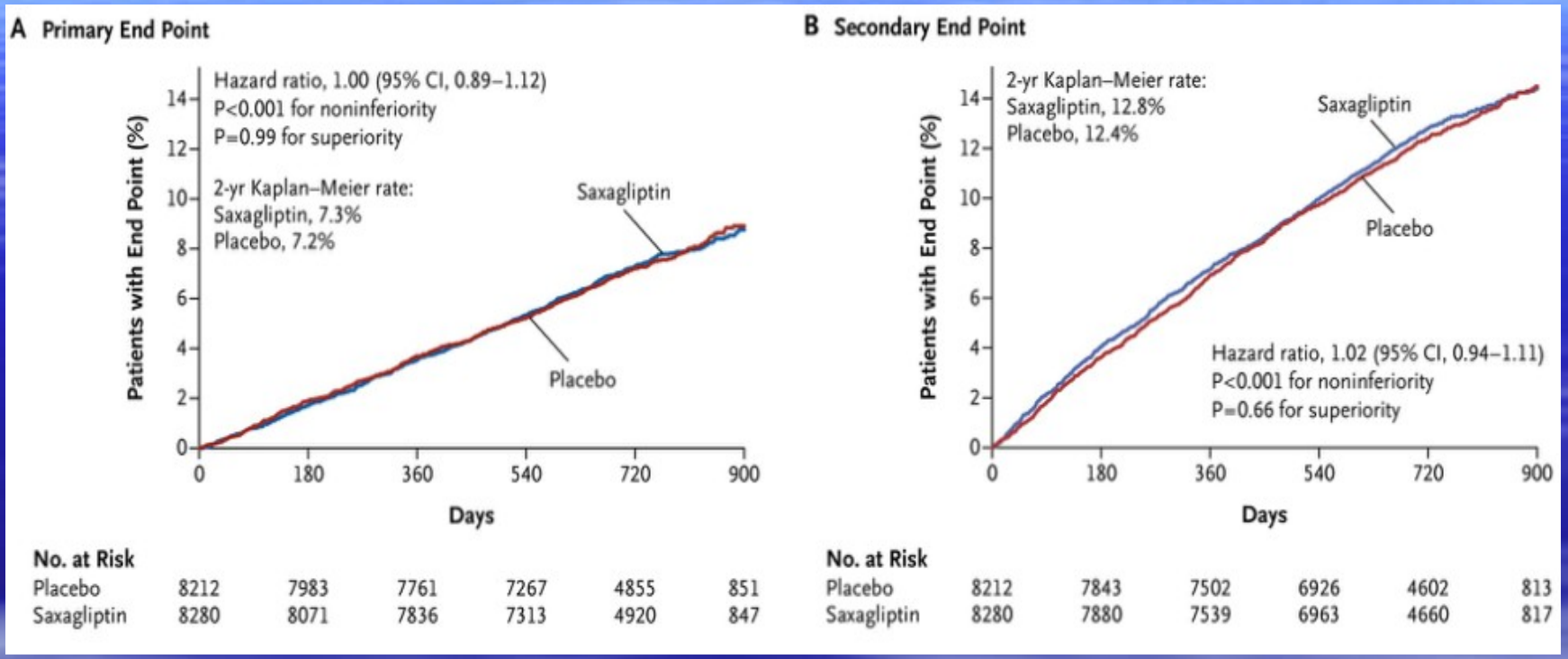
Рискови скорове при ОКС-търсен баланс

Проф. Асен Гудев, FESC, FACC
УМБАЛ ”Царица Йоанна-ИСУЛ”

Kaplan–Meier Rates of the Primary and Secondary End Points



A. The primary end point – съедечно съдова смърт, миокарден инфаркт, исхемичен мозъчен инсулт

B. The secondary end point – сърдечно-съдова смърт, миокарден инфаркт, исхемичен инсулт, хоспитализации за нестабилна стенокардия, коронарна реваскуларизация, сърдечна недостатъчност.

Scirica B. M et. Al. Saxagliptin and Cardiovascular Outcomes in Patients with Type 2 Diabetes Mellitus. NEJM, 2 Sep 2013

под патронажа на Министерство на здравеопазването

съвместно с

СБМС – UBMS
Съюз на българските медицински специалисти

Български лекарски съюз

Първи конгрес

на Съюза на българските медицински специалисти

29-30 ноември 2013
Аулата на Медицинския университет
Пловдив

Cologne Consensus Conference

Decisions in CME/CPD accreditation

20.–21.09.2013

In cooperation with:

