

2. Compare intra-operative versus CT scans for sizing of the valve

The CT-measured aortic annulus diameter, assessed as the calculated average diameter of planimetric annulus area, seems to provide adequate dimensions similar to operative measurements with a Hegar dilator. This approach may minimize the dependency of single-view CT measurement on the elliptic shape of the aortic annulus and appears to be a feasible alternative for aortic annulus assessment in terms of candidates' selection for transcatheter aortic valve replacement.

-- Preoperative assessment of aortic annulus dimensions: comparison of noninvasive and intraoperative measurement.

- already found an article from PubMed (NCBI): “Aortic valve annular sizing: intraoperative assessment versus preoperative multidetector computed tomography”. George I, et al. Circ Cardiovasc Imaging. 2017.

9. How can you blow up the balloon slowly in increments? (Don't want to inflate too quickly and hurt the heart valve).

Balloon-expanding stent and delivery system for transcatheter aortic valve implantation: An animal study

Most of the currently available prostheses employ either balloon-expandable or self-expandable designs.

--Balloon- Or Self-Expandable TAVI: Clinical Equipoise?

11. What is the technology behind the existing CoreValve that is available right now?

Supra -annular Valve Position

The supra-annular leaflet position optimizes orifice area and flow while preserving circularity and optimal coaptation.

Self-Expanding Nitinol Frame

The self-expanding Nitinol frame conforms and seals to the non-circular annulus. The Evolut R System has a low rate of moderate and severe PVL.