

## SUPPLEMENTARY APPENDIX

Database	Search Strategy	Results
<b>PubMed</b>	(((("erector"[All Fields] OR "erectores"[All Fields] OR "erectors"[All Fields]) AND ("spine"[MeSH Terms] OR "spine"[All Fields] OR "spines"[All Fields] OR "spine s"[All Fields]) AND ("aircraft"[MeSH Terms] OR "aircraft"[All Fields] OR "plane"[All Fields] OR "planes"[All Fields]) AND ("block"[All Fields] OR "blocked"[All Fields] OR "blocking"[All Fields] OR "blockings"[All Fields] OR "blocks"[All Fields])) OR ("ultrasound-guided"[All Fields] AND ("erector"[All Fields] OR "erectores"[All Fields] OR "erectors"[All Fields]) AND ("spine"[MeSH Terms] OR "spine"[All Fields] OR "spines"[All Fields] OR "spine s"[All Fields]) AND ("aircraft"[MeSH Terms] OR "aircraft"[All Fields] OR "plane"[All Fields] OR "planes"[All Fields]) AND ("block"[All Fields] OR "blocked"[All Fields] OR "blocking"[All Fields] OR "blockings"[All Fields] OR "blocks"[All Fields]))) AND (("laparoscopes"[MeSH Terms] OR "laparoscopes"[All Fields] OR "laparoscope"[All Fields] OR "laparoscopic"[All Fields] OR "laparoscopically"[All Fields] OR "laparoscopies"[All Fields] OR "laparoscopy"[MeSH Terms] OR "laparoscopy"[All Fields] OR "laparoscopic"[All Fields]) AND ("nephrectomy"[MeSH Terms] OR "nephrectomy"[All Fields] OR "nephrectomies"[All Fields]))) OR ("nephrectomy"[MeSH Terms] OR "nephrectomy"[All Fields] OR "nephrectomies"[All Fields])	1302
<b>Cochrane Central</b>	(((erector spine plane block) OR (ultrasound-guided erector spine plane block)) AND (laparoscopic nephrectomies)) OR (nephrectomies)	824

<b>Embase</b>	(((erector spine plane block) OR (ultrasound-guided erector spine plane block)) AND (laparoscopic nephrectomies)) OR (nephrectomies)	1324
<b>Web of Science</b>	(((erector spine plane block) OR (ultrasound-guided erector spine plane block)) AND (laparoscopic nephrectomies)) OR (nephrectomies)	599

**Supplementary table 1 Detailed search strategy.** MeSH: Medical education subject heading

Author, Year	Patient-Controlled Analgesia (PCA)	
	ESPB	Control
	Mean $\pm$ SD	Mean $\pm$ SD
Ayhan Sahin 2022 [22]	114.7 $\pm$ 4.0	212 $\pm$ 26.6
Z.-Z. Xu, 2023 [26]	0.02 $\pm$ 0.02965	0.025 $\pm$ 0.0333
Özlem Özkalayci, 2023 [23]	33.3 $\pm$ 21.4	37.5 $\pm$ 18.5
Meryem Onay, 2023 [25]	20.95 $\pm$ 12.40	25.05 $\pm$ 13.60
Ming Yang, 2024 [24]	-	-
Erkan Atici, 2024 [21]	16.8 $\pm$ 4.13	33.61 $\pm$ 6.91
Zhen Zhang 2024 [46]	-	-
Nevzat Ozfirat [47]	-	-
Sekar Loganathan [48]	7 $\pm$ 2.32	14 $\pm$ 2.32

**Supplementary table 2. Primary outcome of the included studies.** *ESPB* erector spinae plane block, *SD* standard deviation