ECSF
European Cardiology Service Foundation

EBAC

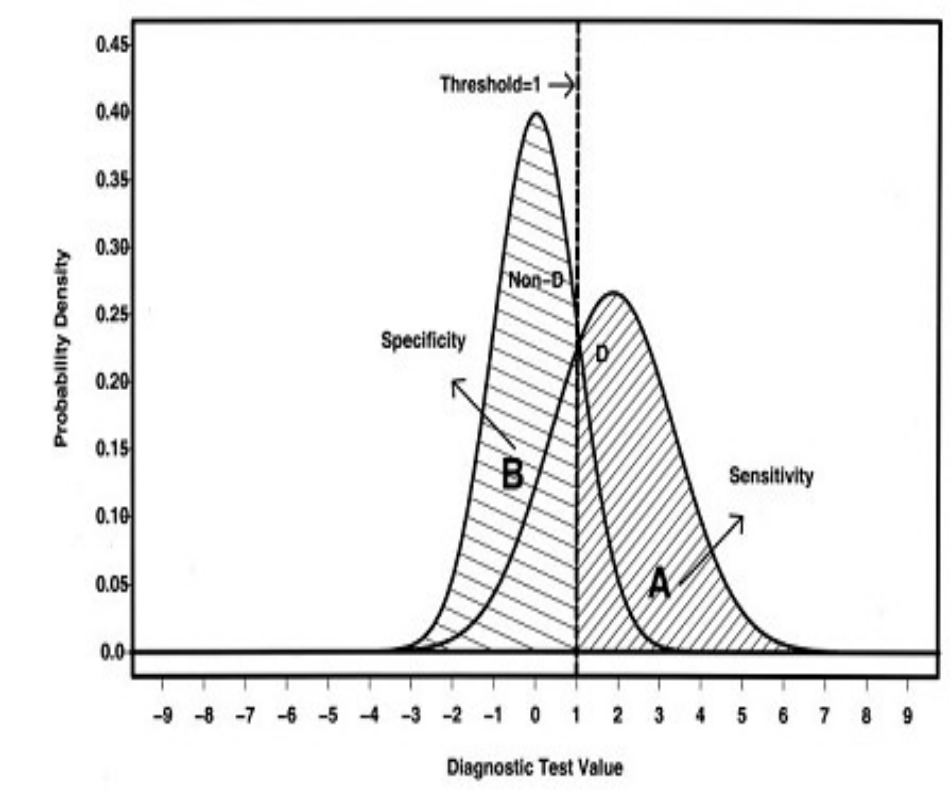
WMA

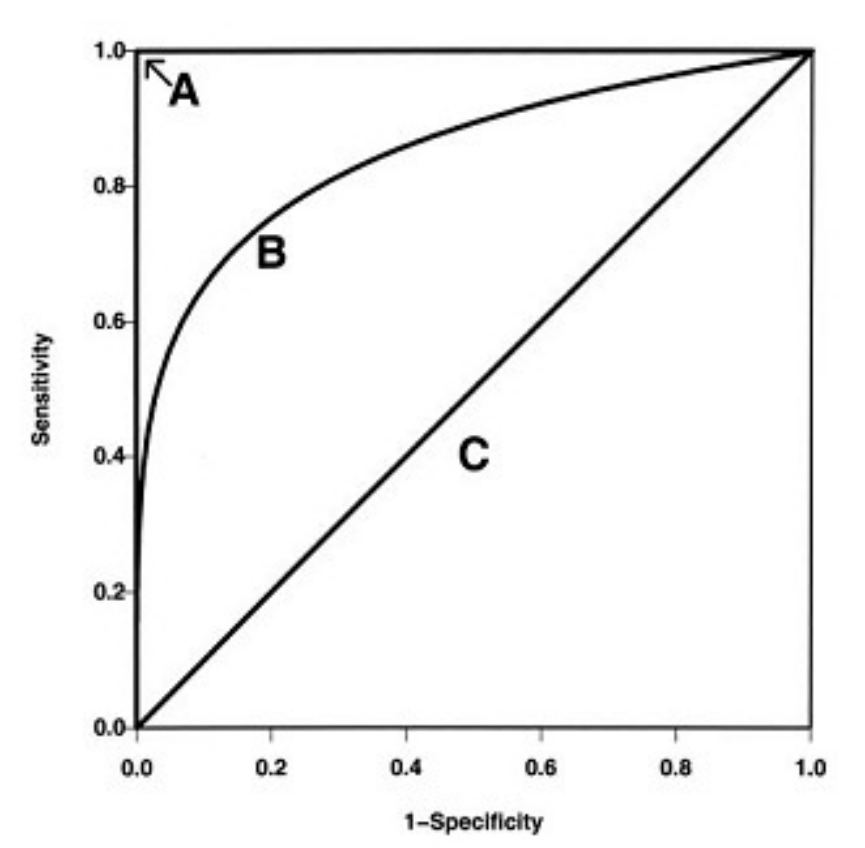
UEMS

Ärztekammer Nordrhein

marburger bund

Venue: Marriott Hotel, Johannistraße 76–80, Cologne/Germany. For further information: www.c-ccc-f.org





Circulation. 2007; 115: 654-657

GRACE SCORE

GRACE Global Registry of Acute Coronary Events — ACS Risk Model

At Admission (in-hospital/to 6 months) | At Discharge (to 6 months)

Age: 80-89
HR: 70-89
SBP: 120-139
Creat.: 141-176
CHF: I (no CHF)

- [ ] Cardiac arrest at admission
- [x] ST-segment deviation
- [x] Elevated cardiac enzymes/markers

Probability of	Death	Death or MI
In-hospital	13%	25%
To 6 months	29%	40%

US Units | Reset | Display Score

GRACE Global Registry of Acute Coronary Events — ACS Risk Model

At Admission (in-hospital/to 6 months) | At Discharge (to 6 months)

Age: 40-49
HR: 70-89
SBP: 140-159
Creat.: 106-140
CHF: I (no CHF)

- [ ] Cardiac arrest at admission
- [ ] ST-segment deviation
- [ ] Elevated cardiac enzymes/markers

Probability of	Death	Death or MI
In-hospital	0.2%	3%
To 6 months	0.8%	7%

US Units | Reset | Display Score

TIMI RISK SCORE

TIMI Risk Score Calculator

Age ≥ 65 years?	☑ Yes (+1)
≥ 3 Risk Factors for CAD?	☑ Yes (+1)
Known CAD (stenosis ≥ 50%)?	☐ Yes (+1)
ASA Use in Past 7d?	☐ Yes (+1)
Severe angina (≥ 2 episodes w/in 24 hrs)?	☑ Yes (+1)
ST changes ≥ 0.5mm?	☑ Yes (+1)
+ Cardiac Marker?	☑ Yes (+1)

Score: 5 points

What does this score mean?

26% risk at 14 days of: all-cause mortality, new or recurrent MI, or severe recurrent ischemia requiring urgent revascularization.

TIMI Risk Score Calculator

Age ≥ 65 years?	☐ Yes (+1)
≥ 3 Risk Factors for CAD?	☑ Yes (+1)
Known CAD (stenosis ≥ 50%)?	☐ Yes (+1)
ASA Use in Past 7d?	☐ Yes (+1)
Severe angina (≥ 2 episodes w/in 24 hrs)?	☑ Yes (+1)
ST changes ≥ 0.5mm?	☐ Yes (+1)
+ Cardiac Marker?	☐ Yes (+1)

Score: 2 points

What does this score mean?

8% risk at 14 days of: all-cause mortality, new or recurrent MI, or severe recurrent ischemia requiring urgent revascularization.

