

ACS-Optimizing Care at the 1st Medical Contact

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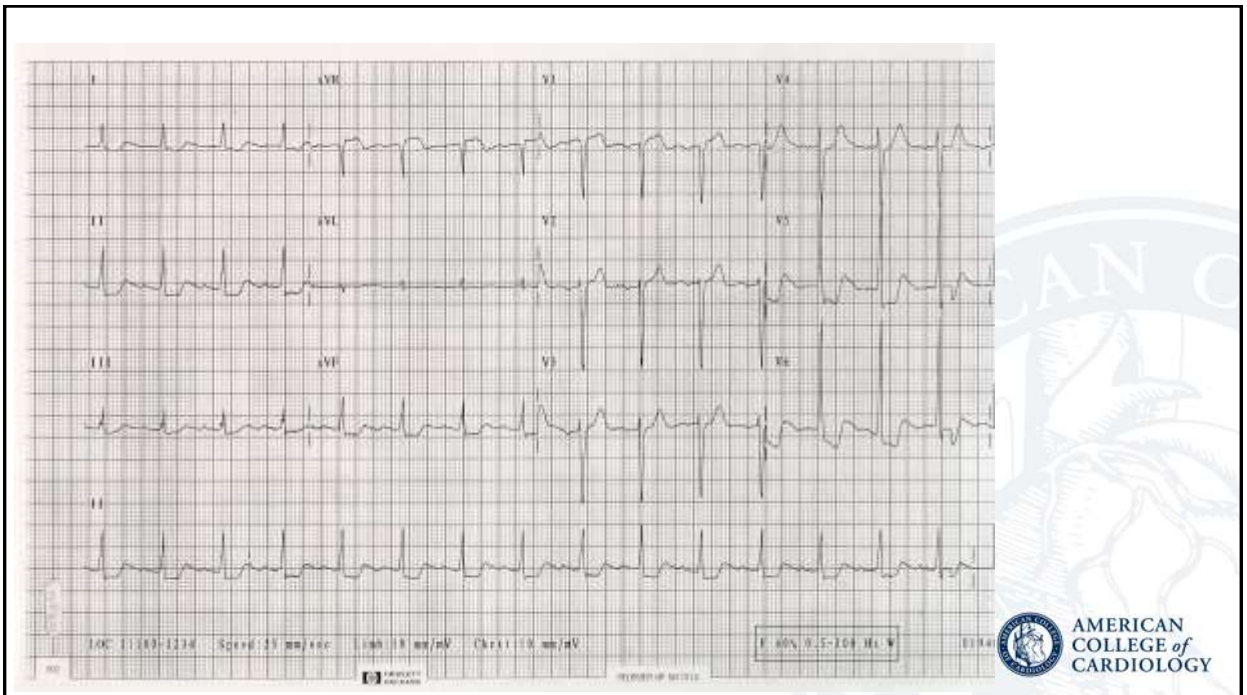


No Disclosures



74 year old woman presents with ACS

- History of hypertension, CABG 1990, MI and stents to LAD in 2003, TIA, and asthma
- Increased CP episodes for one week, and continued chest pain in ED. Treated with nitrates, morphine; beta blocker; wheezing.
- BP 126/68, pulse 101, 80 kg, mild CHF
- Creatinine 1.7 mg/dL; TnT 0.27 ng/ml
- ECG showed 1mm anterolateral ST depression; echo EF 45%
- GRACE risk score
 - death in-hospital 16%
 - death/MI 6 mo 50%



GRACE
ACS RISK SCORE 2.0

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GRACE 2.0 Risk Calculator

The GRACE 2.0 ACS Risk Calculator implements the revised GRACE algorithm for predicting death or death/myocardial infarction following an initial acute coronary syndrome (ACS).

WHAT'S NEW IN 2.0?

