

Appendix 1: Search strategies

Update of effects and complications of knee arthroscopy

MEDLINE (Pubmed)

1. (((("Menisci, Tibial/surgery"[MeSH Major Topic]) OR ("Menisci, Tibial/injuries"[MeSH Major Topic]) OR ("Degenerative meniscal tear"[Title/Abstract]) OR ("Arthroscopic lavage"[Title/Abstract]) OR ("Arthroscopic debridement"[Title/Abstract]) OR ("arthroscopic meniscectomy"[Title/Abstract]) OR ((arthroscopy[Title/Abstract]) AND knee[Title/Abstract]))
2. (("Randomized"[Title/Abstract]) OR ("Randomized controlled trial"[Publication Type]) OR ("randomized controlled trials as topic"[MeSH Major Topic]) OR ("Random allocation"[MeSH Major Topic]) OR ("Control group"[Title/Abstract]) OR ("Control groups"[MeSH Terms]) OR ("Cross-over studies"[Title/Abstract]) OR ("Cross-over study"[Title/Abstract]))
3. (((("Menisci, Tibial/surgery"[MeSH Major Topic]) OR ("Menisci, Tibial/injuries"[MeSH Major Topic]) OR ("Degenerative meniscal tear"[Title/Abstract]) OR ("Arthroscopic lavage"[Title/Abstract]) OR ("Arthroscopic debridement"[Title/Abstract]) OR ("arthroscopic meniscectomy"[Title/Abstract]) OR ((arthroscopy[Title/Abstract]) AND knee[Title/Abstract]))
4. (("adverse events"[Title/Abstract]) OR ("side effects"[Title/Abstract]) OR ("adverse effects"[Title/Abstract]) OR (complication*[Title/Abstract]) OR ("adverse effects"[MeSH Subheading])))
5. 1 AND 2
6. 3 AND 4
7. 5 OR 6

EMBASE (Ovid)

1. Arthroscopic meniscectomy.ti,ab,kw.
2. Arthroscopic debridement.ti,ab,kw.
3. Arthroscopic lavage.ti,ab,kw.
4. Degenerative meniscal tear.ti,ab,kw.
5. knee meniscus/ or meniscus tibial.mp.
6. exp knee arthroscopy/
7. 1 or 2 or 3 or 4 or 5 or 6
8. randomized controlled trial/
9. randomized.ti,ab,kw.
10. randomised.ti,ab,kw.
11. Random allocation.mp.

12. randomised.mp.
13. "randomized controlled trial (topic)"/
14. Control group.mp.
15. control group/
16. crossover procedure/
17. 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16
18. adverse events.mp.
19. side effects.mp.
20. adverse effects.mp.
21. complications.mp.
22. 18 or 19 or 20 or 21
23. 7 and 17
24. 7 and 22
25. 23 or 24
26. limit 25 to yr="2014-2016"

Cochrane Central Register of Controlled Trials

- #1 MeSH descriptor: [Menisci, Tibial] explode all trees and with qualifier(s): [Injuries - IN, Surgery - SU]
- #2 MeSH descriptor: [Arthroscopy] explode all trees
- #3 MeSH descriptor: [Knee] explode all trees
- #4 #2 and #3
- #5 Degenerative meniscal tear:ti,ab,kw (Word variations have been searched)
- #6 Arthroscopic lavage:ti,ab,kw (Word variations have been searched)
- #7 Arthroscopic debridement:ti,ab,kw (Word variations have been searched)
- #8 arthroscopic meniscectomy:ti,ab,kw (Word variations have been searched)
- #9 #1 or #4 or #5 or #6 or #7 or #8 Publication Year from 2014 to 2016, in Trials

New search of outcome nerve damage

Medline Pubmed

("Peripheral Nerve Injuries"[Mesh]) AND ("Arthroplasty, Replacement, Knee/adverse effects"[Mesh] OR "knee arthroscopy" OR ("arthroscop*" AND "knee"))

Embase (Ovid)

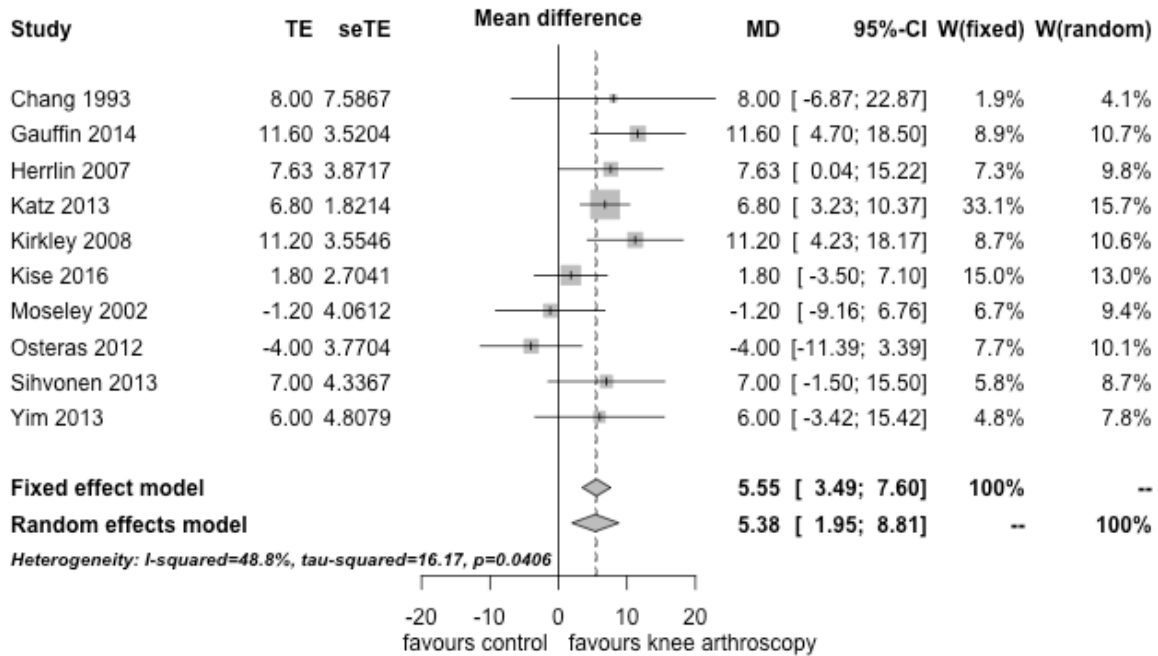
1. exp nerve injury/
2. exp knee arthroscopy/
3. 1 AND 2

Appendix 2: Results of sensitivity analyses to assess the robustness of the difference in the proportion of patients who reach a change higher than the MID

