4% (76)
02. 44 to 56	13.6% (21)	16.2% (25)
03. >=57	0.6% (1)	. (.)
99. N/A	34.4% (53)	34.4% (53)
Base Charlson Comorbidity score	N=154	N=154
00. None	61.7% (95)	61.0% (94)
01. One	26.0% (40)	24.7% (38)
02. Two or more	12.3% (19)	14.3% (22)
Delta WOMAC pain groups	N=154	N=154
00. Negative/Decrease	7.1% (11)	8.4% (13)
01. No change or 1 point increase	7.1% (11)	6.5% (10)
02. Increase of 2 or more points	18.2% (28)	17.5% (27)
99. N/A	67.5% (104)	67.5% (104)

Table 1a.iii - Comparison of Distribution of Variables used for Matching – NEBH database

Variable	TKR	Non-TKR
MATCHING VARIABLES		
Age riddle category	N=248	N=248
01. <55	18.1% (45)	18.5% (46)
02. 55-65	40.7% (101)	40.7% (101)
03. >65	41.1% (102)	40.7% (101)
Gender (% , fraction male)	41.9% (104/248)	40.3% (100/248)
Base WOMAC knee pain groups	N=248	N=248
01. 0 to 10	0.4% (1)	0.8% (2)
02. 11 to 50	37.1% (92)	39.5% (98)
03. 51 to 75	44.8% (111)	47.2% (117)
04. 75 to 100(max)	14.5% (36)	9.3% (23)
99. N/A	3.2% (8)	3.2% (8)
Base WOMAC contralat knee pain groups	N=248	N=248
01. 0 to 10	35.5% (88)	35.5% (88)
02. 11 to 50	51.2% (127)	50.8% (126)
03. 51 to 75	8.1% (20)	8.5% (21)
04. 75 to 100(max)	2.0% (5)	2.0% (5)
99. N/A	3.2% (8)	3.2% (8)
Base SF-12 Physical groups	N=248	N=248
01. 0 to 43	69.0% (171)	69.4% (172)
02. 44 to 56	25.4% (63)	25.0% (62)
03. >=57	1.2% (3)	1.2% (3)
99. N/A	4.4% (11)	4.4% (11)
Base Charlson Comorbidity	N=248	N=248
00. None	75.4% (187)	75.4% (187)
01. One	16.9% (42)	16.9% (42)
02. Two or more	6.5% (16)	6.5% (16)
99. N/A	1.2% (3)	1.2% (3)

Table 1a.iv - Comparison of Distribution of Variables used for Matching – TUFTS database

Variable	TKR	Non-TKR
MATCHING VARIABLES		
Age Riddle category	N=72	N=72
01. <55	26.4% (19)	26.4% (19)
02. 55-65	33.3% (24)	34.7% (25)
03. >65	40.3% (29)	38.9% (28)
Gender (% , fraction male)	69.4% (50/72)	69.4% (50/72)
Base WOMAC knee pain groups	N=72	N=72
02. 11 to 50	50.0% (36)	55.6% (40)
03. 51 to 75	40.3% (29)	31.9% (23)
04. 75 to 100(max)	1.4% (1)	2.8% (2)
99. N/A	8.3% (6)	9.7% (7)
Base SF-12 Physical groups	N=72	N=72
01. 0 to 43	47.2% (34)	47.2% (34)
02. 44 to 56	5.6% (4)	5.6% (4)
99. N/A	47.2% (34)	47.2% (34)
Base Charlson Comorbidity	N=72	N=72
00. None	48.6% (35)	48.6% (35)
01. One	19.4% (14)	19.4% (14)
02. Two or more	30.6% (22)	30.6% (22)
99. N/A	1.4% (1)	1.4% (1)

