within 2 hours after onset was significantly associated with a higher in-hospital mortality [HR (95% CI); 1.4 (1.1-1.9), P=0.012], but became insignificant after the Earthquake [HR (95% CI); 1.2 (0.7-2.1), P=0.437]. When we compared the patients who admitted within 2 hours after onset before and after the Earthquake, the prevalence of heart failure with Killip class≥2 on admission was significantly lower after the Earthquake (P<0.05), despite the higher occurrence of anterior AMI (P<0.05). The performance rate of primary PCI also significantly increased after the Earthquake compared with the previous 3 years (P<0.001). Moreover, there were no differences in these factors associated with improved emergency care of AMI between the seacoast area with direct Tsunami attack and the inland area during the first 2 months after the Earthquake.
Conclusions: These results indicate that the emergent care of AMI was improved soon after the Earthquake as compared with ordinary times, for which improved elapsing time from the onset to admission and higher performance of primary PCI may be involved. To the best of our knowledge, this is the first report that demonstrates that emergency care of AMI could be improved through improvement in the chain of survival after natural disaster in a large community.

P4042 | BEDSIDE
Impact of gender-specific reference values of high-sensitivity troponin T on the prevalence and long-term outcome of acute myocardial infarction

B. Moehring[1], M. Mueller[2], M. Rubini Gimenez[2], R. Twerenbold[3], B. Meller[2], S.M. Sou[2], K. Murray[1], P. Haaf[2], T. Reichlin[4], C. Mueller[2]. *[1]University Hospital Basel, Department of Internal Medicine, Basel, Switzerland; [2]University Hospital Basel, Department of Cardiology, Basel, Switzerland; [3]University Heart Center, Dept. of Cardiology, Freiburg - Bad Krozingen, Germany; [4]Brigham and Women's Hospital, Department of Medicine, Cardiovascular Division, Boston, United States of America*

Purpose: Recently, the 99th percentile of hs-cTn assays in healthy individuals was found to be significantly lower in women as compared to men, possibly at least in part related to the smaller size of women's hearts. These recent findings question current clinical practice to use identical cut-off values for the diagnosis of acute myocardial infarction (AMI) in men and women. In order to shed more light on this important topic we sought to examine the impact of gender-specific reference values on the prevalence, clinical characteristics and long-term outcome of AMI in a large multicenter cohort of consecutive patients presenting with acute chest pain to the Emergency Department (ED).
Methods: We included n=2365 consecutive patients of our ongoing prospective international multicenterstudy. Patients with STEMI (n=79) have been excluded from analysis. The initial final diagnosis was adjudicated by two independent cardiologists usingall available clinical information and high-sensitivity cardiac Troponin T (hs-cTnT, Roche) witha 99th percentile cutoff value of 14 ng/l. We adjudicated a second final diagnosis using gender-specific cutoff reference values, e.g. 8.9 ng/l for women and 15.5 ng/l formen. We excluded female patients (n=5) with insufficient serial hs-cTnT values to assess the criteria. All patients received long-term follow-up.
Results: There were n=725 women and n=1561 men in the cohort. Using the same cutoff value for both women and men, 14.6% (n=106) females and 19.6% (n=396) males received the final diagnosis of NSTEMI. 5.9% (n=43) females and 11.3% (n=176) males received the final the diagnosis of Unstable Angina (UA).
Using gender-specific cutoffs, 2 women (5% of all women with UA) were shifted from the diagnosis of UA to NSTEMI.
Using gender-specific cut-off values, no changes occurred in the diagnosis of men.
The first reclassified woman was 74 years old, with known coronary heart disease. 65 days after presentation the patient died, presumably from cardiac causes.
The second woman was 85 years old, also with known coronary heart disease. There was no further cardiac event documented during follow-up.
Conclusions: In patients presenting with acute chest pain to the ED, using gender-specific reference values for hs-cTnT does reclassify only a very small proportion of patients. Still, the reclassification of women to NSTEMI seems appropriate.
(Clinical trials.gov number, NCT00470587)

P4043 | BEDSIDE
In-hospital outcome of emergent PCI after cardiopulmonary arrest due to acute coronary syndrome

