



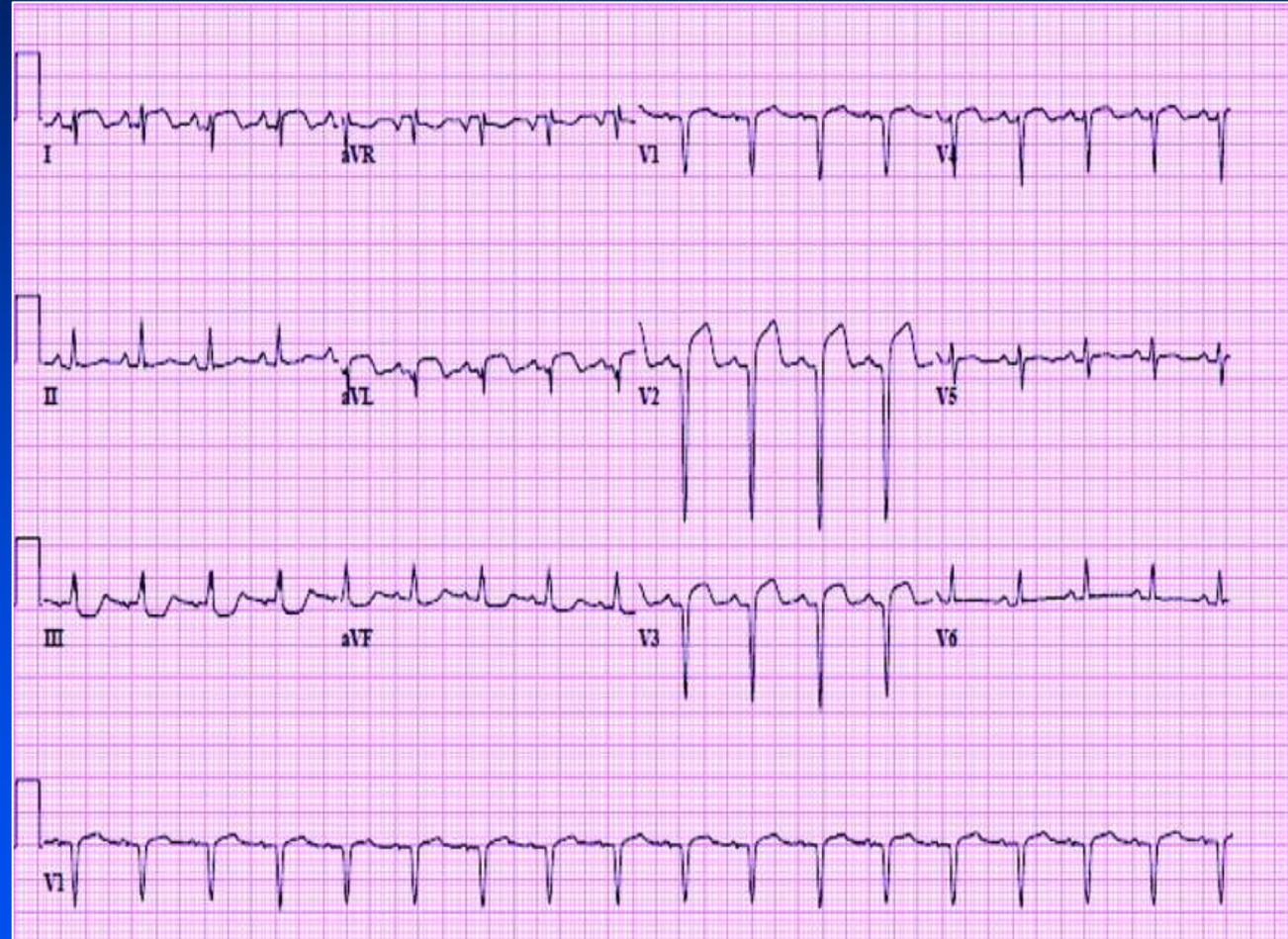
***REVASCULARIZACIÓN en IAM:***

***Vaso Culpable vs Angioplastía Multivaso***

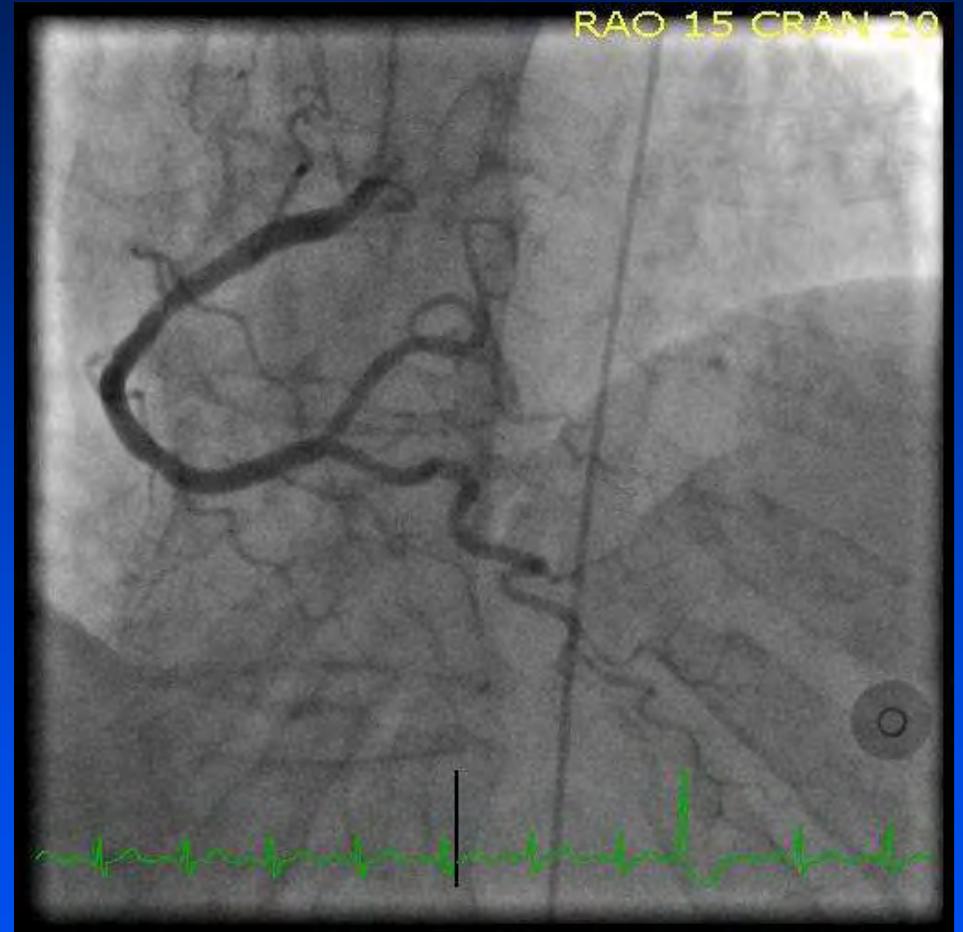
**Conrad Simpendorfer MD, FACC  
Heart & Vascular Institute  
Cleveland Clinic**

# Caso Clínico

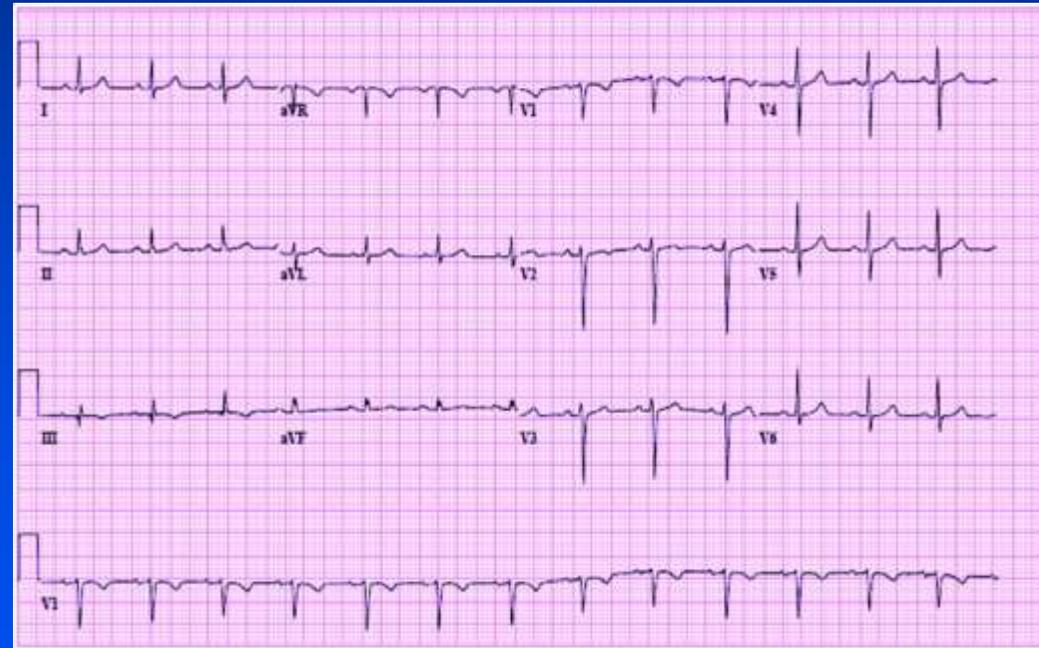
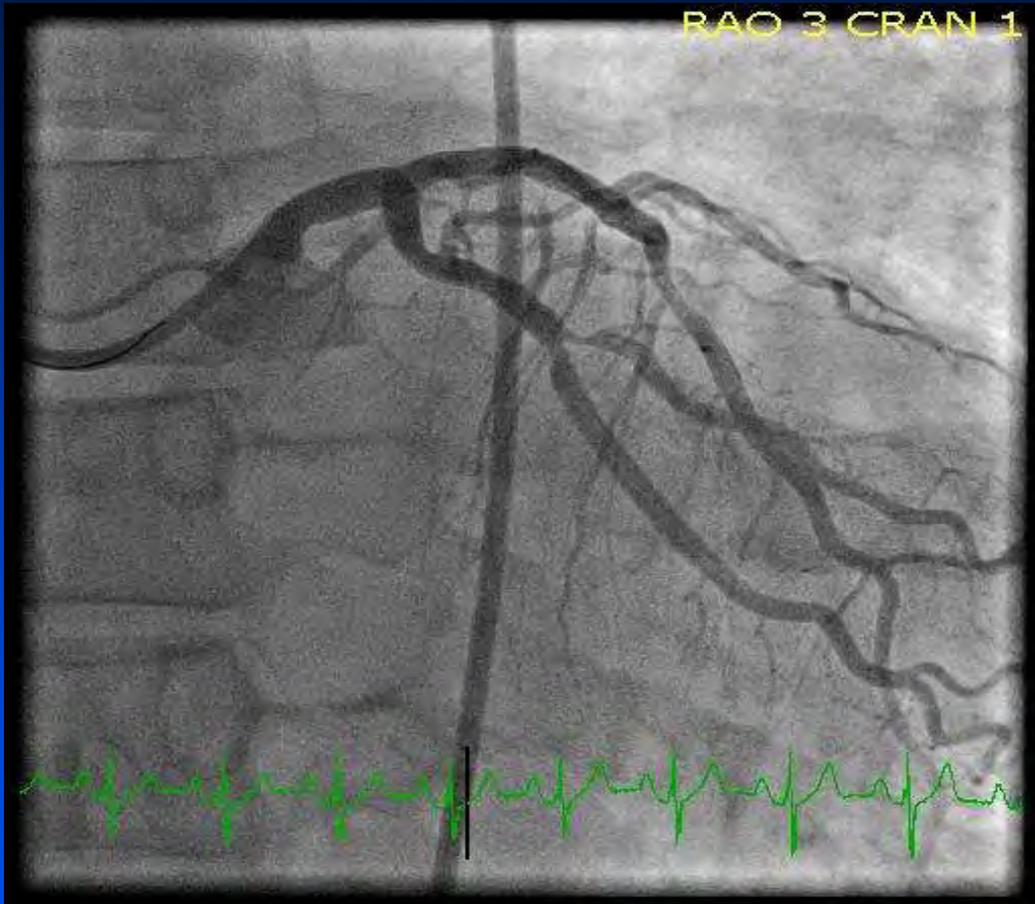
- 62 años
- HTA
- 2 horas dolor precordial
- PA: 92/58



