

Supplementary Figure 1: Funnel Plots Assessing Publication Bias for Outcomes comparing PUS and FS in obese patients undergoing aortic valve replacement :a) renal failure, b) atrial fibrillation, c) reexploration, d) post-operative bleeding, and e) wound infection

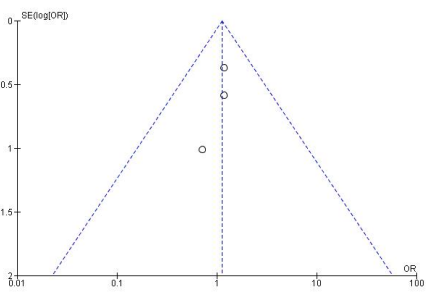
Supplementary Figure 2: Funnel Plots Assessing Publication Bias for Outcomes comparing PUS and FS in obese patients undergoing aortic valve replacement a) Cardiopulmonary bypass time, b) ICU stay, c) hospital stay and d) cross-clamp time

Supplementary Table 1: Quality Assessment of the Included Studies through New Castle Ottawa Scale

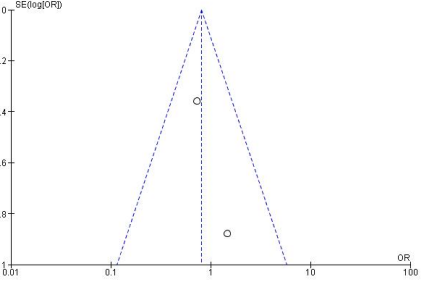
Supplementary Table 2: GRADE Assessment of the Outcomes

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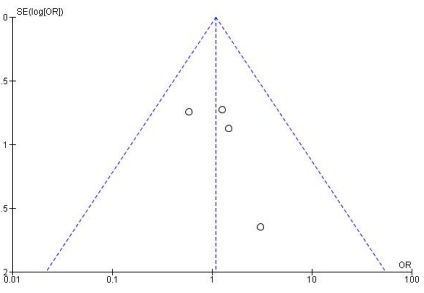
a) Renal Failure



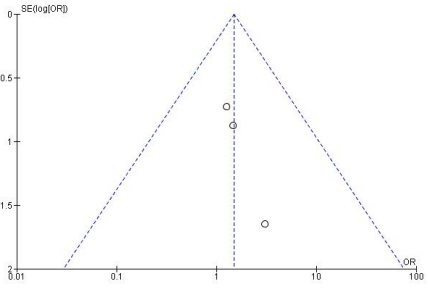
b) Atrial Fibrillation



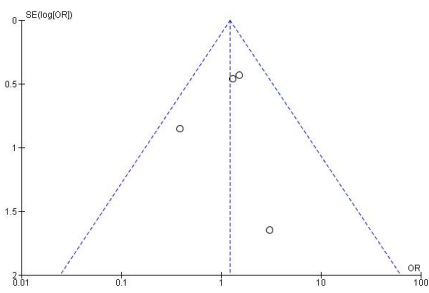
c) Reexploration



d) Post-operative Bleeding

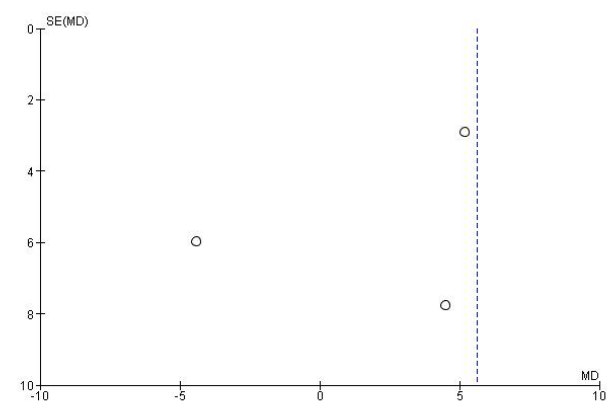


e) Wound Infection

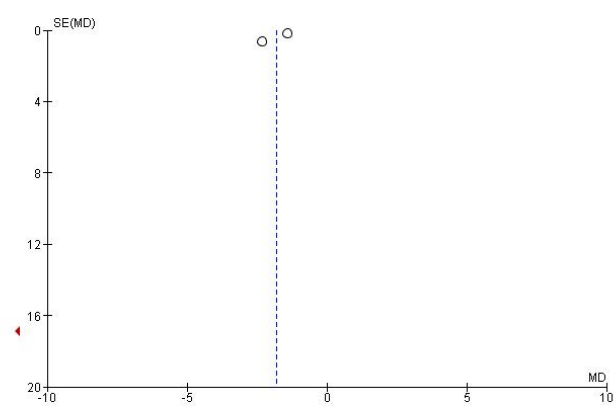


Supplementary Figure 2: Funnel Plots Assessing Publication Bias for Outcomes comparing PUS and FS in obese patients undergoing aortic valve replacement a) Cardiopulmonary bypass time, b) ICU stay, c) hospital stay and d) cross-clamp time