- "Mini-GRACE" algorithm (for use when serum creatinine and Killip class may not be available)
- New 1- and 3-year calculations
- New calculations provide probabilities directly, bypassing scores
- Population histograms with high-, medium- and low-risk markers
- The GRACE 2.0 ACS Risk Calculator app has been defined as a medical device under the Medical Device Directive (MDD) 93/42/EEC and has been CE-marked to indicate compliance with the Directive

DOWNLOAD THE MOBILE APP

Available on the App Store Google play

[USE THE CALCULATOR ONLINE](#)

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Calculator

1. INPUT DATA > 2. DEATH / DEATH OR RESULTS

Age (years)

Heart rate (bpm)

Systolic blood pressure (mmHg)

CHF (Killip class)

Diastolic stage

Creatinine (mg dL⁻¹ / μmol L⁻¹)

Renal failure

ST-segment deviation

Cardiac arrest at admission

Elevated troponin*

* Or other acute cardiac biomarkers

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Calculator

1. INPUT DATA • 2. DEATH / DEATH MI RESULTS

Death		
Time	% Risk (Score)	Histograms
In hospital	6.6	Not available
6 months	18 (149)	Not available
1 year	30	GRAPH
3 years	37	GRAPH

Distribution of risk in GRACE population

Death/MI		
Time	% Risk	Histograms
1 year	38	GRAPH

EDIT INPUT
NEW CALCULATION

Area plot: distribution (log scale) of risk based on the entire GRACE population of 102,541 patients.

Line: risk of death or death/MI

Vertical bar: individual risk of death or death/MI

green = low, yellow = intermediate, red = high

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Treatment options (in addition to 81 mg aspirin/d)

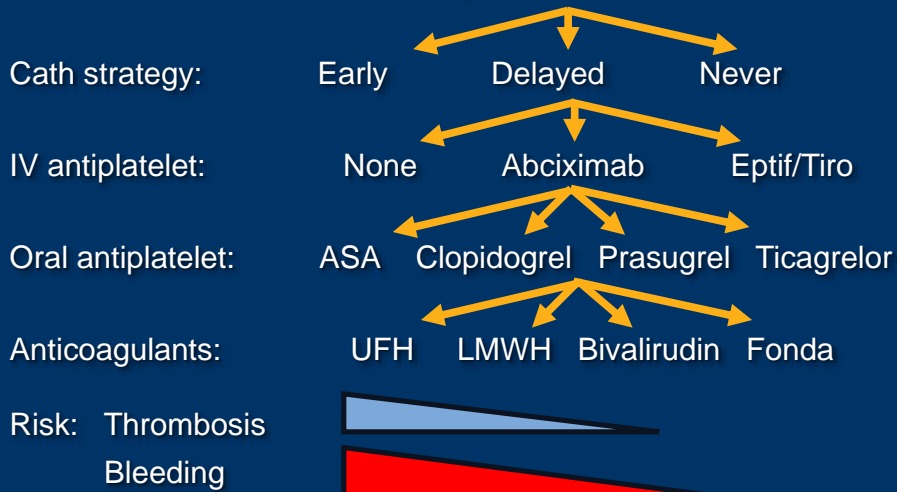
- A. Clopidogrel
- B. Prasugrel
- C. Ticagrelor