# Angiografía Coronaria

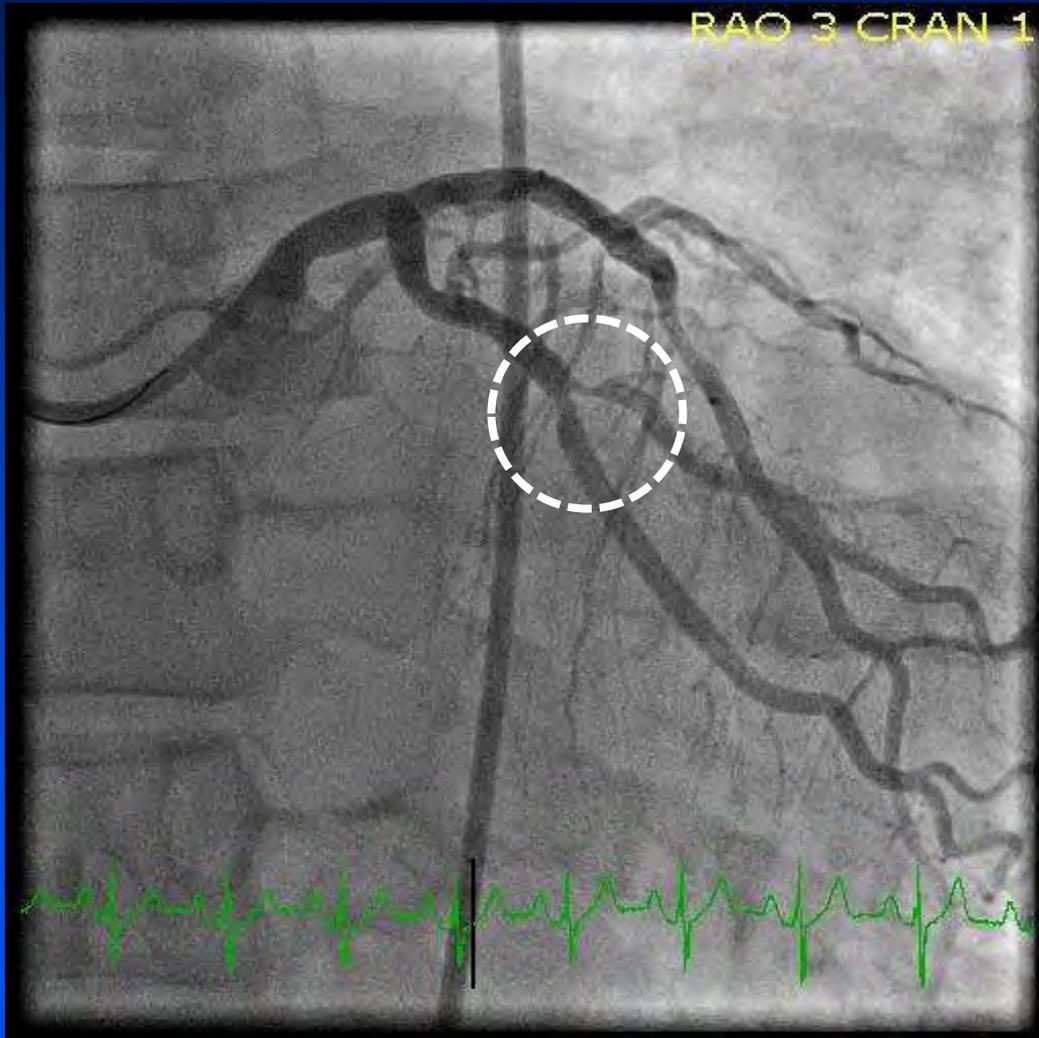


# Post Angioplastia Primaria



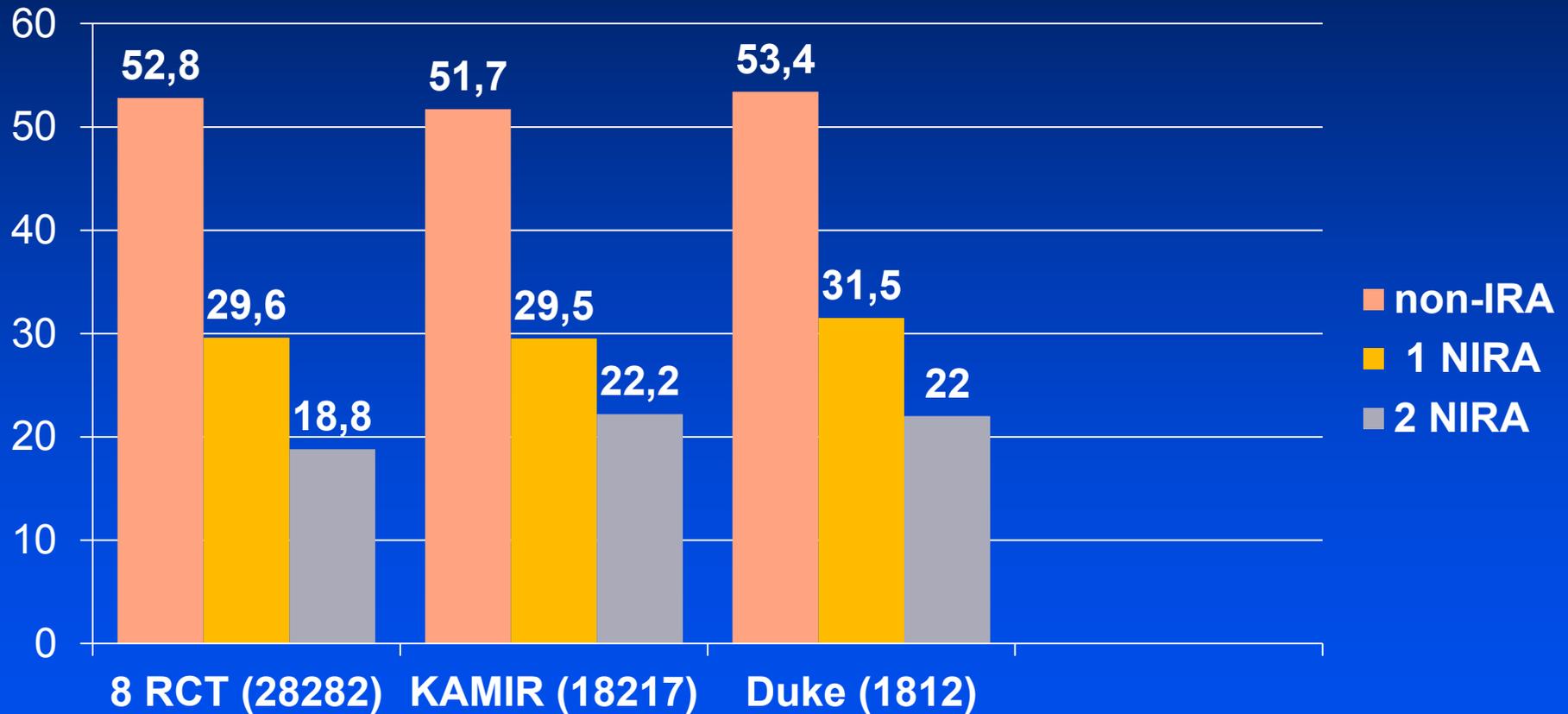
# Cuando intervenir en la Circunfleja?

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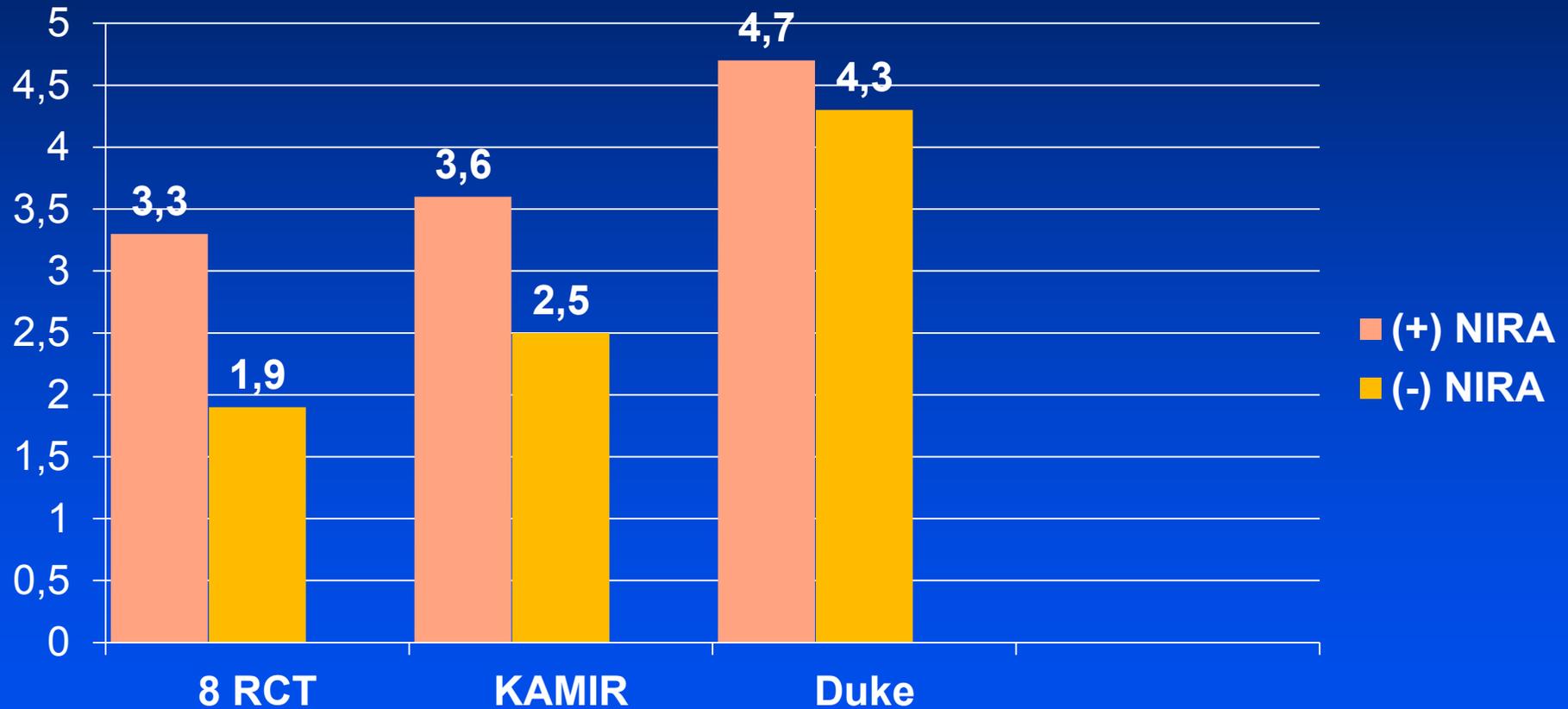


- Inmediato
- Durante esta hospitalización
- Postergar 6-8 semanas
- Solo si hay isquemia