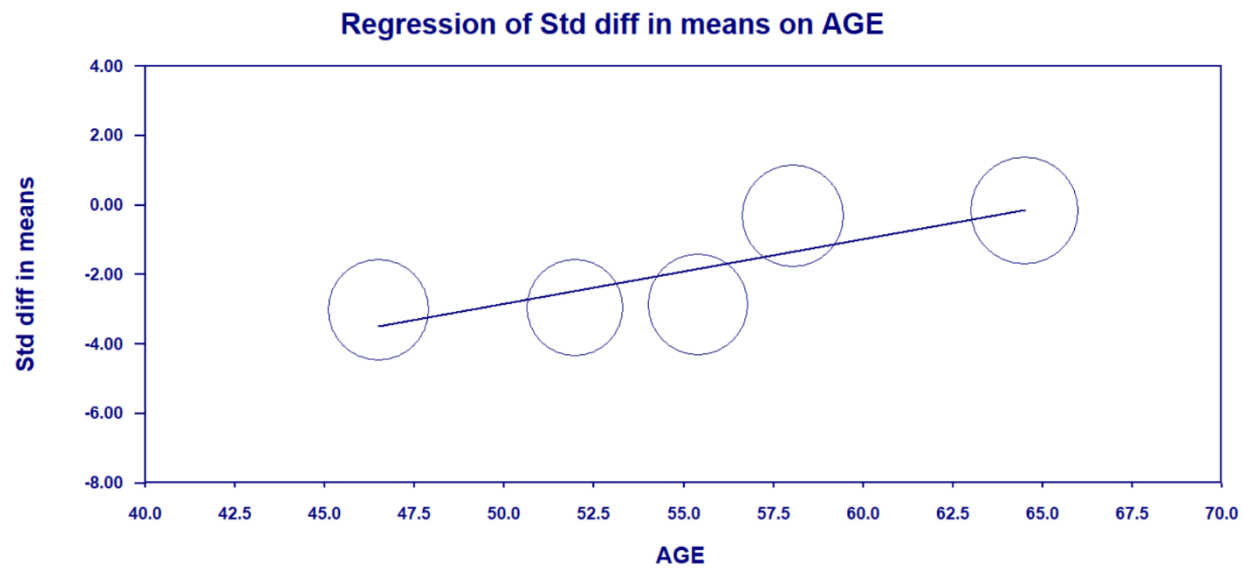
Author, Year	Discharge Time (Days)		Nausea and vomiting		Post-operative analgesia requirement	
	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	Events	Events
	ESPB	Control	ESPB	Control	ESPB	Control
Ayhan Sahin 2022 [22]	3.5 $\pm$ 1.115	4 $\pm$ 1.443	0 $\pm$ 0.25	0 $\pm$ 0.25	1	4



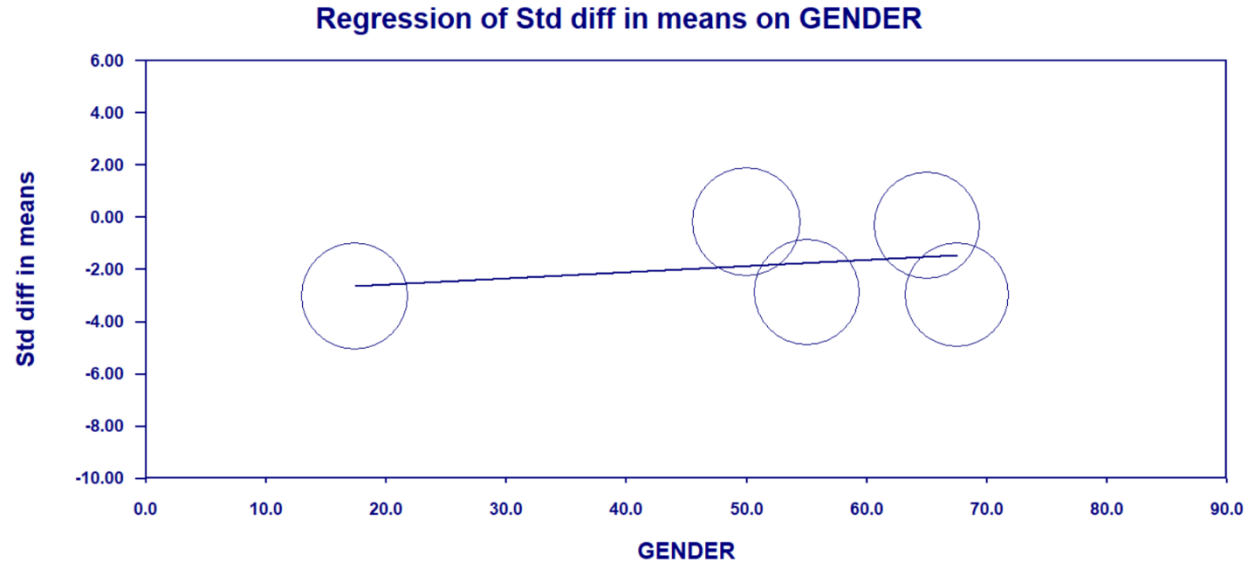
4	randomised trials	not serious	not serious	not serious	not serious	all plausible residual confounding would suggest spurious effect, while no effect was observed	99	102	-	MD <b>8.78 lower</b> (15.34 lower to 2.22 lower)	⊕ ⊕ ⊕ High	CRI TIC AL
<b>PCA - ESPB vs analgesia other than morphine</b>												
2	randomised trials	not serious	not serious	not serious	not serious	all plausible residual confounding would suggest spurious effect, while no effect was observed	113	113	-	MD <b>48.26 lower</b> (143.6 lower to 47.09 higher)	⊕ ⊕ ⊕ High	CRI TIC AL
<b>Discharge time</b>												
4	randomised trials	not serious	not serious	not serious	not serious	none	188	188	-	MD <b>0.11 lower</b> (0.27 lower to 0.06 higher)	⊕ ⊕ ⊕ High	CRI TIC AL
<b>Nausea and Vomiting</b>												
4	randomised trials	not serious	not serious	not serious	not serious	none	156	156	-	MD <b>0.09 lower</b> (0.36 lower to 0.17 higher)	⊕ ⊕ ⊕ High	CRI TIC AL
<b>Post-Operative Analgesia Requirement</b>												
5	randomised trials	not serious	not serious	not serious	not serious	none	45/213 (21.1%)	44/213 (20.7%)	<b>O R 0.8</b>	<b>27 fewer per 1,000</b> (from 181	⊕ ⊕ ⊕	CRI TIC AL

