https://doi.org/10.24875/RECICE.M24000477

SUPPLEMENTARY DATA

Further in-hospital and 30-day outcomes of transfemoral transcatheter aortic valve implantation for aortic regurgitation

Rate of bleeding is 2.49% (95%CI, 00.00%-6.56%, Random Model, Heterogeneity: I^2 =66%, *P*-value= .05) (figure 1A of the supplementary data) with statistically significant heterogeneity, resolved by Leave-one-out sensitivity analysis and removal Vahl et al.[1] 2024. Figure 1B of the supplementary data, while vascular access complication rate is 5.2% (1.74%-9.69%, Random Model, Heterogeneity: I^2 =61%, *P*-value= .05) (figure 2A of the supplementary data) with statistically significant heterogeneity resolved by removal of Baumbach et al.[2]2023. (figure 2B of the supplementary data). The pooled rate of AKI is 5.92% (95%CI, 00.00%-13.86%, Random Model, Heterogeneity: I^2 =72%, *P*-value= .03) (figure 3A of the supplementary data) with statistically significant heterogeneity resolved by removal of either Adam et al.[3] 2023 or Vahl et al.[1] 2024 (figure 3B of the supplementary data). The pooled rate of in-hospital mortality of patients with TF Jena valve is 0.00% (95%CI, 0.00%-4.70%, Random Model, Heterogeneity: I^2 =0%, *P*-value= 1.00) (figure 4 of the supplementary data). 30-day rate of stroke was 1.1% (95%CI, 0.0%-3.2%, I^2 =0%, *P*-value=.38) (figure 5 of the supplementary data).

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Table 1 of the supplementary data. Quality assessment of the included studies

Study ID	**Quality assessment for single-arm observational studies according to the National Institute of Health (NIH) tool**															
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Overall Score**	**Overall quality**
Garcia et al.[4]2023	Y	Y	Y	Y	CD	Y	Y	N	Y	N	Y	N	Y	CD	9	Good
Liu et al.[5] 2022	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	CD	Y	N	11	Good
Liu et al.[6] 2020	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	N	9	Good
Huan Liu et al.[6] 2020	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	CD	Y	N	11	Good
Liu et al.[7] 2019	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	CD	Y	N	11	Good
Adam et al.[3] 2023	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	N	11	Good
Baldus et al.[8] 2019	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	N	11	Good
Silachi et al.[9] 2018	Y	Y	Y	Y	CD	Y	Y	N	Y	Y	Y	CD	CD	N	9	Good
Seiffert et al.[10] 2014	Y	Y	Y	Y	CD	Y	Y	N	Y	Y	Y	N	Y	CD	10	Good
Study ID	**Quality assessment for before and after studies (pre-post) with no control according to the NIH tool**															
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**		**Q12**		**Overall Score**	**Overall quality**
Vahl et al.[1]2024	Y	Y	Y	Y	Y	Y	Y	N	Y	N	NA		NA		8	**Good**
Study ID	**Quality assessment for comparative observational studies according to Newcastle-Ottawa Scale (NOS) tool**															
	Selection					**Compatibility**	**Outcome**									
	Q1		**Q2**		**Q3**	**Q4**	**Q5**	**Q6**		**Q7**	**Q8**				**Overall Score**	**Overall quality**

Kong et al.[11]2022	*	*	*	*	**	*		*	8	Good
Sawaya et al.[12] 2017	*	*	*	*	**	*		*	8	Good
Yoon et al.[13] 2017	*	*	*	*	**	*	*	*	9	Good
Study ID	**Quality assessment for case-series studies according to the NIH tool**									
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Overall Score**	**Overall quality**
Schlingloff et al.[14] 2014	Y	Y	Y	Y	Y	Y	Y	N	Y	8	Good
Baumbach et al.[15] 2023	Y	Y	CD	N	Y	Y	Y	N	Y	6	Fair
Ranard et al.[16]2022	Y	Y	CD	N	CD	Y	Y	Y	N	6	Fair

NIH tool for single-arm observational studies: Q1: Was the study question or objective clearly stated? Q2: Was the study population clearly specified and defined? Q3: Was the participation rate of eligible persons at least 50%? Q4: Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?, Q5: Was a sample size justification, power description, or variance and effect estimates provided?, Q6: For the analyses in this paper, was the exposure(s) of interest measured prior to the outcome(s) being measured?, Q7: Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?, Q8: For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g., categories of exposure, or exposure measured as a continuous variable)?, Q9: Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?, Q10: Was the exposure(s) assessed more than once over time?, Q11: Were

