



**Cutting Edge Strategies in ACS and ST Elevation MI**

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# **Tirofiban and STEMI management: A future perspective**

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# Tirofiban and STEMI Management

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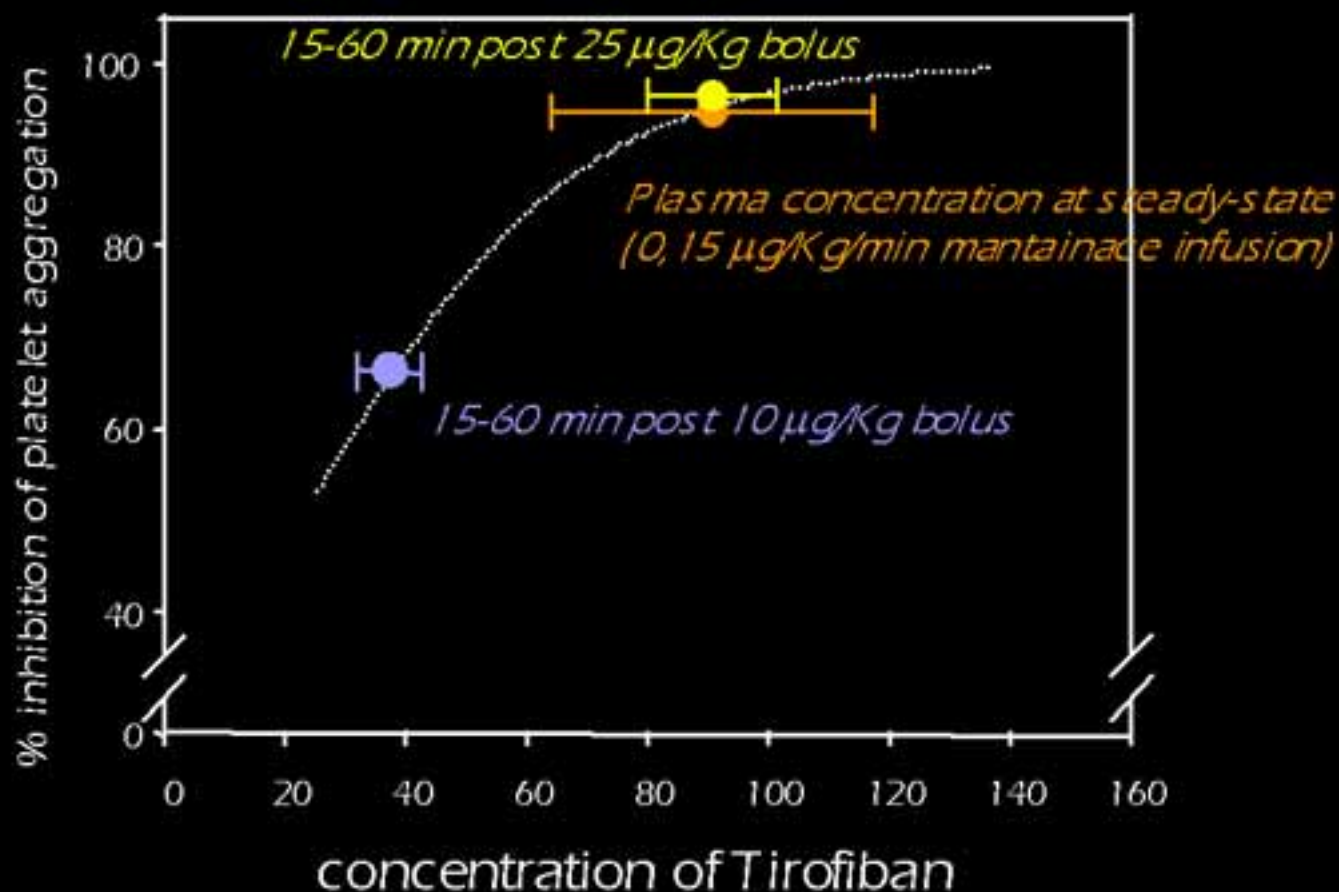
## Early Administration

