28.9%). The bifurcation angle at B2 was significantly greater in swine compared to humans in end systole and end diastole (32.8%; 39.5%).

CONCLUSION A significant change in bifurcation angle and cross sectional area was observed over the cardiac cycle, however few compliance differences were noted across each bifurcation. These data illustrate that the coronary artery bifurcations are a dynamic environment in both humans and swine, which presents a challenge in pre-clinical modeling and stent design.

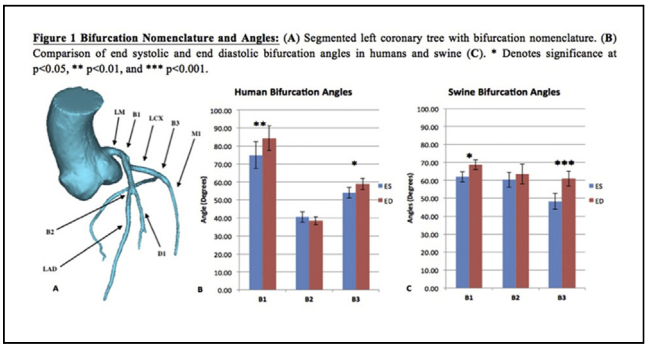

Figure 1 Bifurcation Nomenclature and Angles: (A) Segmented left coronary tree with bifurcation nomenclature. (B) Comparison of end systolic and end diastolic bifurcation angles in humans and swine (C). * Denotes significance at p<0.05, ** p<0.01, and *** p<0.001.

CRT-200.67

Gender Disparities in the Vanderbilt Stemi Network: Insights From a Five Year Experience (2009-2014)

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BACKGROUND Gender disparities have been observed in ST elevation myocardial infarction (STEMI) patients with women experiencing lengthier reperfusion times. There is limited data about persistence of these discrepancies in the current era in a real world setting.

METHODS A retrospective analysis of our institutional STEMI network database was done to include all patients with complete metrics from January 2009 to July 2015 who were transferred to our center with STEMI. Multiple imputation was used to account for any missing data. Patients were stratified based on gender to compare patient characteristics, outcomes, and quality measures.

RESULTS A total of 632 patients (132 women) were included in the analysis. Women were older (62.5 $\pm$ 13.5 vs. 59.3 $\pm$ 12.3 years, $p < 0.05$) but there was no difference in other demographics and pre-existing co-morbidities. Women were transferred over longer distances (43.2 $\pm$ 22.3 vs. 38.8 $\pm$ 23.9 miles, $p = 0.05$). Female gender was associated with a higher time to activation of cardiac catheterization laboratory (53.1 vs. 37.2 minutes, $p < 0.05$), but there was no difference in door-to-(electrocardiogram) EKG-time (17.1 vs. 13.5 minutes, $p > 0.05$), door-in door-out (DIDO) time (110 vs. 91 minutes, $p > 0.05$), transportation time (36.2 vs. 32.9 minutes, $p > 0.05$), first medical contact to balloon time (182.6 vs. 159.3 minutes, $p > 0.05$) or total procedure time (36.2 vs. 35.8 minutes, $p > 0.05$). Women were more likely to present with systolic blood pressure < 100 mmHg (6% vs. 3%, $p = 0.05$), femoral access was used more often in women (39.3% vs. 20%, $p < 0.001$), norepinephrine was used more frequently in women (9% vs. 4%, $p < 0.05$) but there was no difference in the use of other vasopressors, inotropes or mechanical circulatory support. On univariate analysis, in hospital mortality was higher in women (10% vs. 5%, $p < 0.05$) but after adjusting for confounders, gender was no longer associated with higher mortality (adjusted odds ratio, 1.3; 95% CI, 0.6-2.9, $p > 0.05$). On linear regression, female gender, longer door-to-EKG time, longer transfer distance and longer DIDO time were the independent predictors of longer time to activation of catheterization laboratory (R^2=0.79, $p < 0.0001$).

CONCLUSION Data from a single STEMI network suggests that in the current era in a real world setting, women transferred for STEMI may have longer time to activation of cardiac catheterization laboratory than men. There is a need to further streamline systems and improve quality measures in STEMI networks, especially for women.

CRT-200.68

Sheathless Transradial Approach Using Large Bore Catheters vs Other Vascular Access for Chronic Total Occlusions Percutaneous Coronary Intervention: The Quebec CTO Program Experience

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BACKGROUND The use of the transradial approach (TRA) in percutaneous coronary intervention (PCI) of chronic total occlusions (CTO) is still limited. We describe one of the largest single-center experiences, which evolved from 6F to a novel sheathless technique (ST) with regular 8F antegrade guides. We evaluated the safety of this technique.

