|	Prior CABG (n=250)	No Prior CABG (n=3292)	P-Value	Culprit SVG (n=81)	Native Culprit (n=99)	No Culprit (n=57)	P-Value*
Age (Yrs), mean(SD)	69.4 +/− 12.0	62.0 +/− 14.3	<0.001	68.5 +/− 11.4	68.7 +/− 11.6	69.2 +/− 12.4	0.90/ 0.95
Male, (%)	204 (81.6)	2324 (70.6)	<0.001	67 (82.7)	83 (83.8)	45 (79.0)	0.84/ 0.74
BMI, mean(SD)	28.6 +/− 5.7	28.9 +/ −6.0	0.40	28.6 +/− 4.7	28.5 +/− 6.0	28.8 +/− 6.7	0.90/ 0.97
OOHCA, (%)	15 (6.0)	296 (9.0)	0.11	3 (3.7)	6 (6.1)	4 (7.0)	0.47/ 0.67
Shock Pre-PCI, (%)	20 (8.0)	279 (8.5)	0.79	11 (13.6)	4 (4.0)	4 (7.0)	0.021/ 0.061
History of smoking, (%)	147 (59.5)	1995 (61.0)	0.64	52 (64.2)	47 (48.0)	42 (73.7)	0.03/ 0.004
Current Smoker-, (%)	47 (32.0)	1233 (61.8)	<0.001	17 (32.7)	18 (38.3)	10 (23.8)	0.56/ 0.34
Diabetes, (%)	89 (35.7)	518 (15.8)	<0.001	29 (35.8)	30 (30.6)	23 (40.4)	0.46/ 0.46
EF (%), mean(SD)	45.3 +/− 14.4	47.4 +/− 13.3	0.020	45.0 +/− 13.8	45.4 +/− 14.6	48.2 +/− 14.3	0.82/ 0.42
Killip Class			0.98				0.061/ 0.15
0/1, (%)	218 (87.2)	2867 (87.1)		67 (82.7)	91 (91.9)	48 (84.2)	
2/4, (%)	32 (12.8)	423 (12.9)		14 (17.3)	8 (8.1)	9 (15.8)	
Intervention Done, (%)	169 (67.6)	2622 (79.8)	<0.001	71 (87.7)	94 (95.0)	2 (3.5)	0.078/ <0.001
D2B (mins), median (25th, 75th percentile)	98 (74, 124)	95 (74, 124)	0.35	95 (75, 119)	98 (75, 119)	107 (84, 130.5)	0.87**/ 0.27**
Death In Hospital, (%)	12 (4.8)	165 (5.0)	0.88	6 (7.4)	2 (2.0)	2 (3.5)	0.081/ 0.19
Death at 30 Days, (%)	12 (4.8)	189 (5.7)	0.54	6 (7.4)	2 (2.0)	2 (3.5)	0.081/ 0.19
Death at 1 Year, (%)	27 (10.8)	295 (9.0)	0.33	10 (12.4)	7 (7.1)	4 (7.0)	0.23/0.40

TCT-528

Clinical Syntax Score And Long-Term Outcome After Successful Primary PCI.

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Background: Several clinical and angiographic scores have been proposed for the prediction of the outcome of patients with myocardial infarction undergoing primary percutaneous coronary angiography (PCI). The aim of this study was to assess the ability of Clinical Syntax Score (CSS) for predicting outcome late after successful primary PCI.
Methods: 345 consecutive patients that underwent successful primary PCI due to STEMI in our hospital were recruited out of 361 primary PCIs. CSS was calculated for each patient as previously described. The patients were followed by outpatient visit or telephone for 2 years. Endpoints included all-cause death, cardiac death, repeat revascularization (RR), stent thrombosis (ST) and major adverse cardiac event (MACE), defined as the composite of death, myocardial infarction, or target vessel revascularization.
Results: The median follow-up period was 476 days (mean 496±5 days). Table 1 presents the 2-year outcomes according to CSS tertile, while the figure shows Kaplan-Meier curves for freedom from cardiac death and MACE, respectively, stratified by CSS tertile. CSS score was higher in patients with death or cardiovascular death, RR and MACE.

