



## Lecture Notes

### American College of Cardiology 60<sup>th</sup> Annual Scientific Session & i2 Summit

#### **Lifetime Cost Effectiveness of Transcatheter Aortic Valve Replacement Compared with Standard Care Among Inoperable Patients with Severe Aortic Stenosis: Results from the PARTNER Trial (Cohort B)**

Study Sponsor: Edward Life Sciences

Trial Registration: NCT00530894

#### **Background**

- The Partner Trial showed that compared with standard care, transcatheter aortic valve replacement (TAVR)
- Improved 12-month survival (70% vs 50%)
- Produced substantial and sustained improvement in symptoms, functional status, and quality of life
- Reduced hospitalization for aortic stenosis or its treatment 22% vs 44% at one year

#### **Primary Endpoint**

- Lifetime incremental cost-effectiveness ratio (\$/LYG)

#### **Secondary Endpoint**

- Lifetime incremental costs per quality-adjusted life year gained (ICER; \$/QALY)

#### **Methods**

- (n=358)
- In-trial (12 month) analysis based on observed survival, quality of life, health care resource use, and hospital billing data
- Lifetime analysis based on projections of survival and quality-adjusted survival

#### **Summary of Findings**

- TAVR was associated with index admission costs of approximately \$78,540 (including estimated physician fees)
- Observed follow-up costs were approximately \$23,372 lower per patient with TAVR versus standard care, although overall costs remained substantially higher with TAVR at 1 year which was related to a significantly higher hospitalization rate (2.15 vs 1.2; p<0.001)
- TAVR resulted in an estimated increase in life expectancy of approximately 1.9 years and an ICER of \$50,212 per life-year gained
- Sensitivity analyses had a minimal impact on results



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#### Limitations

- TAVR device and care may become more efficient in the future
- The old and high-risk patient population of the study limits the extrapolation of the findings to other patient groups

#### Conclusions

For patients with severe aortic stenosis who are unsuitable for surgical AVR, TAVR significantly increases life expectancy at an incremental cost per life year gained that is well within accepted values for commonly used cardiovascular technologies.

#### Further Reading

<http://clinicaltrials.gov/ct2/show/NCT00530894?term=NCT00530894&rank=1>