NOVEDADES EN EL TRATAMIENTO DE LA CARDIOPATIA ISQUEMICA

Congreso SEC 2011
Maspalomas

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SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA

Declaración de potenciales conflictos de intereses

NOVEDADES EN EL TRATAMIENTO DE LA CARDIOPATIA ISQUEMICA

Relativas a esta presentación no existen conflictos de intereses

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NOVEDAD

- 1. Cualidad de nuevo.
- **2.** Cosa nueva.
- **3.** Cambio producido en algo.
- **4.** Suceso reciente, noticia.
- 5. Innovar en algo lo que ya estaba en práctica

Diccionario RAE 2011

NOVEDADES EN EL TRATAMIENTO DE LA CARDIOPATIA ISQUEMICA

- Fármacos
  - Antianginosos
  - Antiagregantes, Anticoagulantes
- Revascularización
  - Intervencionismo coronario
  - Cirugía coronaria
- Prevención

ANTIANGINOSOS

Cardiopatía isquémica estable

- **IVABRADINA**

Safety of *Ivabradine* in Patients With Coronary Artery Disease and Left Ventricular Systolic Dysfunction (from the BEAUTIFUL Holter Substudy)

Michal Tendera, MD[a,*], Mario Talajic, MD[b], Michele Robertson, BSc[c], Jean-Claude Tardif, MD[b], Roberto Ferrari, MD[d], Ian Ford, PhD[c], P. Gabriel Steg, MD[e], and Kim Fox, MD[f], on Behalf of the BEAUTIFUL Investigators

