Cost information for transcatheter aortic valve replacement in patients ineligible for surgical valve replacement

According to Edwards Lifesciences, the retail cost of the SAPIEN Transcatheter Heart Valve with the RetroFlex 3 Transfemoral System is $32,500. Three cost analyses for transcatheter aortic valve replacement in intermediate to high risk patients have been published. The first study compared actual data in matched patients in Europe. Both in-hospital costs (€40,802 versus €33354) and total costs at one year (€46,217 versus €35,511) were higher with TAVR than with SAVR, despite shorter hospital length of stay and lower costs for blood products with TAVR. The primary difference was the cost of the procedure (€28,785 versus €13,096). At current exchange rates, the difference in the procedure costs is approximately $20,330.

The second cost analysis assumed that the cost of TAVR and SAVR the same ($49,106) using data from the Healthcare Cost and Utilization Project. This study estimated the incremental cost effectiveness ratio was $52,773 per quality adjusted life-year.

Finally, the third cost analysis utilized data from the Partner A trial. Using actual cost and quality of life data from the trial, they estimated that the incremental cost effectiveness of TAVR was $76,877 per quality adjusted life-year. However the results varied dramatically by the approach used for the procedure. When the transfemoral approach was used, TAVR cost less through one year of follow-up and increased quality adjusted life years. The opposite was true for
patients who required treatment using the transapical approach: costs were higher and overall outcomes were worse (as measured by quality adjusted life-years).

These studies did not incorporate the capital cost required to build and operate the hybrid operating room / cardiac catheterization laboratory that is typically used for transcatheter valve procedures. The costs will vary based on the exact specifications of the hybrid operating room, but one recent example at an academic institution cost $3 million (http://www.cooperhealth.org/departments-programs/surgery/vascular-and-endovascular-surgery/hybrid-or-suite). The Advisory Board Company in a Technology Insights presentation estimated that the average investment cost for a hybrid operating room would be $3,617,500. (http://www.aameda.org/Conference/ACCA/ConfHandouts/documents/PreConIIIHybridOR2-per.pdf).

References:

