TCT-62
Impact of Atrial Fibrillation in Patients with STEMI Before and After Primary PCI: Insights from the HORIZONS-AMI Trial
A. René1, Philippe Genevieux2, Michael Eekowsitz3, Ajay Kirtane5, Roxana Mehran1, Gregg Stone2
1Columbia University Medical Center, New York, NY, 2Columbia University Medical Center and the Cardiovascular Research Foundation, New York, NY, 3CRF, Wynnewood, USA, 4Mount Sinai Hospital, New York, USA

Background: Recent data suggest that atrial fibrillation (AF) is associated with worse outcomes after PCI for STEMI. We investigated the incidence and impact of baseline and new onset AF in pts undergoing primary PCI from the large, prospective, randomized HORIZONS-AMI trial. Methods: HORIZONS-AMI was a large-scale, multicenter, international, randomized trial comparing different antithrombotic regimens and stents during primary PCI in STEMI. The primary endpoint was net adverse cardiac events (NACE; the composite of death, reinfarction, ischemia-driven TVR, stroke, or non-CABG-related major bleeding). Pts with and without AF at baseline and with and without new onset AF post-PCI were compared at 3 years. Results: Baseline AF was present in 69/3,599 patients (1.9%), and AF developed after PCI in an additional 172/3,385 patients (5.1%). Three-year NACE rates were not significantly different between pts who did and did not have AF at baseline (34.2% vs. 26.4%, p = 0.12). Nor were the 3-year rates of mortality different in pts with and without baseline AF (10.4% vs 6.7%, p = 0.22). In contrast, compared to pts who remained in sinus rhythm, pts with new onset AF after PCI had higher 3-year rates of NACE (45.7% vs. 25.4%), mortality (14.9% vs. 6.3%), reinfarction (14.3% vs. 6.9%), stroke (7.4% vs. 1.6%) and major bleeding (21.0% vs. 8.0%) (all p < 0.0001). By multivariate analysis, new onset AF was one of the strongest independent predictors of NACE (HR [95%CI] = 1.80 [1.37, 2.37], p < 0.0001) and death (1.88 [1.23, 2.88], p < 0.0003) at 3 years. Conclusions: In the large multicenter HORIZONS-AMI trial, the presence of AF at baseline was not associated with inferior outcomes in pts with STEMI undergoing primary PCI. However, the development of AF post-PCI was associated with markedly higher rates of adverse events and mortality. New approaches to prevent or treat post-PCI AF may further improve outcomes after primary PCI.

TCT-63
Remote Ischemic Perconditioning Improves Long-Term Clinical Outcome in Patients Undergoing Primary Percutaneous Coronary Intervention for ST-Elevation Myocardial Infarction
Astrid D Sloth1, Michael R Schmidt2, Kim Munk3, Rajesh K Kharbanda4, Andrew N Redington3, Lars Pedersen4, Henrik T Sørensen4, Hans Erik Botker1
1Aarhus University Hospital, Skejby, Department of Cardiology, Denmark, 2Oxford University Hospitals, John Radcliffe Hospital, Oxford, Oxford, United Kingdom, 3Hospital for Sick Children, Division of Cardiology, Toronto, Canada, 4Aarhus University Hospital, Department of Clinical Epidemiology, Denmark

Background: We have previously demonstrated that remote ischemic perconditioning (rIPerC) before primary percutaneous coronary intervention (pPCI) in patients with ST-elevation myocardial infarction (STEMI) improves myocardial salvage. The aim of the present study was to investigate 5-year clinical outcome. Methods: From February 2007-November 2008, 251 patients with a first acute ST-elevation myocardial infarction met inclusion criteria and were randomized to receive primary percutaneous coronary intervention with (n = 126) or without (n = 125) remote ischemic perconditioning. Pts were followed-up from inclusion date until death or January 2012 (median follow-up duration = 3.9 years). The primary endpoint was MACE (death, rehospitalisation for heart failure, myocardial infarction, and stroke), based on data collected from Danish nationwide registries and medical records. Results: MACE was significantly reduced in the intervention group compared with the control group, with a cumulative incidence of 13.0% (95% confidence interval (CI): 7.5%-20.1%) versus 24.3% (95% CI: 17.2%-32.2%) and a crude HR of 0.46 (95% CI: 0.25-0.86; p = 0.02). The cumulative incidence of all-cause mortality was 4.8% (95% CI: 1.7%-10.6%) in the intervention group versus 12.2% (95% CI: 7.1%-18.6%) in the control group and a crude HR of 0.32 (95% CI: 0.12-0.88, p = 0.033). Conclusions: Remote ischemic perconditioning before pPCI improves long-term clinical outcome in patients with STEMI.