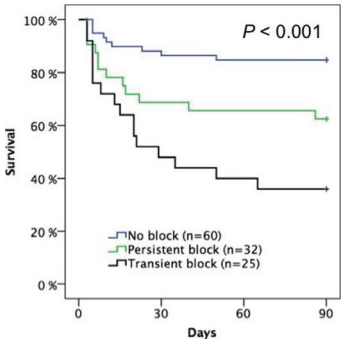
Transient block was an independent predictor of 90-day mortality (adjusted HR 4.8, 95% CI 1.7–13.9, P=0.004).

	No block (n=99)	LBBB (n=8)	RBBB (n=31)	Hemiblock (n=30)	IVCD (n=32)	P for trend
Age, years; mean (SD)	65 (11)	76 (6)	69 (12)	69 (11)	67 (11)	0.02
Hypertension	60%	75%	52%	50%	72%	0.3
History of ischemic heart disease	28%	50%	29%	23%	44%	0.3
Chronic heart failure	8%	20%	14%	4%	11%	0.7
LVEF%, mean (SD)	38 (14)	28 (15)	36 (15)	31 (15)	33 (13)	0.097



Conclusions: Ventricular conduction blocks at baseline indicate very high mortality risk in patients with CS; reversal of blocks does not diminish their negative impact on mortality. RBBB and hemiblocks are independent predictors of mortality in CS.

P5535 | BEDSIDE
The role of both baseline frontal plane qrs-t angle and post-revascularization frontal plane QRS-T angle in cardiac risk asssessment in patients with acute ST elevated myocardial infarction

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Background: Cardiac risk assessment is central to the management of acute ST elevated myocardial infarction (STEMI). Many electrocardiographic (ECG) parameters have been used for risk stratification. To our knowledge, no study so far investigated the comparison of baseline frontal plane QRS-T angle (f(QRS/T)) and post-revascularization (PR) f(QRS/T) in acute STEMI patients who underwent revascularization procedure.
Purpose: To evaluate the comparison of baseline f(QRS/T) and PR- f(QRS/T) in risk assessment of patients with acute STEMI who underwent revascularization procedure.
Methods: 248 patients who admitted to a university hospital cardiology department for the first STEMI and treated with primary PCI (pPCI) or thrombolytic therapy (TT) consecutively between July 2013 and December 2014 were included in our study. Twelve-lead ECG were taken from all patients at admission, after pPCI and 90 minutes after TT. f(QRS/T) were measured from all ECGs.
Results: Baseline f(QRS/T) ≥95.6° predicted in-hospital mortality with a specificity 72.1% and a sensitivity of 66.7% in ROC curve analysis. Patients with baseline f(QRS/T) ≥95.6° have higher troponin levels and more frequent in-hospital mortality, proximal vessel disease, three vessel disease, but lower LVEF and ST segment resolution (STR) (Table 1). In addition, PR-f(QRS/T) ≥89.6° predicted in-hospital mortality with a specificity of 77.8% and sensitivity of 62.5%. Patients with PR-f(QRS/T) ≥89.6° have higher troponin levels and more frequent in-hospital mortality, but lower LVEF and STR (Table 1). Multivariate logistic regression analysis showed that PR-f(QRS/T) ≥89.6° was an independent predictors of in hospital mortality.

	Baseline f(QRS/T) ≥95.6°	Baseline f(QRS/T) <95.6°	P	PR-f(QRS/T) ≥89.6°	PR-f(QRS/T) <89.6°	P
LVEF (%)	43.6±9.6	47.0±9.6	0.013	43.3±8.9	46.8±9.8	0.018
STR (%)	53.0±33.8	64.3±34.6	0.020	50.2±42.4	64.0±31.5	0.009
Troponin I (ng/ml)	61.1±33.6	41.3±34.0	<0.001	55.1±30.1	44.8±36.1	0.032
Three vessel disease (%)	30.7	12.7	0.001	16.9	18.5	0.785
Proximal vessel disease (%)	68	53.8	0.037	67.8	55	0.083
In-hospital mortality (%)	16	4.6	0.003	16.9	5.3	0.011

Table 1

Conclusion(s): Our study firstly demonstrated both baseline f(QRS/T) and PR-f(QRS/T) can be useful for identifying poorer perfusion and high risk patients with larger necrotic myocardium in acute STEMI. In addition, increased baseline f(QRS/T) can be used as an simple indicator of three vessel disease and proximal vessel disease. However, PR-f(QRS/T) is more closely associated with in-hospital mortality.

