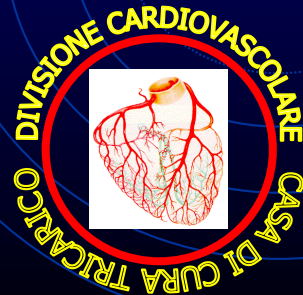
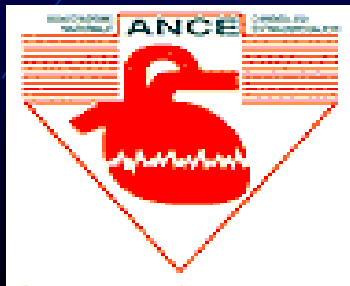


SEMINARIO REGIONALE ANCE CALABRIA

INCONTRI PITAGORICI DI CARDIOLOGIA

Crotone – Hotel Costa Tiziana

1 – 2 ottobre 2004

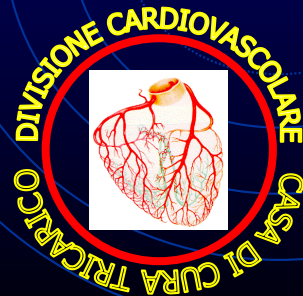
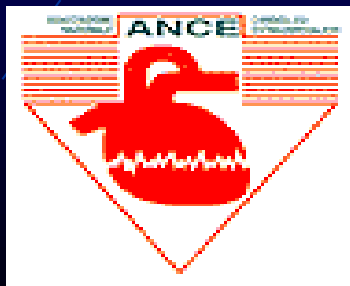


LINEE GUIDA DELLE SINDROMI CORONARICHE ACUTE: QUAL'E' IL MIGLIOR TRATTAMENTO?

PRESENTA: A. BUFFON (CS)

ESPERTI A CONFRONTO:

- F. P. CARIELLO (Belvedere M.mo)**
- P. MAZZAROTTO (Cosenza)**



NSTEMI

STEMI

Onset of STEMI

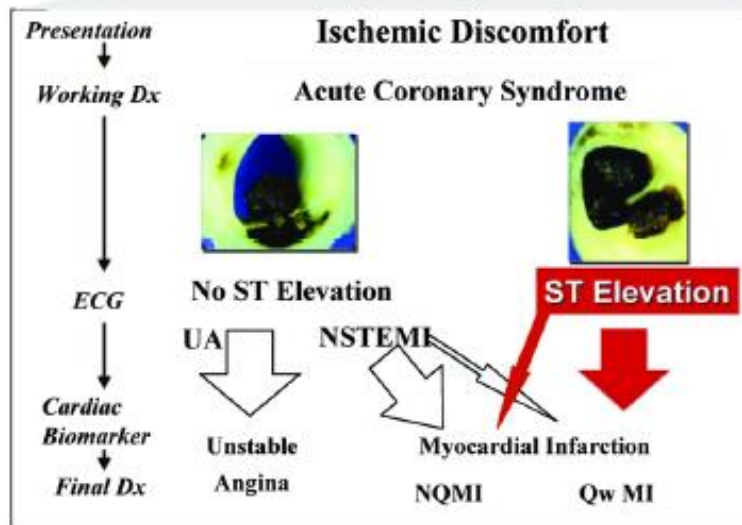
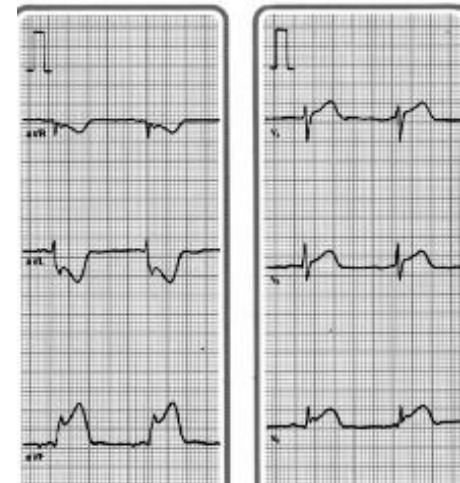
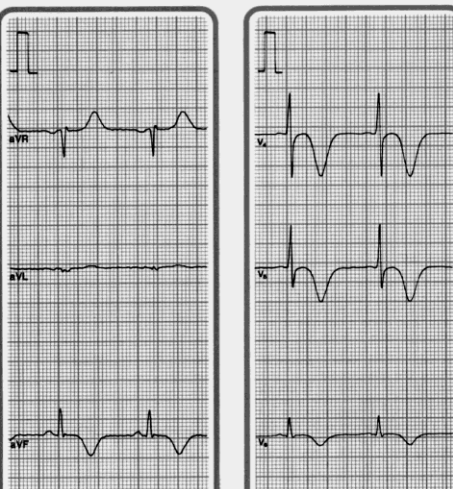
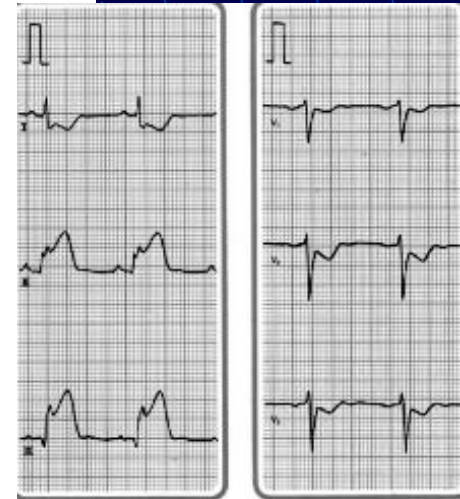
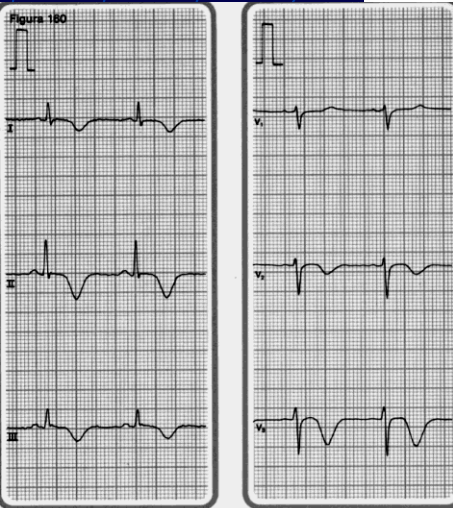
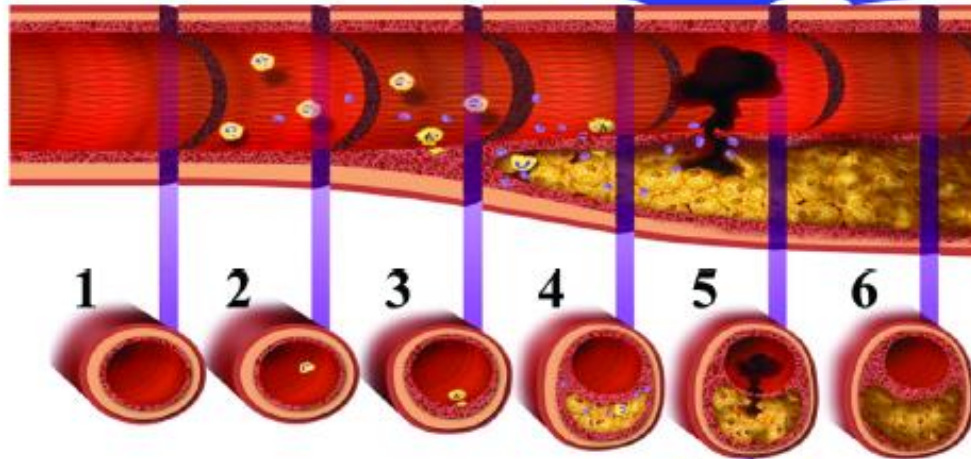
- Prehospital Issues
- Initial recognition and management in the Emergency Department
- Reperfusion

Hospital Management

- Medications
- Arrhythmias
- Complications
- Preparation for discharge

Management Prior to STEMI

Secondary Prevention/ Long-Term Management



NSTEMI: Stratificazione rischio

ESC guidelines

Patients judged to be at high risk for progression to MI or death

Patients with recurrent ischemia

Recurrent chest pain

Dynamic ST-segment changes

(ST-segment depression or transient ST segment elevation)

Early post infarction unstable angina

Elevated troponin levels

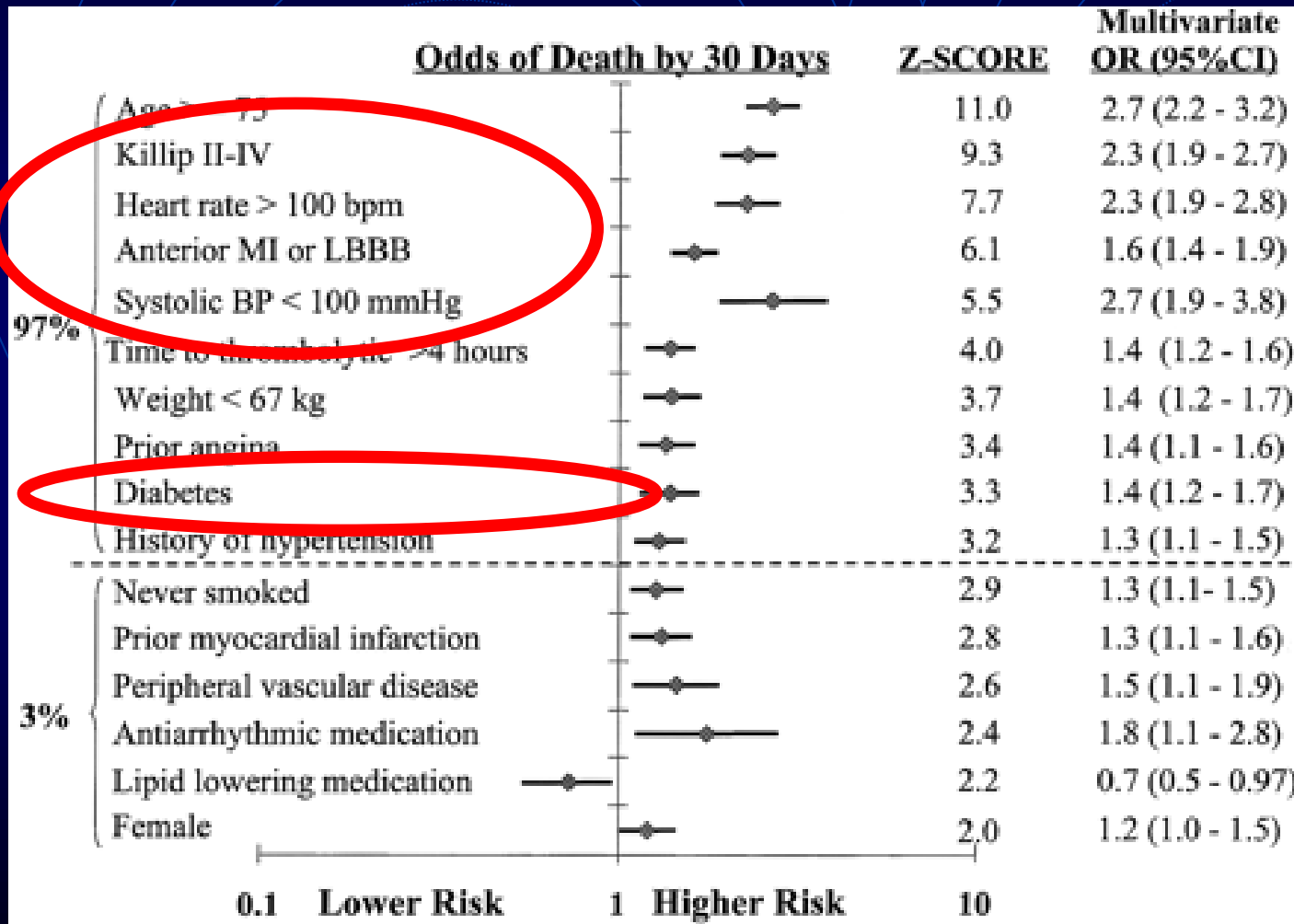
Diabetes

Hemodynamic instability

Major arrhythmias (VF, VT)