METHODS We compared our earlier experience (EE) using 6-7F catheters to the latest one (LE), introduced in March 2013 favoring the use of 8F, either from the radial or the femoral (TFA). We then compared ST vs. standard TRA or TFA. The in-hospital outcomes of interest were technical success, contrast, radiation, procedure time, and the incidence of major vascular or bleeding complications. In a sub-sample, we examined radial patency using Doppler at 3-6 months.

RESULTS From 01.2010 to 03.2015, a total of 409 CTO PCIs were performed: 223 during the EE, whereas 186 in LE favoring 8F catheters. Despite an increase of the proportion of patients with very difficult lesions (J-CTO score $\geq$ 3) in LE (from 39% to 51%, p=0.02), we did not observe any difference with regards to success, procedure time, or in the incidence of major complications. However, contrast use was higher in LE (355$\pm$152 ml vs. 292$\pm$124 ml, p<0.0001). Over the 2 years of LE, 92 patients underwent their CTO PCI with a ST and 94 without a ST. Patients not treated with a ST were more likely to be females (33% vs 5% in ST group, p<0.0001), diabetic (51% vs 36%, p=0.04) and to undergo their CTO PCI with at least one TFA. Again, we did not observe any difference with regards to success, procedure time, or in the incidence of major vascular or bleeding complications, which were very low in both groups. The ST did not increase procedure time (143 min vs 154 min with the sheath, p=NS). The mid-term radial Doppler evaluation of 28 patients demonstrated 7.1% radial occlusions with the 8F ST, while 3.6% with 6F in the contralateral radial artery (control).

CONCLUSION A liberal use of the TRA with selected TFA for CTO PCI is associated with low complication rates. Our 8F sheathless technique for TRA in CTO PCI is feasible and safe when compared to the use of 6F standard PCI and provides unlimited spectrum of CTO PCI technique available to transfemoral CTO operators.

CRT-200.70

Abstract Withdrawn

CRT-200.71

Initial Commercial Experience With Orbital Atherectomy in Calcified Coronary Artery Disease

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BACKGROUND Severely calcified lesions present many challenges to PCI. Orbital Atherectomy System (OAS) is a device which allows for vessel preparation and treatment of severely calcified coronary lesions. This study evaluated clinical safety and results of the initial commercial experience of OAS in a real world setting.

METHODS A retrospective analysis was completed on all coronary OAS cases at our institutions that occurred between April 2014 thru August 31, 2015 (n=112). In-hospital and 30 day outcomes were assessed for procedure success, complications and device related events. Statistical analysis was performed using SPSS (IBM V.22).

RESULTS Baseline and procedural characteristics are described in the table below. Perforation occurred in 0.9% (n=1), dissection occurred in 1.8% (n=2), and no-reflow phenomenon occurred in 0.9% of cases (n=1). There were no cases of bleeding complications, emergent

bypass, 30-day MI, 30-day TVR, or stent thrombosis. 1 (0.9%) patient had a stroke within 30 days of PCI. Restenosis occurred in 3.6% of patients (n=4). 30 day mortality occurred in 1.8% of patients (n=2) due to non-cardiac causes from post-operative complications from non-cardiac surgery.

CONCLUSION In this first report of the commercial experience with coronary OAS, procedure success, adverse events, and clinical outcomes were favorable. This data demonstrates the safety and effectiveness of OAS in treating severely calcified coronary artery disease.

Baseline and Procedural Characteristics

AgeGenderBody Weight	7462.5% Male79.4Kg
DMHTNDyslipidemia	50.9%100%92%
Current SmokerRenal Insufficiency (Cr>1.5) Dialysis Dependent	7.1%25.9%7.1%
Prior MIPrior PCIPrior CABG	20.5%37.5%18.8%
CVAPVDEF	13.4%22.3%48%
Presenting with MIPresenting with stable anginaPresenting with unstable angina	14.3%17.9%64.3%
Avg # of vessels treatedAvg # of stentsDirect stenting	1.41.925.9%
Intravascular imaging used	9.8%
Radial access siteTemporary pacemaker placedMechanical support used	17.9%8.9%16.1%
Contrast volume usedRadiation exposureMaximum inflation pressure	137 mL24.6 mins.19.7 ATM

CRT-200.72

Cardiovascular Outcomes and Concomitant Proton Pump Inhibitors and Clopidogrel Users: Evidence From Meta-analysis

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BACKGROUND Evidence on cardiovascular outcomes with concomitant pharmacotherapy with proton pump inhibitors (PPI) and clopidogrel is mixed and varies across studies. We performed a meta-analysis of studies examining this relationship in both matched and unmatched cohorts.

METHODS PubMed, Google Scholar and EBSCO databases were searched electronically to identify studies using concomitant PPI's and clopidogrel. Data on endpoints of mortality, myocardial infarction (MI), stroke (CVA), stent thrombosis and clinically driven revascularization was extracted. Pooled risk ratio (RR) with 95% confidence intervals (CI) was estimated using random effects model.