CRUSADE BLEEDING SCORE

Baseline Hematocrit	34 - 36.9	Prior Vascular Disease	No
GFR: Cockcroft-Gault	31 - 60 (Calculate GFR)	Diabetes Mellitus	No
Heart rate on admission	81 - 90	Signs of CHF on admission	No
Systolic blood pressure on admission	101 - 120	Sex	Female

Clear Selections

CRUSADE Bleeding Score	Risk of In-Hospital Major Bleeding
47	11.4%
High Risk	

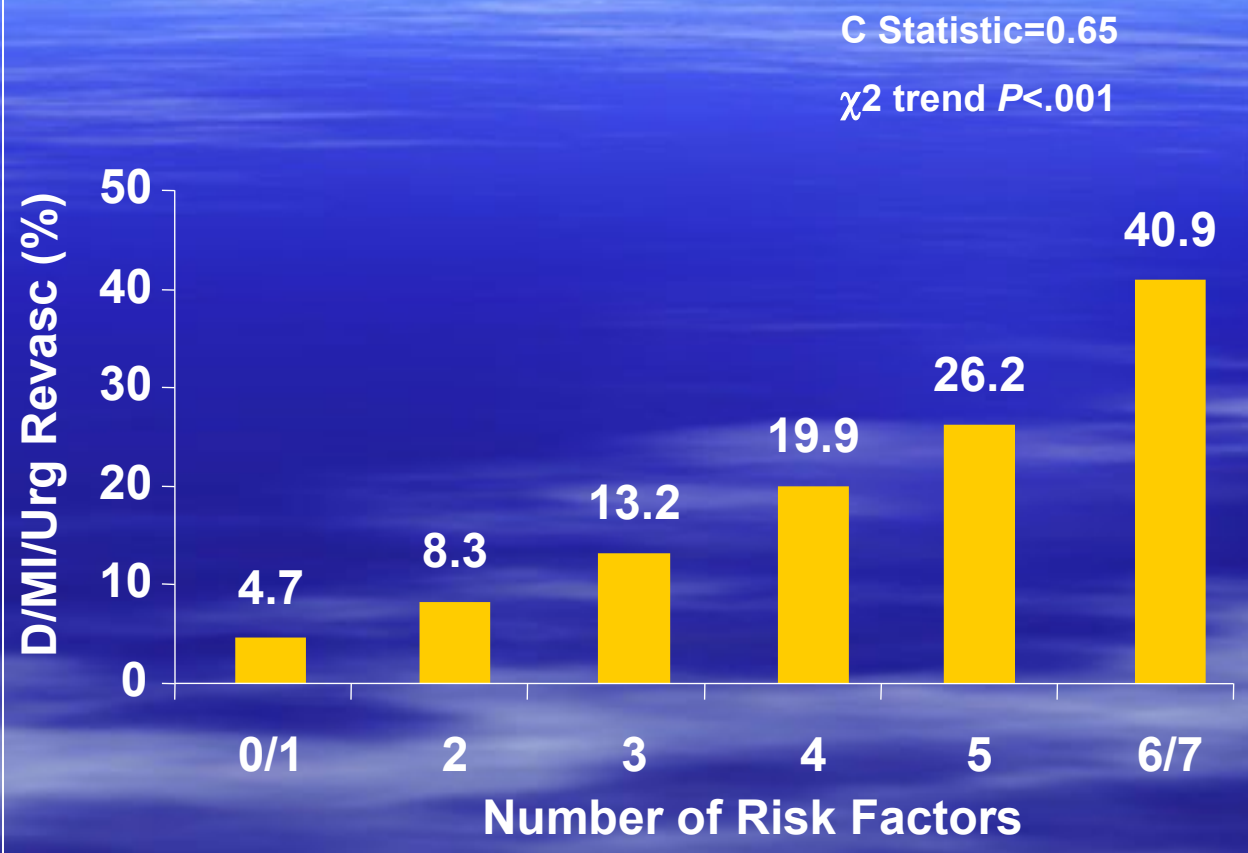
Baseline Hematocrit	> 39.9	Prior Vascular Disease	No
GFR: Cockcroft-Gault	61 - 90 (Calculate GFR)	Diabetes Mellitus	No
Heart rate on admission	71 - 80	Signs of CHF on admission	No
Systolic blood pressure on admission	121 - 180	Sex	Male

Clear Selections

CRUSADE Bleeding Score	Risk of In-Hospital Major Bleeding
19	4.7%
Very Low Risk	

TIMI Risk Score For UA/NSTEMI

- Age ≥65 years
- ≥3CAD Risk Factors
- Prior Stenosis >50 %
- ST deviation
- ≥2 Anginal events ≤24 hours
- ASA in last 7 days
- Elev Cardiac Markers (CK-MB or troponin)