P5536 | BEDSIDE
Pre-hospital and in-hospital mortality from myocardial infarction in Berlin

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Background: During the past two decades improvement and advancement of coronary reperfusion and optimized medical therapy enabled a marked reduction of hospital mortality in patients with myocardial infarction, while pre-hospital mortality has not been favourably influenced in equal measure. This study aims at describing those who died from myocardial infarction during one year in the city of Berlin, thereby particularly focusing on the comparison of pre-hospital versus in-hospital mortality.
Methods: We examined data from centrally archived death certificates between July 2014 and June 2015 and identified cases of myocardial infarction according to the specific International Classification of Diseases codes (I21, I22, I23) and applying specific keywords ("Herzinfarkt", "Infarkt", "Myokardinfarkt", "Myocardinfarkt", "NSTEMI", "STEMI", "Herzmuskel"). The diagnosis of detected cases were individually checked and validated. In this consolidated cohort place and time of death, age, and sex were recorded.
Results: During the study period 1094 deaths from myocardial infarction were identified. The majority (722; 66%) had died out of hospital, whereas 392 individuals (34%) died at a hospital. Pre-hospital deaths occurred at younger age compared to in-hospital deaths (74.3±13.5 vs. 77.4±12.3y; p<0.001). The preponderance of pre-hospital deaths was detectable over all age groups, but the difference was more pronounced at ages below 65 (fig. 1). Gender-related distribution of the place of death did not differ (female pre-hospital 39.0% vs. in-hospital 40.4%; p=0.671), although in the overall cohort female vs. male had a higher mean age (80.7±13 vs. 71.7±13y). The distribution of pre-hospital vs. in-hospital deaths differed significantly according to season of the year (fig.2). Altogether fewer deaths occurred during summer compared to spring, autumn and winter. At the same time the relation between pre-hospital and in-hospital deaths went into reverse during the months June to September, however.

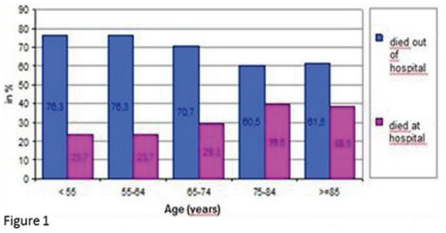

Figure 1

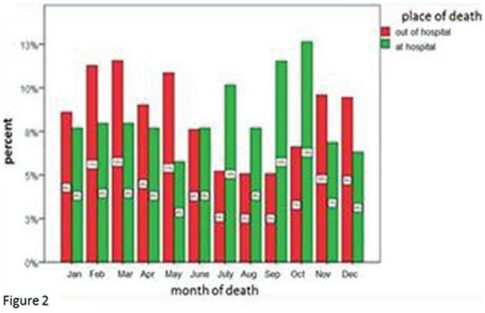

Figure 2

Conclusion: In this study two thirds of deaths from myocardial infarction occurred out of the hospital. Younger individuals died predominantly out of the hospital; and the place of death varied considerably by season of the year. The high level of pre-hospital deaths from myocardial infarction should stimulate intense efforts to improve prevention and emergency management, accompanied by respective scientific evaluation.

P5537 | BEDSIDE
Development of antithrombotic therapy and bleeding complications in patients with ACS over time: Data from a local myocardial infarction registry

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Background: Antithrombotic therapy is a basic component in treatment of pa-

tients with ACS. Over time guidelines have revised their recommendations regarding (dual) antiplatelet therapy. With the data of our local myocardial infarction registry we analysed how guidelines influenced treatment and bleeding complications of ACS patients in a real world setting.
Method: Our Registry collects data on hospital treatment of patients with ACS since 1999. Since 1.4.2011 data on treatment with Clopidogrel, Ticagrelor and Prasugrel are collected. In our study we included 11,943 patients from 20 hospitals with a cath-lab treated between 1.4.11–31.12.15. We studied bleeding complications according to GUSTO criteria (mild, moderate, severe) and we analysed how often antiplatelet therapy was given to risk patients with high age, low weight and history of stroke or TIA.
Results: See figures.