- A. UFH
- B. Enoxaparin
- C. Fondaparinux

- A. Cath < 24 hrs
- B. Cath > 24 hrs
- C. Med therapy

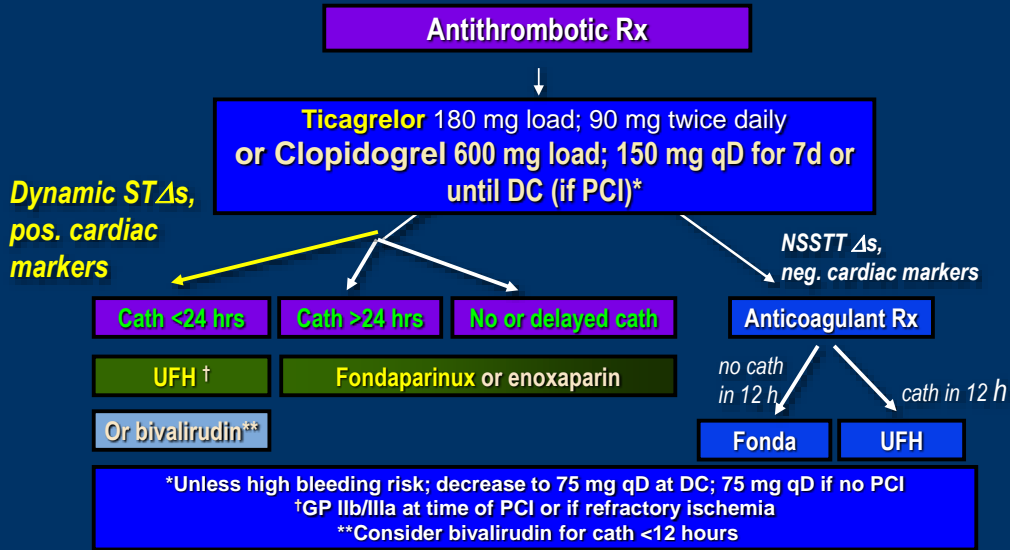


Antithrombotic Therapy in Context



144 Different Combinations!

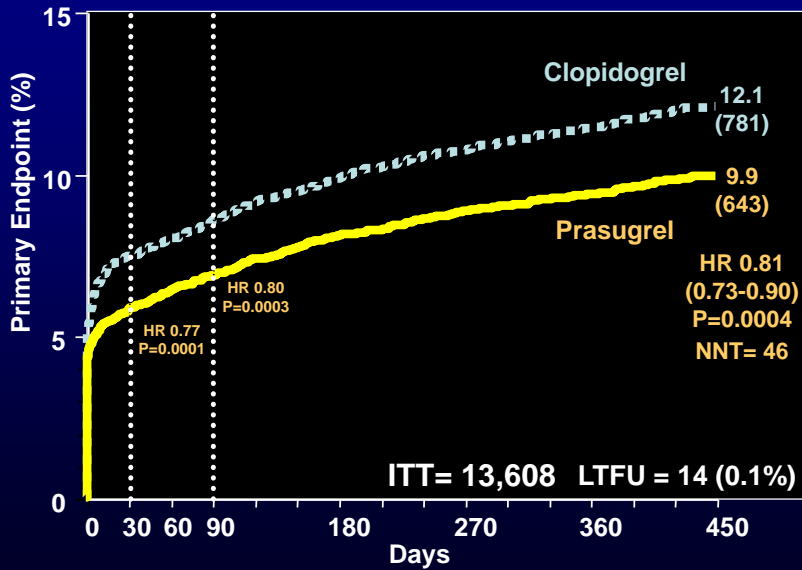
Duke ACS Algorithm: NSTEMI ACS