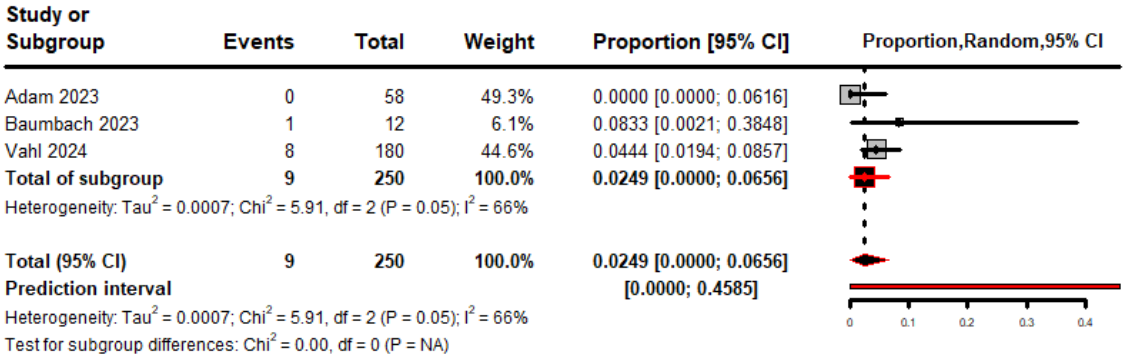
the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?, Q12: Were the outcome assessors blinded to the exposure status of participants?, Q13: Was loss to follow-up after baseline 20% or less?, Q14: Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)? **NOS tool for Comparative Observational studies:** Three domains: Selection, Compatibility and Outcome domains. Q1: Representativeness of the sample, Q2: Selection of the non-exposed cohort, Q3: Ascertainment of Exposure, Q4: Demonstration that that outcome of interest was not present at the start of the study, Q5: comparability Of cohorts on the basis of design or analysis controlled for confounders, Q6: Assessment of outcome, Q7: was follow up long enough for outcomes to occur, Q8: Adequacy of Follow-up. **NIH tool for Case-series**: Q1: Was the study question or objective clearly stated?, Q2:study population clearly and fully described, including a case definition?, Q3:Were the cases consecutive?, Q4; Were the subjects comparable?, Q5: Was the intervention clearly described? Q6: consistently across all study participants?, Q7: Was the length of follow-up adequate?, Q8:statistical methods well-described?, Q9: Were the results well-described?

CD, cannot be determined; N, no; NA, not applicable; NIH, National Institutes of Health; NOS, Newcastle-Ottawa Scale; Y, yes.

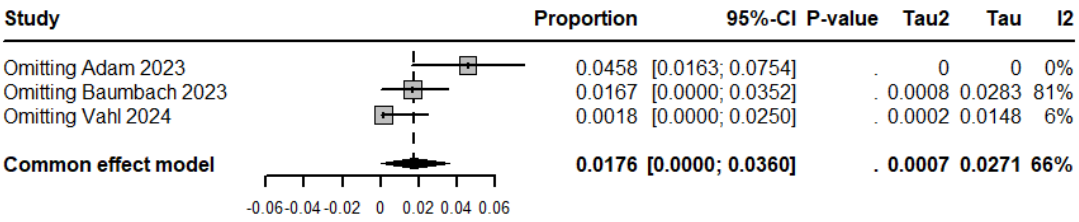
https://doi.org/10.24875/RECICE.M24000477

Figure 1 of the supplementary data. A. Bleeding. B. Leave-one-out sensitivity analysis of bleeding.

A



B.



95%CI, 95% confidence interval. The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baumbach et al.[15] 2023, Vahl et al.[1] 2024.