Fig. 1: Initial treatment with Clopidogrel, Prasugrel and Ticagrelor over time (%)

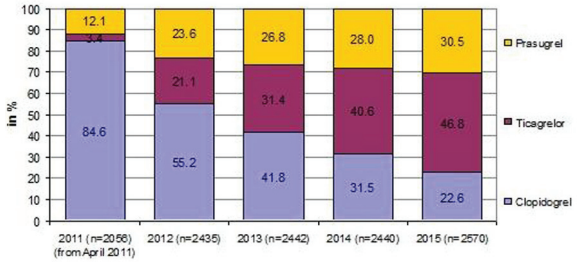
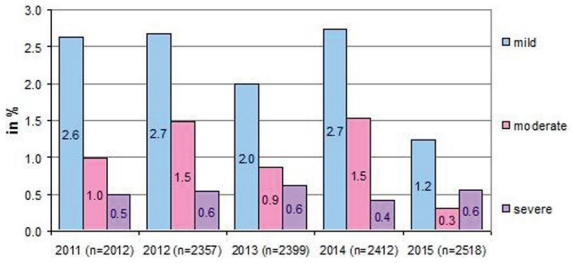


Fig. 2: Bleeding complications (according to GUSTO) during patients' in-hospital stay (%)



Treatment of special patient subgroups was as follows for Clopidogrel, Ticagrelor, Prasugrel: age ≥75 years 39.8%, 33.6%, 6.6%; <60kg 51.3%, 33.6%, 15.2%; history of stroke 63.3%, 27.7%, 8.8%.
Conclusion: 1. As recommended in the guidelines treatment of ACS patients with new antiplatelet drugs has increased significantly over the last 5 years.
2. Even in special subgroups of patients, i.e. elderly patients, patients with low weight and history of stroke or TIA, treatment with new antiplatelet drugs is common.
3. During our study period bleeding complications have not increased over time. This makes it seem, as if the new antiplatelet drugs are safe in the everyday setting.

P5538 | BEDSIDE
Meta-analysis of the impact on mortality of successful revascularization of the non-infarct-related artery coronary chronic total occlusion in patients with acute myocardial infarction treated by PPCI

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Introduction: Recently several observational studies which have compared clinical outcomes of the successful staged revascularization of non-infarct-related artery chronic total occlusion (n-IRA CTO) versus those non-reperfusion, suggested that the former decreased all-cause mortality. But the EXPLORE trail evaluated the impact of CTO revascularization in n-IRA after PPCI for ST-segment elevation myocardial infarction (STEMI) on LV systolic function and clinical outcomes and they did not find the overall benefit for CTO PCI in terms of LVEF or LVEDV and MACE rates.
Purpose: The goal of this study was to provide a systematic review and meta-analysis evaluating the impact of the successful revascularization for an n-IRA CTO on long-term mortality after primary percutaneous coronary intervention for acute myocardial infarction.
Methods: We conducted the meta-analysis in accordance with the general guidelines of the Cochrane Handbook for Systematic Reviews of Interventions; version 5.0.2.We conducted Cochrane Controlled Trials Registry, PubMed, MEDLINE and EMBASE database searches for literatures. Meanwhile, collected published data and randomized controlled trials from meeting abstracts and websites to compare Successful PCI and Occluded CTO for treating n-IRA-CTO in patients with acute myocardial infarction. The quality of literatures were assessed and extracted by Newcastle-Ottawa Scale (NOS), Meta-analysis was conducted by RevMan 5.3 software.
Results: Five studies (3 observational studies and 2 randomized controlled trials) comprising 1083 patients and 565 patients with successful PCI for n-IRA CTO were selected eventually. The successful PCI for n-IRA CTO was related to decreased incidence of all-cause mortality at a median follow-up of 36 months (interquartile range 19 to 42) compared with non-reperfusion (odds ratio [OR] 0.34, 95% confidence interval [CI] 0.2 to 0.59; p=0.0001).In addition, during the mean of 36 months follow-up period, the following incidences were different between 2 groups: cardiac mortality (absolute risk 6.02% vs. 12.55%; OR 0.36, 95% CI 0.19 to 0.68; p=0.002), major cardiovascular events (absolute risk 21.85% vs. 43.48%; OR 0.35, 95% CI 0.24 to 0.5; p<0.00001),stoke (absolute risk 1.26% vs. 3.41%; OR 0.36, 95% CI 0.13 to 0.97; p=0.04); but the risk of myocardial infarction (absolute risk 3.19% vs. 3.47%; OR 0.78, 95% CI 0.36 to 1.70; p =o.54), target lesion re-vascularization (absolute risk 18.58% vs. 17.18%; OR 1.11, 95% CI 0.43 to 2.87; p =o.83)was similar.
Conclusion: Successful PCI for n-IRA CTO could significantly decrease incidence of all-cause mortality, cardiac mortality, MACE and stroke in patients presenting with acute myocardial infarction treated with PPCI. And it was not associated with increased risk of repeat revascularization and myocardial infarction.

