

**Table 1.** Sensitivity analysis of meta-analytic findings with the exclusion of studies with high risk of bias

Risk factor	All studies		High risk of bias studies excluded		Findings with exclusion of studies
	Studies (n)	OR (95% CI)	Studies (n)	OR (95% CI)	
Age ≥ 18 vs. < 18	7	3.03 (1.74 – 5.27)	4	2.15 (1.43 – 3.24)	No changes
Age ≥ 20 vs. < 20	5	3.53 (2.29 – 5.45)	4	3.21 (2.14 – 4.82)	No changes
Age ≥ 25 vs. < 25	5	2.86 (1.97 – 4.16)	2	2.76 (1.54 – 4.94)	No changes
Age ≥ 30 vs. < 30	3	2.59 (1.51 – 4.44)	2	3.32 (1.57 – 7.01)	No changes
Age continuous	26	0.47 (0.38 – 0.59)	21	0.46 (0.36 – 0.59)	No changes
Sex	73	0.88 (0.79 – 0.98)	52	0.87 (0.77 – 0.99)	No changes
Marx score at primary injury	2	1.65 (0.53 – 5.16)	No studies removed	NA	No changes
Tegner score at primary injury (continuous)	8	2.29 (1.48 – 3.55)	No studies removed	NA	No changes
Tegner score at primary injury ≥7 vs. < 7	3	3.91 (1.69 – 9.01)	No studies removed	NA	No changes
Lateral tibial slope	8	2.21 (1.26 – 3.86)	7	2.27 (1.20 – 4.28)	No changes
Medial tibial slope	8	1.31 (0.76 – 2.24)	6	1.11 (0.47 – 2.61)	No changes
Femoral condyle ratio	2	1.19 (0.65 – 2.19)	No studies removed	NA	No changes
Duration between injury and surgery ≥ 12 vs. < 12 months	2	1.87 (1.58 – 2.22)	No studies removed	NA	No changes
Duration between injury and surgery ≥ 6 vs. < 6 months	2	1.57 (0.58 – 3.74)	NA	NA	Insufficient studies retained to perform meta-analyses
Duration between injury and surgery ≥ 3 vs. < 3 months	2	1.40 (0.29 – 6.79)	No studies removed	NA	No changes
Return to pre-injury activity level	11	1.87 (1.21 – 2.91)	8	1.85 (1.12 – 3.07)	No changes
Family history of ACL injury	11	1.76 (1.34 – 2.31)	7	1.99 (1.50 – 2.65)	No changes

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KOOS ADL	2	0.89 (0.39 – 2.02)	No studies removed	NA	No changes
KOOS pain	2	0.95 (0.80 – 1.12)	No studies removed	NA	No changes
KOOS QoL	2	1.01 (0.85 – 0.19)	No studies removed	NA	No changes
KOOS sport/recreation	2	0.96 (0.81 – 1.13)	No studies removed	NA	No changes
KOOS symptom	2	0.81 (0.69 – 0.95)	No studies removed	NA	No changes
Psychological readiness to RTS	2	2.18 (1.32 – 2.61)	NA	NA	Insufficient studies retained to perform meta-analyses
Concomitant cartilage injury	9	0.70 (0.62 – 0.79)	No studies removed	NA	No changes
Concomitant meniscal tear	10	1.07 (0.94 – 1.22)	No studies removed	NA	No changes
Concomitant meniscal repair	4	1.00 (0.60 – 1.66)	No studies removed	NA	No changes
Concomitant Meniscectomy	9	1.16 (0.93 – 1.46)	8	1.16 (0.92 – 1.46)	No changes
Concomitant MCL injury	2	0.99 – (0.70 – 1.41)	No studies removed	NA	No changes
BMI ≥ 25 vs. < 25	3	1.22 (0.48 – 3.11)	2	0.70 (0.56 – 0.89)	BMI ≥ 25 associated with lower odds of graft rupture
BMI (continuous)	12	0.87 (0.73 – 1.03)	11	0.85 (0.69 – 1.06)	No changes
Smoking status	5	0.77 (0.45 – 1.31)	No studies removed	NA	No changes
Contact vs non-contact mechanism of primary injury	4	1.70 (0.75 – 3.87)	2	2.12 (0.80 – 5.59)	No changes
General joint laxity	2	3.20 (0.37 – 27.93)	NA	NA	Insufficient studies retained to perform meta-analyses
Growth-plate status	2	1.04 (0.44 – 2.48)	No studies removed	NA	No changes

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Number of physical therapy visits	2	1.19 (0.40 – 3.48)	No studies removed	NA	No changes
Timing of RTS ≥ 6 vs. <6 months	2	1.12 (0.68 – 1.83)	NA	NA	Insufficient studies retained to perform meta-analyses
Type of sport (soccer vs other sports)	5	1.32 (0.82 – 2.15)	No studies removed	NA	No changes
Hop performance (SLHD)	4	0.99 (0.65 – 1.50)	2	1.10 (0.38 – 3.18)	No changes
Hop performance (THD)	2	1.15 (0.74 – 1.81)	NA	NA	Insufficient studies retained to perform meta-analyses
Knee abduction	2	0.53 (0.15 – 1.91)	No studies removed	NA	No changes
Q-ceps peak torque	2	1.06 (0.61 – 1.83)	NA	NA	Insufficient studies retained to perform meta-analyses
Hamstring peak torque	2	0.59 (0.34 – 1.02)	NA	NA	Insufficient studies retained to perform meta-analyses

OR = odds ratio, ACL = anterior cruciate ligament, KOOS = Knee injury and Osteoarthritis Outcome Score, ADL = activities of Daily Living, QoL = Quality of Life, RTS = return to sport, MCL = medial collateral ligament, BMI = body mass index, SLHD = single-leg hop for distance, THD = triple hop for distance, NA = not applicable