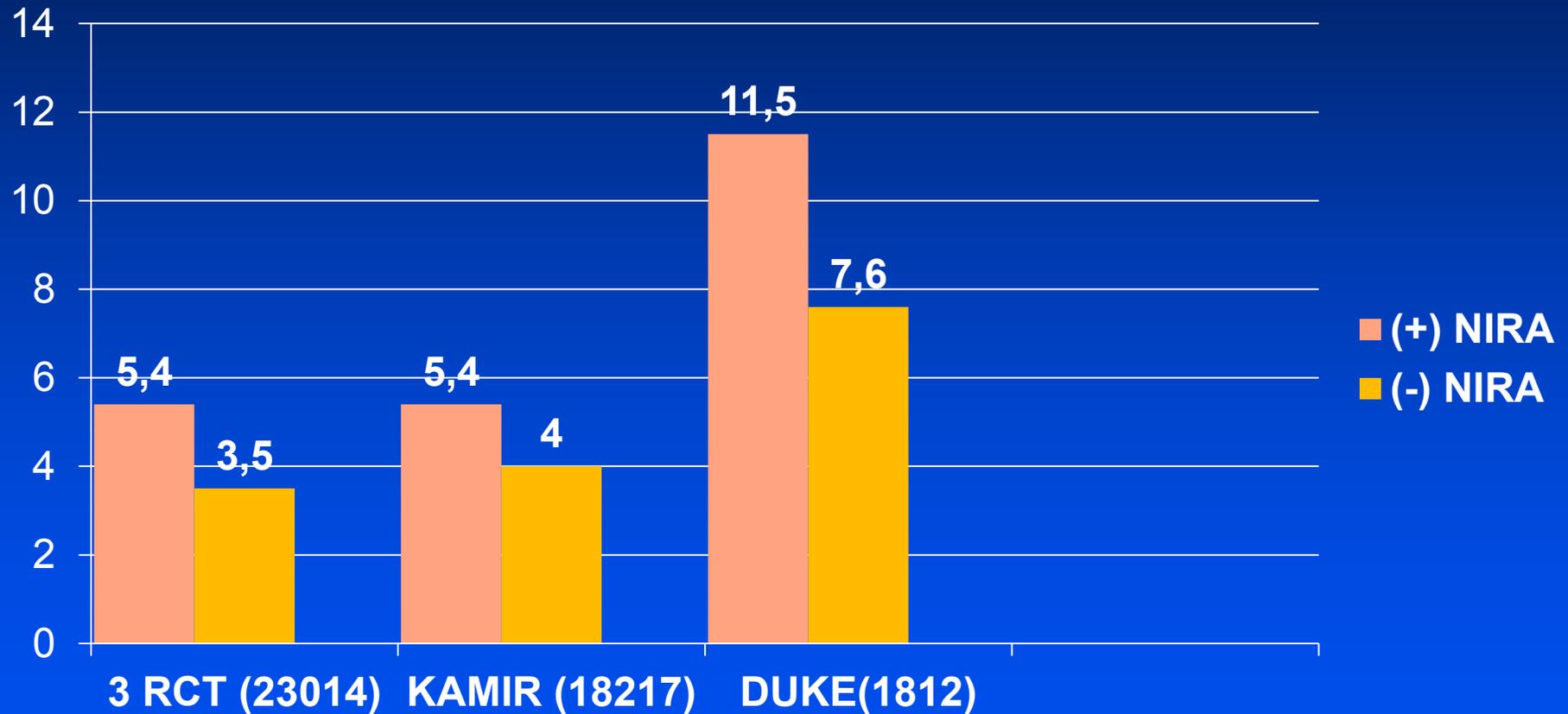
# STEMI: Extent of non-IRA disease



# 30-day adjusted Mortality



# 1-year Adjusted Mortality



- 
- ❑ > 50% de pacientes con IAM tienen lesiones importantes en otros vasos**
  - ❑ Estas lesiones influyen en el pronóstico a corto y largo plazo**

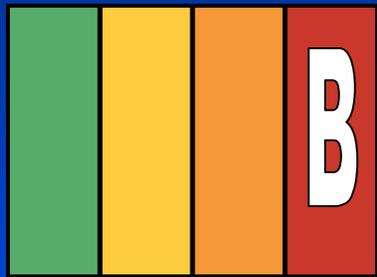
**Intervenir?**

**Cuando?**

# 2013 ACCF/AHA Guidelines for STEMI

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I IIa IIb III



**PCI should not be performed** in a noninfarct artery at the time of primary PCI in patients with STEMI who are hemodynamically stable

# ESC 2014 Revascularization Guidelines

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**II a B**

PPCI should be **limited to the culprit vessel**. Exceptions: Cardiogenic Shock and persistent ischemia

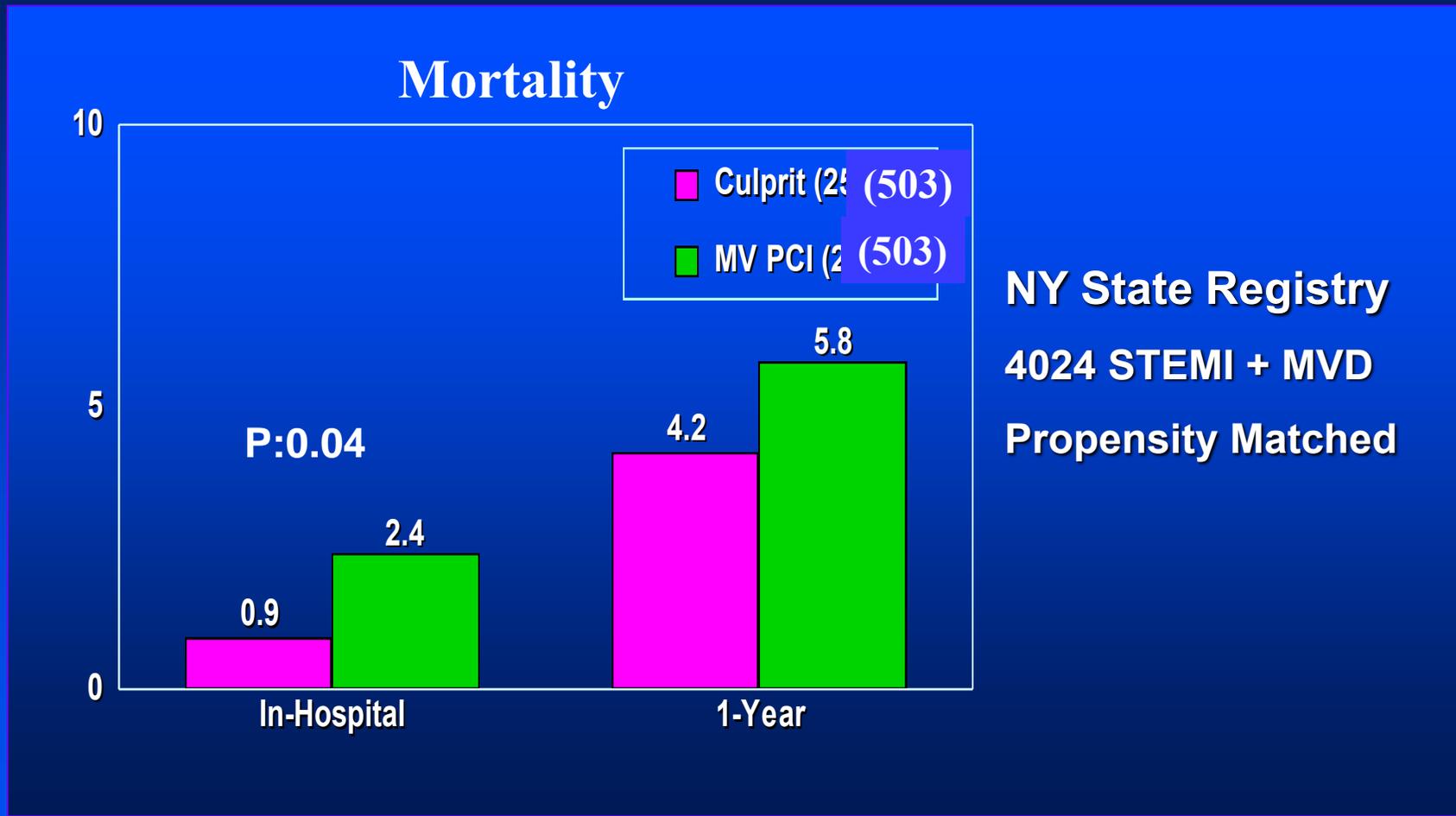
**Staged PCI of non-culprit lesions** within days to weeks, in case of symptoms or Ischemia.

**II b B**

Immediate revascularization of non-culprit lesions may be considered in selected patients

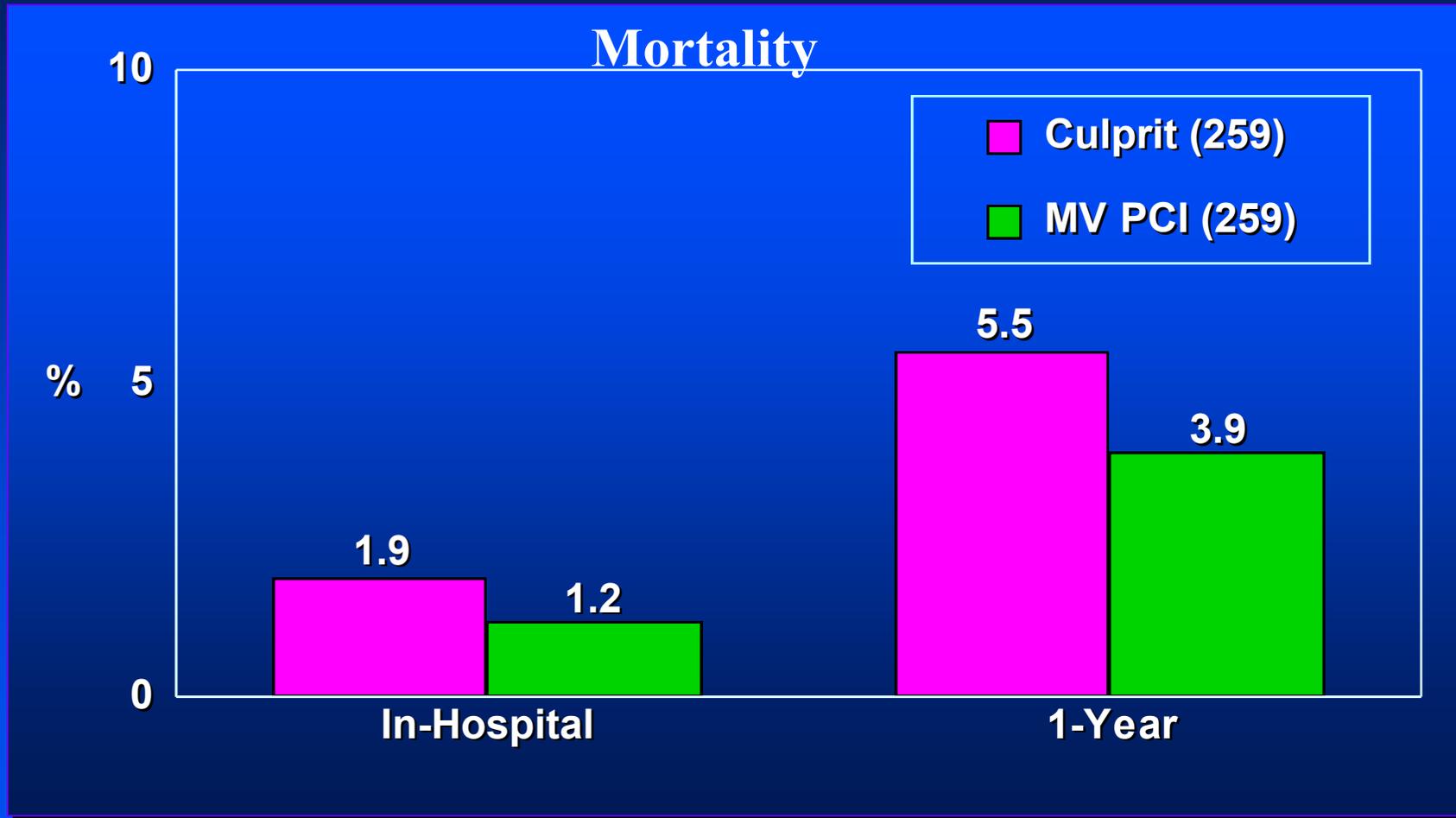
# STEMI: Culprit vs Multivessel PCI

(At Primary PCI)