P5539 | BEDSIDE
8-hydroxy-2-deoxyguanosine predicts microvascular obstruction after primary percutaneous coronary intervention in patients with anterior ST-segment elevation myocardial infarction

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Background: Microvascular obstruction (MVO) is an important complication of reperfusion therapy in patients with ST-segment elevation myocardial infarction (STEMI). Oxidative stress is involved in the initiation and progression of atherosclerosis, but the relationship between MVO and 8-hydroxy-2-deoxyguanosine (8-OHdG) which is one of the oxidative stress markers has not been examined.
Methods: We investigated 48 patients with STEMI who underwent reperfusion therapy within 12h onset. We analyzed urinary 8-OHdG by ELIZA method in a stable phase after admission. All patients underwent cardiac magnetic resonance imaging (CMR) on day 7 after admission. CMR images were interpreted using Q-MASS MR7.5. Patients were classified into 2 groups; high-8-OHdG group (Group H) and low-8-OHdG group (Group L).
Results: There were no significant differences between Group H and Group L regarding age (61.2±11.3 vs. 66.8±13.8 years), male gender (91% vs. 75%) and coronary risk factors. Group H had more frequently with MVO (54% vs. 12%, p=0.002), greater infarct core (20.8±8.17 vs. 14.7±5.86, p=0.005) at CMR.
Univariate analysis showed higher 8-OHdG group was a strong predictor of MVO (odds ratio, 8.273; 95% confidence interval, 1.937–35.336; p=0.004). Multivariate analysis revealed that higher 8-OHdG group was an independent predictor of MVO (odds ratio, 31.358; 95% confidence interval, 3.087–318.584; p=0.004).
Conclusion: Oxidative stress predicts MVO in patients with STEMI.

P5540 | BEDSIDE
The impact of delay from diagnostic ECG to wire on infarct size, myocardial salvage and clinical outcome in STEMI patients treated with primary percutaneous coronary intervention

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Background: Reperfusion with primary percutaneous coronary intervention (primary PCI) is the recommended therapy for patients with ST-segment elevation myocardial infarction (STEMI) provided it can be performed within 120 minutes from first medical contact. The impact of primary PCI performed later than 120 minutes on reperfusion success is unknown.
Purpose: The aim of this study was to evaluate the impact of ECG-to-wire >120 minutes on infarct size, myocardial salvage, microvascular obstruction (MVO) assessed by cardiovascular magnetic resonance (CMR) and clinical outcome in STEMI patients treated with primary PCI.
Method: This study is a post hoc analysis of the DANAMI-3 trial. Only patients included at Copenhagen University Hospital, were considered for inclusion as CMR was performed only at this center. In total 1492 STEMI patients were included in the analyses of clinical outcome and 748 patients underwent CMR.
Results: Patients with ECG-to-wire >120 minutes had larger infarct size (18% [interquartile range (IQR), 10–28] vs. 15% [8–24]; p=0.022), smaller myocardial salvage index (0.60 [IQR 0.46–0.78] vs. 0.66 [IQR 0.50–0.85]; p=0.032 and a numerically higher incidence of MVO (58% vs. 49%; p=0.076). In a multivariable Cox regression analysis ECG-to-wire >120 minutes was associated with a combined endpoint of all-cause mortality and heart failure (hazard ratio 1.52 [95% confidence interval 1.06–2.18], p<0.022).
Conclusion: ECG-to-wire >120 minutes resulted in larger infarct size, smaller