Table 1b.i - Comparisons of subject characteristics in raw data – OAI

Variable	TKR (n=252)	Non-TKR (n=252)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD) or %(n)</i>			<i>(Δ/SD)</i>
Age in years	67.88 +/- 8.64 (252)	66.82 +/- 8.36 (252)	1.06[-0.43 to 2.55]	0.12
BMI	29.80 +/- 4.60 (184)	30.39 +/- 4.66 (179)	-0.59[-1.55 to 0.36]	-0.13
SF-12 Physical	38.75 +/- 9.17 (191)	39.82 +/- 9.31 (191)	-1.07[-2.93 to 0.79]	-0.12
SF-12 Mental	55.57 +/- 8.64 (191)	54.39 +/- 9.18 (191)	1.18[-0.61 to 2.98]	0.13
Depression Scale	7.47 +/- 7.13 (233)	7.99 +/- 6.98 (231)	-0.52[-1.81 to 0.77]	-0.07
Back Pain	62.2% +/- 48.6% (188)	66.8% +/- 47.2% (193)	(4.6%)[(14.3%) to 5.0%]	-0.10
ADL/Disability	24.49 +/- 11.70 (247)	23.27 +/- 11.72 (247)	1.21[-0.86 to 3.28]	0.10
WOMAC Total score	35.66 +/- 15.99 (246)	33.40 +/- 16.20 (246)	2.26[-0.59 to 5.11]	0.14
WOMAC Pain subscores, 0=none, 4=extreme				
WOMAC Pain- Walking	1.77 +/- 0.98 (252)	1.46 +/- 0.90 (250)	0.32[0.15 to 0.48]	0.34
WOMAC Pain- Stairs	2.31 +/- 0.97 (248)	1.96 +/- 0.92 (248)	0.35[0.18 to 0.52]	0.37
WOMAC Pain- In Bed	1.14 +/- 1.14 (251)	1.05 +/- 1.11 (250)	0.09[-0.11 to 0.29]	0.08
WOMAC Pain- Sit/Lie down	0.96 +/- 0.94 (251)	1.12 +/- 0.97 (250)	-0.17[-0.34 to -0.00]	-0.18
WOMAC Pain- Standing	1.42 +/- 0.94 (250)	1.30 +/- 0.99 (250)	0.13[-0.04 to 0.30]	0.13
WOMAC Knee pain (0-100)	38.00 +/- 18.92 (251)	34.41 +/- 19.70 (250)	3.59[0.20 to 6.98]	0.19
Contralateral Knee Pain (0-100)	15.05 +/- 17.30 (252)	15.67 +/- 16.59 (251)	-0.62[-3.59 to 2.35]	-0.04
Hip Pain or Pain/Ache/Stiff	56.0% +/- 49.8% (191)	60.1% +/- 49.1% (193)	(4.1%)[(14.0%) to 5.8%]	-0.08
Homunculus (0 to 100%)	24.63 +/- 12.82 (155)	26.47 +/- 14.42 (164)	-1.84[-4.85 to 1.17]	-0.13
Narcotics	14.3% +/- 35.1% (252)	9.6% +/- 29.5% (251)	4.7% [(1.0%) to 10.4%]	0.15
Charlson (approximate)	N=128	N=128		
0	67.2% (86)	68.8% (88)		
1	21.9% (28)	20.3% (26)		
2	7.0% (9)	9.4% (12)		
3	3.9% (5)	1.6% (2)		
Baseline Charlson_approx	0.48 +/- 0.79 (128)	0.44 +/- 0.73 (128)	0.04[-0.15 to 0.23]	0.05
Follow-up (FU)				
FU SF-12 Physical	44.55 +/- 9.53 (129)	41.29 +/- 10.10 (171)	3.26[1.00 to 5.52]	0.33
FU WOMAC Knee Pain (0-100)	11.78 +/- 15.69 (252)	26.62 +/- 20.33 (252)	-14.84[-18.01 to -11.66]	-0.82
Time from Baseline to FU (months)				
Median <q1-q3> (n)	22.6<13.1-24.1> (252)	12.0<11.1 -12.7>(252)		
Mean +/-sd (n)	19.76 +/- 5.60 (252)	12.20 +/- 2.81 (252)	7.56[6.78 to 8.33]	1.71

