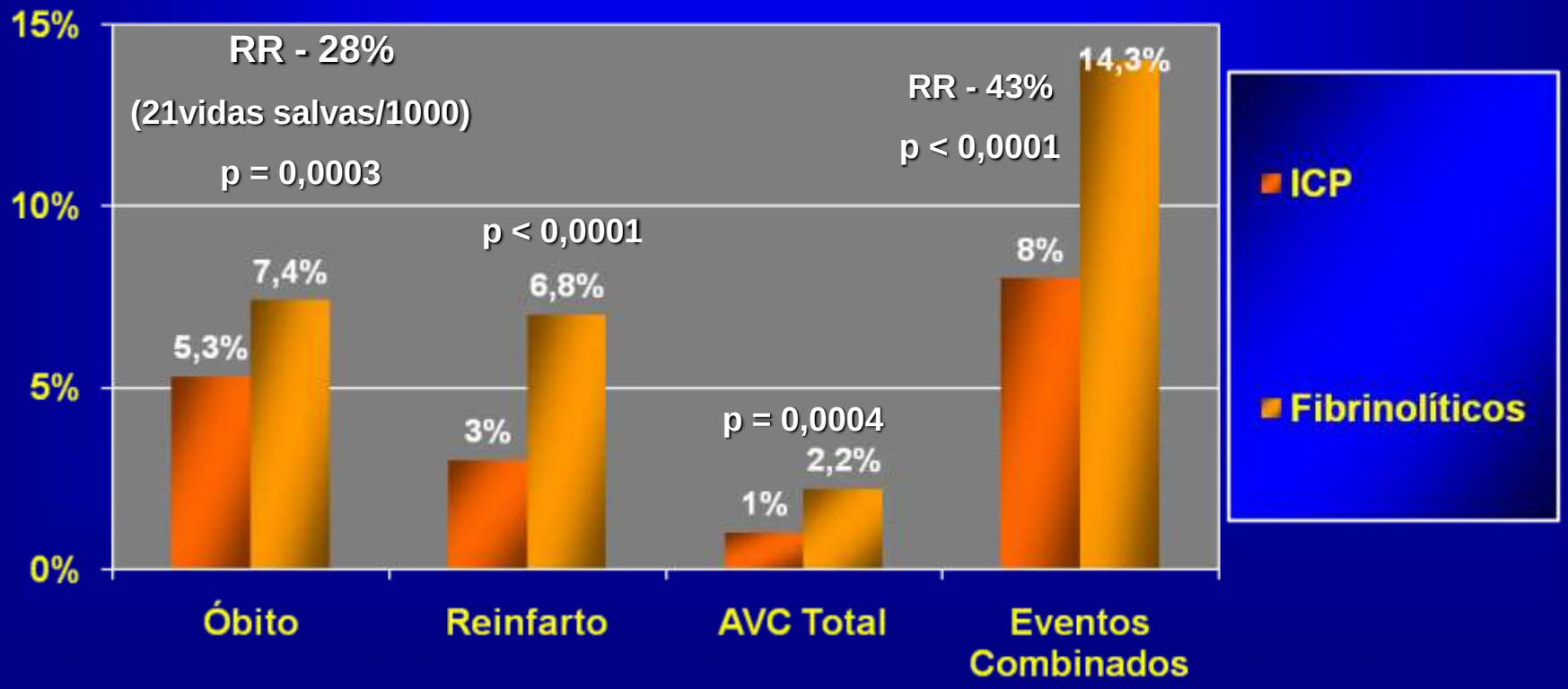
Nuevas Estrategias de Reperfusión Miocárdica en el IAM con Elevación del Segmento ST

SOLACI
SOCIEDAD LATINOAMERICANA DE CARDIOLOGIA INTERVENCIONISTA

23 Estudios Randomizados

ICP Primaria vs Fibrinolíticos

n = 7.739 Resultados 30 días



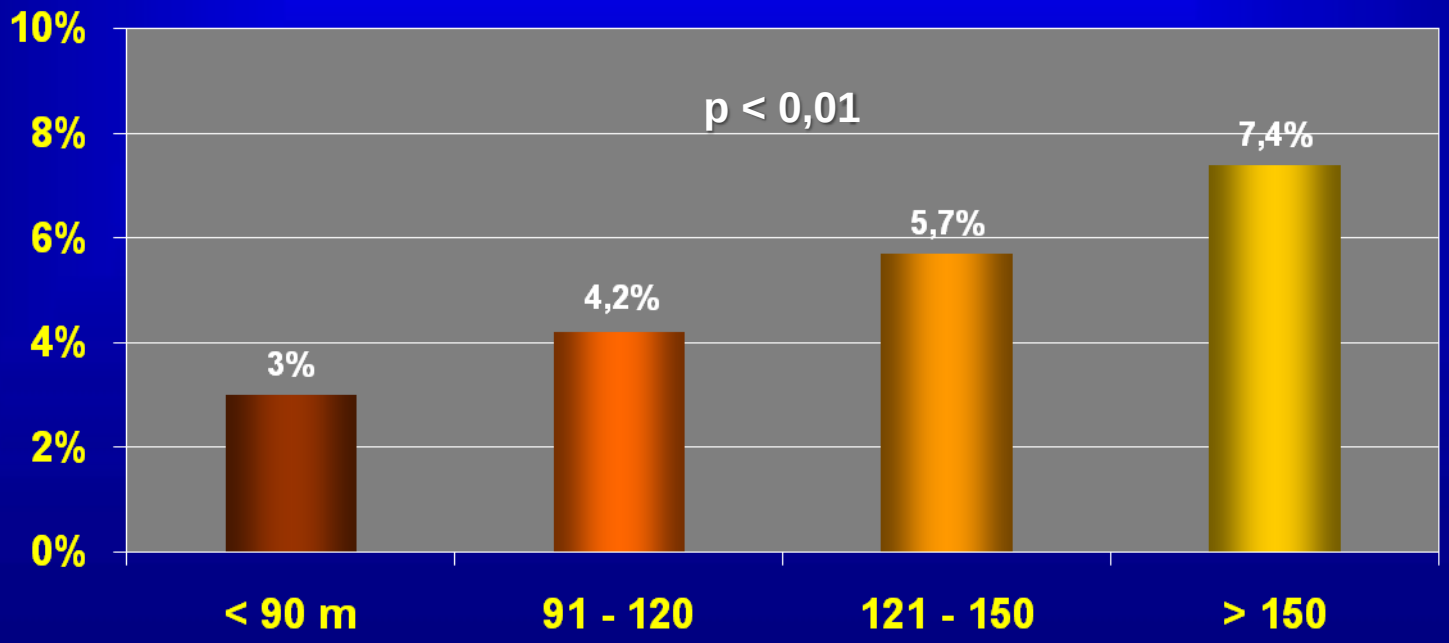
Keeley E.C., Grines C.L. Lancet 2003;361:13-20

Mortalidad 30 días

Influencia del Retardo Puerta - Balón

Registro NRMI 3 – 4 (EUA)

1999 a 2006 n = 29.222 SCACST < 6 h → ICP



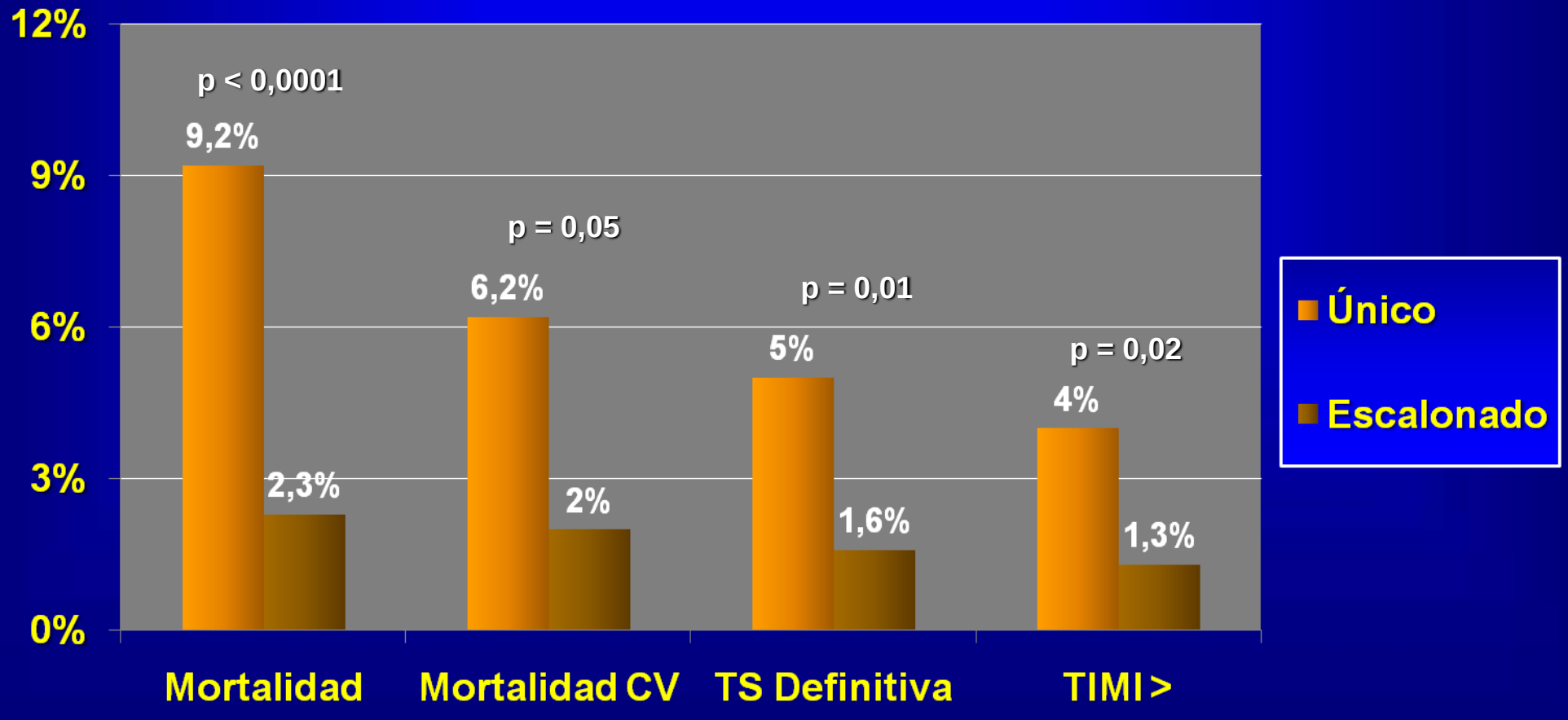
Puerta-balón > 90 m
OR 1,42; 95% IC 1,24 to 1,62