	CSS LOW (n=117)	CSS MID (n=109)	CSS HIGH (n=119)	p-value
Total Death	6 (5.1%)	14 (12.8%)	22 (18.4%)	0.007
Cardiac death	1(0.8%)	5 (4.5%)	13 (10.9%)	0.02
ST	0 (0%)	0 (0%)	2(1.6%)	0.14
RR	5 (4.2%)	4(3.6%)	15 (12.6%)	0.01
MACE	5 (4.2%)	6 (5.5%)	20(16.8%)	0.001
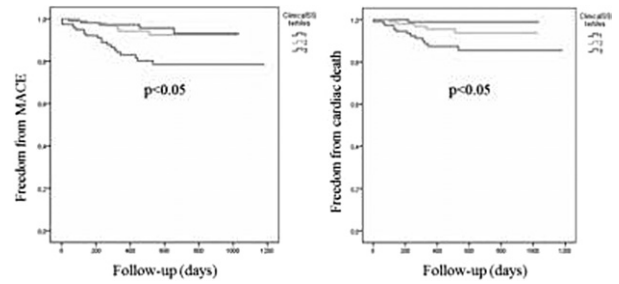
Conclusions: CSS is a reliable tool for assessing outcome after successful PCI in patients with myocardial infarction and successful primary PCI.

TCT-529

5 types of drug-eluting stents including zotarolimus-eluting stent with biolinx polymer show the similar clinical outcomes for the treatment of ST-segment elevation myocardial infarction

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Background: There were no published data regarding the clinical efficacy and safety of second generation drug-eluting stent (zotarolimus-eluting stent with biolinx polymer, ZES-BP, Endeavor resolute) following primary percutaneous coronary intervention (PCI) in ST-elevation myocardial infarction (STEMI). We evaluated the one-year outcome of zotarolimus-eluting stent with biolinx polymer versus to 1st generation (sirolimus-eluting stent, SES and paclitaxel-eluting stent, PES) and 2nd generation (zotarolimus-eluting stent, ZES and everolimus-eluting stent, EES) drug-eluting stents(DES) for the treatment of STEMI.
Methods: A prospective, open-labeled, multi-center cohort has been performed. The primary endpoint was major adverse cardiac event (MACE): the composite of cardiac death (CD), recurrent MI and ischemia-driven target vessel revascularization (TVR) at 1 year. Stent thromboses (ST) by ARC definition were analyzed.
Results: Total 975 patients (ZES-BP=178, EES=197, ZES=203, SES=203, PES=194) were analyzed. One-year MACE were 3.4%, 2.0%, 5.9%, 3.4% and 5.7% in ZES-BP, EES, ZES, SES and PES group, respectively (p=ns). Cardiac death were 2.3%, 1.0%, 2.5%, 1.5% and 1.0% in ZES-BP, EES, ZES, SES and PES group, respectively (p=ns).

• Table 1. Clinical events at 12 months and stent thrombosis.

	ZES-BP (n=178)	EES (n=197)	ZES (n=203)	SES (n=203)	PES (n=194)	P Value
MACE, N (%)	6 (3.4)	4 (2.0)	12 (5.9)	7 (3.4)	11 (5.7)	0.322
Cardiac death, N (%)	4 (2.3)	2 (1.0)	5 (2.5)	3 (1.5)	2 (1.0)	0.646
Recurrent MI, N (%)	0	1 (0.5)	2 (1.0)	4 (2.0)	6 (3.1)	0.781
Ischemia-driven TLR, N (%)	2 (1.1)	3 (1.5)	5 (2.5)	0	3 (1.5)	0.190
Stent thrombosis, N (%)	0	0	4 (2.0)	4 (2.0)	4 (2.0)	0.715

ZES-BP ; zotarolimus-eluting stent with biolinx polymer EES : everolimus-eluting stent, ZES : zotarolimus-eluting stent, SES : sirolimus-eluting stent, PES : paclitaxel-eluting stent, MACE : major adverse cardiac event, MI : myocardial infarctin, TLR : target lesion revascularization.

Conclusions: Compared to 1st and 2nd generation DES (SES and PES, ZES), EES and ZES-BP showed similar one-year clinical outcomes in terms of MACE in patients with STEMI following primary PCI and no stent thrombosis.

TCT-530

Predictors and Clinical Outcomes Related to Door-in Door-out Times

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Background: Recent studies suggest door in-door out (DIDO) time may predict outcomes in ST-elevation myocardial infarction (STEMI) patients transferred from a

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non-percutaneous coronary intervention (PCI) facility. ACC/AHA Clinical AMI Performance Measures recommend a benchmark of ≤30 minutes DIDO time. However, recent studies indicate this is difficult to achieve. Our goal was to evaluate the effect of various DIDO times on clinical outcomes.

Methods: Using a comprehensive prospective regional STEMI program database, we evaluated the outcome of STEMI patients based on DIDO times of ≤30 minutes, 30-45 minutes, 46-60 minutes, 61-90 minutes, and >90 minutes.