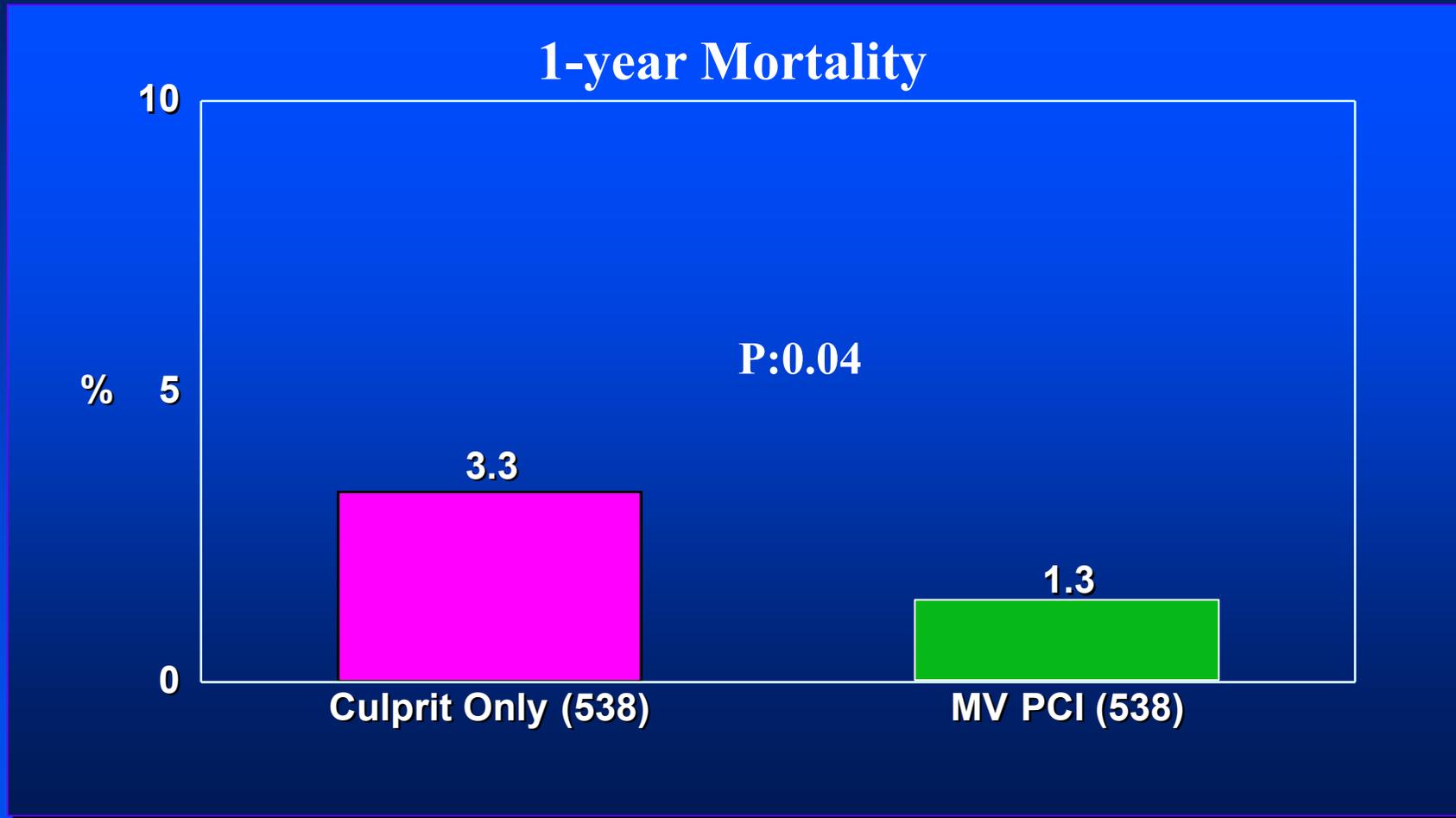
# STEMI: Culprit vs Multivessel PCI

(Staged Same Hospitalization)



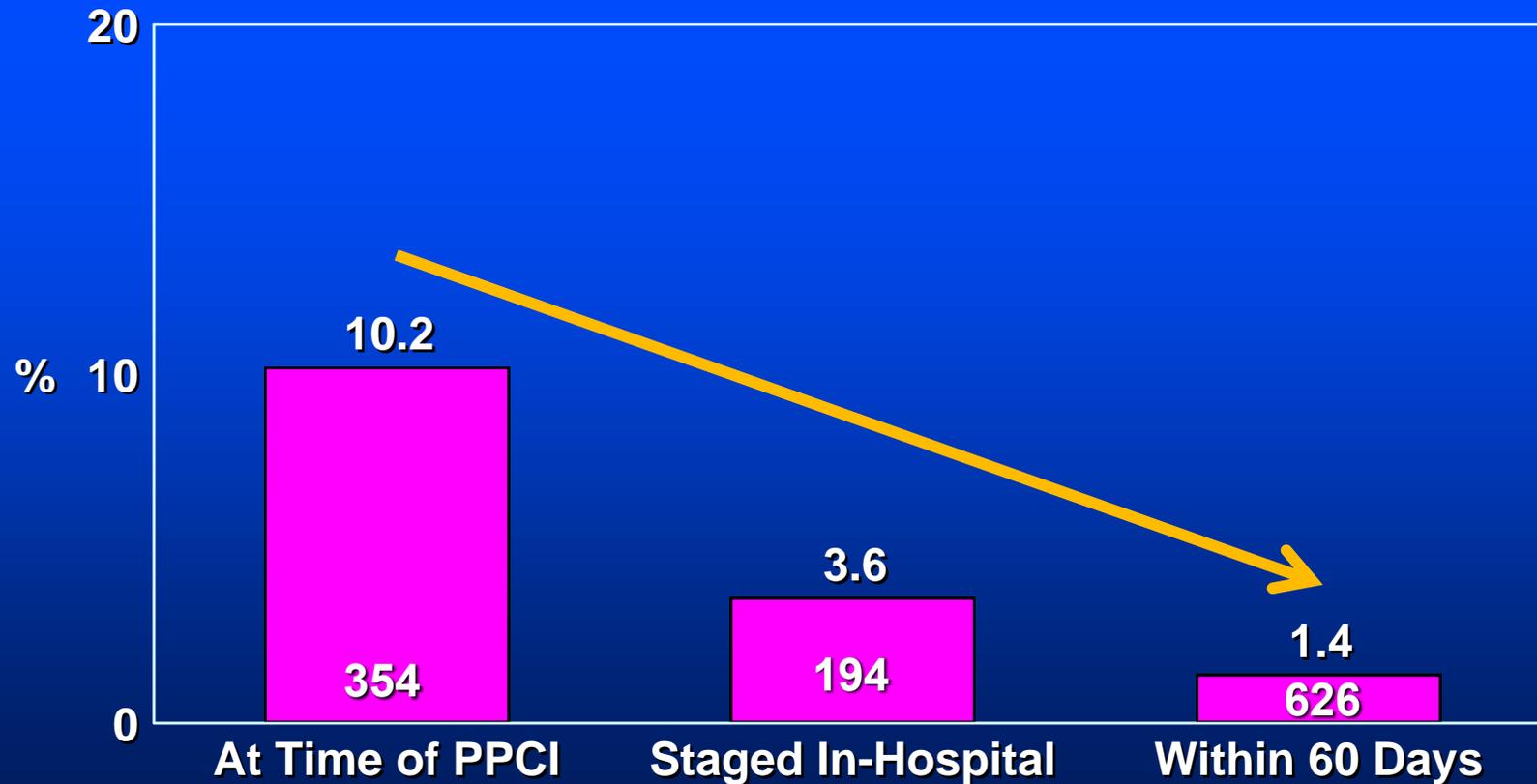
# STEMI: Culprit vs Multivessel PCI

(Staged within 6 Weeks)



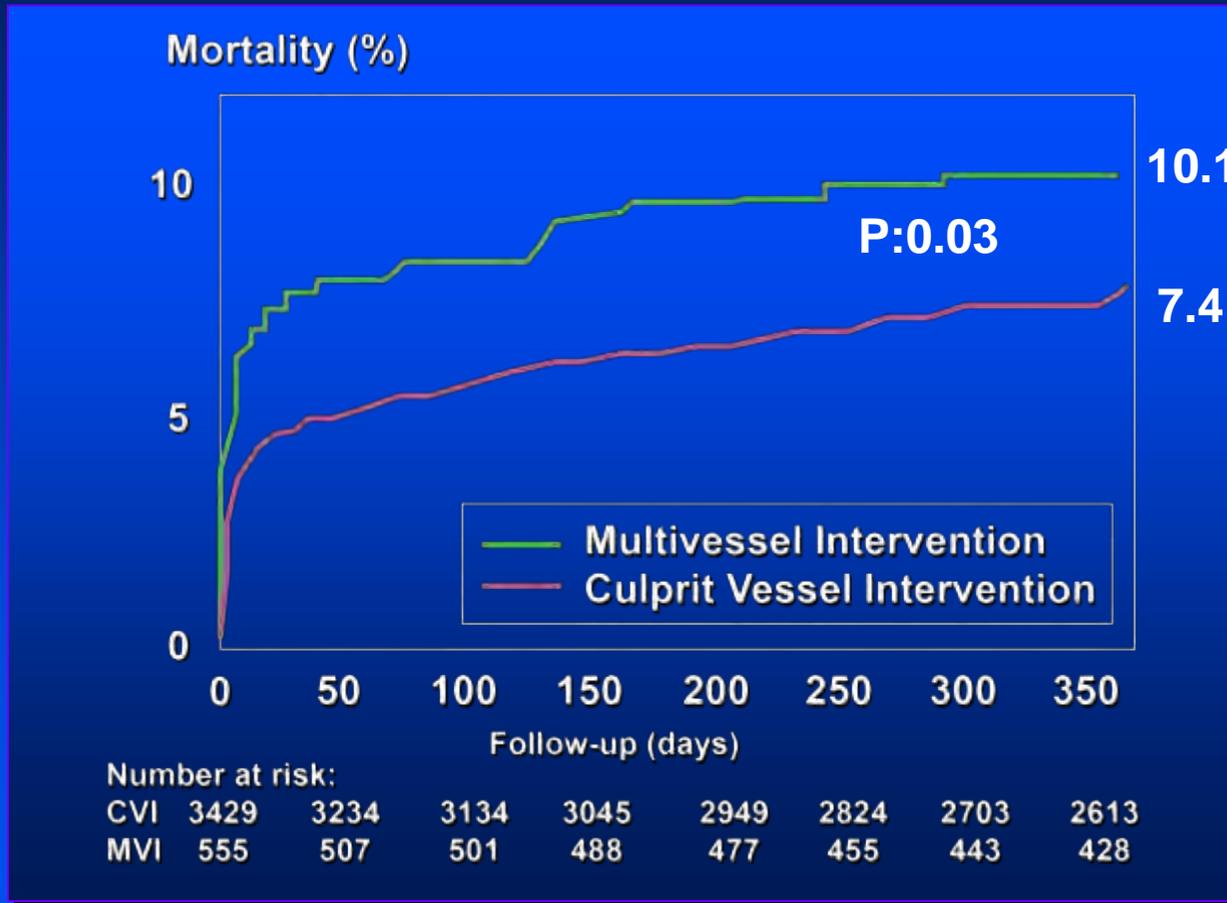
# Western Denmark Registry: STEMI Multivessel PPCI

## 12-Months Mortality



# STEMI: Culprit vs Multivessel PCI

## 1-Year Mortality



3984 Pts

STEMI-MVD

8 Centers – London

2005-2011

# PRAMI

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## Randomized Trial of Preventive Angioplasty in Myocardial Infarction

