**OUTCOMES OF ANTI-PLATELET THERAPY DIRECTED BY POST PCI PLATELET FUNCTION TESTING IN A REAL WORLD SETTING**

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Objectives: To assess whether AccumetrixVerifyNow P2Y12 testing directed anti-platelet therapy after all-comers percutaneous coronary intervention (PCI) in a real world setting, could affect outcomes.

Background: Multiple trials suggest that high residual on-treatment platelet reactivity (HRPR) [Platelet Reactivity Units (PRU) ≥ 230] increases the incidence of major adverse cardiac events: death, myocardial infarction, target vessel revascularization and stent thrombosis (MACE). Data on routine real world testing is lacking.

Methods: 428 patients had PCI [294 acute coronary syndrome (ACS), 134 non-ACS] and platelet function testing after initial background aspirin and ≥ 600 mg of clopidogrel. For PRU at 12-24 hours < 230, maintenance 325 mg/day of aspirin and 75 or 150 mg/day of clopidogrel for 1 week then 75 mg/day were continued unless followup testing at 1-3 weeks demonstrated HRPR. Most patients with initial HRPR were switched to prasugrel or ticagrelor with no further testing, as hyporesponse is rare; or clopidogrel 150 mg/day with repeat testing at 1-3 weeks. Continued HRPR on clopidogrel usually drove switching to prasugrel or ticagrelor unless contraindicated.

Results and Conclusions: There were 176 (41%) HRPR (121 ACS vs. 55 non-ACS) and 252 (59%) responders (173 ACS vs. 79 non-ACS). MACE was similar between the two groups [12/176 (7%) vs. 10/252 (4%), p=0.13, respectively). The 30 day incidence of stent thrombosis was zero in both groups. Adjusting anti-platelet therapy on the basis of VerifyNow testing results in low and equivalent MACE at 30 days after PCI, for initial anti-platelet responders and HRPR patients switched to more effective therapy.