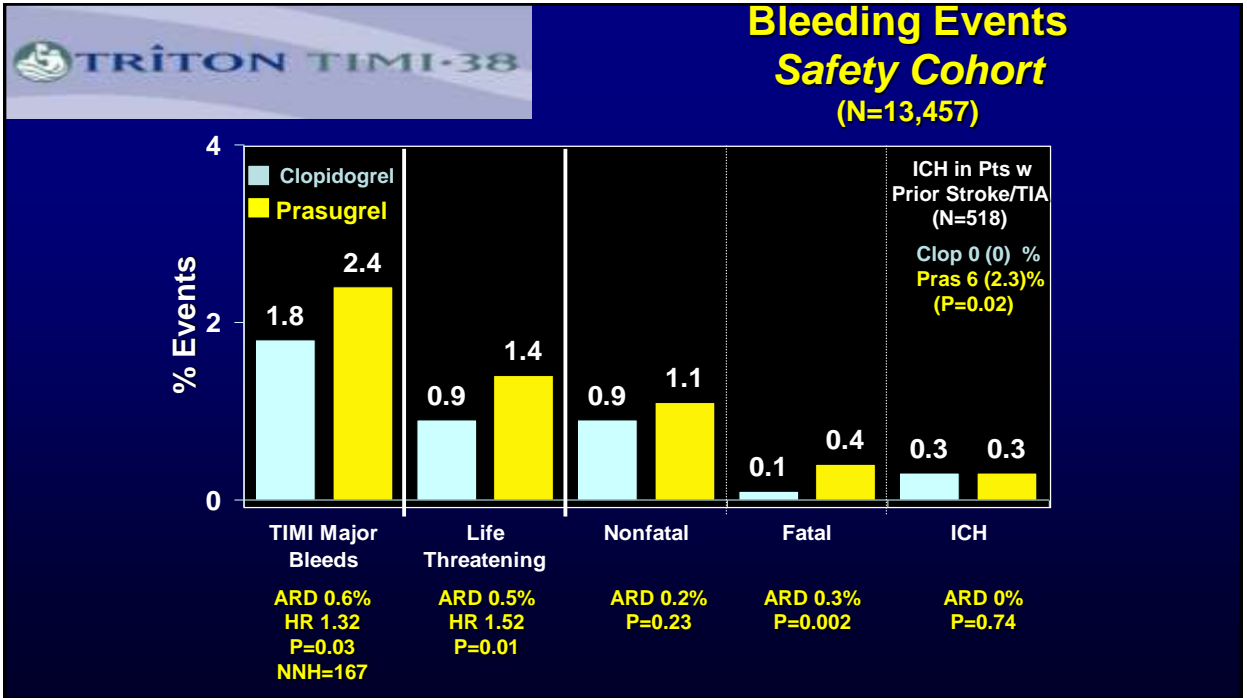


Duke Clinical Research Institute



Primary Endpoint CV Death, MI, Stroke



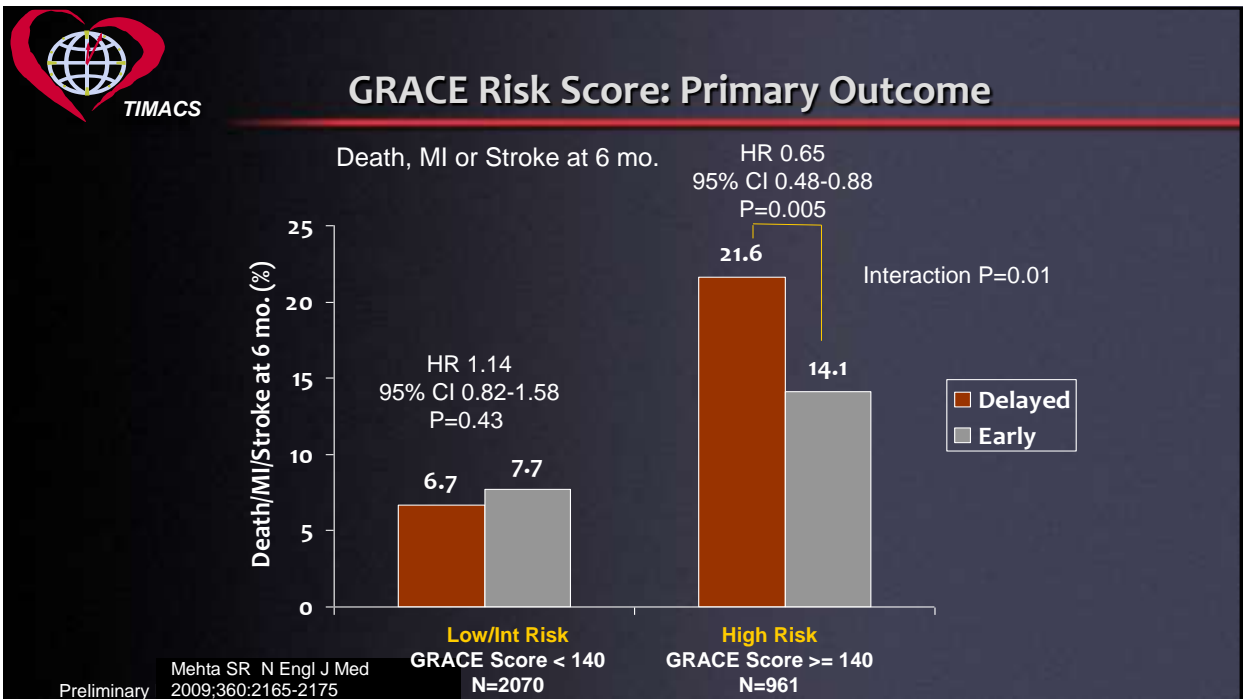
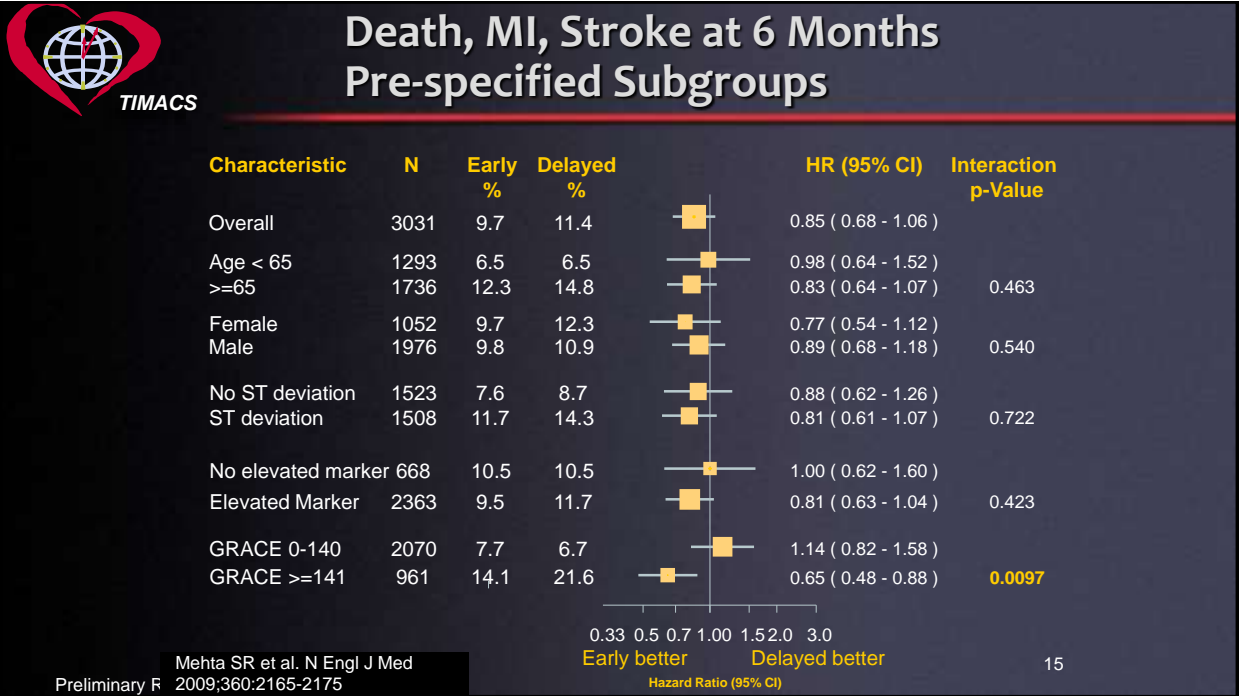


Interventions and Timing

	Early N=1,593	Delayed N=1,438
Coronary Angiography (%)	97.6	95.5
Median time (h ± iqr)	14 (3-21)	50 (41-81)
PCI (%)	59.6	55.1
Median time (h ± iqr)	16 (3-23)	52 (41-101)
CABG (%)	14.8	13.6
Median time (d ± iqr)	7.7 (4.7-17.4)	10.8 (6.7-19.8)

Mehta SR et al. N Engl J Med
 Preliminary R 2009;360:2165-2175

Iqr=interquartile range 14



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