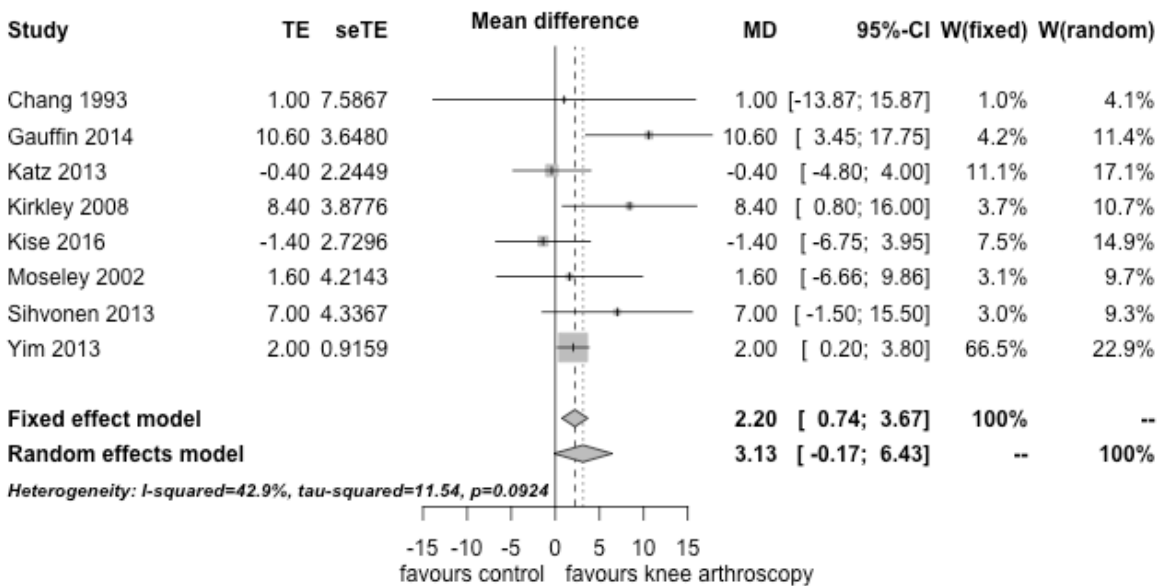
Outcome	MID (range)	Risk difference (95% CI)	Risk difference when using lowest value of the range (95% CI)	Risk difference when using highest value of the range (95% CI)	Risk difference based on the standardized mean difference* (95% CI)
Pain in the short term	KOOS pain ⁵⁸ 12 (4; 20)	12.4% (4.4; 20.4)	10.5% (4.3; 16.7))	11.3% (2.9; 19.7)	9% (1.7; 15.7)
	WOMAC pain ⁶¹ 12 (2; 30)				
Function in the short term	KOOS ADL ⁵⁸ 8 (3; 9)	13.4% (4.4; 22.3)	11.3% (3; 19.5)	11% (2; 19.9)	7.3% (-0.06; 15.1)
	WOMAC function ^{61 62} 13 (3; 34)				

*This method relies on the standardized mean difference. It does not use any specific threshold to calculate the risk difference.

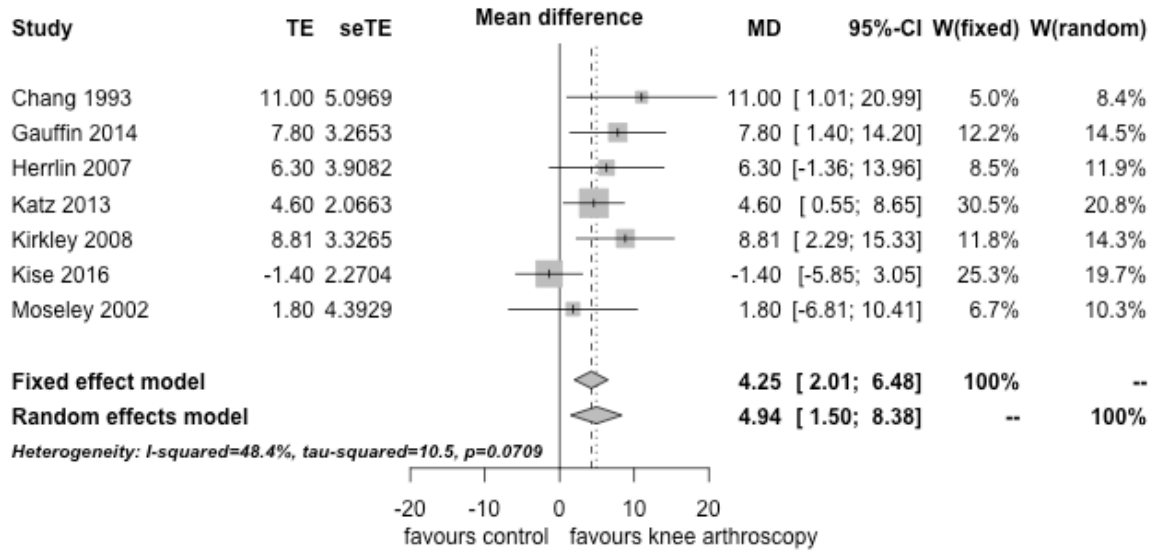
Appendix Figure 1: Meta-analysis of pain in the short-term (difference in change from baseline)



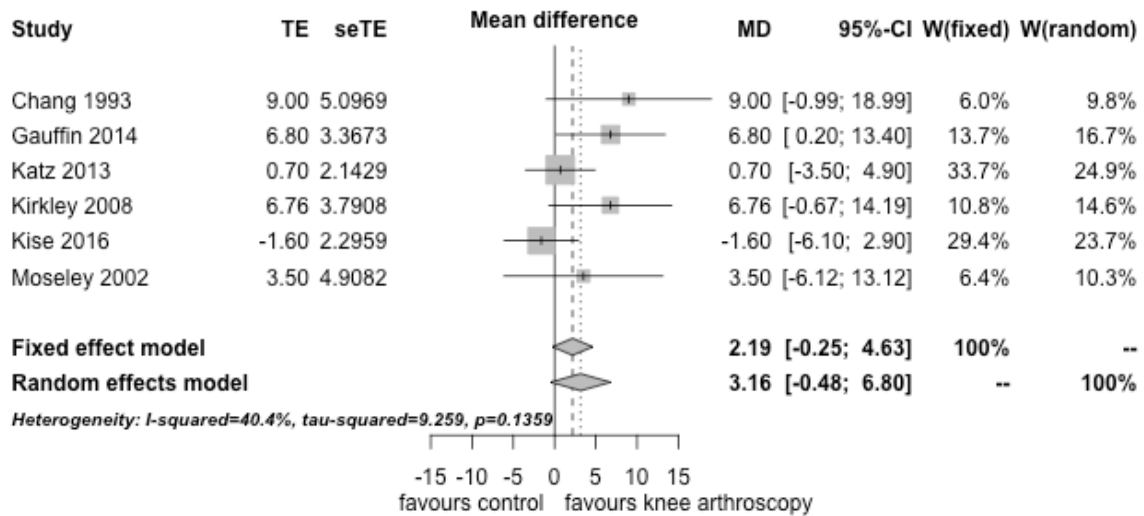
Appendix Figure 2: Meta-analysis of pain in the long-term (difference in change from baseline)



