

## Improved quality of life in 13.860 patients treated by surgical aortic valve replacement or transcatheter aortic valve implantation

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**Purpose:** Aortic valve disease (AVD) is the most common valvular heart disease predominantly in elderly patients. Surgical aortic valve replacement (SAVR) leads to a significant increase in long-term survival compared to untreated AVD. For patients treated by transcatheter aortic valve implantation (TAVI) mid- and long-term benefit still has to be verified. Beyond mortality and morbidity, assessment of health related quality-of-life (HrQoL) is of paramount importance not only to guide patient-centered clinical decision-making but also to judge a treatment modality.

**Methods:** In 2011, 13860 patients undergoing SAVR (w/o CABG) or TAVI (transapical (TAVI-TA) or transvascular (TAVI-TV)) were included in the German Aortic Valve Registry (GARY). The HrQoL was measured using the EuroQOL Five Dimension (EQ-5D-3L) questionnaire preoperative and 12 months postoperative. Evaluated dimensions are mobility, self-care, usual activity, pain/discomfort and anxiety/depression. Each dimension is classified in 3 levels whereas level 1 means no complains and level 2 or 3 mean mild or severe complains, respectively. In addition, a visual analogue scale (VAS; 0-100%) for self-rating general health status was used. The 1-year follow up for HrQoL was completed in 10626 (75,2%) patients.

**Results:** One-year mortality of the whole study population was 12,5% (SAVR: 6,7%; SAVR+CABG: 9,5%; TAVI-TV: 21,0%; TAVI-TA: 27,8%). 2,3,% of included patients denied follow up, 6,6% were alive but did not respond and 1,9% were lost at one-year follow up. Overall baseline mean VAS score for general health status was 61,0%±20,5% and improved to 66,4%±20,2% 1-year after treatment. For the whole study population improvement for patient dependent HrQoL reflected by relative changes in level 1 of the five dimensions between baseline and 1-year follow-up were for mobility 7,9% (baseline:57,2%, one-year FU: 65,1%), self care 0,9% (baseline:85,2%, one-year FU: 86,1%), usual activity 14,7% (baseline:60,0%, one-year FU: 74,7%), pain/discomfort 0,9% (baseline:46,4%, one-yearFU: 47,3%) and anxiety/depression 1,3% (baseline:70,0%, one-year FU: 71,3%). The improved relative changes within the 5 dimensions were persistent in all four subgroups except self care for SAVR+CABG and TAVI-TA as well as anxiety/depression for TAVI-TA.

**Conclusion:** Treatment of AVD either by SAVR or by TAVI leads to an improved HrQoL in all dimensions of the EQ-5D 1-year postoperative. Most substantial changes were found for mobility and usual activity whereas only minor changes were found for self care, pain/discomfort and anxiety/depression.