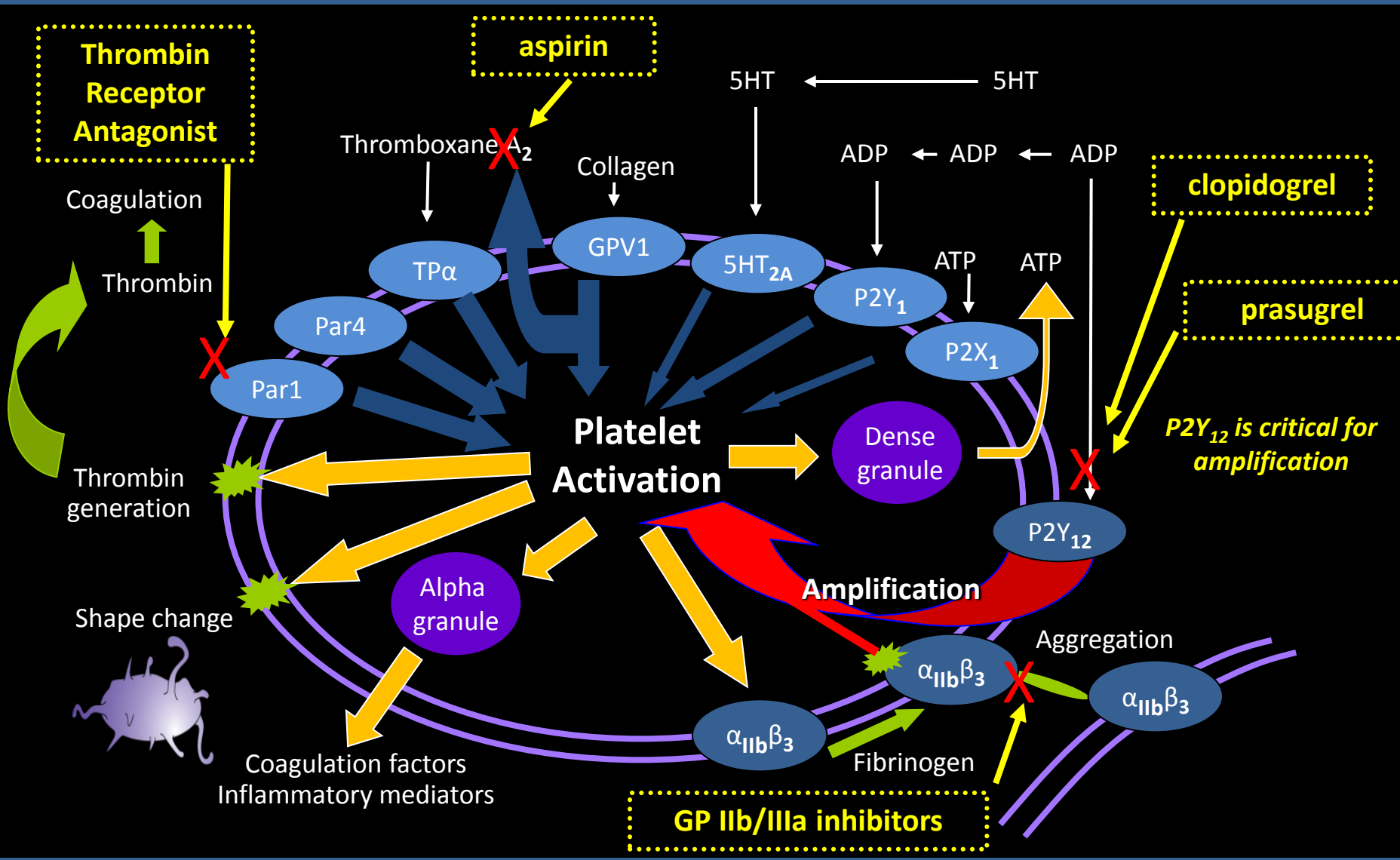
Am J Cardiol 2011;107:805– 811

  - Seguridad uso asociado a betabloqueantes

- **RANOLAZINA**

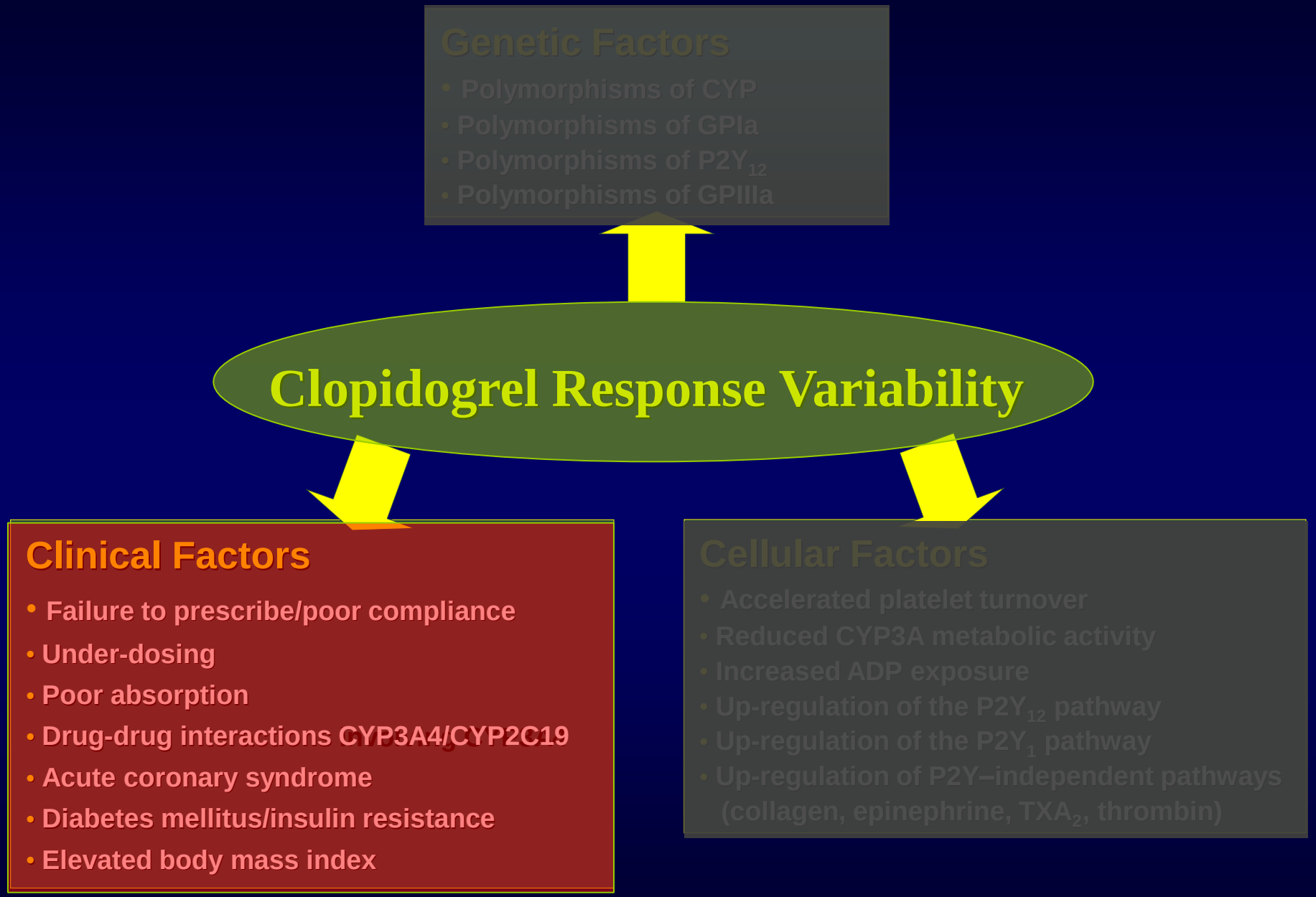
ANTIAGREGANTES

Vías de activación plaquetaria



5HT=5-hidroxitriptamina; ADP=Adenosín difosfato; GP=Glicoproteína; PAR=receptor activado por proteasas; TP=receptor de tromboxano A_2.

Adaptado a partir de Storey RF et al. *Curr Pharm Des* 2006;12:1255-1259



Angiolillo DJ et al. J Am Coll Cardiol. 2007; 49: 1505-1516 .

HIPORRESPONDEDORES

- ¿Hay que hacer test de función plaquetaria?
- ¿Hay que hacer test genéticos?
- ¿Hay que recurrir a la triple antiagregación?
- ¿Usamos aas más nuevos antiagregantes?
- ¿Usamos aas y doble dosis de clopidogrel?

¿Test de agregación plaquetaria?

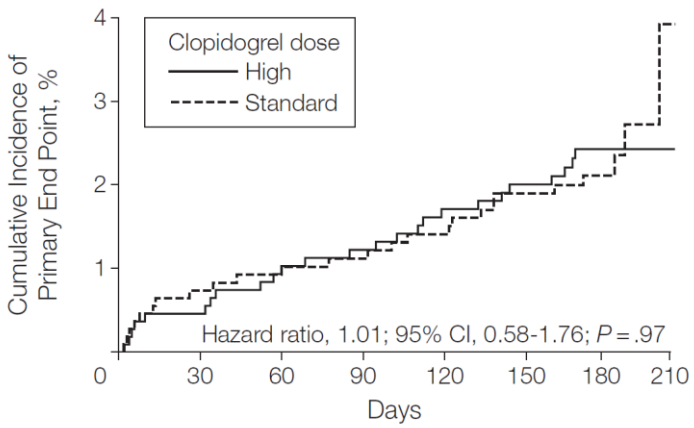
GRAVITAS Study Design

Elective or Urgent PCI with DES*

VerifyNow P2Y12 Test 12-24 hours post-PCI

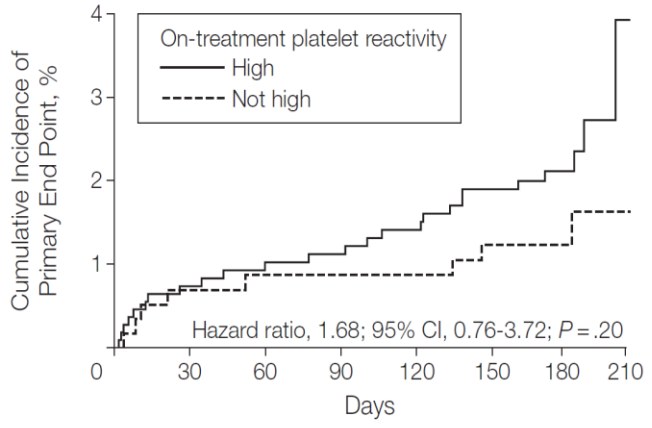
PRU ≥ 230

Patients with high on-treatment platelet reactivity receiving high- or standard-dose clopidogrel



No. at risk								
High-dose clopidogrel	1109	1056	1029	1017	1007	998	747	54
Standard-dose clopidogrel	1105	1057	1028	1020	1015	1005	773	53

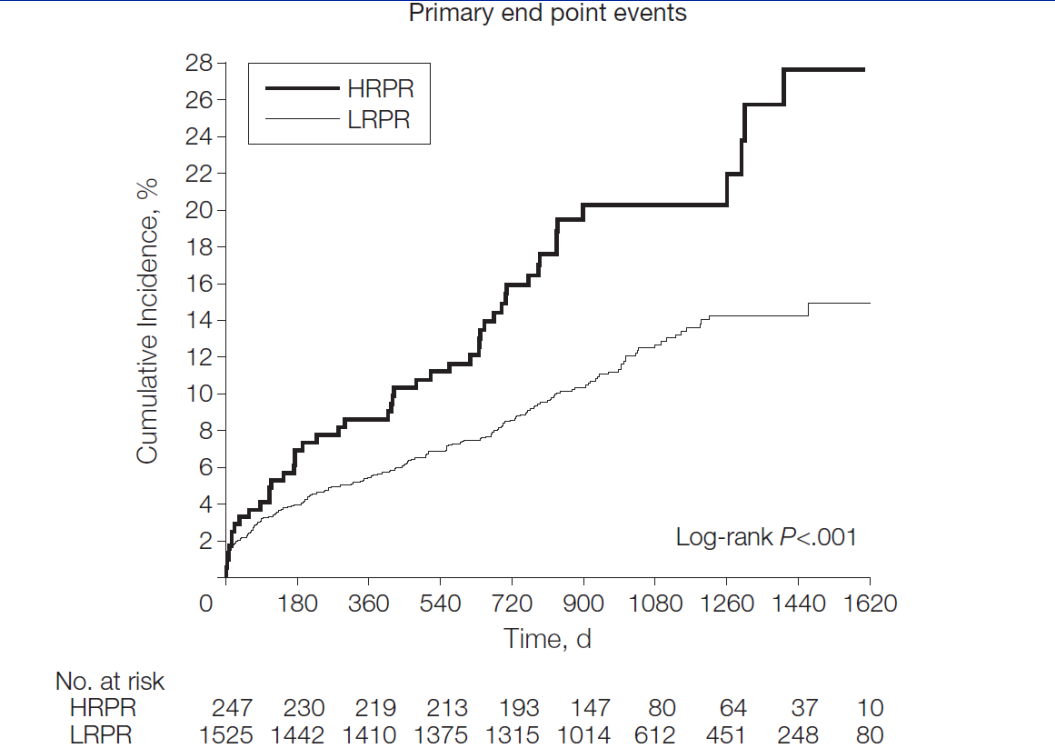
Patients with and without high on-treatment platelet reactivity receiving standard-dose clopidogrel



No. at risk								
High on-treatment reactivity	1105	1057	1028	1020	1015	1005	773	53
Not high on-treatment reactivity	586	565	552	551	549	546	415	19

JAMA. 2011;305(11):1097-1105

High Residual Platelet Reactivity After Clopidogrel Loading and Long-term Cardiovascular Events Among Patients With Acute Coronary Syndromes Undergoing PCI



JAMA. 2011;306(11):1215-1223

POPULAR Study

Comparison of Platelet Function Tests in Predicting Clinical Outcome in Patients Undergoing Coronary Stent Implantation

- El estudio POPULAR analizó la utilidad de los tests de función plaquetaria en 1069 ptes con stent
- El agregómetro de transmisión de luz, el VerifyNow y el Plateworks proporcionaron un moderado Valor Predictivo para eventos CVs al año
- Las mediciones con PFA-100 o IMPACT-R no tuvieron valor pronóstico alguno
- Ninguno predijo el riesgo de sangrado

JAMA. 2010;303(8):754-762

¿Test genéticos?