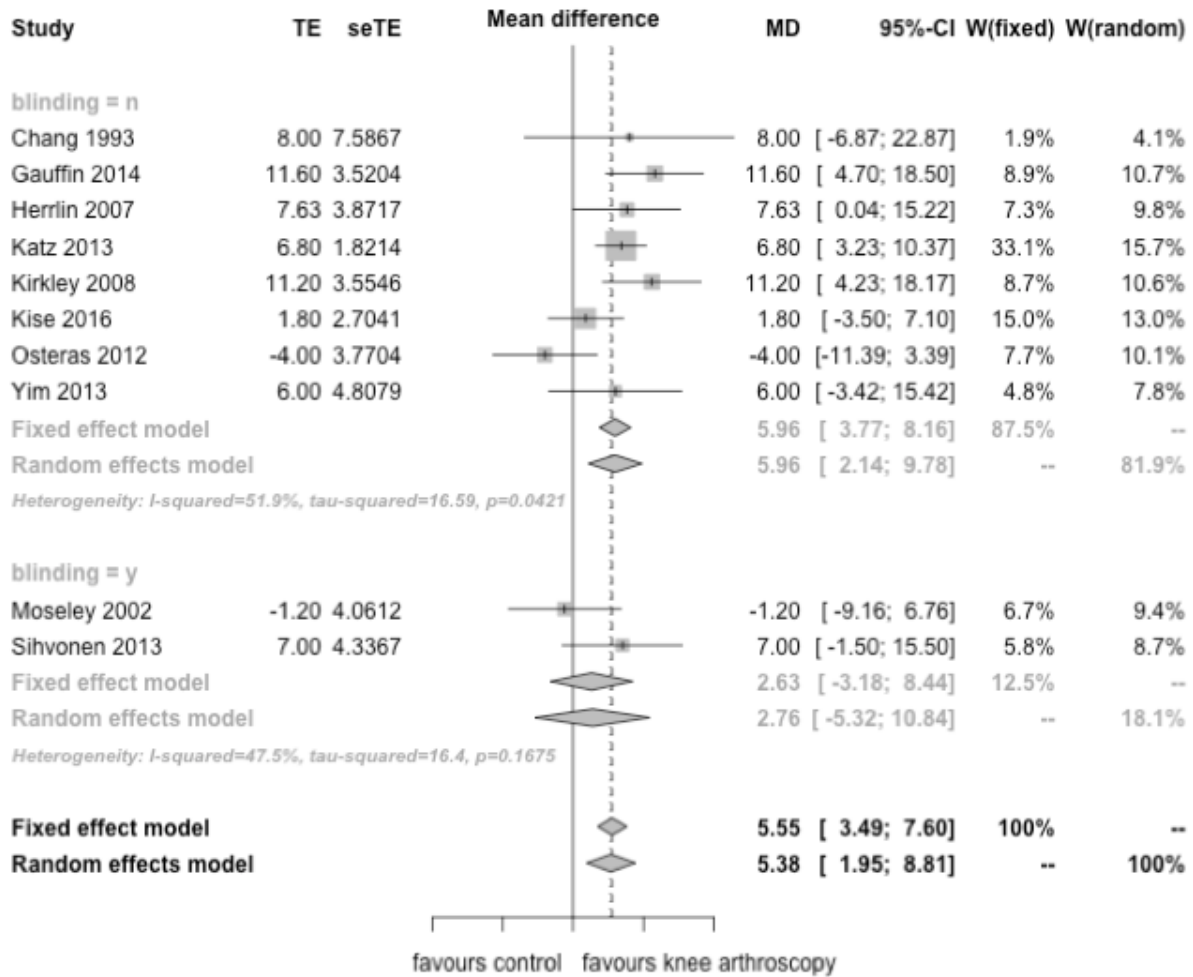
Appendix Figure 3: Meta-analysis of function in the short-term (difference in change from baseline)



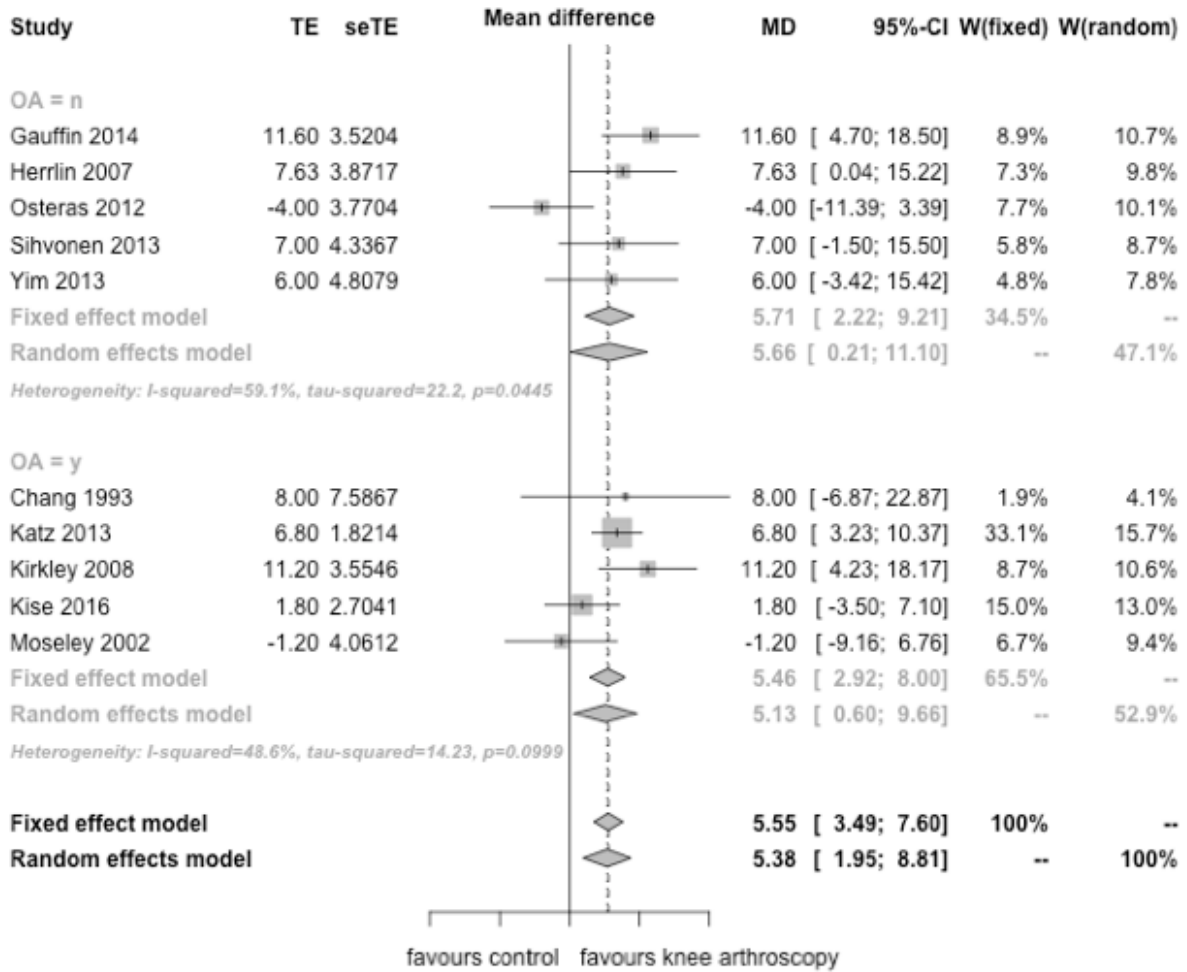
Appendix Figure 4: Meta-analysis of function in the long-term (difference in change from baseline)



