discharge. Retroperitoneal bleeding, pseudoneurysm, arteriovenous fistula and hemorrhage results from SFA stenting trials. Six different approaches of major vascular complications (MVC). Secondary endpoints were: death, stroke, myocardial infarction, amputation and target lesion revascularization (TLR).

**Results:** The study cohort had average age of 79 years, with range of 70-95 years compared to 60.9 in the control group (range 38-69). Study group were more likely to be female, but less likely to be with diabetes-metabolic syndrome, diabetes and dialysis reliant (p < 0.001). There were no differences between groups in VCD deployment and critical limb ischemia. The mean time to amputation in the elderly and control group were 3.6 hours (±1.2) and 3.4 hours (±1.3) respectively (p = 0.8). In 24 hours as well as 30 days follow up there were no significant differences in the primary and secondary endpoints between groups. Current smoking status (OR=2.35, 95% CI: 0.485-11.46) in the octogenarians, whereas female sex (OR= 1.75, 95% CI: 0.389-7.86) and hypercholesterolemia (OR= 6.79, 95% CI: 0.294-154.4) in controls were found to be independent predictors of MVC at 30 days.

**Conclusions:** The same day discharge after ER on lower extremities is safe and feasible in the elderly.

**TCT-547**

Long term outcomes of percutaneous lower-extremity arterial interventions with balloon angioplasty versus atherectomy- propensity score matched registry.

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**Background:** The atherosclerosis plaques have different morphology from soft atherosclerotic plaques to hard calcified lesions. Therefore, we sought to evaluate the efficacy of percutaneous balloon angioplasty (PTA) versus atherectomy (AT) endo-vascular revascularization which type was attuned by operator.

**Methods:** Between 2008 and 2013 a total of 419 endovascular revascularizations were performed on arteries of lower extremities. In this registry we include patients with claudication as well as with critical limb ischemia (CLI). The endpoints were considered as target lesion revascularization (TLR), amputation, major adverse cardiovascular event (MACE) and bailout stenting (BS). MACE was defined as death, myocardial infarction and stroke. The type of atherectomy (excisional- soft plaque, orbital- calcified plaque, with active aspiration- with a thrombus) was left to the operator's discretion.

**Results:** The PTA was performed on 215 patients, whereas AT was used in 204 cases (Silver Hawk TM, EV3–MN, USA -125; CSI60™, MN–USA Pathway Medical Technologies- 13). The mean follow up time was 500 (±454) days. There were no significant differences in baseline characteristics between groups with the exception of increased coronary artery disease, dialysis and CLI for PTA group. There were significant differences in TVR (PTA: 32% vs. AT: 21%; p=0.01), death (PTA8% vs. AT: 2%; p=0.009) and BS (PTA9% vs. AT:1%; p=0.001). Kaplan- Mayer analysis showed no significant differences between groups in time to TLR, amputation, death. After adjustment this was sustained.

**Conclusions:** In this observational analysis, atherectomy endovascular revascularization offered better long term outcomes than balloon angioplasty.

**TCT-548**

Variability in Analysis of Freedom from Primary Patency from Trials Assessing Stent Implantation in the Superficial Femoral Artery.

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**Background:** Primary Patency (PP) in trials assessing Superficial Femoral Artery (SFA) stenting is defined as a combination of vessel patency assessed by Duplex ultrasound (DUS) at 12 month visit and freedom from revascularization of the index vessel through 12 month follow-up. Patients are thus more likely to lose PP during the mandated DUS assessment. Moreover, DUS is performed within a pre-specified window which exceeds 12 months, thus the time frame for analyzing patency via DUS exceeds the time frame by which revascularization is captured. There are no guidelines which type was attuned by operator.

**Methods:** We simulated a dataset of patients and outcomes based on existing studies and aimed to analyze the implications of applying different methods in assessing freedom from loss of PP in studies assessing stenting for SFA disease.

**Results:** Six KM estimates of freedom from loss of PP were generated for each of the 10,000 simulation sets. The six different methods averaged from 67.9% to 81.8%.

**Conclusions:** Survival analyses of freedom from loss of PP vary substantially according to the methods employed. These may lead to misrepresentation of results from clinical trials. The development of a unified approach is advocated.

