



ACSIS PCI 2010

Results of Interventional Cardiology in ACS A National Survey in Israel



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Cardiology and Intensive Cardiac Care Units,

The Israel Heart Society



Annual Meeting of the Israel Heart Society - May 4st, 2011



Background



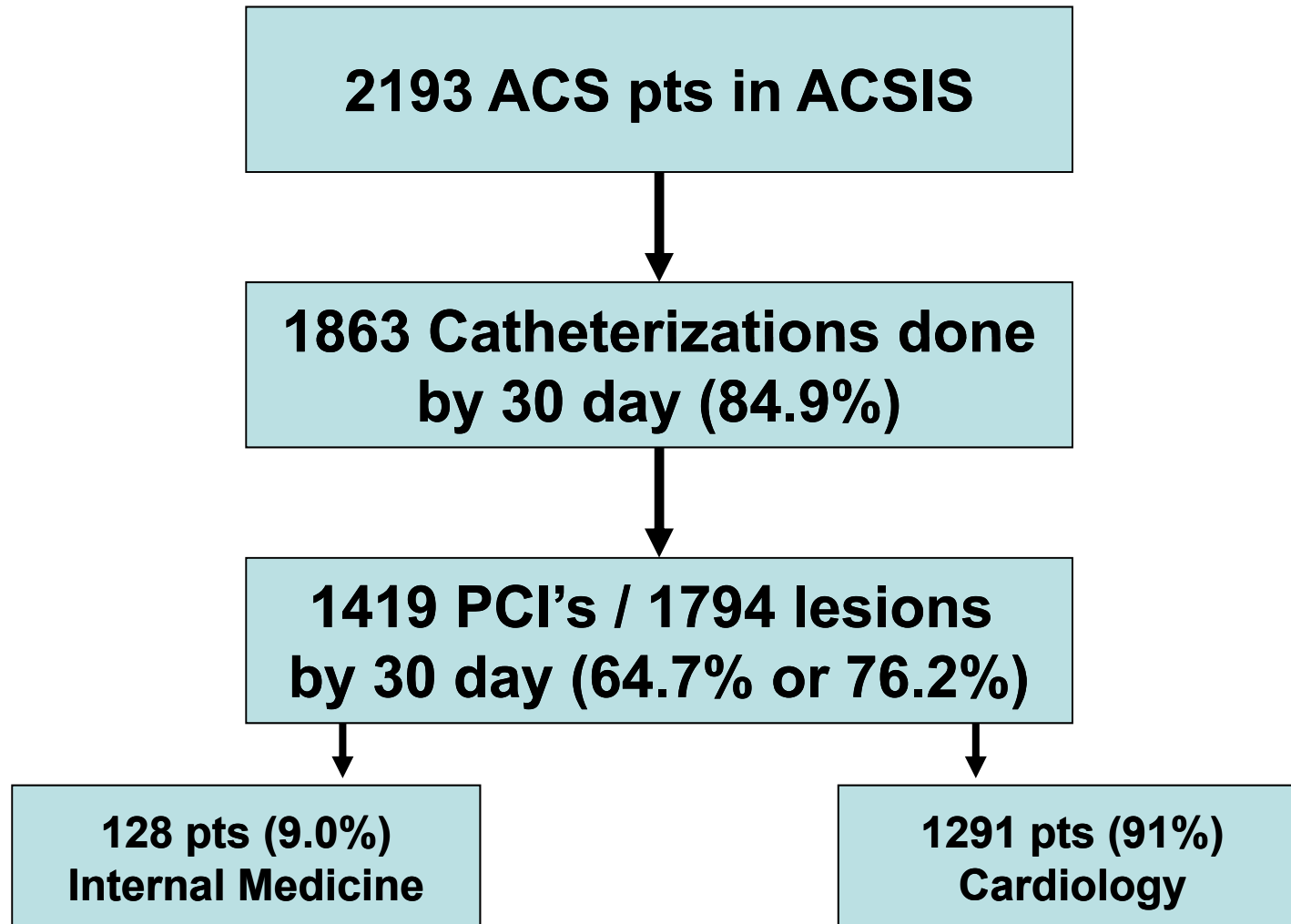
- ACS is a major cause of morbidity and mortality in Israel.
- Early PCI has become an established treatment for ACS patients.
- PCI techniques evolved over time (pharmacology and devices).

Goal

- Using the ACSIS 2010 ACS registry platform, a national survey has been conducted to explore PCI treatment patterns and ACS outcomes in Israel.



Coronary Angiography/PCI During Hospitalization



Clinical Diagnosis

ECG (Admission)	Frequency (%)
Primary STEMI	517 (36.4)
Delayed STEMI	152 (10.7)
Non STEMI	458 (32.3)
UAP or other diagnosis	292 (20.6)

Clinical Characteristics

	Frequency (%)
Male	79.5
Age (yrs)	62.5 ± 11.9
Age > 75 y/o	16.1
DM	36.0
HTN	63.6
Smoker	40.4
Dyslipidemia	76.4
Post MI	29.1
Post PCI	32.6
Post CABG	8.8
PVD	6.2
Past CHF	7.4