- Tiger-PA
- Cutlip DE *et al.*
- On-Time

## Late Administration

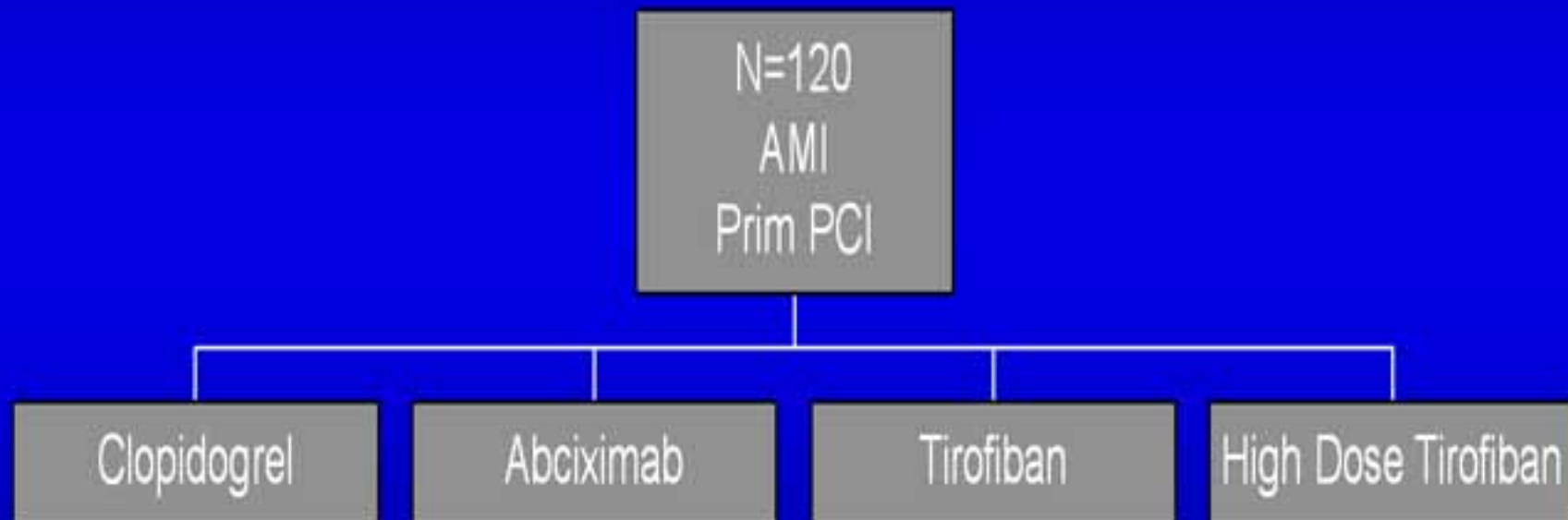
- Tripas
- Danzi GB *et al.*
- Strategy

# Early platelet inhibition - Pharmacokinetics