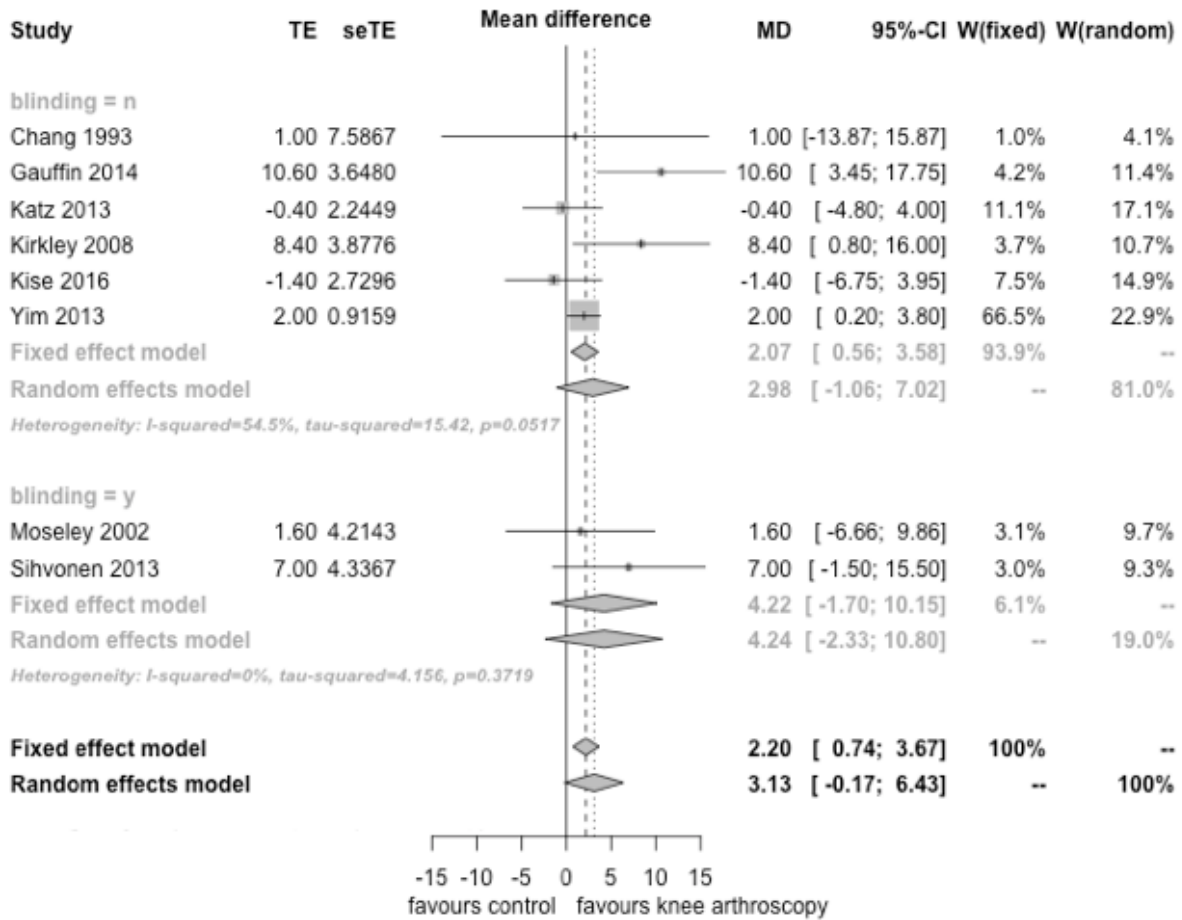
Appendix Figure 5: Subgroup analysis of pain in the short term (difference on change from baseline) according to blinding of the studies. P value of test for subgroup effect= 0.48



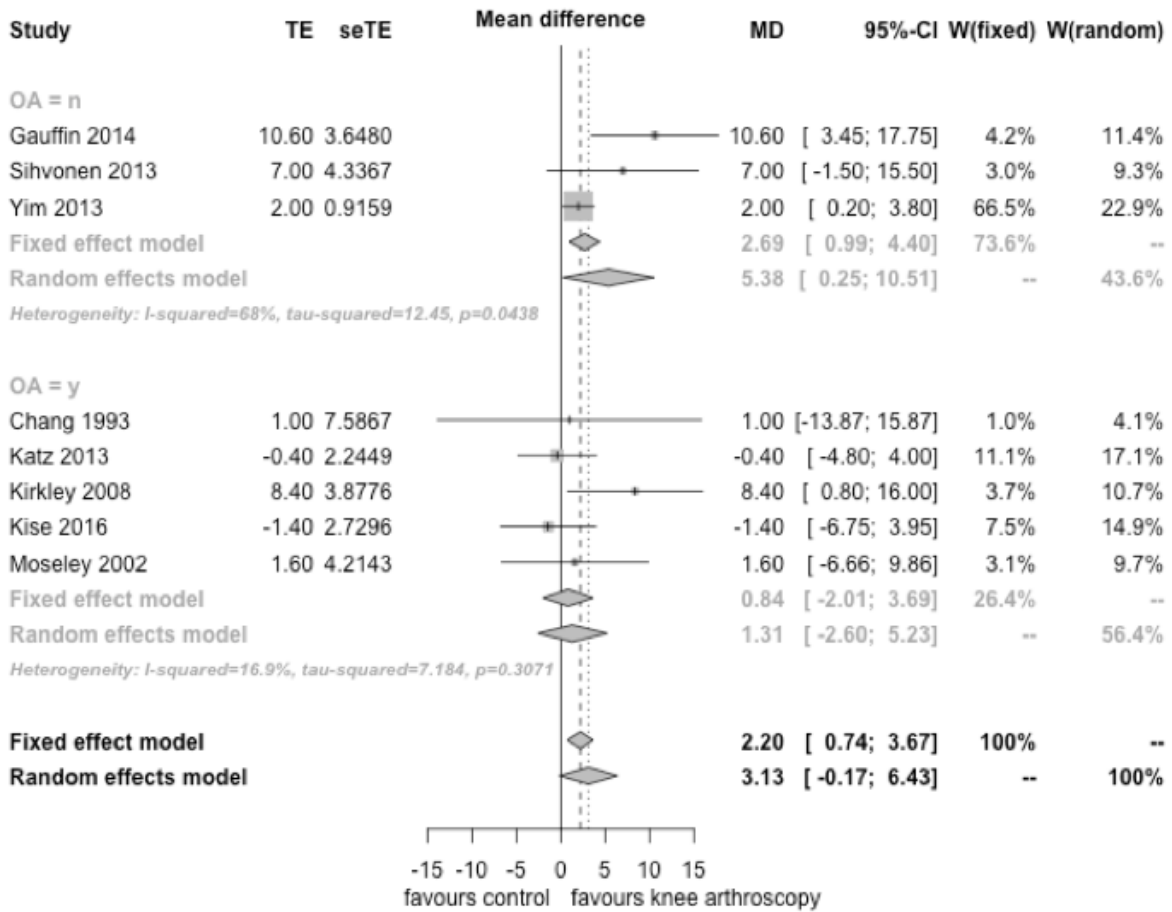
Appendix Figure 6: Subgroup analysis of pain in the short term (difference on change from baseline) according to percentage of patients with radiographic knee osteoarthritis (>50% patients). P value of test for subgroup effect= 0.88



