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**Methods:** This is a multicenter registry of 437 patients with ACS, in whom percutaneous coronary intervention (PCI) utilizing DES was performed. One hundred and twenty one sirolimus eluting stents (SES, Cypher), 128 biolimus eluting stent (BES, Biomatrix), 91 zotarolimus (ZES, Endeavor Resolute) and 97 everolimus (EES, Xience V) were implanted. SES were defined as first (DES1, n=121), while ZES, EES and BES as second generation DES (DES2, n=316).

**Results:** The study groups were comparable with regard to baseline demographic clinical and procedural characteristics, however there were more incidents of STEMI in DES2 group (27.8% vs. 18.1%;  $p=0.03$ ). There were no differences in mortality and major adverse cardiovascular and cerebral events (MACCE) in the periprocedural period between the groups. At one-year follow up the incidence of MACCE (15.7 vs. 7.6%  $p=0.01$ ) and any cause mortality (5 vs. 1.6%  $p=0.04$ ) were lower in the DES 2 group when compared with DES 1. There was also a trend toward lower cardiac mortality (4.4 vs. 0.8%  $p=0.05$ ) and the rate of repeated revascularization (10 vs. 5.4%  $p=0.09$ ) in favor of DES 2 group. The estimated long-term survival, freedom from MACCE and repeated revascularization was higher in the DES 2 group. Implantation of the 2nd generation DES was the only independent factor decreasing the risk of long term MACCE (RR:0.5 95% CI:0.3-0.9).

**Conclusions:** Despite higher clinical risk, implantation of second generation DES was associated with lower rate of adverse events at one year. Further investigations are required to confirm this hypothesis generating registry.

## CAD AND COMORBIDITIES

### P3080 | BEDSIDE

#### Individuals with coronary artery disease at a young age and features of the metabolic syndrome have an increased prothrombotic potential

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**Background:** The relation between coagulation and atherosclerosis has been extensively described. However, most literature on this issue shows conflicting results. Surprisingly, hypercoagulability is most pronounced in young patients with Coronary Artery Disease (CAD). It is known that obesity and hereby induced Metabolic Syndrome (MS), a risk factor for CAD, are related to a higher incidence of thrombo-embolic events. We hypothesized that individuals with CAD at a young age and features of MS have an increased prothrombotic potential. We analyzed this by measuring the Endogenous Thrombin Potential (ETP) in patients with CAD before the age of 51 in men and 56 in women and compared them to their healthy first-degree relatives. Furthermore, we studied whether the presence of the MS in these CAD patients further increased the prothrombotic potential.

**Methodology and principal findings:** We included 118 patients with CAD at a young age and 50 healthy first-degree relatives. An adjusted General Linear Model (GLM) showed that there is a positive association between the peak thrombin levels and the presence of CAD at a young age ( $B = 9.40$ ;  $p < 0.05$ ). Based on the NCEP guidelines we divided our patient group in CAD patients with and without MS, and compared them to healthy first-degree relatives without MS. The adjusted GLM showed that CAD patients with MS have increased ETP levels, both in comparison with healthy first degree relatives ( $B = 12.97$ ;  $p < 0.05$ ) and with CAD patients without MS ( $B = 12.87$ ;  $p < 0.05$ ). There was no difference in ETP levels between CAD patients without MS and healthy first-degree relatives ( $B = 0.10$ ;  $p = ns$ ).

**Conclusion:** This study shows that individuals with CAD at a young age have an increased prothrombotic state. Furthermore, we show that the increased prothrombotic state in the young CAD patients is associated with the presence of the metabolic syndrome.

### P3081 | SPOTLIGHT 2013

#### Does Ultrasensitive Troponin have prognostic value in patients with chronic kidney disease on hemodialysis?

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**Introduction:** Patients with end stage renal disease (Chronic Kidney Disease Stage 5-CKD 5) and no evidence of active ischemia often have elevated troponin T concentrations and increased cardiovascular events. It is unclear whether the high-sensitive troponin T (hsTn T) by its lower specificity has a prognostic role in CKD 5 patients. Objectives: Determine the prevalence and prognosis of elevated hsTn T concentration in hemodialysis patients without apparent clinical evidence of active ischemia. Evaluate independent predictors of elevated hsTn T in this group of patients.

**Methods:** We measured hsTn T serum concentrations in CKD 5 dialysis patients at our institution, which were clinically stable and had no evidence of active ischemia. They were divided according to hsTn T levels into tertiles. All patients were followed for 6 months and the primary endpoint was mayor adverse cardiovascular events (MACE).