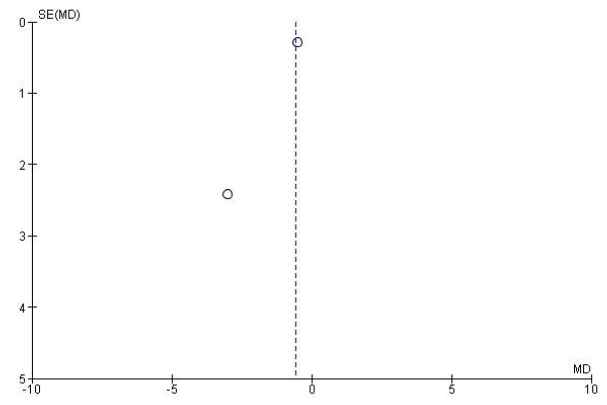
a) Cardiopulmonary bypass time



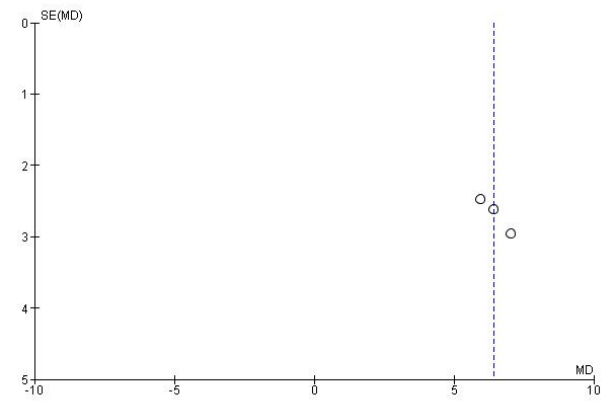
b) ICU Stay



c) Hospital Stay



d) Cross Clamp Time



Supplementary Table 1: Quality Assessment of the Included Studies through New Castle Ottawa Scale

Study	Selection				Comparability	Outcome			Total
	1	2	3	4	1	1	2	3	
Cammertoni 2024	★	★	★	★	★★	★	★		8/9
Luo 2022	★	★	★	★	★	★	★	★	8/9
Welp 2018	★	★	★	★	★★	★	★		8/9
Xie 2022	★	★	★	★	★★	★	★	★	9/9

Supplementary Table 2: GRADE Assessment of the Outcomes

Name of Outcome	No. of Studies	Study Design	Risk of Bias	Inconsistency	Imprecision	Indirectness	Effect Size (OR/MD + CI)	Certainty of Evidence
Renal Failure	4	Observational	Low	Not serious (I ² =0%, P=0.69, no heterogeneity)	Serious (wide CI: 0.63–2.94)	Not serious	OR=1.13 (95% CI: 0.63–2.94)	Low
Atrial Fibrillation	2	Observational	Low	Not serious (I ² =0%, P=0.84, no heterogeneity)	Serious (wide CI: 0.43–1.54)	Not serious	OR=0.81 (95% CI: 0.43–1.54)	Low
Reexploration	4	Observational	Low	Not serious (I ² =0%, P=0.84, no heterogeneity)	Serious (wide CI: 0.48–2.47)	Not serious	OR=1.09 (95% CI: 0.48–2.47)	Low
Postoperative Bleeding	3	Observational	Low	Not serious (I ² =0%, P=0.45, no heterogeneity)	Serious (wide CI: 0.53–4.15)	Not serious	OR=1.48 (95% CI: 0.53–4.15)	Low
Wound Infection	4	Observational	Low	Not serious (I ² =0%, P=0.47, no heterogeneity)	Serious (wide CI: 0.70–2.14)	Not serious	OR=1.23 (95% CI: 0.70–2.14)	Low
Cardiopulmonary Bypass Time	4	Observational	Low	Serious (I ² =55%, P=0.07, moderate heterogeneity, reduced to I ² =22% without Welp 2018)	Serious (wide CI: -0.36 to 11.59)	Not serious	MD=5.62 minutes (95% CI: -0.36 to 11.59)	Very Low
ICU Stay	4	Observational	Low	Serious (I ² =78%, P=0.003, considerable heterogeneity, reduced to I ² =62% without Welp 2018)	Not serious (narrow CI: -4.43 to -0.90)	Not serious	MD=-2.67 days (95% CI: -4.43 to -0.90)	Low
Hospital Stay	4	Observational	Low	Serious (I ² =90%, P=0.83, considerable heterogeneity, reduced to I ² =68% without Welp 2018)	Serious (wide CI: -4.13 to 5.15)	Not serious	MD=0.51 days (95% CI: -4.13 to 5.15)	Very Low
Cross-Clamp Time	4	Observational	Low	Serious (I ² =73%, P=0.10, considerable heterogeneity, reduced to I ² =0% without Cammertoni 2024)	Serious (wide CI: -0.75 to 8.80)	Not serious	MD=4.03 minutes (95% CI: -0.75 to 8.80)	Very Low