Appendix Table A1: Significant Odds of Having Lower PROM Score for Explanatory and Co-Variates in Model (IKDC and KOOS PROMs)[a]

				KOOS				
Patient Demographics	Comparison	Reference Category	IKDC (n = 937)	Symptoms (n = 937)	Pain (n = 935)	ADL (n = 937)	Sports/Rec (n = 911)	QoL (n = 940)
Two-year sport participation[b]	Multiple sports vs No sport	Multiple sports	3.73 (2.64-5.28) *P* < .0001	2.25 (1.62-3.15) *P* < .0001	2.28 (1.62-3.19) *P* < .0001	2.39 (1.67-3.41) *P* < 0.0001	2.31 (1.60-3.35) *P* < .0001	3.29 (2.31-4.67) *P* < .0001
	Single sport vs No sport	Single sport	2.41 (1.62-3.58) *P* < .0001	1.77 (1.18-2.64) *P* = .005	1.94 (1.32-2.87) *P* = .001	1.98 (1.34-2.94) *P* = .001	1.79 (1.19-2.70) *P* = .006	2.70 (1.81-4.03) *P* < .0001
Baseline sport participation[b]	Multiple sports vs Single sport	Multiple sports					0.61 (0.43-0.86) *P* = 0.005	
Baseline outcome score	Continuous variable		1.04 (1.04-1.05) *P* < .0001	1.04 (1.04-1.05) *P* < .0001	1.05 (1.04-1.06) *P* < .0001	1.05 (1.04-1.06) *P* < .0001	1.03 (1.02-1.03) *P* < .0001	1.03 (1.02-1.04) *P* < .0001
Baseline activity score (MARX activity scale)	Continuous variable		1.04 (1.02-1.08) *P* = .001				1.03 (1.01-1.06) *P* = .021	1.03 (1.01-1.06) *P* = .019
Sex	Female vs Male	Male	1.44 (1.11-1.87) *P* = .006					
BMI	Continuous variable		0.96 (0.92-0.99) *P* = .012			0.96 (0.93-1.00) *P* = .027		
Time since last ACLR, y	Continuous variable		1.05 (1.02-1.08) *P* = .001	1.07 (1.04-1.09) *P* < .0001	1.06 (1.3-1.09) *P* < .0001	1.06 (1.03-1.10) *P* < .0001	1.06 (1.03-1.09) *P* < .0001	
Smoking	Never vs Current	Never Smoker						1.54 (1.03-2.30) *P* = .037
Meniscal Treatment (previous)								
Medial	No tear vs excised	No tear		1.32 (1.01-1.75) *P* = .046	1.39 (1.03-1.87) *P* = .030			
Lateral	No tear vs excised	No tear	1.50 (1.03-2.20) *P* = .036	1.81 (1.27-2.59) *P* = .001	1.52 (1.07-2.17) *P* = .020		1.48 (1.02-2.15) *P* = .041	1.79 (1.24-2.59) *P* = .002
	No tear vs unstable, not healed repair	No tear	2.17 (1.03-4.55) *P* = .041	2.82 (1.18-6.79) *P* = .021	3.04 (1.33-6.96) *P* = .008	2.60 (1.20-5.62) *P* = .015		2.04 (1.03-4.05) *P* = .042

				KOOS				
	Comparison	Reference Category	IKDC (n = 937)	Symptoms (n = 937)	Pain (n = 935)	ADL (n = 937)	Sports/Rec (n = 911)	QoL (n = 940)
Articular cartilage injury (current)								
Lateral femoral condyle	**Normal/G1 vs Injury/G2-G4[c]**	**Injury/G2-G4**				**1.36 (1.01-1.84) *P* = .045**		
Trochlear	Normal/G1 vs Injury/G2-G4[c]	Normal/G1	1.41 (1.02-1.97) *P* = .038		1.47 (1.03-2.12) *P* = .035	1.83 (1.32-2.56) *P* < .0001	1.45 (1.04-2.03) *P* = .029	

