

IMPACT OF SEX ON OUTCOMES IN TAVR: RESULTS OF A SINGLE CENTER REGISTRY

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Original Research

Background: Early studies on TAVR outcomes show that female sex was associated with better survival. Whether sex has an impact on TAVR outcomes with increased usage of new generation valves is less known.

Methods: Retrospective analysis using institutional NCDR TVT data was performed on all patients undergoing TAVR at Yale New Haven Hospital from July 2012 to August 2019. Log-rank test and Kaplan-Meier curves were used to compare sex differences in survival up to 1-year post TAVR. Cox modeling was used to adjust for differences in baseline and procedural characteristics.

Results: A total of 927 consecutive patients (41.4% women) underwent TAVR. Women were older (82.8 vs 80.6 $p<.001$) and had higher STS mortality score compared to men (7.6% vs 6.4%, $p<.001$) despite lower prevalence of most cardiovascular comorbidities including coronary artery disease, peripheral arterial disease, and smoking. Most cases used transfemoral access (90.6%) and new generation devices (70%). Women received smaller valves compared to men (20-23 mm: 5.3% vs 1.6; 29-33mm: 1.0% vs 29.6%, $p<.001$). There were no statistically significant differences between sexes in both unadjusted and adjusted 1-year mortality [Figure].

Conclusion: Our data show no significant difference in 1-year survival between sexes using primarily new generation valves. Further studies are needed to reassess the impact of sex on TAVR outcomes and whether newer technologies such as new valve design and sizes, and usage of CT imaging may have closed the gender gap.

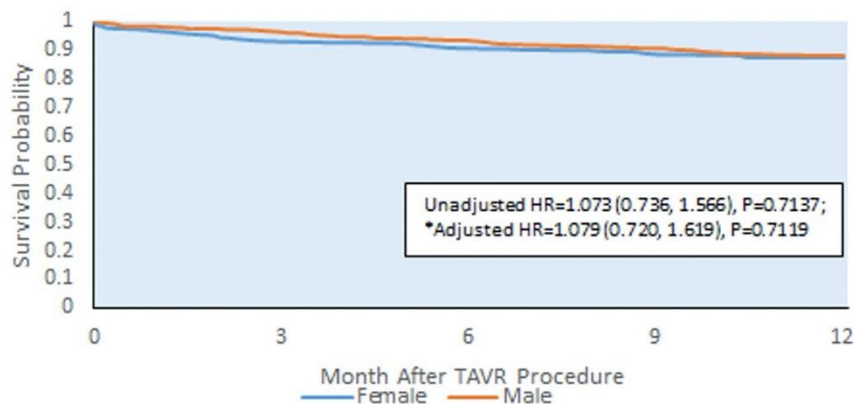


Figure: Kaplan-Meier curve for 1 year survival in female versus male TAVR recipients.

*Adjusted for age, GFR<30, LVEF<35, Platelet <50,000, Coronary artery disease (prior PCI, MI, or CABG), Prior peripheral artery disease, pacemaker, conduction defect, New vs old generation valve, Self-expanding vs balloon expanding