**Table. Clinical Outcomes at 12-Month**

| Variables, N (%) | No Statin (N=949) | Statins (N=3355) | P-value |
|---|---|---|---|
| Total Death | 32 (3.4) | 65 (1.9) | 0.009 |
| Cardiac Death | 22 (2.3) | 43 (1.3) | 0.020 |
| Repeat-PCI | 83 (8.8) | 172 (5.1) | <0.001 |
| TLR | 26 (2.7) | 64 (1.9) | 0.113 |
| TVR | 34 (3.4) | 99 (3.0) | 0.320 |
| Non-TVR | 49 (5.2) | 73 (2.2) | <0.001 |
| Recurrent AMI | 12 (1.3) | 20 (0.6) | 0.034 |
| Total MACE | 128 (13.5) | 261 (7.8) | <0.001 |

**0216**

## Risk Score for Predicting Nonobstructive Coronary Artery Disease and Adverse Events in Non-ST-Elevation Acute Coronary Syndromes

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**Introduction:** Patients (pts) with non ST elevation acute coronary syndromes (NSTE-ACS) frequently have non obstructive coronary artery disease (NO-CAD). **Aim:** Develop and validate a risk score (RS) to predict NO-CAD and events in patients with NSTE-ACS. **Methods:** 6874 pts with NSTE-ACS included in a registry were randomly divided in two cohorts. In the first cohort pts were stratified according to absence or presence of NO-CAD (defined as stenosis <50%). A regression model was used to derive a RS aiming to identify the presence of NO-CAD. The RS was validated in the second cohort and tested to predict in-hospital and 6-month death or infarction. **Results:** Eight independent predictors of NO-CAD were identified: age≤50 (OR 1.58, CI 1.05–2.36); female gender (OR 2.47, CI 1.85–3.31); absence of diabetes, hyperlipidemia or smoking (OR 2.09, CI 1.57–2.78); no prior history of myocardial infarction, coronary angioplasty or CABG (OR 1.68, CI 1.16–2.43); only one episode of chest pain on admission (OR 1.96, CI 1.43–2.70); no ST depression or negative T waves (OR 1.64, CI 1.23–2.19); negative troponin (OR 1.41, CI 1.00–1.99); and no heart failure (OR 1.65, CI 1.135–2.40). A RS was created by the sum of points, assigning female sex 2 points and the remaining 1 point. There was a graded association between the RS and the prevalence of NO-CAD in the validation cohort. A decrease in adverse events was seen with an increasing score from 9.9% (score=0) to 0% (score>7) for in-hospital death or infarction ($p<0.001$) and from 20.5% (score=0) to 4.0% (score>7) for 6-month death or infarction ($p<0.001$). **Conclusion:** In NSTE-ACS eight variables may be used to identify pts with NO-CAD and with a lower risk of events.

**0217**

## Usefulness of Clinical Scores for Patient Risk Stratification in Non-ST Elevation Acute Coronary Syndrome: Any Role for Serum Markers of Inflammation?

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**Introduction:** Risk stratification of patients with unstable angina or non ST-segment elevation myocardial infarction (UA/NSTEMI) is problematic given the heterogeneous presentation of the condition and clinical characteristics of patients. We sought to compare, in acute coronary syndrome patients, the prognostic value of two frequently used risk scores (RS): the Thrombolysis in Myocardial Infarction (TIMI) and the physician's risk assessment (PRA). We also assessed whether serum biomarkers can increase the prognostic accuracy of clinical RS. **Methods:** In a prospective cohort study of Non ST Elevation-ACS patients (unstable angina (UA) and NSTEMI), we calculated RS and assessed hs-C-reactive protein, leukocyte count, interleukins 6 and 18, CD 40 ligand, neopterin, P- and E- selectin and NT-proBNP at study entry. The primary study endpoint was death and non-fatal myocardial infarction (MI). Binary logistic regression models were fitted to determine the relationship between RS -alone and after the addition of biomarkers- and the study endpoint at 30 and 360 day follow up. The C statistic was used to evaluate predictive accuracy of the models. **Results:** We recruited 610 consecutive patients: 217 (36%) UA and 393 (64%) NSTEMI. During the 30 day follow up 16 patients (2.6%) died and 24 developed a MI (3.9%). 54 patients (8.9%) reached the study endpoint at 360 day f-up: 26 died (4.3%) and 34 (5.6%) developed a MI. For both RS, the study endpoint was more frequently observed in the higher risk patient groups. For both RS, the proportion of patients with events was more frequent among the higher risk groups, i.e. at 30 days for TIMI RS, 2.9%, 2.1% and 7.4%. ($p<0.02$) and for PRA score, 2.0%, 5.5% and 9.2% ($p<0.005$) and at one year follow up for TIMI RS, 2.9%, 4.3% and 10.8% ($p<0.005$) and for PRA score, 3.6%, 8.9% and 12.3% ($p<0.003$). The discriminatory accuracy of TIMI RS was not significantly different when TIMI and PRA scores were compared. TIMI RS, however, had better predictive accuracy than PRA for both 30 day (OR 4.15 CI 1.21–14.16, $p<0.02$ vs. OR 2.14 CI 0.97–4.73, $p<0.05$) and 1-year mortality or MI (OR 4.08 CI 1.55–10.69, $p<0.004$ vs. OR 1.58 CI 0.80–3.11, $p<0.18$). Both RS showed good predictive value but there was a weak correlation between these two RS. The addition of inflammatory biomarkers did not improve the predictive value of RS. **Conclusions:** TIMI RS is a better marker of risk than PRA RS, and inflammatory biomarkers do not improve the predictive value of established clinical RS.