Drug Safety and Availability

Postmarket Drug Safety Information for Patients and Providers

- Index to Drug-Specific Information
- Approved Risk Evaluation and Mitigation Strategies (REMS)
- Postmarketing Safety Evaluation of New Molecular Entities: Final Report
- Drug Safety Information for Healthcare Professionals

FDA Drug Safety Communication: Reduced effectiveness of Plavix (clopidogrel) in patients who are poor metabolizers of the drug

Safety Announcement

Additional Information for Patients

Additional Information for Healthcare Professionals

Data Summary

Safety Announcement

[03-12-2010] The U.S. Food and Drug Administration (FDA) has added a *Boxed Warning* to the label for Plavix, the anti-blood clotting medication. The *Boxed Warning* is about patients who do not effectively metabolize the drug (i.e. "poor metabolizers") and therefore may not receive the full benefits of the drug.

The *Boxed Warning* in the drug label will include information to:

- Warn about reduced effectiveness in patients who are poor metabolizers of Plavix. Poor metabolizers do not effectively convert Plavix to its active form in the body.
- Inform healthcare professionals that tests are available to identify genetic differences in CYP2C19 function.
- Advise healthcare professionals to consider use of other anti-platelet medications or alternative dosing strategies for Plavix in patients identified as poor metabolizers.

Plavix is given to reduce the risk of heart attack, unstable angina, stroke, and cardiovascular death in patients with cardiovascular disease. Plavix works by decreasing the activity of blood cells called platelets, making platelets less likely to form blood clots.

For Plavix to work, enzymes in the liver (particularly CYP2C19) must convert (metabolize) the drug to its active form. Patients who are poor metabolizers of the drug, do not effectively convert Plavix to its active form. In these patients, Plavix has less effect on platelets, and therefore less ability to prevent heart attack, stroke, and cardiovascular death. It is estimated that 2 to 14% of the population are poor metabolizers; the rate varies based on racial

2% Blancos
4% Negros
14% asiáticos

¿Triple antiagregación?

A Randomized, Double-Blind, Multicenter Comparison Study of Triple Antiplatelet Therapy With Dual Antiplatelet Therapy to Reduce Restenosis After Drug-Eluting Stent Implantation in Long Coronary Lesions

Results From the DECLARE-LONG II (Drug-Eluting Stenting Followed by Cilostazol Treatment Reduces Late Restenosis in Patients with Long Coronary Lesions) Trial

Variable	Triple (n = 250)	Dual (n = 249)	p Value
Death	6 (2.4%)	3 (1.2%)	0.51
Cardiac	4 (1.6%)	1 (0.4%)	
Noncardiac	2 (0.8%)	2 (0.8%)	
MI	4 (1.6%)	4 (1.6%)	0.99
Q-wave	2 (0.8%)	1 (0.4%)	
Non–Q-wave	2 (0.8%)	3 (1.2%)	
Ischemic-driven TLR	13 (5.2%)	25 (10.0%)	0.04
Cutting balloon	6 (2.4%)	12 (4.8%)	
Drug-eluting stent	6 (2.4%)	12 (4.8%)	
Bypass surgery	1 (0.4%)	1 (0.4%)	
Stent thrombosis	4 (1.6%)	1 (0.4%)	0.18
Acute	1 (0.4%)	0	
Subacute	2 (0.8%)	1 (0.4%)	
Late	1 (0.4%)	0	
Ischemic-driven TVR	13 (5.2%)	26 (10.4%)	0.03
Death/MI/ischemic-driven TVR	18 (7.2%)	31 (12.4%)	0.05
MACE (death/MI/ischemic-driven TLR)	18 (7.2%)	30 (12.0%)	0.07

Variable	Triple (n = 250)	Dual (n = 249)	p Value
Bleeding complications	18 (7.2%)	17 (6.8%)	0.87
Major bleeding	6 (2.4%)	2 (0.8%)	0.16
Minor bleeding	1 (0.4%)	1 (0.4%)	0.99
Minimal bleeding	11 (4.4%)	14 (5.6%)	0.53
Headache	11 (4.4%)	2 (0.8%)	0.01
Palpitation	4 (1.6%)	1 (0.4%)	0.18
Rash	8 (3.2%)	7 (2.8%)	0.80
Gastrointestinal trouble	6 (2.4%)	2 (0.8%)	0.16
Thrombocytopenia	1 (0.4%)	0	0.99
Neutropenia	1 (0.4%)	0	0.99
Hepatic dysfunction	0	4 (1.6%)	0.06
Drug discontinuation	47 (18.8%)	28 (11.2%)	0.02

J. Am. Coll. Cardiol. 2011;57;1264-1270

¿Subir dosis de Clopidogrel?

CURRENT Study Design, Flow and Compliance

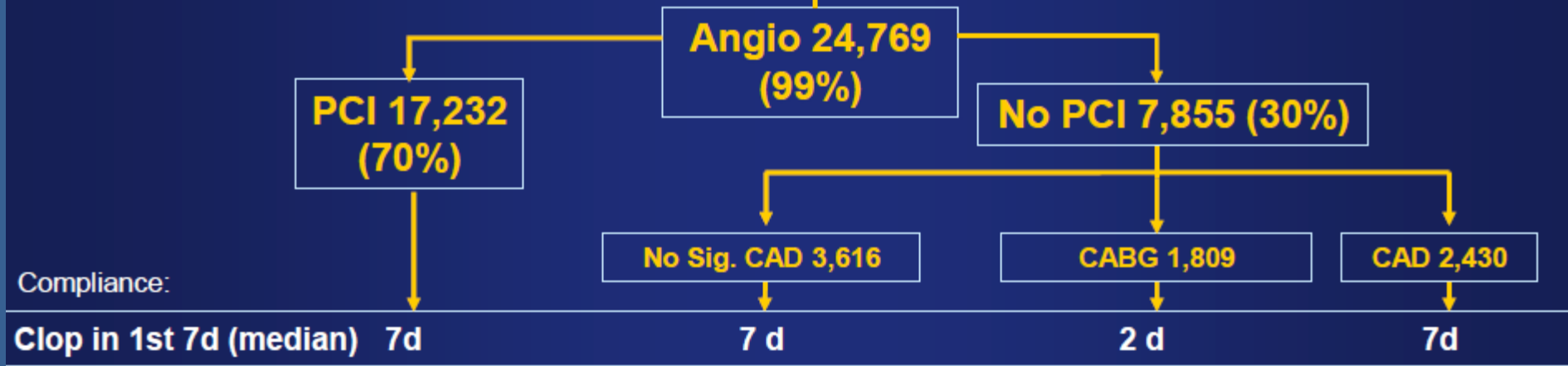
25,087 ACS Patients (UA/NSTEMI 70.8%, STEMI 29.2%)

- ✓ Planned Early (<24 h) Invasive Management with **intended PCI**
- ✓ Ischemic ECG Δ (80.8%) or ↑cardiac biomarker (42%)

Randomized to receive (2 X 2 factorial):

CLOPIDOGREL: Double-dose (600 mg then150 mg/d x 7d then 75 mg/d) **vs** Standard dose (300 mg then 75 mg/d)

ASA: High Dose (300-325 mg/d) **vs** Low dose (75-100 mg/d)



Efficacy Outcomes: CV Death, MI or stroke at day 30
Stent Thrombosis at day 30

Safety Outcomes: Bleeding (CURRENT defined Major/Severe and TIMI Major)

Key Subgroup: PCI v No PCI

Complete Followup 99.8%

Conclusions
Clopidogrel Dose Comparison

CURRENT

1. Double-dose clopidogrel significantly reduced stent thrombosis and major CV events (composite of CV death, MI or stroke) in PCI.

