Factors Predicting Prolonged Hospital Stay After TAVI
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Background: Transcatheter aortic valve implantation (TAVI) has become a valuable alternative to aortic valve replacement (AVR) for surgical high-risk patients with severe aortic stenosis. Due to technical improvements and increased operator experience the valve implantation success has become very high. Nevertheless, the post procedural recovery in these elderly patients is often prolonged. We aimed to evaluate clinical and demographic predictors of a prolonged hospital stay in patients undergoing TAVI.

Methods: We included 187 consecutive patients with severe aortic stenosis who underwent TAVI. The valve was implanted by transfemoral technic in 160 (85.6%) CoreValve and 27 (14.4%) Edwards SAPIEN prostheses. Logistic regression analysis was used to determine the factors affecting length of stay longer than median.

Results: Median of length of stay was 7 days. Pulmonary hypertension above 60 mmHg, prior ischemic stroke, EuroSCORE II above median (5.3%) and previous cardiac surgery did not have significant influence on the length of hospital stay (LOS). The following parameters could be identified as predictors of a hospital stay > 7 days (table 1).

Conclusion: Age above 85, STS Score above median (5.6%), female gender, state of chronic renal failure ≥ 3, logistic EuroSCORE above median (14.7%) are associated with an increased risk of a longer hospital stay after TAVI. Independent predicting risk factors are only the STS Score above median (5.6%) and the age above 85.

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#### Table 1. Predictors of LOS > 7 days

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Odds ratio</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Chronic renal failure ≥ 3</td>
<td>1.9</td>
<td>1.1-3.5</td>
<td>0.03</td>
</tr>
<tr>
<td>STS-Score ≥ median (5.6%)</td>
<td>2.5</td>
<td>1.4-4.5</td>
<td>0.003</td>
</tr>
<tr>
<td>EuroSCORE Log ≥ median (14.7%)</td>
<td>1.9</td>
<td>1.1-3.4</td>
<td>0.03</td>
</tr>
<tr>
<td>Age &gt; 85</td>
<td>2.6</td>
<td>1.3-5.5</td>
<td>0.01</td>
</tr>
<tr>
<td>Female Gender</td>
<td>2.0</td>
<td>1.1-3.6</td>
<td>0.03</td>
</tr>
</tbody>
</table>

### CRT-135

Transcatheter Aortic Valve Implantation Has Simplified Surgical Treatment Of Sever Aortic Valve Stenosis In Elderly High Risk Patients With Previous Cardiac Surgery: A Propensity Analysis
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Objectives: The aim of this study was to compare surgical outcome of patients with previous cardiac surgery undergoing transcatheter aortic valve implantation (Redo-TAVI) to those undergoing classic aortic valve replacement (Redo-AVR) by using propensity analysis.

Background: TAVI has been suggested as an alternative to surgery in elderly patients considered inoperable or high risk for surgical aortic valve replacement.

Methods: From January 2005 through May 2012, 52 high-risk patients underwent Redo-TAVI using a percutaneous stent graft fixed within a stainless steel, balloon-expandable stent (Edwards SAPENTM). During the same period of time 167 patients underwent classic Redo-AVR. Logistic regression analysis was used to identify covariates among 10 baseline patient variables including the type of initial surgery. Using the significant regression coefficients, each patient’s propensity score was calculated, allowing selectively matched subgroups of 40 patients each. Initial surgery included CABB in 29 patients and valve surgery in 11 patients in each group. Operative outcomes were analyzed for differences. Follow-up was 4±2 years and 100% complete.

Results: Postoperative chest tube drainage (163±214 vs 562±323 ml/24h; p=0.02), incidence of permanent postoperative neurologic events (0 vs 13%; p=0.012) and 30 day mortality (10 vs 20%; p=0.046) was lower in patients with Redo-TAVI as compared to Redo-AVR. There was a trend towards a decreased ventilation time and need of transfusion of packed red blood cell concentrates in the Redo-TAVI group (p=0.079).

Conclusion: Despite the limited number of patients, current data suggest a faster postoperative recovery and reduced perioperative morbidity and mortality with Redo-TAVI as compared to classic Redo-AVR. This evolving approach has reduced surgical trauma and may be particularly applicable to elderly high risk patients with previous cardiac surgery.

### CRT-136

Long-Term Results Following Transcatheter Aortic Valve Replacement (TAVR)
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Background and Aim: TAVR is an emerging technique for the treatment of severe symptomatic aortic stenosis (AS). Few data reported the long-term outcomes of patients undergoing TAVR. Thus, we aimed to focus on the prolonged results of the TAVR procedure.

Methods: We analyzed the outcomes of 190 TAVR treated patients that were followed up to 3 years. All patients were at very high risk for surgical valve replacement. The Medtronic-CoreValve device was utilized in 64.2% and the Edwards-SAPIEN device in 35.7% of patients. The primary end point was death from any cause during follow up.

Results: The mean (±SD) patient age was 82±5.7 years (60.5% female). Procedural success rate (per VARC) was 96.8%. At 30 days, all-cause mortality was 3.1% and stroke rates 3.7%. Two years follow up was obtained in 112 patients. All-cause mortality was recorded in 13.6% of treated patients (4.2% cardiac mortality). No significant differences in mortality were found when angioplasty was performed prior or during TAVR compared to TAVR alone. Multivariate analysis showed that increased baseline creatinine (HR 1.47; 95% CI 0.92-2.34; p=0.099) and increased LogEuroSCORE (HR 1.03; 95% CI 1.01-1.07; p=0.017) predicted all-cause mortality.

Conclusion: According to our clinical experiences, the long-term prognosis of ‘all comers’ TAVR patients is favorable.