Table 1b.ii - Comparisons of subject characteristics in raw data – MOST

Variable	TKR (n=154)	Non-TKR (n=154)	TKR minus non-TKR <i>Delta</i> (Δ) and [95% CI]	Effect Size (Δ /SD)
	<i>mean +/- standard deviation (SD) or %(n)</i>			
Age in years	65.49 +/- 6.88 (154)	65.21 +/- 7.47 (154)	0.28[-1.33 to 1.89]	0.04
BMI	32.19 +/- 5.69 (106)	31.77 +/- 6.15 (107)	0.42[-1.18 to 2.02]	0.07
SF-12 Physical	36.73 +/- 8.26 (101)	37.25 +/- 8.08 (101)	-0.53[-2.79 to 1.74]	-0.06
SF-12 Mental	55.75 +/- 9.41 (101)	53.38 +/- 9.65 (101)	2.37[-0.28 to 5.01]	0.25
Depression Scale	8.13 +/- 7.42 (97)	10.70 +/- 9.02 (96)	-2.56[-4.91 to -0.22]	-0.31
Back Pain	71.1% +/- 45.5% (97)	81.3% +/- 39.2% (96)	(10.1%)[(22.2% to 2.0%]	-0.24
ADL/Disability	28.08 +/- 10.44 (105)	26.84 +/- 10.85 (105)	1.24[-1.66 to 4.13]	0.12
WOMAC Total Score	40.07 +/- 14.43 (105)	37.93 +/- 15.02 (105)	2.14[-1.86 to 6.15]	0.15
WOMAC Pain subscores, 0=none, 4=extreme				
WOMAC Pain- Walking	1.78 +/- 0.77 (109)	1.50 +/- 0.82 (109)	0.28[0.07 to 0.50]	0.36
WOMAC Pain- Stairs	2.51 +/- 0.87 (109)	2.18 +/- 0.94 (109)	0.33[0.09 to 0.57]	0.36
WOMAC Pain- In Bed	1.27 +/- 0.96 (109)	1.26 +/- 0.98 (109)	0.01[-0.25 to 0.27]	0.01
WOMAC Pain- Sit/Lie down	0.81 +/- 0.87 (109)	0.90 +/- 0.80 (109)	-0.09[-0.31 to 0.13]	-0.11
WOMAC Pain- Standing	1.50 +/- 0.82 (109)	1.54 +/- 0.90 (109)	-0.05[-0.28 to 0.18]	-0.05
WOMAC Knee pain (0-100)	40.28 +/- 17.52 (109)	38.39 +/- 17.72 (109)	1.88[-2.82 to 6.58]	0.11
Contralateral Knee Pain (0-100)	22.32 +/- 18.97 (109)	23.30 +/- 19.09 (109)	-0.99[-6.07 to 4.09]	-0.05
Hip Pain or Pain/Ache/Stiff	46.4% +/- 50.0% (153)	61.4% +/- 48.8% (153)	(15.0%)[(26.2% to (3.9%)]	-0.30
Homunculus (0 to 100%)	17.34 +/- 17.25 (154)	20.93 +/- 19.01 (154)	-3.59[-7.66 to 0.48]	-0.20
Narcotics	20.8% +/- 40.7% (106)	14.0% +/- 34.9% (107)	6.7% [(3.5%) to 17.0%]	0.18
Charlson (approximate)	N=154	N=154		
0	61.7% (95)	61.0% (94)		
1	26.0% (40)	24.7% (38)		
2	11.0% (17)	9.1% (14)		
3	1.3% (2)	2.6% (4)		
4	. (.)	0.6% (1)		
5	. (.)	0.6% (1)		
7	. (.)	1.3% (2)		
Baseline Charlson_approx	0.52 +/- 0.74 (154)	0.66 +/- 1.15 (154)	-0.14[-0.35 to 0.08]	-0.14
Follow-up (FU)				
FU SF-12 Physical	40.03 +/- 11.66 (133)	40.69 +/- 10.72 (137)	-0.67[-3.35 to 2.02]	-0.06
FU WOMAC Knee Pain (0-100)	14.01 +/- 16.35 (154)	23.93 +/- 18.13 (154)	-9.92[-13.79 to -6.05]	-0.05
Time from Baseline to FU (months)				
Median <q1-q3> (n)	36 < 17- 39> (154)	25 < 16- 37> (152)		-0.57
Mean +/-sd (n)	30.05 +/- 11.63 (154)	26.72 +/- 10.64 (152)	3.33[0.82 to 5.84]	0.3