									4 (0.10 to 6.94)	fewer to 437 more)	⊕ High	
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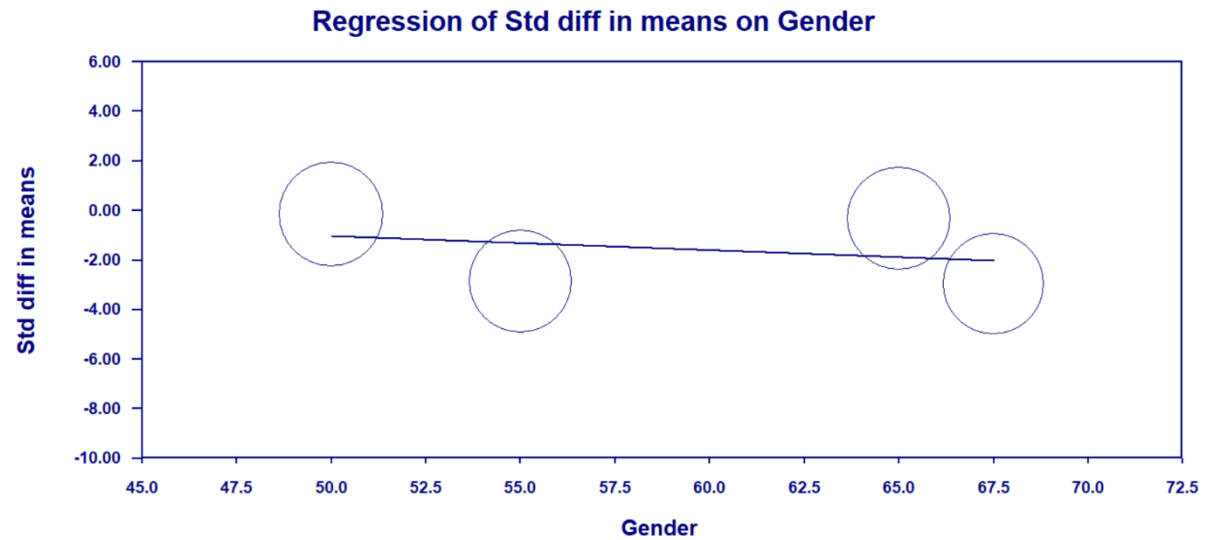
**CI:** confidence interval; **MD:** mean difference; **OR:** odds ratio