2. In patients not undergoing PCI, double dose clopidogrel was not significantly different from standard dose (70% had no significant CAD or stopped study drug early for CABG).

3. There was a modest excess in CURRENT-defined major bleeds but no difference in TIMI major bleeds, ICH, fatal bleeds or CABG-related bleeds.

Nuevos Antiagregantes

TRITON-TIMI 38

TIMI group,Daiichi Sankyo, Eli Lilly **707 HOSPITALES, 30 PAÍSES (Nov 04 - Enero 07)**

SCA (STEMI or UA/NSTEMI) y PCI Planeada

Aspirina

N= 13,608 10074 scasest y 3534 Scacest

Doble ciego

CLOPIDOGREL
300 mg DC / 75 mg DM

PRASUGREL
60 mg DC/ 10 mg DM

Duración tratamiento: 6-15 meses:14.5 meses

Seguimiento: al alta, a los 30 y 90 días y cada 3 meses; 14 pérdidas de seguimiento

1º endpoint: Muerte CV, IAM no fatal, AVC no fatal

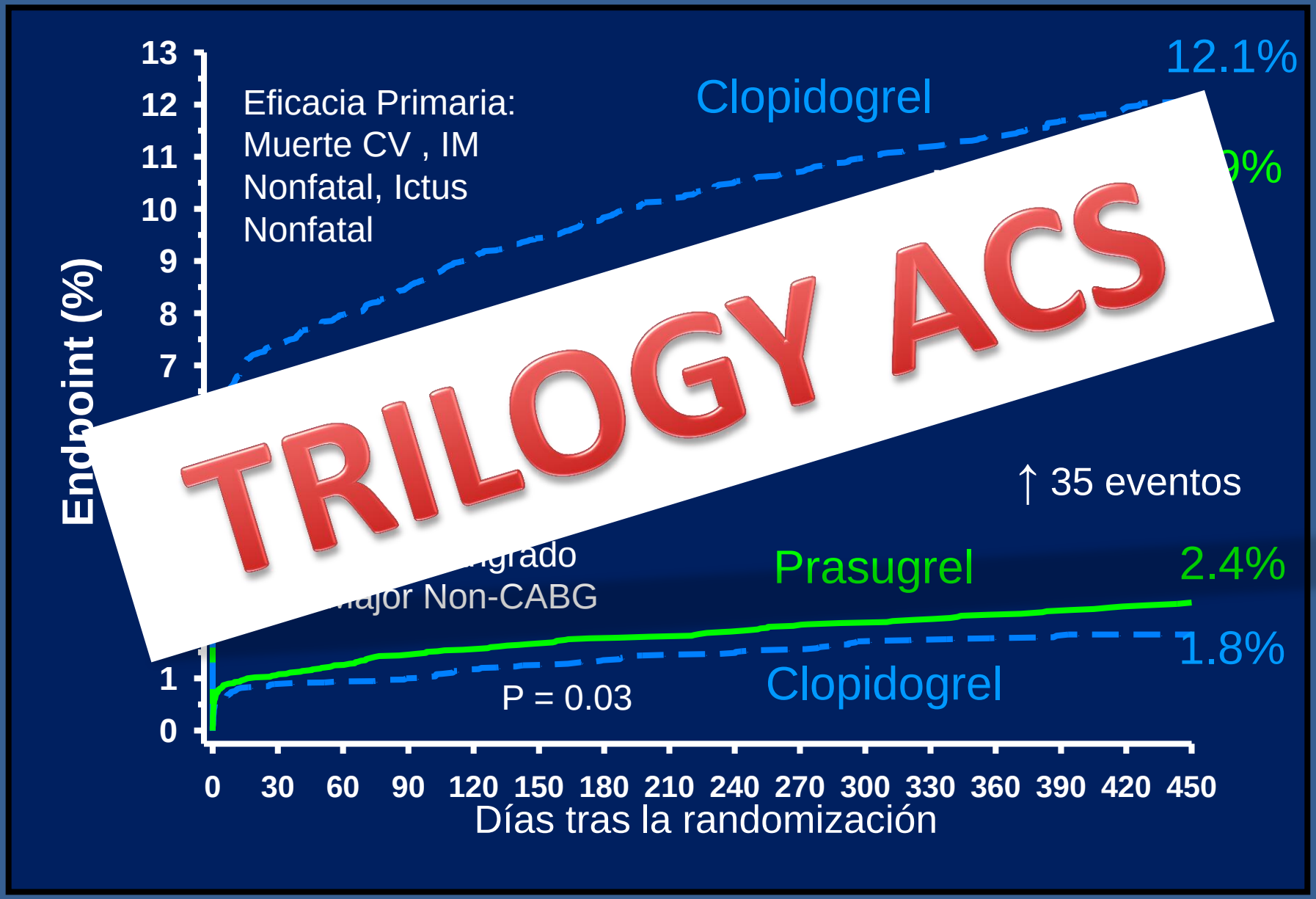
2º endpoint: EP 1º a los 30 y 90 días.
Muerte CV, IAM no fatal o UTVR a los 30 y 90 d
Trombosis de stent (probable o definitva según ARC).
Muerte CV, IAM no fatal, AVC no fatal o rehospitalización por evento isquémico card.

Análisis preespecificado adicional: End point primario 0-3 días y ≥3 días

Endpoint de seguridad:TIMI major bleeds non CABG,Life-threatening bleeds,TIMI mayor o menor bleeds

Wiviott SD, Antman EM et al AHJ 2006

TRITON-TIMI38: EFICACIA Y SEGURIDAD EN LA POBLACION TOTAL



Wiviott SD et al. *NEJM* 2007;357:2001-2015

PLATO study design

PLATO

NSTE-ACS (moderate-to-high risk) STEMI (if primary PCI)
Clopidogrel-treated or -naive;
randomised within 24 hours of index event
(N=18,624)

Clopidogrel
If pre-treated, no additional loading dose;
if naive, standard 300 mg loading dose,
then 75 mg qd maintenance;
(additional 300 mg allowed pre PCI)

Ticagrelor
180 mg loading dose, then
90 mg bid maintenance;
(additional 90 mg pre-PCI)

