

Appendix H. Supplementary Tables 2a to 2c

APPENDIX H

Table 2a. Models of 1-year Knee pain (scored as 0 = no pain, 100= extreme pain)

	Initial Model built on OAI and tested on MOST	P1. Model (from pooled MOST+OAI)	P2. model (from 4-source data)
<i>R-square</i>	<i>0.36(OAI), 0.32 (MOST)</i>	<i>0.32</i>	<i>0.32</i>
	<i>Beta Coeff(stderr) p-value</i>	<i>Beta Coeff(stderr) p-value</i>	<i>Beta Coeff(stderr) p-value</i>
Model intercept (constant)	1.95 (2.60) p=0.4550	-2.99(4.04) p=0.4597	31.44(5.52) p<.0001
Treatment (1=TKR, 0=control)	-4.59 (3.41) p=0.1781	-5.00(2.77) p=0.0718	-3.33(2.16) p=0.1246
WOMAC knee pain (base)	0.49 (0.05) p<.0001	0.42(0.04) p<.0001	0.49(0.03) p<.0001
Interaction: Treatment * WOMAC knee pain	-0.21 (0.07) p=0.0044	-0.18(0.06) p=0.0026	-0.33(0.05) p<.0001
Age (in years)			-0.12(0.05) p=0.0225
SF-12 mental component [base]			-0.11(0.05) p=0.033
SF-12 physical component [base]			-0.21(0.07) p=0.0017
Age, dichotomized (less than 60 years old: 1=yes,0=no))	4.20 (1.79) p=0.0186	4.44(1.41) p=0.0017	
WOMAC [base] contralateral knee pain		0.13(0.04) p=0.0562	
Homunculus %	0.26 (0.08) p=0.0008	0.11(0.05) p=0.0155	
Body mass index [base], kg/m ²		0.22(0.12) p=0.0628	
Hip Pain (1=yes, 0=no)	-0.31 (2.48) p=0.8992	2.00(1.80) p=0.2694	
Interaction: Treatment*Hip Pain	-5.69 (2.96) p=0.0545	-3.82(2.29) p=0.0948	

Table 2b. Models of 1-year Physical Function (Physical Component Score of SF-12)

	Initial Model built on OAI and tested on MOST	F1. model (from pooled MOST+OAI)	F2. model (from 4-source data)
<i>Adjusted R-square (range from 10 imputed datasets)</i>	<i>0.42(OAI), 0.18 (MOST)</i>	<i>0.35</i>	<i>0.34</i>
		<i>Beta Coeff(stderr) p-value</i>	<i>Beta Coeff(stderr) p-value</i>
Model Intercept (constant)	5.49 (8.70) p=0.5337	25.84(5.15) p=<.0001	17.40(4.27) p=<.0001
Treatment (1=TKR, 0=control)	3.43 (1.00) p=0.0017	2.58(0.74) p=0.0008	25.41(4.33) p=<.0001
Gender (1=male, 0=female)	1.25 (0.95) p=0.1961	1.60(0.75) p=0.037	0.99(0.57) p=0.0873
Age (in years)	-0.11 (0.04) p=0.0080	-0.13(0.04) p=0.0017	-0.05(0.04) p=0.2397
SF-12 mental component [base]	0.32 (0.10) p=0.0058	0.12(0.05) p=0.0196	0.19(0.04) p=<.0001
SF-12 physical component [base]	0.65 (0.06) p=<.0001	0.57(0.04) p=<.0001	0.55(0.03) p=<.0001
Body mass index [base], kg/m ²		-0.16(0.08) p=0.0664	-0.19(0.05) p=0.0008
Charlson Comorbidity Score >=1 (vs. 0)			-2.05(0.60) p=0.0009
Interaction: hadTKR*age			-0.15(0.06) p=0.0084
Interaction: hadTKR*SF-12 mental score			-0.18(0.06) p=0.0013
WOMAC [base] contralat knee pain	-0.05 (0.03) p=0.1335	-0.07(0.02) p=0.0033	
Homunculus (% of sites positive)	-0.19 (0.06) p=0.0059		
Hip Pain (1=yes, 0=no)	3.90 (1.03) p=0.0003		

Table 2c. Summary of variables used in multivariable models built on pooled data sources

Label	Summary of Data (% or 5th to 95th percentile from imputed data) [for variables used for models]		Included in model built on pooled 2- source (P1/F1) or pooled 4-source database (P2/F2)			
	Pooled (2-source) database OAI and MOST	Pooled (4-source) database OAI/MOST/TUFTS/NEBH	P1	F1	P2 ++	F2 ++
Treatment (1=TKR, 0=control)	(50% -matched set)	(50% -matched set)	Yes	Yes	Yes	Yes
Gender (1=male, 0=female)	39% male	42% male	no	Yes	no	Yes
Age (in years)	53 to 79	51 to 79 (min-max: 40 to 88)	(dichot)	Yes	Yes	Yes
SF-12 mental component [base]	37 to 67 (high is good)	34 to 66	no	Yes	Yes	Yes
SF-12 physical component [base]	24 to 53 (high is good)	23 to 53	no	Yes	Yes	Yes
WOMAC [base] contralat knee pain (100 pt. scale)	0 (no pain) to 51	not available	Yes	Yes	no	no
Body mass index [base], kg/m ²	22 to 41	23 to 41	Yes	Yes	no	Yes
WOMAC knee pain (base)	5 to 70 (high is bad)	10 to 80	Yes	no	Yes	no
Homunculus, % sites with symptom	0% (no sites with pain) to 53%	not available	Yes	no	no	no
Hip Pain (1=yes, 0=no)*	56%	48%	Yes	no	no	no
Less than 60 years old (1=yes,0=no)	21%	27%	Yes	no	no	no
Charlson comorbidity score >=1 (1=yes, 0=no)	32%	31%	no	no	no	Yes
* OAI definition: Right or Left hip pain, aching or stiffness: any, past 12 months (includes pain in groin and in front and sides of upper thigh)						
*Variables in gray were used in P1 and/or F1 but were NOT used in P2/F2 models						
++ Model used for interface						