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Appendix 1: Responder and non responder characteristics

	All (n=1124)	Incomplete data, not included (n=279)	Analytic Sample (n=845)
Age, mean (SD)	65 (10)	63 (11)	65 (9)
Sex*: female, n (%)	645 (57%)	154 (55%)	491 (58%)
Race/ethnicity: Non Hispanic White, n (%)	1003 (89%)	220 (79%)	783 (93%)
Joint: knee, n (%)	757 (67%)	195 (70%)	562 (67%)
Literacy* ^m : High, n (%)	963 (86%)	220 (79%)	743 (88%)
Education*: college degree or more, n (%)	605 (54%)	57 (20%)	548 (65%)
Missing	175 (16%)	163 (58%)	12 (1%)
Insurance*:			
Commercial	401 (36%)	103 (37%)	298 (35%)
Medicaid/Dual eligible	115 (10%)	45 (16%)	70 (4%)
Medicare	321 (29%)	77 (28%)	244 (29%)
Missing	287 (26%)	54 (19%)	233 (28%)
BMI, mean (SD)	30.4 (76.5)	310.8 (76.8)	3029.9 (6.4)
Charlson Co- morbidity Index=0, n (%)	826 (73%)	207 (74%)	619 (73%)
Baseline EQ-5D*, mean (SD)	0.64 (0.20)	0.60 (0.22)	0.65 (0.19)
Decision aid delivery paper (vs online), n (%)	892 (79%)	228 (82%)	664 (79%)
Location*, n (%)			
Site 1	226 (20%)	58 (21%)	168 (20%)
Site 2	287 (26%)	54 (19%)	233 (28%)

	All (n=1124)	Incomplete data, not included (n=279)	Analytic Sample (n=845)
Site 3	611 (54%)	167 (60%)	444 (54%)
Decision aid use=all* ^m , n (%)	700 (62%)	115 (41%)	585 (69%)

Table legend: ^mmissing Race/ethnicity: n=46; literacy n=14; Charlson n=6; decision aid use n=14

*p<0.05 for responder (analytic sample) vs. non responders (not included)

Appendix 2: Full model results for each of the main outcomes for the entire sample and stratified by joint.

A2.1 Model results for overall quality of life (EQ-5D)

	Overall (n=804)			Hip (n=271)			Knee (n=553)		
	Estimate	SE	P value	Estimate	SE	P value	Estimate	SE	P value
Baseline EQ-5D	0.340	0.038	<0.0001	0.371	0.077	<0.0001	0.321	0.035	<0.0001
IPC Decisions	0.041	0.012	0.0019	0.014	0.026	0.58	0.053	0.011	<0.0001
Treatment: Surgery	0.140	0.016	<0.0001	0.178	0.034	<0.0001	0.122	0.016	<0.0001
Sex: Female	0.013	0.012	0.29	-0.010	0.019	0.59	0.024	0.011	0.035
Age 10yr increments	-0.004	0.009	0.63	-0.011	0.012	0.34	0.001	0.010	0.92
Education: =college or post graduate degree	0.022	0.011	0.052	0.022	0.017	0.21	0.022	0.011	0.053
Clinical Site:									
Site 1	0.008	0.008	0.29	0.022	0.014	0.11	0.000	0.007	0.98
Site 2	0.016	0.007	0.034	0.043	0.011	0.0001	0.000	0.007	0.95
Joint: Hip	0.014	0.009	0.11	.	.	.	.	.	.

SE=standard error; IPC=informed, patient centered

A2.2 Model results for Harris Hip Score and KOOS Symptom Score

	Hip (n=277)			Knee (n=553)		
	Estimate	SE	P value	Estimate	SE	P value
Baseline Harris Hip/ KOOS	0.472	0.067	<0.0001	0.394	0.054	<0.0001
IPC Decisions	1.120	2.371	0.64	5.285	1.489	0.0004
Treatment: Surgery	23.887	2.783	<0.0001	18.050	2.360	<0.0001
Sex: Female	-1.822	0.659	0.006	3.910	0.568	<0.0001
Age 10yr increments	-1.648	0.776	0.034	3.137	0.740	<0.0001
Education: <u>≥college or post graduate degree</u>	2.825	1.538	0.0766	1.315	1.456	0.37
Clinical Site:						
Site 1	1.612	0.912	0.0877	-0.895	0.602	0.14
Site 2	2.285	0.625	0.0003	0.011	0.547	0.98

