

Cost-Effectiveness of Transcatheter Aortic Valve Implantation (TAVI) in Low Surgical Risk Patients with Severe Symptomatic Aortic Stenosis in Spain

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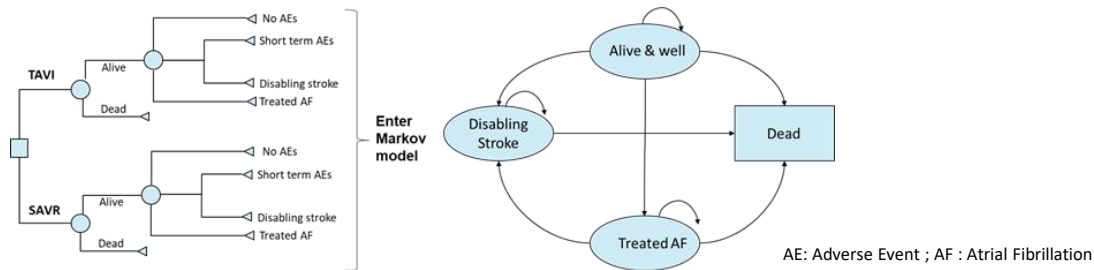
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Objective

- Assess the cost-effectiveness of TAVI compared with surgical aortic valve replacement (SAVR) in severe symptomatic aortic stenosis (sSAS) patients at low risk of surgical mortality.

Model Inputs and Methods

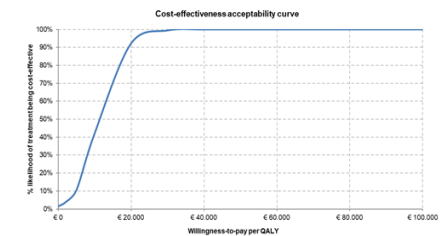
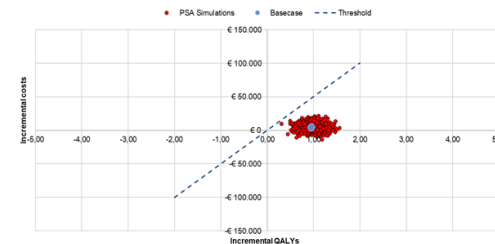
- Clinical outcomes from a recent pivotal trial¹ in conjunction with Spanish direct healthcare costs, survival and health-related quality of life data were used as model inputs.
- A two-stage cost-utility model was developed.



- The simulated time horizon was lifetime.
- Accrued costs and benefits were discounted at 3% annually.
- The effect of uncertainty in model parameters and robustness of the results were explored through deterministic and probabilistic sensitivity analysis as well as multiple scenario analyses.

Results

- The base case results demonstrate an increase of 0.95 QALYs with increased lifetime costs of € 3522 per patient for TAVI compared with SAVR.
- PSA results showed 99.9% likelihood of cost-effectiveness at € 30 000 willingness-to-pay threshold.



- These results are robust with TAVI remaining cost-effective across multiple scenario analyses.

Conclusions

- TAVI improves clinical outcomes and is estimated to slightly increase costs.
- These initial results suggest that TAVI is a cost-effective therapy for low risk sSAS patients in Spain.

References

¹ Mack, Michael J., et al. "Transcatheter aortic-valve replacement with a balloon-expandable valve in low-risk patients." NEJM 380.18 (2019): 1695-1705.