**Introduction of
GpIIb/IIIa blocker
and
Coronary angiography**

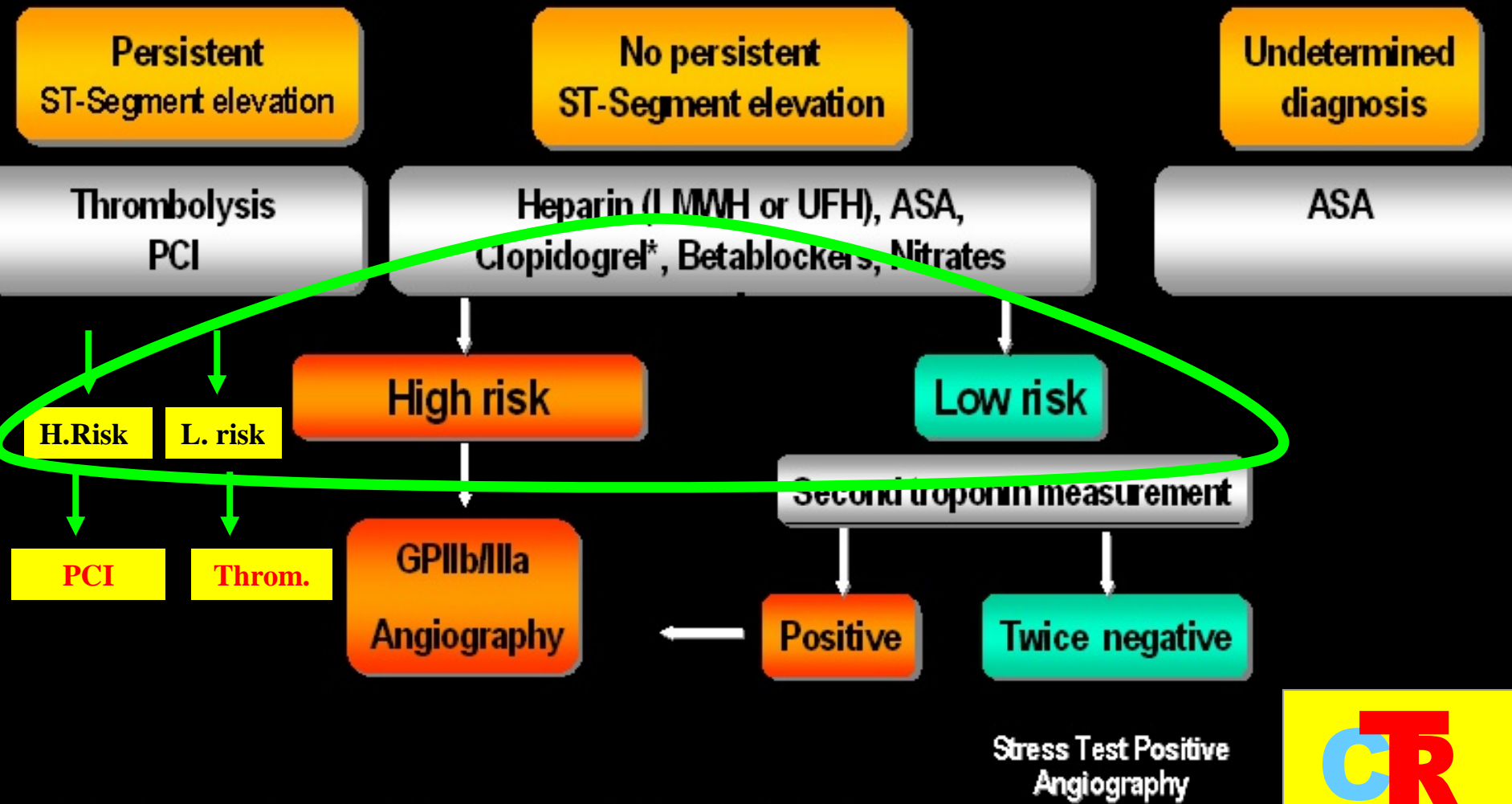
STEMI TIMI SCORE: 16 Variabili



T.S. = 0-3: LR
T.S. = 5-8: HR
T.S. > 8: VHR

New ESC Guidelines

Physical examination, Electrocardiogram
ECG monitoring, Blood samples



* omit clopidogrel if the patient is likely to go to CABG within 5 days



NSTEMI

STEMI

Onset of STEMI

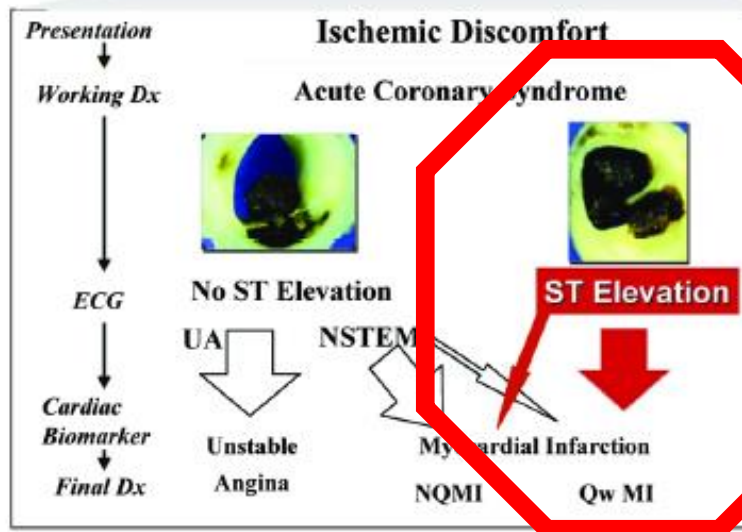
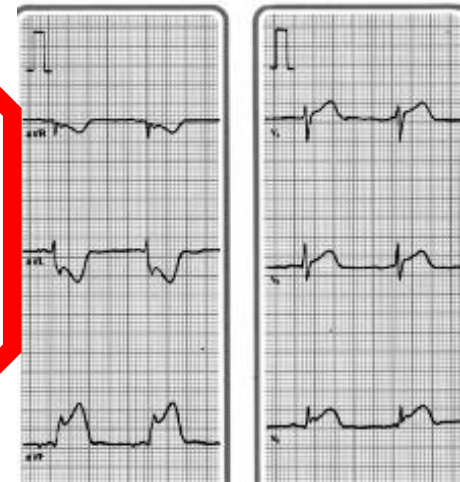
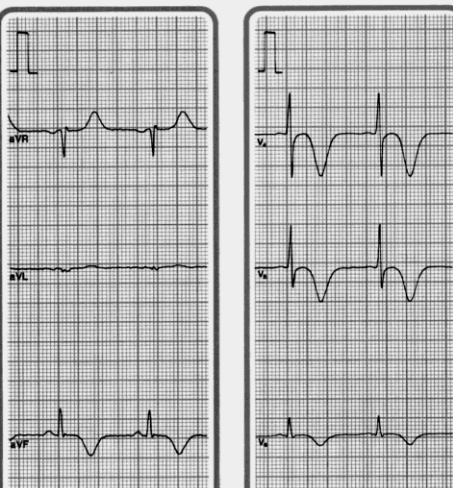
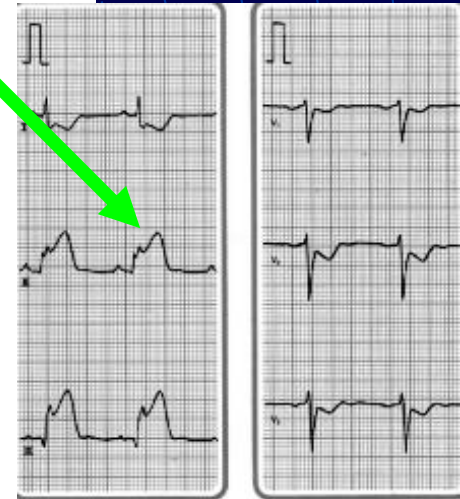
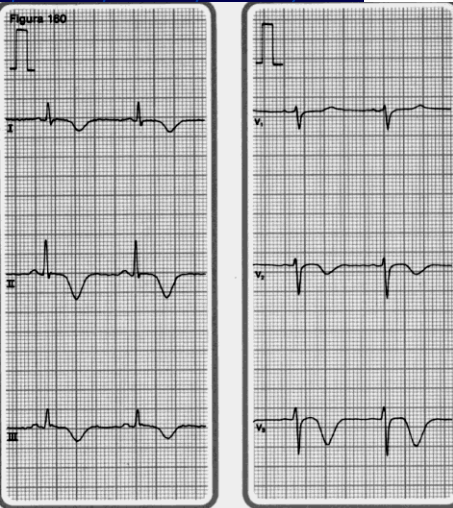
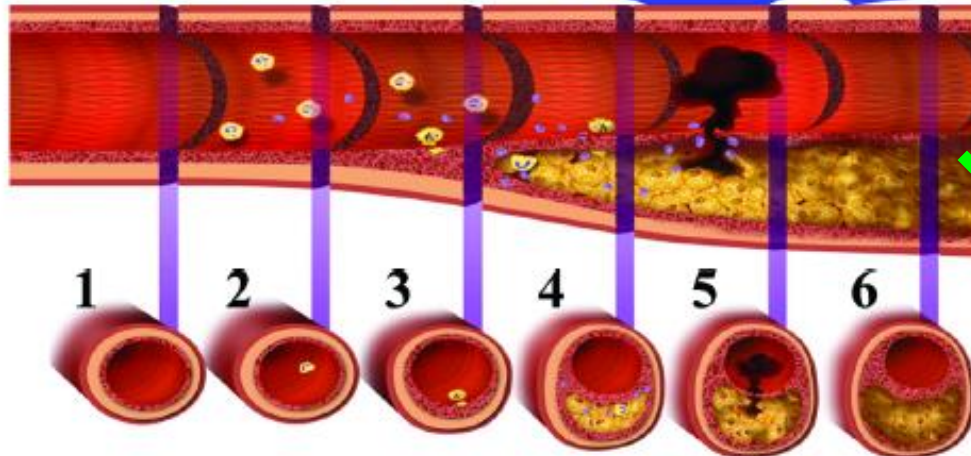
- Prehospital Issues
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Hospital Management

- Medications
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Management Prior to STEMI

Secondary Prevention/ Long-Term Management



Obiettivi prioritari per una appropriata gestione dei pazienti con IMA

**Aumentare il numero di pazienti con IMA
che arrivano vivi in ospedale**

**Arrivare il più precocemente possibile
ad una adeguata terapia di riperfusione,
tenendo conto che sia la mortalità che la quantità
di tessuto miocardico che può venire salvato
sono direttamente proporzionali ai tempi di intervento**

Figure 5. Act in Time to Heart Attack Signs

Use the **T.I.M.E.** Method To Help Your Patients Make a Heart Attack Survival Plan

Why Your Patients Need To Act in Time to Heart Attack Signs

Coronary heart disease is the leading killer of both men and women in the United States. Each year, about 1.1 million Americans suffer a heart attack. About 460,000 of those heart attacks are fatal. Disability and death from heart attack can be reduced with prompt thrombolytic and other artery-opening therapies—ideally given within the first hour after symptom onset. Patient delay is the largest barrier to receiving therapy quickly.

