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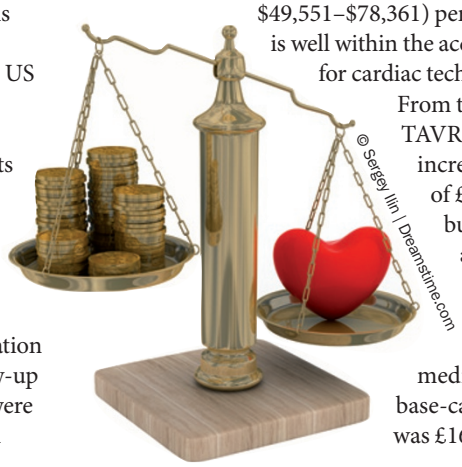
VALVULAR DISEASE

TAVR is cost-effective in the USA and UK

The PARTNER trial involved a group of patients (cohort B) with symptomatic, severe aortic stenosis, who were not suitable candidates for conventional surgery. Transfemoral, transcatheter aortic-valve replacement (TAVR) in this cohort reduced mortality by 50% and improved functional status compared with standard, nonsurgical care. Results from two analyses that used data from the PARTNER trial now show that TAVR is cost-effective in these patients from both the US and UK perspectives.

In the US-based analysis, the mean costs of the initial TAVR procedure and hospitalization were $42,806 and $78,542, respectively. Reduced subsequent hospitalization rates meant that follow-up costs in the first year were lower with TAVR than standard therapy ($29,289 versus $53,621), but cumulative 1-year costs remained almost twice as high ($106,076 versus $53,621). TAVR was associated with an estimated increase in discounted lifetime medical-care costs of $79,837 per patient, and a gain in discounted life expectancy of 1.3 quality-adjusted life-years (QALYs). The lifetime incremental cost-effectiveness ratio (ICER), therefore, was $61,889 (95% CI $49,551–$78,361) per QALY gained, which is well within the accepted range of values for cardiac technologies.



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From the UK perspective, TAVR was associated with increased 10-year costs of £25,200 per patient, but also conferred an additional 1.56 QALYs over this period, compared with medical therapy. The base-case ICER, therefore, was £16,200 per QALY gained, which is well below the accepted cost-effectiveness threshold.

These analyses are likely to have been limited by the data obtained from the PARTNER trial. Early generation transcatheter valves were used and the investigators were relatively unfamiliar with the novel procedure; outcomes will probably improve with technological refinements and increased experience. Also, the long-term survival and costs were extrapolated from the 12–30 months of trial follow-up. Finally, further study is required to evaluate the cost-effectiveness of TAVR compared with surgical aortic-valve replacement in low-risk patients.

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Original articles Reynolds, M. R. *et al.* Cost effectiveness of transcatheter aortic valve replacement compared with standard care among inoperable patients with severe stenosis: results from the PARTNER trial (cohort B). *Circulation* doi:10.1161/CIRCULATIONAHA.111.054072 | Watt, M. *et al.* Cost-effectiveness of transcatheter aortic valve replacement in patients ineligible for conventional aortic valve replacement. *Heart* **98**, 370–376 (2012)