

**Supplementary Material A1** The search strategy for PubMed

#1 ("Anterior Cruciate Ligament Reconstruction"[Mesh]) OR (Anterior Cruciate Ligament Reconstruction[Title/Abstract])

#2 ("Infections"[Mesh]) OR ((Infection[Title/Abstract]) OR (Septic Arthritis[Title/Abstract]))

#3 ("Risk Factors"[Mesh]) OR (((((Risk Factor[Title/Abstract]) OR (factor[Title/Abstract])) OR (factors[Title/Abstract])) OR (predictors[Title/Abstract])) OR (predictor[Title/Abstract]))

#1 AND #2 AND #3

**Supplementary Material A2** Quality appraisal of included studies

Quality appraisal	Reporting							External validity	Internal validity- Bias				Internal validity- confounding (selection bias)				Po wer	The sum of each item (Summary score) <sup>a</sup>
	1	2	3	5	6	7	10		11	12	15	16	18	20	21	22		
Abram 2019	1	1	1	1	1	1	0	1	0	0	1	1	2	1	1	1	1	15 (79)
Barker 2010	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1	0	0	12 (63)
Bohu 2019	1	1	1	2	1	1	1	1	0	0	1	1	2	1	1	1	0	16 (84)
Brophy 2015	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	0	15 (79)
Brophy 2021	1	1	1	0	1	1	1	1	0	0	0	0	1	1	1	0	0	10 (53)
Cancienne 2016	1	1	1	2	1	1	1	1	0	0	1	1	2	1	1	1	1	17 (89)
Greenberg 2010	1	1	1	0	1	1	0	1	0	0	1	0	1	1	1	0	0	10 (53)
Gupta 2018	1	1	1	2	1	1	1	1	0	0	1	1	2	1	1	1	0	16 (84)
Hurvitz 2020	1	1	1	1	1	1	1	1	0	0	1	1	2	1	1	1	0	15 (79)
Judd 2006	1	1	1	1	1	1	0	1	0	0	1	0	1	1	1	0	0	11 (58)
Katz 2008	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	0	15 (79)
Kawata 2018	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	1	16 (84)
Kraus 2021	1	1	1	2	1	1	1	1	0	0	1	1	2	1	1	1	1	17 (89)
Krutsch 2017	1	1	1	0	1	1	1	1	0	0	1	1	2	1	1	0	0	13 (68)
Leroux 2014	1	1	1	0	1	1	1	1	0	0	1	1	1	1	1	1	0	13 (68)
Maletis 2013	1	1	1	1	1	1	1	1	0	0	1	1	2	1	1	1	1	16 (84)
Marom 2022	1	1	1	2	1	1	1	1	0	0	1	1	1	1	1	1	1	16 (84)
Murphy 2016	1	1	1	2	1	1	1	1	0	0	0	1	1	1	1	1	1	15 (79)
RISTIĆ 2014	1	1	1	0	1	0	0	1	0	0	0	1	0	1	1	0	0	8 (42)
Roecker 2021	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	15 (79)
Sonnery-Cottet 2011	1	1	0	0	1	1	1	1	0	0	1	1	1	1	1	1	0	12 (63)
Sonnery-Cottet 2019	1	1	1	2	1	1	1	1	0	0	0	1	1	1	1	1	0	14 (74)
Westermann 2017	1	1	1	2	1	1	1	1	0	1	1	1	1	1	1	1	0	16 (84)

<sup>a</sup>The checklist comprised a maximum score of 19 points. A summary score (the sum of each item divided by the total score) ranging

from 0 to 100.