**Supplementary figure 1 – Scatter plot for the effect of age on the outcome PCA.**



**Supplementary figure 2 – Scatter plot for the effect of gender on the outcome PCA.**



**Supplementary figure 3 – Scatter plot for the effect of age on the outcome nausea and vomiting.**

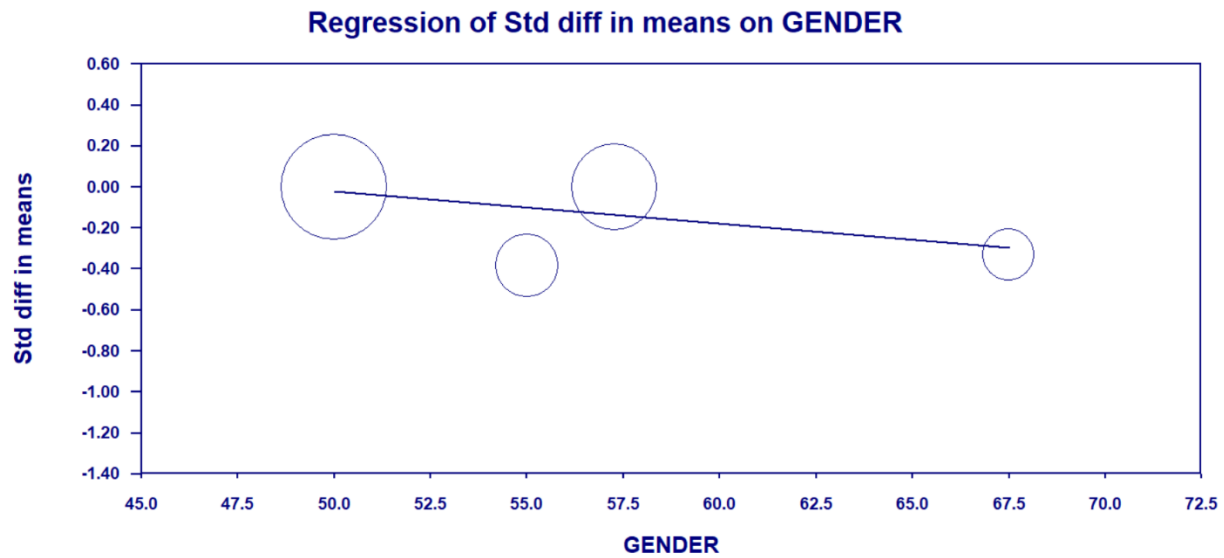




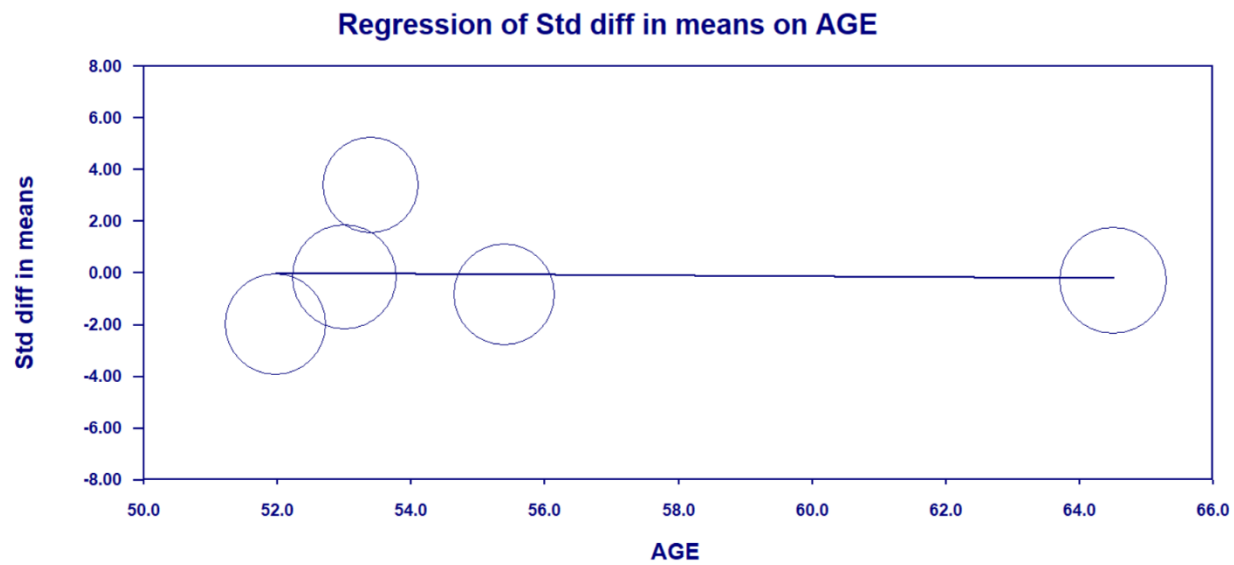
**Supplementary figure 4 – Scatter plot for the effect of gender on the outcome of Nausea and Vomiting.**