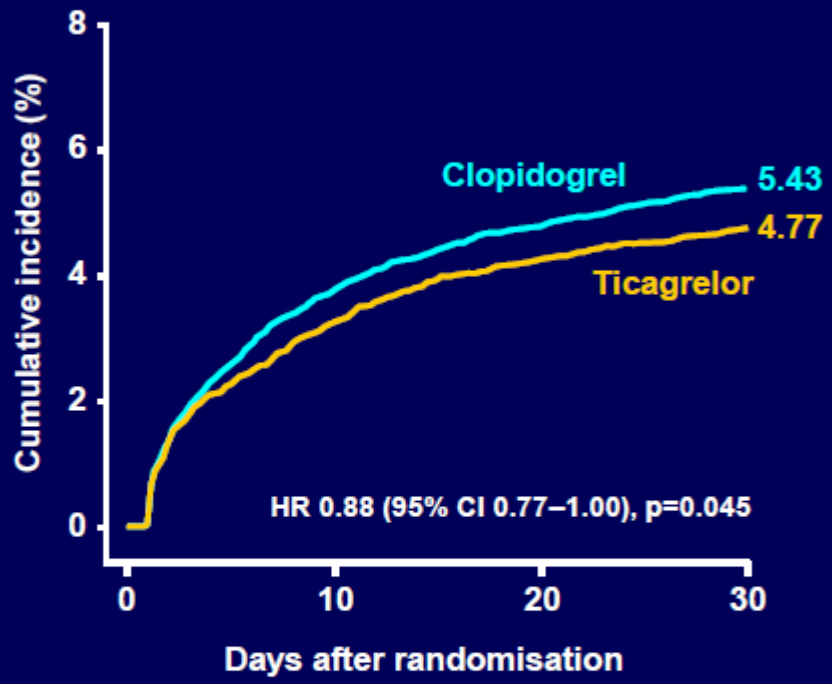
6–12-month exposure

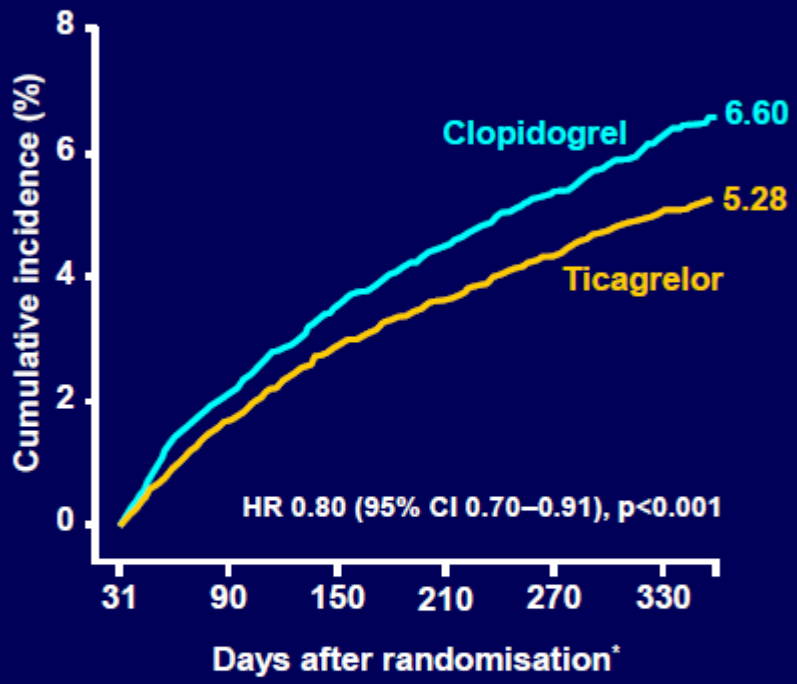
Primary endpoint: CV death + MI + Stroke
Primary safety endpint: Total major bleeding

PCI = percutaneous coronary intervention; ASA = acetylsalicylic acid;
CV = cardiovascular; TIA = transient ischaemic attack

Primary efficacy endpoint over time (composite of CV death, MI or stroke)

PLATO





No. at risk										
Ticagrelor	9,333	8,942	8,827	8,763	8,673	8,543	8,397	7,028	6,480	4,822
Clopidogrel	9,291	8,875	8,763	8,688	8,688	8,437	8,286	6,945	6,379	4,751

*Excludes patients with any primary event during the first 30 days

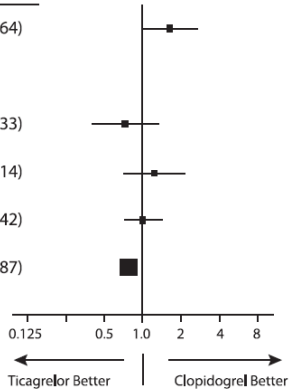
Duke Clinical Research Institute

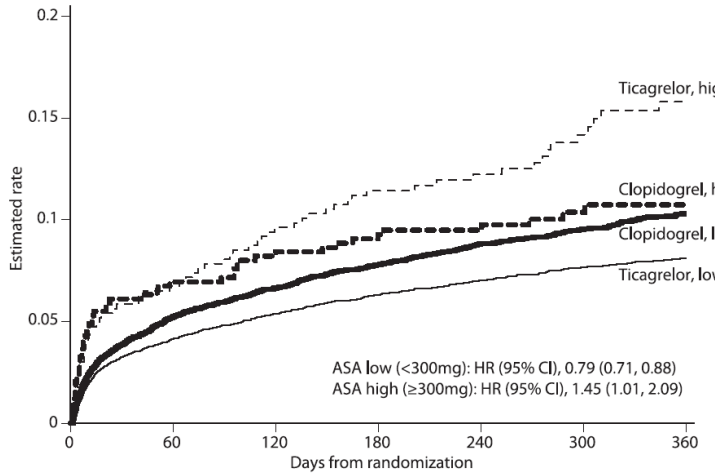
UCR
UPPSALA CLINICAL RESEARCH CENTER

Ticagrelor Compared With Clopidogrel by Geographic Region in the Platelet Inhibition and Patient Outcomes (PLATO) Trial

Kenneth W. Mahaffey, MD; Daniel M. Wojdyla, MS; Kevin Carroll, MS; Richard C. Becker, MD; Robert F. Storey, MD, DM; Dominick J. Angiolillo, MD, PhD; Claes Held, MD, PhD; Christopher P. Cannon, MD; Stefan James, MD, PhD; Karen S. Pieper, MS; Jay Horrow, MD; Robert A. Harrington, MD; Lars Wallentin, MD, PhD; on behalf of the PLATO Investigators

Region	ASA Dose (mg)	Ticagrelor N	Ticagrelor E	Clopidogrel N	Clopidogrel E	HR (95% CI)
US	≥300	324	40	352	27	1.62 (0.99, 2.64)
	>100–<300	22	2	16	2	*
	≤100	284	19	263	24	0.73 (0.40, 1.33)
Non-US	≥300	140	28	140	23	1.23 (0.71, 2.14)
	>100–<300	503	62	511	63	1.00 (0.71, 1.42)
	≤100	7449	546	7443	699	0.78 (0.69, 0.87)