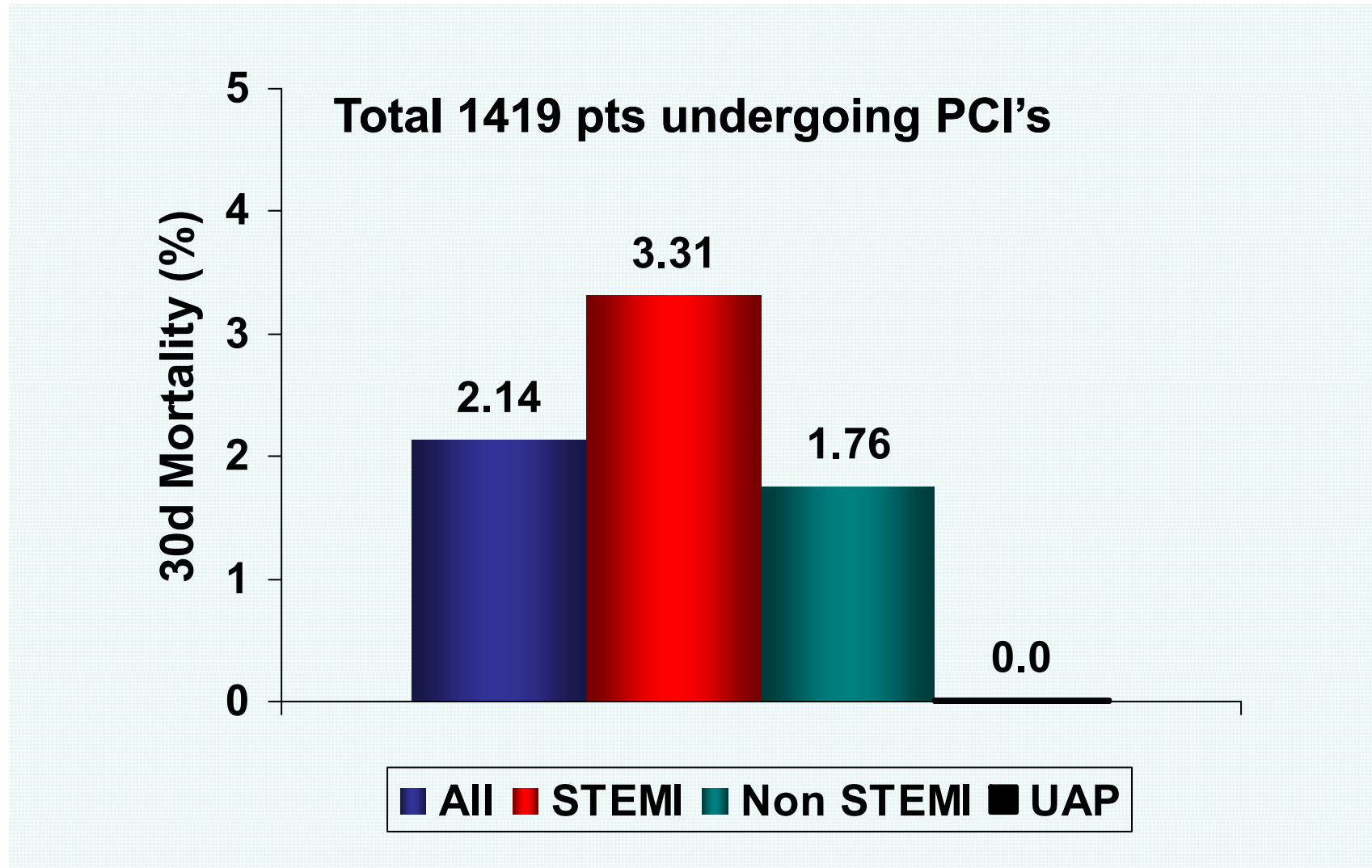
Cardiac Failure Characteristics

Killip ≥ 2	9.8%
Mean LVEF	47.8 \pm 11.4%
Median LVEF	50%
EF < 40%	22.5%
EF < 40% in STEMI	27.7%
Cardiogenic shock (CS)	2.7%
CS - STEMI	4.5%
CS – Non-STEMI/UAP	1.2%

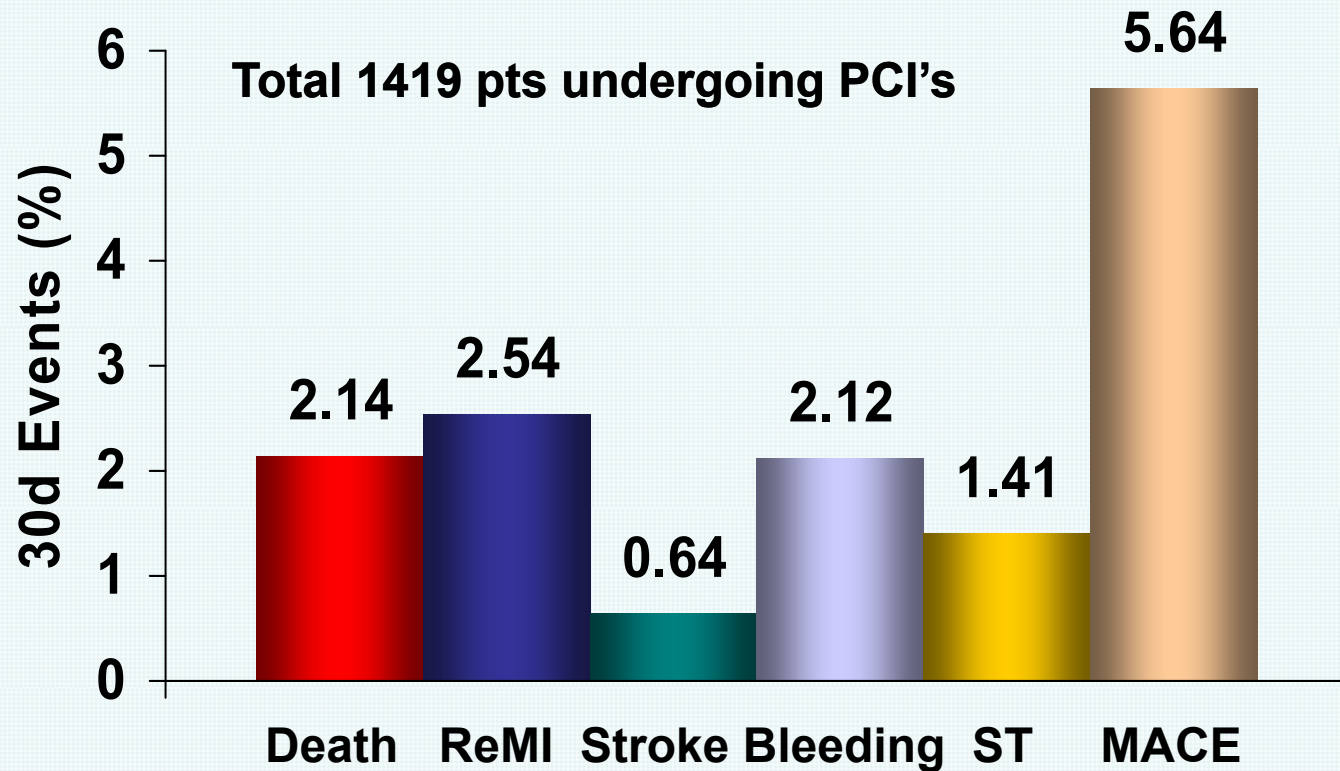
Use of IABP (STEMI)

+IABP	5.7%
-IABP	94.3%

Mortality following ACS-PCI



Adverse Events following ACS PCI

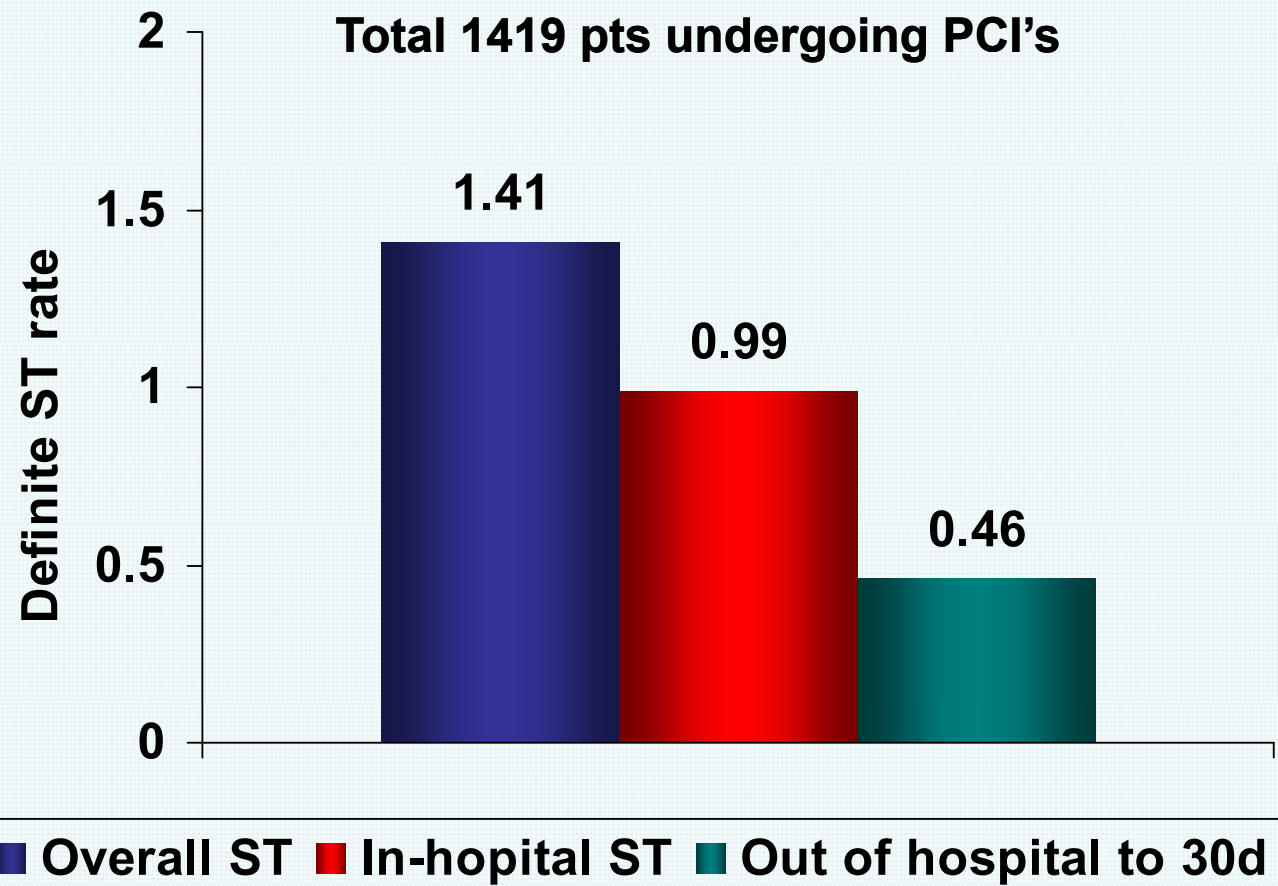


*ST=Definite Stent thrombosis (acute & sub-acute)

