included (78 (57%) in the Ross group and 58 (17%) in the AVR group). Using a 1:1 propensity score match analysis, 82 Ross patients and 82 mechanical AVR patients were included in the study. Mean age of the cohort was 48±11 years and Euroscore II was 1.1%±0.6%. Perioperative outcomes were defined according to STS guidelines.

**RESULTS:** The mean cardiopulmonary bypass and crossclamp time were higher in the Ross cohort (210 and 185 min vs 82 and 62 min respectively; $p<0.001$). There were no mortalities in the two groups. There were no differences in the rates neurological complications (0.6% overall). A significant increase in serum creatinine was more commonly observed after the Ross procedure (11% versus 0%; $p=0.003$), but there was no significant difference in the rate of temporary dialysis (p=0.25). There was no significant difference in permanent pacemaker implantation following mechanical AVR implantation compared to the Ross group (4.9% versus 0%; p=0.1). Three (3.7%) reinterventions for bleeding were reported in the Ross cohort and 4 (4.9%) in the mechanical AVR cohort (p>0.99). Thirty patients (37%) required ≥1 blood product transfusion in the Ross group compared to 26 patients (32%) in the mechanical AVR group (p=0.5). There were no differences in other perioperative complications between groups. Median hospital length of stay was similar in both groups (6 days in each group; p=0.99).

**CONCLUSION:** There are no differences in perioperative mortality, neurological complications, hospital length of stay, reoperation or blood transfusion requirements between Ross procedure and mechanical AVR recipients in this propensity-matched analysis. However, there is a higher risk of acute renal injury after a Ross procedure.

## 341
## RESULTS OF SURGICAL AORTIC VALVE REPLACEMENT IN OCTOGENARIANS TURNED DOWN FOR TRANS-CATHETER AORTIC VALVE REPLACEMENT BY THE MULTIDISCIPLINARY HEART TEAM

**S Mohammadi, E Dumont, J Rodes-Cabau, P Voisine, D Doyle, E Charbonneau, F Dagenais, D Kalavrouziotis**

***Québec City, Québec***

**OBJECTIVES:** In the era of trans-catheter aortic valve replacement (TAVR), the optimal approach to treatment of octogenarians with severe aortic stenosis is unknown. Our objective was to evaluate the outcomes of octogenarians referred for TAVR who were ultimately turned down by the multidisciplinary heart team and who subsequently underwent surgical aortic valve replacement (SAVR).

**METHODS:** Between May 2007 and March 2015, 459 octogenarians were referred to the multidisciplinary heart team for a potential TAVR. A total of 320 octogenarians (69.7%) were accepted for TAVR and 139 (30.3%) were refused for TAVR. Among the latter group, 52 patients were assigned to goal-directed medical treatment, and 87 patients were assigned to SAVR (group A). This group of patients was compared to a cohort of octogenarians (n= 467) who underwent SAVR during the same period of time, without prior multidisciplinary heart team evaluation (group B).

**RESULTS:** Mean age was higher in group A compared to group B patients (84.5±3.0 vs. 82.5±2.3, p=0.0001, respectively). A higher percentage of group A patients were female compared to group B (55.2% vs. 43.7%, p<0.05, respectively). Mean Society of Thoracic Surgeons (STS) score (4.2±1.6 in group A versus 4.1±1.8 in group B, p=0.52) and logistic EuroSCORE (15.3±9.2 in group A versus 14.5±10.7 in group B, p=0.49) were similar in both groups. Group B octogenarians had a higher incidence of post-operative prolonged ventilation more than 48 hours (5.6% vs. 0%, p=0.02), pulmonary infection (11.4% vs. 4.6%, p<0.05), and low cardiac output syndrome (8.6% vs. 2.3%, p<0.05) when compared to group A. In-hospital mortality was also significantly higher in group B compared to group A octogenarians (5.4% vs. 0%, p=0.02).

**CONCLUSION:** Patients aged 80 years and over referred for TAVR but re-directed to SAVR by the multidisciplinary heart team have excellent early outcomes which are superior to those octogenarians undergoing SAVR who did not undergo preoperative evaluation by the heart team. Among octogenarians referred for TAVR, surgical risk is over-estimated by contemporary risk models.

## 342
## PRE-OPERATIVE INTRA-AORTIC BALLOON PUMP (IABP) DECREASES MORTALITY AND MAJOR ADVERSE CARDIOVASCULAR AND CEREBROVASCULAR EVENTS (MACCE) IN HIGH-RISK CORONARY ARTERY BYPASS (CABG) PATIENTS

**PP Rampersad, R Zawi, CB Overgaard, M Ouzounian, V Sharma, V Rao, ME Farkouh, JA Udell, V Džavík**

***Toronto, Ontario***

**BACKGROUND:** Despite widespread clinical use, evidence to support pre-emptive intra-aortic balloon pump (IABP) insertion for high-risk coronary artery bypass graft (CABG) surgery patients is sparse. We sought to meta-analyze cardiovascular outcomes in randomized controlled trials (RCTs) of anticipatory IABP-use versus control in high-risk CABG patients. The primary endpoint was all-cause mortality within 30-days of surgery. The secondary endpoint was major adverse cardiac and cerebrovascular events (MACCE), a composite of death, myocardial infarction, stroke, or repeat revascularization.

**METHODS AND RESULTS:** Using Ovid MEDLINE, we systematically reviewed and identified all RCTs comparing pre-operative IABP with control in high-risk adult CABG patients, defined as: left-ventricular ejection fraction (LVEF)