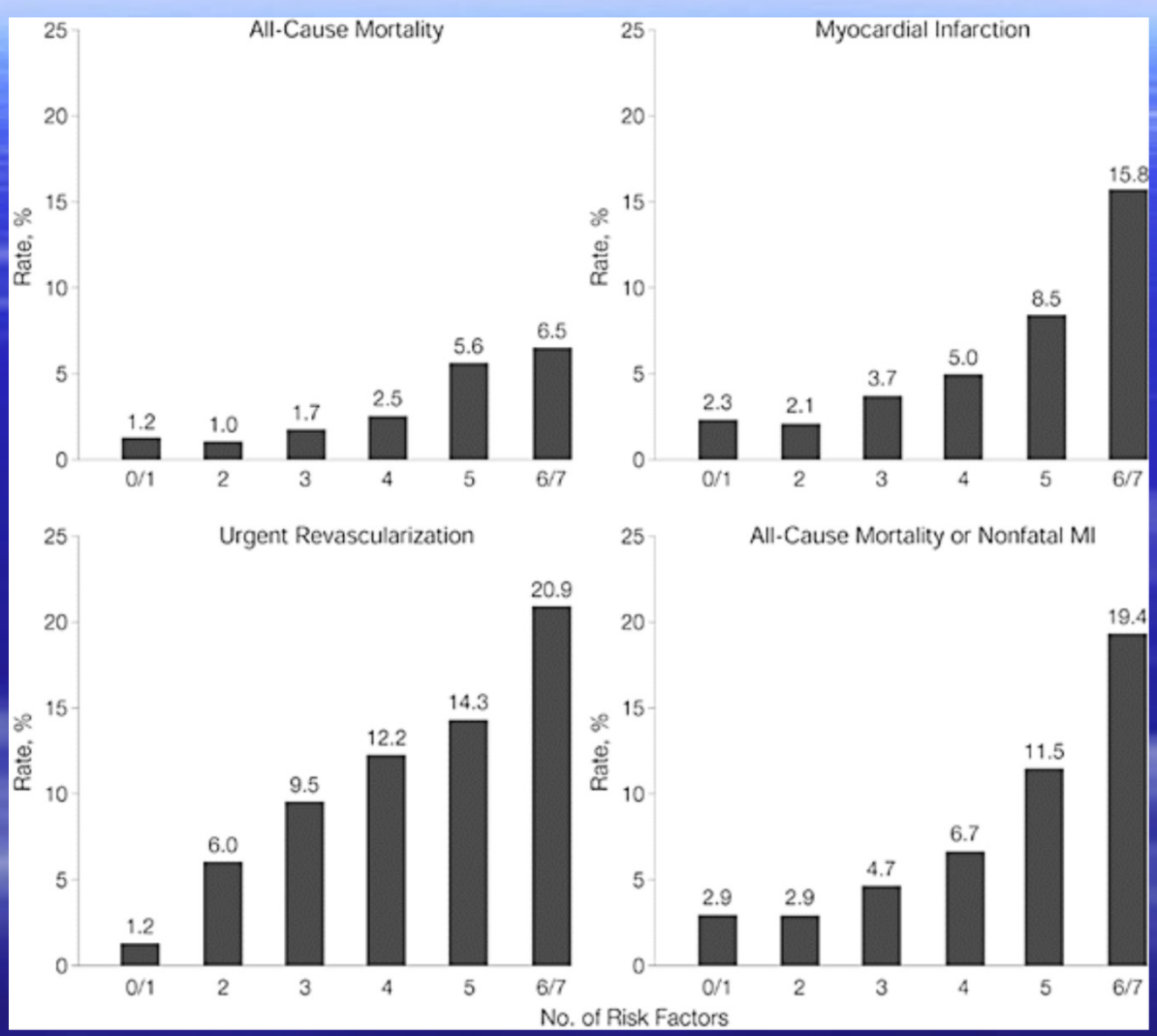


Population (%):	4.3	17.3	32.0	29.3	13.0	3.4

Antman EM, et al. *JAMA*. 2000;284:835-442.