MACE=Major adverse events (all composite) – death, reMI, stroke, stent thrombosis

Bleeding=Major bleeding

Stent thrombosis details



*One pt with 2 ST events – the events were counted twice

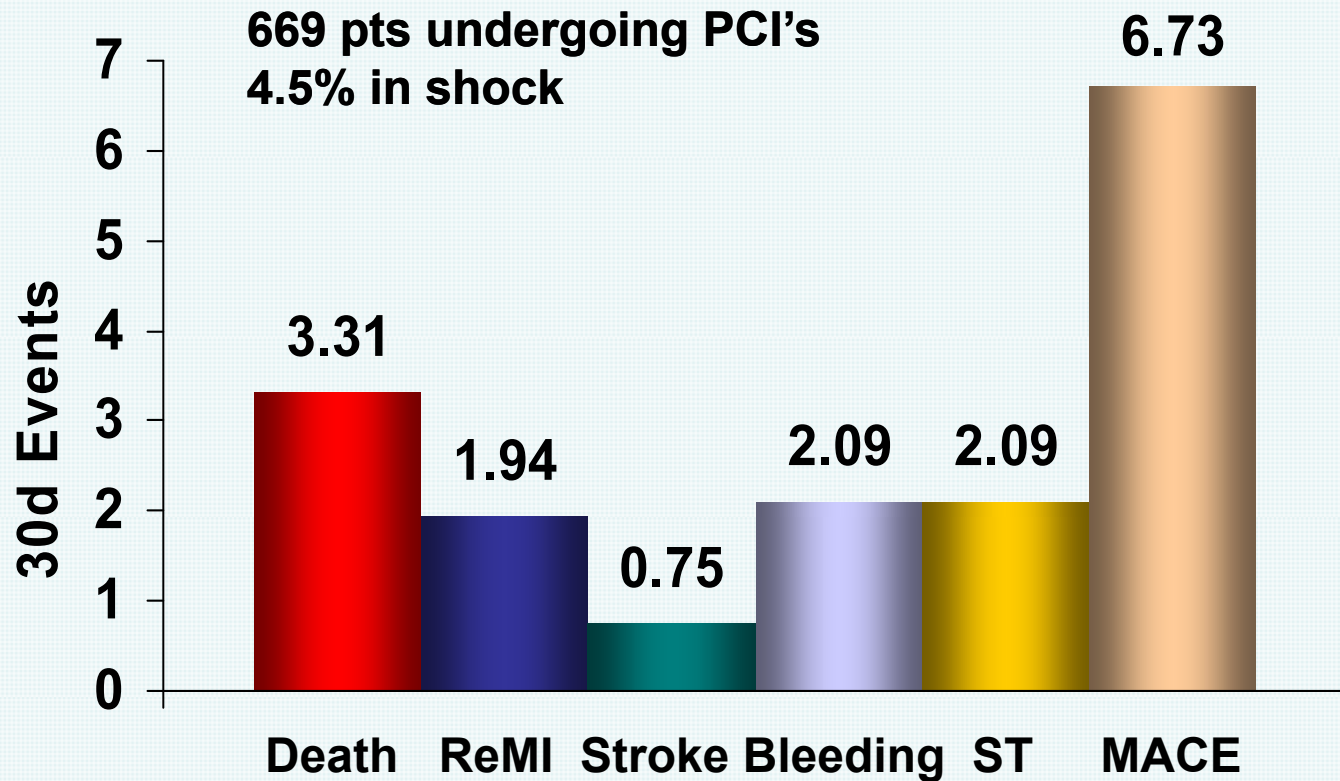
Timing of PCI (STEMI)

●————→ Symptoms to balloon= 244 ± 156 min (median 190min) —————→



●————→
Door to balloon= 89 ± 82 min
(median 68min)

Results following STEMI PCI

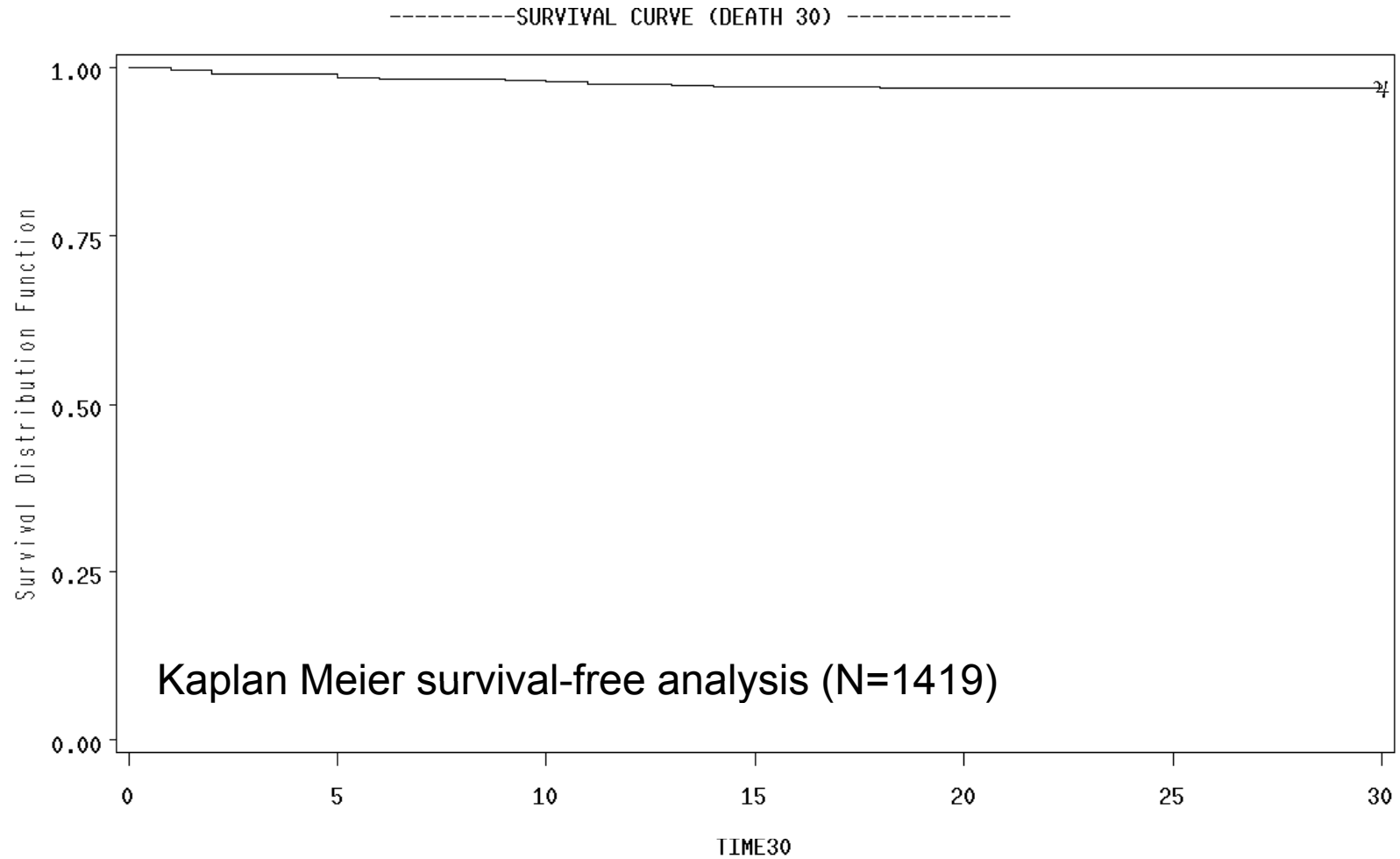


*ST=Definite Stent thrombosis (acute & sub-acute)