of Tirofiban

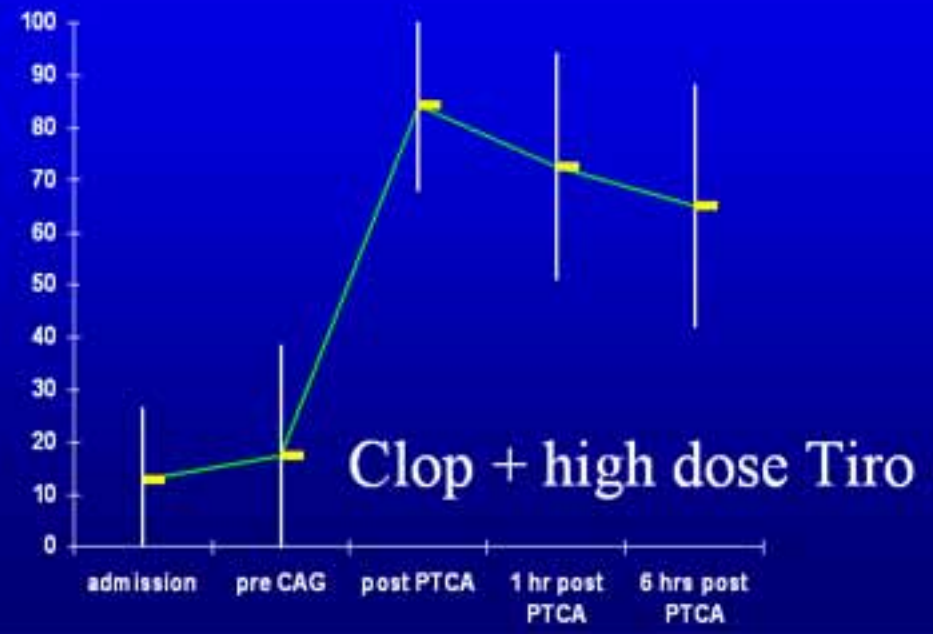
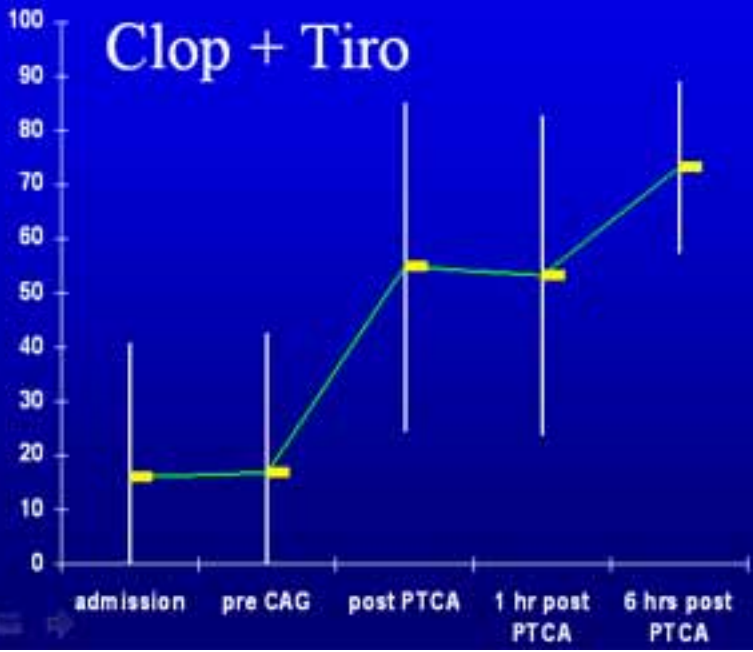
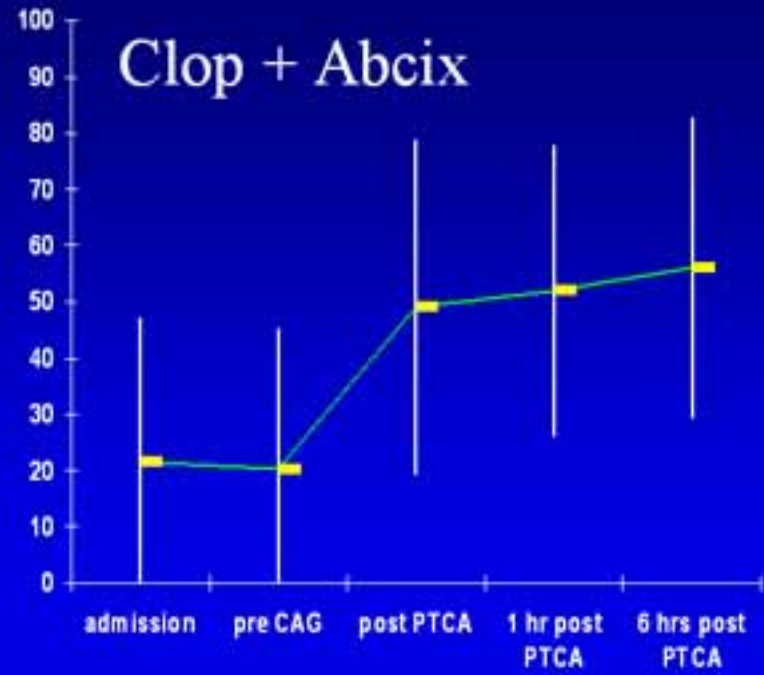
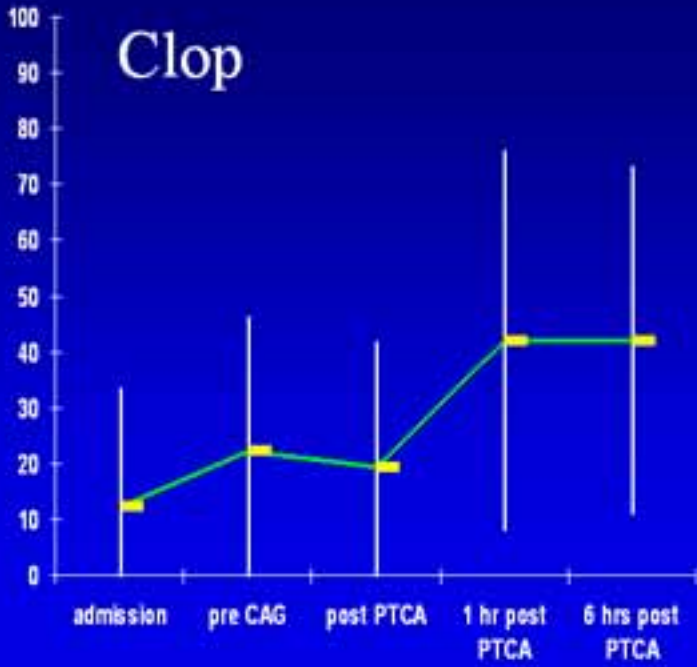