Table 1b.iii - Comparisons of subject characteristics in raw data – NEBH

Variable	TKR (n=248)	Non-TKR (n=248)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size (Δ /SD)
	<i>mean +/- standard deviation (SD) or %(n)</i>			
Age in years	63.33 +/- 8.52 (248)	63.28 +/- 8.85 (248)	0.05[-1.48 to 1.58]	0.01
BMI	31.50 +/- 6.71 (244)	31.18 +/- 5.00 (233)	0.32[-0.75 to 1.39]	0.05
SF-12 Physical	37.33 +/- 8.92 (237)	38.06 +/- 9.17 (237)	-0.72[-2.36 to 0.91]	-0.08
SF-12 Mental	48.23 +/- 8.05 (237)	53.08 +/- 10.57 (237)	-4.85[-6.54 to -3.15]	-0.52
Depression Scale		10.06 +/- 9.43 (238)		
Back Pain		75.6% +/- 43.0% (234)		
ADL/Disability		29.07 +/- 14.46 (229)		
WOMAC Total Score		43.05 +/- 19.85 (228)		
WOMAC Pain subscores, 0=none, 4=extreme				
WOMAC Pain- Walking		1.96 +/- 0.96 (241)		.
WOMAC Pain- Stairs		2.58 +/- 0.91 (236)		
WOMAC Pain- In Bed		1.70 +/- 1.30 (241)		.
WOMAC Pain- Sit/Lie down		1.46 +/- 1.09 (240)		
WOMAC Pain- Standing		1.90 +/- 1.02 (240)		.
WOMAC Knee pain (0-100)	56.07 +/- 19.02 (240)	48.41 +/- 22.67 (240)	7.67[3.91 to 11.42]	0.37
Contralateral Knee Pain (0-100)	21.11 +/- 22.23 (240)	23.99 +/- 21.84 (240)	-2.89[-6.84 to 1.06]	-0.13
Hip Pain or Pain/Ache/Stiff	12.5% +/- 33.1% (248)	64.7% +/- 47.9% (238)	(52.2%)[(59.5%) to(44.9%)]	-1.27
Homunculus (0 to 100%)		30.22 +/- 17.05 (211)		.
Narcotics	8.5% +/- 27.9% (248)	15.4% +/- 36.1% (241)	(6.9%)[(12.6%) to (1.2%)]	-0.21
Charlson (approximate)	N=245	N=245		.
0	76.3% (187)	76.3% (187)		
1	17.1% (42)	17.1% (42)		.
2	6.1% (15)	2.4% (6)		
3	0.4% (1)	2.0% (5)		.
4	. (.)	1.2% (3)		
5	. (.)	0.8% (2)		.
Baseline Charlson_approx	0.31 +/- 0.60 (245)	0.37 +/- 0.85 (245)	-0.07[-0.20 to 0.07]	-0.09
Follow-up (FU)				
FU SF-12 Physical	48.92 +/- 9.45 (228)	40.37 +/- 10.00 (152)	8.55[6.56 to 10.54]	0.88
FU WOMAC Knee Pain (0-100)	15.33 +/- 18.87 (248)	33.53 +/- 23.83 (247)	-18.20[-21.99 to -14.40]	-0.85
Time from Baseline to FU (months)				
Median <q1-q3> (n)	12 < 12- 12> (248)	12.2 < 11.46- 22> (244)		
Mean +/-sd (n)	12.77 +/- 3.33 (248)	16.90 +/- 9.29 (244)	-4.12[-5.35 to -2.89]	-0.59

