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CORRESPONDENCE

Letters to the Editor

Health-Related Quality of Life After Transcatheter Aortic Valve Replacement

With great interest we read the recent report by Reynolds et al. (1) reporting on the health-related quality-of-life (HRQOL) outcomes in Cohort A of the PARTNER (Placement of Aortic Transcatheter Valves) randomized controlled trial. Using 3 different standardized questionnaires at 1, 6, and 12 months, HRQOL was analyzed in a total of 628 patients with severe, symptomatic aortic valve stenosis at high surgical risk who were randomized to transcatheter aortic valve replacement (TAVR) via the transapical or transfemoral approach or to surgical aortic valve replacement (SAVR). Health status improved substantially between baseline and 1 year after both TAVR and SAVR. TAVR via the transfemoral but not the transapical route was associated with short-term advantages compared with surgery. Although evidence is accumulating that patients at high risk for SAVR undergoing TAVR derive HRQOL benefits, the investigators should be commended for this important study, because it represents the first randomized study investigating HRQOL dynamics after TAVR in comparison with SAVR, adding an important piece of evidence to the field.

We would greatly appreciate the investigators' comments on how New York Heart Association functional class developed over time. As long as valve function is durable, one would expect that functional benefits can be maintained in the longer term as well. However, data derived from Cohort B of the PARTNER trial and other studies suggest that functional status slightly worsens at 12 months (2–4). We concur with the investigators that the results of available studies encompass only a maximal follow-up period of 1 year, which may be too short. Therefore, the longer term dynamics of HRQOL changes in TAVR patients remain elusive.

Did the investigators attempt to evaluate and correlate HRQOL outcomes with New York Heart Association functional class or with any of the baseline characteristics? The identification of patient-related or procedure-related parameters predictive of the extent of HRQOL benefits would be highly desirable to facilitate better risk stratification and patient selection and to improve guidance of patient-centered clinical decision making. It has been observed that the extent of benefit seems to be inferior for patients with oxygen-dependent chronic obstructive pulmonary disease (2). Also, lower operator experience, female sex, and vascular complications have been reported to be independent predictors of lower HRQOL improvements at 1 year (3). In our prospective cohort, mitral valve regurgitation >I° was predictive of lower HRQOL improvements. Only at 3 months did this association reach statistical significance. Likewise, female sex was associated with less improvement at 3 months, corroborating the results described by Fairbairn et al. (3). Notably, we could not observe any association with Society of Thoracic Surgeons score or log European System for Cardiac Operative Risk Evaluation score, hemodynamic parameters, or comorbidities (4).

Larger patient numbers in conjunction with longer follow-up will be necessary to identify reliable patient-related and procedure-related factors predictive of the extent of HRQOL benefits and to answer the question of whether benefits are durable conclusively. In the future, it will be of interest to determine how HRQOL benefits compare between TAVR and SAVR in patients at lower surgical risk (5).

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Reply

We agree with many of the points raised in the letter by Dr. Deutsch and colleagues and appreciate their interest in our work. We have not as yet made any formal correlations between patient-level health status measures and New York Heart Associ-