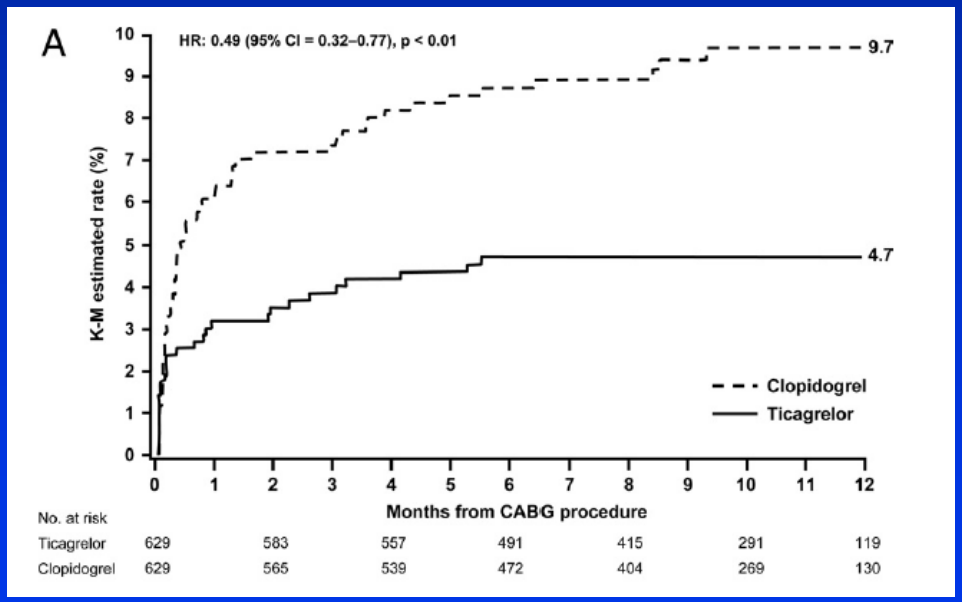


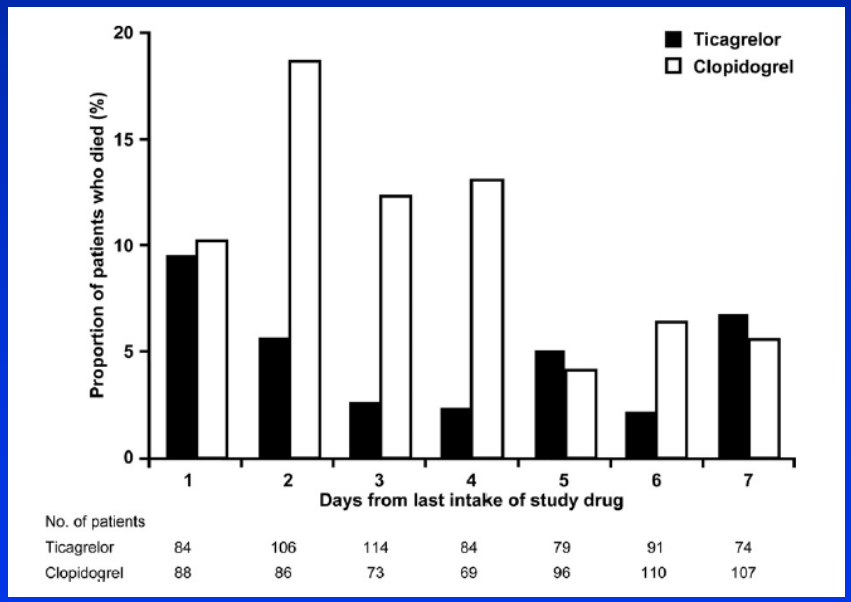
Conclusions—The regional interaction could arise from chance alone. Results of 2 independently performed analyses identified an underlying statistical interaction with aspirin maintenance dose as a possible explanation for the regional difference. The lowest risk of cardiovascular death, myocardial infarction, or stroke with ticagrelor compared with clopidogrel is associated with a low maintenance dose of concomitant aspirin.

Circulation. 2011;124: 21 junio

Ticagrelor Versus Clopidogrel in Patients With Acute Coronary Syndromes Undergoing Coronary Artery Bypass Surgery

Results From the PLATO (Platelet Inhibition and Patient Outcomes) Trial





J Am Coll Cardiol 2011;57:672–84

ESC, Hotline III, Paris, August, 30, 2011

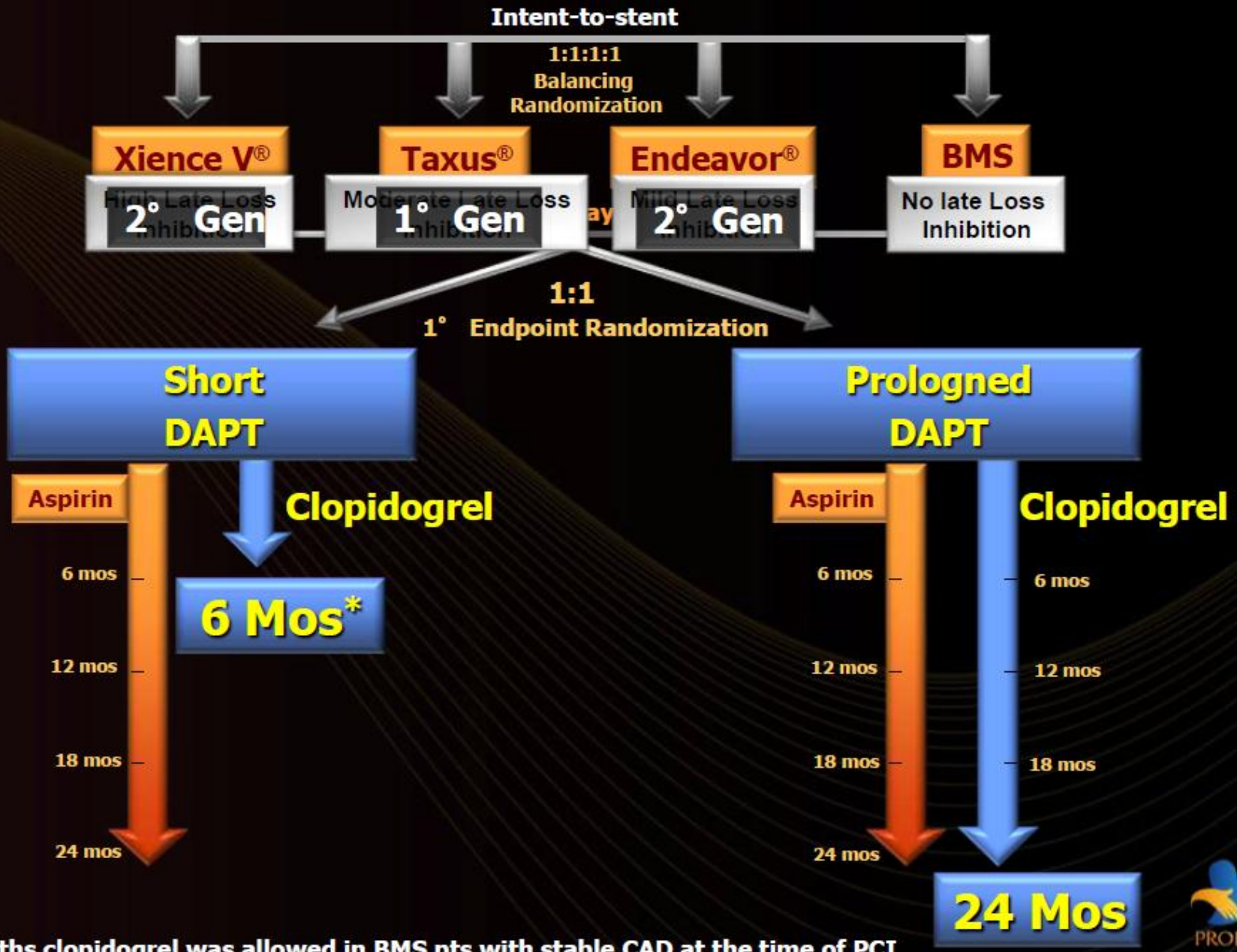
PRODIGY

PROlonging Dual antiplatelet treatment after Grading stent-induced Intimal hyperplasia studY

