METHODS Six-hundred-eighty-four consecutive patients with severe aortic stenosis who underwent TAVI in our institution between 2012 and 2014 with available pre-procedural MSCT were included. For adjudication of the leaflet phenotype, diastolic (70%) and systolic (30%) reconstructions were used. Genuine BAV was diagnosed according to Sievers et al. (type 0: purely bileaflet; type 1: trileaflet anlage, 1 raphe; type 2: trileaflet anlage, 2 raphes). Functional BAV was defined as tricuspid configuration with symmetric geometry of all three cusps and commissures in diastole - assuming a trileaflet anlage - and bicuspid configuration during systole unmasking a fusion of two adjacent cusps. Device success according to VARC II criteria was compared between BAV and non-BAV patients.

RESULTS Mean age was 82.2± 5.9 years, logistic Euro score was 24.3± 12.2%, and 54.2% were female. With echocardiography only 15 (2.1%) patients were present in 13 (1.9%) patients. The overall incidence of functional BAV was 11.3% vs. 3.2%; p<0.001. However, the rate of device-related procedural complications including device malpositioning, embolization and/or valve-in-valve implantation, was significantly higher in the BAV-group (11.2% vs. 3.2%; p = 0.01).

CONCLUSION MSCT facilitates the identification and classification of genuine or functional BAV in TAVI patients.

METHODS A prospective study involving 58 patients of mitral stenosis having New York Heart Association (NYHA) II-IV class symptoms was done. Patients with favorable valve morphology (Wilkin’s score<10) were selected for PTMC. Echocardiographic evaluation and PFT were done before and 7 days after PTMC and compared using paired student’s T test and correlation between variables were established with Pearson’s correlation analysis.

RESULTS Two patients died from procedural complication. Others showed significant improvement in symptoms and hemodynamic measurements after successful PTMC.

Before PTMC, 19 patients (33.9%) were in NYHA class III, 36 patients (64.3%) were in class II. After PTMC, majorities (37 patients, 66.1%) were switched over to NYHA class I and remaining 18 patients (32.1%) were in class II. Pulmonary artery systolic pressure did not show any correlation with forced vital capacity.