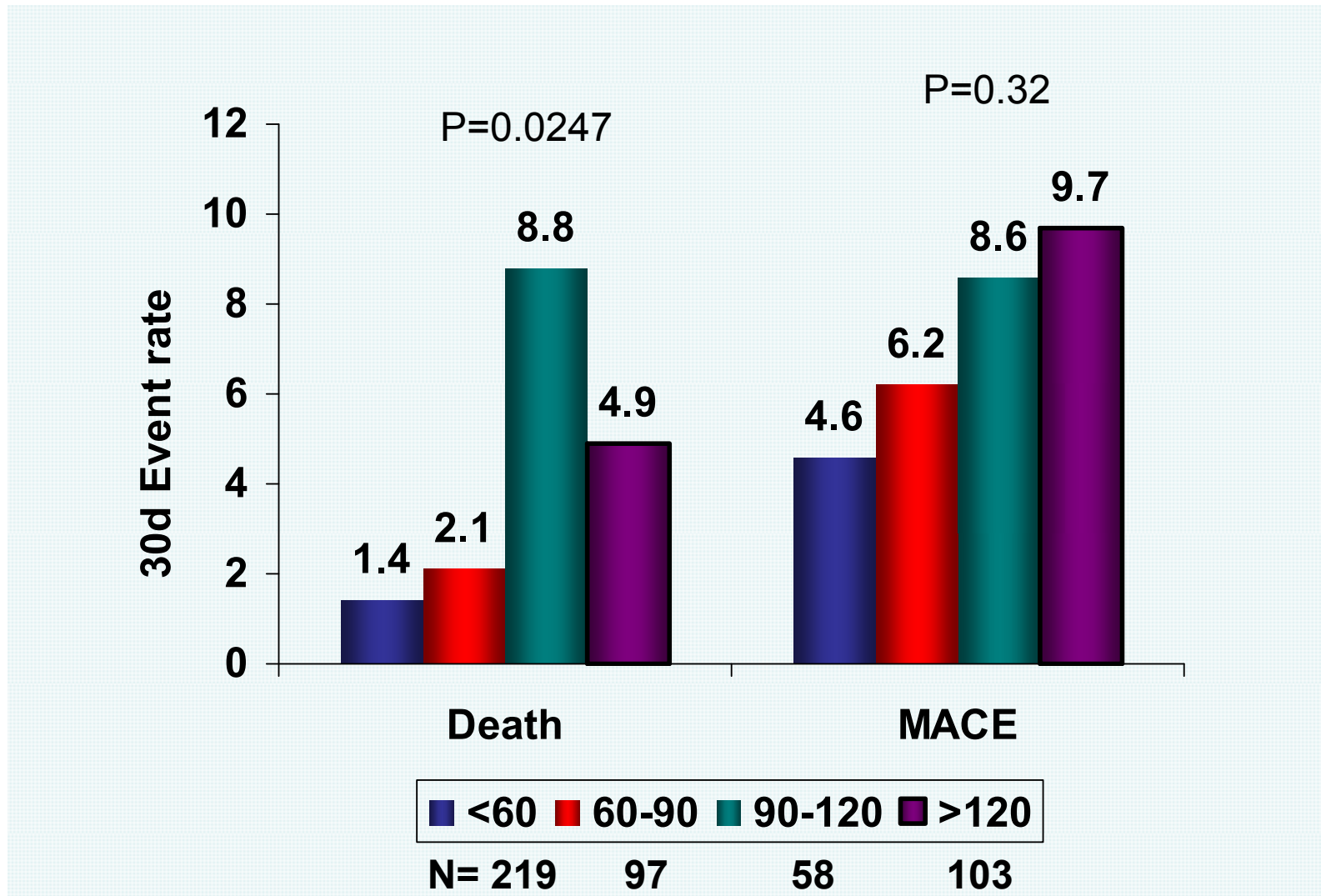
MACE=Major adverse events (all composite) – death, reMI, stroke, stent thrombosis

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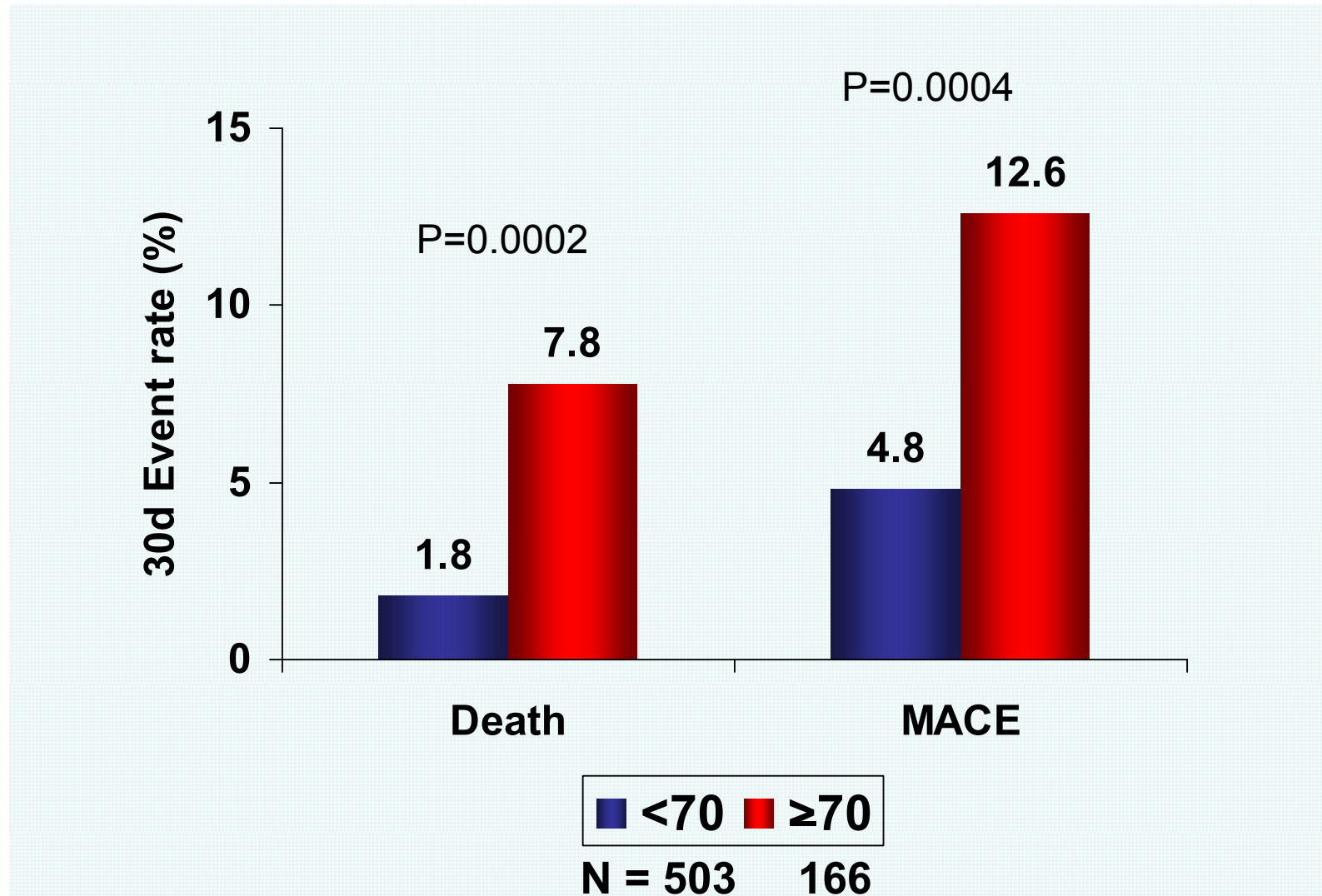
Mortality following STEMI-PCI