Heart Attack Warning Signs

- ▲ **Chest discomfort** (pressure, squeezing, fullness, or pain in the center of the chest)
- ▲ **Discomfort in one or both arms, back, neck, jaw, or stomach**
- ▲ **Shortness of breath** (often comes with or before chest discomfort)
- ▲ **Breaking out in a cold sweat, nausea, or light-headedness**

Uncertainty is Normal

Most people think a heart attack is sudden and intense, like a "movie heart attack." The fact is that many heart attacks start slowly as mild pain or discomfort. People who feel such symptoms may not be sure what is wrong.

Delay Can Be Deadly



Most heart attack victims wait 2 or more hours after symptoms begin before they seek medical help. People often take a wait-and-see approach or deny that their symptoms are serious.

Every minute that passes without treatment means that more heart muscle dies.

Calling 9-1-1 Saves Lives

Minutes matter. Anyone with heart attack symptoms **should not wait more than a few minutes—5 minutes at most—to call 9-1-1.**

From: Act in Time to Heart Attack Signs. Action Plan. U.S. Department of Health and Human Services. Public Health Service. National Institutes of Health. National Heart, Lung, and Blood Institute. NIH Publication No. 01-3313, September 2001
<http://nhlbi.nih.gov/health/prof/heart/atm/provider.pdf> (110)

Use the T.I.M.E. Method:

Talk with your patients about—

- ▲ Risk of a heart attack.
- ▲ Recognition of symptoms.
- ▲ Right action steps to take/rationale for rapid action.
- ▲ Rx—give instructions for when symptoms occur (based on patient history).
- ▲ Remembering to call 9-1-1 quickly—within 5 minutes.

Investigate—

- ▲ Feelings about heart attack.
- ▲ Barriers to symptom evaluation and response.
- ▲ Personal and family experience with AMI and emergency medical treatment.

Make a plan—

- ▲ Help patients and their family members to make a plan for exactly what to do in case of heart attack symptoms.
- ▲ Encourage patients and their family members to rehearse the plan.

Evaluate—

- ▲ The patient's understanding of risk in delaying.
- ▲ The patient's understanding of your recommendations.
- ▲ The family's understanding of risk and their plan for action.

Additional Resources

Find information and educational materials at the National Heart, Lung, and Blood Institute Web site: www.nhlbi.nih.gov and the American Heart Association Web site: www.americanheart.org

NATIONAL INSTITUTES OF HEALTH
NATIONAL HEART, LUNG, AND BLOOD INSTITUTE



Fattore Tempo

IL TEMPO NON E' UN
LIMITE.....