Table 1b.iv- Comparisons of subject characteristics in raw data – TUFTS

Variable	TKR (n=72)	Non-TKR (n=72)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD) or %(n)</i>			<i>(Δ/SD)</i>
Age in years	62.6 +/- 10.0 (72)	61.8 +/- 8.1 (72)	0.75[-2.23 to 3.73]	0.08
BMI	35.8 +/- 19.3 (65)	31.2 +/- 4.5 (49)	4.57[-1.01 to 10.15]	0.31
SF-12 Physical	31.5 +/- 7.6 (38)	35.5 +/- 6.7 (38)	-4.05[-7.32 to -0.78]	-0.57
SF-12 Mental	48.5 +/- 12.2 (38)	51.7 +/- 11.8 (38)	-3.23[-8.72 to 2.27]	-0.27
Depression Scale	not avail	11.0 +/- 8.9 (47)		
Back Pain	not avail	81.3% +/- 39.4% (48)		
ADL/Disability	not avail	31.1 +/- 9.9 (57)		
WOMAC Total Score	not avail	44.6 +/- 12.8 (57)		
WOMAC Pain subscores, 0=none, 4=extreme				
WOMAC Pain- Walking	not avail	1.9 +/- 0.8 (65)		
WOMAC Pain- Stairs	not avail	2.5 +/- 0.8 (62)		
WOMAC Pain- In Bed	not avail	1.6 +/- 0.9 (65)		
WOMAC Pain- Sit/Lie down	not avail	1.5 +/- 0.8 (65)		
WOMAC Pain- Standing	not avail	1.8 +/- 0.7 (65)		
WOMAC Knee pain (0-100)	48.0 +/- 13.1 (66)	47.2 +/- 14.5 (65)	0.80[-3.98 to 5.58]	0.06
Contralateral Knee Pain (0-100)	not avail	36.0 +/- 21.4 (65)		
Hip Pain or Pain/Ache/Stiff	9.9% +/- 30.0% (71)	60.0% +/- 49.4% (65)	(50.1%)[(63.9%) to (36.4%)]	-1.24
Homunculus (0 to 100%)	13.0 +/- 7.7 (23)	23.5 +/- 21.5 (64)	-10.49[-19.61 to -1.36]	-0.56
Narcotics	16.7% +/- 37.5% (72)	19.3% (11/57)	(2.6%)[(16.2%) to 10.9%]	-0.07
Charlson (approximate)	N=71	N=71		
0	49.3% (35)	49.3% (35)		
1	19.7% (14)	19.7% (14)		
2	22.5% (16)	14.1% (10)		
3	2.8% (2)	8.5% (6)		
4	1.4% (1)	1.4% (1)		
5	2.8% (2)	7.0% (5)		
6	1.4% (1)	. (.)		
Baseline Charlson_approx	1.01 +/- 1.34 (71)	1.14 +/- 1.50 (71)	-0.13[-0.60 to 0.34]	-0.09
Follow-up (FU)				
FU SF-12 Physical	39.2 +/- 9.1 (52)	37.2 +/- 7.8 (42)	1.91[-1.60 to 5.42]	0.22
FU WOMAC Knee Pain (0-100)	16.4 +/- 15.3 (72)	35.0 +/- 21.0 (72)	-18.65[-24.71 to -12.58]	-1.01
Time from Baseline to FU (months)				
Median <q1-q3> (n)	14 < 13- 16> (70)	15.36 < 12.12- 29.5> (72)		
Mean +/-sd (n)	15.84 +/- 12.00 (70)	21.28 +/- 11.54 (72)	-5.43[-9.34 to -1.53]	-0.46