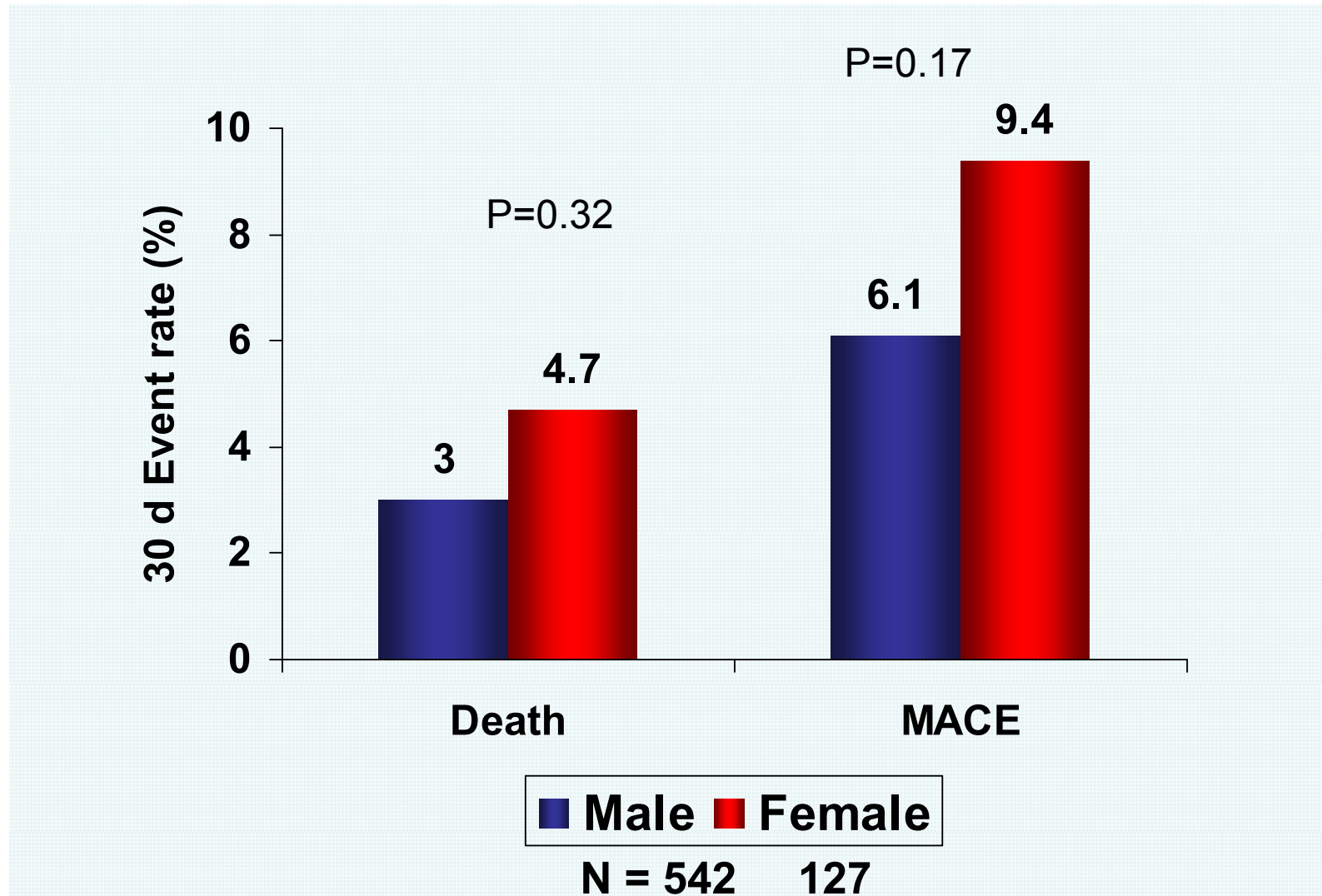
Results of STEMI PCI by DTB



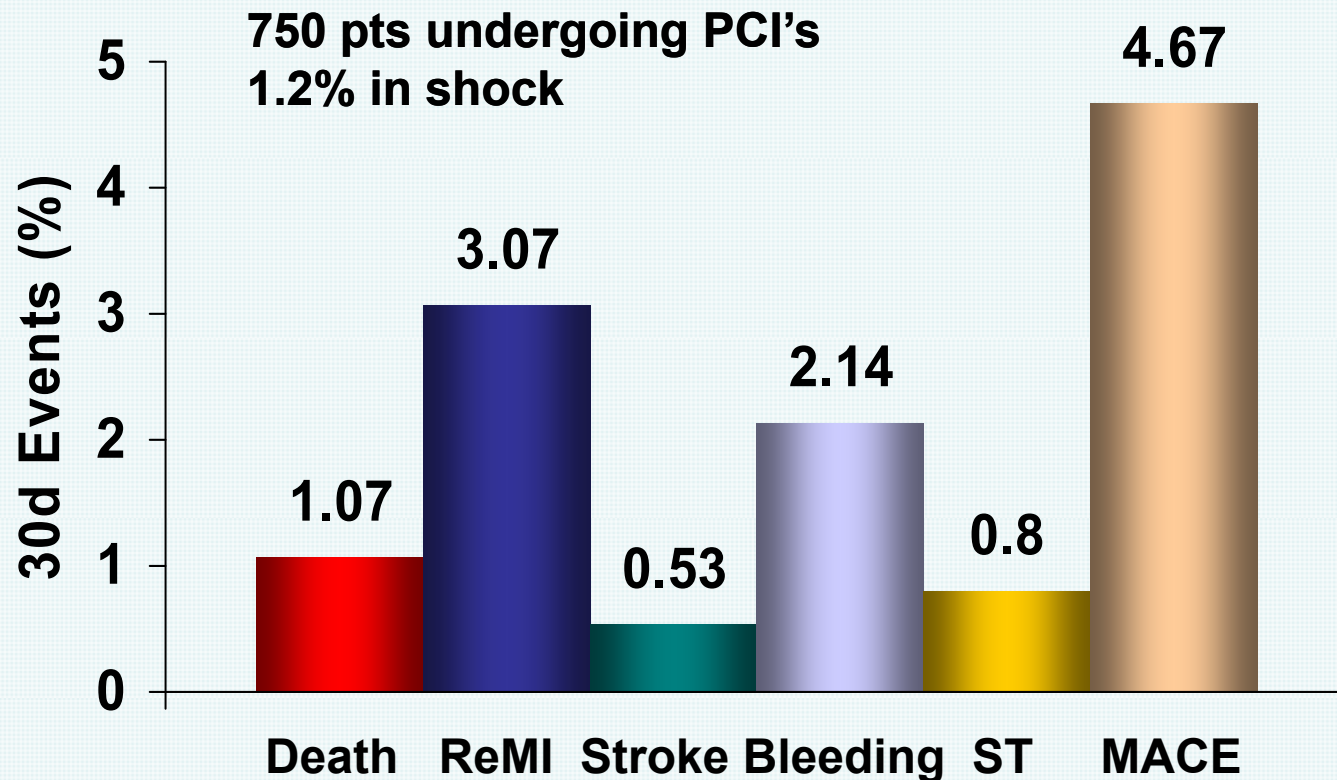
Results of STEMI PCI by Age



Results of STEMI PCI by Gender



Results following Non-STEMI/UAP PCI

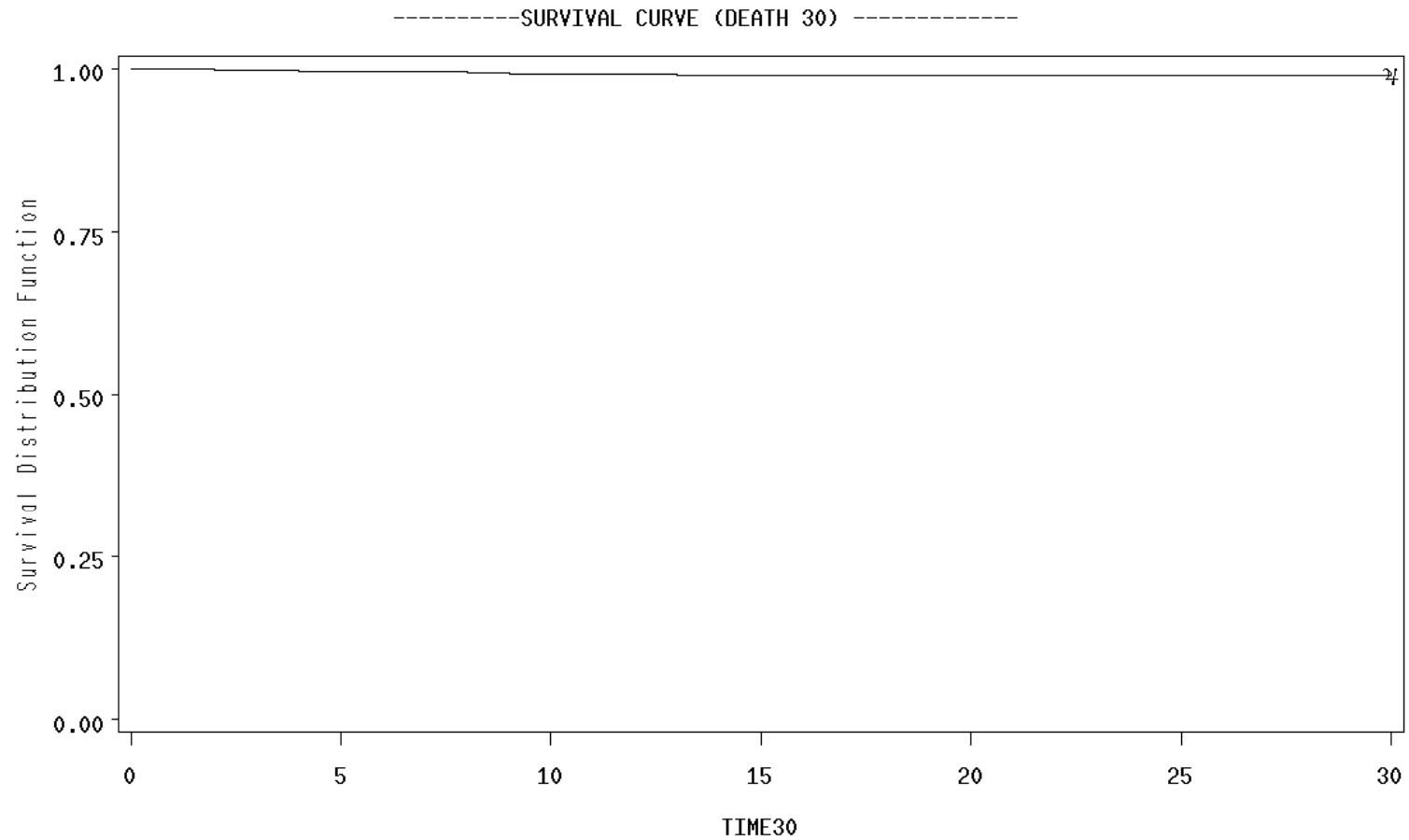


*ST=Definite Stent thrombosis (acute & sub-acute)