Significant Odds of Having Lower PROM Score for Explanatory and Co-Variates in Model (MARX and WOMAC PROMs)[a]

				WOMAC		
Patient Demographics	Comparison	Reference Category	MARX (n = 940)	Stiffness (n = 937)	Pain (n = 935)	ADL (n = 937)
Two-year sport participation[b]	Multiple sports vs No sport	Multiple sports	5.68 (3.93-8.21) *P* < .0001	2.00 (1.39-2.89) *P* < .0001	1.99 (1.37-2.87) *P* < .0001	2.39 (1.68-3.41) *P* < .0001
	Single sport vs No sport	Single sport	3.77 (2.48-5.75) *P* < .0001		1.84 (1.22-2.80) *P* = .004	1.98 (1.34-2.94) *P* = .001
	Multiple sports vs Single Sport	Multiple sports	1.51 (1.07-2.11) *P* = .018	1.48 (1.07-2.06) *P* = .019		
Baseline sport participation[b]	Multiple sports vs Single sport	Multiple sports	0.61 (0.43-0.87) *P* = .006			
	Single sport vs No sport	Single Sport	2.02 (1.21-3.37) *P* =.007			
Baseline outcome score	Continuous variable		1.12 (1.10-1.15) *P* < .0001	1.04 (1.03-1.05) *P* < .0001	1.05 (1.04-1.06) *P* < .0001	1.05 (1.04-1.06) *P* < 0.001
Sex	Female vs male	Male	1.72 (1.32-2.24) *P* < .0001			
BMI	Continuous					0.96

	variable					(0.93-1.00) *P* = .024
Time since last ACLR, y	Continuous variable			1.06 (1.03-1.09) *P* < .0001	1.05 (1.02-1.08) *P* = .001	1.06 (1.03-1.10) *P* < .0001
Meniscal Treatment (previous)						
Medial	No tear vs excised	No tear		1.44 (1.08-1.93) *P* = .014		
	No tear vs stable, healed repair[c]	**Stable, healed repair**	**2.51 (1.20-5.25) *P* = .015**			
Lateral	No tear vs excised	No tear		1.50 (1.04-2.15) *P* = .029	1.45 (1.01-2.09) *P* = .047	
	No tear vs unstable, not healed repair	No tear		2.83 (1.19-6.70) *P* = .018	3.53 (1.22-10.27) *P* = .020	2.60 (1.20-5.62) *P* = .015

				WOMAC		
	Comparison	Reference Category	MARX (n = 940)	Symptoms (n = 937)	Pain (n = 935)	ADL (n = 937)
Meniscal injury (at time of revision)						
Lateral	**No tear vs Tear[c]**	**Tear**			**1.32 (1.01-1.74) *P* = .042**	
Articular cartilage injury (at time of revision)						
Lateral femoral condyle	**Normal/G1 vs Injury/G2-G4**	**Injury/G2-G4**				**1.36 (1.01-1.84) *P* = .045**

[a]Results are expressed as odd ratio and their 95% CIs. Nonsignificant findings are expressed as empty cells if the listed variable in the left (first) column did not have a significant impact on the patient reported outcome measure (top row). ACLR, Anterior cruciate ligament reconstruction; ADL, Activities of Daily Living; BMI, Body Mass Index; IKDC, International Knee Documentation Committee Subjective Form; KOOS, Knee Injury and Osteoarthritis Outcome Score; PROMs, Patient Reported Outcome Measures; QoL, quality of life; Sports/Rec, Sports & Recreation subscale; T_0, Time of revision (enrollment); WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index.

[b]No sport participation were individuals who reported no primary or secondary sport participation, single sport participation were individuals who only reported a single sport participation, Multi-sport participation were individuals who reported more than one sport or other sport in their primary and secondary sport participation.

[c]Variables were treated as binary as normal/grade one articular cartilage injury or grade two through four articular cartilage injury as identified by the orthopedic surgeon during revision surgery. Bolded variables and values represent results that were opposite to the initial hypothesis.