

# TAVI improves quality of life in patients with severe aortic stenosis for at least 1 year

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Transcatheter aortic valve implantation (TAVI) leads to meaningful improvements in health-related quality of life in patients with severe aortic stenosis that are maintained for at least 1 year, according to a study presented at ESC Congress 2012. The results from the German transcatheter aortic valve interventions registry were presented by Professor Till Neumann, MD, from Essen, Germany.

Aortic stenosis is the most common [valvular heart disease](#) with increasing incidence especially with regard to the ageing of the population. Today, the prevalence of aortic stenosis is estimated at about 2.5% of 75 year olds and 8.1% of people aged 85 years.

TAVI, introduced in 2002 by Dr Alain Cribier from France and 2005 by Dr John Webb from Canada, has been shown to improve survival compared with standard therapy in patients with [severe aortic stenosis](#) who cannot have surgery. In particular, older patients with aortic stenosis cannot always be offered conventional surgical [aortic valve replacement](#) at an acceptable risk. As a consequence, about 30% of these patients are presently not operated. Therefore TAVI is currently an [alternative treatment](#) option.

The prospective multicentre German transcatheter aortic valve interventions registry includes patients with symptomatic, severe aortic stenosis since January 2009. "The registry was designed to monitor current use and outcome of transcatheter aortic valve interventions, including TAVI, in daily clinical routine, and to evaluate safety,

effectiveness and health [economic data](#)," said Professor Neumann. "Therefore, the registry gives insight into a real world setting of using the TAVI procedure."

Health-related [quality of life](#) was assessed at baseline, at 30 days and 12 months with the EQ-5D questionnaire, a prominent instrument to measure health-related quality of life. The study used quality of life data for a total of 415 patients who survived 12 months after TAVI (average [age](#)  $81.9 \pm 5.9$  years; men 37.3%). At 12 months, TAVI patients reported improvements with regard to each single dimension of the EQ-5D. In particular the distribution of the three levels (no problems, some problems, extreme problems) changed with regard to usual activities (see figure 1) and discomfort (see figure 2) after 12 months.

For usual activities, the proportion of patients with no problems rose from 17.5% to 48.6%, with some problems decreased from 72.5% to 39.7%, and with extreme problems increased slightly from 10.1% to 11.7%. For discomfort, the proportion of patients with no problems rose from 22.7% to 61.9%, with some problems decreased from 69.1% to 33.3%, and with extreme problems decreased from 8.3% to 4.8%. Professor Neumann said: "Patients gain improvements in their usual activities and feel more comfortable."

He added: "One of the main findings of our study is a remarkable increase in patients' self-ratings of quality of life after TAVI." Scores on the visual analogue health scale (EQ VAS), which records the patient's self-rated health on a vertical, visual analogue scale, significantly improved from a mean value of  $44.7\% \pm 16.5$  at baseline to  $62.9\% \pm 17.4$  at 30 days. However, even more important was the fact that this benefit in quality of life was sustained, as indicated by the patient's self-rated health status after one year ( $65.1\% \pm 20.6$ ; see figure 3).

"Our results demonstrate that the minimal invasive procedure of TAVI

does not only save lives but also leads to a remarkable improvement in health-related quality of life in a real world setting," said Professor Neumann. "This benefit in quality of life lasts for a long time period."

He continued: "Patients with severe aortic stenosis can profit from TAVI – the gain in health-related quality of life confirms this. Our findings regarding quality of life could give further impetus to the argument for performing TAVI in older patients with severe aortic stenosis."

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