**Results:** A total of 91 patients were included of which 95% had elevated lev-

els of hsTn T ( $> 14\text{ng/l}$ ). The serum concentration of hsTn T in each group was: group 1: hsTn T =  $6-37\text{ng/l}$ , group 2: hsTn T =  $38-74\text{ng/l}$ , group 3: hsTn T =  $> 74\text{ng/l}$ . At 6 months the incidence of MACE increased progressively in each tertile (group 1 = 1 patient (3%), group 2 = 4 patients (8%), group 3 = 8 patients (26%),  $p < 0.02$ ). The variables that significantly correlated with elevated hsTn T levels were: age ( $p < 0.01$ ), hypertension ( $p < 0.04$ ), diabetes ( $p < 0.0001$ ), BMI ( $p < 0.02$ ), history of coronary artery disease ( $p < 0.003$ ), history of peripheral vascular disease ( $p < 0.02$ ), history of heart failure ( $p < 0.003$ ), EKG evidence of fibrosis ( $p < 0.009$ ) and atrial fibrillation ( $p < 0.04$ ). After a logistic regression analysis the independent predictors of hsTn T levels  $> 74\text{ng/l}$  that remained were diabetes OR = 13.2 (95% CI 3.9 to 44.5) and fibrosis OR = 6.4 (95% CI 1.52 to 26.9). Patients with concentrations hsTnT  $> 74\text{ ng/l}$  have 7.5 times more risk of MACE; for each year of age increased 10% the risk of MACE.

**Conclusions:** Most patients in CKD 5 dialysis without apparent active ischemia have elevated HsTn T concentration. At higher hsTn T concentration there is a progressive risk of MACE. Independent predictors of elevated HsTn T levels are diabetes and fibrosis.

### P3082 | BEDSIDE

#### Non rate-controlled CT coronary angiography for the exclusion of obstructive coronary artery disease in the assessment of patients referred for transcatheter aortic valve implantation

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**Purpose:** Optimal management of concomitant coronary artery disease (CAD) in patients undergoing transcatheter aortic valve implantation (TAVI) is contentious. This study aimed to assess the role of routine non rate-controlled CT coronary angiography (CTCA) in assessing CAD in patients referred for TAVI, thereby potentially precluding the need for invasive coronary angiography (ICA). CTCA in this cohort can be difficult due to the high burden of coronary calcium and the inability to perform standard pharmacological rate control.

**Methods:** All patients underwent an ECG-gated 128-slice calcium score and CT angiogram to assess peripheral vasculature, aortic anatomy, aortic valve calcification and location of the coronary ostia. Coronary artery calcium scores (CACS) and CTCA images were scored by two independent, blinded observers and compared with ICA performed prior to TAVI. Significant coronary stenosis was defined as  $\geq 70\%$  and ICA was deemed the gold standard for true disease status. Sensitivity, specificity, positive (PPV) and negative predictive values (NPV) were calculated for CTCA at a patient level.

**Results:** 70 consecutive patients referred for consideration of TAVI were studied: 40% male (n=28), mean age 78.9yrs ( $\pm 7.91$ ), 23% diabetic (n=16). Significant CAD was demonstrated in 30% of ICA studies (1 vessel disease (VD) 20% [n=14], 2VD 8.6% [n=6], 3VD 1.4% [n=1]). The sensitivity, specificity, PPV and NPV of CTCA for the detection of significant coronary stenoses were 57.9% (CI: 33.5% to 79.7%), 87.0% (CI: 75.1% to 94.6%), 61.1% (CI: 35.8% to 82.6%) and 85.4% (CI: 73.3% to 93.5%) respectively. The vast majority of false positive (5/6; 83%) and false negative (6/7; 86%) CTCAs were seen in patients in the highest quartile of CACS ( $> 400$ ).

**Conclusions:** In patients undergoing CT assessment prior to TAVI, non rate-controlled CTCA shows poor sensitivity but good specificity and negative predictive value for the detection of significant CAD. A CAC score  $> 400$  may represent a threshold above which invasive angiography is mandated.

### P3083 | BEDSIDE

#### Frailty assessment as a prognostic tool in elderly acute coronary syndrome patients to identify those approaching end-of-life: results from prospective multicenter fate-acs study

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**Purpose:** Acute coronary syndrome (ACS) is common in frail elderly patients and decision-making regarding interventional or conservative management is commonly based upon a clinician's subjective assessment of the patient. Frailty is increasingly recognised as a clinical condition associated with increased mortality but is often omitted from risk scores. This study (FATE-ACS) assessed the predictive power of a simple frailty score in identifying ACS patients approaching end-of-life by.

**Methods:** Demographic, clinical and laboratory data were collected for consecutive, unselected ACS patients admitted to cardiology or medical wards at three interventional centres. Conventional cardiovascular risk stratification was performed using the Global Registry of Acute Coronary Events (GRACE) score and New York PCI score. Frailty was assessed using the Canadian Study of Health and palliative care needs assessed using the Gold Standards Framework (GSF) score. The primary end-point was Major Adverse Cardiac Events (MACE), a composite of death and revascularization at 30 days.

