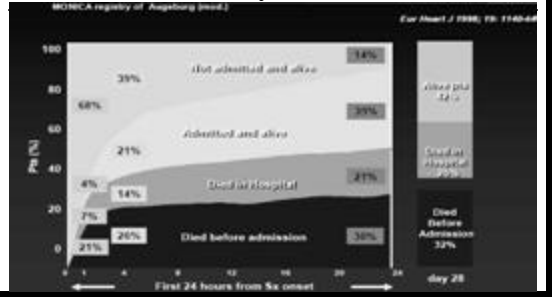


# PPCI for STEMI

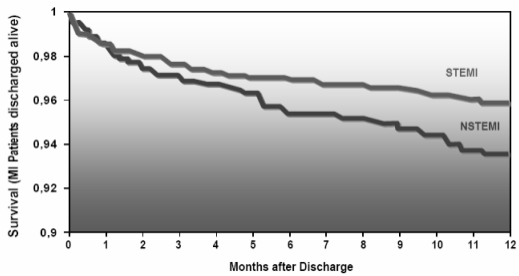
Ranil de Silva  
Consultant Cardiologist

Ealing and Royal Brompton Hospitals

## Outcomes from Myocardial Infarction



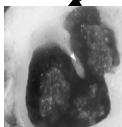
## Prognosis after ACS



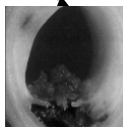
## The Problem



## Acute Coronary Syndromes



ST elevation



ST depression



T wave inversion

## ECG Criteria for Reperfusion

- ST?
  - >2mm in 2 contiguous leads V1-V3 or
  - >1 mm in at least 2 contiguous other leads
- LBBB

## Information from the ECG

- Diagnosis
- Prognosis
  - Infarct size
  - Infarct location
- Complications
  - Arrhythmia

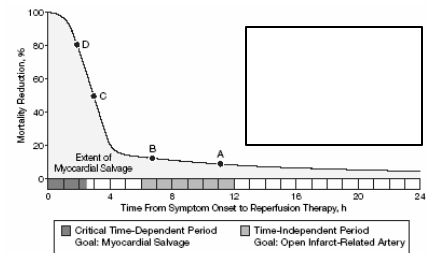
## The High Risk Patient

- Age >75
- Heart failure or shock
- Anterior or multi-site ST?
- ST? in >3 leads
- DM
- Female gender

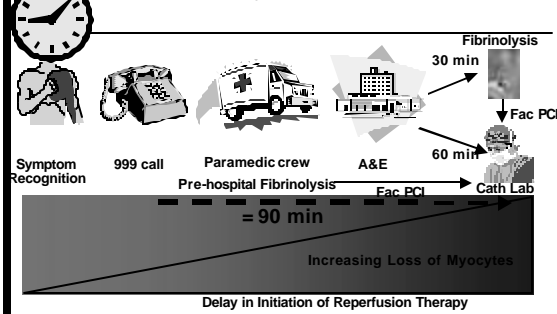
## Opening the Artery: Options in 2008

- Fibrinolysis
    - Pre-hospital
    - In-hospital
  - Facilitated PCI
  - Primary PCI
- HOW DO I CHOOSE ?