MACE=Major adverse events (all composite) – death, reMI, stroke, stent thrombosis

Bleeding=Major bleeding

Mortality - Non-STEMI/UAP PCI



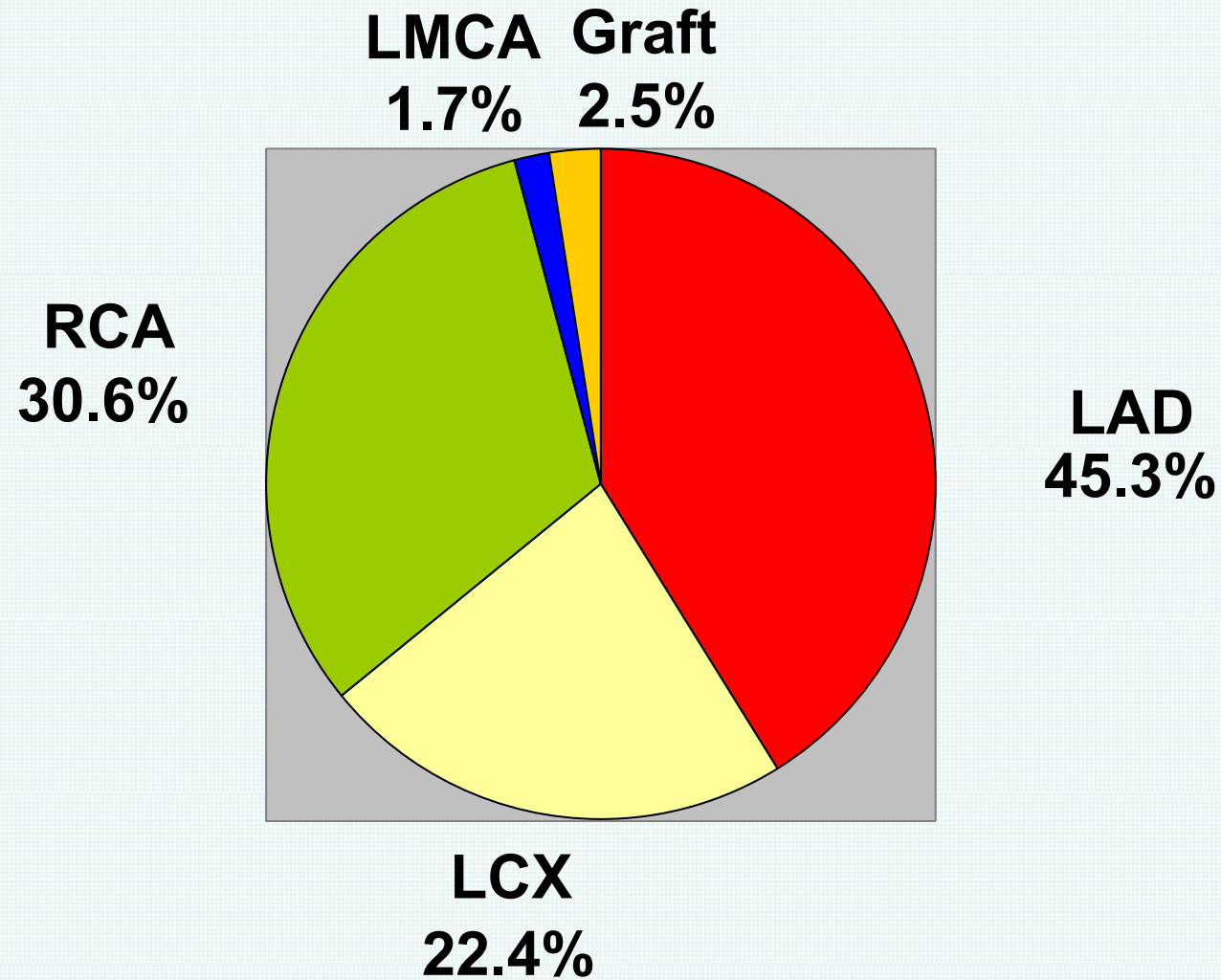
Vascular Access Details

Femoral	67.8%
Radial	32.1%
Brachial	0.1%

Pharmacology

UFH/LMWH	78.6%	
Bivalirudin	7.3%	
Fondaparinux	5.8%	
GP IIb/IIIa	33%	
Plavix (pre)	81.5%	} Overall 99.6%
Plavix (post)	18.1%	