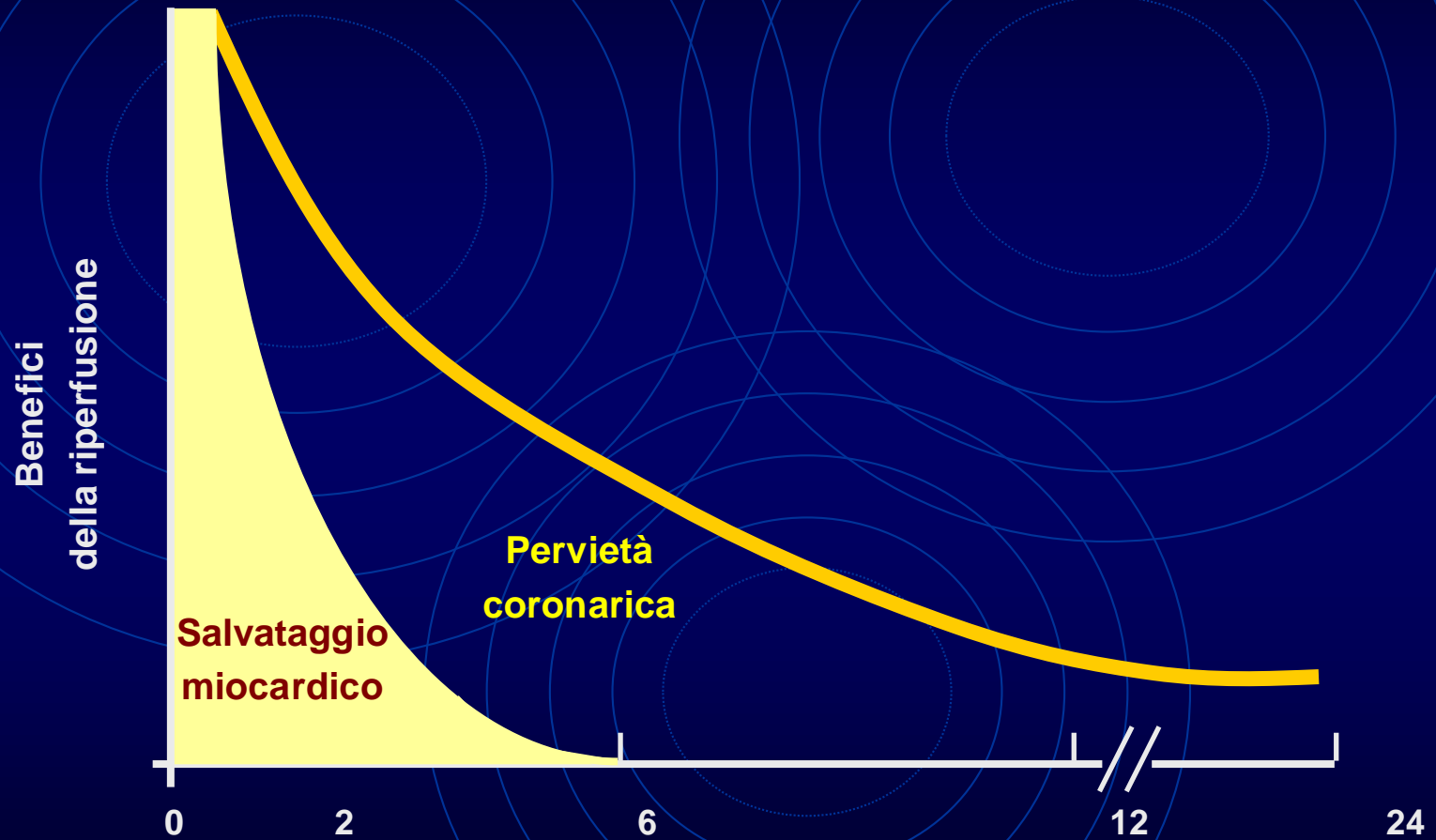
IL TEMPO E' UNA
RISORSA

CASA DI CURA
TRICARICO

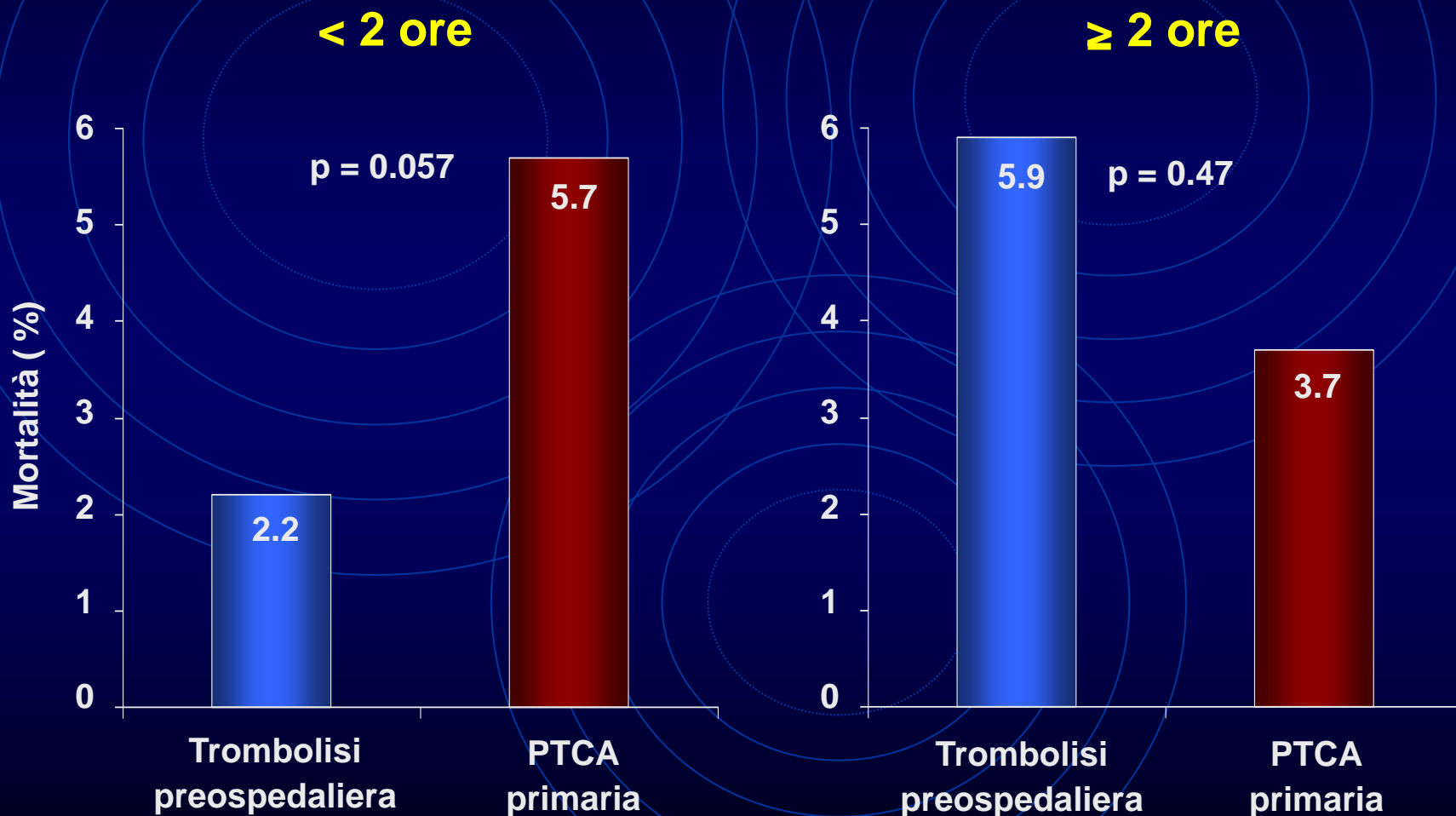
Da impiegare nel modo giusto



Benefici della riperfusione in relazione ai tempi di trattamento

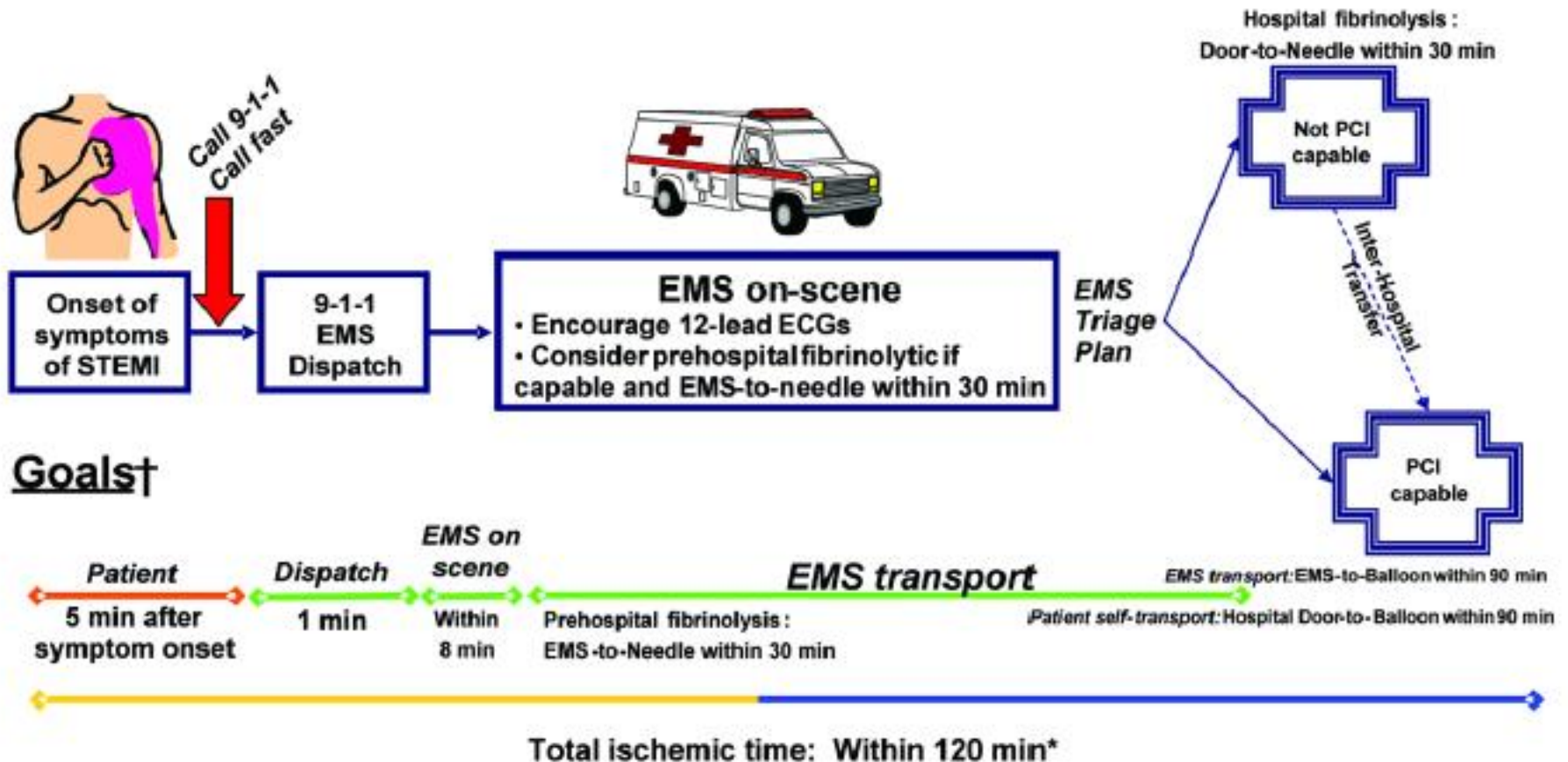


CAPTIM: mortalità in relazione ai tempi di randomizzazione



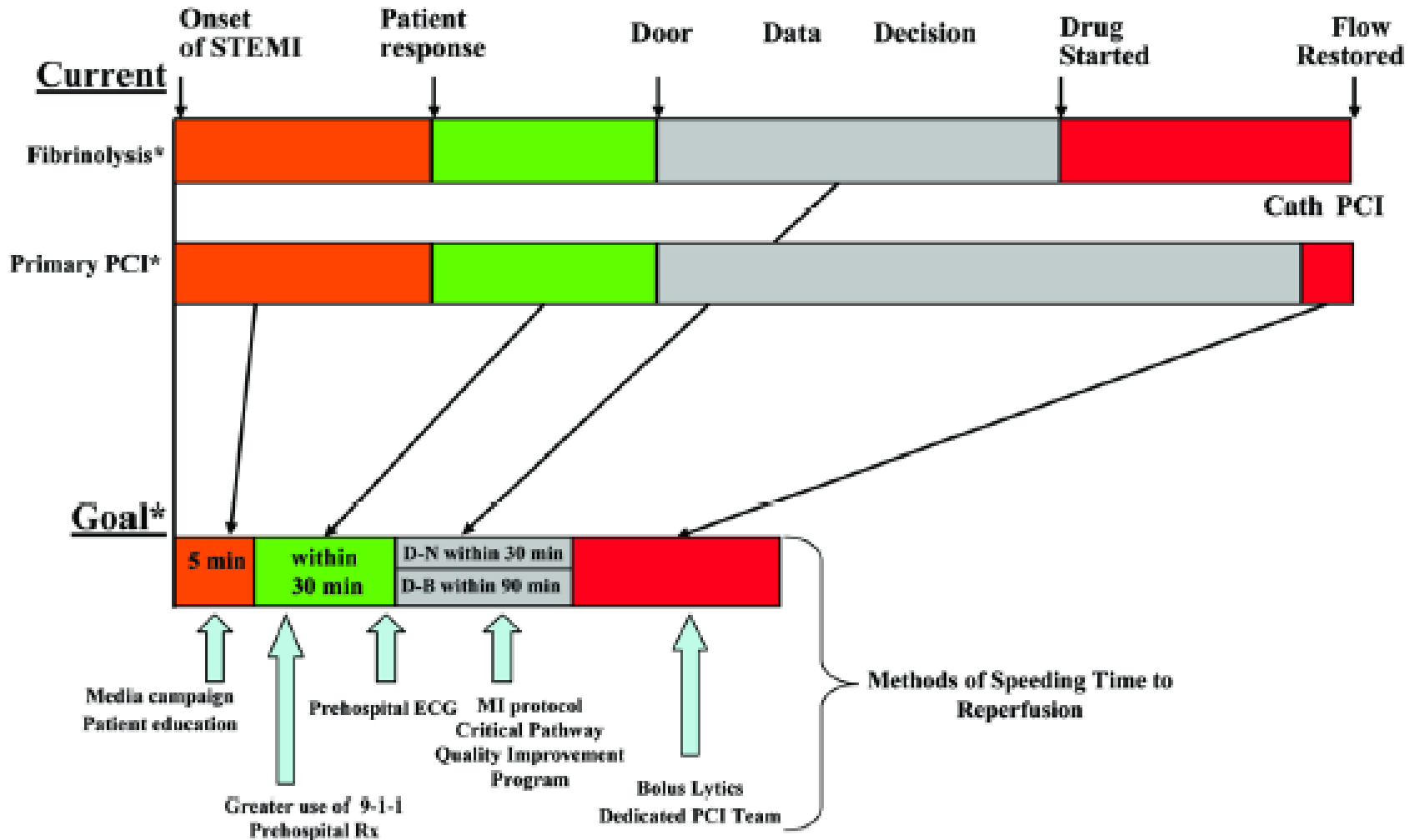
Door-to-Needle within 30 minutes

Door-to-Balloon within 90 minutes



*Golden Hour = First 60 minutes

█ Patient
 █ Transport
 █ Inhospital
 █ Reperfusion



Trasferimento di pazienti per la PTCA primaria nel mondo reale (NRMI 4)

Valutazione clinica

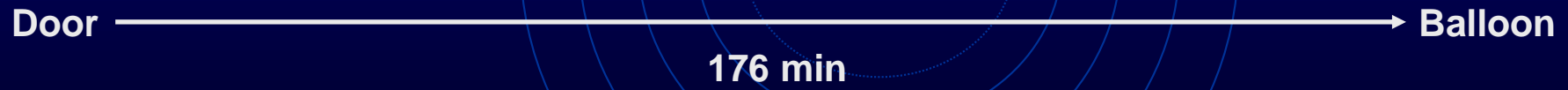
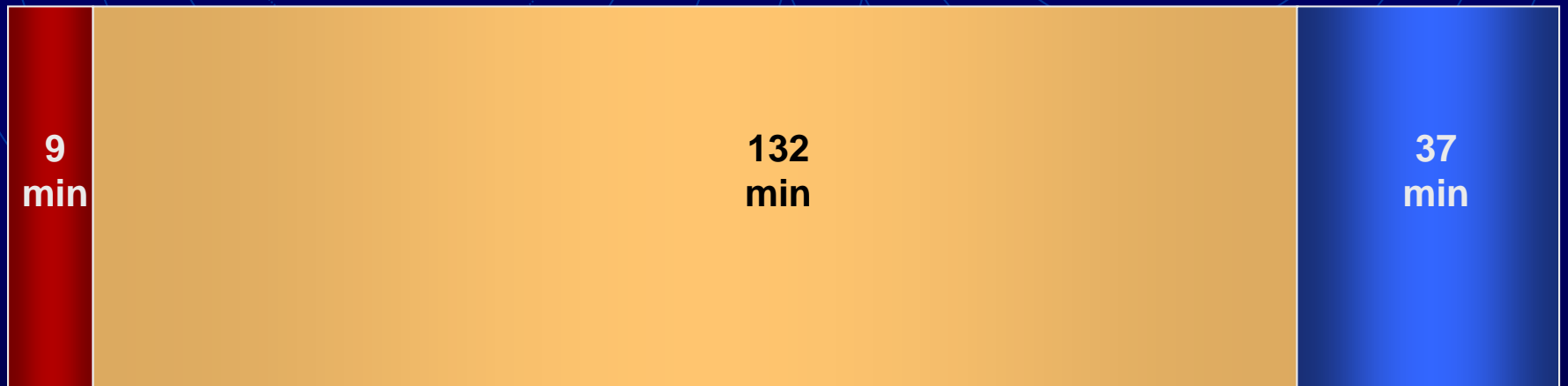
50° = 9 min
 25° = 4 min
 75° = 15 min

Trasporto casa-emodinamica

50° = 132 min
 25° = 68 min
 75° = 219 min

Time to balloon

50° = 37 min
 25° = 28 min
 75° = 50 min

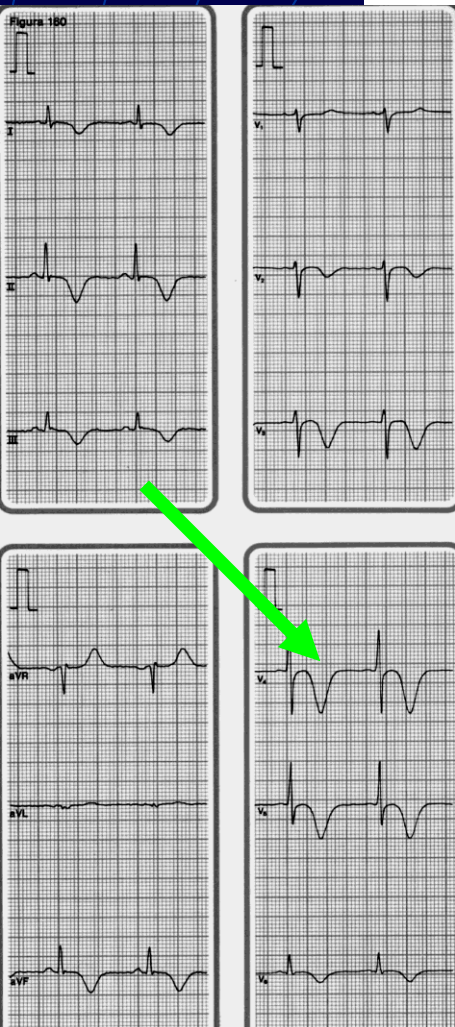


Pazienti con door-to-balloon <90 min: 3%

N. pazienti: 1346

Periodo: gennaio-dicembre 2002

NSTEMI



Onset of STEMI

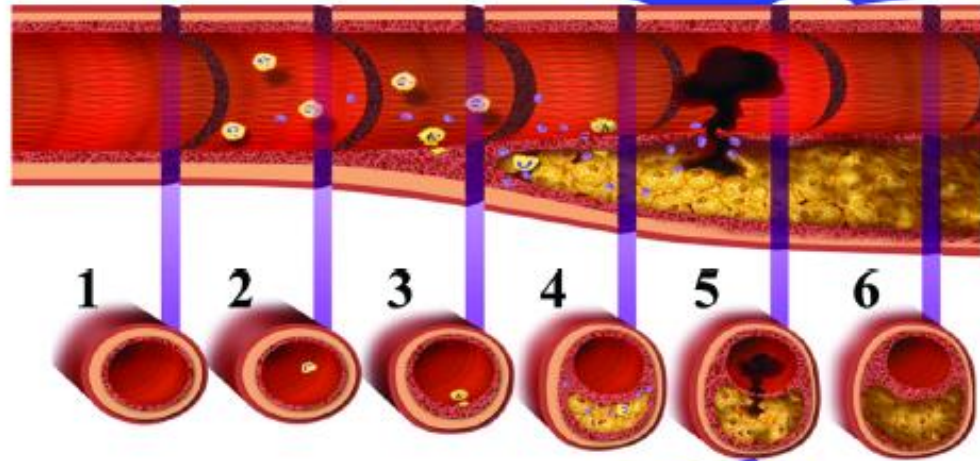
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Hospital Management