**Results:** 355 patients were recruited within the first three months of study period

(Nov 2012 - Jan 2013) across the three centres. For all patients the median age was 68 years (58-77), BMI 28 (25-29-YZ) and 246 (69%) were males. 56 (16%) had unstable angina, 143 (41%) Non ST Segment Elevation Myocardial Infarction and 156 (43%) ST Segment Elevation Myocardial Infarction. 300 (80%) patients had diagnostic angiography, revealing three vessel disease in 30%, and left main stem disease in 12%. 37 (11%) patients experienced a MACE at 30 days, of which 16 (4.5%) died. Of all risk stratification tools tested, only a positive GSF score was significantly associated with adverse events (HR 1.9:1.2-2.9;  $p=0.03$ ; AUC 0.70), independent of age, left ventricular ejection fraction and diagnosis of three vessel disease.

**Conclusion:** Our interim analysis indicates that positive GSF score, but not Canadian frailty or GRACE scores provides independent prediction of short term clinical outcomes in ACS patients. Further data collection and analyses are being performed and we will present final study results of 800 patients (powered for primary endpoint) at ESC Congress in August/September 2013 at Amsterdam.

### P3084 | BEDSIDE

#### Epicardial adipose tissue thickness is independently related to the coronary atherosclerotic burden determined by SYNTAX and Gensini score

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**Purpose:** Epicardial adipose tissue (EAT), is a specialized visceral fat depot localized between myocardium and visceral pericardium. It acts as an endocrine and paracrine organ and it has been shown to be associated with the presence, severity and extent of atherosclerotic coronary artery disease (CAD). We aimed to search if EAT thickness is associated with Gensini score and Syntax score which is a relatively new system to score complexity of coronary artery disease.

**Methods:** We included 200 consecutive patients who were admitted with stable angina pectoris or acute coronary syndrome, and decided to undergo coronary angiography. Patients were divided into three groups, namely; normal coronary arteries, minimal CAD (at least one coronary atherosclerotic lesion with <50% stenosis) and significant CAD (at least one coronary atherosclerotic lesion with >50% stenosis). Epicardial adipose tissue thickness was evaluated by transthoracic echocardiography. Coronary angiography was performed; Gensini score and Syntax score were calculated.

**Results:** Mean EAT was  $4.3 \pm 0.9$ ,  $5.2 \pm 1.5$  and  $7.5 \pm 1.9$  mm in the patients with normal coronary arteries, minimal CAD and significant CAD groups respectively ( $p<0.001$ ). With increasing EAT thickness Gensini score and Syntax score increase (for EAT thickness <5 mm, 5-7 mm, >7 mm; mean Gensini scores were  $4.1 \pm 5.5$ ,  $19.8 \pm 15.6$  and  $64.9 \pm 32.4$  and mean Syntax scores were  $4.7 \pm 5.9$ ,  $16.6 \pm 8.5$  and  $31.7 \pm 8.7$  respectively; both  $p<0.001$ ). Multivariate analysis and ROC analysis revealed that EAT can be used as an independent predictor of significant CAD. Cut-off EAT value to predict significant CAD was identified as 5.8 mm (ROC analysis 0.875;  $p<0.001$ , 95% CI: 0.825- 0.926). Sensitivity and specificity of EAT cut-off 5.8 to predict significant CAD were 77% and 83% respectively.

**Conclusion:** EAT thickness is significantly associated with more severe, extensive and complex CAD and it can be used as a reliable predictor of significant CAD. Determination of EAT by echocardiography is a cheap and practical method to identify patients who would need more aggressive risk reduction.

### P3085 | BEDSIDE

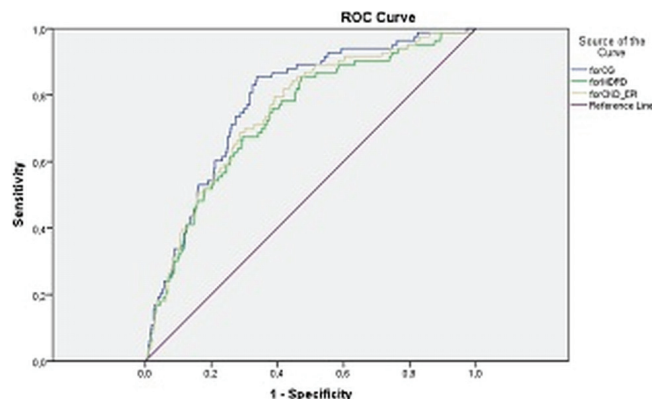
#### Estimation of glomerular filtration rate in acute coronary syndromes: comparison between cockcroft-gault, modification of diet in renal disease and chronic kidney disease epidemiology collaboration

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**Purpose:** Chronic Kidney Disease (CKD) is a frequent morbidity in patients admitted for acute coronary syndrome (ACS). Several equations to correctly identify patients with CKD through glomerular filtration rate (GFR) exist, but it is still not consensual which one is the most appropriate in the setting on ACS. We aimed to compare which of the 3 more commonly used formulas - Cockcroft-Gault [CG]; Modification of Diet in Renal Disease [MDRD] and Chronic Kidney Disease Epidemiology Collaboration [CKD-EPI] - is more effective in predicting a worse outcome at 1-year follow up.