RESULTS A total of 24 studies (7 matched) were included. In the matched cohort, 7,962 and 12,225 patients were included in the PPI and non-PPI groups respectively. In the matched cohort only group there was no difference in the outcomes of mortality, MI, revascularization, stent thrombosis and CVA (Figure 1). However, in the unmatched cohort group, mortality, MI, and revascularization were significantly higher in the PPI group compared to the non-PPI group. The risk of stent thrombosis and CVA risk was not different in the two groups.

CONCLUSION Adverse cardiovascular outcomes were not significantly different in the PPI and clopidogrel group in the matched cohort but not in the unmatched cohort. We speculate that PPI as a class do not influence the above outcomes but may be dependent on the type of PPI, dose of PPI and dose of clopidogrel used.

Cardiovascular Outcomes with and without PPI's in Clopidogrel Users

Outcome	Matched Cohort RR (95% CI)	Unmatched Cohort RR (95% CI)
Mortality	1.19 (0.79 - 1.80)	1.40 (1.21 - 1.62)
Myocardial Infarction	1.11 (0.95 - 1.29)	1.41 (1.20 - 1.66)
Clinically driven revascularization	1.04 (0.80 - 1.34)	1.66 (1.15 - 2.39)
Stroke	1.46 (0.67 - 3.20)	1.35 (0.99 - 1.86)
Stent thrombosis	1.33 (0.84 - 2.11)	1.12 (0.61 - 2.06)

CRT-200.73

Risk Assessment and Clinical Outcomes for Surgically Rejected Octogenarians Undergoing Left Main Percutaneous Coronary Intervention

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BACKGROUND Elderly patients are well known to have higher mortality rates associated with coronary surgical revascularization. The Society of Thoracic Surgeons (STS) score and the European System for Cardiac Operative Risk Evaluation (EuroSCORE) II are well known risk stratification models in which age plays an incremental factor. In the present study, we report our experience of surgically rejected octogenarians with unprotected left main coronary artery (ULMCA) stenosis undergoing percutaneous coronary intervention (PCI).

METHODS From April 2008 to June 2014, 71 patients with ULMCA stenosis were considered high risk for surgical revascularization and underwent PCI. Patients were divided based upon age less than 80 years (n=53) and greater than 80 years (n=18). STS, EuroSCORE II, Syntax score, use of device support and 30 day and 1 year mortality were assessed.

RESULTS Baseline characteristics were similar, except octogenarians had lower rates of diabetes (22% vs. 55%) and higher rates of advanced chronic kidney disease (61% vs 30%). Compared to younger patients, octogenarians had a significantly higher STS Score (14.1 ± 3.0 vs 6.5 ±9.3, p=0.009) and EuroSCORE II (17.0 ± 18.7 vs 8.2 ± 9.2, p=0.01). There was no difference in Syntax score between the 2 groups, 24.6 ± 12.1 vs 24.1 ± 12.1, p=NS. The type of device support (Intra Aortic Balloon Pump, Impella or Tandem Heart) did not differ between the groups. Need for temporary dialysis during hospitalizations did not differ (20% vs 20%, p=NS). Average length of stay was comparable (8.4 ± 8.6 vs 12.0 ±10.7, p=NS). 30 day mortality (17% vs 4%, p=NS) and 1 year mortality (28% vs 21%, p=NS) were similar between the groups.

CONCLUSION When compared to younger patients, octogenarians with ULMCA stenosis undergoing PCI have similar short and long-term outcomes despite having a higher baseline STS Score and EuroSCORE II.

CRT-200.74

Abstract Withdrawn

CRT-200.75

Troponin Elevation Post PCI: Prognostic or Without Purpose?

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BACKGROUND The prognostic value of post-PCI troponin elevation in the modern era is uncertain. There is conflicting data as to the predictive value of the degree of troponin elevation post-PCI.

METHODS We queried Dartmouth Dynamic Registry database of consecutive PCI's to identify elective PCI's with documented normal troponins at baseline between 2006 and 2015. A total of 1709 cases were identified. Baseline demographic information and procedural characteristics were collected. Post procedure troponins and in-hospital adverse outcomes including heart failure, repeat intervention, arrhythmia, bleeding, and death were collected. Outcomes between patients with mild (3 times upper limit, NCDR definition) and moderate (5 times upper limit, Joint Task Force definition) troponin elevations were compared to those patients without troponin elevation to asses for predictive value. The Fishers Exact Test was used to determine statistical significance.

CONCLUSION In patients undergoing elective PCI, even mild post-procedure troponin elevation is predictive of adverse in-hospital outcomes.