## Time is Crucial

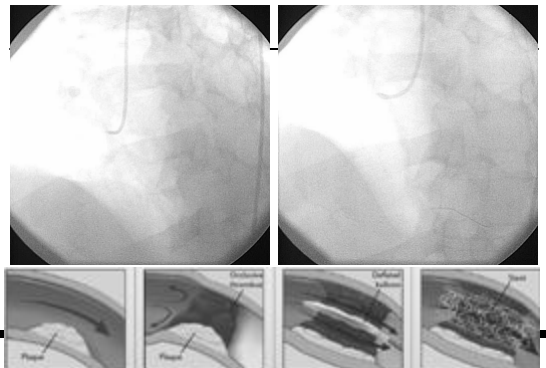


## Treatment Delayed is Treatment Denied



ESC STEMI Management Guidelines 2003  
ACC/AHA STEMI Guidelines 2005

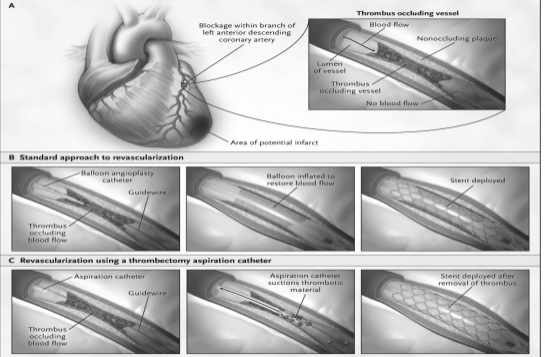
## PPCI for STEMI



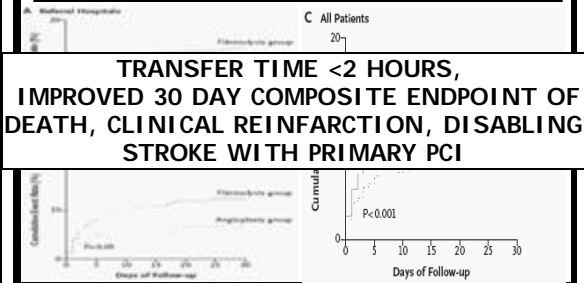
# PCI Options



# Thrombectomy during PPCI



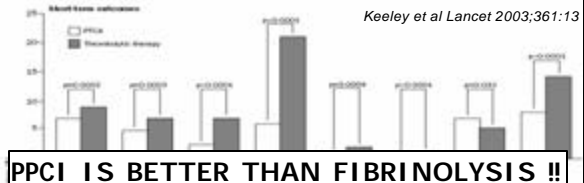
# PPCI v Fibrinolysis: DANAMI 2



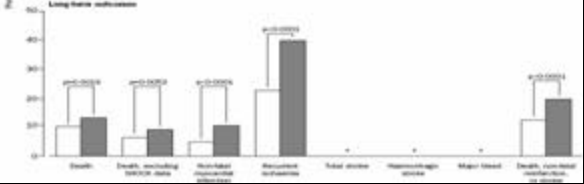
**TRANSFER TIME < 2 HOURS, IMPROVED 30 DAY COMPOSITE ENDPOINT OF DEATH, CLINICAL REINFARCTION, DISABLING STROKE WITH PRIMARY PCI**

Andersen HR et al. *N Engl J Med* 2003;349:733-42

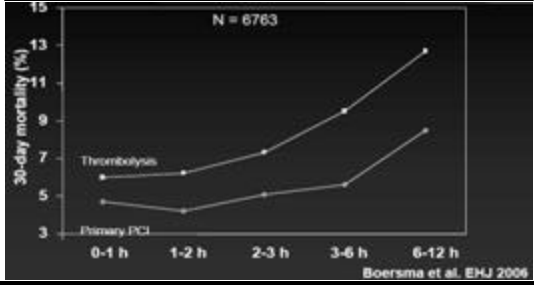
# PPCI v Fibrinolysis



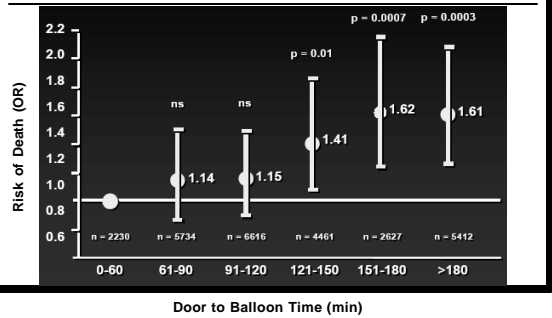
**PPCI IS BETTER THAN FIBRINOLYSIS !!**



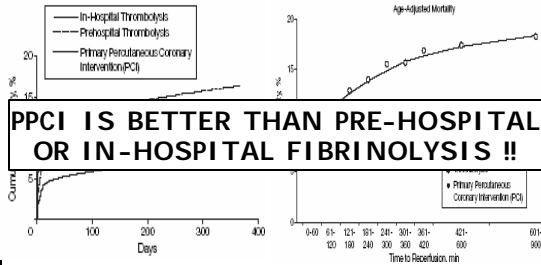
# PPCI is Superior to Thrombolysis



# Door to Balloon Time Determines Outcome

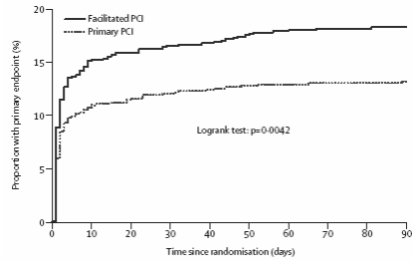


## RIKS-HIA



Stenstrand JAMA 2006;296:1749

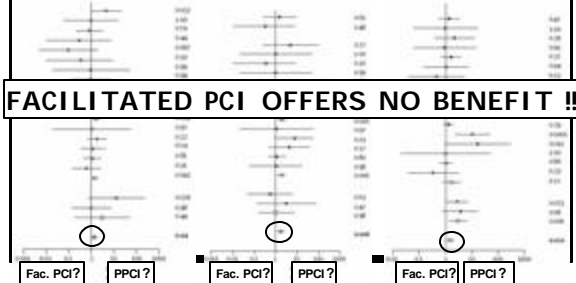
## Facilitated PCI v PPCI: ASSENT IV



ASSENT IV PCI. Lancet 2006;367:569

## PPCI v Facilitated PCI

DEATH      NON-FATAL MI      MAJOR BLEEDING



**FACILITATED PCI OFFERS NO BENEFIT !!**

Keeley Lancet 2006;367:579

## STEMI Care in the UK 2006/7 (MINAP)

- Thrombolysis in ~80%
  - In-hospital thrombolysis ~60%
  - Pre-hospital thrombolysis ~20%
- PPCI in ~20%
  - Routinely offered by 35 hospitals in England

## Challenges

- To make PPCI available to all patients
- Reduce pain to balloon time
  - Public education
  - Optimise networks of care
  - Availability of 24/7 cath lab team
- Optimise pharmacologic Rx and PCI technique