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ASSOCIATION OF LARGE LIPID CORE PLAQUE DETECTED BY NEAR INFRARED SPECTROSCOPY WITH POST PERCUTANEOUS CORONARY INTERVENTION MYOCARDIAL INFARCTION

i2 Oral Contributions
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Background: Near infrared spectroscopy (NIRS) allows assessment of lipid core plaques of interest (LCPs). Large LCPs may be more likely to be disrupted during angioplasty and coronary stenting resulting in distal embolization and additional myocardial necrosis.

Methods: All subjects from the COLOR Registry, an observational all-comer registry, with valid pre-intervention Chemograms in a treated vessel, normal pre-percutaneous coronary intervention (PCI) cardiac biomarkers, and post-PCI cardiac biomarkers monitored were included in the study. A post PCI acute myocardial infarction (AMI) was defined as cardiac biomarker elevation ≥3xULN. The treated segments in each Chemogram were compared between subjects with and without post PCI AMI.

Results: Post PCI AMI occurred in 2 of 19 subjects who met the inclusion criteria. The lipid core burden index (LCBI) of the treated segment was significantly higher in the post PCI AMI group than in the stable cardiac biomarker group (372 vs. 111, $p<0.001$). The average treated segment length (28.0 mm, SD 0.0 mm) in the post PCI AMI group was comparable to the stable biomarker group (29.9mm, SD 17.5 mm).

Conclusion: Higher lipid core plaque burden may be associated with higher-risk of post PCI acute myocardial infarction. NIRS may allow identification of patients at high-risk for post PCI AMI.

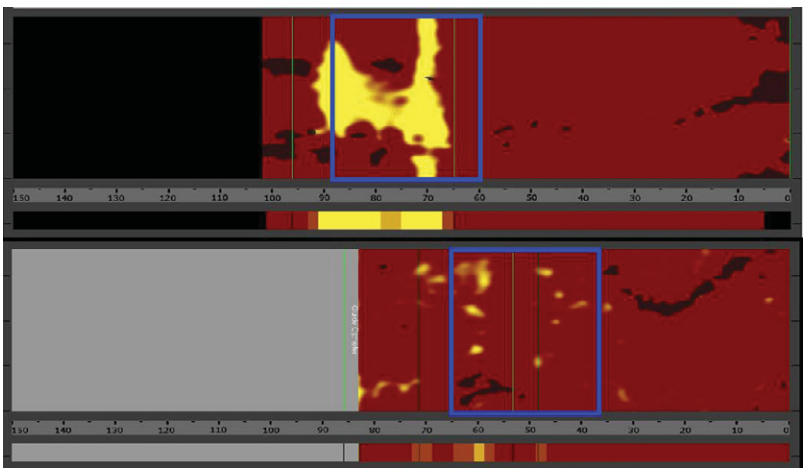

Figure 1. Figure 1. Pre-intervention Chemograms from the post PCI AMI group (top) and cardiac biomarker stable group (bottom) have each artery segment stented outlined in blue.