The JAMA Network

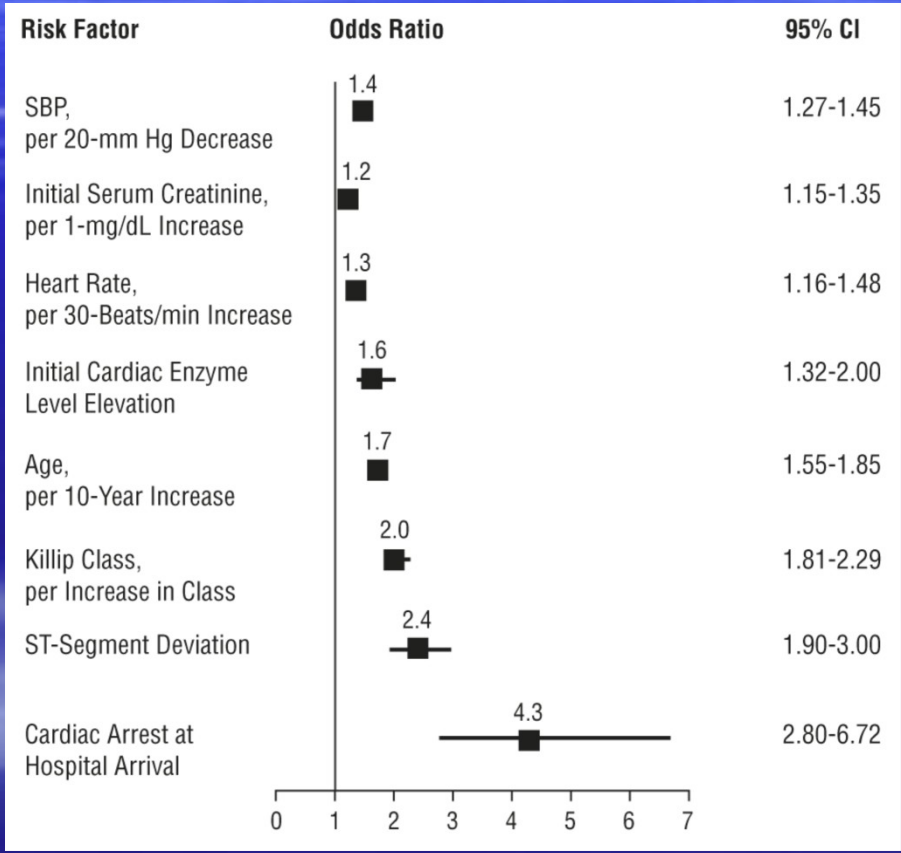
TIMI Risk Score



JAMA. 2000;284(7):835-842. doi:10.1001/jama.284.7.835

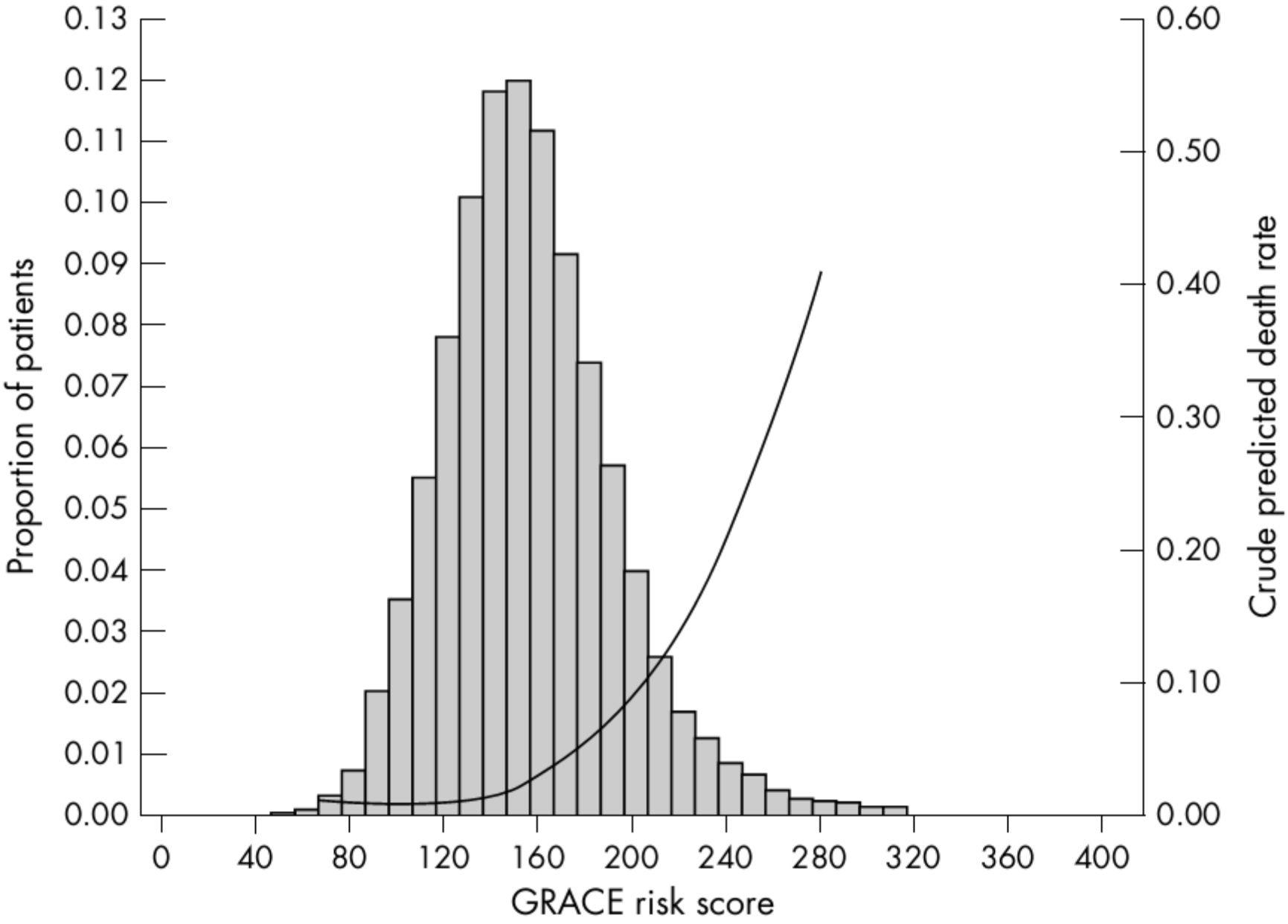
The JAMA Network

Предиктори на болнична смъртност в **GRACE SCORE**



Arch Intern Med. 2003;163(19):2345-2353. doi:10.1001/archinte.163.19.2345

The JAMA Network


Proportion of patients
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0
40
80
120
160
200
240
280
320
360
400
GRACE risk score
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Crude predicted death rate

European Heart Journal (2011) 32, 2999–3054
doi:10.1093/eurheartj/ehr236

ESC GUIDELINES

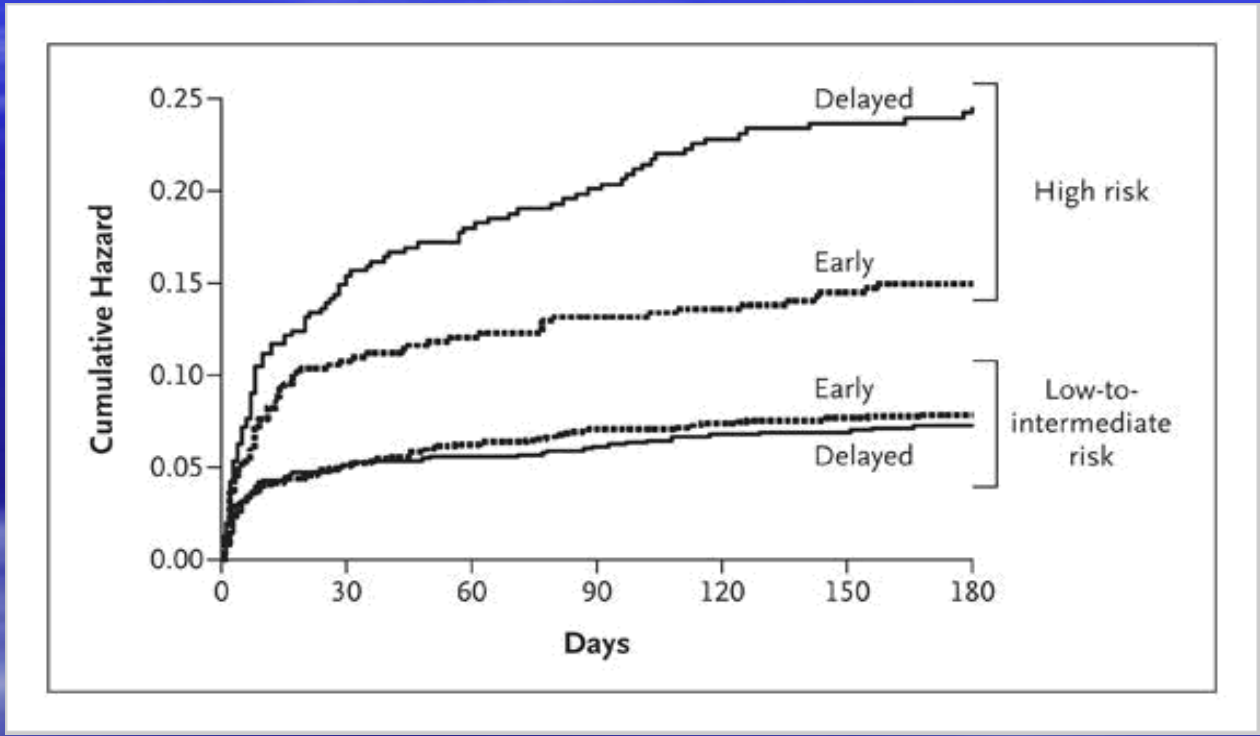
ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