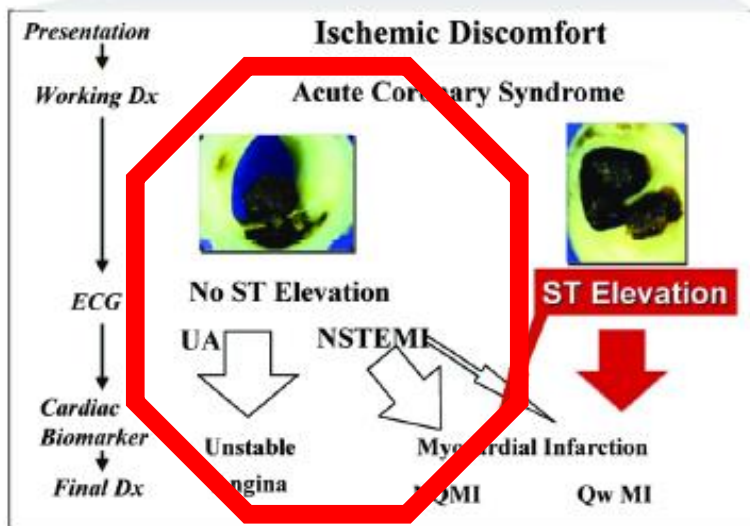
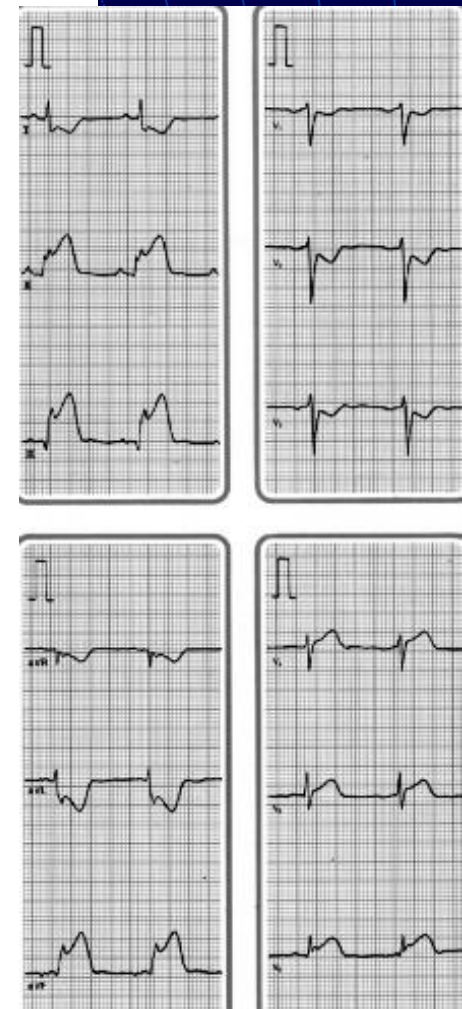
- Medications
- Arrhythmias
- Complications
- Preparation for discharge

Management Prior to STEMI

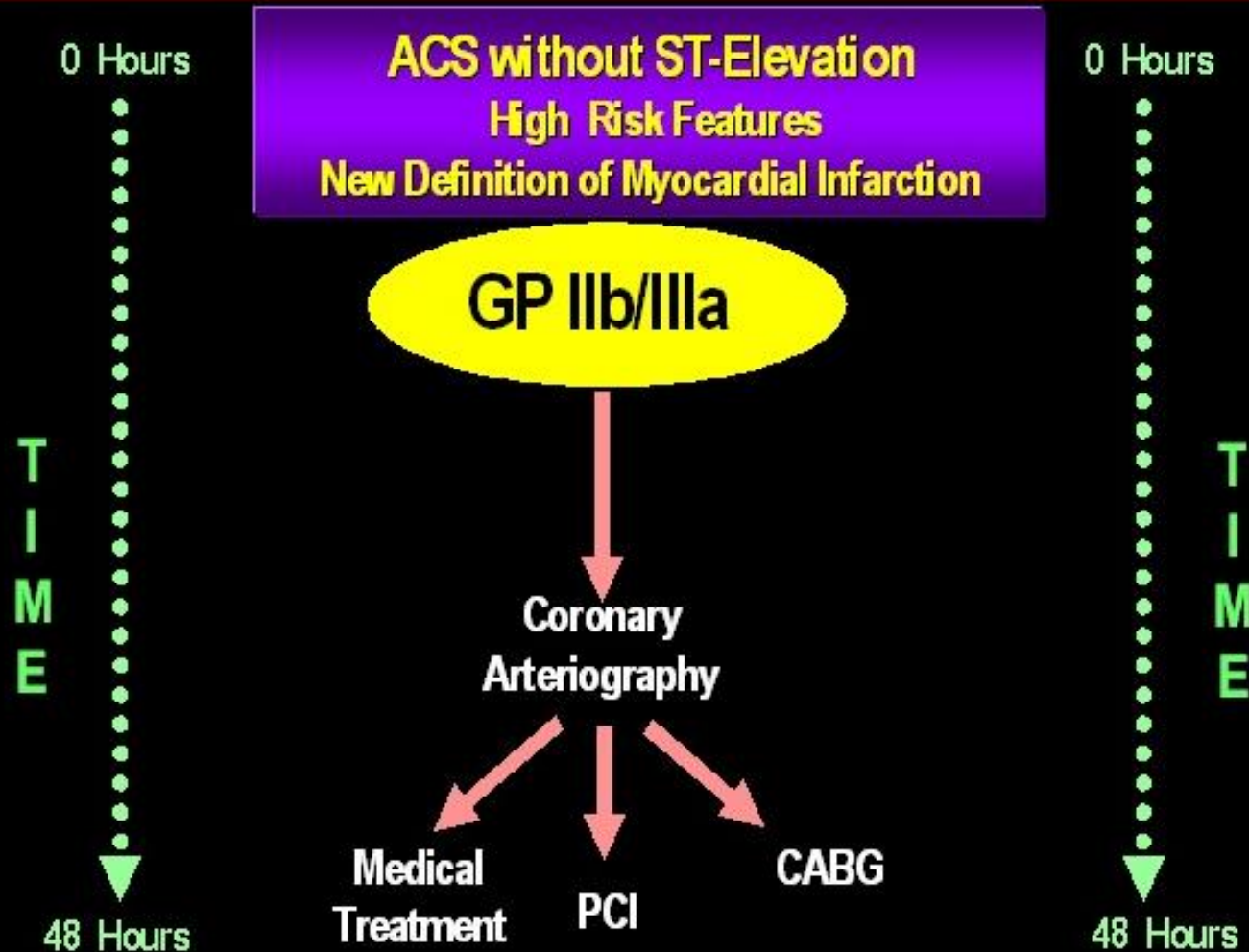
Secondary Prevention/ Long-Term Management



STEMI



Invasive Treatment ACS without ST-Segment Elevation



ESC guidelines

Patients judged to be at high risk for progression to MI or death

Patients with recurrent ischemia
Recurrent chest pain
Dynamic ST-segment changes
(*ST-segment depression or transient
ST segment elevation*)
Early post infarction unstable angina
Elevated troponin levels
Diabetes
Hemodynamic instability
Major arrhythmias (*VF, VT*)

**Introduction of
GpIIb/IIIa blocker
and
Coronary angiography**

Ridurre i tempi!

come?