Table 1c.i - Comparisons of subject characteristics in imputed data – OAI

Variable	TKR (n=252)	Non-TKR (n=252)	TKR minus non-TKR <i>Delta</i> (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD)</i>			<i>(Δ/SD)</i>
Age	67.88 ± 8.50	66.82 ± 8.50	1.06 [-0.42 , 2.54]	0.06
Male, N(%)	0.43 ± 0.50	0.44 ± 0.50	-0.01 [-0.09 , 0.08]	-0.01
Baseline BMI	29.84 ± 5.84	30.51 ± 5.69	-0.67 [-1.68 , 0.33]	-0.06
Baseline SF-12 Physical	38.68 ± 10.51	39.77 ± 10.64	-1.10 [-2.94 , 0.75]	-0.05
Baseline SF-12 Mental	55.60 ± 9.81	54.28 ± 9.61	1.31 [-0.38 , 3.01]	0.07
Baseline WOMAC Knee pain (0-100)	37.97 ± 19.33	34.40 ± 19.38	3.56 [0.18 , 6.94]	0.09
Baseline Knee Pain in Contralateral (0-100)	15.05 ± 16.95	15.70 ± 16.99	-0.65 [-3.62 , 2.31]	-0.02
Baseline Hip Pain or Pain/Ache/Stiff	0.56 ± 0.54	0.60 ± 0.56	-0.04 [-0.14 , 0.06]	-0.04
At least one comorbidity, N (%)	0.30 ± 0.61	0.27 ± 0.70	0.03 [-0.08 , 0.14]	0.02
Narcotics, N (%)	0.14 ± 0.32	0.10 ± 0.33	0.05 [-0.01 , 0.10]	0.07
Follow-up SF-12 Physical	44.20 ± 13.65	41.17 ± 10.24	3.03 [0.92 , 5.13]	0.13
Follow-up WOMAC Knee Pain (0-100)	11.78 ± 18.15	26.62 ± 18.15	-14.84 [-18.01 , -11.67]	-0.41

**Shaded rows indicate variables where definitions varied between databases so that these variables ultimately were excluded as candidates in the building of final models.*

Table 1c.ii - Comparisons of subject characteristics in imputed data – MOST

Variable	TKR (n=154)	Non-TKR (n=154)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD)</i>			<i>(Δ/SD)</i>
Age	65.49 \pm 7.18	65.21 \pm 7.18	0.28 [-1.32 , 1.88]	0.02
Male, N(%)	0.31 \pm 0.46	0.31 \pm 0.46	0.01 [-0.10 , 0.11]	0.01
Baseline BMI	32.33 \pm 9.48	31.44 \pm 7.18	0.89 [-0.98 , 2.77]	0.05
Baseline SF-12 Physical	36.80 \pm 7.83	38.62 \pm 10.43	-1.82 [-3.87 , 0.24]	-0.1
Baseline SF-12 Mental	55.99 \pm 11.00	54.23 \pm 11.80	1.76 [-0.79 , 4.31]	0.08
Baseline WOMAC Knee pain (0-100)	40.23 \pm 24.82	35.33 \pm 22.24	4.90 [-0.36 , 10.17]	0.1
Baseline Knee Pain in Contralateral (0-100)	21.46 \pm 20.06	19.38 \pm 24.10	2.08 [-2.87 , 7.03]	0.05
Baseline Hip Pain or Pain/Ache/Stiff	0.46 \pm 0.50	0.61 \pm 0.50	-0.15 [-0.26 , -0.04]	-0.15
At least one comorbidity, N (%)	0.38 \pm 0.49	0.39 \pm 0.49	-0.01 [-0.12 , 0.10]	-0.01
Narcotics, N (%)	0.20 \pm 0.44	0.13 \pm 0.39	0.07 [-0.03 , 0.16]	0.08
Follow-up SF-12 Physical	40.01 \pm 12.11	40.10 \pm 11.99	-0.09 [-2.78 , 2.60]	0
Follow-up WOMAC Knee Pain (0-100)	14.01 \pm 17.26	23.93 \pm 17.26	-9.92 [-13.77 , -6.06]	-0.29

**Shaded rows indicate variables where definitions varied between databases so that these variables ultimately were excluded as candidates in the building of final models.*