# TRIPAS

Tirofiban or Reopro on Inhibition of Platelet Aggregation Study



Platelet Aggregation: ICHOR analyzer, PPACK, 20  $\mu$ mol ADP

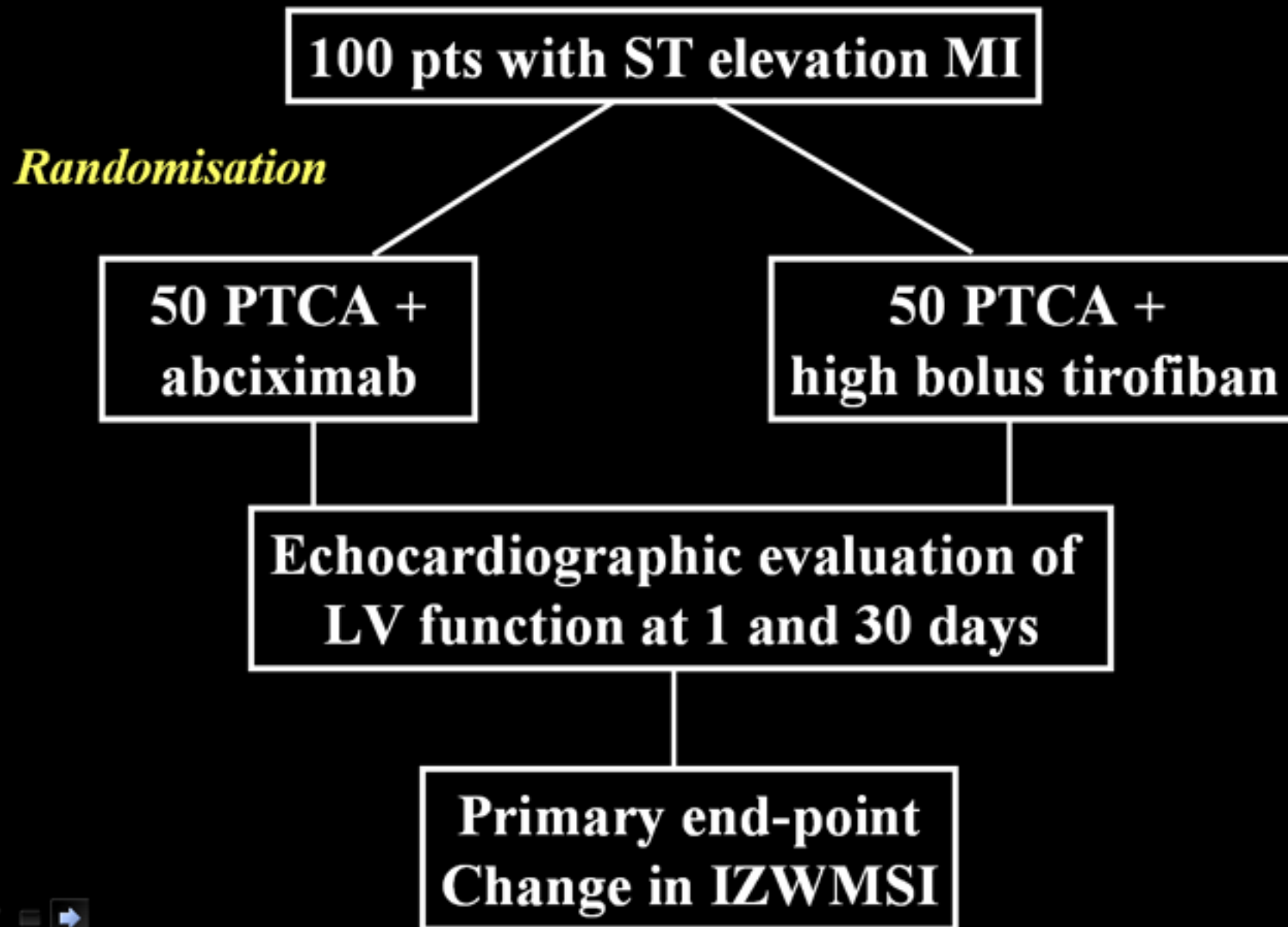


**Comparison in Patients Having Primary  
Coronary Angioplasty of  
Abciximab Versus Tirofiban  
on Recovery of Left Ventricular Function**