PTCA



Gestione Integrata

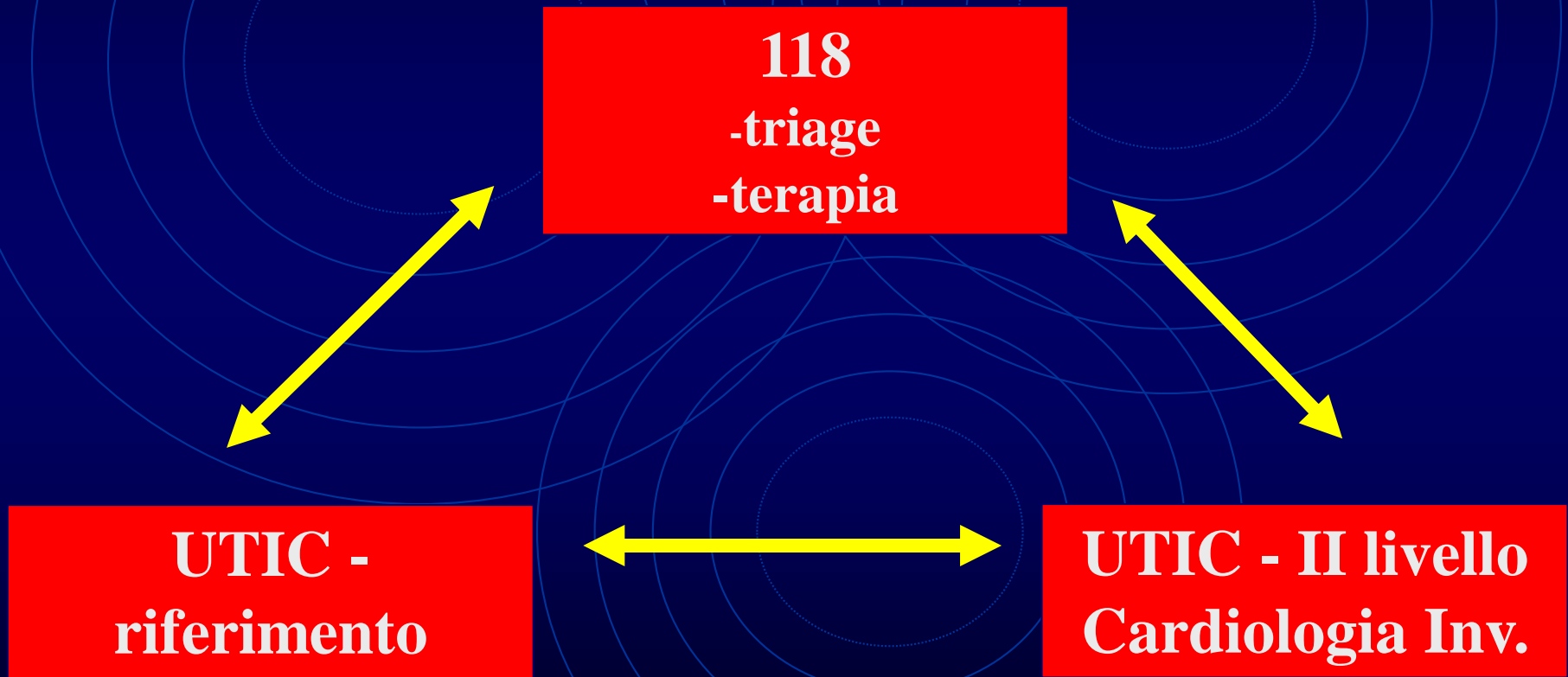
DEFIBRILLAZIONE PRECOCE



TROMBOLISI PRE-OSPEDALIERA



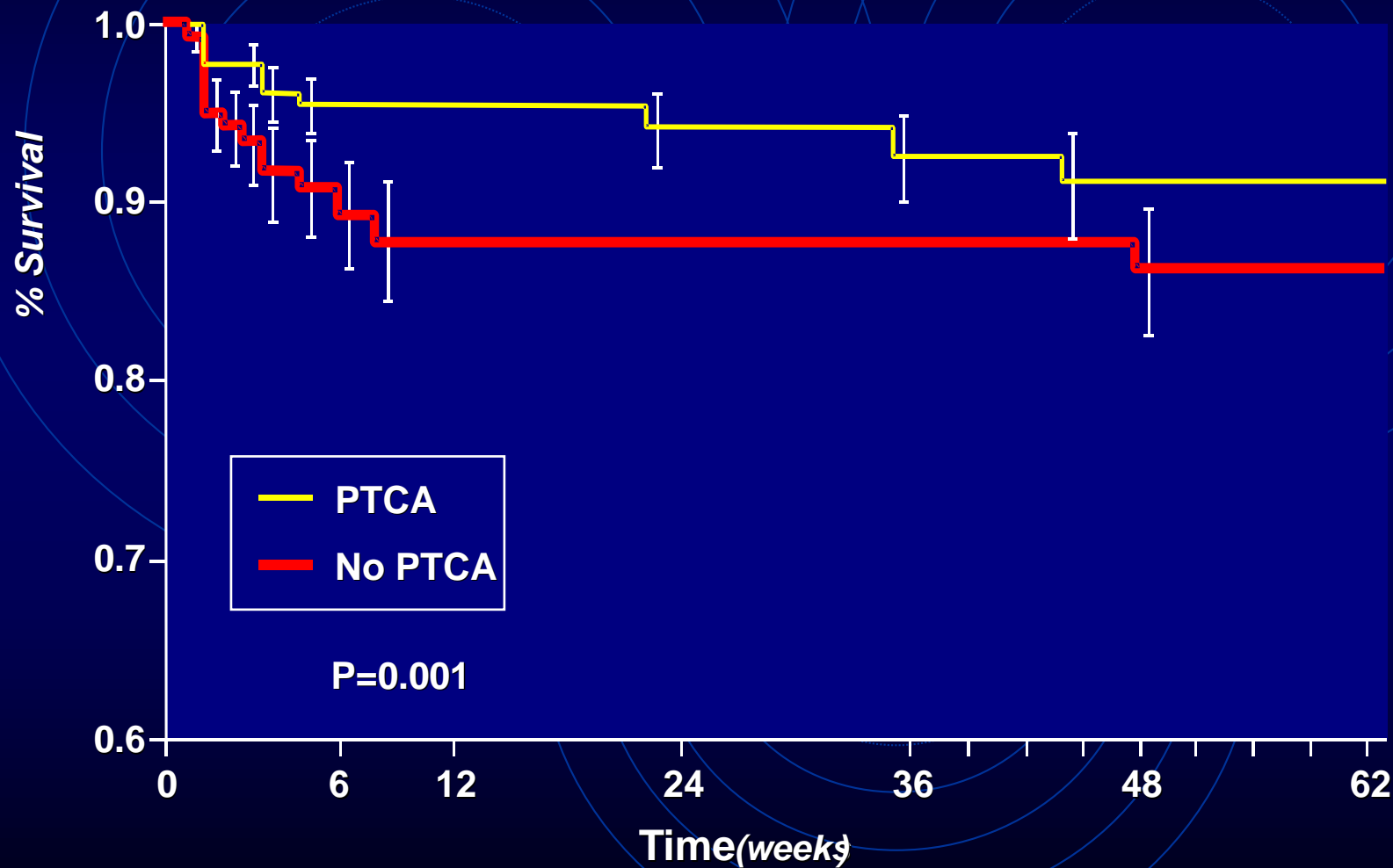
LA RETE PER L'EMERGENZA



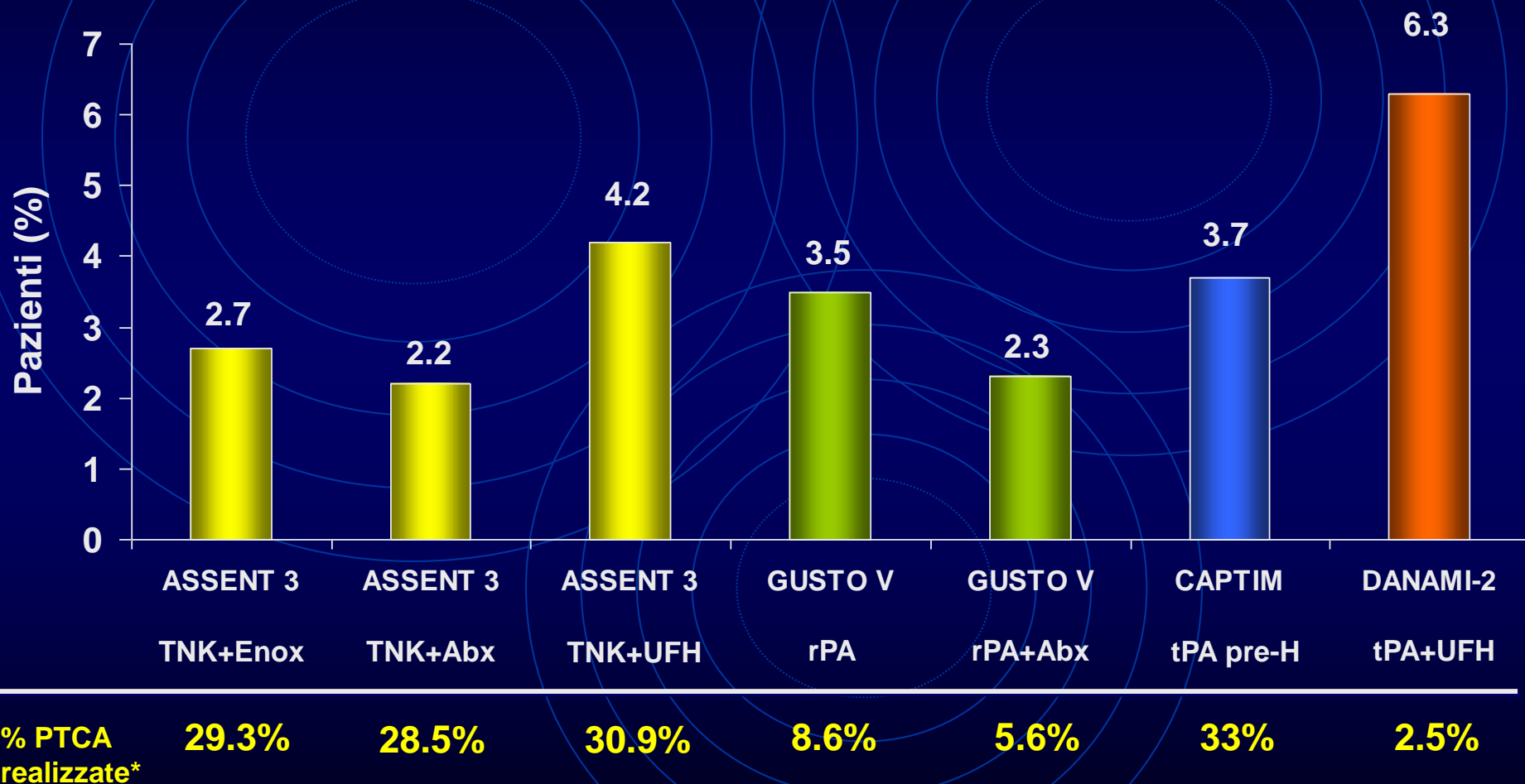
Sinergia tra Trombolisi e PTCA

- **PTCA Rescue**
- **PTCA Facilitata**

Rescue PTCA after failed fibrinolysis RESCUE I trial



Incidenza di reinfarto e PTCA post-trombolisi in diversi trial clinici



* PTCA urgenti e non urgenti combinate

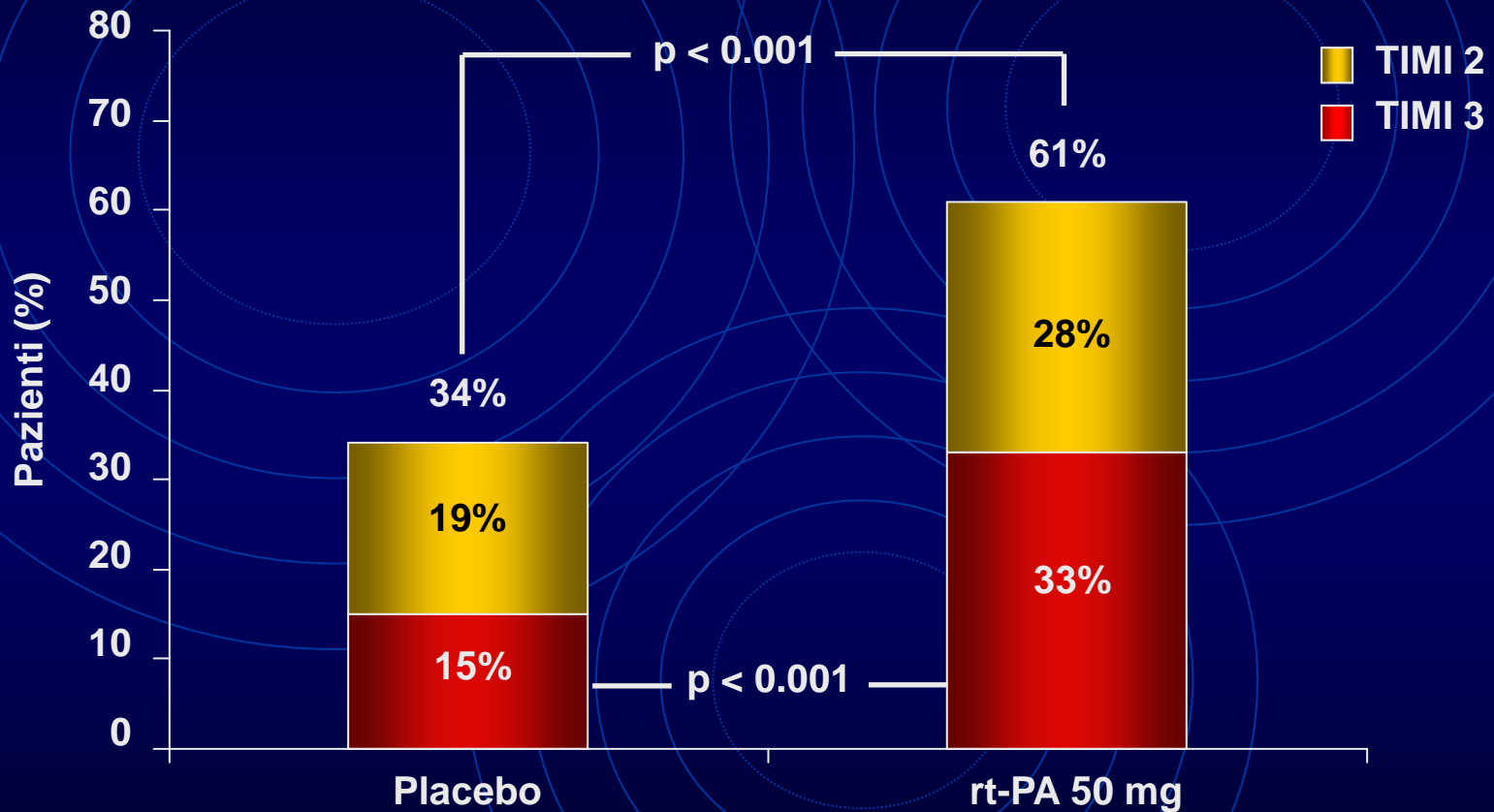
Sinergismo tra Trombolisi e PTCA (STEMI) e somministrazione Antipiastrinici e PTCA (NSTEMI)