Table 1c.iii - Comparisons of subject characteristics in imputed data – NEBH

Variable	TKR (n=248)	Non-TKR (n=248)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD)</i>			<i>(Δ/SD)</i>
Age	63.33 \pm 8.69	63.28 \pm 8.69	0.05 [-1.48 , 1.58]	0
Male, N(%)	0.42 \pm 0.49	0.40 \pm 0.49	0.02 [-0.07 , 0.10]	0.02
Baseline BMI	31.56 \pm 5.86	31.14 \pm 6.07	0.41 [-0.64 , 1.46]	0.03
Baseline SF-12 Physical	37.33 \pm 9.22	38.20 \pm 9.13	-0.87 [-2.49 , 0.74]	-0.05
Baseline SF-12 Mental	48.22 \pm 9.60	53.17 \pm 9.72	-4.95 [-6.65 , -3.25]	-0.26
Baseline WOMAC Knee pain (0-100)	56.11 \pm 21.64	48.11 \pm 21.16	8.00 [4.23 , 11.77]	0.19
Baseline Knee Pain in Contralateral (0-100)	21.27 \pm 22.18	23.86 \pm 22.18	-2.58 [-6.49 , 1.32]	-0.06
Baseline Hip Pain or Pain/Ache/Stiff	0.13 \pm 0.41	0.65 \pm 0.42	-0.52 [-0.60 , -0.45]	-0.63
At least one comorbidity, N (%)	0.24 \pm 0.43	0.23 \pm 0.42	0.00 [-0.07 , 0.08]	0
Narcotics, N (%)	0.08 \pm 0.32	0.15 \pm 0.33	-0.07 [-0.13 , -0.01]	-0.1
Follow-up SF-12 Physical	48.94 \pm 10.42	39.32 \pm 10.37	9.63 [7.80 , 11.46]	0.46
Follow-up WOMAC Knee Pain (0-100)	15.33 \pm 21.49	33.48 \pm 21.53	-18.14 [-21.93 , -14.36]	-0.42

**Shaded rows indicate variables where definitions varied between databases so that these variables ultimately were excluded as candidates in the building of final models.*

Table 1c.iv - Comparisons of subject characteristics in imputed data – TMC

Variable	TKR (n=72)	Non-TKR (n=72)	TKR minus non-TKR Delta (Δ) and [95% CI]	Effect Size
	<i>mean +/- standard deviation (SD)</i>			<i>(Δ/SD)</i>
Age	62.57 \pm 9.06	61.82 \pm 9.06	0.75 [-2.21 , 3.71]	0.04
Male, N(%)	0.69 \pm 0.46	0.69 \pm 0.46	-0.00 [-0.15 , 0.15]	0
Baseline BMI	33.42 \pm 6.77	30.99 \pm 7.28	2.43 [0.13 , 4.73]	0.17
Baseline SF-12 Physical	32.00 \pm 10.14	35.74 \pm 12.93	-3.74 [-7.54 , 0.05]	-0.16
Baseline SF-12 Mental	49.48 \pm 14.97	51.58 \pm 14.97	-2.10 [-6.99 , 2.79]	-0.07
Baseline WOMAC Knee pain (0-100)	47.48 \pm 14.48	46.43 \pm 14.43	1.05 [-3.67 , 5.77]	0.04
Baseline Knee Pain in Contralateral (0-100)	21.46 \pm 13.72	19.38 \pm 16.48	2.08 [-2.87 , 7.03]	0.07
Baseline Hip Pain or Pain/Ache/Stiff	0.10 \pm 0.41	0.60 \pm 0.45	-0.50 [-0.64 , -0.36]	-0.59
At least one comorbidity, N (%)	0.51 \pm 0.51	0.51 \pm 0.51	0.00 [-0.16 , 0.17]	0
Narcotics, N (%)	0.17 \pm 0.38	0.19 \pm 0.40	-0.02 [-0.15 , 0.11]	-0.03
Follow-up SF-12 Physical	39.66 \pm 10.09	36.10 \pm 10.04	3.56 [0.27 , 6.85]	0.18
Follow-up WOMAC Knee Pain (0-100)	16.35 \pm 18.40	35.00 \pm 18.40	-18.65 [-24.66 , -12.63]	-0.51

**Shaded rows indicate variables where definitions varied between databases so that these variables ultimately were excluded as candidates in the building of final models.*