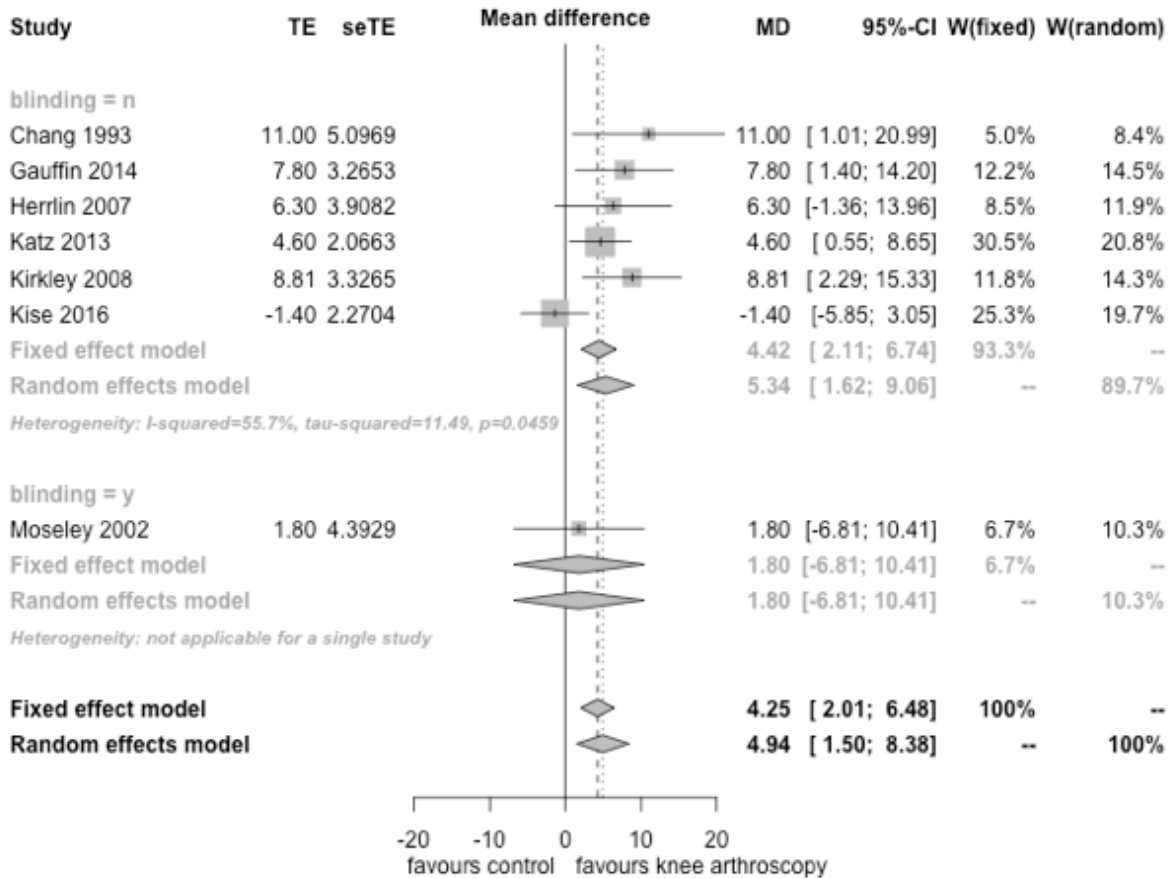
Appendix Figure 7: Subgroup analysis of pain in the long term (difference on change from baseline) according to blinding of the studies. P value of test for subgroup effect= 0.75



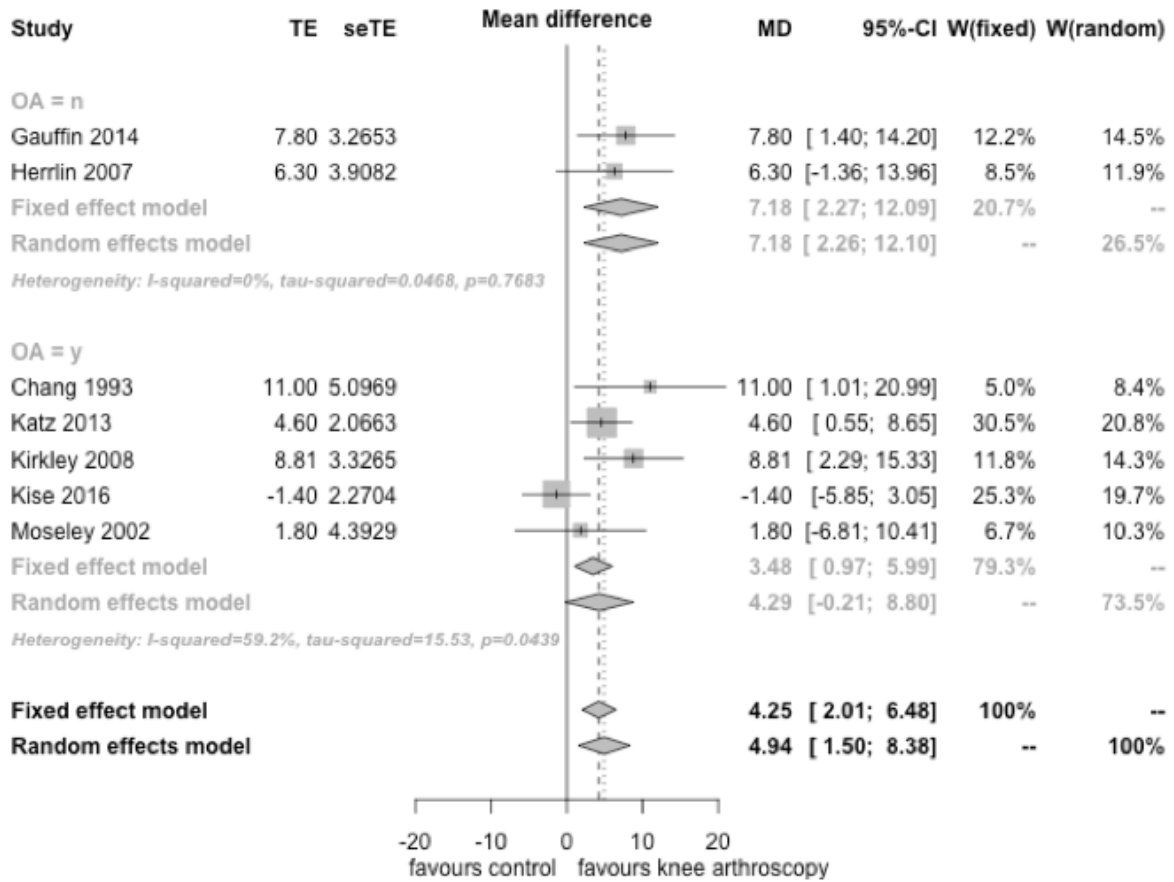
Appendix Figure 8: Subgroup analysis of pain in the long term (difference on change from baseline) according to percentage of patients with radiographic knee osteoarthritis (>50% patients). P value of test for subgroup effect= 0.22