*Danzi et al, Am J Cardiol 2004*

# STUDY DESIGN

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# Inclusion/Exclusion criteria

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## INCLUSION

- ST elevation MI (within 6 hours)

## EXCLUSION

- Age > 75 years
- Cardiogenic shock
- History of bleeding diathesis
- Major surgery (within previous 6 weeks)
- Cerebrovascular event (previous 6 months)
- Platelet count of  $<100.000/\text{mm}^3$
- RI (creatinine  $>2$  mg/dl)

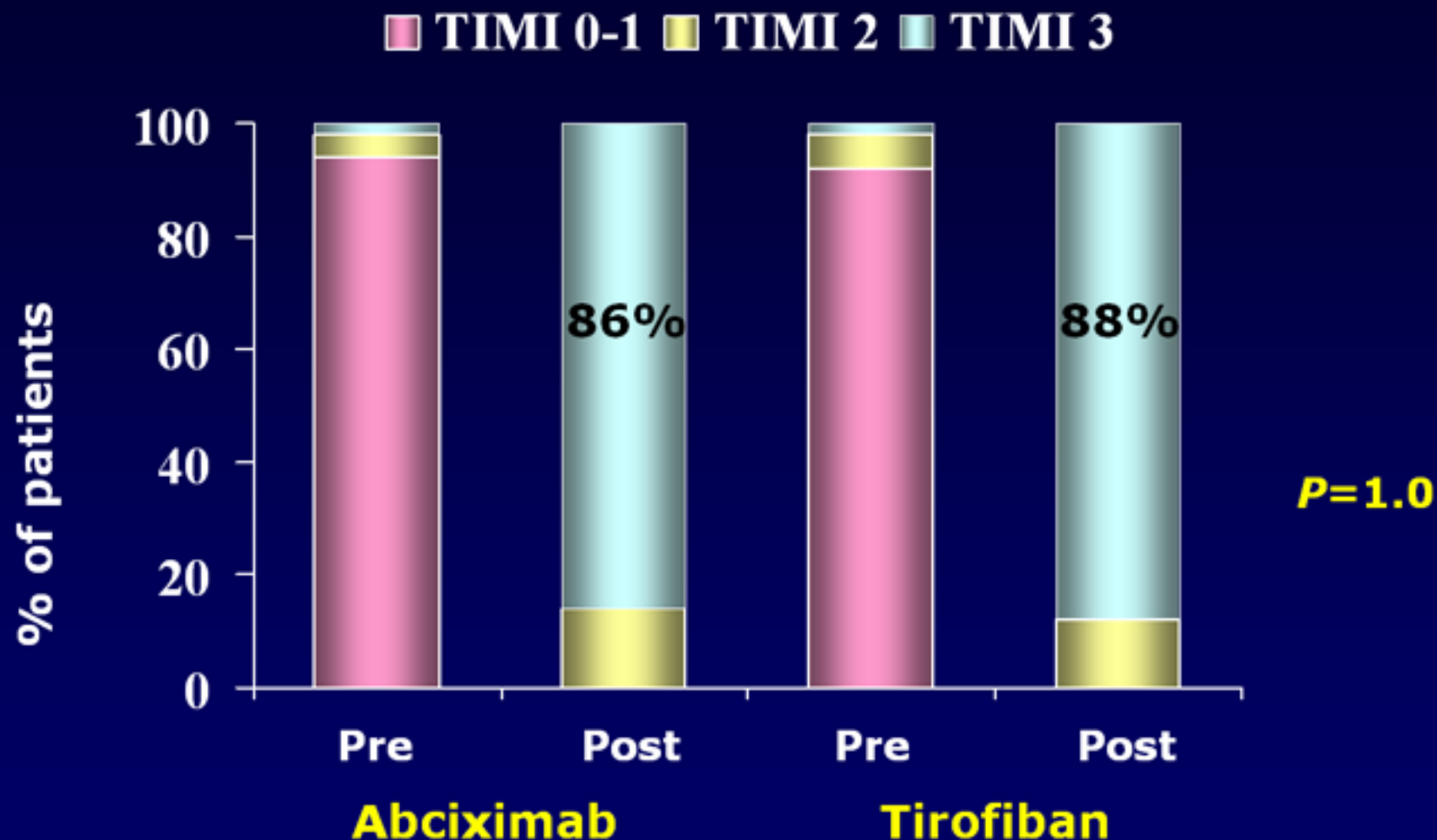


# Echocardiographic evaluation

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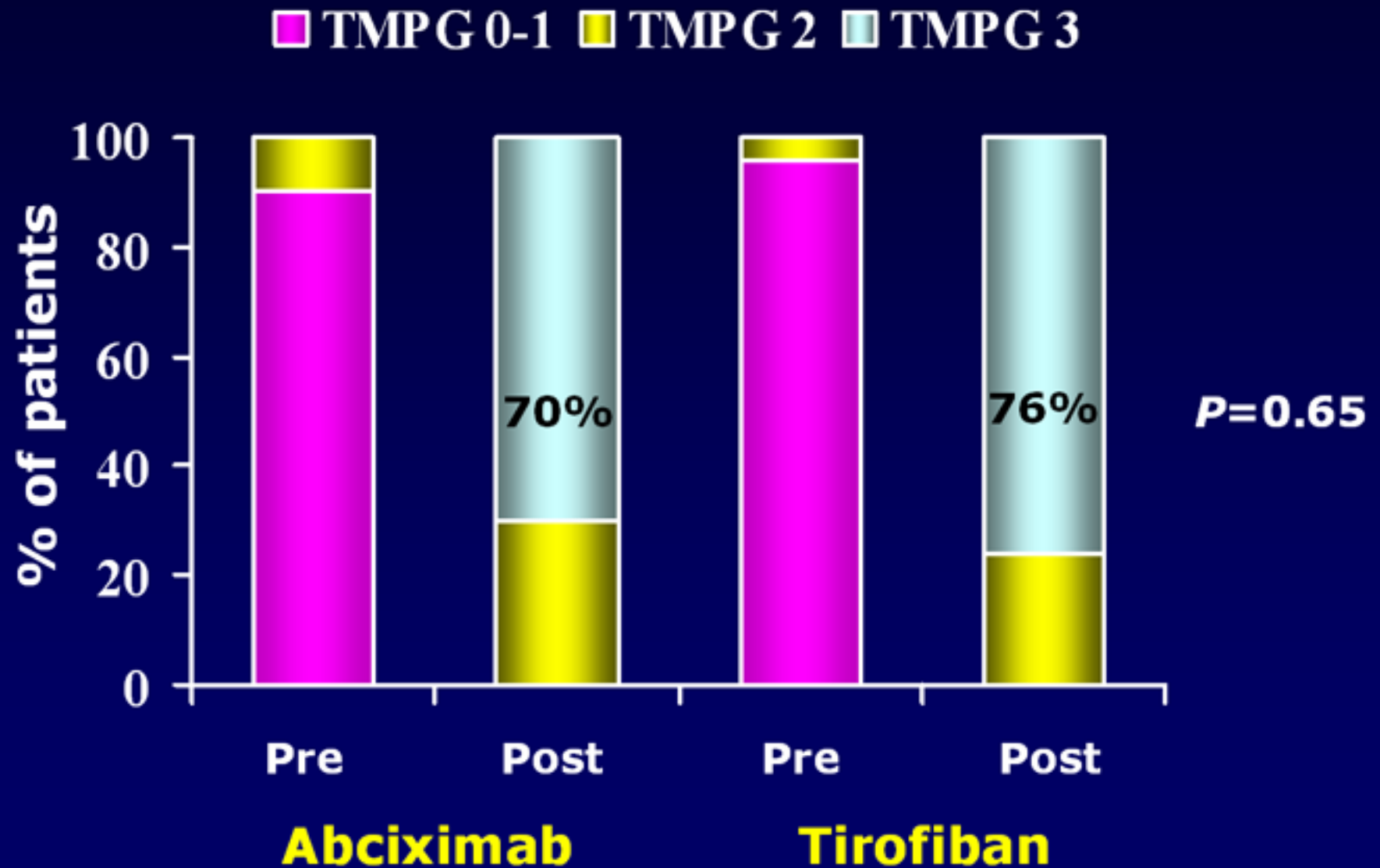
- Two blinded investigators
- Discrepancies resolved by consensus
- LV divided according to a 16-segment model
- Wall motion scored as:
  - 1 (*normal*)
  - 2 (*hypokinetic*)
  - 3 (*akinetic*)
  - 4 (*dyskinetic*)
- Intra/inter-observer variability: 6% and 7%