PTCA facilitata: la trombolisi supporta la PTCA

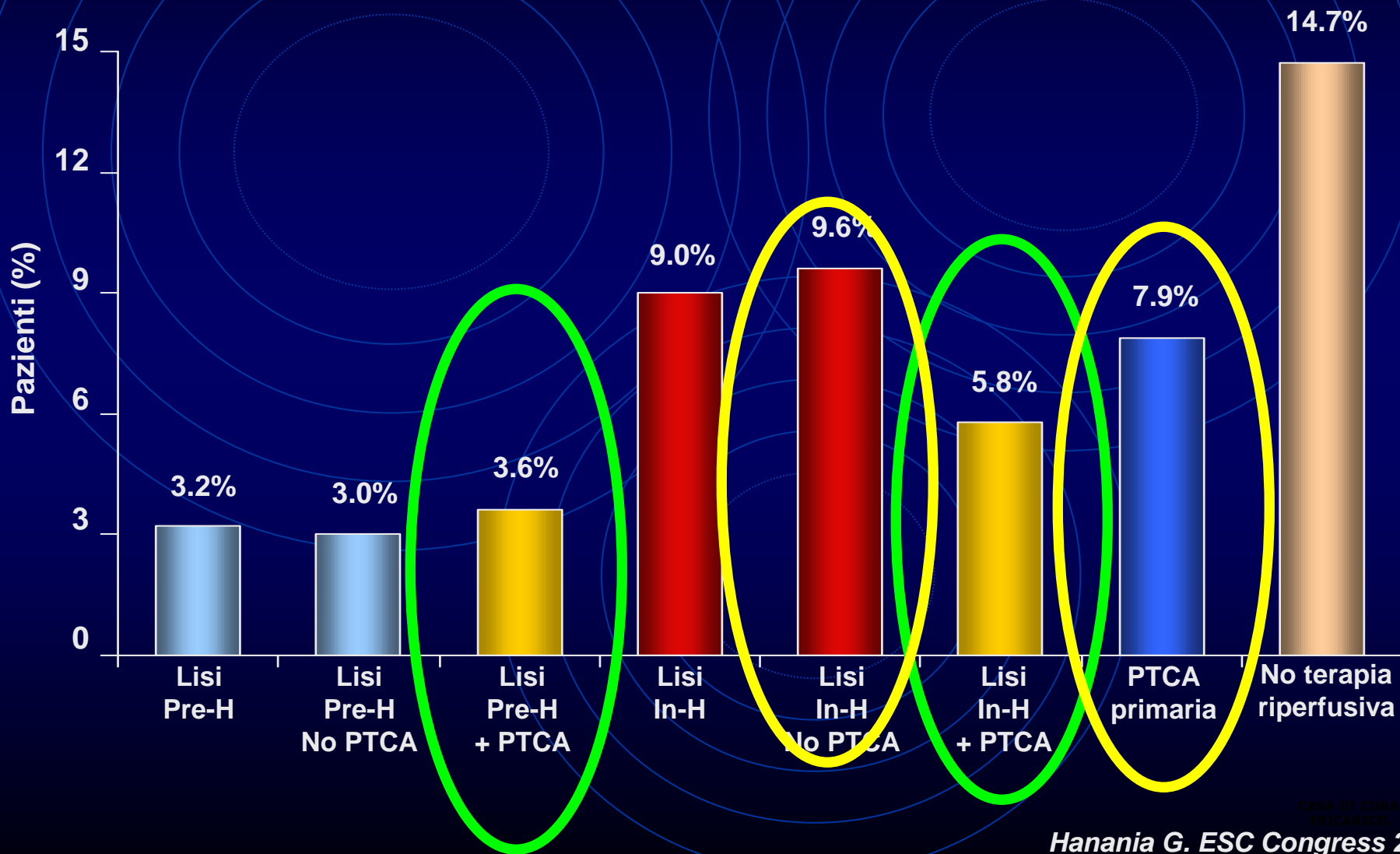
Sinergia Territoriale

Somministrazione precoce di GP IIb/IIIa (?)

Studio PACT: pervietà coronarica dopo trombolisi precoce con rt-PA o placebo



PTCA facilitata (Trombolisi) nel mondo reale: mortalità a 30 giorni nel registro USIC 2000



PTCA facilitata: studi clinici in corso

ASSENT-4 PCI

4000 pazienti

TNK-tPA + PTCA (no anti-GP IIb/IIIa)
vs. PTCA (+/- anti GP IIb/IIIa)

Endpoint: morte, scompenso cardiaco,
shock cardiogeno

CADILLAC-2

3000 Pazienti

1/2 dose TNK-tPA + Tirofiban + PTCA
vs. Tirofiban + PTCA

Endpoint: morte, scompenso cardiaco

FINESSE

3700 pazienti

1/2 dose r-PA + Abciximab + PTCA
vs. Abciximab + PTCA

Endpoint: morte, scompenso cardiaco,
shock cardiogeno

CARESS

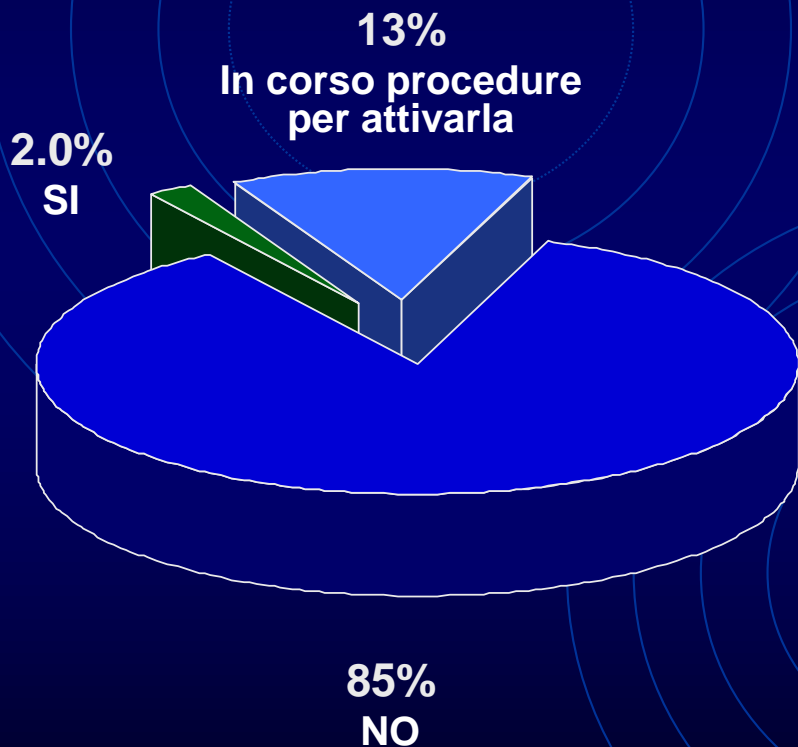
1800 pazienti

1/2 dose r-PA + Abciximab + PTCA
1/2 dose r-PA + Abciximab

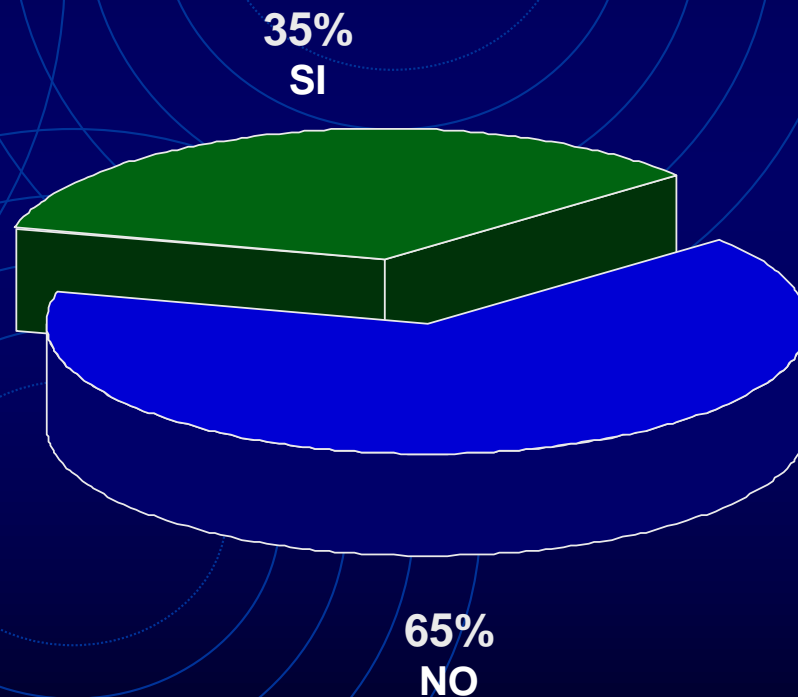
Endpoint: morte, reinfarto, recidive
ischemiche

Trombolisi precoce: a che punto siamo?

Trombolisi preospedaliera



Terapia riperfusiva avviata in PS/DEU

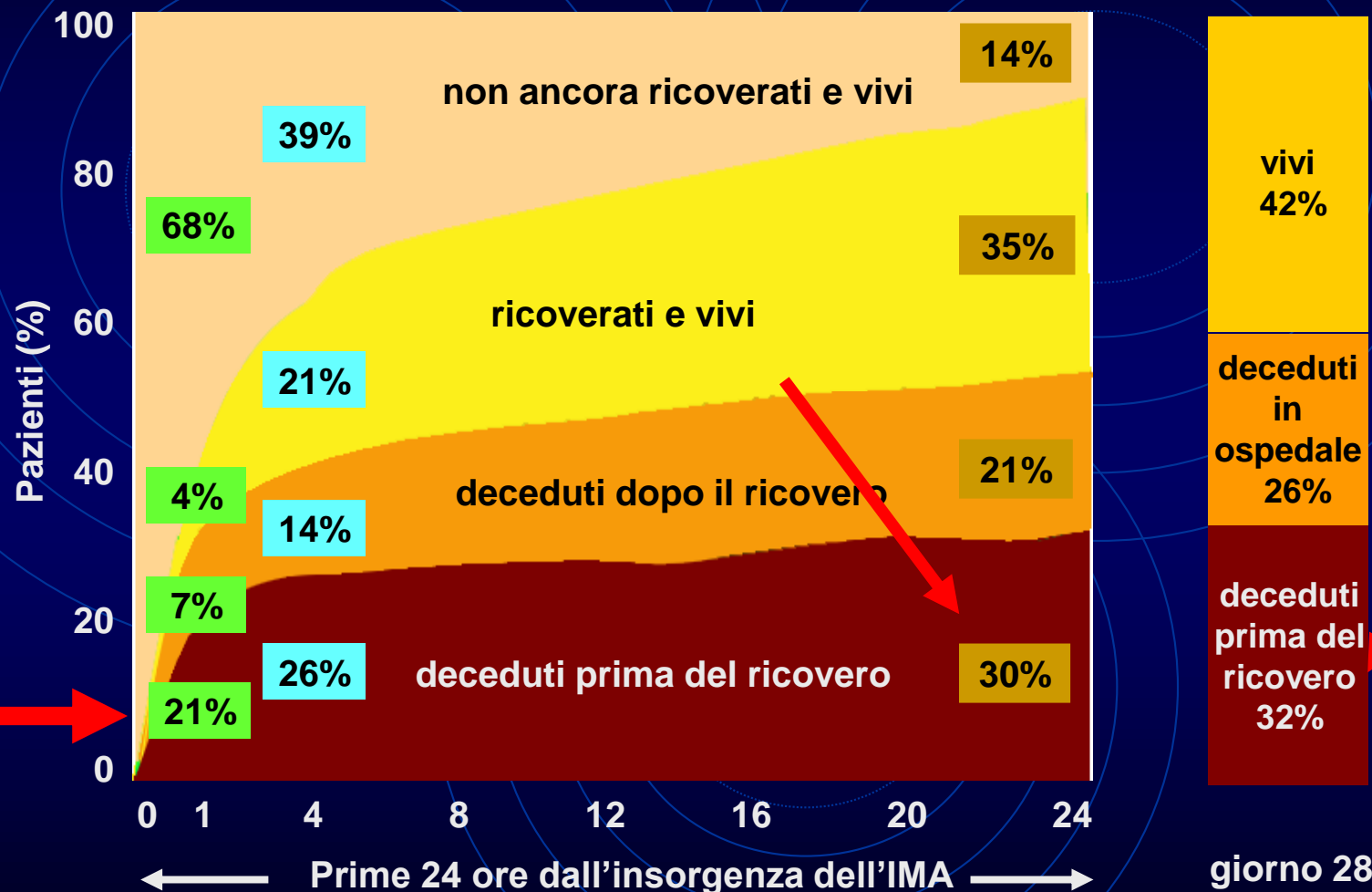


Epidemiologia dell'infarto miocardico acuto in Italia

Casi totali di IMA	120.000
Decessi prima del ricovero	30.000
Ricoveri totali per IMA	90.000
Ricoveri in UTIC	55.000
IMA ST sopra	65%
IMA non ST sopra	30%
Sottoposti a trombolisi	50%
Sottoposti a PTCA primaria	15%
Sottoposti a PTCA rescue	10%
Nessuna terapia ripercussiva	35%
Mortalità intraospedaliera IMA ST sopra	7.5%
Mortalità intraospedaliera IMA non ST sopra	5.2%
Mortalità a 30 giorni IMA ST sopra	9.5%
Mortalità a 30 giorni IMA non ST sopra	7.1%
Ricoveri in altri reparti	35.000

