

## Gender-specific differences and hospital outcomes in patients undergoing transcatheter aortic valve implantation and conventional surgery: results from the German aortic valve registry

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**Background:** Transcatheter aortic valve implantation (TAVI) appears to be an effective alternative to conventional aortic valve replacement (AVR) for the treatment of aortic stenosis in surgical high-risk patients. However, gender differences in patients treated with TAVI or conventional aortic valve replacement (AVR) have been poorly investigated.

**Methods:** From 2011 to 2012, 30,292 consecutive patients undergoing repair for aortic valve disease were prospectively enrolled into German Aortic Valve Registry (GARY). For the present analysis patients were divided into four categories: females treated with TAVI or AVR and males treated with TAVI or AVR.

**Results:** Female patients had a comparable general health status, but were older and more likely to be treated with TAVI than male patients (table). Among those with AVR, concomitant coronary bypass surgery was more often performed in male patients (38.8 versus 28.2%). In the TAVI group the transfemoral access route was more frequently used among females (72.2 versus 63.3%). The rate of TIA/stroke was similar in all groups, but significant aortic regurgitation ( $\geq$  II°) and vascular complications were more often observed in the TAVI cohort. The incidence of in-hospital death was lowest in male patients with AVR, followed by female patients with AVR and both TAVI groups.

**Conclusions:** Female patients undergoing repair for aortic valve disease were older and more likely to be treated with TAVI in comparison to their male counterparts. In-hospital mortality was higher in female patients treated with AVR, whereas mortality rates were similar in both groups treated with TAVI.

	Female AVR	Male AVR	Female TAVI	Male TAVI
	N=7,395	N=13,626	N=5,118	N=4,153
Age (mean)	71.9 yrs.	68.4 yrs.	82.0 yrs.	79.7 yrs.
ASA $\geq$ 3	85.3%	84.7%	90.8%	90.1%
Residual insufficiency $\geq$ 2°	0.4%	0.4%	5.0%	7.2%
TIA/stroke	2.9%	2.5%	3.3%	2.5%
Vascular complications	1.3%	1.1%	10.4%	6.7%
Hospital mortality	3.8%	2.6%	5.3%	5.3%