Evidence for Transcatheter Aortic Valve Implantation (TAVI) including in intermediate risk patients

Inoperable patients
The first Partner randomized trial, in inoperable patients, showed superior survival in patients treated with TAVI compared with standard medical management.¹

High risk patients
Subsequent trials in high risk, but operable, patients, showed that TAVI had superior survival and a lower incidence of stroke, compared with conventional aortic valve surgery.²

Intermediate risk patients
Intermediate risk patients (STS-PROM score 5.8±2.1%) in the trans-femoral TAVI cohort of the Partner 2 trial (with the Sapien XT valve) had significantly better survival and a significantly lower stroke risk than the patients treated by surgical AVR.³

In the SURTAVI trial of intermediate risk (STS 4.5±1.6%) patients randomized either to TAVI with the Medtronic CoreValve (or Evolut R) or surgical aortic valve replacement, TAVI was non-inferior for the primary endpoint of death or disabling stroke at 2 years.

Advantages of TAVI over surgical AVR in addition to mortality and stroke
TAVI is less invasive, is usually performed under local anaesthesia, has less acute kidney injury, less atrial fibrillation and a shorter hospital stay.

Valve durability
Valve durability is being studied but appears similar to surgical tissue valves. Five-year follow-up of TAVI patients in the Partner 1 trial showed no evidence of valve deterioration.⁴ Some argue that if a surgeon felt that a tissue valve were suitable in a given patient, then from the durability point of view, TAVI would be appropriate.

Sapien S3 TAVI valve
At Mercy Angiography, we use the Sapien S3 balloon-expandable valve because of its low incidence of paravalvular leak and infrequent need for subsequent pacemaker implantation compared with self-expanding valves.
Risk and the STS-PROM score

Risk is defined by the STS-PROM score and input from ‘the Heart Team’. Intermediate risk is defined as an STS ≥ 4% and <8%. There are STS score is designed for surgical patients and has limitations for TAVI risk assessment. To access the STS-PROM risk calculator on-line, type ‘STS-PROM risk calculator’ into your search engine, e.g. Google.

Southern Cross will reimburse intermediate risk patients with an STS-PROM score of ≥4% or ≥3% with a major co-morbidity.

Mercy Angiography ‘Heart Team’ is made up of cardiologists, a cardiothoracic surgeon and a cardiac anaesthetist. To fulfil Southern Cross Eligibility criteria for TAVI funding, the Heart Team must agree on suitability and this must be documented.

We are happy to discuss any patient with regard to potential suitability for TAVI especially as there is the potential to negotiate with funders.