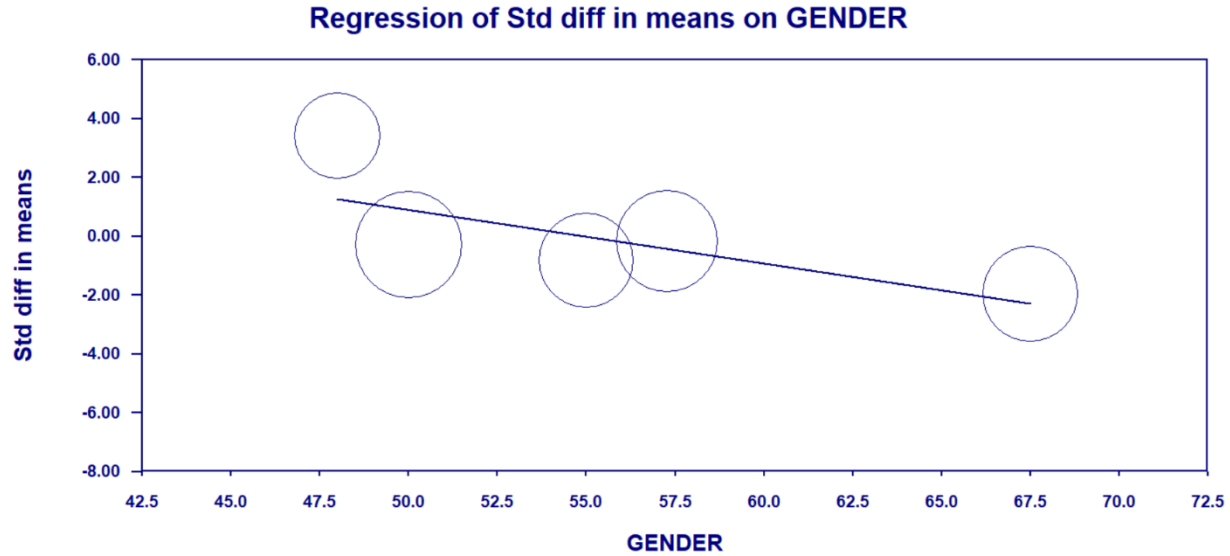
**Supplementary figure 5 – Scatter plot for the effect of age on the outcome of Discharge Time.**



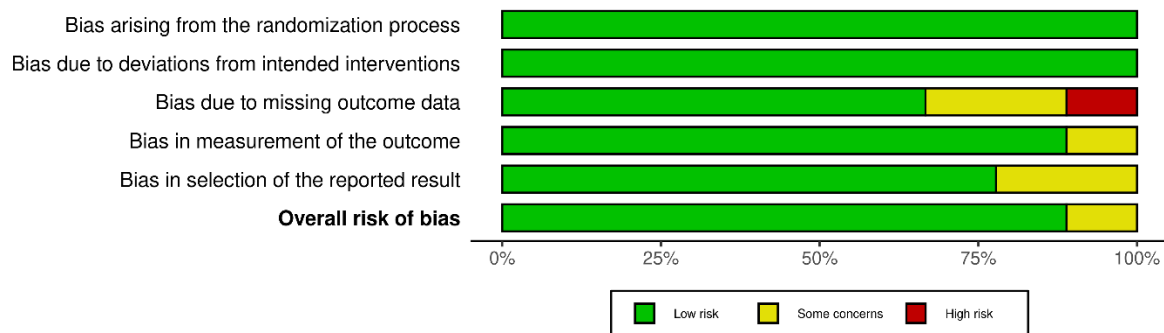
**Supplementary figure 6 – Scatter plot for the effect of gender on the outcome of Discharge Time.**



