Potential drugs for vascular delivery have variable kinetic release requirements. Some first generation drug eluting stents have used non-erodable polymers and fixed kinetics, which may be responsible for late malapposition and restenosis. Biodegradable polymers positioned within the volume of a stent strut may be metabolized without tissue toxicity or malapposition. We evaluated configurations of the Conor stent with altering polymer volumes and degradation rates for restenosis and tissue toxicity.

Methods and Results: The Conor stent has honeycomb metallic strut elements that contain automated programmable initial layers of biodegradable Poly-l-lactic acid (PLGA). Degradation rates were manipulated by altering the PLGA comonomer ratio and molecular weight. Three low volume PLGA groups with different in-vitro degradation rates (21 to 180 days), one high volume PLGA group (21 days), and bare metal stent controls were randomly implanted in porcine coronary arteries. Arterial segments were selected to achieve a balloon to artery ratio 1.5-1.2:1. All methods and results are volume dependent. PLGA degradation rates are controllable but very less than predicted and could decrease the neointimal hyperplasia at 6 weeks follow-up compared to bare metal stent control.

Conclusion: These co-PEA polymer stent coating showed a biocompatible performance and could decrease the neointimal hyperplasia at 6 weeks follow-up compared to bare metal stents. Loading of the polymer with nitroxyl groups could further suppress the neointimal formation.
enosis, TVR and MACE were similar. Versus 14%; \(p = 0.99\) and MACE (20% versus 16%; \(p = 0.79\) occurred similarly. Focal and diffuse restenosis were similar. Conclusions: We can conclude: 1) a-SiC:H coating did reduce the deposition of fibrin, platelets and leukocytes over the stent, improving hemocompatibility and biocompatibility. Thus, a-SiC:H coated stents can reduce intimal hyperplasia and restenosis. Methods: We conducted a prospective, randomized, open label and single center trial to compare the performance of a a-SiC:H coated stent with a bare stent in patients with stable and unstable coronary artery disease. We included 100 patients/50 patients in each group, and the primary end point was in-stent volume of intimal hyperplasia (IVH) measured by IVUS. Baseline stent length was not identical we assessed absolute (per patient) and relative (divided per mm of stent length) IVH. Secondary end points included binary restenosis rate, minimal luminal diameter, TVR and MACE at six months follow-up. Angiographic patterns of restenosis were classified as discrete, in-stent, TVR and target site revascularization.

**1150-184 Randomized Intravascular Ultrasound Comparison Between Patients That Underwent Amorphous Hydrogenated Silicon-Carbide-Coated Stent Deployment Versus Uncoated Stents**

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**Background:** In-stent restenosis remains the main limitation of percutaneous coronary revascularization. Amorphous hydrogenated silicon-carbide (a-SiC:H). 10 has been shown to reduce the deposition of fibrin, platelets and leukocytes over the stent, improving hemocompatibility and biocompatibility. Thus, a-SiC:H coated stents can reduce intimal hyperplasia and restenosis. Results: Twenty of 25 (100%) bifurcation stents were successfully implanted in the right coronary arteries of 13 juvenile normolipemic swine in straight (n = 17) or bifurcation (n = 12). Sacrification was performed after 3 weeks. The Cross Section Area (CSA) of the neointima was measured by histomorphometric analysis. Conclusions: Results: 62 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 13 months with a mean of two months. Of the 16 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of an event and RVP based on Cox proportional hazards regression. Results: 82 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 12 months with a mean of two months. Of the 18 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of an event and RVP based on Cox proportional hazards regression. Results: 82 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 12 months with a mean of two months. Of the 18 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of a HF-related event and the mean RVP based on Cox proportional hazards regression. Results: 82 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 12 months with a mean of two months. Of the 18 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of an event and RVP based on Cox proportional hazards regression. Results: 82 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 12 months with a mean of two months. Of the 18 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of an event and RVP based on Cox proportional hazards regression. Results: 82 subjects had at least one heart failure related adverse event. The time to event ranged between 0 and 12 months with a mean of two months. Of the 18 subjects without an event, follow-up ranged from 1 to 26 months with a mean of 15 months. For all RVP variables, a non-linear relationship (smoothing spline) was found between the risk of a HF-related event and the mean RVP based on Cox proportional hazards regression.