### Supplementary Material A3 Quality modified checklist from Downs and Black

	ITEM	Yes	Unable to determine/No
1	Is the hypothesis/aim/objective of the study clearly described?		
2	Are the main outcomes to be measured clearly described in the Introduction or Methods sections?		
3	Are the characteristics of the subjects included in the study clearly described?		
5	Are the distributions of principle confounders in each group of subjects to be compared clearly described?	partially	
6	Are the main findings of the study clearly described?		
7	Does the study provide estimates of the random variability in the data for the main outcome?		
10	Have actual probability values been reported (e.g. 0.035 rather than		
11	Were the subjects asked to participate in the study representative to the entire population from which they were recruited?		
12	Were those subjects who were prepared to participate representative of the entire population from which they were recruited?		
15	Was an attempt made to blind those measuring the main outcome?		
16	If any of the results was based on “data dredging”, was this made clear?		
18	Were the statistical tests used to assess the main outcomes appropriate?		
20	Were the main outcome measures used accurate (valid and reliable)?	Accuracy not reported but method clearly described	
21	Were the subjects (e.g. the two groups to be compared) recruited from the same population?		
22	Were the study subjects (the two groups to be compared) recruited over the same period of time?		
25	Were there adequate adjustments for confounding in the analyses from which the main findings		

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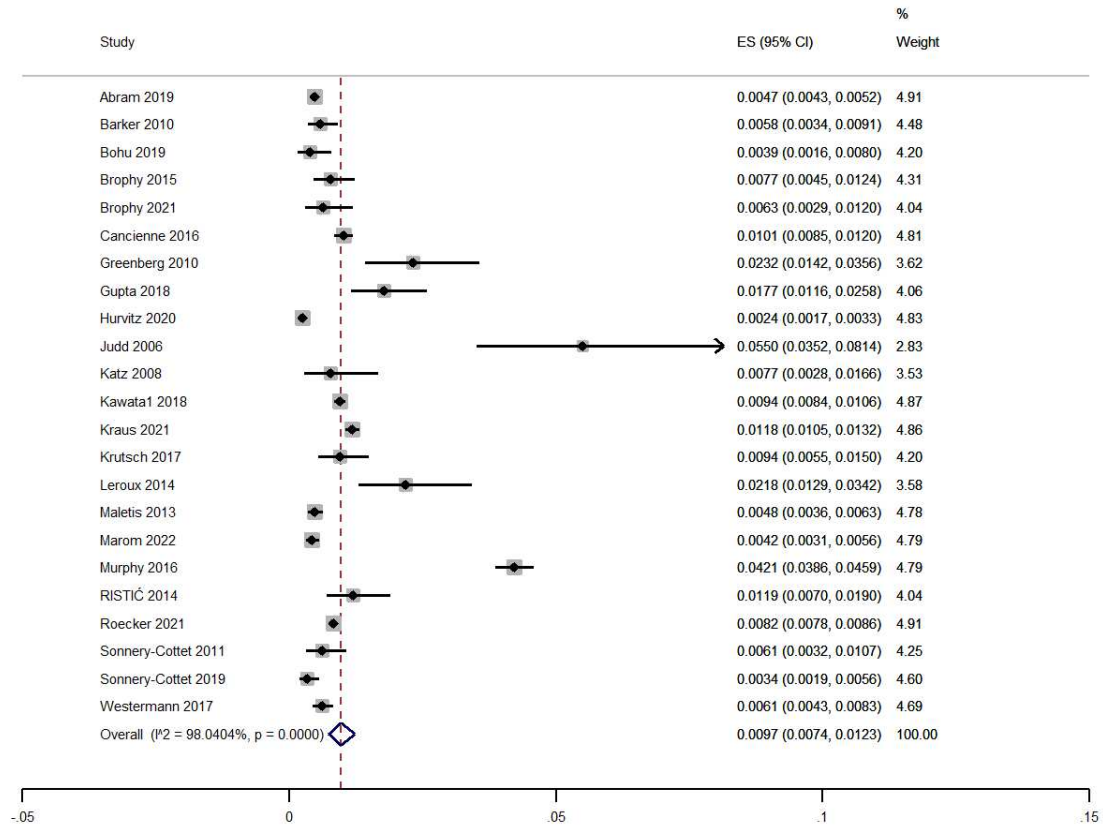
were drawn?