Table 5 Mortality in hospital and at 6 months[50] in low, intermediate, and high risk categories in registry populations, according to the GRACE risk score

Risk category (tertile)	GRACE risk score	In-hospital death (%)
Low	≤108	<1
Intermediate	109–140	1–3
High	>140	>3
Risk category (tertile)	**GRACE risk score**	**Post-discharge to 6-month death (%)**
Low	≤88	<3
Intermediate	89–118	3-8
High	>118	>8

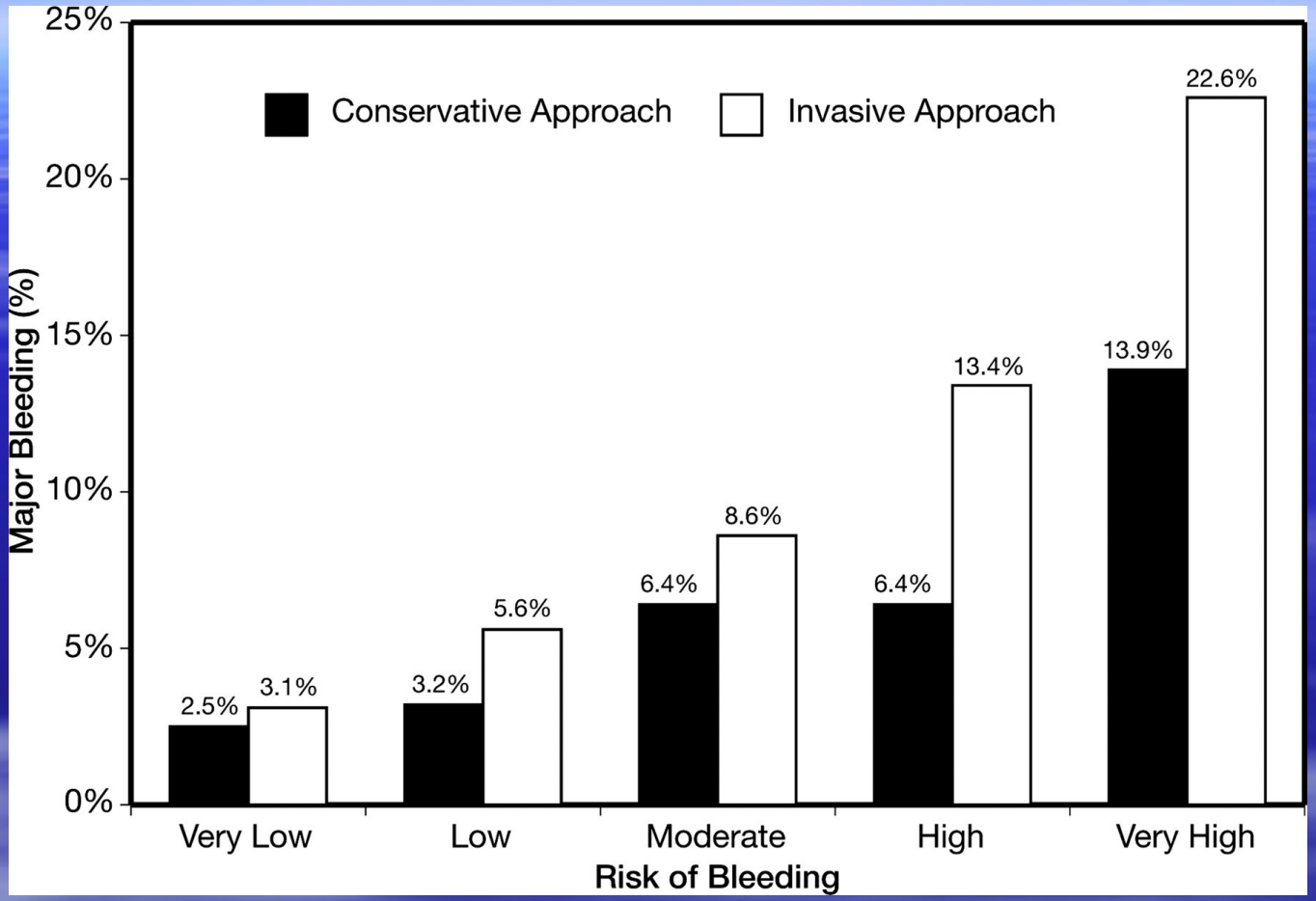
GRACE SCORE

TIMACS TRIAL



- Пациенти с висок GRACE score (> 140) имат най-голяма полза от ранна реваскуларизация.

CRUSADE bleeding score



Честота на голямо кървене при пациенти лекувани с ≥2 антитромботични медикамента в зависимост от избраната консервативна или инвазивна стратегия