McNamara RL. J Am Coll Cardiol 2006;47:2180-86

HORIZONS TRIAL

Procedimiento Único vs Escalonado

Multiarteriales n = 668 (18,5%) Resultados 1 año



Kornowski R. J Am Coll Cardiol 2011;58:704-711

Registro Estado de Nueva York
Mortalidad

n = 4.024 Enero/2003 a Junio/2006 ICP - IAM con ST Elevado ≤ 24 h

Amuestras con Propensión de Semejanza

Mortalidad Excepto: Inestabilidad Hemodinámica, FE < 20%, Arritmia Ventricular Grave	Vaso Culpable n = 458	Multiarterial n = 458	p
Hospitalaria	0,9%	2,4%	0,04
12 m	4,2%	5,8%	0,13
24 m	4,9%	7,2%	0,07
42 m	6,7%	10,4%	0,08

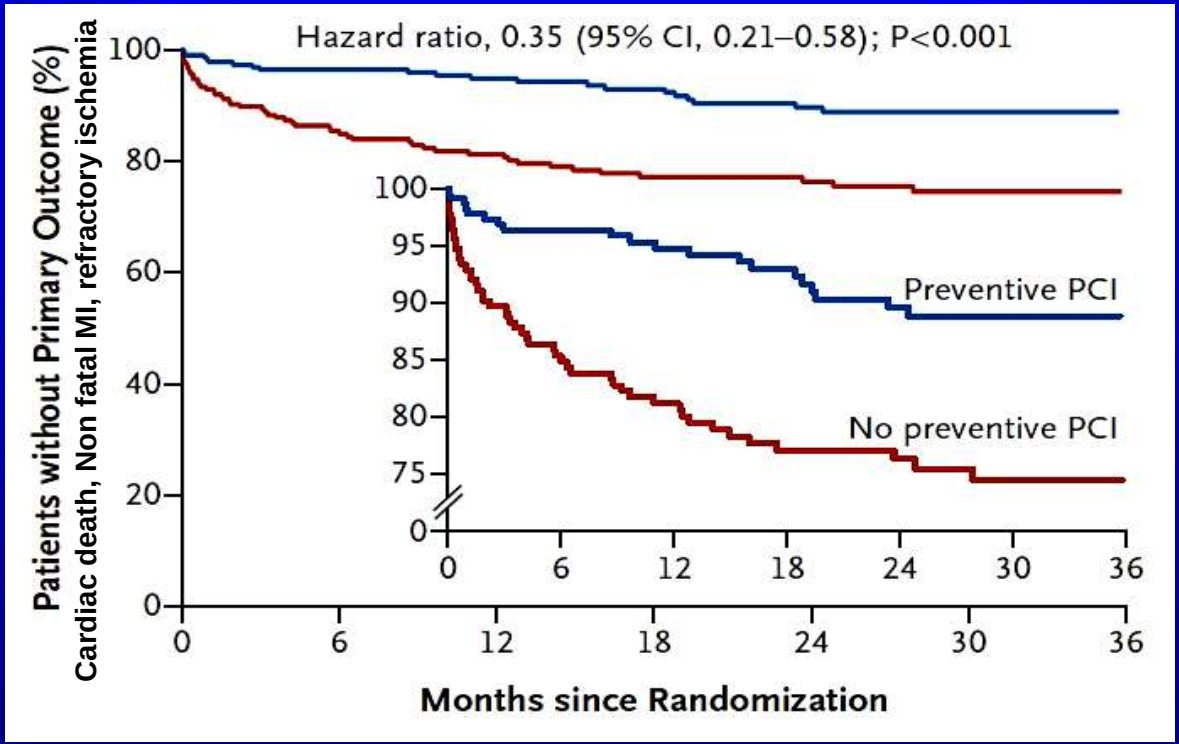
Hannan E. J A Coll Cardiol Intv 2010;3:22-31

PRAMI TRIAL

ICP Preventiva en el IAM

Estudio Randomizado 5 Centros Reino Unido 2008-2013

n = 465 → Multiarteriales (≥ 50% en otras arterias)



- **No preventiva – ICP → angina refractaria con evidencia objetiva de isquemia**
- **Escalonada no recomendada**
- **Interrupción precoz**

Wald D.S. N Engl J Med 2013;369:1115-1123

IMA con ST Elevado

Directrices

Procedural aspects of primary PCI		
Primary PCI should be limited to the culprit vessel with the exception of cardiogenic shock and persistent ischaemia after PCI of the supposed culprit lesion.	IIa	B

	COR	LOE
Ischemic symptoms <12 h	I	A
Ischemic symptoms <12 h and contraindications to fibrinolytic therapy irrespective of time delay from FMC	I	B
Cardiogenic shock or acute severe HF irrespective of time delay from MI onset	I	B
Evidence of ongoing ischemia 12 to 24 h after symptom onset	IIa	B
PCI of a noninfarct artery at the time of primary PCI in patients without hemodynamic compromise	III: Harm	B

Steg P. Eur Heart J 2012;33:2569-2619

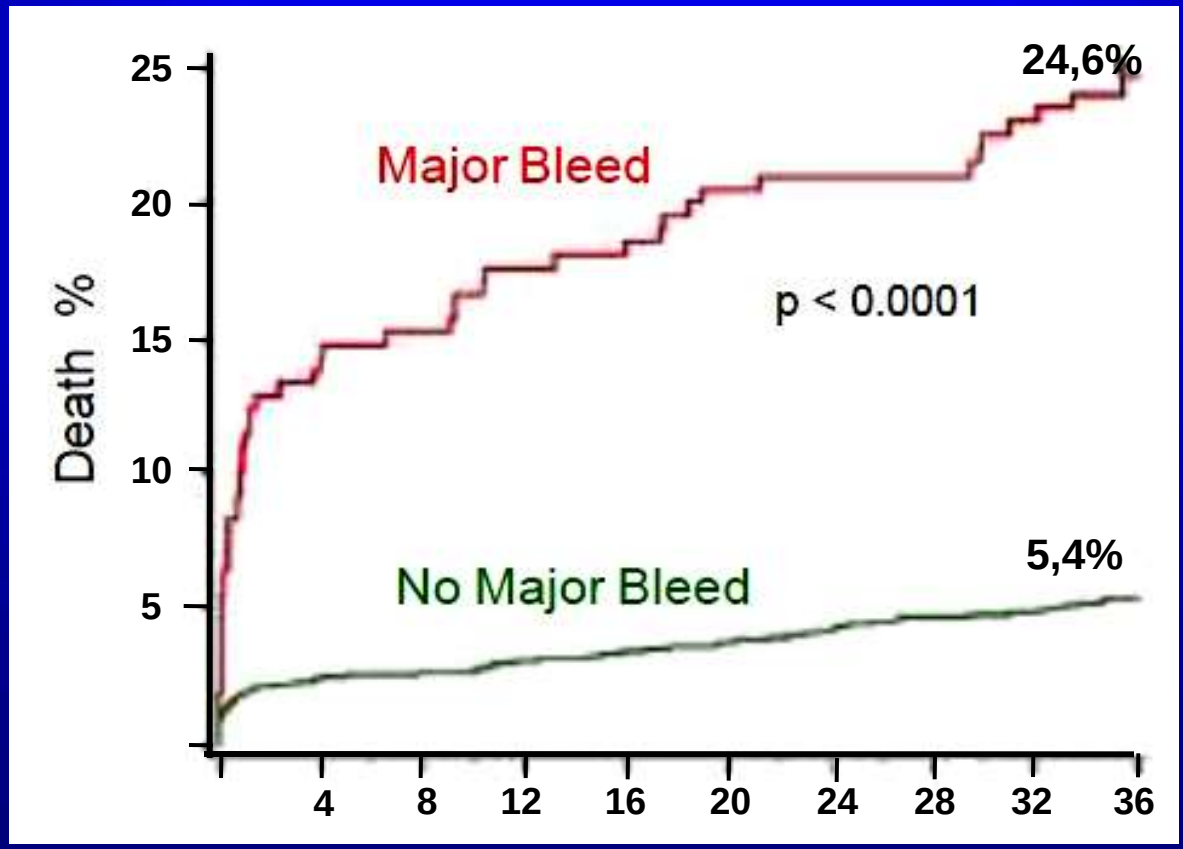
O'Gara P.T. Circulation 2013;127:e362-425

Sangrados > Hospitalización

Mortalidad

HORIZONS AMI TRIAL (HNF + IGP IIb/IIIa vs Bivalirudina)