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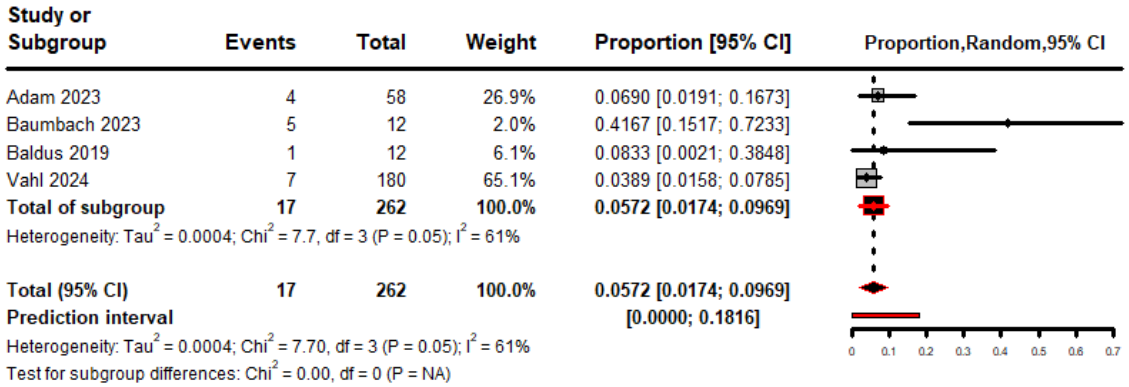
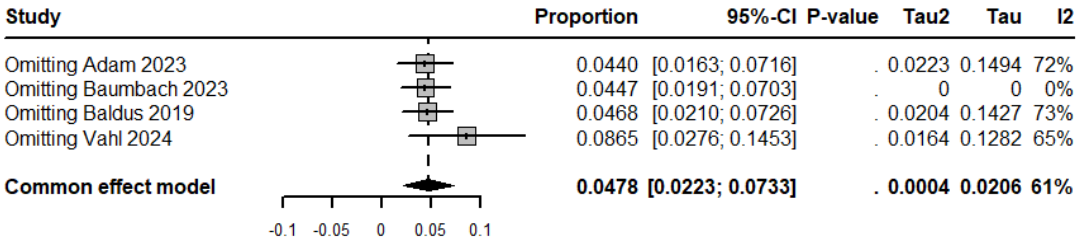
Figure 2 of the supplementary data. A. Vascular access complication. B. Leave-one-out sensitivity analysis of need of vascular access complication.

A.



B

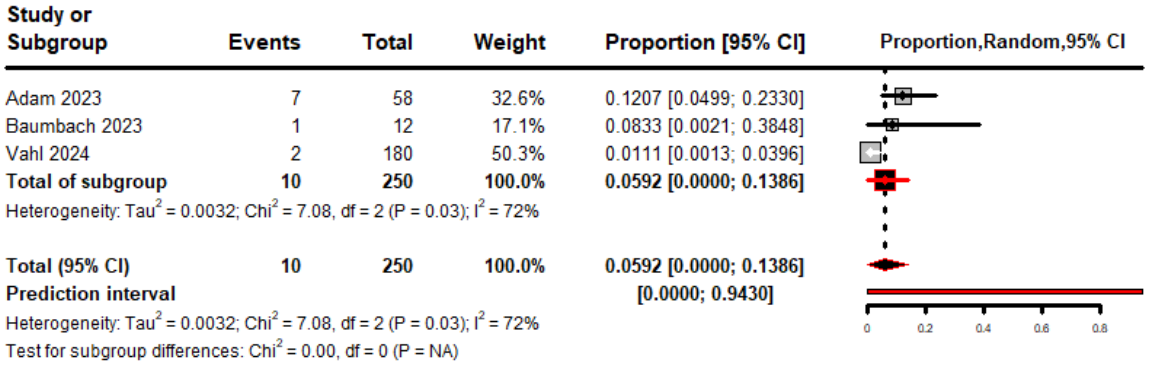


95%CI, 95% confidence interval. The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baumbach et al.[15] 2023, Baldus et al.[8] 2019, Vahl et al.[1]

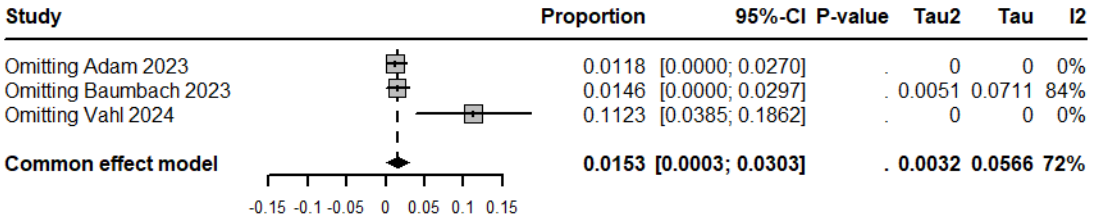
https://doi.org/10.24875/RECICE.M24000477

Figure 3 of the supplementary data. A: AKI. B. Leave-one-out sensitivity analysis of need of vascular access complication. B. Leave-one-out sensitivity analysis of AKI.

A.



B.