# Angiographic Results: TIMI FLOW e Final CTFC

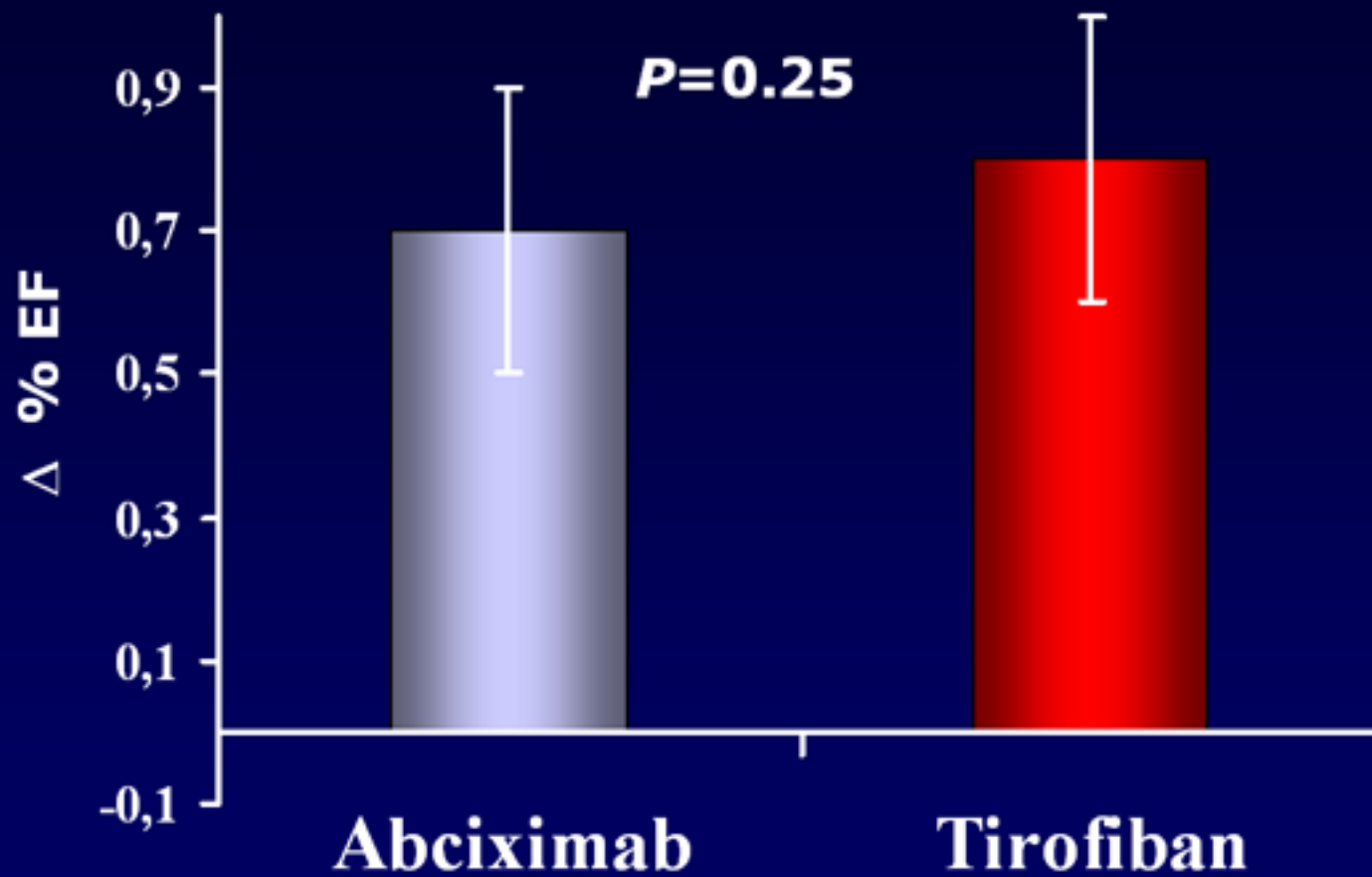


<b>Final CTFC</b>	<b>22.5 ± 1.9</b>	<b>22.1 ± 2.5</b>	<b>P=0.37</b>
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# Angiographic Results : TMPG ( Blush )

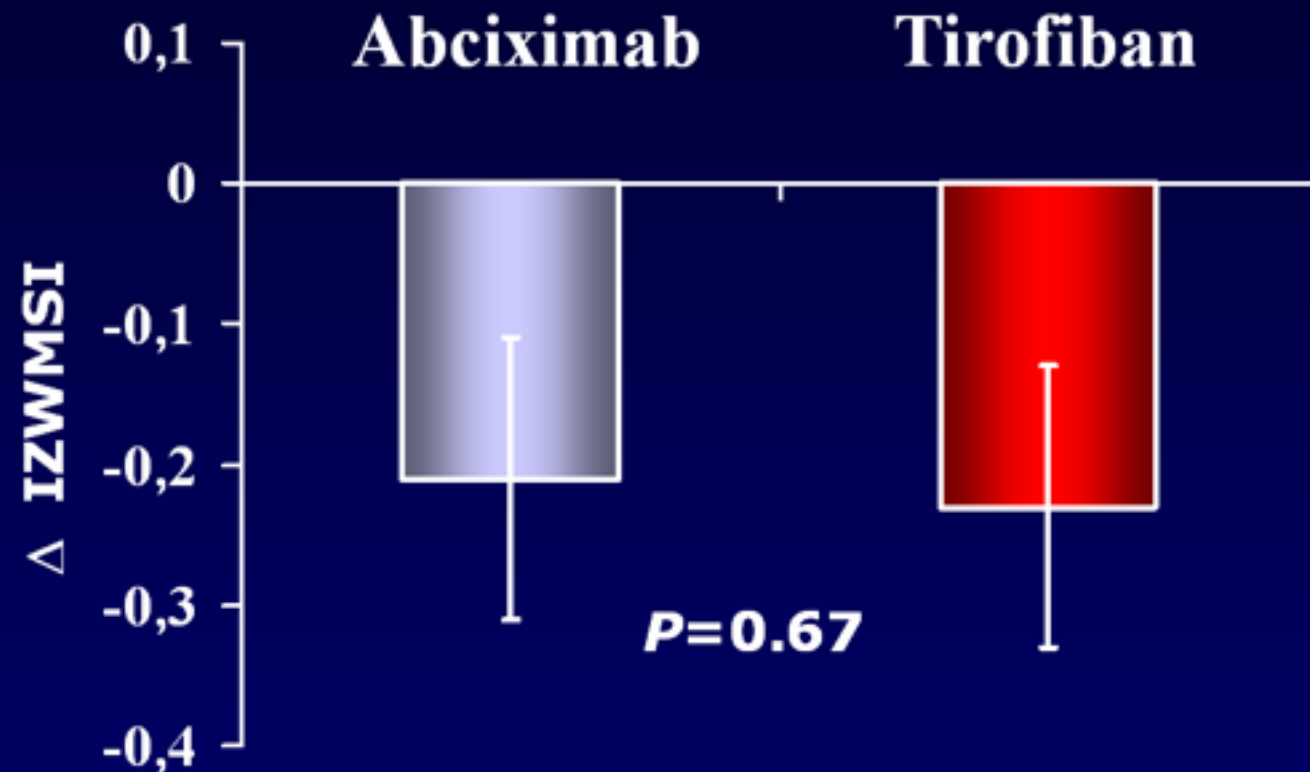


# EJECTION FRACTION



EF(%)	Baseline	$47 \pm 7\%$	$47 \pm 7\%$	$P=1.0$
EF(%)	1 Month	$54 \pm 10\%$	$55 \pm 9\%$	$P=0.6$