n = 3.602 STEMI ≤ 12 h ICP Primária



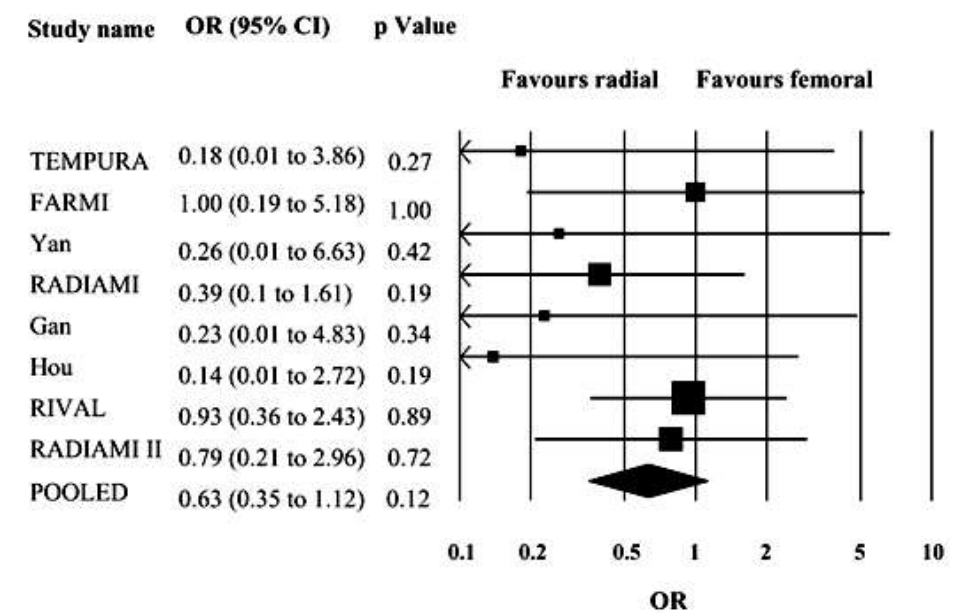
Suh JW. J Am Coll Cardiol 2011;58:1750

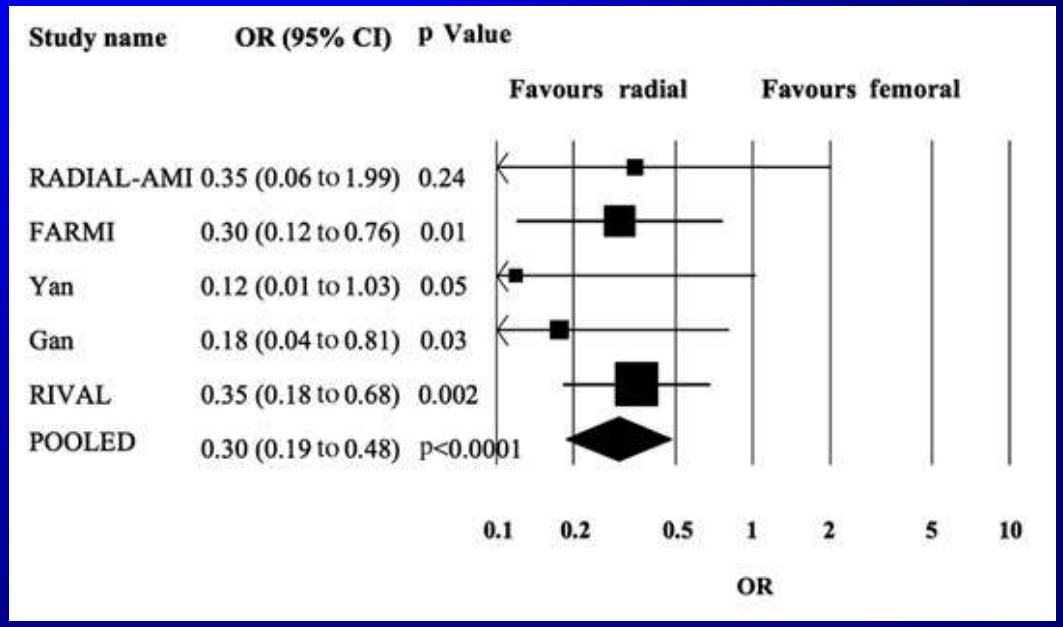
Radial vs Femoral

Complicaciones Vasculares/Sangrados >

8 Estudios Randomizados
2003 a 2011

ICP IAM con ST Elevado
n = 2.977





Sangrados >

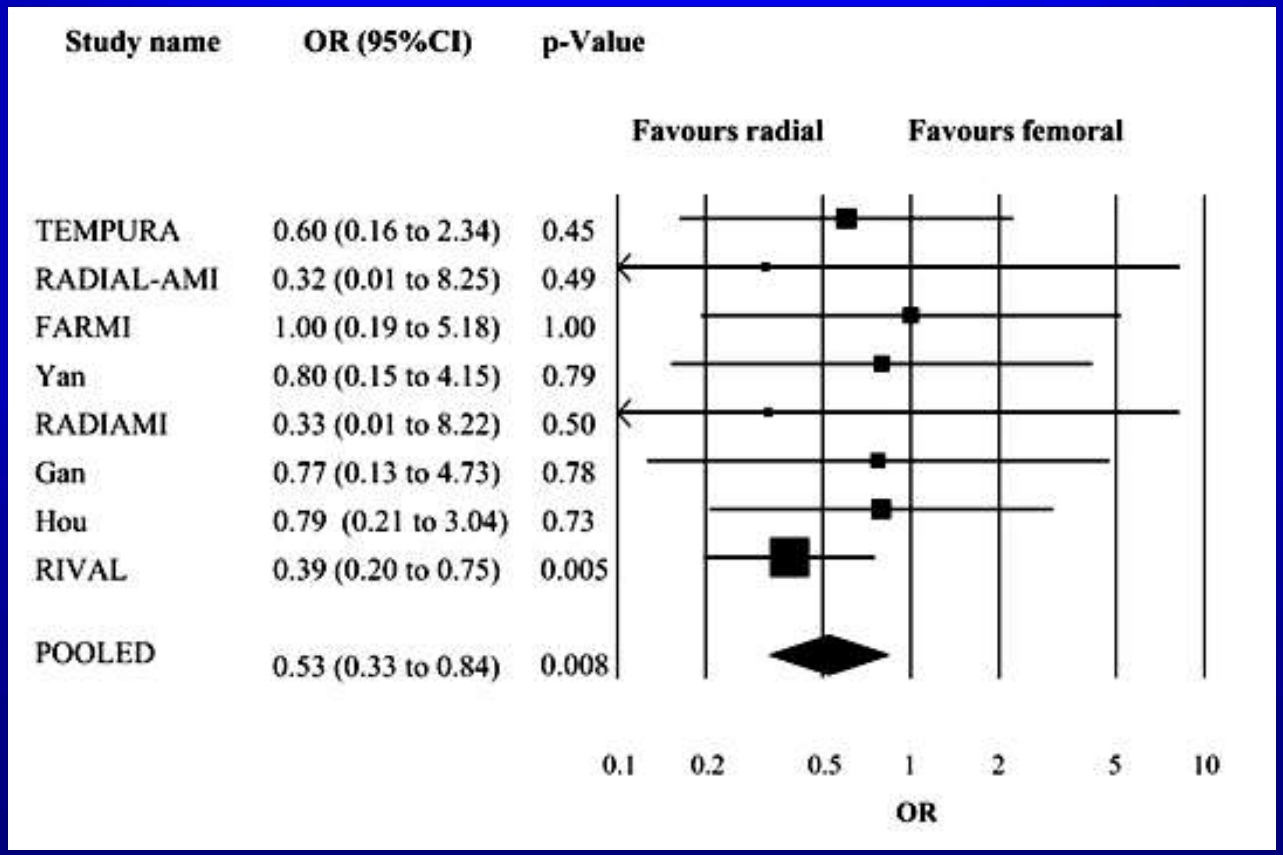
Complicaciones Vasculares

Mamas MA. Heart 2012;98:303-311

Mortalidad
Radial vs Femoral

9 Estudios Randomizados **ICP IAM con ST Elevado**

2003 a 2011 **n = 2.977**

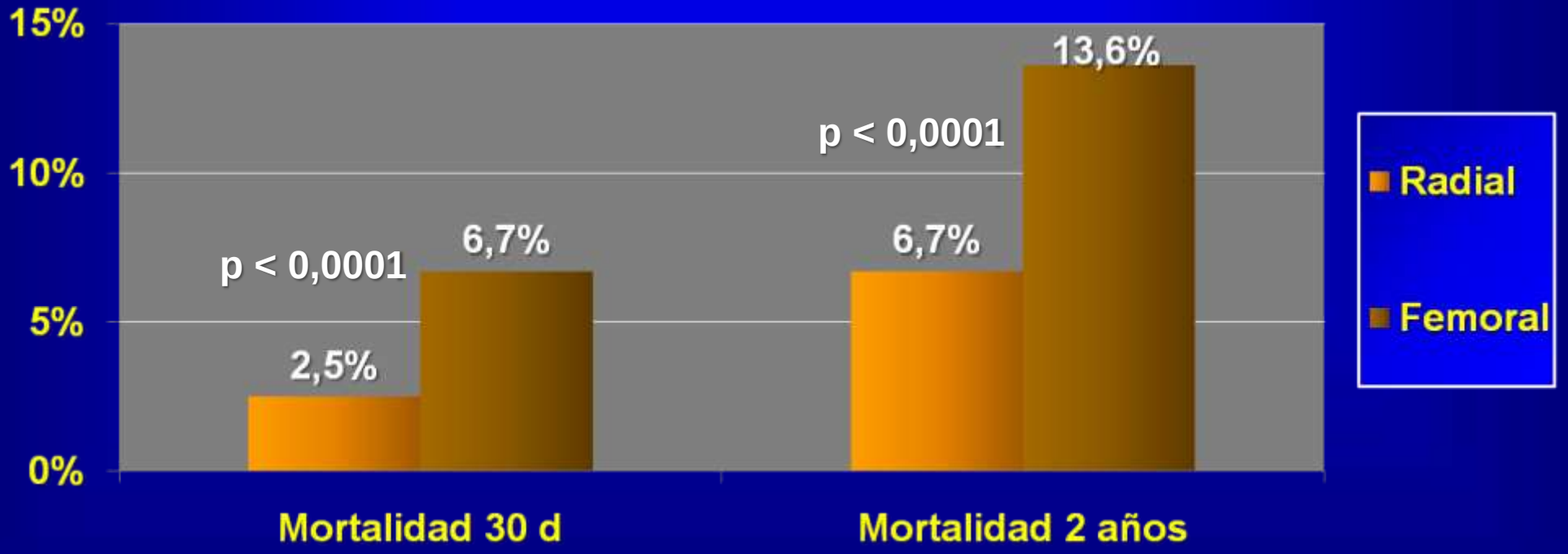


Mamas MA. Heart 2012;98:303-311

Radial vs Femoral
Práctica Clínica

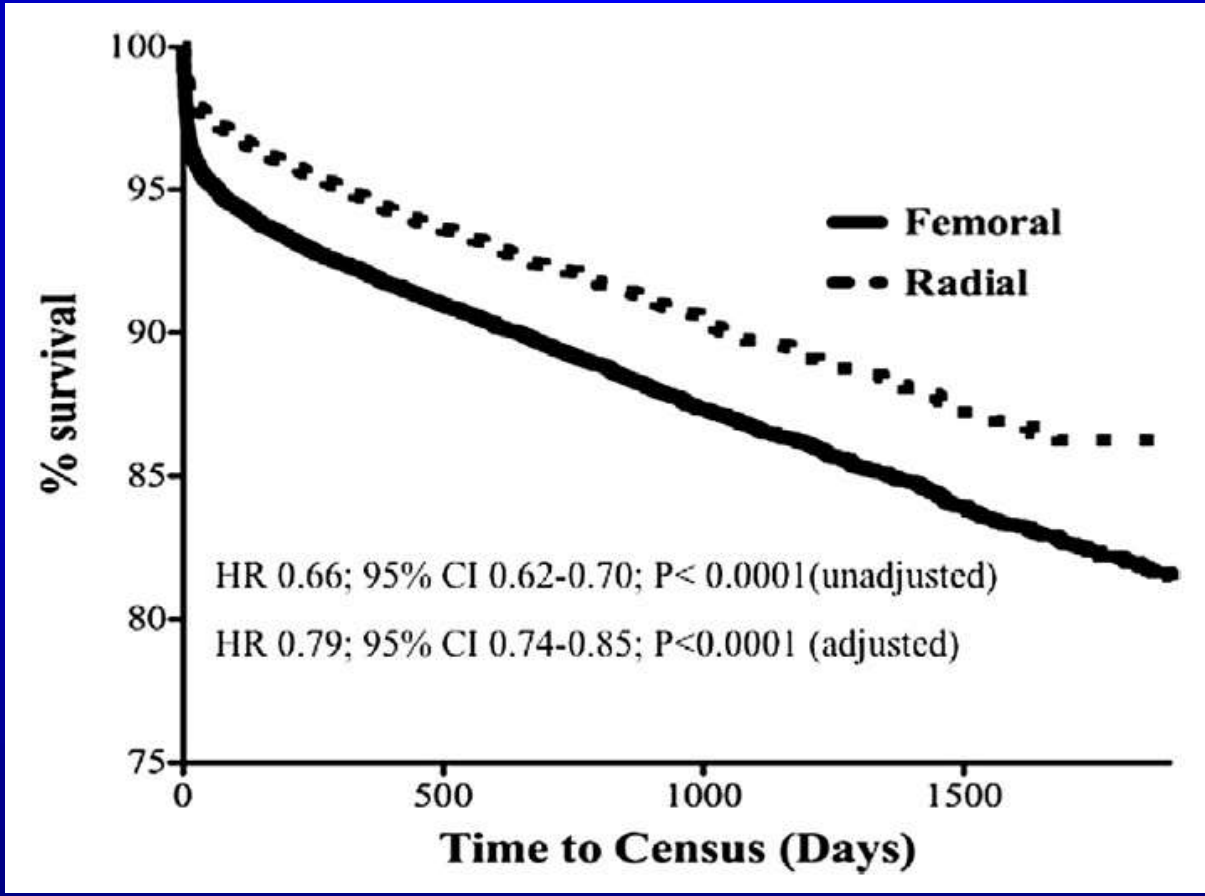
2006 a 2010 Reino Unido n = 46.128 ICP IAM