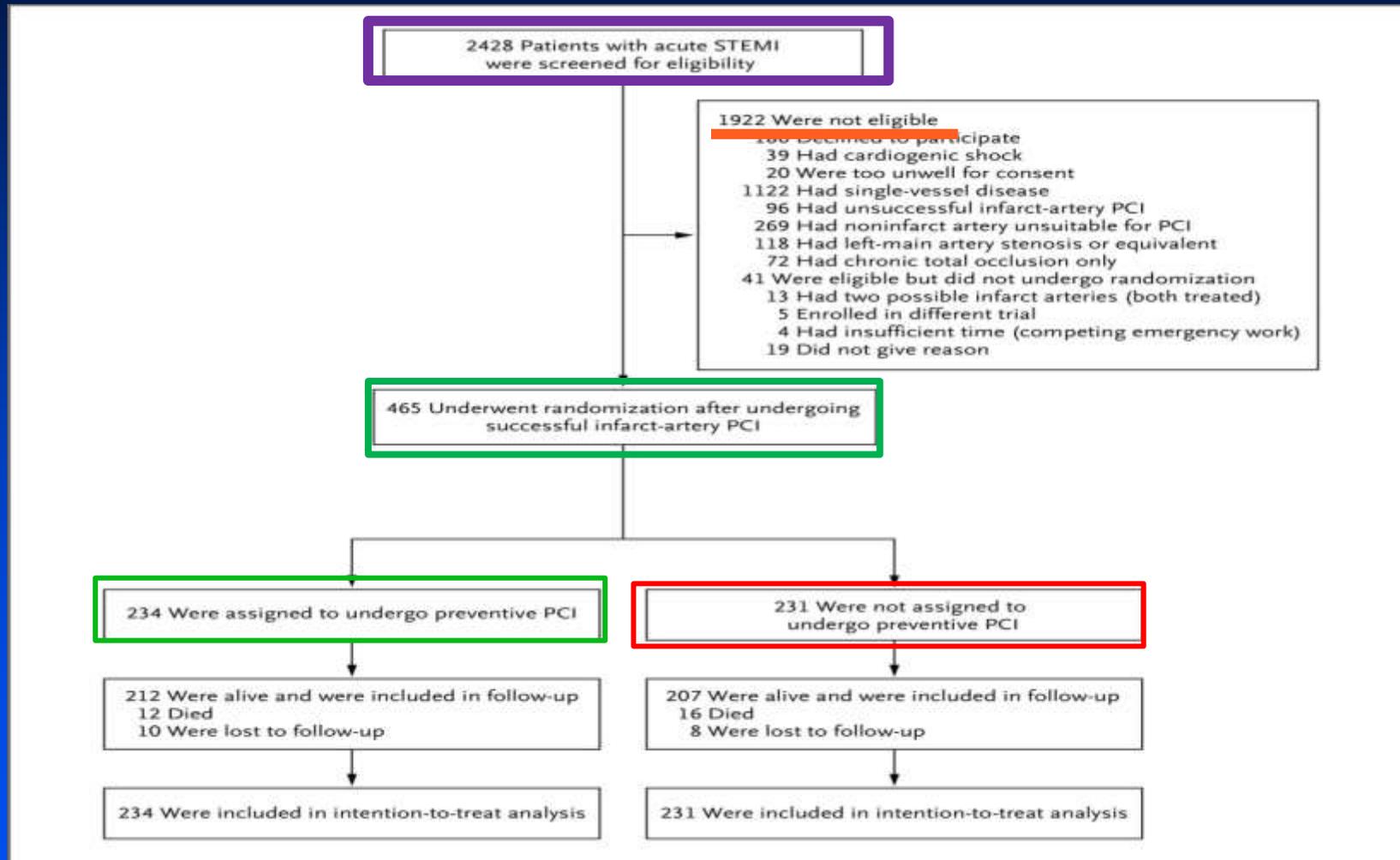
David S. Wald, M.D., Joan K. Morris, Ph.D., Nicholas J. Wald, F.R.S., Alexander J. Chase, M.B., B.S., Ph.D., Richard J. Edwards, M.D., Liam O. Hughes, M.D., Colin Berry, M.B., Ch.B., Ph.D., Keith G. Oldroyd, M.D., for the PRAMI Investigators

N Engl J Med  
Volume 369(12):1115-1123  
September 19, 2013



The NEW ENGLAND  
JOURNAL of MEDICINE

# PRAMI : Enrollment and Follow-up.

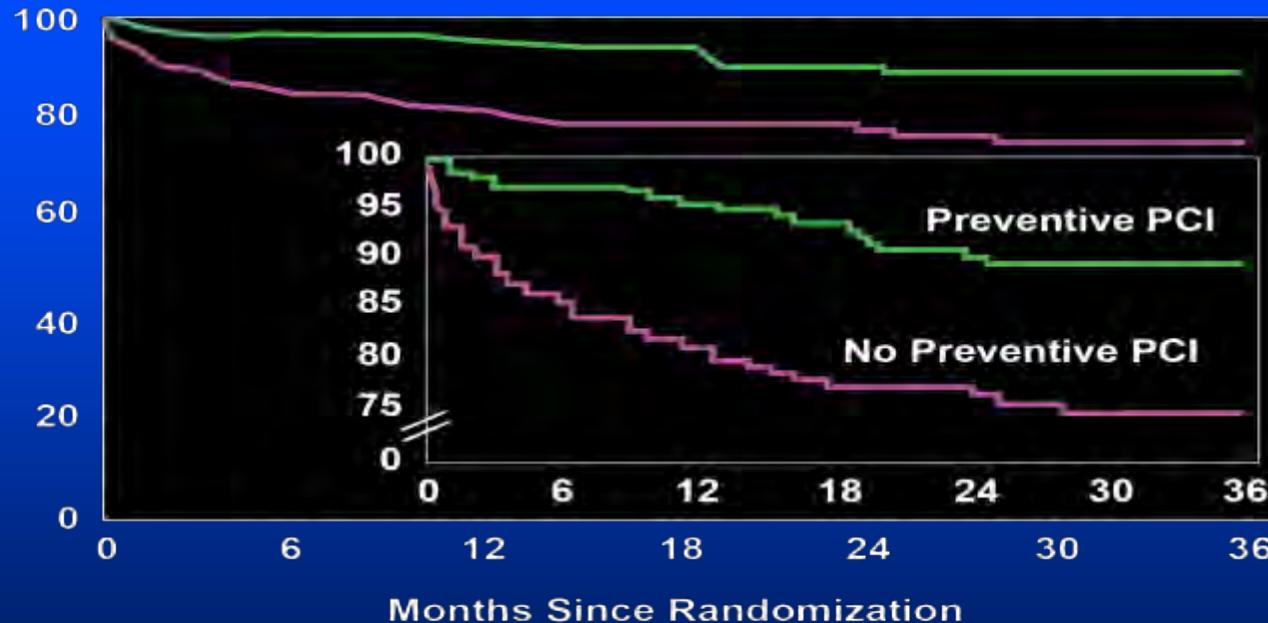


# PRAMI: Primary Outcome

## Cardiac Death, MI, Refractory Angina

Patients without Primary Outcome (%)

Hazard Ratio, 0.35 (95% CI, 0.21-0.58); P<0.001

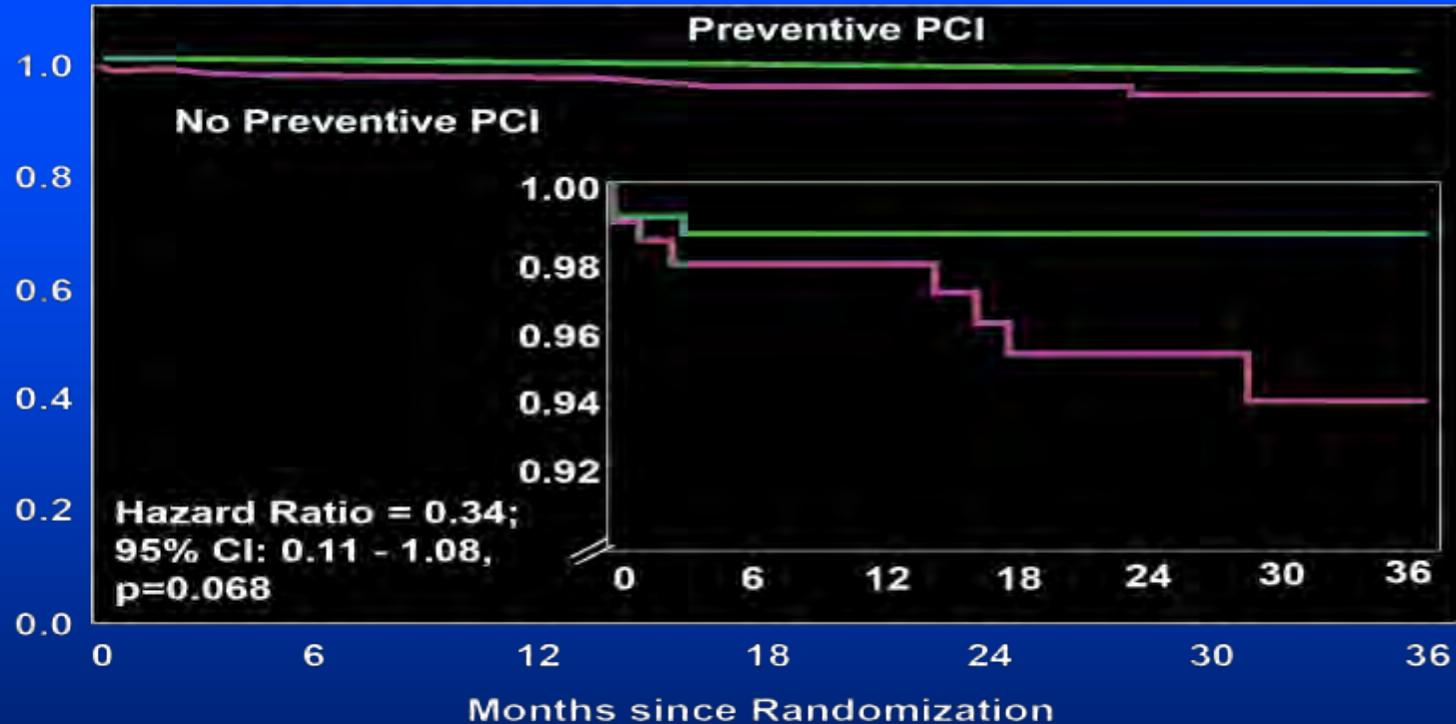


No. at Risk

Preventive PCI	234	196	166	146	118	89	67
No Preventive PCI	231	168	144	122	96	74	50

# PRAMI: Cardiac Deaths

Proportion without cardiac death

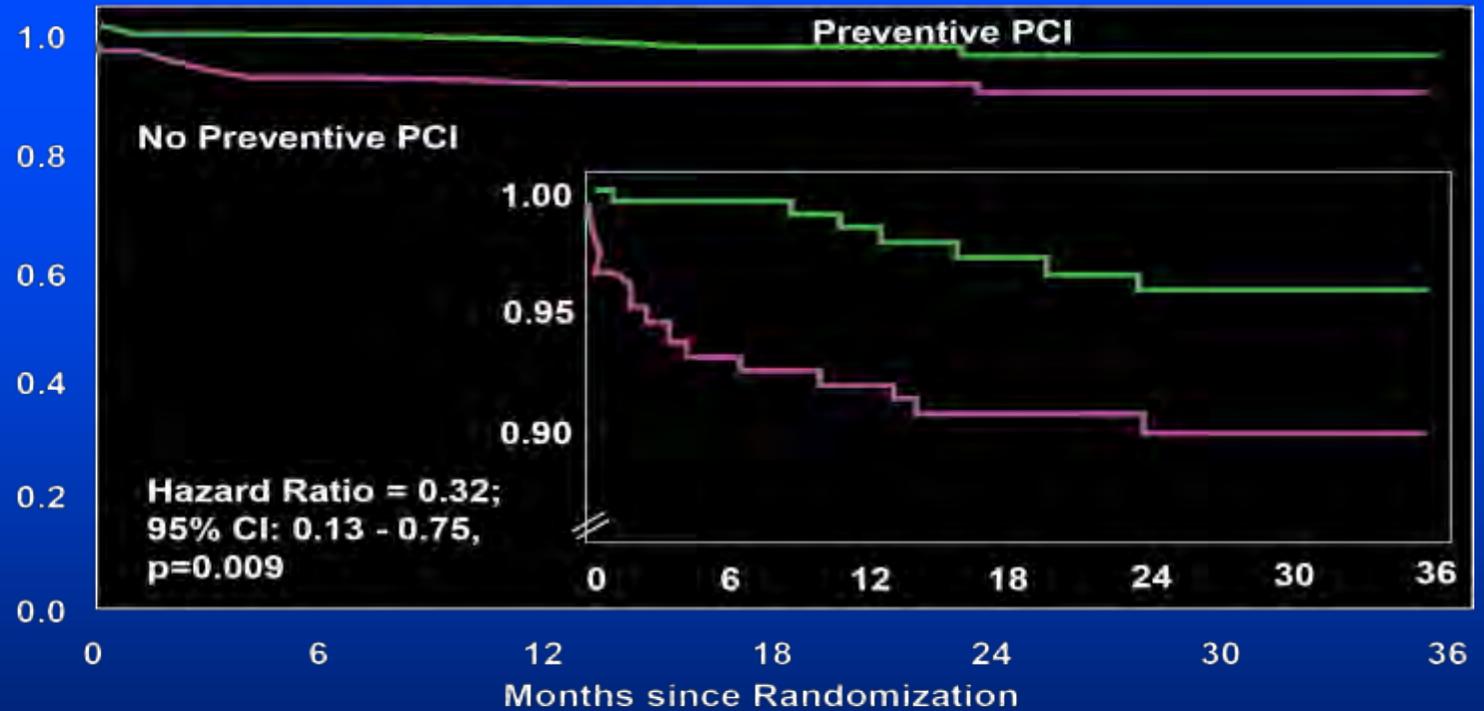


No. at Risk

Preventive PCI	234	196	166	146	118	89	67
No Preventive PCI	231	168	144	122	96	74	50

