| Clinical events after 2 years follow-up | |
|---|---|
| Composite of cardiac death, myocardial infarction or stroke | 11 (5,5%) |
| Death from any cause - Cardiac | 9 (4,5%) 5 (2,5%) |
| Stroke - Ischemic - Hemorrhagic | 2 (1,0%) 1 (0,5%) 1 (0,5%) |
| All myocardial infarction - Non Q-wave - Q-wave - Fatal | 6 (3,0%) 3 (1,5%) 3 (1,5%) 1 (0,5%) |
| Definitive scaffold thrombosis | 6 (3,0%) |
| Restenosis | 14 (7,0%) |

**CONCLUSION** In our single-center observational study, the incidence of clinical events, restenosis and definitive scaffold thrombosis after 2 years follow-up is concordant with those reported in large randomized clinical trials. Our results support the efficacy and safety of Absorb scaffold in non-selective patients treated with this device in daily clinical practice.

**CATEGORIES CORONARY:** Stents: Bioresorbable Vascular Scaffolds

## TCT-849

### In-stent restenosis treated with everolimus-eluting bioresorbable scaffold: 1-year angiographic results

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**BACKGROUND** In-stent restenosis (ISR) constitutes a main cause of percutaneous coronary treatment failure and target vessel revascularization. Currently, the use of either drug-eluting stent (DES) or drug-coated balloon is recommended in this setting. Nevertheless, ISR lesions treated with any of both options have worse results compared with treatment of de novo lesions. Everolimus-eluting bioresorbable scaffold (BRS) is a potential alternative for ISR treatment. We aim to evaluate 1-year angiographic results after everolimus-eluting BRS implantation for ISR treatment.

**METHODS** Prospective observational study. Consecutive patients with ISR coronary lesions treated with BRS implantation were included. Target lesion failure (TLF) was defined as composite of cardiac death, target-vessel myocardial infarction or ischemia-driven target-lesion revascularization. Quantitative coronary analysis (QCA) of angiograms was performed by external imaging core laboratory.

**RESULTS** From June 2013 to December 2015, a total of 56 ISR lesions in 53 patients were treated with BRS implantation (mean age of 64±10 years, 26% female, 38% diabetics. Among all lesions, 43% were ISR of DES, 18% were recalcitrant ISR, 48% had diffuse ISR pattern and 70% were B2/C. Baseline reference vessel diameter by QCA was 2.47±0.58 mm. All lesions were predilated (52% of cutting balloon dilatation). Mean diameter of BRS was 3.0±0.4 mm (23% BRS had 2.5 mm nominal diameter) with mean length of 21.2±6.4 mm. Post-dilatation with non-compliant balloon was performed in 86% lesions at 21±5 atmospheres. Successful PCI was achieved in 100%, with in-segment acute gain of 0.81±0.47 mm and residual diameter stenosis of 21.3±10.5%. Angiographic follow-up at 1 year was performed in 48 patients (51 lesions, 91%). In-segment late loss was 0.23±0.38 mm and diameter stenosis 28.2±14.7%. One-year TLF rate was 11.3%, 2 patients (3.8%) had cardiac death and 4 patients (7.5%) underwent target lesion revascularization for binary restenosis. Scaffold thrombosis rate was 1.9% (1 patient with probable late thrombosis).

**CONCLUSION** In our study, BRS implantation for ISR treatment was safe and it was associated with favorable angiographic outcomes at 1-year follow-up.

**CATEGORIES CORONARY:** Stents: Bioresorbable Vascular Scaffolds

## TCT-850

### Side Branch Access Evaluation of Metallic Drug Eluting Stents

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**BACKGROUND** Stent design can influence side branch access as well as the side branch opening achieved. A new methodology was developed to compute the probability of a device crossing through the stent cell without strut interference. In addition, bench testing was performed to evaluate the side branch opening that can be achieved.

**METHODS** Side branch accessibility of metallic coronary stents were evaluated for 3.0 mm devices expanded to nominal (n=5 each): Abbott XIENCE Alpine, Boston Scientific SYNERGY MONORAIL, BIOSENSORS BioFreedom, BRAUN Coroflex ISAR, BIOTRONIK Orsiro, Medtronic Resolute Onyx, and TERUMO Ultimaster. Side branch accessibility was defined as the probability of a side branch being accessed by a device without stent strut interference. Digitized scans of deployed stents were analyzed using simulated access devices of different diameters to compute the probability of side branch access as a function of side branch device profile. A bench study was performed to measure geometric attributes associated with a stent cell expanded for side branch access.

**RESULTS** Statistical analysis showed that with a 0.014" device, BioFreedom (49.5±0.6%) had the highest side branch accessibility, followed by Alpine (44.3±0.4%) and Synergy (43.8±2.5%, $p<0.05$). Ultimaster (39.0±2.4%), Coroflex (33.8±0.7%), Onyx (31.9±0.9%) and Orsiro (32.8±1.3%), had lower side branch accessibility. In addition, for side branch expansion diameters less than the nominal diameter, the maximum circular side branch diameter of Ultimaster (1.47±0.07mm), Coroflex (1.38±0.10mm), Onyx (1.45±0.10mm), and Synergy (1.46±0.04mm) were statistically smaller diameter than Orsiro (1.78±0.16mm), Alpine (1.74±0.06mm), and BioFreedom (1.76±0.14mm).

**CONCLUSION** BioFreedom, Xience Alpine, and Synergy had the overall lowest strut interference during side branch access. Xience Alpine, BioFreedom, and Orsiro achieved higher side branch diameter with balloon dilation of the stent cell compared to other stents. Combining the two metrics into an overall side branch accessibility results in Xience Alpine and BioFreedom exhibiting the best performance for side branch access. Study performed at and funded by Abbott Vascular, Santa Clara.

**CATEGORIES CORONARY:** Stents: Drug-Eluting

## TCT-851

### Impact of Same-day Discharge on Cost of Hospitalization After Uncomplicated Elective Percutaneous Coronary Interventions: Results from a Nationwide Real-world Registry

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**BACKGROUND** Impact of same-day discharge (SDD) on cost of hospitalization following elective percutaneous coronary interventions (PCI) is unclear.

**METHODS** Nationwide Inpatient Sample data files from 2003 to 2014 were used to extract adult patients (age > 18 years) who underwent elective PCI. Patients who developed major complications (acute stroke, gastrointestinal bleeding, acute kidney injury, cardiac arrest, cardiogenic shock, vascular complications, and in-hospital mortality) after PCI were excluded to identify those with uncomplicated hospital stay. Patients who were discharged on the same day after the procedure were identified if their length of hospitalization was zero days. Propensity score matched analysis was performed to adjust for baseline characteristics between SDD and non-SDD groups. Linear regression model was used to assess the effect of SDD on cost of hospitalization.

**RESULTS** Of 370,161 uncomplicated elective PCI procedures, 3,475 patients (0.9%) were discharged on the same day after the procedure. After adjusting for the differences in baseline characteristics, 5,222 uncomplicated PCIs were identified, of which 2,611 patients were discharged on the same day following the procedure and 2,611 patients were not discharged on the same day. SDD was associated with a significant reduction in cost of hospitalization (cost difference ($) = -5,678; 95% CI = - 2,681 to - 5,501; P=0.0005).

**CONCLUSION** SDD is associated with a significant reduction in cost of hospitalization following uncomplicated elective PCI.

**CATEGORIES OTHER:** Cost-Effectiveness and Reimbursement Issues