Femoral n = 28.091 (60,9%) Radial n = 18.037 (39,1%)



Mamas MA. J Am Coll Cardiol Intv 2013;6:698-706

Radial vs Femoral
Supervivencia



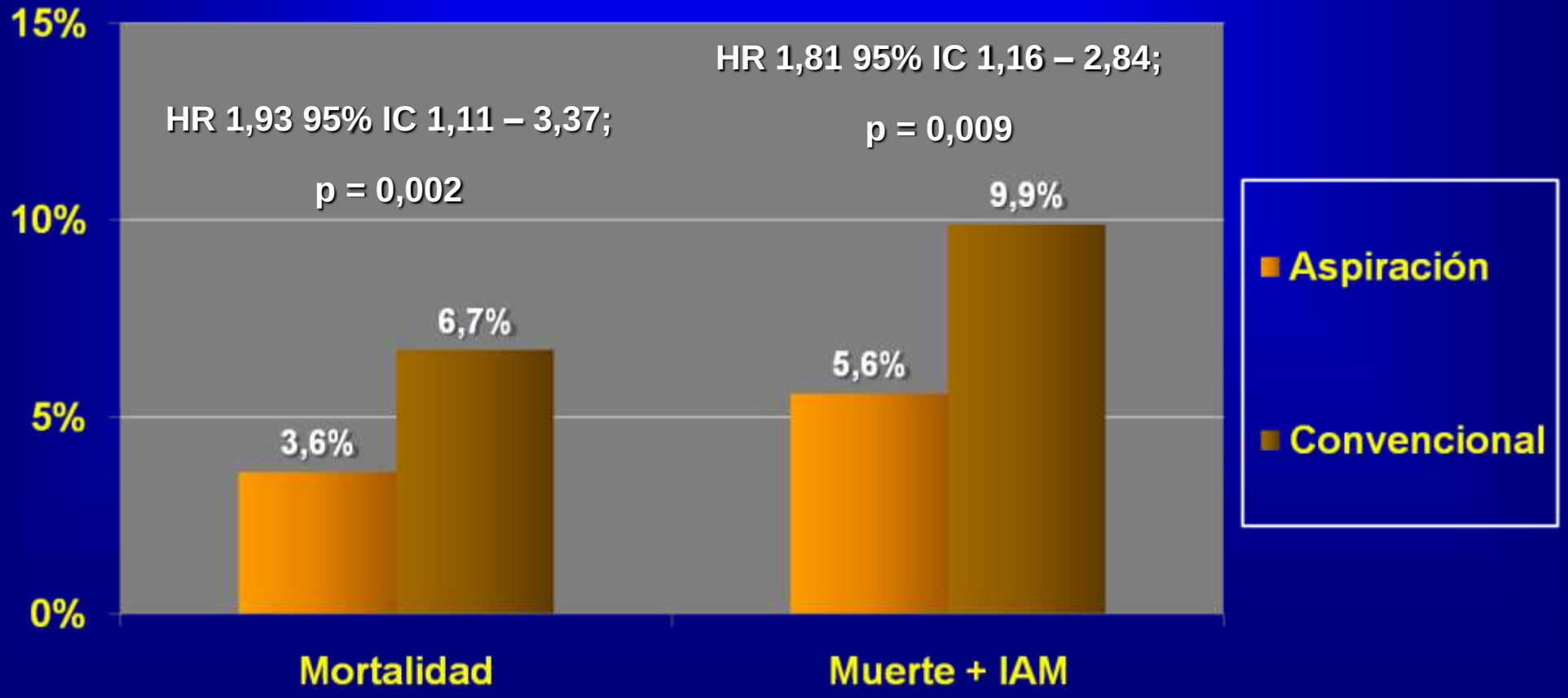
Mamas MA. J Am Coll Cardiol Intv 2013;6:698-706

TAPAS TRIAL

Resultados 1 año

n = 1.701 IAM c/ Supra ST

Enero/2005 a Diciembre/2006 Universidad Groningen/Holanda



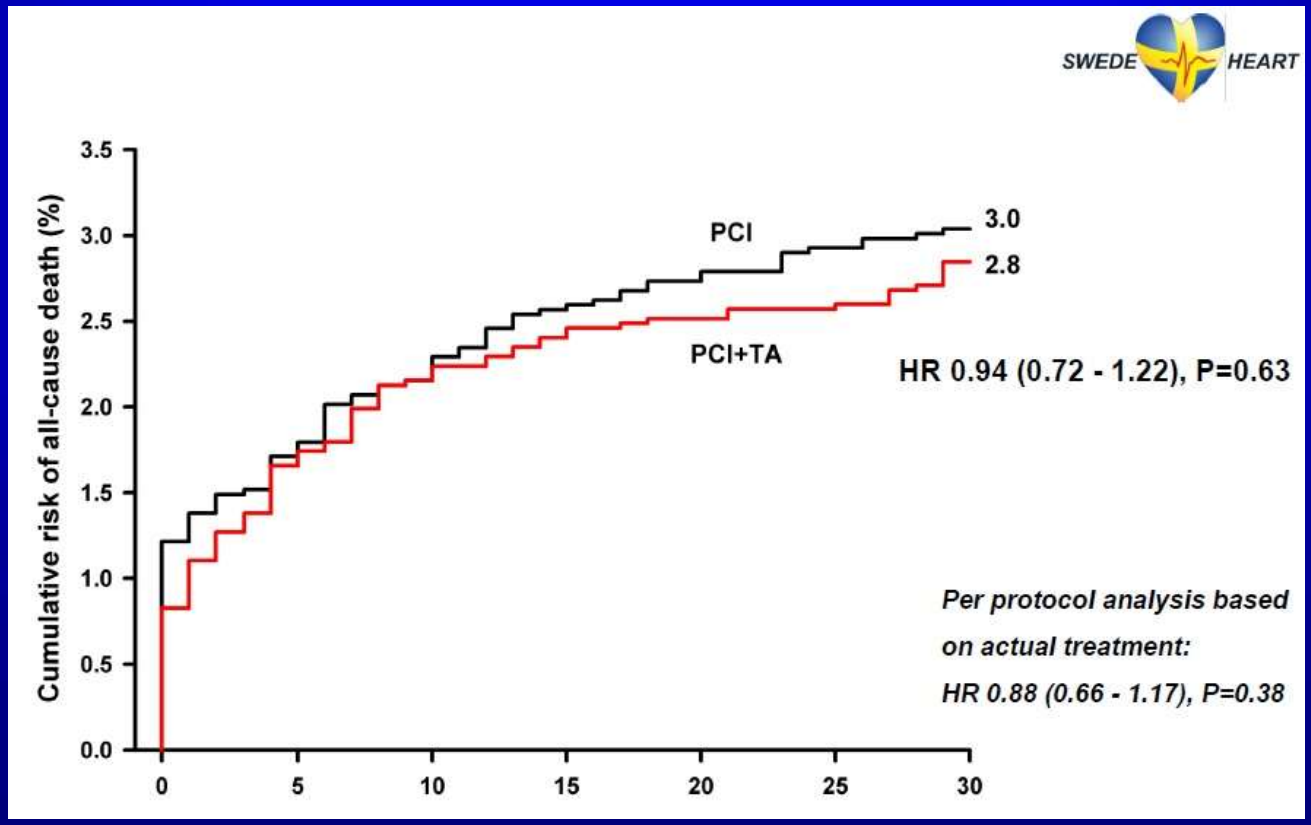
Vlaaar P.J. Lancet 2008;371:1915-20

TASTE TRIAL

Mortalidad – 30 días

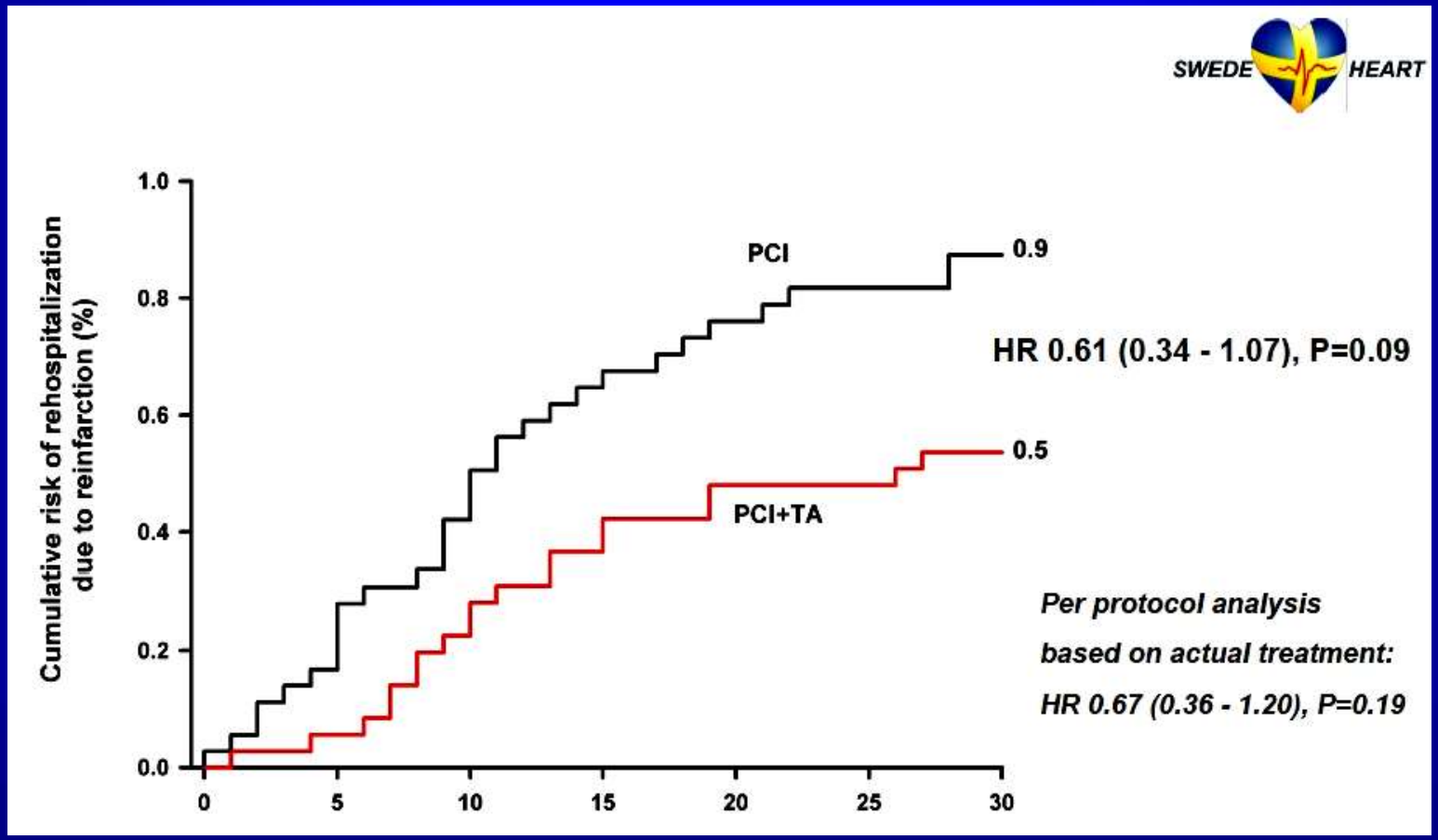
n = 7.244 31 Centros Escandinávia STEMI < 24 h