Results: Of 3,435 consecutive STEMI patients who presented to the Minneapolis Heart Institute at Abbott Northwestern Hospital regional STEMI system 4/03 to 12/11, 2,589 were transferred from non-PCI facilities (Zone 1 0-60 miles, Zone 2 60-210 miles). The baseline characteristics and outcomes for the DIDO groups are shown in Table 1. Longer DIDO times occurred in patients with increased age, history of diabetes, presentation during off-peak hours, self-transfer to non-PCI hospital, no intervention performed, and Zone 2 patients. As expected, patients with shorter DIDO times were more likely to have a door to balloon time ≤120 minutes, but there was basically no difference in <30 and 30-45 minutes groups (96.5% vs. 94.5%). Patients with DIDO >90 were less likely to have a culprit artery which required an intervention. When adjusted for difference in baseline characteristics, there were no differences in 30 day or 1 year mortality.

Conclusions: DIDO time is a complex measure influenced by many factors. There is with basically no difference in clinical outcomes for patients with DIDO <30 compared to 30-45 minutes. Clinical outcomes appear to be more related to factors which increase DIDO time than the time itself.

	DIDO 0-30 (n=279)	DIDO 31-45 (n=649)	DIDO 46-60 (n=651)	DIDO 60-90 (n=613)	DIDO>90 (n=374)	P-value
Age (Yrs), (Mean (SD))	60.5 (13.1)	61.4 (13.8)	62.0 (14.0)	64.1 (14.7)	63.7 (14.9)	<0.001
Male (N/%)	208/74.6%	482/74.3%	469/72.0%	428/69.8%	259/69.3%	0.25
Diabetes Mellitus (N/%)	42/15.1%	86/13.3%	101/15.6%	115/18.8%	74/19.8%	0.027
Initial Hospital Zone 1 (N/%)	213/76.3%	476/73.7%	372/57.1%	291/47.6%	177/47.5%	<0.001
Presentation to ANW during traditional peak hours (N/%)	120/43.2%	234/36.1%	229/35.2%	196/32.0%	115/30.8%	0.008
Mode of Arrival IH— Ambulance (N/%)	189/67.7%	251/38.7%	229/35.2%	217/35.4%	105/28.1%	<0.001
Prior ED Activation (N/%)	45/16.1%	65/10.0%	49/7.53%	27/4.4%	26/7.0%	<0.001
Cardiac Arrest—Pre PCI & In Cath (N/%)	28/10.04%	69/10.63%	72/11.06%	84/13.7%	38/10.16%	0.50
Cardiogenic shock (N/%)	20/7.3%	40/6.4%	56/8.8%	61/10.2%	35/9.5%	0.13
Intervention performed (N/%)	242/86.74%	543/83.67%	519/79.72%	467/76.18%	250/66.84%	<0.001
Door to Balloon ≤ 120 minutes (%) (95% Wald CL)	96.5% (21.5, 100)[d]	94.5% (21.3, 100)[a]	84.1% (18.9, 100)[a]	46.0% (10.2, 100)[b]	3.6% (1.7, 7.5)[c]	<0.001†
30 day mortality, (%) (95% Wald CL)*	4.8% (0.6, 36.0)	6.5% (1.1, 37.8)	5.7% (1.0, 33.1)	5.3% (0.9, 30.2)	11.5% (3.4, 38.2)	0.18
1 year mortality (%) (95% Wald CL)**	5.5% (0.9%, 32.0%)	8.0% (1.7%, 38.3%)	6.8% (1.4%, 32.8%)	8.4% (1.8%, 39.2%)	10.2% (3.3%, 31.5%)	0.27

abcEstimates with the same superscripts do not differ (p>0.05)

*Mortality rates adjusted for baseline differences of age, intervention performed, cardiac arrest, and cardiogenic shock

**Mortality rates adjusted for age, intervention performed, arrival mode to tertiary hospital, cardiac arrest, and cardiogenic shock, and cardiac arrest "Cool-It" patient

TCT-531

Positive Predictive Value Of Clinically Suspected ST-Segment Elevation Myocardial Infarction Using Angiographic Verification

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Background: Fibrinolysis has not been used for the treatment of ST-segment elevation myocardial infarction (STEMI) in Denmark since 2005. The aim of the present study was to assess the positive predictive value of clinically suspected STEMI among consecutive patients in a real-world setting where all patients with suspected STEMI undergo acute coronary angiography.