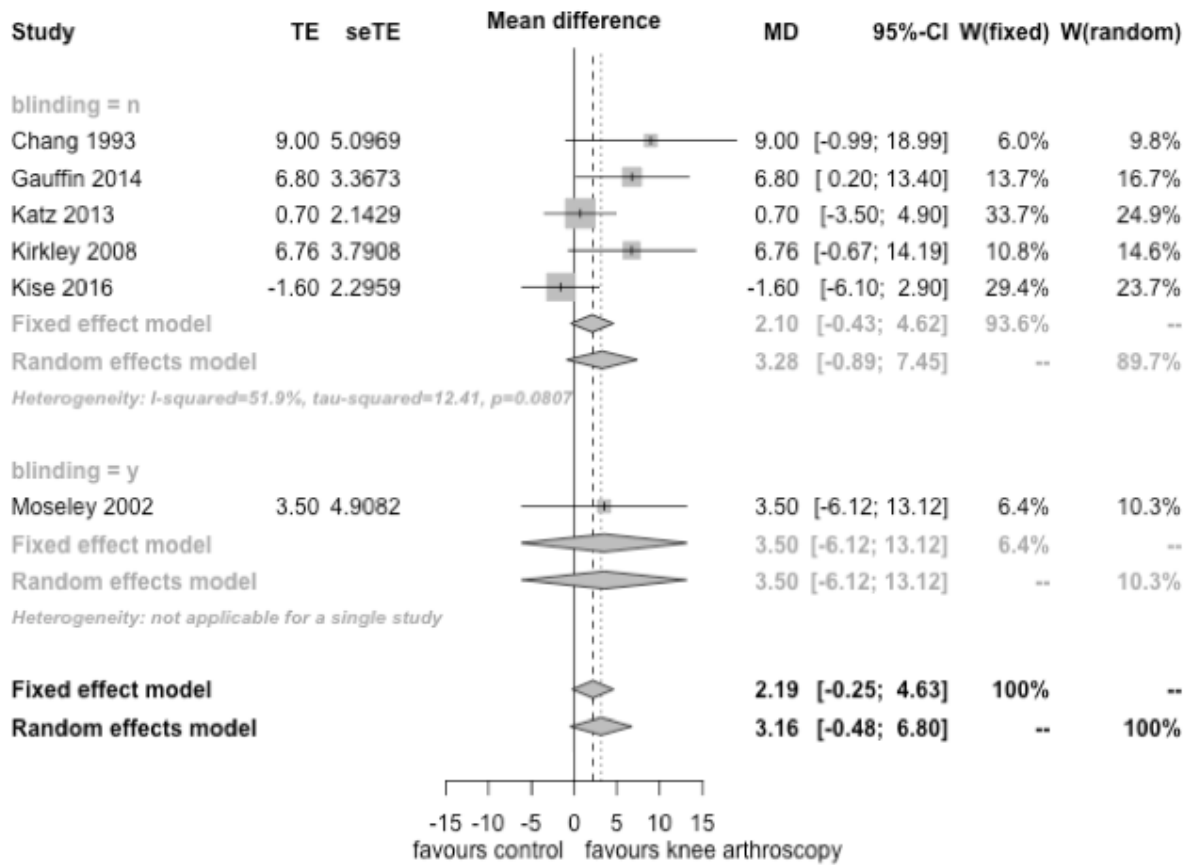
Appendix Figure 9: Subgroup analysis of function in the short term (difference on change from baseline) according to blinding of the studies. P value of test for subgroup effect= 0.46



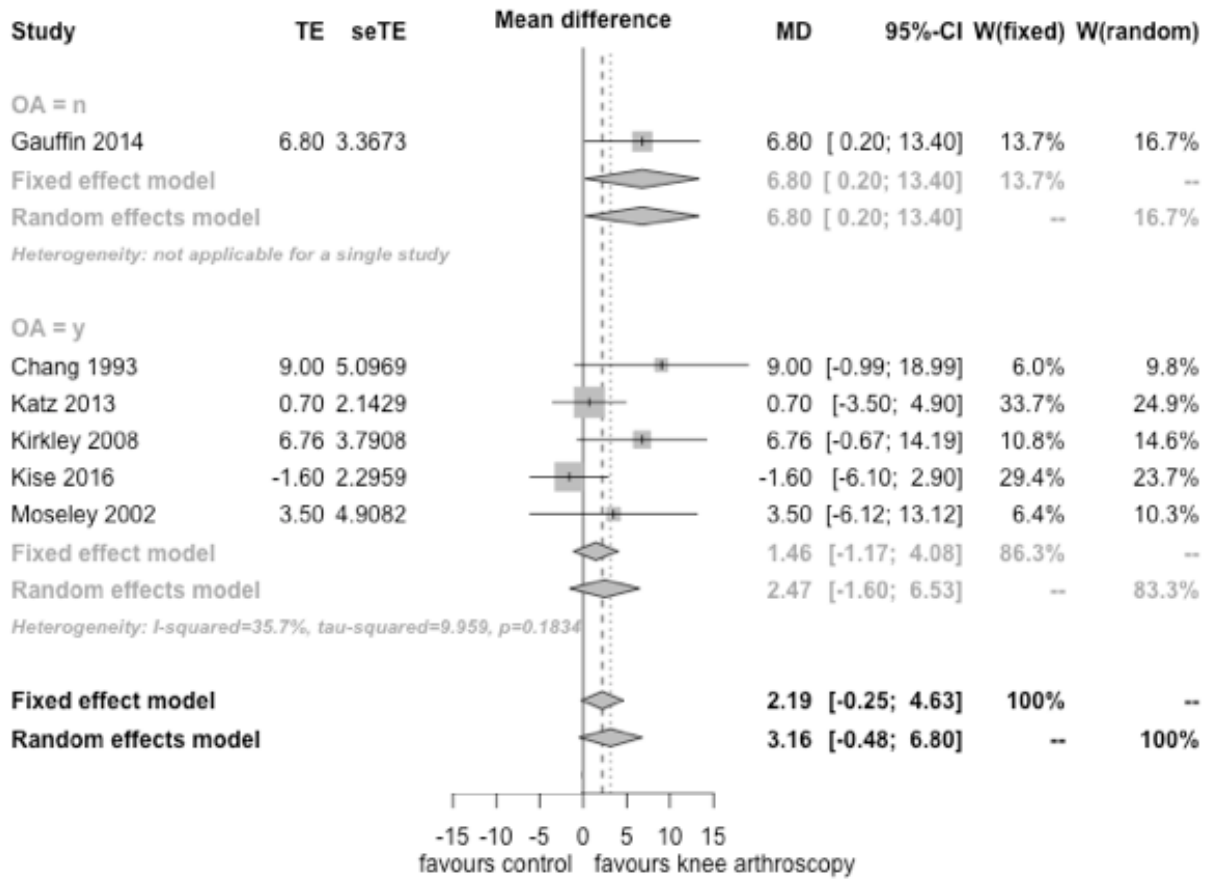
Appendix Figure 10: Subgroup analysis of function in the short term (difference on change from baseline) according to percentage of patients with radiographic knee osteoarthritis (>50% patients). P value of test for subgroup effect= 0.40



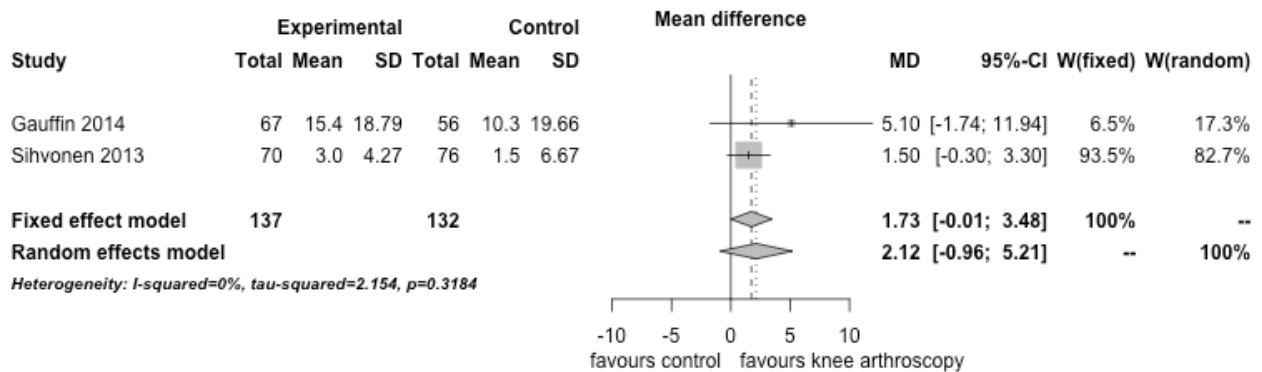
Appendix Figure 11: Subgroup analysis of function in the long term (difference on change from baseline) according to blinding of the studies. P value of test for subgroup effect= 0.97