**0218**

## Incidence and Predictors of Grade 3 Ischemia in Patients with STEMI Undergoing Primary PCI

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**Introduction:** Grade 3 ischemia (distortion of the terminal portion of the QRS complex) is a predictor of serious complications after acute myocardial infarction. However, it is unknown which patients are more prone to present with grade 3 ischemia. **Methods:** Patients who were enrolled in the Ongoing Tirofiban In Myocardial infarction Evaluation (On-TIME) Trial were included. These patients were divided in two groups based on the enrolment electrocardiogram: grade 2 or grade 3 ischemia. **Results:** Between June 2004 and November 2007, 1308 patients with interpretable ECG's were enrolled. Grade 2 ischemia was found in 882 patients (67.4%) and grade 3 ischemia in 426 (32.6%) patients. Patients with grade 3 were more often male (79.6% vs. 74.5%, $p=0.043$), more often had diabetes (14.1% vs. 9.6%, $p=0.014$), were older ($63.33\pm11.83$ vs. $60.89\pm11.81$, $p<0.001$), more often a had TIMI risk score >3 (39.9% vs. 24.2%, $p<0.001$), more often had pre procedural TIMI 3 flow (13.5% vs. 23.3%, $p<0.001$) and more often presented in Killip class >1 (14.6% vs. 10.3%, $p=0.024$). One hour after PCI, residual ST-elevation was higher in patients with grade 3 ischemia compared to patients with grade 2 ischemia ($3.60\pm5.45$ mm vs. $5.37\pm5.71$ mm, $p<0.001$). Furthermore, grade 3 ischemia was associated with more major cardiac events (MACE: death, MI, urgent TVR, $p=0.002$). After multivariate adjustment, grade 3 ischemia was an independent predictor of failure of ST resolution (STR) ($p<0.001$), 30 day mortality ($p=0.024$) and MACE, although the latter was not significant ($p=0.06$). **Conclusions:** Grade 3 ischemia, which may be diagnosed on the initial diagnostic ECG, was a strong independent predictor of failure of STR and 30 day mortality. Higher age, male gender, diabetes, TIMI risk score >3, pre procedural TIMI 3 flow and Killip class >1 were predictors of grade 3 ischemia. This simple electrocardiographic tool may help identifying high risk patients early after symptom onset.

**0219**

## The Importance of Prehospital Infarct Diagnosis and Therapy on Initial Patency of the Infarct-Related Vessel Before PCI in Patients with STEMI

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**Introduction:** Pre-hospital infarct diagnosis in the ambulance or at a referral center gives the opportunity to start anti-platelet and anti-thrombotic agents before arrival at a PCI center. However, whether this is associated with improved initial patency of the infarct related vessel (IRV) is unknown. **Methods:** From 1990 until 2007 all consecutive patients with STEMI were registered in a database. Initial patency, defined as TIMI 3 flow of the infarct related vessel (IRV) was recorded at initial angiography and was compared between three time intervals: 1990–1995 (period A), 1996–2001 (period B), 2002–2007 (period C). **Results:** 7.398 patients with STEMI were registered, 727 (9.8%) in period A, 2.380 in period B (32.2%) and 4.291 in period C (58%). Patients from period C were older, more often female, but less often had previous MI and less often presented in Killip class >1. Pre-hospital infarct diagnosis with early initiation of aspirin (500 mg) and heparin (5000IU) was present in 28.6% in period A, 77.4% in period B and 96.2% in period C. Initial patency of the IRV was 13.2% in period A, 15.9% in period B and 20.9% in period C ($p<0.001$ for trend). After multivariate analysis, pre-hospital infarct diagnosis and therapy was an independent predictor of initial patency of the IRV (OR: 1.679, 95% CI 1.293 to 2.180). Patients with initial TIMI 3 flow of the IRV had a significantly lower one-year mortality (3.6% vs. 7.5%, $p=0.004$). **Conclusion:** In recent years the majority of STEMI patients underwent PCI after a pre-hospital diagnosis either in the ambulance or at a referral center. Pre-hospital infarct diagnosis with concomitant early initiation of aspirin and heparin was associated with improved initial patency of the infarct related vessel before PCI.

**0220**

## Relation Between Postprocedural Leukocyte Count and Myocardial Perfusion, Left Ventricular Function, and Clinical Outcomes in ST-elevated Myocardial Infarction Patients who Underwent Percutaneous Coronary Intervention

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**Introduction:** The pathogenic role of inflammation in the generation and development of cardiovascular disease is well established.Some studies had demonstrated baseline white blood cell (WBC) count was correlated with short-/long-term ischemic events and death in patients presenting with acute coronary syndrome. However, few studies have noticed the relation between the postprocedural WBC count and ischemic events/death in patients with ST elevated myocardial infarction (STEMI) underwent primary percutaneous coronary intervention (PCI). Therefore, the aim of this study was to assess the relation between postprocedural WBC count and myocardial perfusion, left ventricular function and clinical outcomes in STEMI patients underwent PCI. **Methods:** 242 consecutive acute ST elevated myocardial infarction (STEMI) patients underwent successful primary percutaneous coronary intervention (PCI) were enrolled and followed up for 2 years. WBC counts were measured within 12 hours after PCI. ST-segment resolution and myocardial blush grades (MBG) were evaluated immediately after