**Supplementary figure 7 – Scatter plot for the effect of age on the outcome of Post-operative analgesia requirement.**

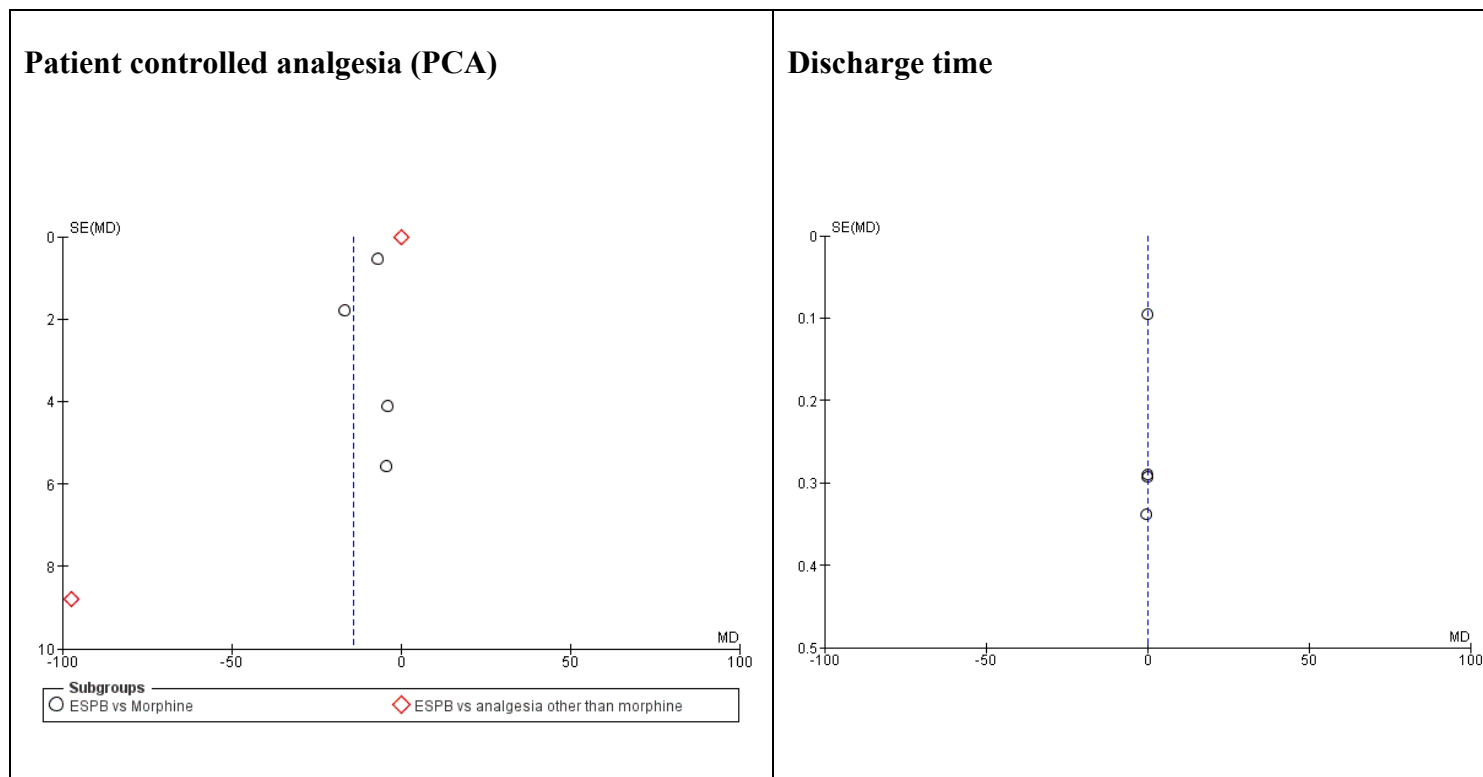


**Supplementary figure 8 – Scatter plot for the effect of gender on the outcome of Discharge Time.**

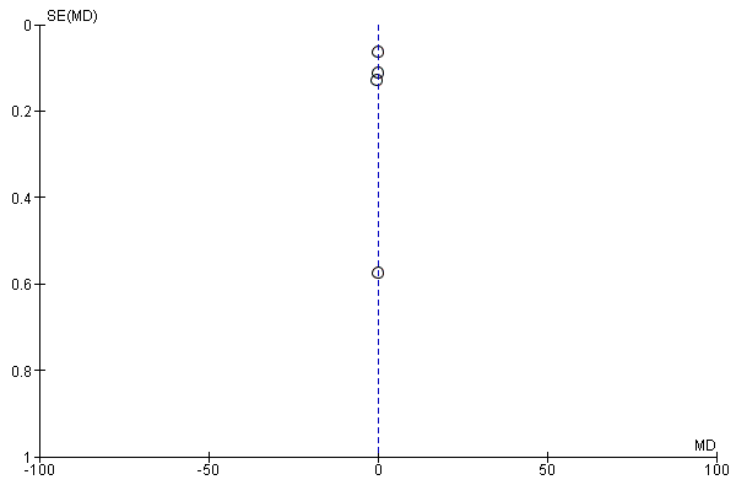


**Supplementary figure 9 – Summary plot showing the proportion of studies with low risk, some concerns, and high risk of bias across each ROB2 domain.**

**Supplementary figure 10. Funnel Plots of Primary Outcomes and Secondary Outcomes.**



## Nausea and Vomiting



## Post-Operative Analgesia Requirement

