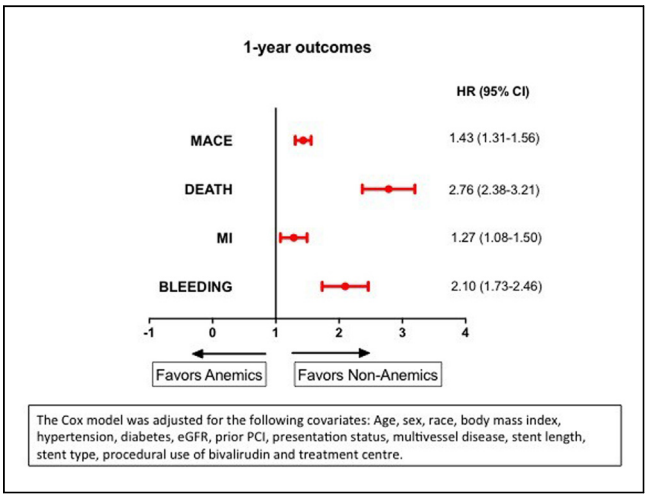
**BACKGROUND** Bleeding is a risk of potent antiplatelet therapy. Anemia is associated with increased bleeding. We sought to examine the rates of prasugrel use, thienopyridine switching and clinical outcomes by presence of anemia in contemporary percutaneous coronary intervention (PCI) for acute coronary syndrome (ACS).

**METHODS** Patients undergoing ACS PCI from the PROMETHEUS study (n=19,914) were grouped by presence of baseline anemia, defined as hemoglobin < 12 g/dl in men and <11g/dl in women. Multivariable Cox regression was used to determine the adjusted association between anemia and 1-year major adverse cardiac events (MACE) (composite of death, myocardial infarction, stroke or unplanned revascularization) and bleeding, using no anemia as the reference.

**RESULTS** Of the total cohort, 3843 (19.3%) patients were anemic. Patients with anemia were older, female or African-American with greater prevalence of diabetes, renal dysfunction and multivessel disease. Anemic patients underwent PCI more often for Non-ST elevation myocardial infarction or unstable angina compared with non-anemic patients with marginally longer stent lengths and greater use of bare metal stents. Upfront prasugrel use (11.6 vs 22.2%) was lower and switching at discharge to clopidogrel (22.0 vs 12%) was higher in anemic vs. non-anemic patients (p <0.001 for both). At 1-year, the incidence of MACE (30.5% vs 16.3%) and bleeding (9.1 vs 3.4%) was significantly greater in anemic than non-anemic patients (p <0.001 for both). On multivariable adjustment, all associations remained significant (Figure).




**CONCLUSION** Prasugrel was used less often in patients with anemia with higher rates of switching to clopidogrel compared to non-anemic patients. Anemia was independently associated with higher adjusted risk for both ischemic and bleeding events at 1-year.

**CATEGORIES CORONARY:** Acute Coronary Syndromes

## TCT-112

### Pretreatment with P2Y12 receptor antagonists is not associated with improved patency of infarct related-artery in NSTEMI – A report from SCAAR

Christian Dworeck,[1] Inger Haraldsson,[2] Oscar Angeras,[3] Jacob Odenstedt,[4] Dan Ioanes,[5] Petur Petursson,[6] Sebastian Volz,[7] Per Albertsson,[8] Jonas Persson,[9] Sasha Koul,[10] David Erlinge,[11] Truls Råmunddal,[12] Elmir Omerovic[13]
[1]Hospital, trollhattan, Sweden; [2]University of Verona, Gothenburg, Sweden; [3]Mayo Clinic Arizona; [4]Sahlgrenska University Hospital, Gothenburg, Sweden; [5]Sahlgrenska Sweden, Viken, Sweden; [6]Sahlgrenska University Hospital, Gothenburg, Sweden; [7]Sahlgrenska University Hospital, Gothenburg, Sweden; [8]University of Gothenburg, Gothenburg, Sweden; [9]Hjartmedicin/Medicinkliniken, Stockholm, Sweden; [10]Hospital Ramón y Cajal; [11]Skane University Hospital, Lund, Sweden; [12]Sahlgrenska university hospital, Göteborg, Sweden; [13]Department of Cardiology, Hisings Backa, Sweden

**BACKGROUND** Patients with NSTEMI are frequently pretreated with P2Y12 receptor antagonist (P2Y12) and other antithrombotic agents in order to increase patency of IRA and decrease ischemic events. However, there is no clear evidence from randomized clinical trials that pretreatment with P2Y12 in myocardial infarction reduces ischemic events and improves prognosis. The aim of this study was to investigate whether pretreatment with P2Y12 improves patency of IRA at the time of PCI.