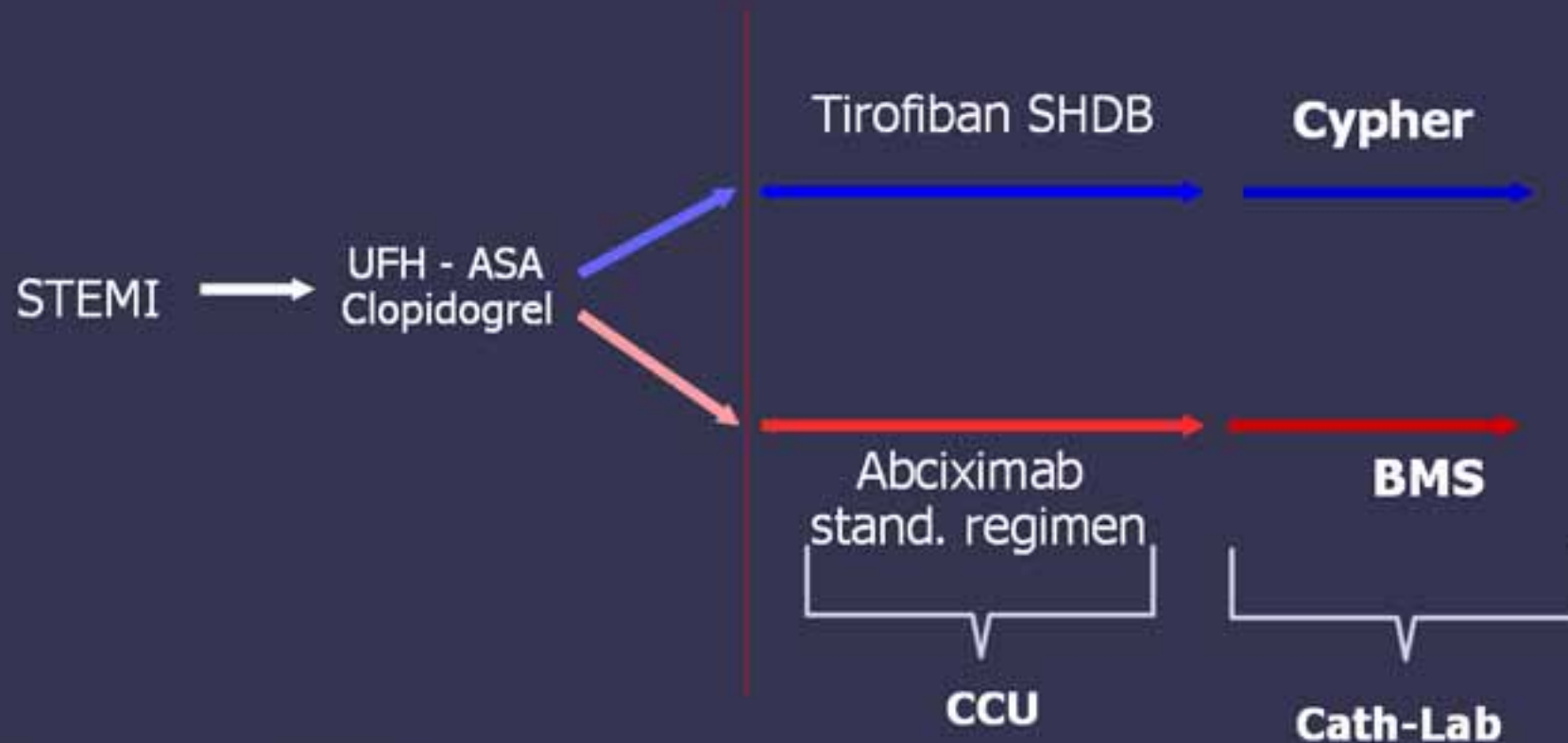
# Infarct-Zone Wall Motion Score Index



IZWMSI Baseline	2.20 $\pm$ 0.3	2.18 $\pm$ 0.3	<i>P=0.8</i>
IZWMSI 1 Month	1.99 $\pm$ 0.2	1.95 $\pm$ 0.3	<i>P=0.5</i>

# Study design

- **Inclusion Criteria:** STEMI all comers: shock, elderly included
- **Exclusion Criteria:** Contraindications to GpIIb/IIIa inhibitors