M. Valgimigli, MD, PhD
University of Ferrara, *ITALY*
On behalf of the PRODIGY Investigators

clinicaltrials.gov Identifier: NCT00611286

PRODIGY Study Flow Chart

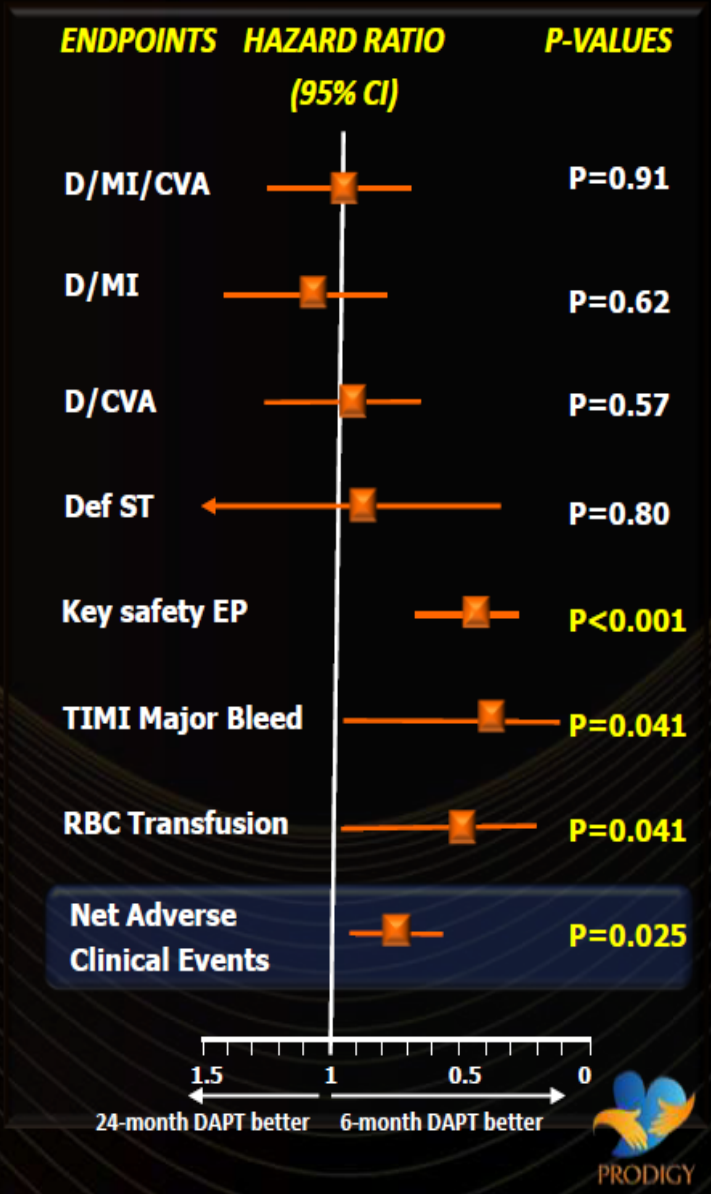


*: <6 months clopidogrel was allowed in BMS pts with stable CAD at the time of PCI

Summary

Our study failed to show that prolonging DAPT for 24 months is superior to 6 month duration of Tx in pts receiving 1 or 2 gen DES or at least 1 month after BMS

While we cannot rule out the possibility that a smaller than previously anticipated benefit may exist, the clear increase in bleeding, transfusion and net adverse clinical events, suggests that current recommendations may have overemphasized the benefit over the risk of long-term treatment with aspirin and clopidogrel



Bern-Rotterdam Cohort Study

Newer generation everolimus-eluting stents eliminate the risk of very late stent thrombosis compared with early generation sirolimus-eluting and paclitaxel-eluting stents

Lorenz Räber, Michael Magro, Giulio G. Stefanini, Bindu Kalesan, Ron T. van Domburg, Yoshinobu Onuma, Peter Wenaweser, Joost Daemen, Bernhard Meier, Peter Jüni, Patrick W. Serruys, Stephan Windecker

Department of Cardiology
Swiss Cardiovascular Center and Clinical Trials Unit Bern
Bern University Hospital, Switzerland
Thoraxcenter, Erasmus Medical Center, Rotterdam, The Netherlands

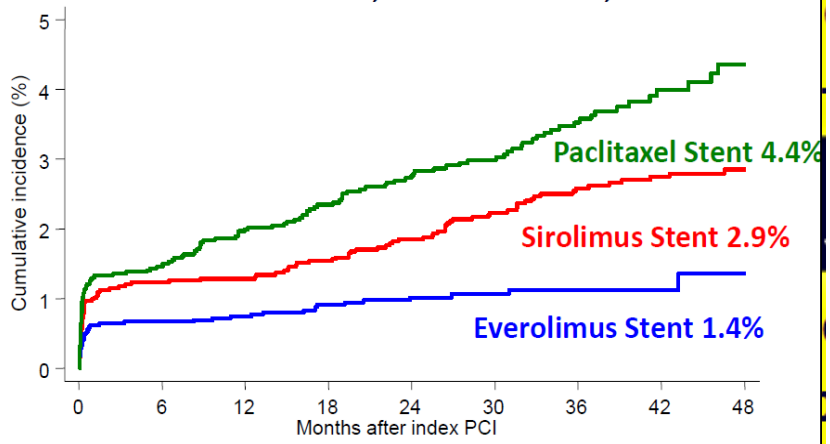
BR Cohort Study - Patient Flow

12339 Patients Undergoing PCI

Primary Endpoint
ARC Definite ST @ 4 Years

EES vs. SES Hazard Ratio = 0.41, 95% CI 0.27–0.62, P<0.0001*

EES vs. PES Hazard Ratio =0.33, 95% CI 0.23-0.48, P <0.0001*



No. at risk

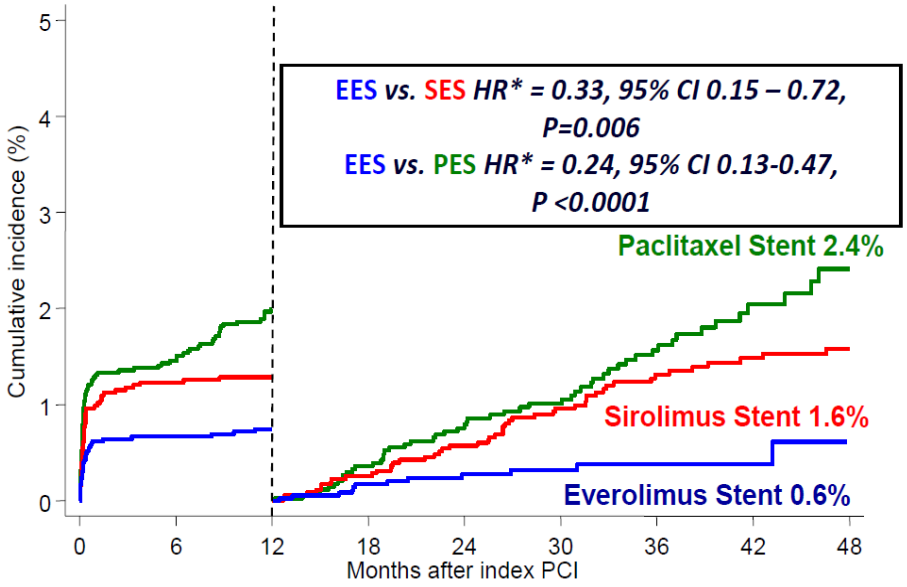
PES	4214	3916	3797	3176	2905	2344	1880	1077	686
SES	3784	3617	3569	3499	3404	3080	2521	2118	1734
EES	4135	3913	3793	3284	2604	1856	1041	514	208

*from Cox proportional hazards model

Very Late ST (1-4yrs)

EES vs. SES HR = 0.33, 95% CI 0.15 – 0.72, P=0.006*

EES vs. PES HR = 0.24, 95% CI 0.13-0.47, P <0.0001*



*from Cox proportional hazards model

***F/U rate at the time of latest follow-up**

Full Text View | Tabular View | No Study Results Posted | Related Studies

MANTENANCE OF PLATELET INHIBITION WITH CANGLELOR (BRIDGE)

This study has been completed.

First Received on October 6, 2008. Last Updated on September 12, 2011 History of Changes

Sponsor:	The Medicines Company
Information provided by (Responsible Party):	The Medicines Company
ClinicalTrials.gov Identifier:	NCT00767507

Purpose

The purpose of this study is to demonstrate that patients receiving cangrelor infusion before coronary artery bypass grafting have an acceptable safety profile and can undergo surgery without excessive bleeding peri-operatively.

