OUTCOMES OF INOPERABLE PATIENTS UNDERGOING TRANSAPICAL AND TRANSAOARTIC TRANSCATHETER AORTIC VALVE REPLACEMENT: A PARTNER 2B SUBSTUDY ANALYSIS OF NESTED REGISTRIES

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Background: Transcatheter aortic valve replacement (TAVR) has emerged as the treatment of choice for many inoperable and high risk patients with aortic stenosis. In patients without appropriate transfemoral (TF) access, transapical (TA) TAVR has been shown to be an appropriate alternative to surgery. Little is known about the transaortic (TAo) approach and neither approach has been extensively studied in patients who are not considered surgical candidates.

Methods: Patients deemed inoperable by the heart team without adequate iliofemoral access for TF TAVR were enrolled in one of two nested registries in The PARTNER 2 Trial that included TA and TAo access. All patients were treated with the SAPIEN-XT balloon expandable valve (23 or 26 mm) using the Ascendra+ delivery system. The decision to use a TA or TAo approach was left to the discretion of the treating institution. All data and outcomes were reviewed by established core labs, a CEC, and a DSMB.

Results: A total of 125 patients underwent TAVR via TA approach and 94 via TAo approach. At baseline, there was no difference between these two groups in terms of age (81.4 for TA vs. 82.9 for TAo, p=0.23), body mass index (26.2 for TA vs. 26.2 for TAo, p=0.1884), or STS score (10.6 for TA vs. 10.3 for TAo, p=0.876). Sex was statistically significant (p=0.028) with more females in the TAo TAVR group (64.9% vs. 35.1%) as compared with the TA TAVR group where there was equal distribution of males and females (49.6% vs. 50.4%). The 30 day mortality was similar between the two approaches (8.8% for the TA group and 7.6% for the TAo group). Adverse events (stroke, vascular complications, and bleeding) as well as quality of life metrics are currently being analyzed and adjudicated, and will be available at the time of presentation.

Conclusions: TA and TAo TAVR in inoperable patients appear to have reasonable short term outcomes especially as compared with historic outcomes in high-risk patients via a TA approach. Differences in other outcomes between the two procedures, especially stroke and quality of life will be presented. TA and TAo TAVR are important and viable alternatives for patients requiring TAVR without TF access.