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## Commentary: Age is just an element of the quality of life puzzle following aortic valve replacement

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In the current issue of the *Journal*, Blokzijl and colleagues<sup>1</sup> reported the impact of surgical aortic valve replacement (SAVR) on physical and mental quality of life in 899 patients. The association between age and health-related quality of life (HRQL) was explored, and, as expected, older patients were identified the most at risk of experiencing deterioration. The authors' analysis might be biased by the large number of nonrespondents (29% of patients), the merging of the Short Form-12 and Short Form-36 health status instrument values, and the relatively low-risk profile of these patients. Furthermore, a decrease in HRQL 1 year after surgery might be simply related to the natural course of advancing age.

The topic of quality of life is a crucial element in assessing the outcome after transcatheter aortic valve replacement (TAVR) or SAVR, although the great majority of studies discuss postoperative morbidity and survival benefits only.<sup>2,3</sup> The authors correctly commented that well-being and quality of life are likely to be valued more important than quantity of life in the elderly patients.<sup>1</sup>

We definitively agree that expectation on postoperative HRQL needs to be preoperatively emphasized and discussed with patients to tailor the proper procedure for them.<sup>1</sup> The simple reason is that HRQL is a key element of the TAVR and SAVR effectiveness. Should patients be candidates for TAVR only on the basis of HRQL? Or, is there a specific cohort of patients in whom TAVR should be preferred over SAVR? To answer to these questions,

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### CENTRAL MESSAGE

Advanced age is a key factor in influencing the health-related quality of life after surgical aortic valve replacement and may indicate the use of new and less-invasive treatment methods.

we are missing important parameters in the study of Blokzijl and colleagues.<sup>1</sup> Again, it would have been more appealing to analyze the impact of new and emerging surgical techniques, such as minimally invasive or sutureless approaches, on postoperative HRQL. A recent US investigational device exemption trial of a sutureless aortic bioprosthesis corroborates significant HRQL benefits at 1 year with the sutureless approach.<sup>4</sup> Minimally invasive approaches (mini-sternotomy or right thoracotomy) proved the same.<sup>5</sup> Finally, HRQL is impacted by postoperative complications, and SAVR-related complications, such as perioperative bleeding, postoperative acute kidney injury, atrial fibrillation, and stroke, are all associated with worse quality of life after open heart surgery.<sup>6,7</sup> In the Placement of Aortic Transcatheter Valves 2 (PARTNER 2) trial, when 30-day complications were considered, difference in quality of life between TAVR and TAVI disappeared.<sup>2</sup> Therefore, the relationship with patient age is only a piece of the puzzle in the understanding the impact of SAVR on HRQL. Certainly, in the present study, the authors have the merit to highlight the HRQL as valuable element in refining the decision making for patients affected by aortic valve disease.

Advanced age is a key factor in influencing the HRQL after SAVR and may indicate the use of new and less-invasive treatment methods. Further studies as the this are definitively deemed to clarify patient populations who would benefit the most from TAVR or SAVR.

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