# Can we improve the gold standard STEMI treatment without increasing costs?



**Medical Costs**

# Study Overview

**1° End-point** — Death, MI, Stroke and binary restenosis at 6 Months

→ 160 patients needed

**2° End-points** — ST-segment resolution, MACE, LV Recovery and safety analysis

**Substudy** — Degree of platelet inhibition by PFA-100 at baseline and 10' after GpIIb/IIIa inhibitor bolus

Death+MI+Stroke **5%**

Binary Restenosis **10%** TC group

↓ **60% R.R.**

Binary Restenosis **25%** AB group



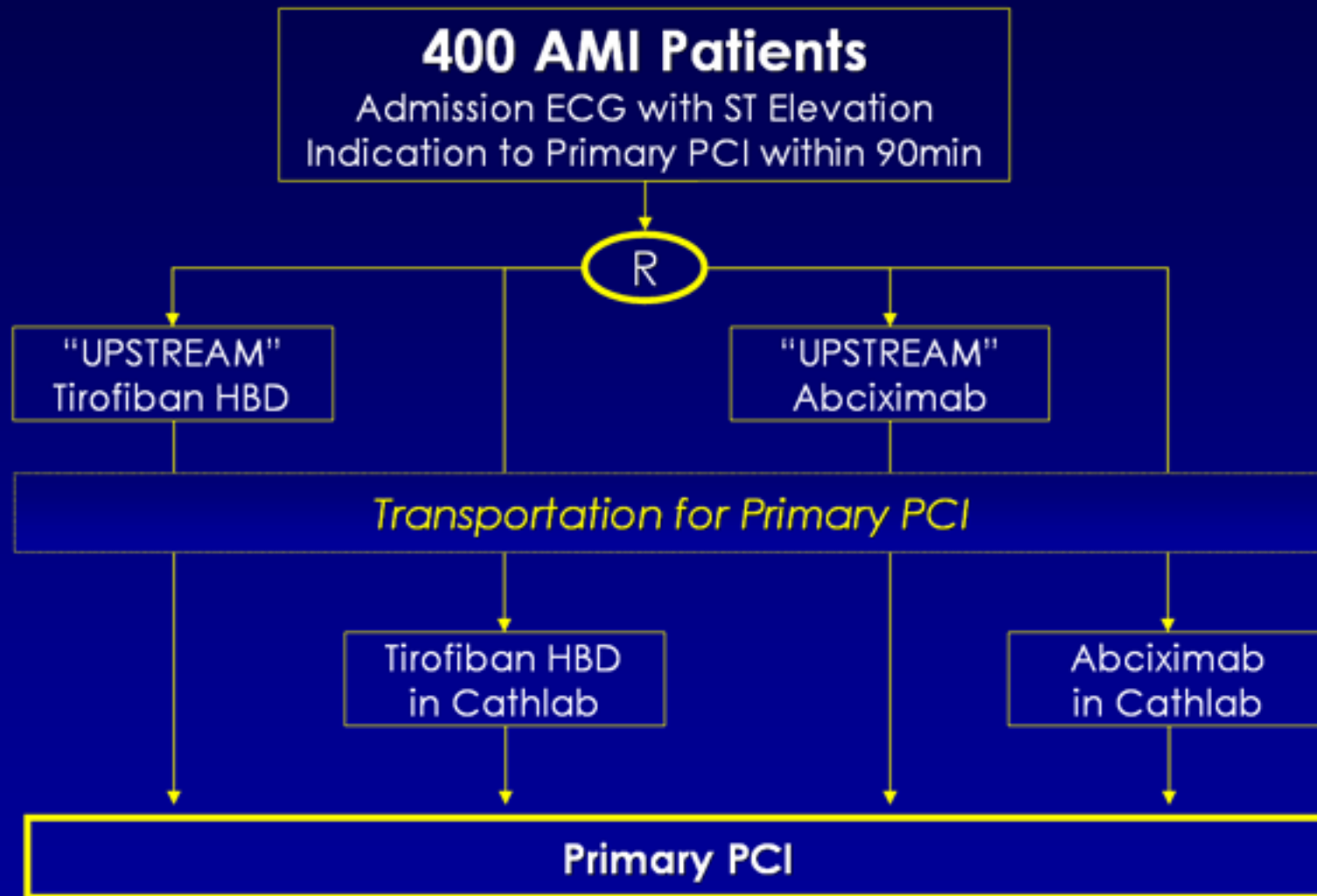
# MI: new researches with HBD Tirofiban

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- ✦ FATA Trial
- ✦ Multi- STRATEGY Trial
- ✦ STAR Trial
- ✦ On-Time II Trial

# Tirofiban in AMI – FATA Trial

Leading Investigators: A Marzocchi (Bo)

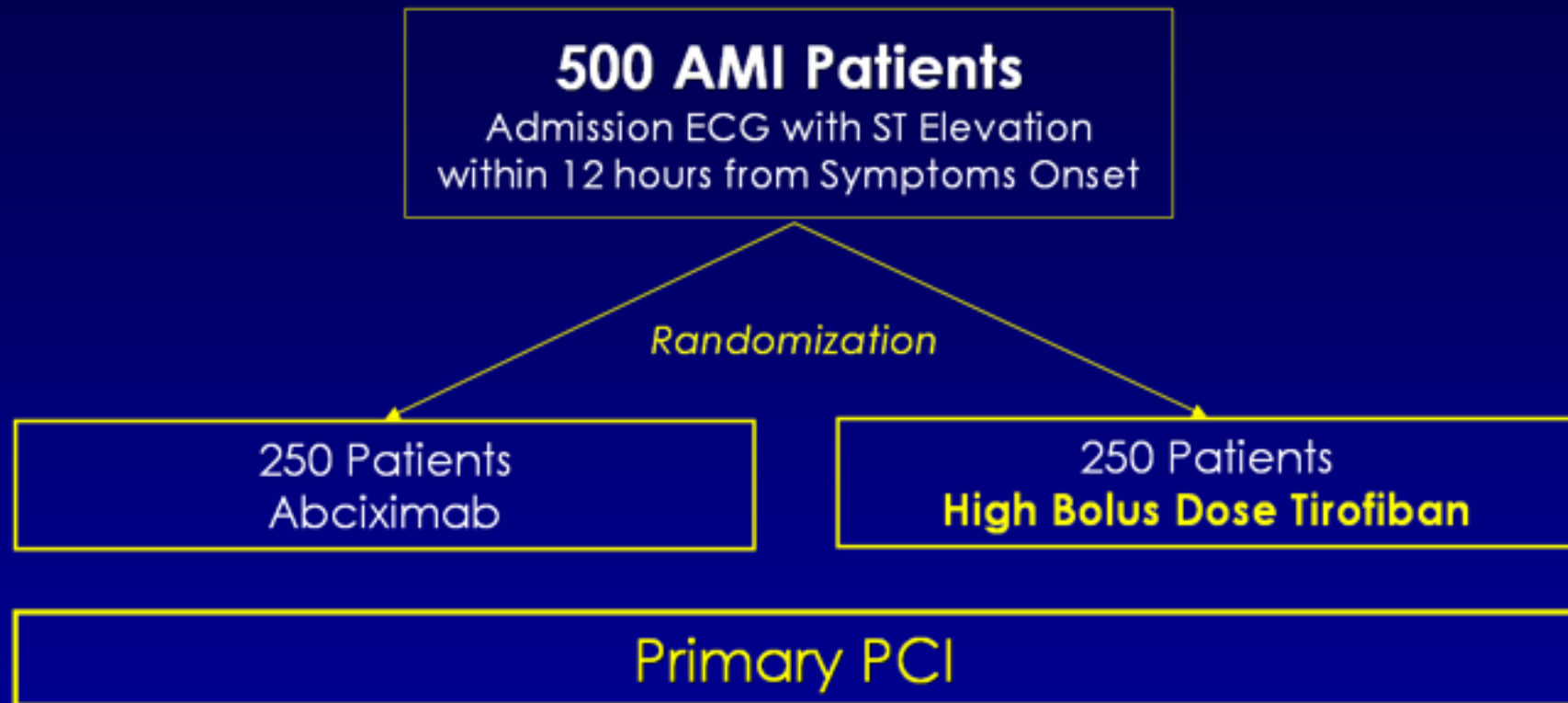


## Primary End Point:

ECG evaluation of the ST segment resolution 90 minutes after PCI

# Tirofiban in AMI – STAR Trial

Leading Investigators: GB Danzi (MI)



**Primary End Point:** TIMI FLOW GRADE 3

**Secondary End Points:** Composite of D/MI/ TVR at 1 and 6 months

# On-TIME 2

N=950

Acute myocardial infarction  
diagnosed in ambulance or non-PCI centre

Clopidogrel 600

Placebo

Tirofiban  
High Dose

Transportation



PTCA center

Tirofiban  
only as bail-out

Placebo