Aspiración Manual



Frobert O. N Engl J Med 2013;369:587-97

TASTE TRIAL
Reinfarto – 30 días



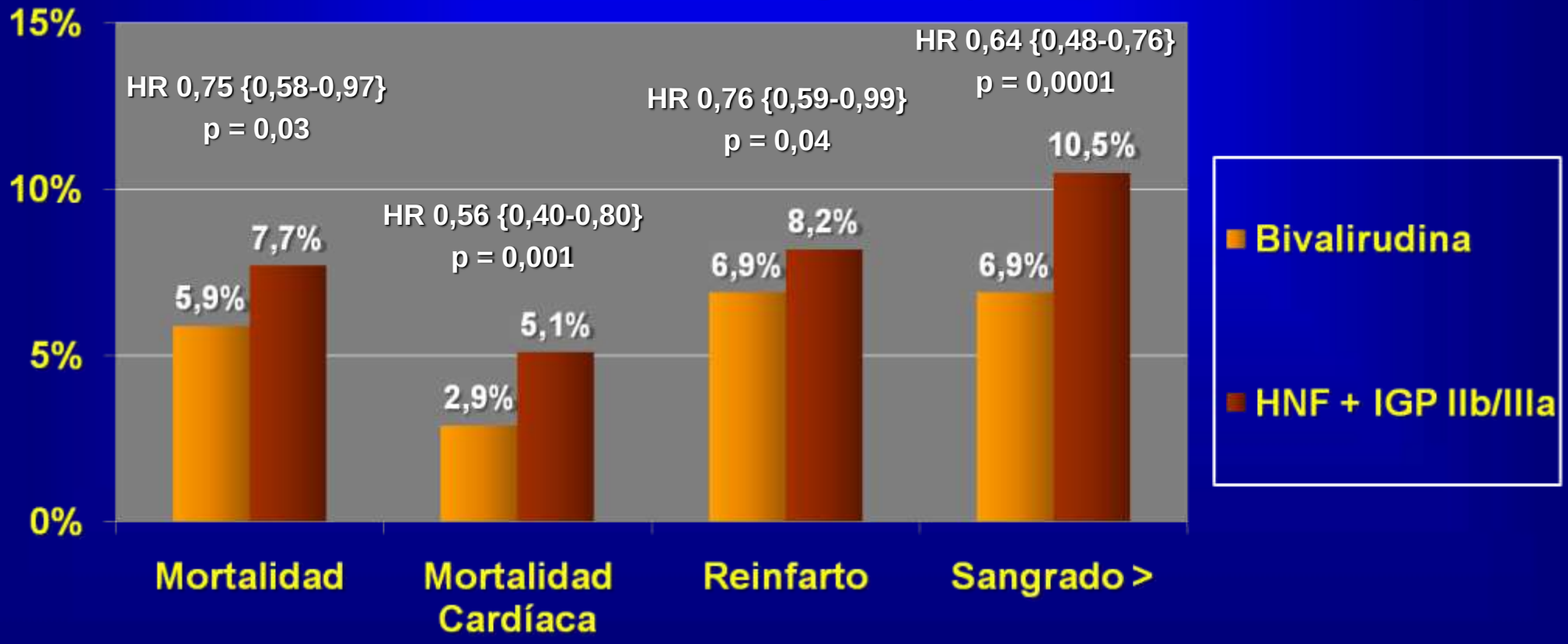
Trombosis del Stent – ICP 0,5% vs ICP + TA 0,2% - p = 0,06

Frobert O. N Engl J Med 2013;369:1587-1597

HORIZONS TRIAL
Resultados 3 años

n = 3.602 123 centros

IAM c/ ST ≤ 12h → Coronariografia (83% ICP con Stent)



Stone G.W. Lancet 2011;377:2193-2204

EUROMAX Trial Design

2218 patients with STEMI with symptom onset >20 min and ≤12h
Randomized in ambulance or non-PCI hospital
Intent for primary PCI

Aspirin + $P2Y_{12}$ inhibitor (any) as soon as possible

R
1:1

UFH/LMWH ± GPI
Per standard practice

Bivalirudin
(0.75 mg/kg bolus, 1.75 mg/kg/h infusion)
+ prolonged optional infusion
(PCI dose or 0.25 mg/kg/h)
(provisional GPI only)

Primary endpoint: 30-day death or non-CABG related major bleeding

Key Secondary endpoint: Death, Re-infarction or non-CABG major bleeding at 30 days

Clinical FU at 30 days and 1 year

IGP

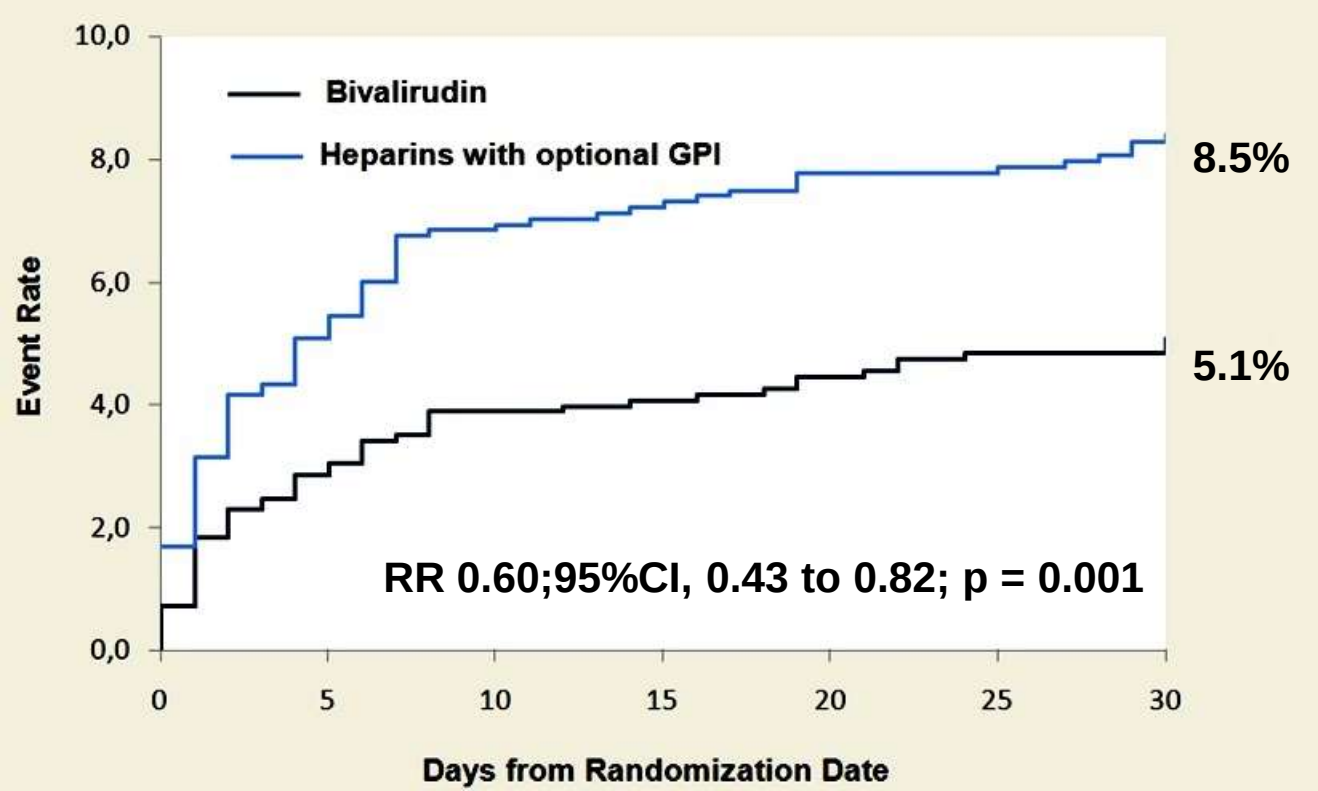
Bivalirudina (11,5%) vs Heparina (69,1%)