S. Mogi, S. Kohsaka, Y. Maekawa, A. Kawamura, K. Fukuda. *Keio University School of Medicine, Department of Cardiology, Tokyo, Japan*

Background: The outcome of resuscitated patients after cardiopulmonary arrest (CPA) after acute coronary syndrome (ACS) remains unclear. Previous reports suggested potential benefit of emergency percutaneous coronary intervention (PCI), however the predictor of mortality in these patients remains.
Methods and results: We prospectively collected data on 2499 consecutive patients with ACS treated with PCI from September 2008 to December 2012 in seven hospitals in metropolitan Tokyo area. Patients background, procedural and angiographical characteristics were analyzed retrospectively.Total of 124 (5.0%) patients (male 87.9%, mean age 65.1±11.6 years, cardiogenic shock 75.8%) underwent PCI immediately after resuscitation. Overall, in-hospital mortality was 36.3% (N=45). Rate of hypothermia therapy and bleeding complications were not statistically significant between survived group and death group. BMI ≥25 (survive vs. death 26.1% vs. 47.2%; p=0.03), diabetes mellitus (25.3% vs. 46.7%; p=0.02), shock status (68.4% vs. 88.9%; p=0.01), and multivessel disease (48.1% vs. 71.1%; p=0.01) were statistically significant predictor of survival by univariate analysis. Multivariate analysis showed that shock status and BMI ≥25 were identified as independent predictors of in-hospital mortality (OR, 3.63 95% CI, 1.18–13.2; p = 0.02 and OR, 3.39 95% CI, 1.32–9.21; p = 0.01, respectively).
Conclusion: In-hospital mortality of resuscitated patients after CPA by ACS was 36.3% slightly better than previous reports. Cardiogenic shock on admission and obesity were independent predictor of in-hospital death.

P4044 | BEDSIDE
Gender-specific chest pain characteristics in the early diagnosis of acute myocardial infarction

M. Rubini Gimenez, M. Reiter, R. Twerenbold, B. Moehring, T. Reichlin, P. Haaf, S. Sou, B. Meller, K. Wildi, C. Mueller. *University Hospital Basel, Department of Cardiology, Basel, Switzerland*

Purpose: We aimed to contribute to an improvement in the management of women with suspected acute myocardial infarction (AMI) by exploring gender-specific chest pain characteristics (CPC).
Methods: We enrolled 2475 consecutive patients (796 women and 1679 men) presenting with acute chest pain to the emergency department (ED) in a prospective multicenter study. The gender-specific diagnostic performance of 34 predefined CPC was evaluated in the early diagnosis of AMI.
Results: AMI was the adjudicated final diagnosis in 18% of women and in 22% of men. Overall, the symptoms reported by women with suspected AMI differed from those reported by men. The capability of most CPC to diagnose AMI was low in women as well as in men with positive likelihood ratios (LR) close to 1 (ranging from 0.25 to 2.27, mean value 1.03, SD of ± 0.35) and rather large 95% confidence intervals. However some CPC significantly increased the likelihood for the diagnosis of AMI (pain aggravated by exertion or relieved by nitrates, pain location on the mid-chest and/or right chest, pain area over 3 cm, radiation to the left and/or right shoulder/arm, and more severe pain as quantified on the VAS) and others significantly decreased the likelihood for the diagnosis of AMI (stabbing pain, aggravation of the pain by breathing, movement or palpation, pain location on the left chest and inframamilar, pain without radiation and pain duration less than 2 minutes). But comparing male and female patients, most of the predefined chest pain criteria tended to increase or decrease the likelihood for AMI similarly showing no significant differences between genders. (p>0.05)
Conclusion: CPC reported by women with suspected AMI differ from those reported by men; nevertheless the diagnostic performance was similar in women and men and did therefore not allow to establish a women-specific strategy which would help physicians to differentiate between women with AMI from women without AMI at the ED