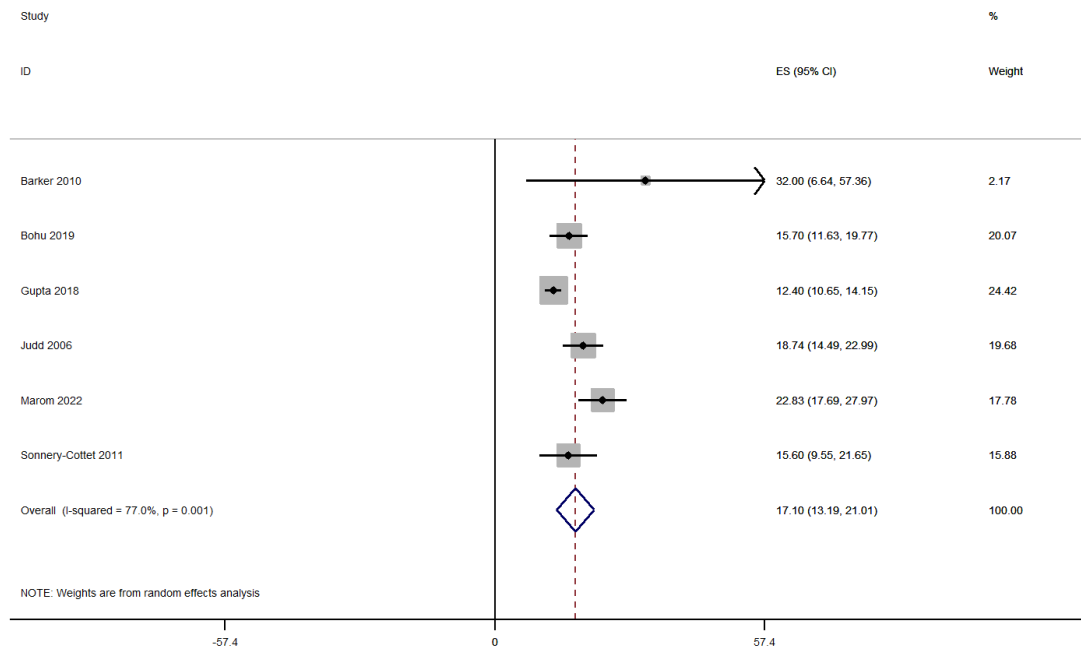
- 27 Did the study have sufficient power to detect a clinically important effect?

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Note: Every question was given 1 point for “yes” and zero points for “unable to determine” and “no” except for item 5 and 20. Item 5 was given 2 points for “yes”, 1 point for “partially” and zero points for “unable to determine” and “no”. Item 20 was given 2 points for “yes”, 1 point for “Accuracy not reported but method clearly described” and zero points for “unable to determine” and “no”.

### Supplementary Material A4 Incidence rate of surgical site infections after anterior cruciate ligament reconstruction



**Supplementary Material A5** The mean time from surgery to the onset of surgical site infection symptoms after anterior cruciate ligament reconstruction

**Supplementary Material A6** Subgroup analysis of deep surgical site infections after anterior cruciate ligament reconstruction

Potential risk factors	Studies included	OR/WMD	95% CI	P value	I-squared
Sex (males vs. females)	9	1.93	1.61-2.31	<0.00001 <sup>a</sup>	9%
Age	7	-0.34 <sup>b</sup>	-2.18-1.49	0.71	48%
Obesity	2	1.99	0.72-5.47	0.18	76%
Tobacco user	5	1.22	0.85-1.76	0.28	0%
Diabetes mellitus	6	4.54	1.27-16.32	0.02 <sup>a</sup>	65%
Previous knee surgery history	3	5.13	1.23-21.29	0.02 <sup>a</sup>	76%
Professional athletes	5	4.56	1.30-15.96	0.02 <sup>a</sup>	74%
Outpatient surgery (vs. inpatient surgery)	3	1.20	0.91-1.59	0.19	0%
Revision surgery (vs. primary surgery)	5	2.05	1.03-4.06	0.04 <sup>a</sup>	60%
Hamstring autograft (vs. BPTB autograft)	9	2.98	2.21- 4.03	<0.00001 <sup>a</sup>	16%
Hamstring autograft (vs. allograft)	3	3.26	1.45-7.35	0.004 <sup>a</sup>	51%
BPTB autograft (vs. allograft)	4	0.43	0.16-1.16	0.10	41%
A concomitant lateral extra-articular tenodesis	3	3.92	1.96-7.84	0.0001 <sup>a</sup>	0%

BPTB, bone–patellar tendon–bone. <sup>a</sup>Statistical significance; <sup>b</sup>WMD value.