Steg P.G. N Engl J Med 2013;369:2207-2217

Euromax Trial

Muerte o Sangrado > - 30 días

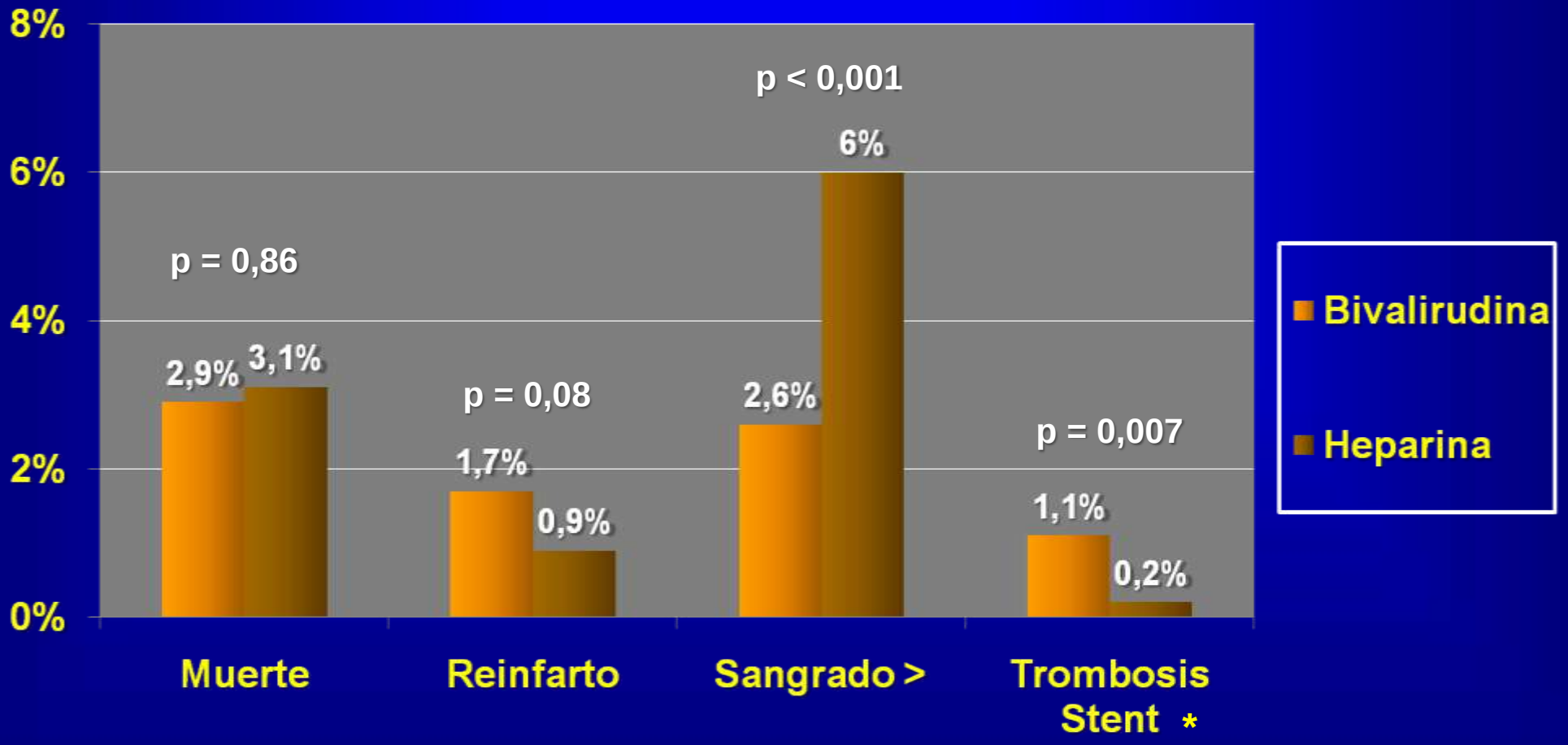
Endpoint Primario



Steg P.G. N Engl J Med 2013;369:2207-2217

Euromax Trial

Complicaciones- 30 días



* definitiva

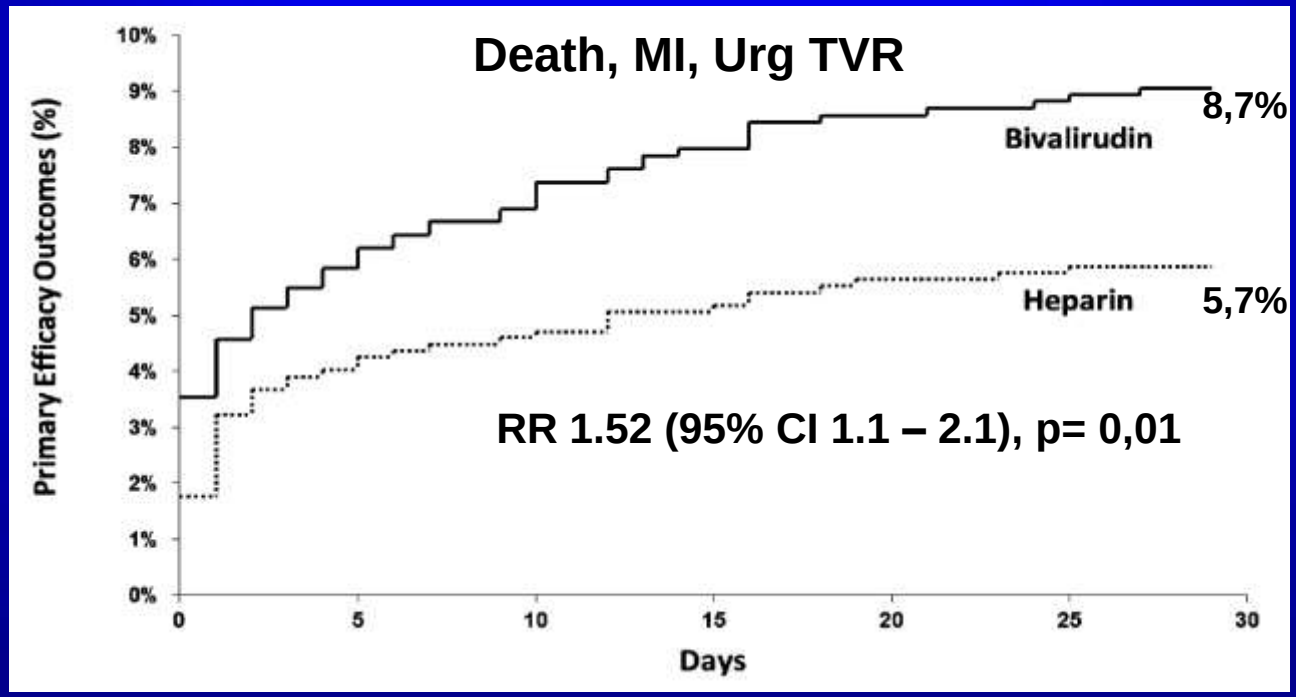
Steg P.G. N Engl J Med 2013;369:2207-2217

HEAT PPCI

Endpoint Primário Eficácia

n = 1.812 STEMI → PCI Centro Único – Liverpool Heart and Chest Hospital

IGP "Bail – Out" Bivalirudina – 13,5% vs Heparina – 15,5%



Trombosis Stent

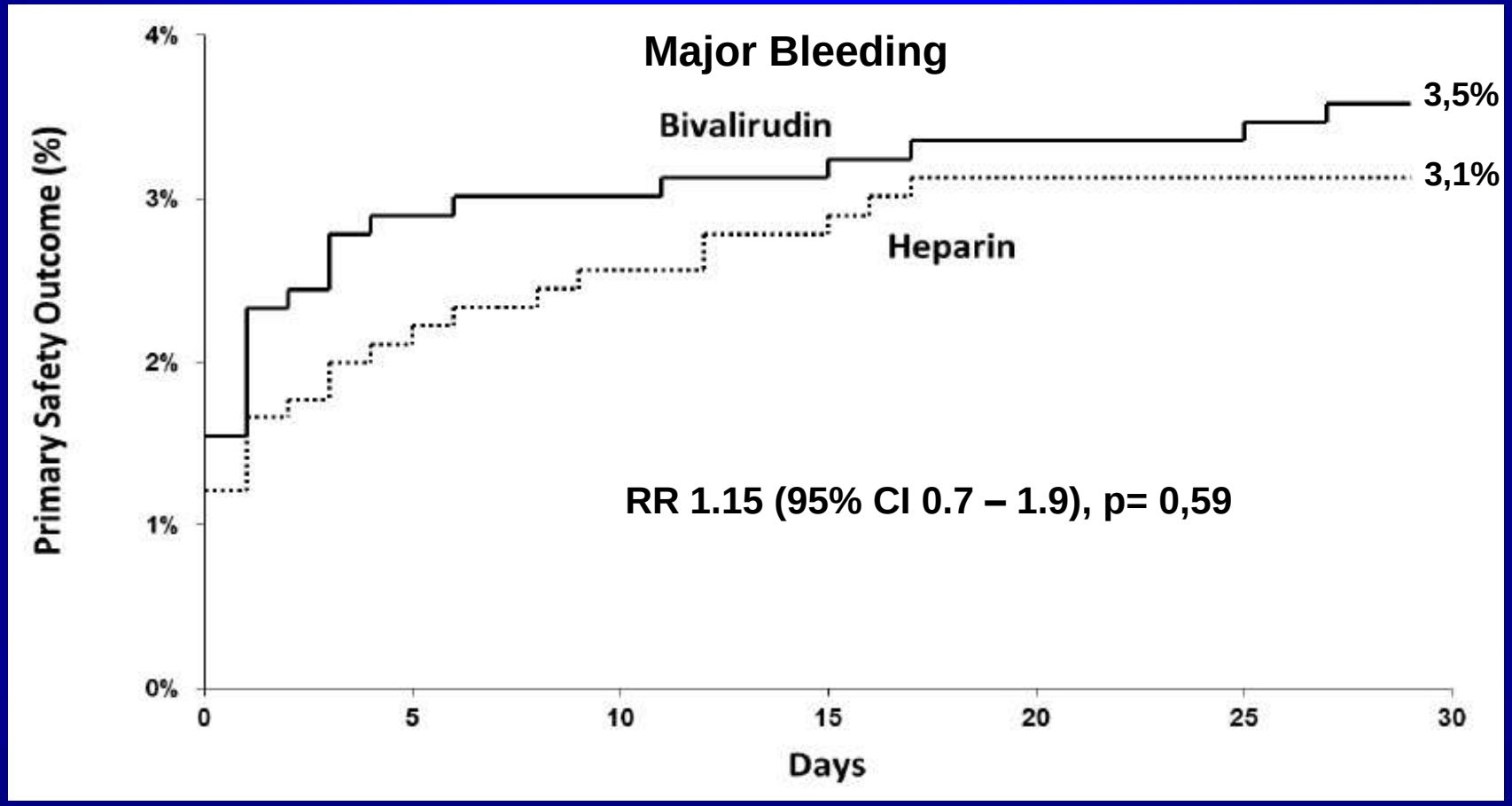
Bivalirudina – 3,4% vs Heparina – 0,9%

RR 3,91 (95% CI 1,6 – 9,5, p = 0,001)