# PRAMI: Non-Fatal MI

Proportion without nonfatal myocardial infarction

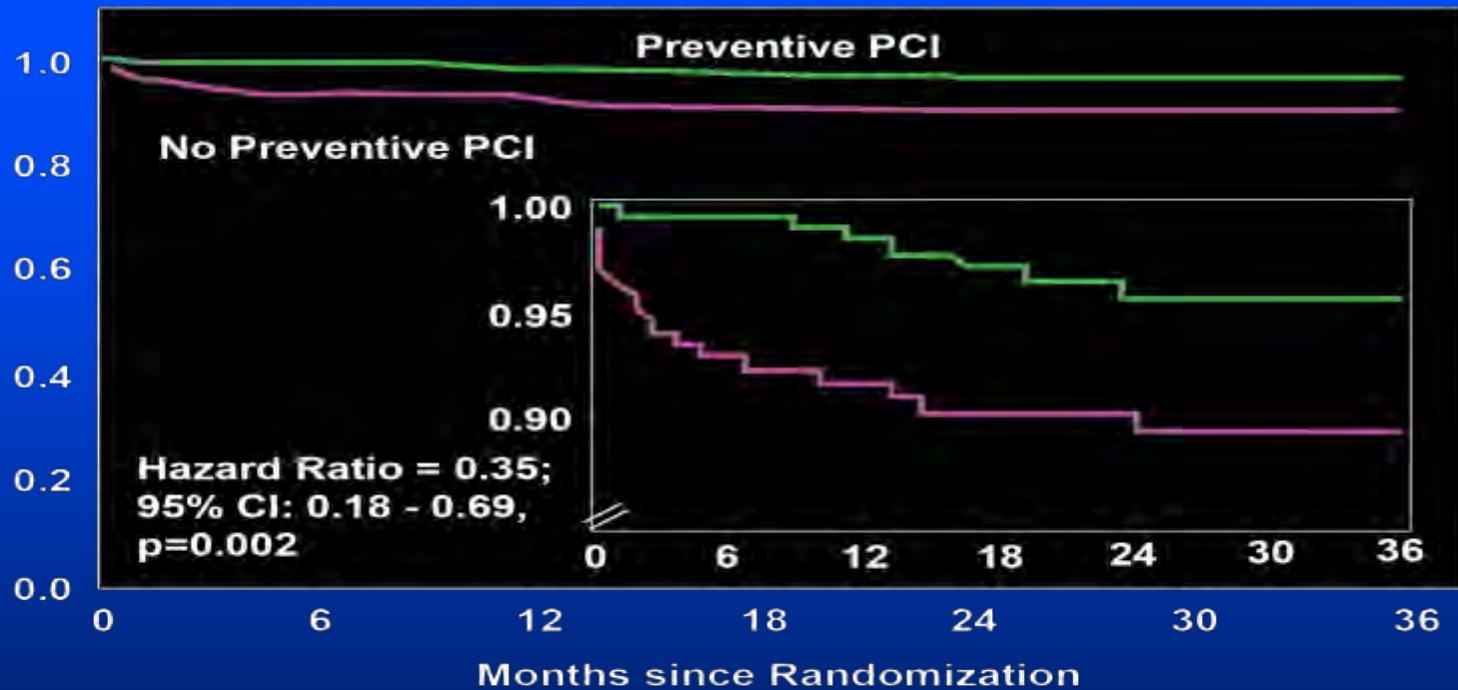


No. at Risk

Preventive PCI	234	196	166	146	118	89	67
No Preventive PCI	231	168	144	122	96	74	50

# PRAMI: Refractory Angina

Proportion without refractory angina

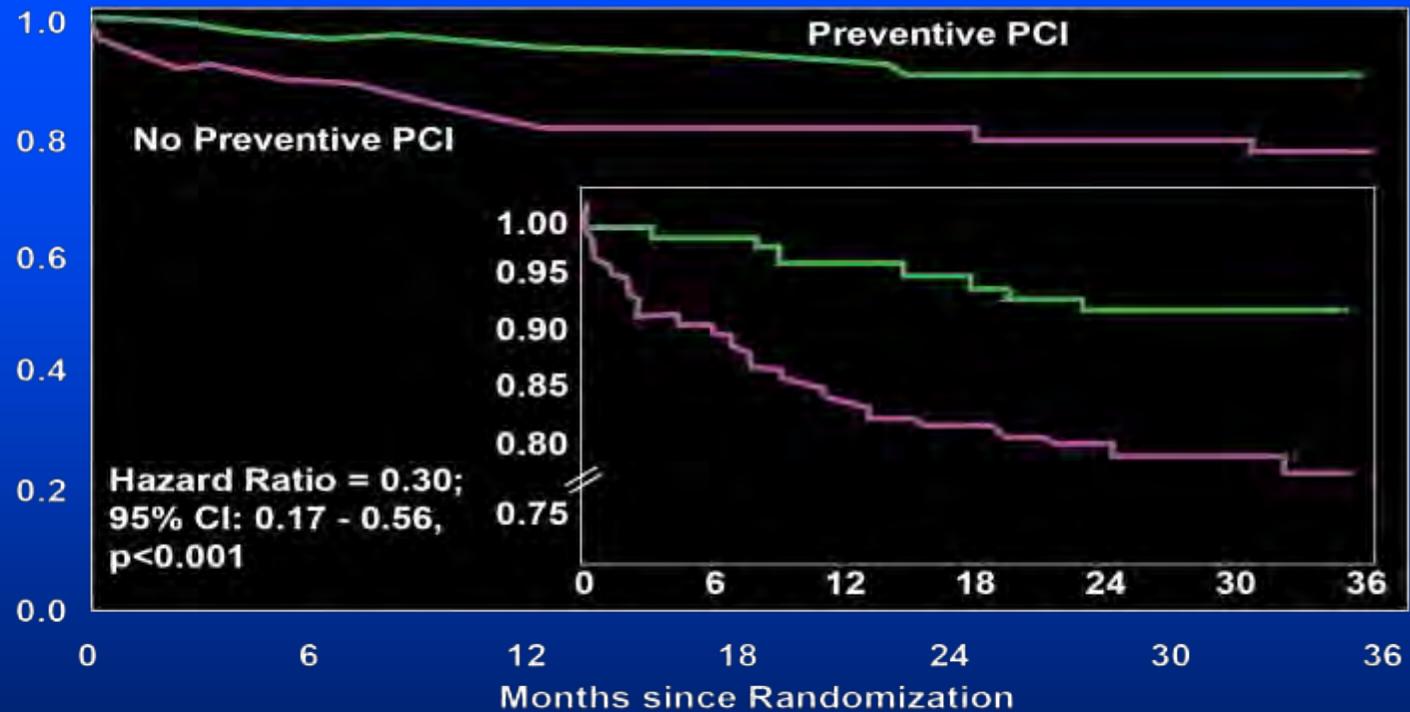


No. at Risk

Preventive PCI	234	196	166	146	118	89	67
No Preventive PCI	231	168	144	122	96	74	50

# PRAMI: Repeat Revascularization

Proportion without Revascularization



No. at Risk

Preventive PCI	226	168	139	119	93	72	49
No Preventive PCI	232	192	159	141	114	85	63

# Problemas con PRAMI

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**2428 STEMI**  
**5 centros**  
**5 años**

**% de PCI  
diferidas?**



**1922 no califican**



**465 randomizados**

**19%**

# CVLPRIT

STEMI <12 Hours

Angios

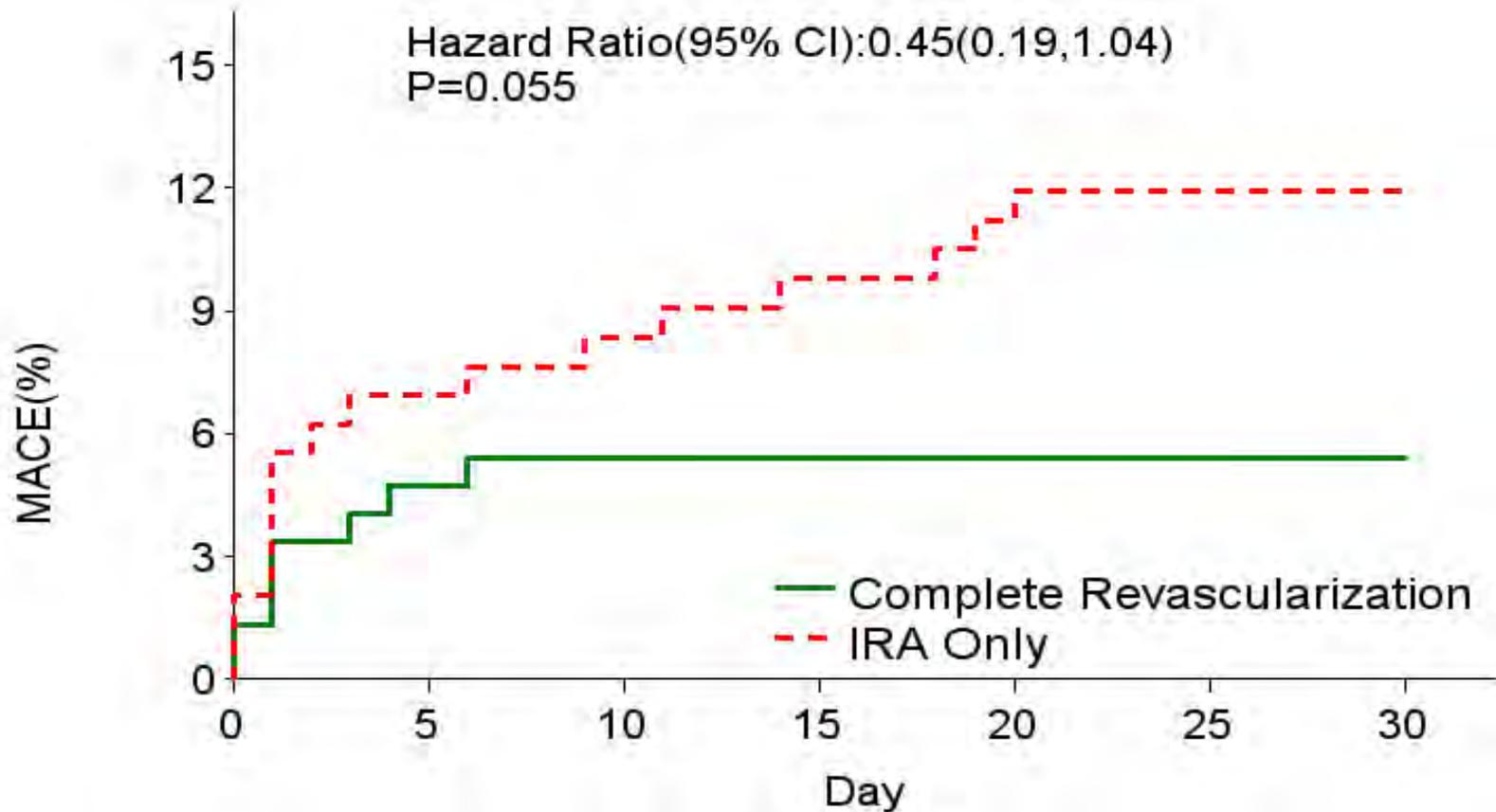
MVD  
≥1 N-IRA  
>2 mm Suitable x Stenting  
>70% Single View  
>50%: 2 Views