Methods: We evaluated the clinical diagnosis of consecutive patients with suspected STEMI admitted to Aarhus University Hospital between September 1, 2010 and August 31, 2011 who underwent acute angiography. Conclusive STEMI was defined as a patient with an, by angiography, identifiable culprit lesion.

Results: Of 615 patients with suspected STEMI, 483 (79%) had conclusive STEMI while 132 (21%) did not have an identifiable culprit lesion. Patients with conclusive STEMI had a higher proportion of male gender (73% versus 60%; P=0.004), advanced age (mean, 64 versus 62 years; P=0.005), and a lower ejection fraction (47% versus 50%; P=0.003). Patients without conclusive STEMI were more likely to have diabetes (16% versus 10%; P=0.04), left bundle branch block (24% versus 2%; P<0.001), hypertension (48% versus 36%; P=0.01), or a history of coronary artery bypass surgery (8% versus 2%; P=0.001).

Among patients without conclusive STEMI, 41% had positive biomarkers and a number of differential diagnoses were identified.

Conclusions: In this real-world setting, the positive predictive value of clinically suspected STEMI was 79%. A substantial number of "false-positive" patients would have received fibrinolysis if acute angiography had not been available.

TCT-532

The Effect of Northeast Japan Earthquake on Acute Myocardial Infarction

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Background: Tragic magnitude 9.0 earthquake hit Northeast Japan on 11 March 2011. Even at Medical center in Chiba prefecture which is located 400 km away from a hypocenter have experienced a strong quake. City's function was thrown into confusion for couple of days, but not so many people were reported to be dead in our medical district and population change was limited. According to the past statistics, in such a disastrous situation, tend to increase acute myocardial infarction (AMI) patients. Our objective was to investigate whether disaster stress will increase AMI patients.

Methods: Retrospective study was performed at Funabashi Municipal Medical Center, Division of Cardiology, Heart and Vessel Institute, Chiba, Japan. We have compared 307 patients who were hospitalized for AMI between Mar11th to Aug 10th (6 month period) for years 2006 to 2012. For year 2012, only March to June data was included. Monthly figure stands for 11th of the month to 10th of next month. The age was from 32 to 92 (mean 67.6±11.7) and gender were Male 250 and Female 57. Study was made between 2006 to 2010 plus 2012 group and 2011 group.

Results: The number of AMI patient for 2011 March was 15 (14 underwent percutaneous coronary intervention) and average for 2006 to 2010 plus 2012 group was only at 5.7. The AMI number after catastrophe increased by 163% and strong correlation between the number of aftershock and AMI were seen. There were no significant difference between groups in age, gender, coronary risk factors, culprit lesion and mean blood pressure at arrival.

Number of AMI patients	Mar	Apr	May	Jun	Jul	Aug
2006	5	7	4	8	4	2
2007	5	13	4	7	15	8
2008	4	12	6	4	8	8
2009	9	4	9	15	10	9
2010	6	12	8	7	8	11
2012	5	11	9	-	-	-
2006-2010 & 2012 average	5.7	9.8	6.7	8.2	9	7.6
2011 (change%)	15 (+163%)	4 (−59%)	10 (+49%)	7 (−15%)	6 (−33%)	8 (+5%)

Conclusions: This study demonstrates that disaster stress might be the risk factor for AMI and increases hospitalized patients. Also we have experienced the importance of PCI facility running after the catastrophe since number of patients will increase. Over all, further investigation using large number of cases is necessary. Multiple center investigation is required.

TCT-533

Impact of High High-Density Lipoprotein-Cholesterol on 1-year Outcome of Patients With Acute Coronary Syndrome Undergoing Percutaneous Coronary Intervention

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Background: High-density lipoprotein-cholesterol (HDL-C) is a continuous inverse cardiovascular risk factor. However, little is known about the influence of HDL-C on outcome of patients with acute coronary syndrome (ACS) undergoing percutaneous coronary intervention (PCI).

Methods: A total of 2169 consecutive patients with ACS underwent elective PCI was enrolled. We evaluated the impact of HDL-C on 1-year occurrence of death, non-fatal myocardial infarction and target lesion revascularization. The patients were divided into 2 groups: high HDL-C (> 50 mg/dL for female and > 40 mg/dl for male) and low HDL-C (≤ 50 mg/dL for female and ≤ 40 mg/dl for male).

Results: patients with high HDL-C had a higher incidence of male and hypercholesterolemia. After correction for baseline differences, patients with high HDL-C had a significant lower 1-year outcome (OR 0.567, 95% CI 0.402-0.799, p=0.001).

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