A META-ANALYSIS OF MORTALITY AND MAJOR ADVERSE CARDIOVASCULAR AND CEREBROVASCULAR EVENTS FOLLOWING TRANSCATHETER AORTIC VALVE IMPLANTATION VERSUS SURGICAL AORTIC VALVE REPLACEMENT FOR SEVERE AORTIC STENOSIS

Poster Contributions
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Session Title: TAVR III: Meta-Analyses, Costs and International and National Trends in TAVR
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Background: The purpose of this meta-analysis is to compare the post-procedural outcomes of transcatheter aortic valve implantation (TAVI) and surgical aortic valve replacement (SAVR) for severe aortic stenosis.

Methods: Seventeen studies (n=4710) comparing TAVI (n=2288) and SAVR (n=2422) were included. End points were baseline logistic EuroScore, all-cause mortality, cardiovascular mortality, myocardial infarction, stroke, transient ischemic attack, major bleeding and major vascular events. The odds ratio (OR) with 95% confidence interval (CI) was computed and p<0.05 was considered as a level of significance.

Results: No significant difference was found between SAVR and TAVI for baseline logistic EuroScore (p=0.07), all-cause mortality at 30 days (p=0.92) and average 69 weeks (p=0.11) (figure 1), cardiovascular mortality (p=0.54), myocardial infarction (p=0.59), stroke (p=0.4) and transient ischemic attacks (p=0.85). Compared to SAVR, TAVI had significantly lower major bleeding (OR:1.78, CI:1.35-2.33, p<0.00001) and higher major vascular complications (OR:0.42, CI:0.17-1, p=0.05).

Conclusion: Our meta-analysis of 17 studies with 4710 matched-risk propensity population showed that TAVI has similar cardiovascular and all-cause mortality to SAVR at average 69 weeks follow-up. TAVI is superior to SAVR for major bleeding complications and non-inferior to SAVR for post-procedural cerebrovascular events, myocardial infarctions and major vascular events.