Shahzad A. Lancet 2014 ahead of print

HEAT PPCI

Desfecho Primário Segurança

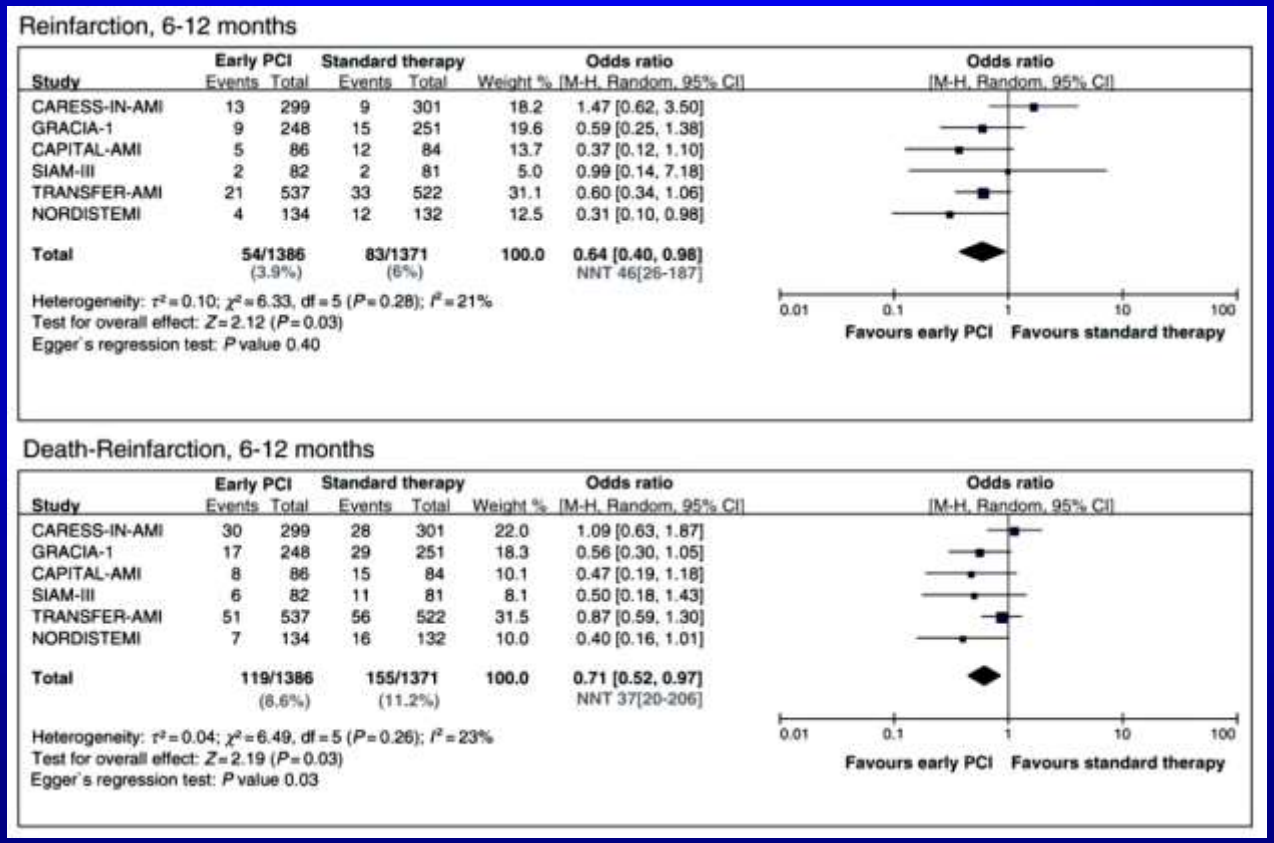


Shahzad A. Lancet 2014 ahead of print

IAM Pós Trombólisis

Angiografía Precoz vs Terapia Convencional

Meta-análisis 7 Trials n = 2.961



Sangrado > 30 d
OR:0.93, 96% CI:0.67 – 1.34, p = 0,70

Borgia F. Eur Heart J 2010;31:2156-63

IAM com Supra de ST

Stents Farmacológicos vs No Farmacológicos

n = 6.026 **Seguimiento Clínico 3 a 5 anos**

DEATH	DES	BMS	OR [95%CI]	P
DEDICATION	10.5%	6.4%	1.73 [0.97, 3.08]	0.06
PASEO	8.3%	12.2%	0.65 [0.29, 1.49]	0.31
STRATEGY	18.4%	15.9%	1.19 [0.54, 2.62]	0.66
SESAMI	3.2%	5.0%	0.61 [0.20, 1.92]	0.40
MISSION	4.4%	6.6%	0.69 [0.25, 1.85]	0.46
TYPHOON	4.0%	6.6%	0.61 [0.27, 1.36]	0.23
PASSION	8.9%	11.5%	0.75 [0.45, 1.27]	0.29
HORIZONS-AMI	5.6%	6.6%	0.84 [0.60-1.17]	0.33
META-ANALYSIS			0.88 [0.68-1.11]	0.27

Stent thrombosis	DES	BMS	OR [95%CI]	P
DEDICATION	2.9%	3.2%	0.90 [0.36, 2.24]	0.82
PASEO	1.1%	2.2%	0.49 [0.07, 3.57]	0.48
STRATEGY	6.9%	7.9%	0.86 [0.28, 2.66]	0.79
SESAMI	5.1%	5.1%	1.00 [0.37, 2.73]	1.00
MISSION	3.1%	2.0%	1.69 [0.40, 7.20]	0.48
TYPHOON	5.3%	5.5%	0.90 [0.42, 2.00]	0.83
PASSION	4.2%	3.4%	1.19 [0.52, 2.69]	0.68
HORIZONS-AMI	5.1%	4.4%	1.15 [0.77-1.72]	0.50
META-ANALYSIS			1.06 [0.81-1.39]	0.67

Ziada KM. J Am Coll Cardiol Intv 2011;4:39-41

IAM com Supra de ST

Stents Farmacológicos vs No Farmacológicos

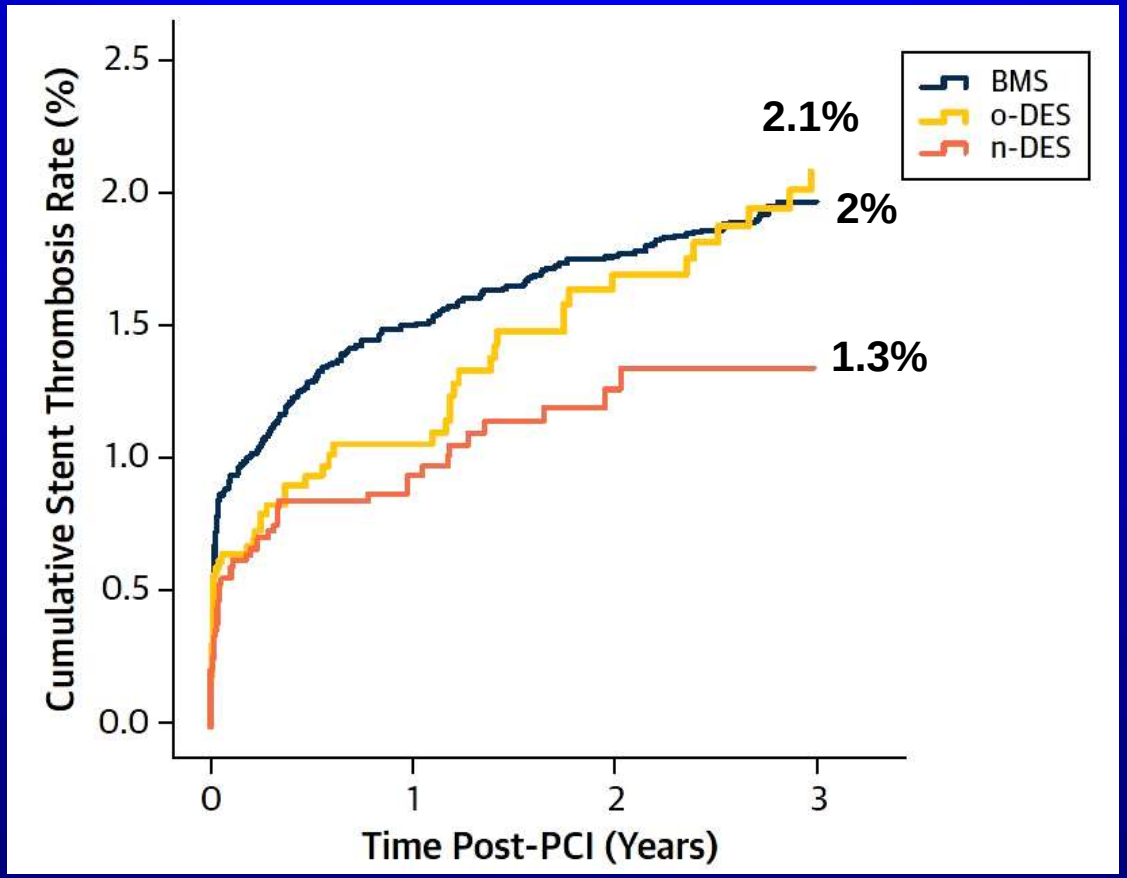
n = 6.026 **Seguimiento Clínico 3 a 5 años**

TVR	DES	BMS	OR [95%CI]	P
DEDICATION	8.9%	19.8%	0.40 [0.25, 0.64]	<0.01
PASEO	6.1%	21.1%	0.24 [0.11, 0.54]	<0.01
STRATEGY	10.3%	26.1%	0.33 [0.14, 0.75]	0.01
SESAMI	8.3%	16.0%	0.46 [0.23, 0.92]	0.03
MISSION	8.9%	15.8%	0.54 [0.27, 1.09	0.09
TYPHOON	11.9%	21.5%	0.49 [0.30, 0.80]	<0.01
PASSION	7.7%	10.5%	0.73 [0.42, 1.26]	0.26
HORIZONS-AMI	12.5%	17.7%	0.67 [0.53-0.84]	0.001
META-ANALYSIS			**0.50 [0.40-0.64]**	**<0.001**

Ziada KM. J Am Coll Cardiol Intv 2011;4:39-41

IAM com Supra de ST
Registro SCARR

Jan/2007 a Jan/2013 n = 34.143 SF 1ª geração (n = 4.271)
SF 2ª geração (n = 4.811) BMS (n = 25.065)