IRA Only  
N=146

COMPLETE REVASC  
N:150

1<sup>ary</sup> EP: 1-Year Mortality /Re-MI /CHF / Isch revasc

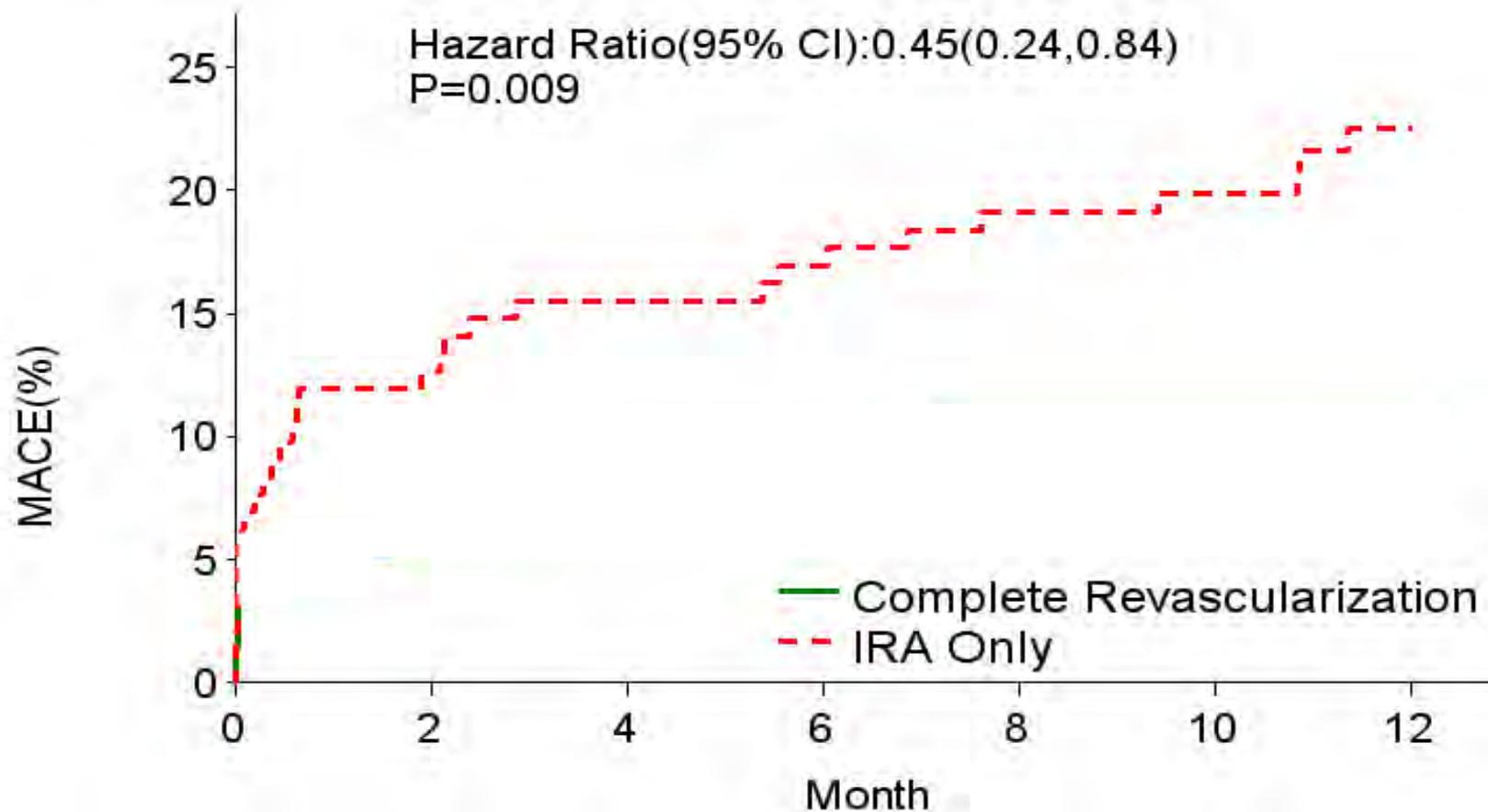
# MACE to CVLPRIT: MACE at 30 days



Number at risk:

Complete:150	136	133	133	133	133	133
IRA Only:146	131	128	126	124	123	123

# CVLPRIT : MACE at 12 months

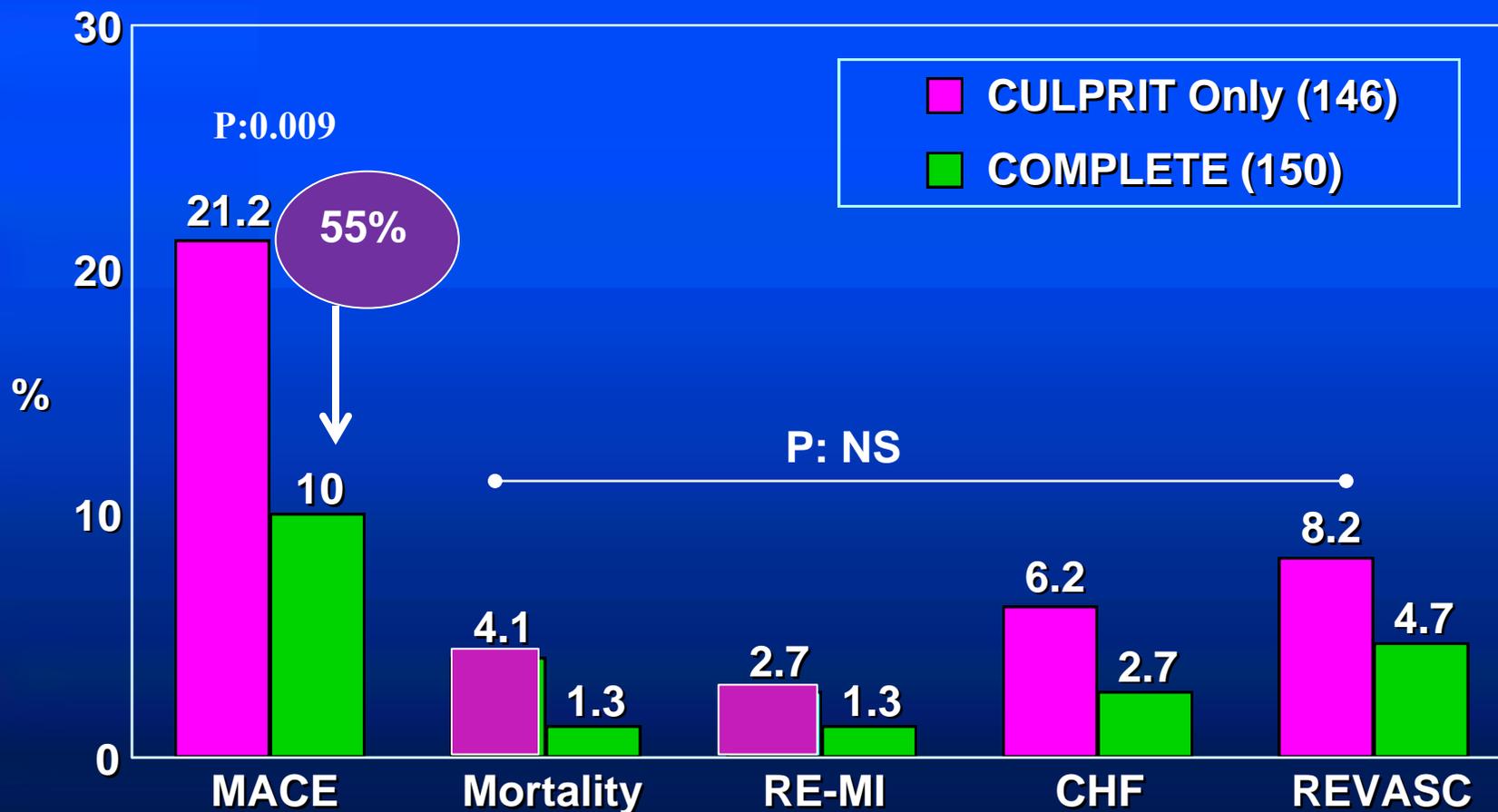


Number at risk:

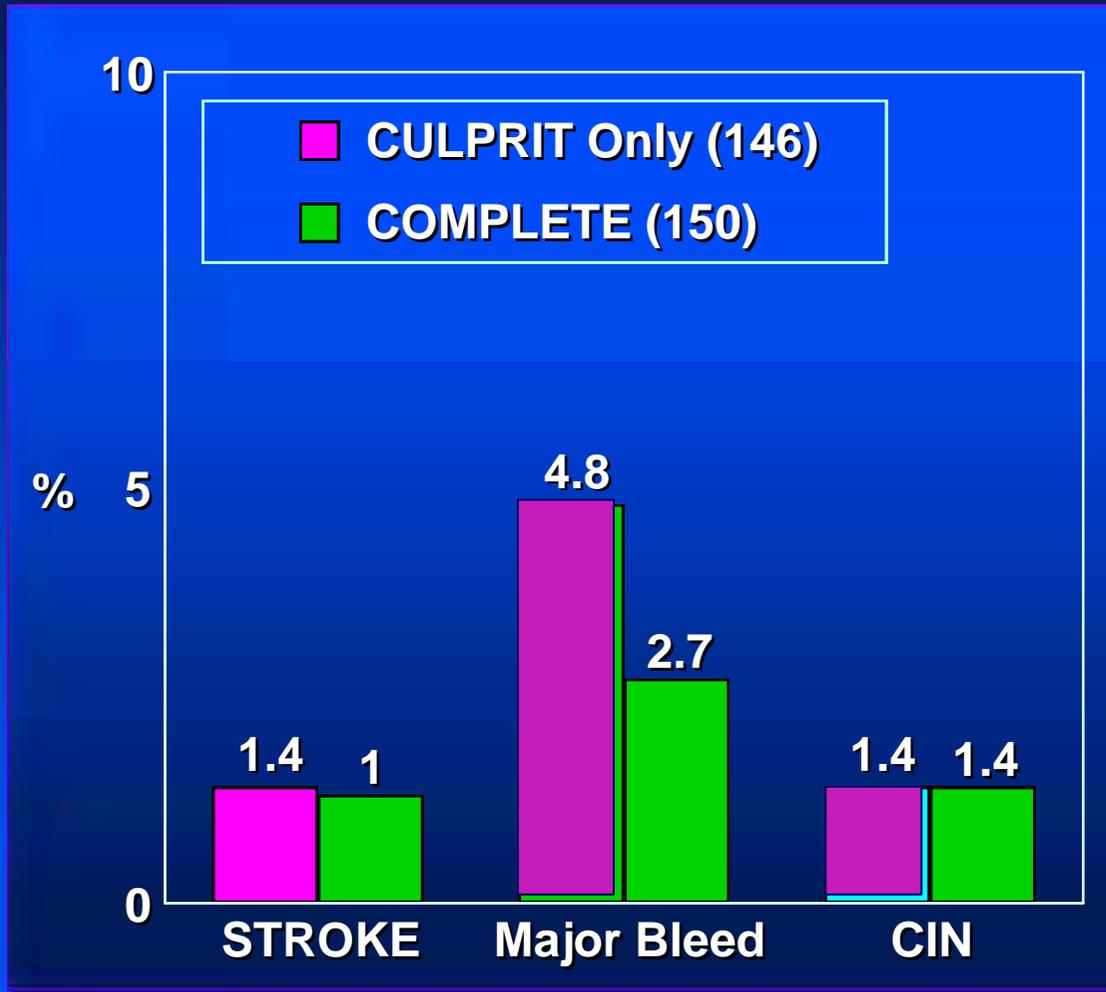
Complete:150	131	129	128	125	108	73
IRA Only:146	122	118	116	111	98	68