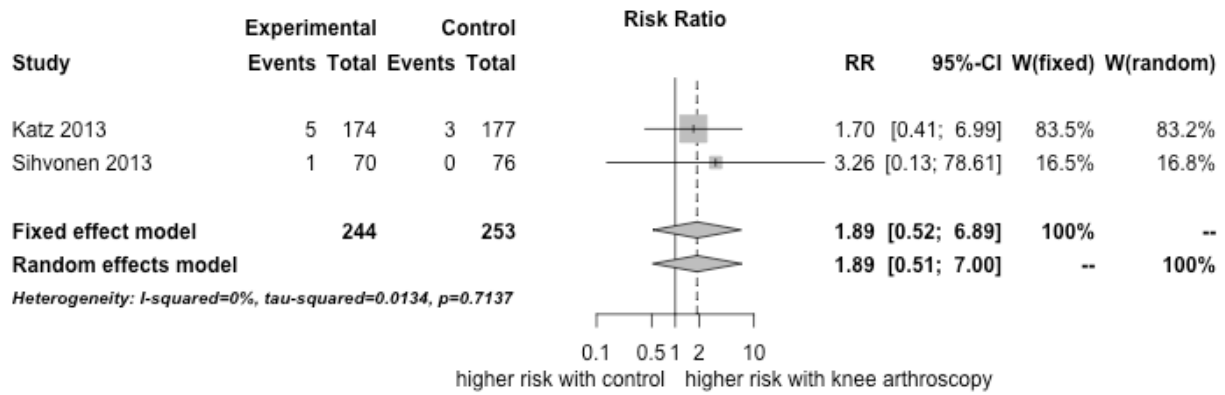
Appendix Figure 12: Subgroup analysis of function in the long term (difference on change from baseline) according to percentage of patients with radiographic knee osteoarthritis (>50% patients). P value of test for subgroup effect= 0.27



Appendix Figure 13: Meta-analysis of Quality of life in the long-term (difference in change from baseline)



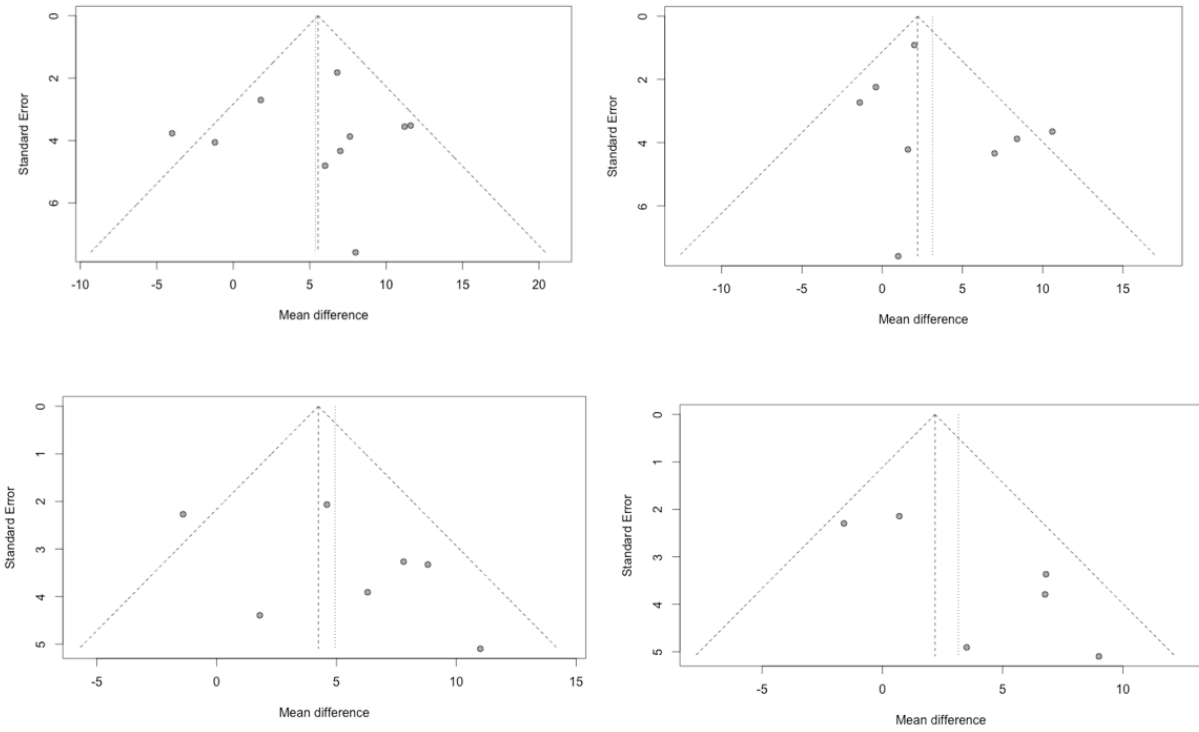
Appendix Figure 14: Meta-analysis of Knee Replacement



Appendix Figure 15: Risk of bias of studies included in the systematic review of effects of knee arthroscopy

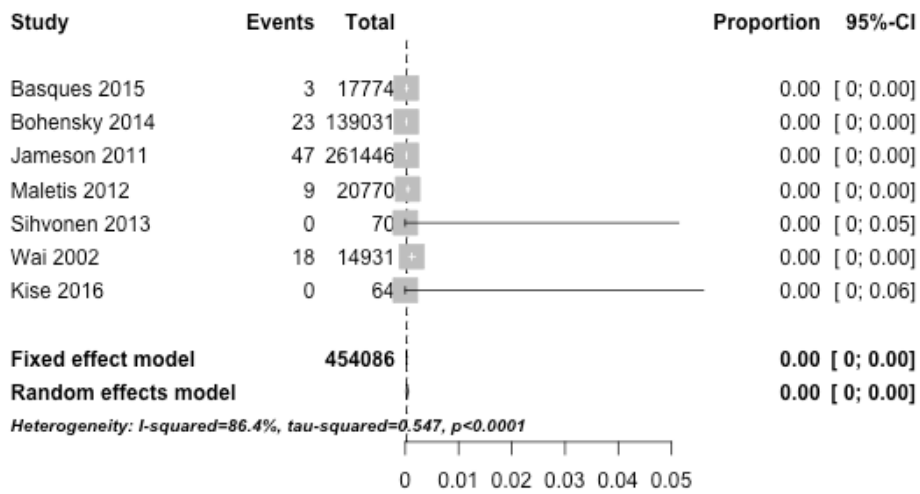
	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants (performance and detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Chang 1993	+	-	-	+	+	+
Gauffin 2014	+	+	-	-	+	+
Herrlin 2007, 2013	+	-	-	-	+	-
Katz 2013	+	+	-	+	+	+
Kirkley 2008	+	+	-	-	+	+
Kise 2016	+	+	-	+	+	+
Moseley 2002	+	+	+	+	+	+
Osteras 2012	+	+	-	+	+	+
Saeed 2015	+	-	-	+	-	+
Sihvonen 2013	+	+	+	+	+	+
Stensrud 2015	+	+	-	-	-	+
Vermesan 2013	+	-	-	+	-	+
Yim 2013	+	+	-	+	+	+