Table legend: SE=standard error; IPC=informed, patient centered

A2.3 Model results for satisfaction with how treatment turned out

	Overall (n=814)		Hip (n=275)		Knee (n=539)	
	Estimate [LCL, UCL]	P value	Estimate [LCL, UCL]	P value	Estimate [LCL, UCL]	P value
Baseline EQ-5D	1.02 [0.43, 2.46]	0.96	6.04 [1.27, 28.69]	0.02	0.46 [0.15, 1.40]	0.17
IPC Decisions	1.56 [0.84, 2.88]	0.16	0.65 [0.19, 2.20]	0.49	2.14 [1.32, 3.47]	0.002
Treatment: Surgery	12.70 [8.20, 19.6]	<0.0001	40.50 [15.96, 102.80]	<0.0001	8.95 [5.18, 15.46]	<0.0001
Sex: Female	1.04 [0.81, 1.34]	0.77	0.73 [0.46, 1.17]	0.19	1.15 [0.88, 1.51]	0.31
Age 10yr increments	1.24 [1.03, 1.50]	0.03	1.14 [1.00, 1.29]	0.04	1.35 [1.06, 1.72]	0.02
Education: ≥college or postgraduate degree	1.24 [0.88, 1.76]	0.22	1.24 [0.85, 1.81]	0.26	1.23 [0.77, 1.95]	0.39
Clinical Site:						
Site 1	0.85 [0.74, 0.98]	0.03	0.85 [0.58, 1.26]	0.43	0.85 [0.67, 1.09]	0.21
Site 2	0.89 [0.70, 1.12]	0.30	1.57 [0.82, 3.03]	0.17	0.72 [0.45, 1.14]	0.16
Joint:Hip	2.09 [1.38, 3.16]	0.0005	.	.	.	.

Table legend: UCL=upper confidence level; LCL=lower confidence level; IPC=Informed, patient centered

A2.3 Model results for satisfaction with pain relief

	Overall (n=836)		Hip (n=279)		Knee (n=557)	
	Estimate	P value	Estimate	P value	Estimate	P value
Baseline EQ-5D	1.17 [0.40, 3.47]	0.77	2.08 [0.37, 11.89]	0.41	0.82 [0.32, 2.12]	0.69
IPC Decisions	1.39 [0.97, 1.98]	0.07	0.85 [0.51, 1.41]	0.52	1.68 [1.19, 2.36]	0.003
Treatment: Surgery	24.80 [16.80, 36.61]	<0.0001	38.75 [14.62, 102.70]	<0.0001	21.80 [13.01, 36.52]	<0.0001
Sex: Female	1.52 [0.99, 2.33]	0.05	1.42 [0.78, 2.59]	0.25	1.56 [1.06, 2.30]	0.02
Age 10yr increments	1.05 [0.80, 1.37]	0.74	0.99 [0.72, 1.37]	0.96	1.12 [0.86, 1.46]	0.41
Education: <u>≥college or post</u> <u>graduate degree</u>	1.41 [1.02, 1.96]	0.04	2.49 [1.72, 3.60]	<0.0001	1.13 [0.76, 1.68]	0.56
Clinical Site:						
Site 1	0.98 [0.85, 1.13]	0.80	1.10 [0.60, 2.02]	0.75	0.97 [0.79, 1.20]	0.79
Site 2	1.02 [0.84, 1.24]	0.87	1.71 [0.99, 2.96]	0.05	0.81 [0.64, 1.01]	0.07
Joint:Hip	1.39 [1.02, 1.89]	0.049	.	.	.	.

Table legend: UCL=upper confidence level; LCL=lower confidence level; IPC=Informed, patient centered

A2.5 Model results for decision regret (predicting no regret)

	Overall (n=836)		Hip (n=260)		Knee (n=518)	
	Estimate	P value	Estimate	P value	Estimate	P value
Baseline EQ-5D	0.45 [0.14, 1.44]	0.18	1.21 [0.21, 6.97]	0.83	0.24 [0.10, 0.58]	0.001
IPC Decisions	1.29 [0.81, 2.04]	0.29	0.29 [0.12, 0.73]	0.008	2.35 [1.34, 4.14]	0.003
Treatment: Surgery	6.02 [4.40, 8.25]	<0.0001	24.15 [4.70, 124.16]	<0.0001	3.92 [2.70, 5.70]	<0.0001
Sex: Female	1.25 [0.88, 1.78]	0.21	0.93 [0.54, 1.60]	0.80	1.48 [1.00, 2.20]	0.05
Age 10yr increments	0.99 [0.84, 1.17]	0.90	0.89 [0.72, 1.37]	0.96	1.05 [0.82, 1.35]	0.68
Education: →=college or post graduate degree	1.26 [0.91, 1.75]	0.17	0.89 [0.64, 1.24]	0.48	1.50 [0.94, 2.40]	0.09
Clinical Site:						
Site 1	0.76 [0.63, 0.90]	0.002	1.14 [0.67, 1.93]	0.63	0.60 [0.50, 0.73]	<0.0001
Site 2	0.75 [0.51, 1.12]	0.16	1.59 [0.91, 2.77]	0.10	0.52 [0.33, 0.81]	0.004
Joint:Hip	1.49 [1.01, 2.20]	0.04	.	.	.	.

Table legend: UCL=upper confidence level; LCL=lower confidence level; IPC=Informed, patient centered