P4045 | BEDSIDE
Acute coronary syndrome care across Australia and New Zealand

J.K. French[1], D. Chew[2], C.J.K. Hammett[3], C.J. Ellis[4], F. Turnbull[5], I. Ranasinghe[5], C. Astley[2], B. Costa-Aliprandi[6], T. Briffa[7], D. Brieger[6]. *[1]Cardiology Department, Liverpool Hospital, SWS Clinical School, The University of New South Wales, Sydney, Australia; [2]Flinders Medical Centre, Department of Cardiology, Adelaide, Australia; [3]Royal Brisbane & Women's Hospital, Brisbane, Australia; [4]Auckland City Hospital, Auckland, New Zealand; [5]George Institute for International Health, Sydney, Australia; [6]Concord Hospital & Anzac Institute, Sydney Medical School, University of Sydney, Dept of Cardiology, Sydney, Australia; [7]University of Western Australia, Perth, Australia*

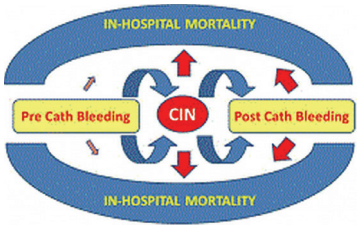
Improving the uptake of guideline-recommended therapy for suspected acute coronary syndrome (ACS) is a global health priority. Australia and New Zealand (NZ) undertook a snapshot of ACS to compare in-hospital care and prevention measures at discharge to published guidelines.
Methods: Demographic and clinical details of individuals hospitalised with suspected ACS between 14-27th May 2012 were collected. Some 525 hospitals (39 in NZ) were identified from public records and peers as accepting ACS cases and considered for participation. Descriptive and logistic regression analysis was performed. The main indicators included: rates of guideline-advocated investigations, therapies, referral to cardiac rehabilitation. Outcomes included, in-hospital case-fatality, new myocardial infarction (MI), stroke, cardiac arrest, worsening heart failure.
Results: 478 hospitals (91%) agreed to participate, 285 of which saw ACS patients and contributed data over the 2-week collection (46% large urban public/private hospitals, 26% regional and 28% small rural). The other 193 participating predominantly small rural facilities did not have ACS admissions over the two-week study period. 4,365 patients were enrolled, mean age 67 (SD 14) years, 60% men and median GRACE score of 118 (IQR: 96-143). Although the majority of presentations were to large urban hospitals (74%), the audit also captured information on 1,135 patient presenting to regional or rural hospitals. At discharge, 34% were diagnosed as MI, 21% unstable angina, 26% unlikely ischaemia, and 19% had other diagnoses. For the 1474 with MI; angiography was performed in

70%, angioplasty in 41% and cardiac surgery in 8%. As patient risk increased invasive management was less likely (GRACE score <100: 85.0% vs. 101-150: 79.4% vs. 151-200: 49.0% vs. >200: 36.1%, p<0.0001). Case-fatality was 4.4% and new MI 5.0%. Adjusted for GRACE score, there was significant variation in care, clinical course, and secondary prevention measures at discharge, by hospital type/regionality and state/province.
Conclusions: This first comprehensive audit of ACS care in large urban, regional and small rural hospitals in Australia and NZ confirms there are significant variations in the application of the guideline-recommended treatment across both countries. Underutilisation of guideline recommended therapy occurred across all hospital types, in particular for the patients deemed at higher risk by the calculated GRACE score. Focus on quality improvement supported by integrated clinical service delivery is warranted to improve access to, and utilisation of, evidence-based ACS care in both countries.

P4046 | SPOTLIGHT 2013
Contrast-induced nephropathy and bleeding: a bidireectinal link with prognositc value in acute coronary syndrome

S. Raposeiras Roubin, E. Abu Assi, R. Ocaranza-Sanchez, N. Bouzas, A. Lopez Lopez, M. Castineiras Busto, A. Garcia Castelo, A. Garcia Acuna, J.R. Gonzalez Juanatey. *University Clinical Hospital of Santiago de Compostela, Santiago de Compostela, Spain*