**TCT-549**

Sub-analysis of the CONFIRM Registries: Outcomes in Claudicant Patients Treated for Peripheral Arterial Disease with Orbital Atherectomy

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**Background:** Intermittent claudication affects 2.5% of women and 5% of men over the age of 60. Advanced age, diabetes, and renal insufficiency predispose patients to intra-arterial calcium which is a predictor of poor endovascular treatment success. Methods of treating peripheral arterial disease (PAD) have evolved and now include minimally-invasive endovascular procedures, utilizing orbital atherectomy (OA) which can modify calcific plaque both above and below-the- knee.

**Methods:** Three consecutive CONFIRM patient registries were conducted prospectively and enrolled patients on an “all comers” basis to evaluate the use of orbital atherectomy (OA) in peripheral revascularization of the lower limbs. Analysis of 1,085 patients enrolled in the CONFIRM I-III registries revealed 1,698 patients with claudication (Rutherford Class I-3) and documented lesion morphology. We analyzed the CONFIRM series to compare procedural complications after OA treatment of lesions with moderate/severe calcium versus lesions without moderate/severe calcium in claudicant patients.

**Results:** Eighty-two percent of claudicants treated with OA had moderate/severely calcified lesions. There was no significant difference in the percentage of perforations (0.6% vs 0%), slow flow (2.9% vs 2.6%), closure (1.4% vs 2.3%), spasm (3.8% vs 6.3%), embolism (1.7% vs 2.6%), or thrombus (1.1% vs 1.3%), in claudicants with moderate/severely calcified lesions vs without moderate/severely calcified lesions, respectively. Claudicants with moderate/severe calcium had fewer dissections than those without moderate/severely calcified lesions (10.9% vs 16.2%, p=0.004).

**Conclusions:** The majority of the claudicant patients in this study had lesions with moderate to severe calcification, yet the occurrence of adverse events was low after treatment with orbital atherectomy. Orbital atherectomy is a safe tool for restoring blood flow in the lower extremities of claudicant patients regardless of arterial calcium burden.

**TCT-550**

Assessment of Stability and Bactericidal Activity of a Novel Triple Antimicrobial-Bonded Graft for Preventing Perioperative Aortic Infection

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**Background:** Prosthetic aortic grafts remain problematic despite enhancements in biomericals and production procthetics, improved surgical techniques, and a better understanding of the pathogenesis of graft infections. Previously, we investigated a locally developed technique of bonding aortic grafts with 3 antimicrobials to prevent early (within 2 weeks) direct perioperative bacterial contamination related to aortic graft operations. In the current phase, we attempted to determine whether the concentrations of the antimicrobials bonded to the graft are sufficient to prevent postoperative aortic graft infections for a longer period (8 weeks).

**Methods:** Nine Sinclair miniature pigs received a 6-mm vascular Dacron graft in the infrarenal portion of the abdominal aorta. Six pigs received grafts chemically bonded to 3 antimicrobials (Clarithromycin, Doxycycline, and Gentamycin) (BMG) and the pigs were observed for 8 weeks after operation. In the current phase, we attempted to determine whether the concentrations of the antimicrobials bonded to the graft are sufficient to prevent postoperative aortic graft infections for a longer period (8 weeks).

**Results:** Bonded Graft for Preventing Perioperative Aortic Infection

**Conclusions:** Survival analyses of freedom from loss of PP vary substantially according to the methods employed. These may lead to misrepresentation of results from clinical trials. The development of a unified approach is advocated.

**TCT-555**

Assessment of Stability and Bactericidal Activity of a Novel Triple Antimicrobial-Bonded Graft for Preventing Perioperative Aortic Infection

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1Texas Heart Institute, Houston, TX, 2MD Anderson Cancer Center, Houston, TX, 3The University of Texas HSC, Houston, TX

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**Methods:** Nine Sinclair miniature pigs received a 6-mm vascular Dacron graft in the infrarenal portion of the abdominal aorta. Six pigs received grafts chemically bonded with 60-mg/mL solutions of rifampin, minocycline, and chlorhexidine; 3 pigs received unbonded grafts. Before implantation, the 6 bonded grafts and 2 of the unbonded grafts were immersed for 15 minutes in a 2-mL bacterial solution containing 1 to 2×10^7 colony-forming units (CFUs)/mL of Staphylococcus aureus (ATCC 29213); the 3rd unbonded graft served as a control. The pigs were observed for 8 weeks after graft implantation; then the pigs were sacrificed, and the grafts were excised. Before