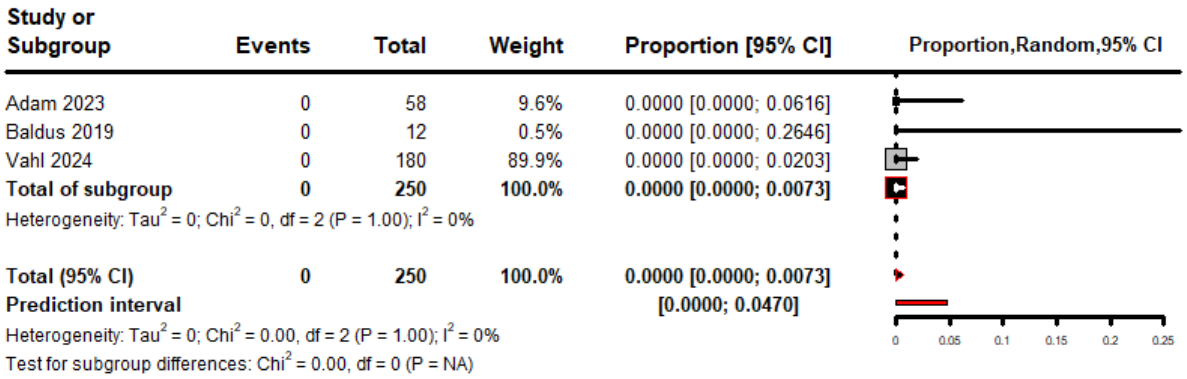


95%CI, 95% confidence interval.

The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baumbach et al.[15] 2023, Vahl et al.[1] 2024.

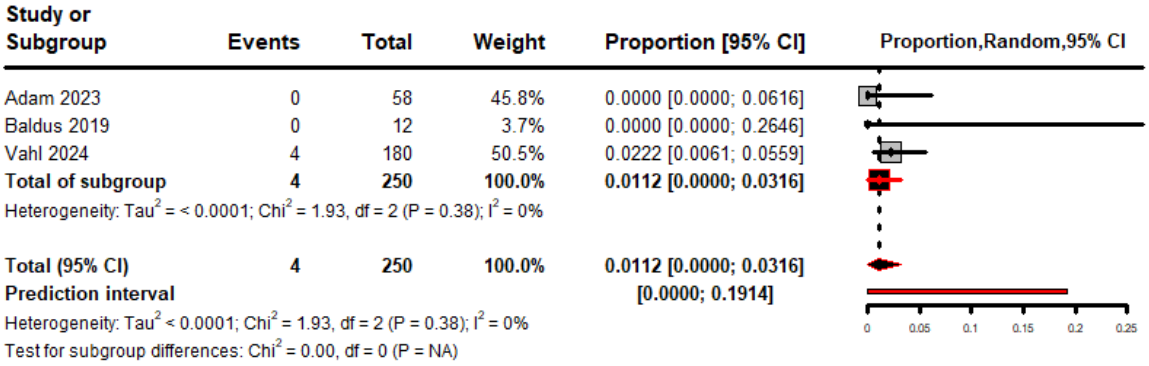
https://doi.org/10.24875/RECICE.M24000477

Figure 4 of the supplementary data. In-hospital mortality.



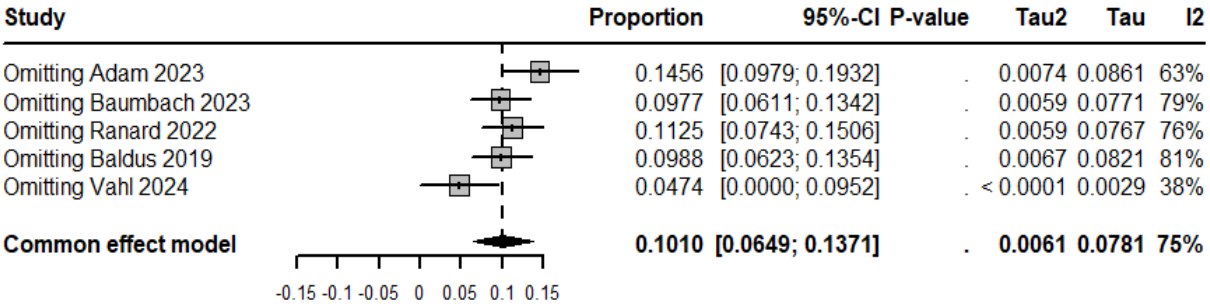
95%CI, 95% confidence interval. The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baldus et al.[8] 2019, Vahl et al.[1] 2024.

Figure 5 of the supplementary data. 30 days stroke.



95%CI, 95% confidence interval. The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baldus et al.[8] 2019, Vahl et al.[1] 2024.

Figure 6 of the supplementary data. Leave-one-out sensitivity analysis of 30 days mild PVR.



PVR: The bibliographical references mentioned in this figure correspond to: Adam et al.[3] 2023, Baumbach et al.[15] 2023, Ranard et al.[16] 2022, Baldus et al.[8] 2019, Vahl et al.[1] 2024.

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