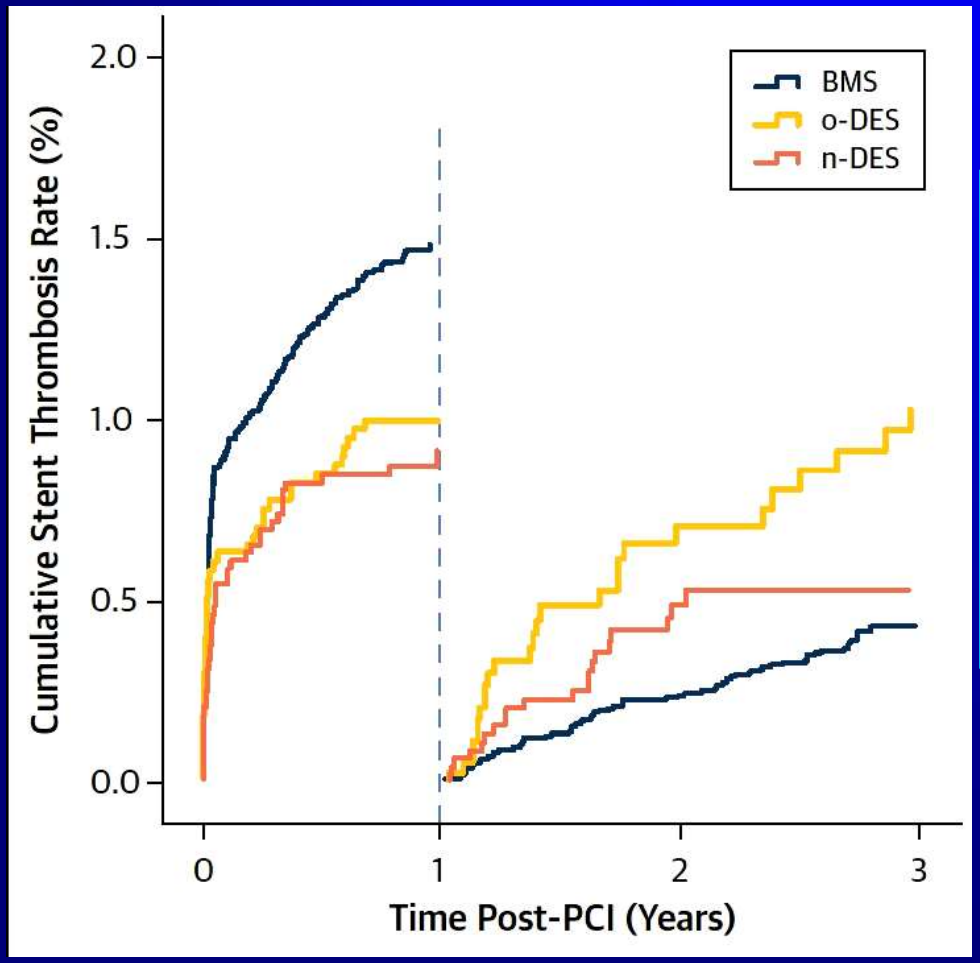


Sarno G. J Am Coll Cardiol 2014;64:16-24

IAM com Supra de ST

Registro SCARR – Landmark Analysis

Análise de regressão de Cox ajustada pelo escore de propensão



Trombose Muito Tardia

1ª geração vs BMS – HR 2.28;95%CI:1.70-4.89;p<0.01

2ª geração vs BMS – HR 1.52;95%CI:0.78-2.98;p=0.21

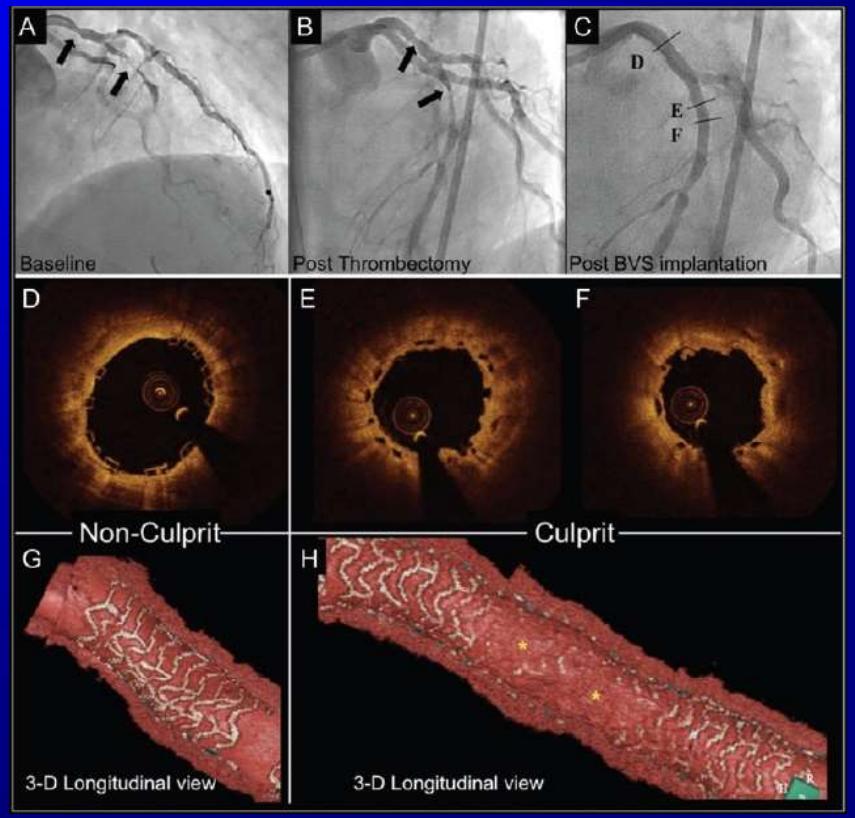
Sarno G. J Am Coll Cardiol 2014;64:16-24

Soporte Vascular Bioabsorbible (BVS)

STEMI

Thoraxcenter – Erasmus University

Clinical events	30 days	N = 49	95% CI
Target-lesion failure		(0/49) 0%	(0–7.41)
TVF		(0/49) 0%	(0–7.41)
Cardiac death		(0/49) 0%	(0–7.41)
Target-vessel MI		(0/49) 0%	(0–7.41)
Q-wave MI		(0/49) 0%	(0–7.41)
Non Q-wave MI		(0/49) 0%	(0–7.41)
Clinically driven target-vessel revascularization		(0/49) 0%	(0–7.41)
Any MI		(1/49) 2.6%	(0–10.69)
Q-wave MI		(0/49) 0%	(0–7.41)
Non Q-wave MI		(1/49) 2.6%	(0–10.69)
Major adverse cardiac events		(1/49) 2.6%	(0–10.69)
Non-target-vessel revascularization		(1/49) 2.6%	(0–10.69)
Definite or probable scaffold thrombosis		(0/49) 0%	(0–7.41)

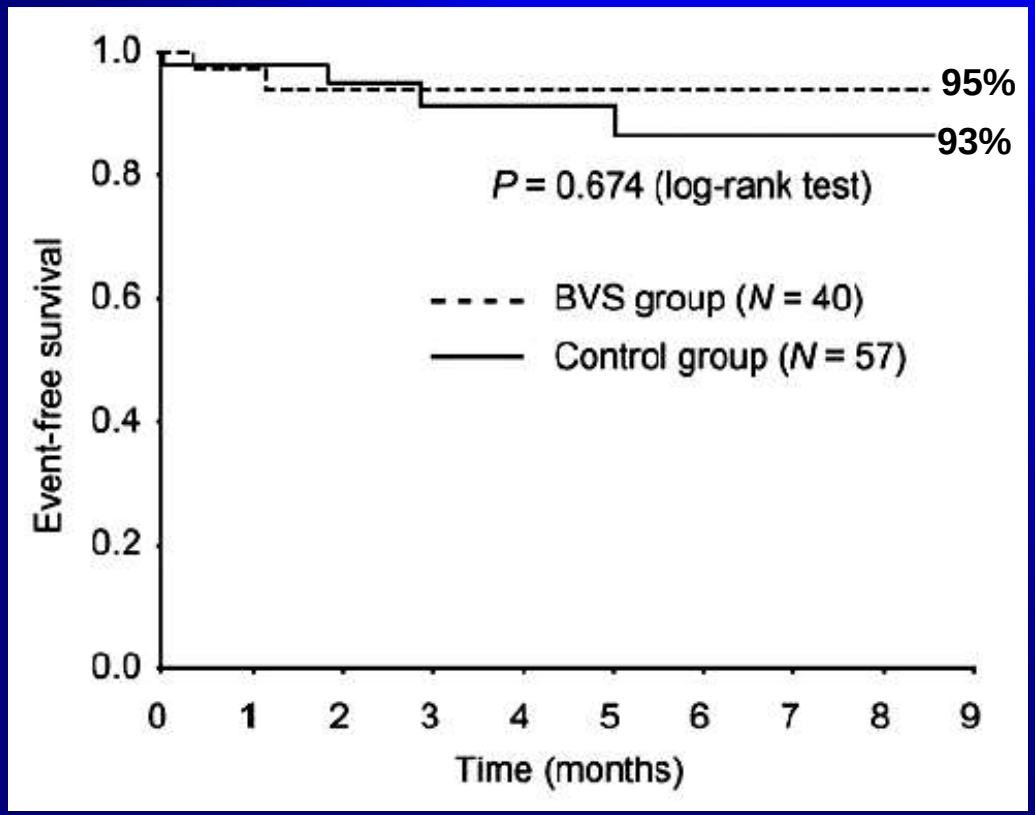


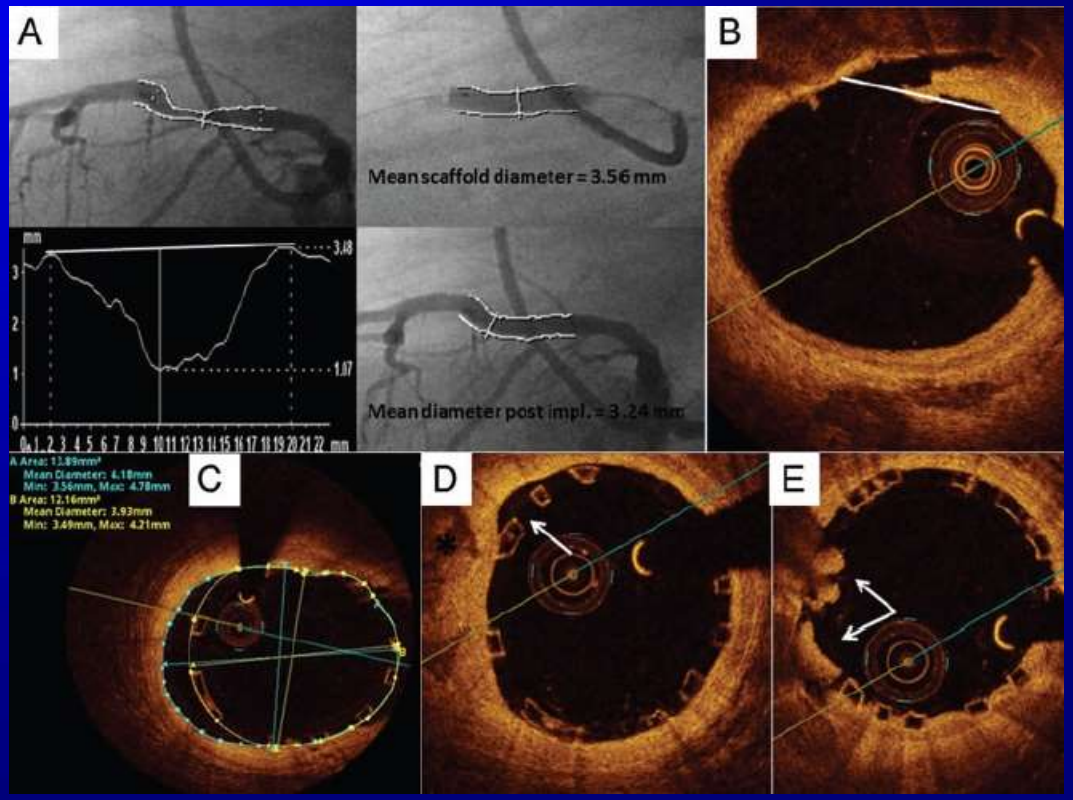
Diletti R. Eur Heart J 2014;35:777-786

Soporte Vascular Bioabsorbible (BVS)

Prague 19

Diciembre/2012 – Agosto /2013 STEMI





Kocka V. Eur Heart J 2014;35:787-794