**BLITZ
2001**

Sopravvivenza nelle prime 24 ore dall'esordio dei sintomi di IMA



PROGETTO

- L'Azienda Sanitaria Numero 1 di Paola si pone come obiettivo prioritario quello di aumentare il numero di pazienti affetti da Infarto Miocardico Acuto che arrivino vivi in ospedale, attraverso una appropriata gestione nelle prime fasi (dall'intervento dei sistemi di emergenza all'arrivo nelle Unità di Terapia Intensiva Coronarica).

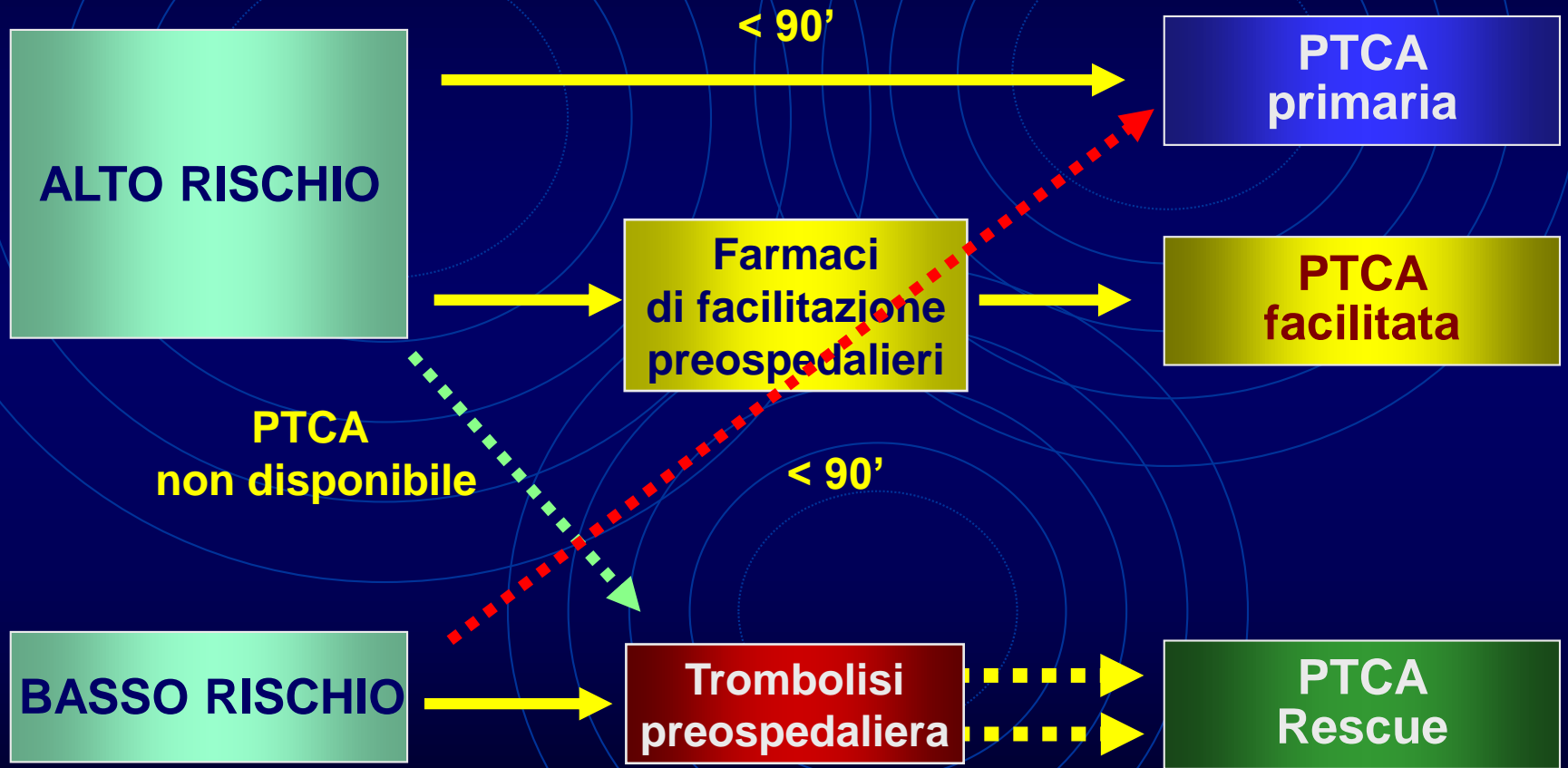
Coinvolgimento

- **Cardiologie ed UTIC**
- **PS**
- **118**
- **Associazioni di Volontariato (Progetto PAD)**
- **Successivo coinvolgimento MMG**

Formazione: tre eventi

- 1. Corso di formazione urgenze ed emergenze cardiologiche per Infermiere (P.S. 118, U.T.I.C. e Reparti Cardiologia)
- 2. Corso di formazione urgenze ed emergenze cardiologiche per Medico (P.S. 118, U.T.I.C. e Reparti Cardiologia)
- 3. Corso di formazione urgenze ed emergenze cardiologiche per Medico ed Infermiere Rianimazione cardiopolmonare e defibrillazione (P.S. 118, U.T.I.C. e Reparti Cardiologia)

Flow chart della terapia per IMA



Criteri di scelta della strategia riperfusiva

La **PTCA** è generalmente da preferire se:

Disponibilità di centro esperto / Tempi brevi

- Esperienza operatore > 75 interventi/anno
- Esperienza team > 36 PTCA primarie/anno
- Door-to-balloon < 90 minuti

IMA ad alto rischio

- Shock cardiogeno
- Classe Killip > 2
- Età > 75 anni

Rischio emorragico elevato

- Pregresso stroke/TIA

Presentazione tardiva

- > 2-3 ore dall'insorgenza dei sintomi

Dubbio diagnostico

La **trombolisi** è generalmente da preferire se:

La strategia invasiva non è un'opzione

- Emodinamica occupata o non disponibile
- Difficoltà accesso vascolare
- Inaccessibilità a un centro esperto

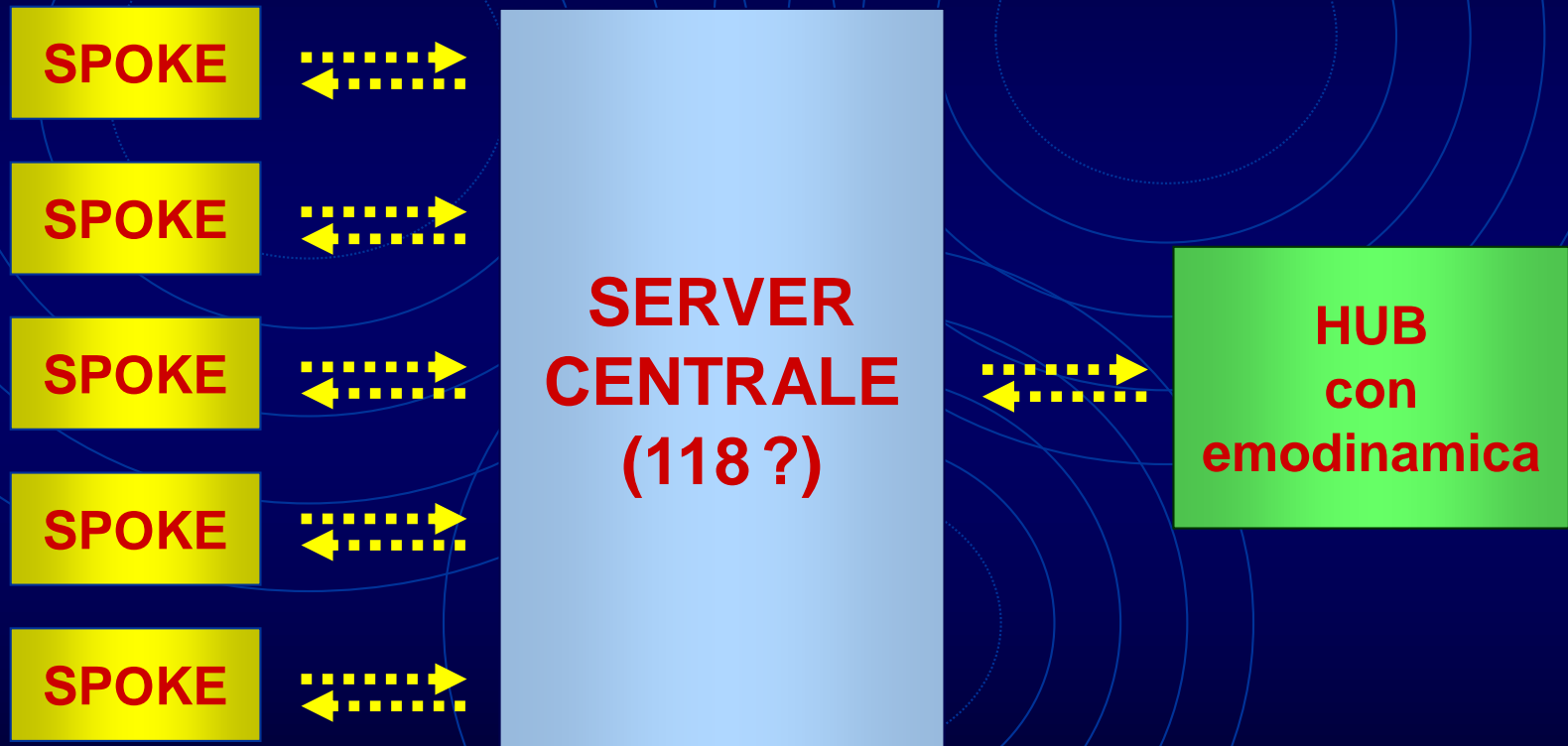
La PTCA non è realizzabile in tempi adeguati

- Lunghi tempi di trasferimento
- Door-to-balloon > 90 minuti
- Ritardo > 1 ora vs. trombolisi

Presentazione molto precoce + tempi lunghi per la PTCA

- < 1-2 ore dall'insorgenza dei sintomi

Sistema Hub & Spoke



Sistema Hub & Spoke