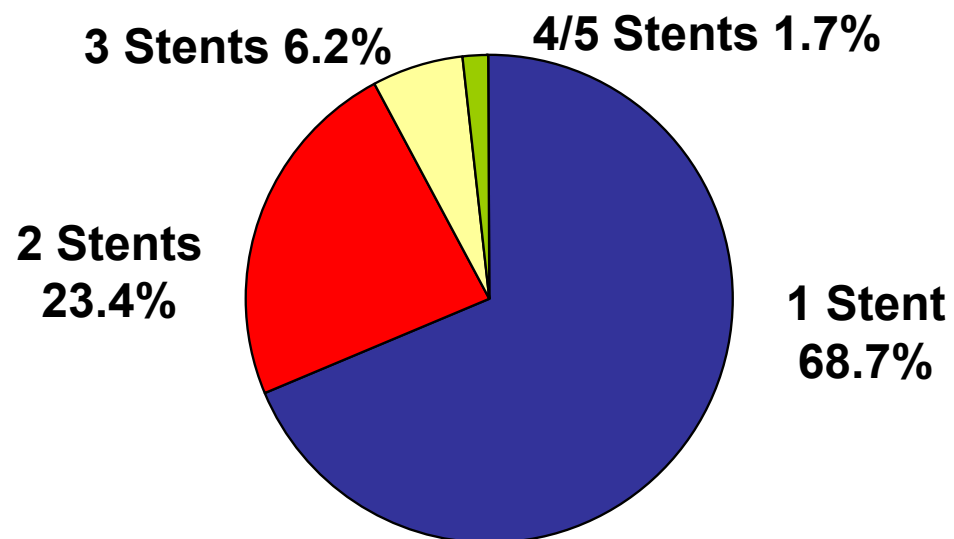
Culprit Vessels Treated



Stent Details

Overall stent rate	91.9%
At least 1 DES used	33.6%
At least 1 BMS used	72.7%
>1 stent	31.3%

***rate of DES use in STEMI = 25.9% and in others = 40.7%**



Diagnostic Devices (All)

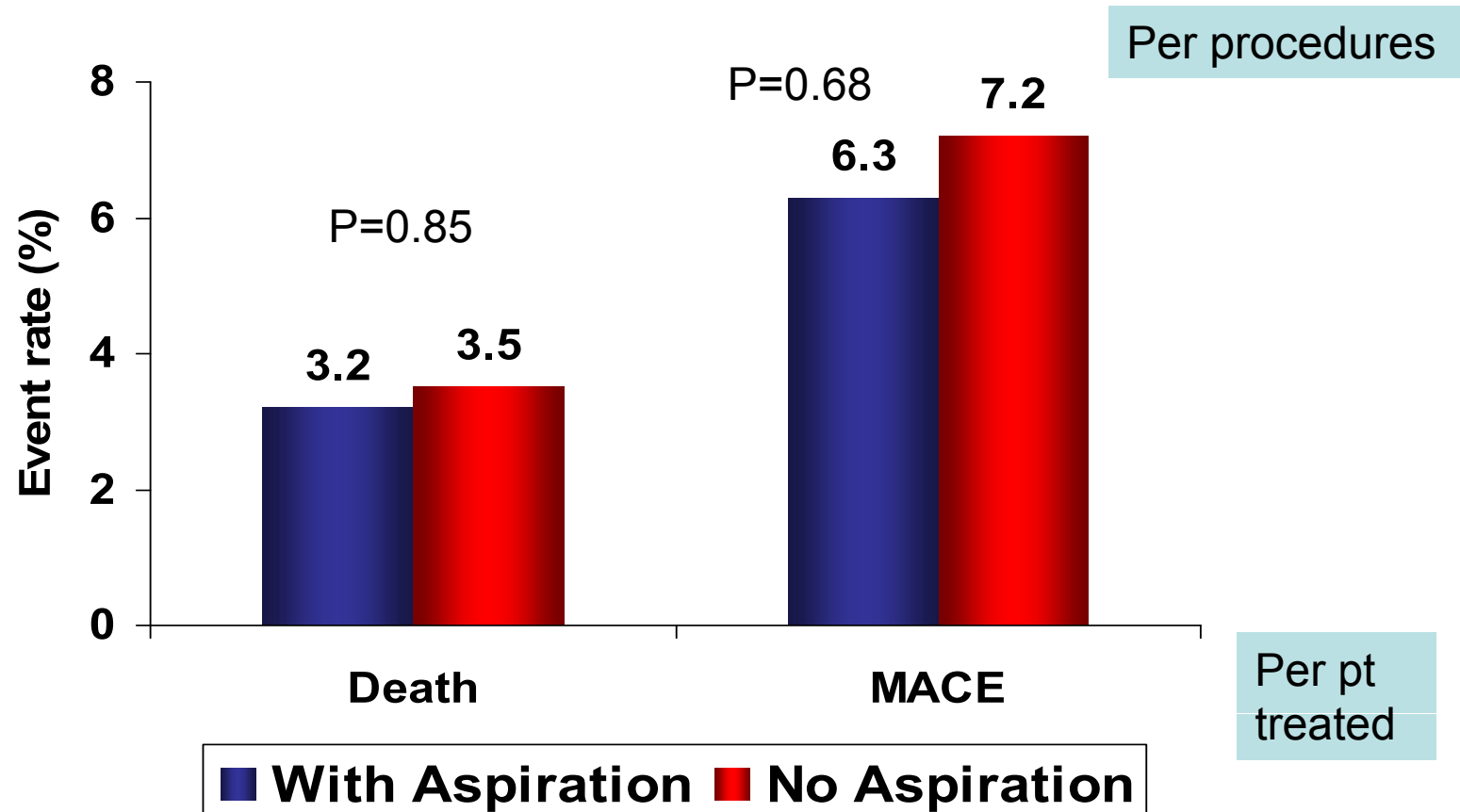
IVUS	0.6%
FFR	0.4%

Distal Protection Devices (All)

+Filter	1.0%
-Filter	99%

Aspiration device (STEMI)

+Aspiration	45.6%
-Aspiration	54.4%



Vascular Closure Devices (All)

None	74.5%
Angioseal	19.1%
Perclose	0.6%
Other	5.8%

Procedural Complications (All ACS)

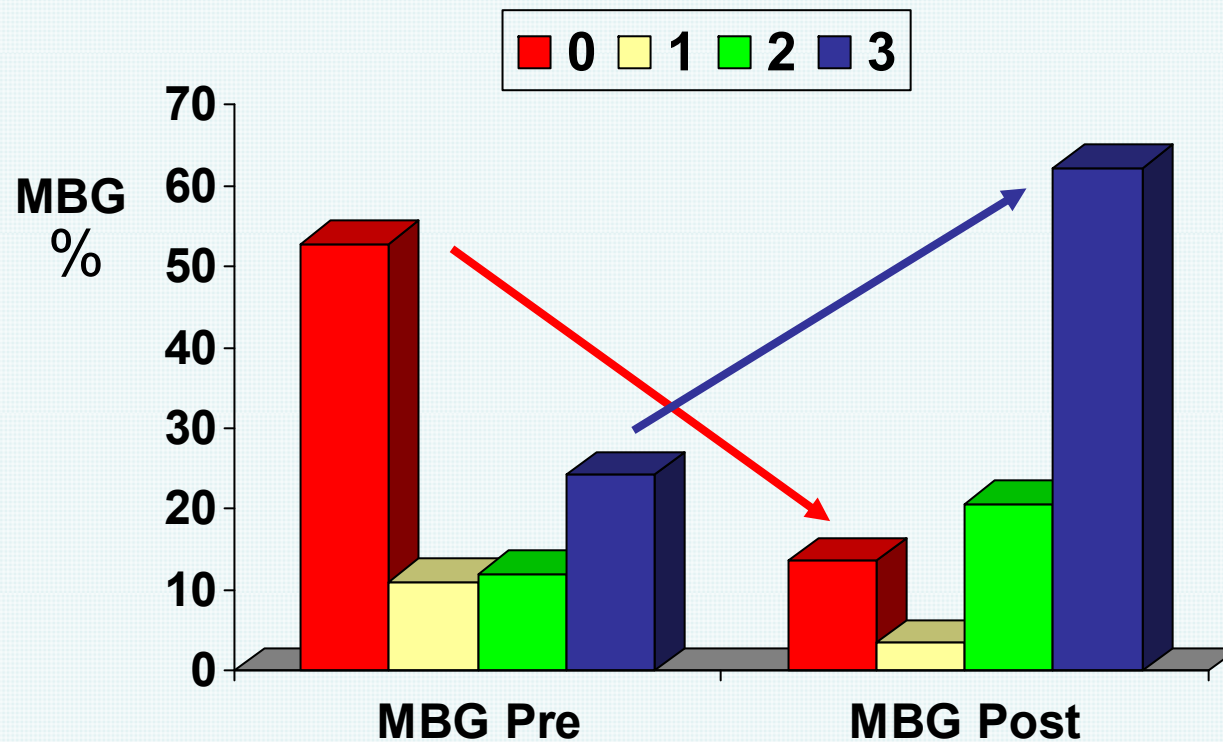
No reflow	3.1%
Any dissection	3.8%
Dissection (final)	0.7%
Side-branch closure	2.7%
Coronary perforation	0.3%
CPR during PCI	1.3%
Urgent CABG	0.4%