Appendix Figure 16: Funnel plots for publication bias assessments of effects of knee arthroscopy

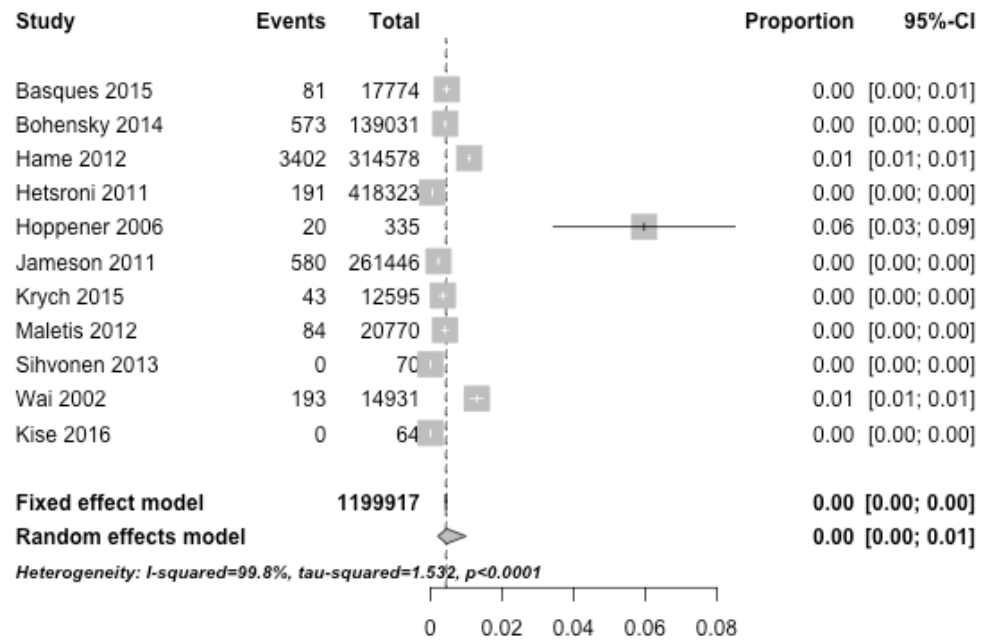


Top left: Short-term pain; Top right: Long-term pain; Bottom left: Short-term function; Bottom right: Long-term function

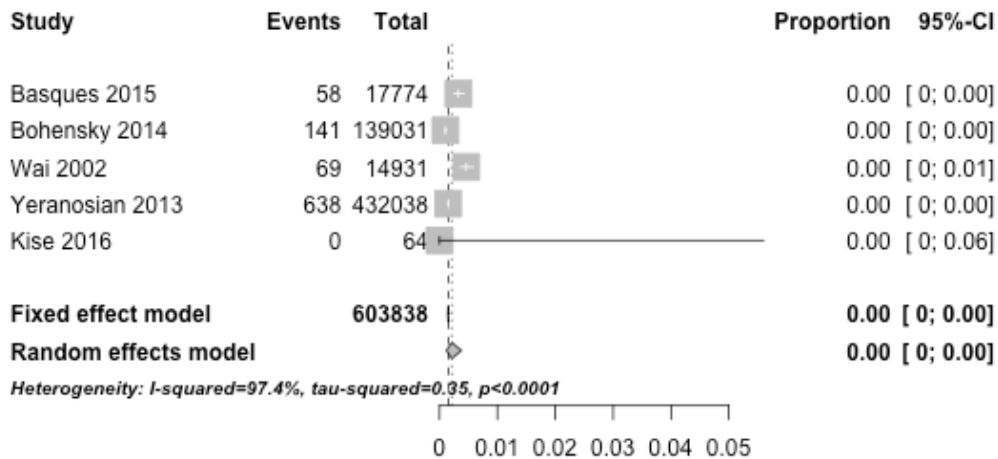
Appendix Figure 17: Meta-analysis of Mortality



Appendix Figure 18: Meta-analysis of VTE



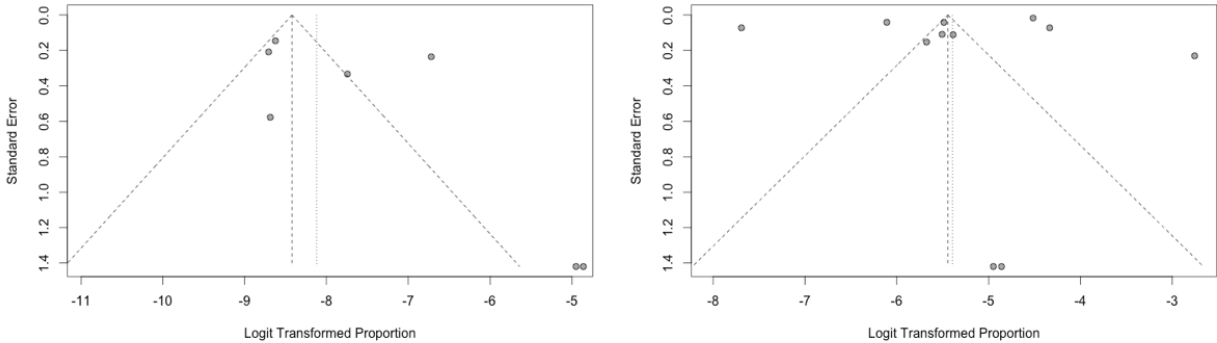
Appendix Figure 19: Meta-analysis of infection



Appendix Figure 20: Risk of bias of the studies included in the systematic review of complications of knee arthroscopy

	Inclusion of consecutive patients	Prospective collection of data	Unbiased assessment of outcomes	Appropriate length of follow-up	Incomplete outcome data (attrition bias)	Prospective calculation of sample size
Basques 2015	+	-	+	+	+	+
Bohensky 2014	+	-	+	+	+	+
Cancienne 2016	+	-	+	+	+	+
Hame 2012	+	-	+	+	+	+
Hetsroni 2011	+	-	+	+	+	+
Hoppener 2006	+	+	+	+	+	-
Jameson 2011	+	-	+	+	+	+
Katz 2013	-	-	+	+	+	-
Kise 2016	-	+	+	+	+	-
Krych 2015	-	-	+	+	-	+
Maletis 2012	+	-	+	+	+	+
Sihvonen 2013	-	+	+	+	+	-
Wai 2002	+	-	+	+	+	+
Yacub 2009	+	-	+	+	+	+
Yeranosian 2013	-	+	+	+	+	-

Appendix Figure 21: Funnel plots for publication bias assessment of complications of knee arthroscopy



Left: Mortality; Right: VTE. Outliers represent the findings of two randomized clinical trials with small sample sizes and 0 events observed.