**METHODS** We used data from the SCAAR registry (Swedish Coronary Angiography and Angioplasty Registry). This database contains information about all consecutive PCI procedures that are performed in Sweden at 31 hospitals. We included all procedures performed between 2005 and 2015 in NSTEMI patients with complete data. The patients were divided into the two groups, P2Y12 pretreated and not-pretreated. We used multilevel modeling based on complete-case mixed-effects logistic regression to adjust for hierarchical database due to clustering of observations. Treated segment (IRA) was the primary observational unit while individual patients and hospitals were treated as additional levels of clustering. These variables were used to adjust for differences in patient's characteristics: age; gender; hypertension; hyperlipidemia; smoking status; diabetes; calendar year, prior myocardial infarction, coronary by-pass surgery and/or PCI; severity of coronary artery disease; pretreatment with ASA, type of P2Y12 agent, clopidogrel, ticagrelor, prasugrel.

**RESULTS** The total of 42,104 patients were included in the study of which 40,731 (97%) were pretreated with P2Y12 and 1,373 (3%) were not. Three different P2Y12 were used, clopidogrel (n=33.431, 79%), ticagrelor (n=7,991, 19%) and prasugrel (n=682, 2%). The number of treated segments was 94,373 of which 10,658 (11%) were occluded and 83,715 (89%) were patent prior to PCI. Non-patent IRA was associated with higher risk of death at 30 days (adjusted OR 2.1; 95% CI 1.68 to 2.56; P<0.000). Pretreatment with P2Y12 was not associated with higher probability for patent IRA (adjusted OR 0.91; 95% CI 0.77 to 1.05; P=0.21). We found no difference between clopidogrel, ticagrelor and prasugrel in regard to patency of IRA (P=0.26 for interaction test).

**CONCLUSION** In this observational study, non-patent IRA was associated with higher risk of death at 30-days in patients with NSTEMI. Pretreatment with P2Y12 was not associated with improved patency of IRA.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

## TCT-113

### Abstract Withdrawn

# HEMODYNAMIC SUPPORT AND CARDIOGENIC SHOCK

**Abstract nos: 114 - 136**

## TCT-114

### Comparing Hemodynamic Profiles and Outcomes in Cardiogenic Shock Requiring VA-ECMO or Impella for Circulatory Support

Michele Esposito,[1] Sudeep Kuchibhotla,[1] David Zisa,[1] Ryan O'Kelly,[1] Shiva Annamalai,[1] Adel Ghuloom,[1] Leslie Lussier,[1] Catalina Breton,[1] Robert Pedicini,[1] Andrew Mullin,[1] Carey Kimmelstiel,[1] Michael Kiernan,[1] Amanda Vest,[1] Navin Kapur[1]
[1]Tufts Medical Center, Boston, Massachusetts, United States

**BACKGROUND** Use of acute mechanical circulatory support (AMCS) devices for cardiogenic shock (CS) is growing and includes veno-arterial extracorporeal oxygenation (VA-ECMO) or Impella. Few studies have defined hemodynamic profiles nor explored the utility of AMCS in CS.

**METHODS** We retrospectively analyzed all patients (n=90) between 2012-2015 who received VA-ECMO (n=39) or Impella (n=51) for CS at our institution. All patients had a cardiac index < 2.2 and were refractory to medical therapy. Hemodynamics were available for 73 patients and used to categorize CS as left ventricular (LV), right ventricular (RV), biventricular (BiV)-dominant, or Euvolemic.

**RESULTS** Compared to VA-ECMO, Impella patients were older (61±12 vs 51±14, p<0.01), had lower ejection fraction (16±9 vs 31±20%,