Procedural Complications (STEMI)

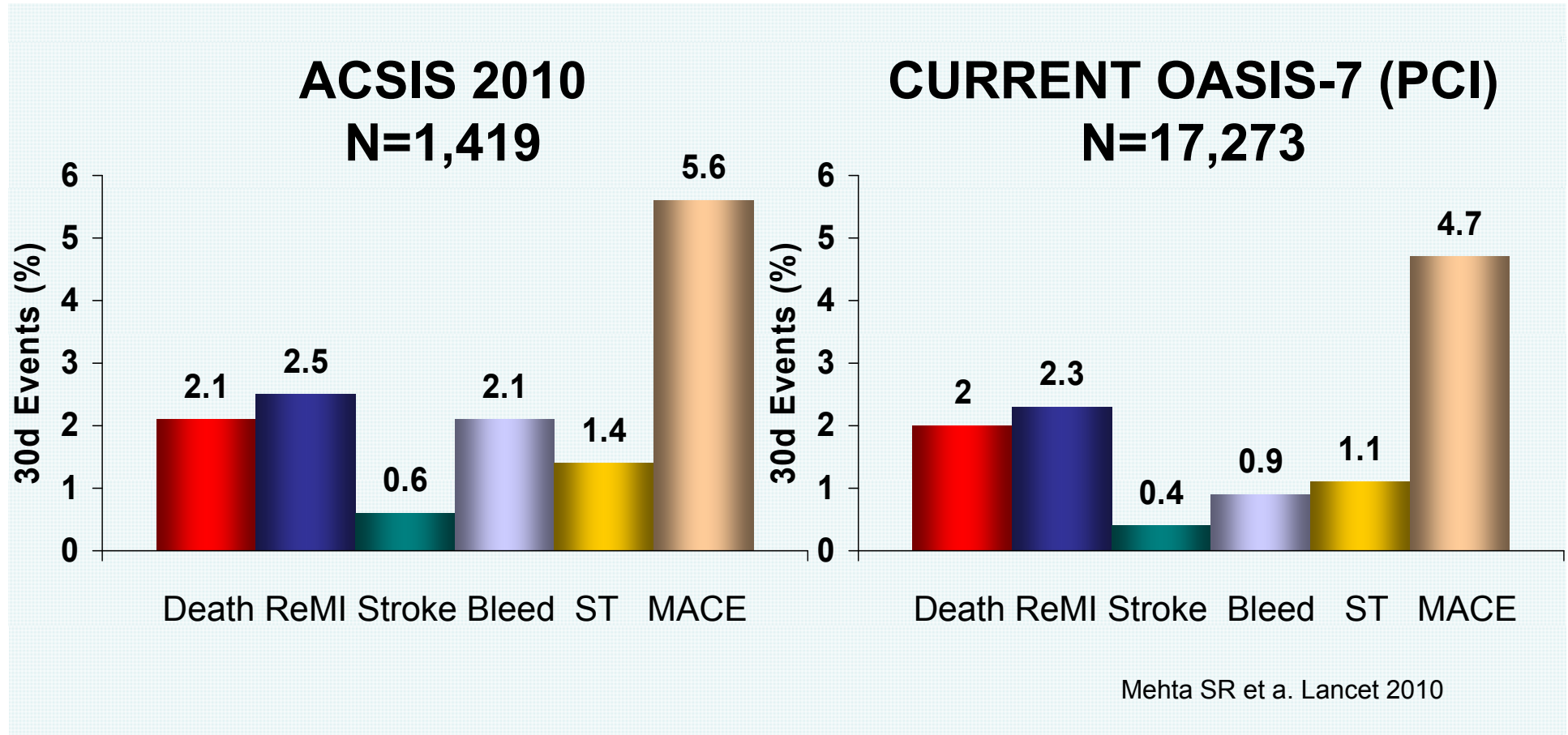
No reflow	3.9%
Any dissection	3.9%
Dissection (final)	0.7%
Coronary perforation	0.1%
Side-branch closure	3.9%
CPR during PCI	2.0%
Urgent CABG	0.6%

TIMI Flow and Blush in STEMI

TIMI 2/3=27.4% → TIMI 2/3=95.9%



ACSIS PCI 2010 vs. CURRENT OASIS-7 PCI



Multivariate model for STEMI

Predicting 30 day Mortality

	OR	CI	P value
Killip $\geq 2^*$	12.68	3.19-50.4	0.0003
Prior MI	9.65	2.45-38.0	0.0012
↑Creatinine	2.13	1.54-2.93	<0.0001
Age (↑10 yrs)	1.11	1.05-1.18	0.0005
Admission HR	1.03	1.01-1.06	0.0098
↑Glucose^{**}	1.01	1.00-1.01	0.0018

*Including cardiogenic shock

**In-hospital measurements

Multivariate model for STEMI

Predicting 30 day MACE

	OR	CI	P value
↑Creatinine	1.44	1.09-1.89	0.009
CPR/Shock	6.94	2.28-21.1	0.0006
Past MI	2.82	1.32-6.02	0.007
Age (↑10 yrs)	1.53	1.13-2.07	0.006
Admission SBP	0.98	0.97-0.996	0.0089
COPD/Asthma	3.72	1.22-11.3	0.0208

Multivariate model for Non-STEMI/UAP Predicting 30 day Mortality

	OR	CI	P value
Renal failure	6.19	1.35-28.4	0.0189
Age (↑10 yrs)	3.33	1.31-8.47	0.0116
↑Glucose*	1.01	1.00-1.02	0.0009

*In-hospital measurements

Multivariate model for Non-STEMI/UAP

Predicting 30 day MACE

	OR	CI	P value
Past MI	2.57	1.22-5.45	0.0133
Prior Amiodarone thx	9.48	2.02-44.3	0.0042
Typical AP	0.35	0.16-0.75	0.0074
Age (↑10 yrs)	1.42	1.02-1.99	0.0396

ACSIS PCI 2010 - Summary

- PCI has been utilized most frequently to treat ACS patients in Israel.
- Successful revascularization was achieved in the vast majority of patients, causing improved flow and perfusion (e.g. STEMI) with very low procedural complication rate.

ACSIS PCI 2010 – Summary (cont.)

- In ACSIS 2010, short-term survival rate (@one month) following ACS-PCI was 97.9% and the overall MACE rate was 5.6%.
- Following STEMI PCI, one month survival was 96.7% and overall MACE rate was 6.7%.
- Following Non-STEMI/UAP PCI, one month survival was 98.9% and overall MACE rate was 4.7%.
- Sub-group of patients (in shock, elderly, renal failure) are still in much higher risk for mortality and MACE and thus should obtain a careful attention and/or clinical management

סקר העשור



האגודה הישראלית לרפואה פנימית
Israel Society of Internal Medicine

ACSIS 2010

Acute Coronary Syndrome Israeli Survey



Yes we can!

Many Thanks

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