Copyright © American Heart Association

Subherwal S et al. Circulation 2009;119:1873-1882

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Learn and Live

European Heart Journal (2011) 32, 2999–3054
doi:10.1093/eurheartj/ehr236

ESC GUIDELINES

ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

Recommendations for diagnosis and risk stratification

Recommendations	Class [a]	Level [b]	Ref [c]
In patients with a suspected NSTE-ACS, diagnosis and short-term ischaemic/bleeding risk stratification should be based on a combination of clinical history, symptoms, physical findings, ECG (repeated or continuous ST monitoring), and biomarkers.	I	A	16, 18, 27, 30, 58 56, 57
ACS patients should be admitted preferably to dedicated chest pain units or coronary care units.	I	C	47
It is recommended to use established risk scores for prognosis and bleeding (e.g. GRACE, CRUSADE).	I	B	50, 83
A 12-lead ECG should be obtained within 10 min after first medical contact and immediately read by an experienced physician. This should be repeated in the case of recurrence of symptoms, and after 6–9 and 24 h, and before hospital discharge.	I	B	17, 18
Additional ECG leads (V_{3R}, V_{4R}, V_7–V_9) are recommended when routine leads are inconclusive.	I	C	18
Blood has to be drawn promptly for troponin (cardiac troponin T or I) measurement. The result should be available within 60 min. The test should be repeated 6–9 h after initial assessment if the first measurement is not conclusive. Repeat testing after 12–24 h is advised if the clinical condition is still suggestive of ACS.	I	A	27, 30
A rapid rule-out protocol (0 and 3 h) is recommended when highly sensitive troponin tests are available (see *Figure 5*).	I	B	20, 21, 23
An echocardiogram is recommended for all patients to evaluate regional and global LV function and to rule in or rule out differential diagnoses.	I	C	-
Coronary angiography is indicated in patients in whom the extent of CAD or the culprit lesion has to be determined (see Section 5.4).	I	C	-
Coronary CT angiography should be considered as an alternative to invasive angiography to exclude ACS when there is a low to intermediate likelihood of CAD and when troponin and ECG are inconclusive.	IIa	B	37–41
In patients without recurrence of pain, normal ECG findings, negative troponins tests, and a low risk score, a non-invasive stress test for inducible ischaemia is recommended before deciding on an invasive strategy.	I	A	35, 54, 55

European Heart Journal (2011) 32, 2999–3054
doi:10.1093/eurheartj/ehr236

ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

Recommendations for invasive evaluation and revascularization

Recommendations	Class[a]	Level[b]	Ref[c]
An invasive strategy (within 72 h after first presentation) is indicated in patients with: • at least one high-risk criterion (*Table 9*); • recurrent symptoms.	I	A	148
Urgent coronary angiography (<2 h) is recommended in patients at very high ischaemic risk (refractory angina, with associated heart failure, life-threatening ventricular arrhythmias, or haemodynamic instability).	I	C	148, 209
An early invasive strategy (<24 h) is recommended in patients with a GRACE score >140 or with at least one primary high-risk criterion.	I	A	212, 215
Non-invasive documentation of inducible ischaemia is recommended in low-risk patients without recurrent symptoms before deciding for invasive evaluation.	I	A	54, 55, 148

Q J Med 2007; **100**:11–18
doi:10.1093/qjmed/hcl133

Original papers

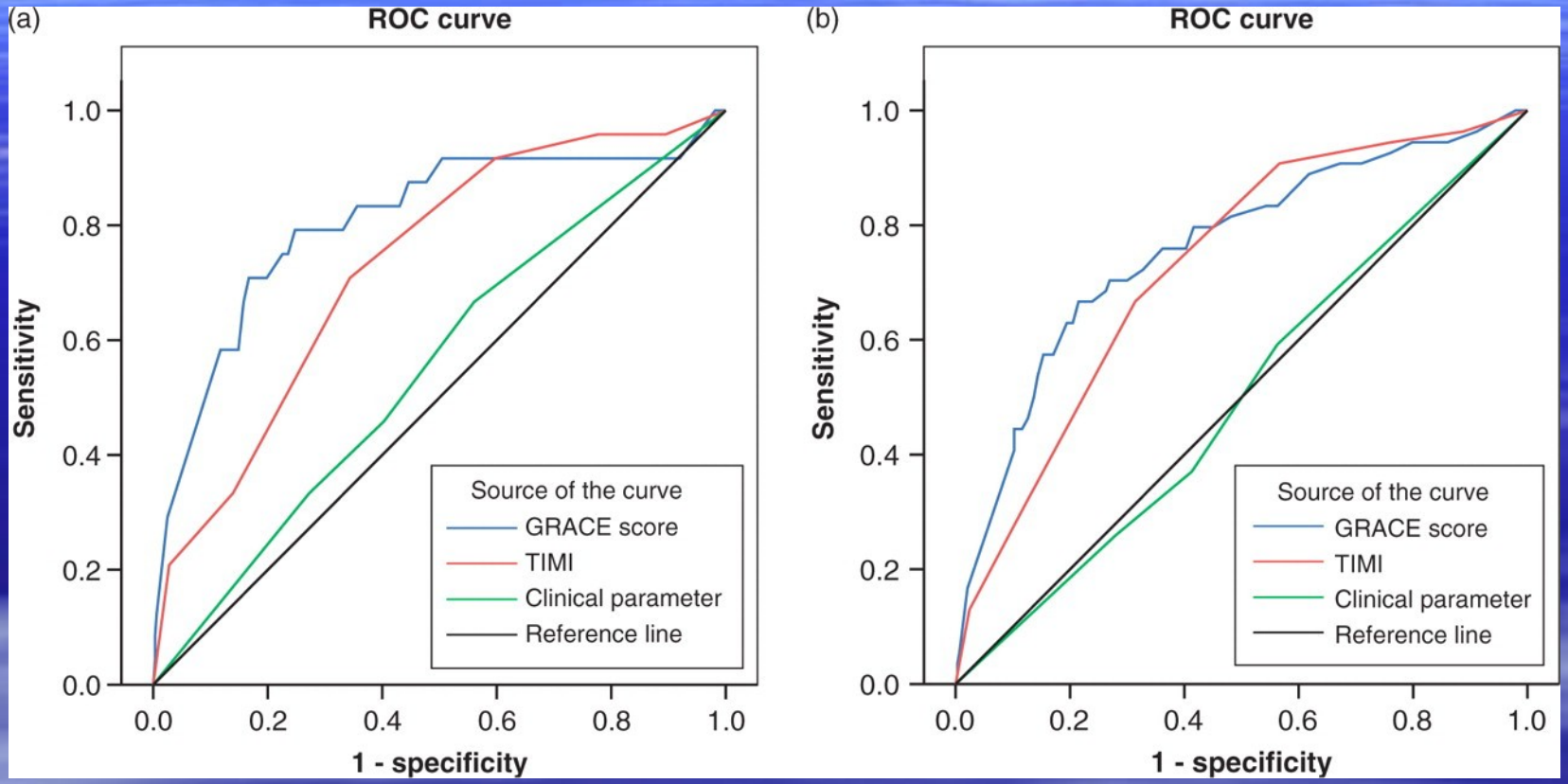
QJM

Risk prediction in patients presenting with suspected cardiac pain: the GRACE and TIMI risk scores versus clinical evaluation