**Methods:** Retrospective study of 560 consecutive patients [age  $66.01 \pm 12.96$ ; 65.9% men; 0.18% black; 30.7% diabetics; 69.1% hypertensive] admitted to our coronary intensive care unit of a tertiary hospital for ACS between October 2009 and October 2011. GFR estimates from CG, MDRD and CKD-EPI were compared in terms of prediction of mortality risk and of a composite primary endpoint (re-infarction, stroke and mortality) at 1-year follow up.

**Results:** Prevalence of GFR <60 ml/min/1.73m<sup>2</sup> was 43.1% using CG, 46.1% with MDRD and 41.8% with CKD-EPI. All 3 formulas showed good results in predicting 1-year composite primary endpoint with CG proving to be the best formula by ROC curve analysis [AUC (CG): 0.747 vs AUC (MDRD): 0.711 vs AUC (CKD-EPI): 0.725]. All formulas were valuable in predicting 1-year total mortality with CG showing the best results. [AUC (CG): 0.78 vs AUC (MDRD): 0.735 vs AUC (CKD-EPI): 0.751].



ROC curve of total mortality

**Conclusions:** In our, almost exclusive, white population all formulas proved value in predicting adverse outcomes at 1-year follow up. The CG formula was significantly more accurate than MDRD and CKD-EPI.

### P3086 | BEDSIDE

#### Differing attitudes in anticoagulation therapy in atrial fibrillation patients with and without coronary artery disease: results from the registry of atrial fibrillation to investigate new guidelines

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**Purpose:** Patients with atrial fibrillation (AF) and concomitant coronary artery disease (CAD) represent a challenging therapeutic problem since combinations of antithrombotic medications may be needed. In this report, we examined the characteristics and the antithrombotic therapy of patients with AF with or without CAD.

**Methods:** The Registry of Atrial Fibrillation To Investigate New Guidelines (RAFTING) is a countrywide prospective observational study of the Hellenic Society of Cardiology. We enrolled 1127 consecutive patients with a diagnosis of AF during their admission for any reason in the Emergency Departments of 31 hospitals trying to capture a representative picture of the characteristics and treatment of AF patients in Greece. After excluding patients with newly diagnosed AF, we identified 195 patients with AF and CAD (group A) and 533 patients with AF without CAD (group B).

**Results:** Patients of group A vs group B were older ( $74 \pm 8$  vs  $70 \pm 12$  years;  $p<0.001$ ), with higher calculated CHADS2 score ( $2.5 \pm 1.2$  vs  $1.9 \pm 1.3$ ;  $p<0.001$ ) and had less often paroxysmal AF (34% vs 50%;  $p<0.001$ ). Overall, the antithrombotic strategy in group A was antiplatelet-only therapy in 42%, vitamin-K antagonist (VKA)-only therapy in 41% and combination of antiplatelet plus VKA in 17% of patients, while in group B the respective rates were 27%, 53% and 1% ( $p<0.001$ ). Of those patients with antiplatelet-only strategy, 18% in group A and 3% in group B received dual antiplatelet therapy ( $p<0.001$ ). In patients with a history of previous stenting, combination therapy with antiplatelet plus VKA was used in 23%. Patients with a CHADS2 score  $\geq 2$  were treated without VKA in 41% of group A and 35% of group B ( $p<0.01$ ). In group B, 31% of patients with a CHADS2 score=0 were treated with VKA. At 6 months follow-up, 11 major bleeding episodes were reported (only 1 with combination therapy).

**Conclusion:** In this representative countrywide registry of AF we found that combination of antithrombotics is kept at low rates especially in patients without CAD resulting in low bleeding at follow-up. However, it seems that patients without CAD at low embolic risk as assessed by CHADS2 score are rather overtreated with VKA while at the same time patients with CAD at high embolic risk are undertreated. At national level, more efforts to base anticoagulation therapeutic decisions by estimating embolic risk objectively with the use of appropriate scoring systems are needed.

### P3087 | SPOTLIGHT 2013

#### Glycosilated haemoglobin but not resting glycaemia is independently associated with coronary artery disease in patients without diabetes mellitus

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Coronary artery disease (CAD) is the leading cause of mortality in developed