

# Characteristics and Outcomes of Patients With Severe Aortic Stenosis Discussed by the Multidisciplinary “Heart Team” According to Treatment Allocation

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Period of study: Discussions by Auckland City Hospital MHT from June 2011 to August 2016

## Objectives

- Review the characteristics, treatments, and outcomes of patients with severe aortic valve disease being considered for transcatheter aortic valve implantation (TAVI), compared to those allocated to surgical aortic valve replacement (SAVR) and medical therapy (MT); and those discussed by the multidisciplinary “Heart Team” at Auckland City Hospital.

## Study design

- Single-centre, retrospective, observational study.

## Materials and methods

- 243 patients (mean age  $80.2 \pm 8.0$ ; 60% male, 40% female): 200 allocated to TAVI, 26 to SAVR, and 17 to MT.
- Patients were presented at the regional cardiosurgical conference and accepted for SAVR to ensure only operable patients were considered for TAVI.
- The Heart Team discussions occurred either 2-weekly or monthly, and were attended by presenting, interventional (at least two) and imaging cardiologists, cardiac surgeons, anaesthetists, cardiovascular intensivists, geriatricians and TAVI nurse co-ordinators.
- Characteristics and outcomes were obtained from clinical records and documented in the Heart Team meeting minutes and the EuroSCORE II was calculated for all patients.

## Key results

- Mean survival time was the primary outcome and was similar for TAVI and SAVR, both being significantly longer than MT (93% (n = 162), 84% (n = 21) and 73% (n = 18) at 1 year and 85% (n = 149), 84% (n = 21) and 54% (n = 13) at 2 years, respectively).
- Over 5-year study period EuroSCORE II significantly decreased for both TAVI and SAVR, but there was no significant change in age indicating a reduction in comorbidities.
- The number of patients discussed by the Heart Team is increasing, thereby furthering understanding and experience of TAVI and widening the indications from high- to intermediate-risk patients, and likely to low-risk in the future.
- The increased offering of TAVI by the Heart Team is appropriate and effective, as the 82% of patients deemed operable present desirable survival rates at 1- and 2-year follow-ups.

## Limitations

- The sample was relatively small for both TAVI and SAVR, mean follow-up duration was only 2-years, and the single-arm cohort design limits comparison of those going through the Heart Team and those who did not.
- Lacks broader information to give enhanced analyses including operative complications, quality of life, frailty, and post-procedural days in intensive care and hospital.

## Conclusions

- TAVI and SAVR had survival comparable to general population, whereas patient outcomes on MT were far worse.
- The majority (82%) of increased-risk patients discussed at Heart Team were recommended for TAVI; this number is slowly increasing with time.
- Results lend support to Auckland MHT process, highlighting its appropriateness for allocating patients to treatment groups.