G. RAMSAY, M. PODOGRODZKA, C. McCLURE and K.A.A. FOX

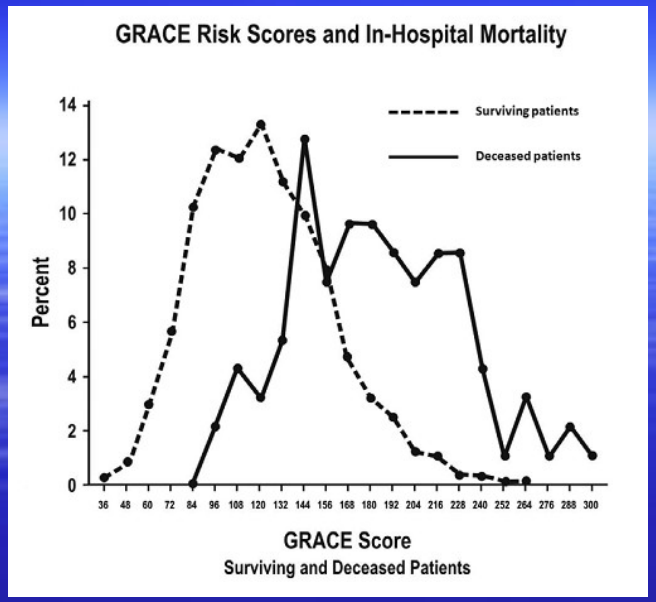
From Cardiovascular Research, Division of Medical and Radiological Sciences, University of Edinburgh, Edinburgh, UK

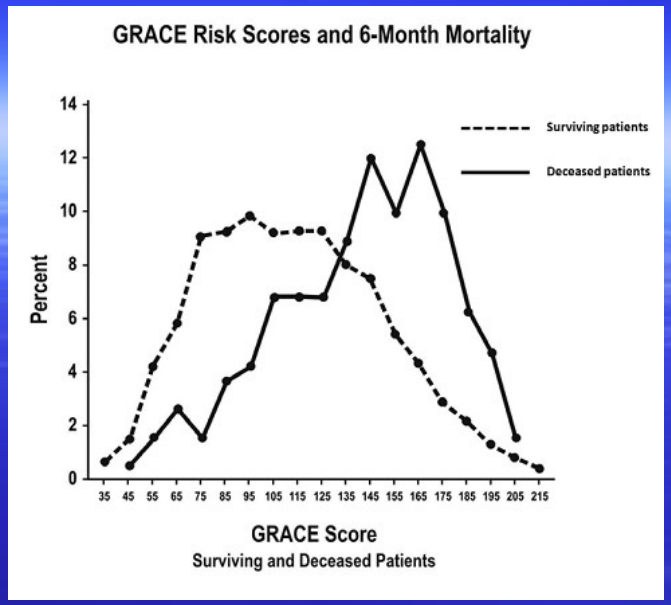
Received 31 July 2006 and in revised form 11 October 2006

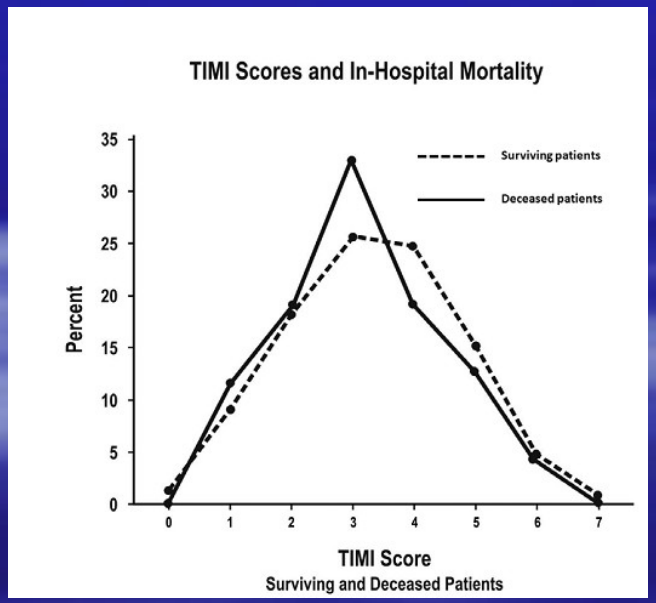


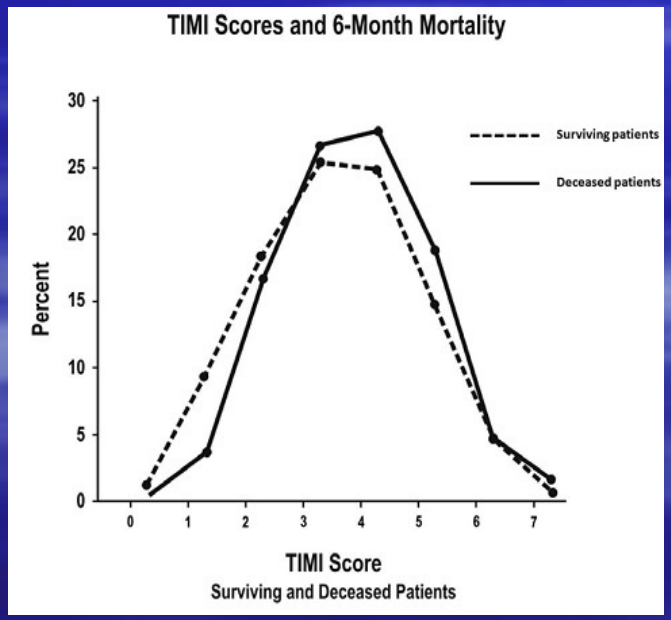
Death, MI, emergency revascularization.

QJM









PLoS ONE. 2009;4: e7947

ИЗВОДИ

- ПОЗНАВАНЕТО НА СТАТИСТИКАТА Е ЧАСТ ОТ СЪВРЕМЕНАТА МЕДИЦИНСКА ПРАКТИКА
- ИЗЧИСЛЯВАНЕТО НА СКОРОВЕТЕ ЗА ОКС И КЪРВЕНЕ ПОМАГА ЗА ПРАВИЛНОТО РЕШЕНИЕ
- GRACE ПРЕВЪЗХОЖДА TIMI