Objectives: To analyze the relationship between contrast-induced nephropathy (CIN) and in-hospital bleeding, and their prognostic impact when occurring separately or jointly in acute coronary syndrome (ACS).
Methods: We studied 940 ACS patients undergoing coronary angiography. Using logistic regression analysis, we first assessed the effect of pre-catheterization bleeding (TIMI major or minor) on the development of CIN. Subsequently, we determined whether CIN enhances the risk of post-catheterization bleeding. Finally, we examined the additive effect of bleeding (pre- or post-catheterization) to CIN, on in-hospital mortality.
Results: 54 (5.7%) patients presented CIN. The rate of TIMI serious bleeding was 6.4% (n=60; 20 were prior to catheterization, whereas 40 occurred after it). After adjustment for Mehran CIN score, pre-catheterization bleeding was an independent predictor for CIN (OR 5.40, 95% CI 1.75-16.70). CIN also showed an independent effect on post-catheterization bleeding development (OR 6.485, CI 95% 2.98-14.11), despite adjusting for CRUSADE bleeding score. Patients with CIN but without any bleeding had higher mortality (OR 25.47, 95% CI 12.54-51.71) than patients with neither CIN nor bleeding. After adjusting by the GRACE score, post-catheterization bleeding was independently associated with death (OR 9.67, CI 95% 4.33-21.58), whereas pre-catheterization bleeding was not (OR 2.58, CI 95% 0.58-11.52). The combination of CIN with either pre-catheterization or post-catheterization bleeding enhanced the risk of in-hospital death independently of the GRACE score.



Link between CIN and bleeding

Conclusions: Our data suggest that there is a reciprocal link between CIN and in-hospital bleeding. The combination of both complications provides an additive prognostic value for predicting in-hospital mortality.

P4047 | BEDSIDE
Impact of clinical introduction of high-sensitive cardiac troponin assays on incidence of coronary angiography and exercise stress testing

R. Twerenbold, M. Mueller, R. Hoeller, T. Reichlin, P. Haaf, T. Hochgruber, M. Rubini-Gimenez, S. Sou, S. Osswald, C. Mueller. *University Hospital Basel, Basel, Switzerland*

Purpose: With the clinical introduction of more sensitive cardiac troponin (cTn) assays, concerns arose about potential higher rate of false positives leading to an increased number of clinically not indicated coronary angiographies and exercise stress tests.
Methods: We conducted a prospective observational study to compare the incidence of coronary angiographies and exercise stress tests before and after the introduction of a high-sensitive (hs) cTnT assay, replacing a less sensitive, conventional cTnT assay. A total of 1768 consecutive patients presenting with symptoms suggestive of acute myocardial infarction (AMI) to the emergency department (ED) of a Swiss university hospital were included. Coronary angiographies and exercise stress tests were only considered for this analysis if they were performed during the index visit or within the following three months.
Results: During the first phase using the conventional cTnT assay, a total of 315 out of 1120 patients (28,1%) underwent coronary angiography as compared to 177 out of 648 patients (27,3%) after the introduction of the hs-cTnT assay (p=0.71 for comparison). The incidence of normal angiographic findings without any atherosclerosis (9,2% before vs. 6.8% after the introduction of hs-cTnT, p=0.35) or just mild coronary sclerosis (stenosis < 50%) (3.5% vs. 6.8%, respectively, p=0.10) did not differ significantly between the two groups.
Exercise stress tests were markedly less frequent after the introduction of the hs-cTnT-assay (31,5% vs. 17,3%, p<0.001).
Median stay in the hospital could be reduced significantly after the introduction of high-sensitive cTnT (2 day [IQR 1-7] before vs. 1 day [IQR 1-5] after hs-cTnT-introduction, p=0.002).
Conclusions: The introduction of a hs-cTn assay does neither result in a higher incidence of coronary angiographies nor in an increased incidence of normal angiographic findings whereas it reduces the median length of stay in the hospital among patients presenting with acute chest pain to the ED. Of note, the use of hs-cTnT nearly halves the incidence of subsequent exercise stress testing.
ClinicalTrials.gov number, NCT00470587.