# CVLPRIT

## 1-Year Events



# CVLPRIT: Safety

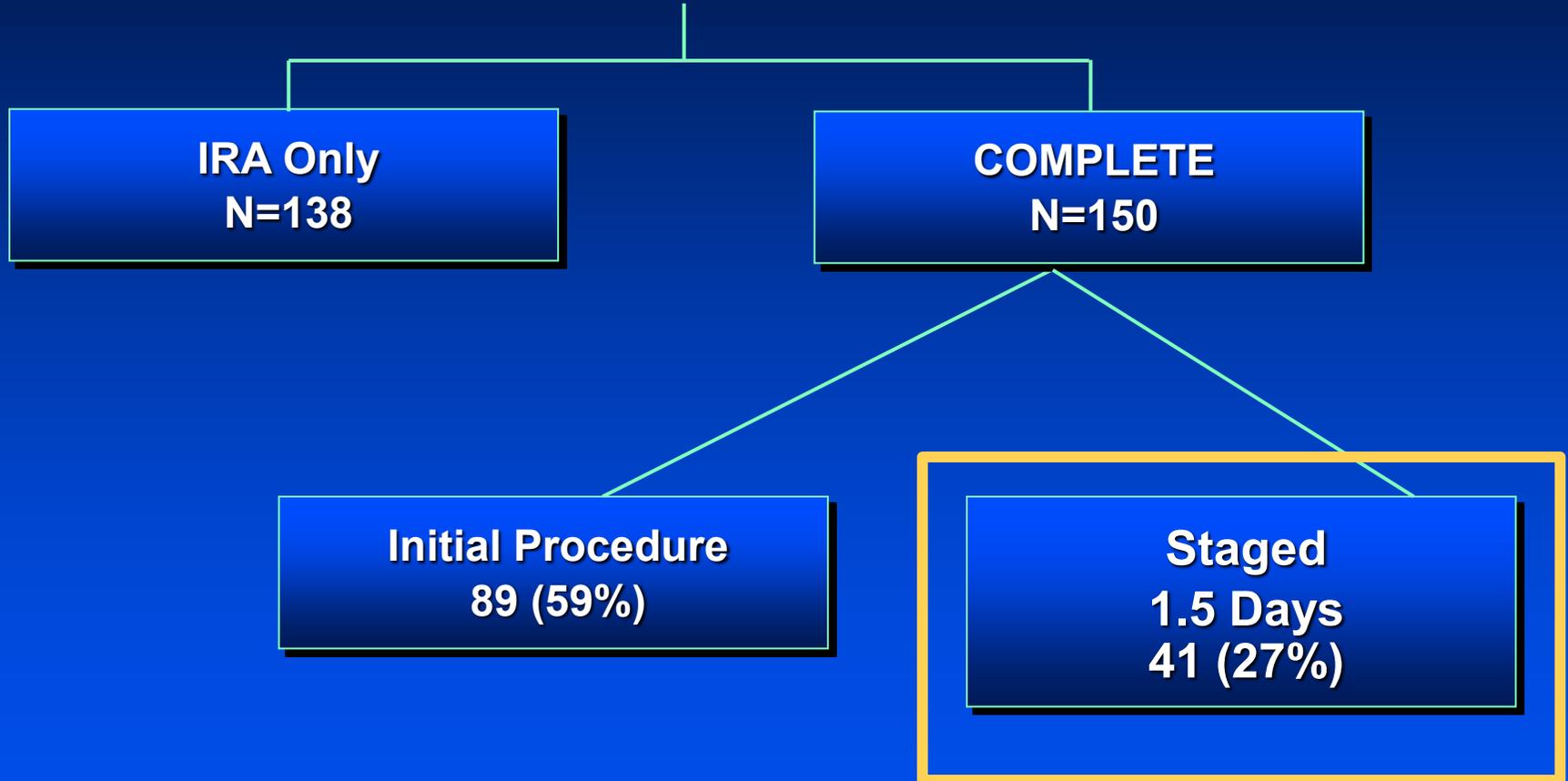


	Culprit	Complete
Proc Time (min)	41	55
Contrast (ml)	190	255

# CVLPRIT

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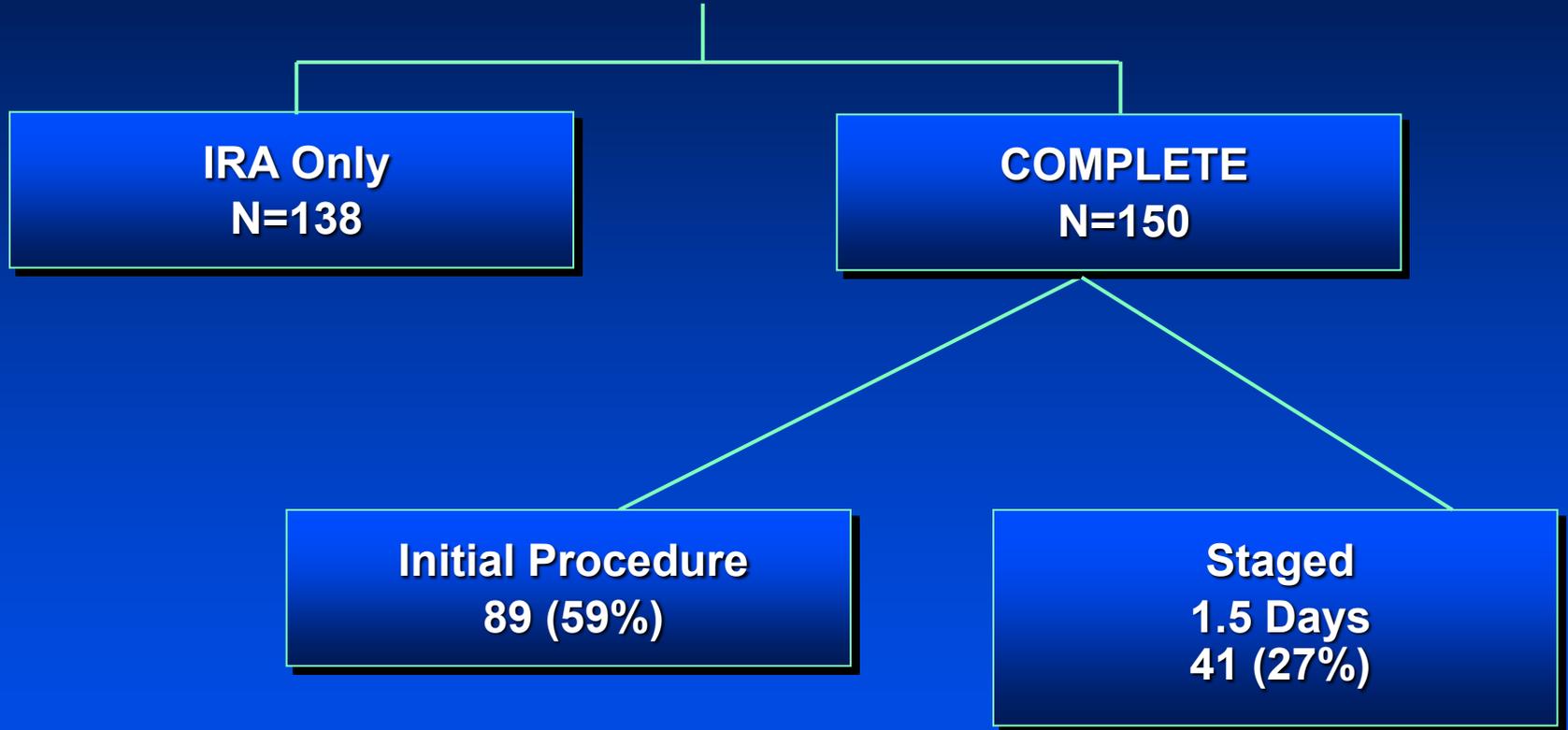
## STEMI



# CVLPRIT

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## STEMI



# CVLPRIT

## 1-Year MACE



# STEMI Multivessel Disease

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## After successful PPCI

### AGGRESSIVE

- PCI of NIRA during PPCI
- (+) Complete revascularization .No additional procedures.
- (-) Complications

### INTERMEDIATE

- Staged PCI of NIRA same hospitalization
- (+) Safer

### CONSERVATIVE

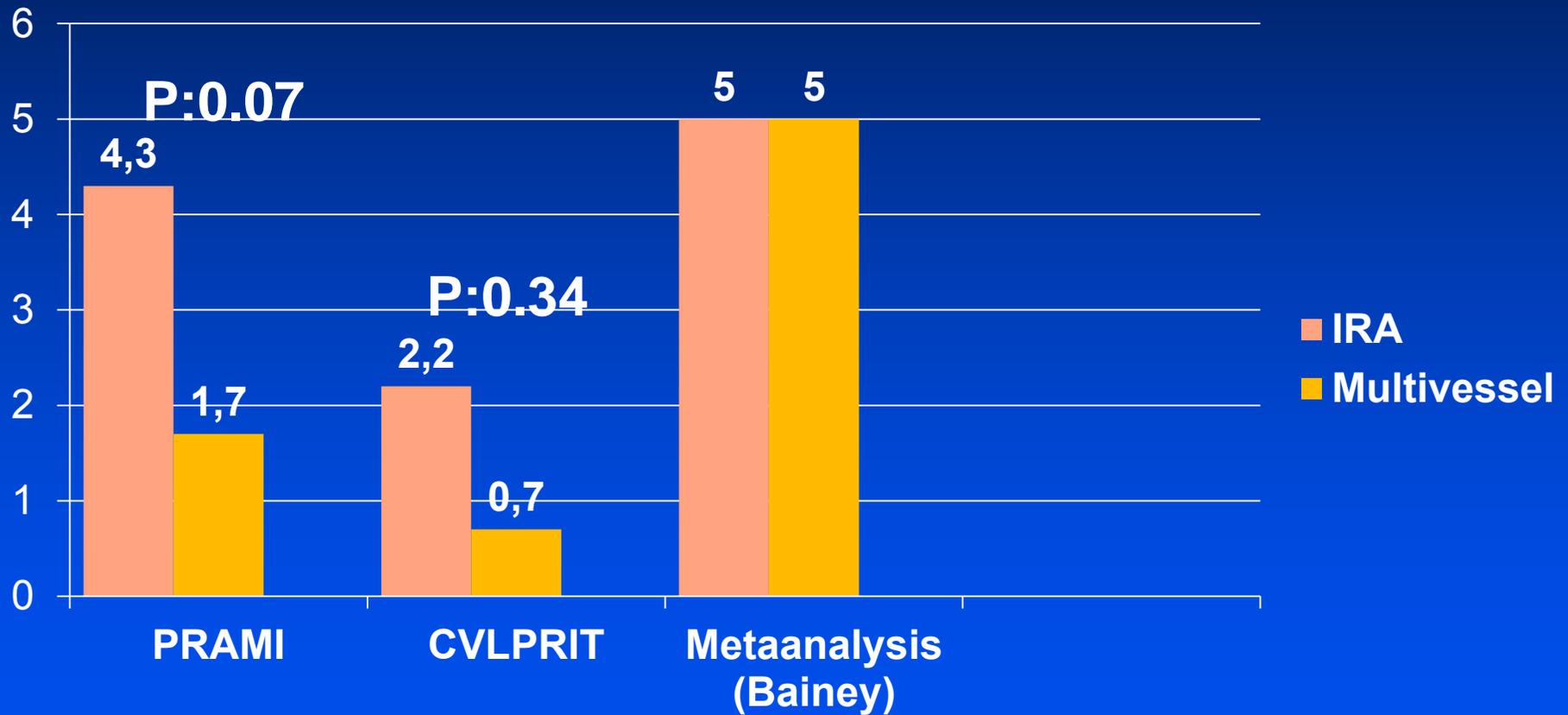
- Staged PCI of NIRA only if symptoms or ischemia
- (+) No unnecessary PCI
- (-) Risk of MACE

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**Razones para no intervenir  
en lesiones no-culpables en  
Angioplastía Primaria**

- 
- **Emergencia ( sin planeamiento)  
Paciente y médico no están  
preparados**
  - **Rx Antiagregante insuficiente**
  - **Como decidir si lesiones son  
significativas?**

# No reduce mortalidad



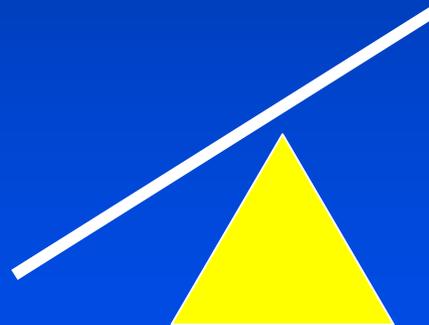
# El peso de la Evidencia

## Culprit-only or Staged MV

• HORIZONS	667
• Hannan (NY State)	1006
• W. Denmark	5944
• Iqbal (London)	3984
• Swiss AMIS Plus	4941
• APEX-AMI	2201
• <u>Bainey Metaanal</u>	<u>46324</u>
	65067

## Complete Revasc

• HELP-AMI	69
• Politi	149
• PRAMI	465
• <u>CVLPRIT</u>	<u>296</u>
	979



# STEMI :Revascularización Multivasos

---

- Durante el procedimiento agudo: solo en caso de compromiso hemodinámico, shock cardiogénico.
- Durante la hospitalización inicial: lesiones críticas, isquemia.
- Deferida- 6-8 semanas: lesiones intermedias permite evaluación clínica y funcional

# COMPLETE Trial

STEMI with Successful PCI-IRA

+

N-IRA  $\geq 70\%$  or  $\geq 50\%$  with FFR  $< 0.80$

Randomized within  
72 hours of PPCI

Complete REVASC  
Staged PCI of  
All Suitable Lesions  
N:1950

CULPRIT-ONLY

N:1950

F/U: 30 Days, 6-Month, yearly x 4Years

1<sup>ary</sup> EP: CV Death/MI

2<sup>ary</sup> EP: CV Death/MI/Revasc x ischemia

*Muchas gracias*