P4048 | SPOTLIGHT 2013
GDF-15 level in acute coronary syndrome and its relations to cardiovascular risk factors, disease manifestations, treatments and outcome - results from the PLATO-study

L.C. Wallentin[1], M. Bertilsson[2], R.C. Becker[3], A. Himmelmann[4], S. Husted[5], S. James[1], H. Katus[6], G. Steg[7], R.F. Storey[8], A. Siegbahn[1] on behalf of PLATO. *[1]Uppsala Clinical Research Center, Department of Medical Sciences, Uppsala, Sweden; [2]Uppsala Clinical Research Center, Uppsala, Sweden; [3]Duke Clinical Research Institute, Department of Cardiology, Durham, United States of America; [4]AstraZeneca, Mölndal, Sweden; [5]Aarhus University Hospital, Department of Cardiology, Aarhus, Denmark; [6]University Hospital of Heidelberg, Department of Cardiology, Heidelberg, Germany; [7]Inserm U698 - AP-HP and University Paris Diderot-Paris 7, Paris, France; [8]University of Sheffield, Department of Cardiovascular Science, Sheffield, United Kingdom*

Background: The plasma GDF-15 level is related to cardiovascular (CV) risk factors and disease manifestations and has been shown to predict outcomes. We evaluated factors influencing GDF-15 level and its relation to outcomes in patients with ST-elevation (STEMI) and non-ST-elevation acute coronary syndrome (NSTE-ACS).
Methods: GDF-15 was determined in plasma at randomization and related to baseline characteristics and treatments at randomization in 16875 patients in the PLATO study (6800 STEMI and 10075 NSTE-ACS) and at discharge (n=4430) and after 1 (n=4049) and 6 months (n=1955) using ANCOVA models. Primary outcome was CV death or myocardial infarction (MI) within one year. GDF-15 was evaluated as a continuous variable (logarithmized), as well as quartiles, using Cox proportional hazard models adjusting for age, gender, smoking, BMI, diabetes, index event (STEMI/NSTE-ACS), previous disease (MI, CABG or PCI, congestive heart failure, peripheral arterial disease, chronic renal disease, chronic obstructive pulmonary disease, asthma) and medications et entry (aspirin, beta-blockade, ACE-inhibitor, diuretics, statin).
Results: Median GDF15 level was at baseline 1550, discharge 1573 1 month 1381and 6 months 1341 ng/L. As presented by ratios of geometric means (95% CI) estimated by multivariable analyses the levels at randomization were increasing with age ≥75 years 2.03 (1.95-2.11), 65-75 years 1.63 (1.57-1.69), 55-65 years 1.35 (1.31-1.40) and 45-55 years 1.18 (1.14-1.22) compared to below 45 years (all p<0.0001). Levels were higher (p<0.0001) with compared to without the following baseline characteristics: chronic renal disease 1.36 (1.32-1.42), diabetes 1.29 (1.27-1.32), diuretics at entry 1.18 (1.16-1.20), habitual smoking 1.17 (1.15-1.19), congestive heart failure 1.14 (1.11-1.18), previous peripheral arterial disease 1.11 (1.07-1.14), ST-elevation MI as the index event 1.07 (1.06-1.09) and previous MI 1.05 (1.03-1.08). The levels were lower (p<0.0001) at treatment with statins0.90 (0.88-0.93) or beta-blockade at entry 0.95 (0.94-0.97). Higher GDF-15 levels at randomization were associated with a raised risk of subsequent CV-death or MI – third quartile (Q3) adjusted HR 1.47 (1.24-1.76) and Q4 adjusted HR 2.09 (1.76-2.49), compared to the first quartile (Q1).
Conclusions: The GDF-15 level seems to be a biomarker of aging and acute and chronic cellular stress. Higher GDF-15 levels are independently associated with higher risk of CV-death and myocardial infarction. Further work should investigate therapeutic measures associated with lowering of GDF-15 levels and their impacts on clinical outcomes.

P4049 | BEDSIDE
Changes in hospital care of octogenarians with acute coronary syndrome: data of the Berlin Myocardial Infarction Registry (BMIR)

J.-U. Roehnisch[1], S. Behrens[2], B. Maier[3], R. Schoeller[4], H. Schuehlen[5], H. Theres[6]. *[1]Vivantes Hospital Hellersdorf, Berlin, Germany; [2]Vivantes Humboldt-Klinikum, Berlin, Germany; [3]Berlin Myocardial Infarction Registry, Berlin, Germany; [4]DRK Kliniken Berlin Westend, Berlin, Germany; [5]Vivantes Auguste-Viktoria Hospital, Berlin, Germany; [6]Charite - University Medicine Berlin, Campus Mitte, Berlin, Germany*

Background: Over the last ten years treatment for patients with ACS has