Condition	Intervention	Phase
Acute Coronary Syndrome	Procedure: Coronary Artery Bypass Graft Surgery	Phase II

Enrollment: 210
Study Start Date: October 2008
Study Completion Date: July 2011
Primary Completion Date: June 2011 (Final data collection date for primary outcome measure)

Arms	Assigned Interventions
Cangrelor: Active Comparator Intervention: Procedure: Coronary Artery Bypass Graft Surgery	Procedure: Coronary Artery Bypass Graft Surgery Coronary Artery Bypass Graft Surgery
Placebo: Placebo Comparator Intervention: Procedure: Coronary Artery Bypass Graft Surgery	Procedure: Coronary Artery Bypass Graft Surgery Coronary Artery Bypass Graft Surgery

Eligibility

Ages Eligible for Study: 18 Years to 90 Years
Genders Eligible for Study: Both
Accepts Healthy Volunteers: No

Criteria

Inclusion Criteria:

- Written informed consent 18 Years of Age non emergent coronary bypass graft surgery Received a thienopyridine within 48 hours prior to enrollment

Exclusion Criteria:

- Confirmed or suspected pregnancy Cerebrovascular accident within one yar Intracranial neoplasm History of bleeding diathesis Thrombocytopenia

GUIAS DE PRACTICA CLINICA

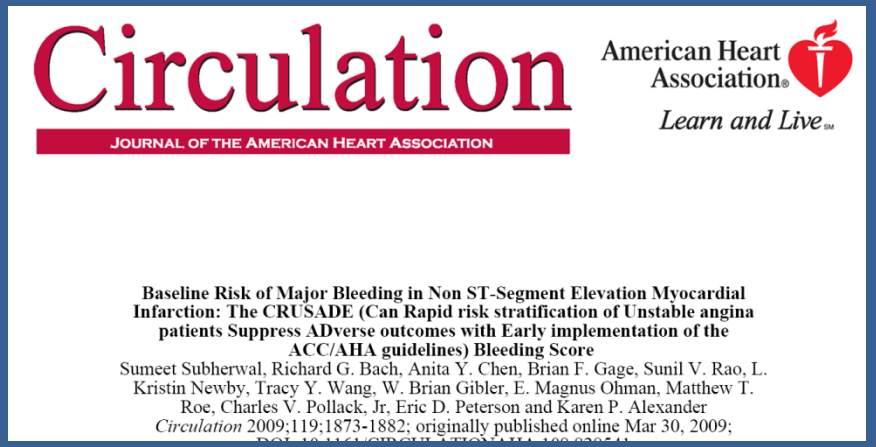
Tratamiento del SCA: balance de riesgos

- Beneficio clínico (eficacia antiisquémica)
- Complicaciones hemorrágicas

Valoración riesgo hemorrágico

CRUSADE Bleeding Score Nomogram

Predictor	Range	Score
Baseline hematocrit (%)	<31	9
	31-33.9	7
	34-36.9	3
	37-39.9	2
	≥40	0
Creatinine clearance (mL/min) (Note: Cockcroft-Gault is truncated at >90 mL/min)	≤15	39
	>15-30	35
	>30-60	28
	>60-90	17
	>90-120	7
	>120	0
Heart rate (bpm) (Note: heart rate is truncated at	≤70	0
	71-80	1
	81-90	3
	91-100	6
	101-110	8
	111-120	10
	≥121	11
Sex	Male	0
	Female	8
Signs of CHF at presentation	No	0
	Yes	7
Prior vasular disease (defined as prior PAD or stroke)	No	0
	Yes	6
Diabetes mellitus	No	0
	Yes	6
Systolic blood pressure (mm Hg)	≤90	10
	91-100	8
	101-120	5
	121-180	1
	181-200	3
	≥201	5



Patient Risk Score and Corresponding Rate of Major Bleeding:

Very Low risk	Low risk	Moderate risk	High risk	Very high risk
≤20	21-30	31-40	41-50	>50
3.1%	5.5%	8.6%	11.9%	19.5%

Perfil del sangrador: Mujer anciana con I.Renal

European Heart Journal
doi:10.1093/eurheartj/ehq277

ESC/EACTS GUIDELINES

Guidelines on myocardial revascularization

The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)

Developed with the special contribution of the European Association for Percutaneous Cardiovascular Interventions (EAPCI)†

Authors/Task Force Members: William Wijns (Chairperson) (Belgium)*, Philippe Kolh (Chairperson) (Belgium)*, Nicolas Danchin (France), Carlo Di Mario (UK), Volkmar Falk (Switzerland), Thierry Folliguet (France), Scot Garg (The Netherlands), Kurt Huber (Austria), Stefan James (Sweden), Juhani Knuuti (Finland), Jose Lopez-Sendon (Spain), Jean Marco (France), Lorenzo Menicanti (Italy) Miodrag Ostojic (Serbia), Massimo F. Piepoli (Italy), Charles Pirlet (Belgium), Jose L. Pomar (Spain), Nicolaus Reifart (Germany), Flavio L. Ribichini (Italy), Martin J. Schalij (The Netherlands), Paul Sergeant (Belgium), Patrick W. Serruys (The Netherlands), Sigmund Silber (Germany), Miguel Sousa Uva (Portugal), David Taggart (UK)

NSTE-ACS				
Antiplatelet therapy				
	ASA	I	C	—
	Clopidogrel (with 600 mg loading dose as soon as possible)	I	C	—
	Clopidogrel (for 9–12 months after PCI)	I	B	55
	Prasugrel[d]	IIa	B	246, 247
	Ticagrelor[d]	I	B	248
	+ GPIIb–IIIa antagonists (in patients with evidence of high intracoronary thrombus burden)			
	Abciximab (with DAPT)	I	B	249
	Tirofiban, Eptifibatide	IIa	B	55
	Upstream GPIIb–IIIa antagonists	III	B	65
Anticoagulation				
Very high-risk of ischaemia[e]	UFH (+GPIIb–IIIa antagonists) or	I	C	—
	Bivalirudin (monotherapy)	I	B	251
Medium-to-high-risk of ischaemia[e]	UFH	I	C	—
	Bivalirudin	I	B	251
	Fondaparinux	I	B	250
	Enoxaparin	IIa	B	55, 60
Low-risk of ischaemia[e]	Fondaparinux	I	B	250
	Enoxaparin	IIa	B	55, 60

STEMI				
Antiplatelet therapy				
	ASA	I	B	55, 94
	Clopidogrel[f] (with 600 mg loading dose as soon as possible)	I	C	—
	Prasugrel[d]	I	B	246, 252
	Ticagrelor[d]	I	B	248, 253
	+ GPIIb–IIIa antagonists (in patients with evidence of high intracoronary thrombus burden)			
	Abciximab	IIa	A	55, 94
	Eptifibatide	IIa	B	259, 260
	Tirofiban	IIb	B	55, 94
	Upstream GPIIb–IIIa antagonists	III	B	86
Anticoagulation				
	Bivalirudin (monotherapy)	I	B	255
	UFH	I	C	—
	Fondaparinux	III	B	256

POSICIONAMIENTO
EN GUÍAS DE PRÁCTICA CLÍNICA

GUIAS NICE 2009(National Institute for health and Clinical Excellence)

Prasugrel en combinación con aspirina se recomienda en pacientes con SCA-ICP en las tres siguientes circunstancias clínicas:

- ICP primaria/inmediata en pacientes con STEMI
- Pacientes STEMI/NSTEMI que han padecido trombosis del stent, estando bajo el tratamiento con clopidogrel.
- Pacientes con diabetes mellitus. (STEMI y no-STEMI)

Guías Americanas de SCACEST 2009

- II b-IIIa durante APTC 1ª en pacientes seleccionados (IIa)
- Se introduce Prasugrel (IB) en APTC 1ª y en STEMI no primaria, manteniendo Clopidogrel 300-600 mg (IC)
- Mantener Clopidogrel o Prasugrel al menos 1 año en STEMI y stent
- Se añade bivalirudina como anticoagulante en STEMI 1ª (I)
- Es razonable el uso de trombectomía en APTC 1ª (IIa)
- Stent DES como alternativa a convencionales en APTC 1ª (II a)
- Creación de redes comunitarias de atención al STEMI
- Traslado de pacientes FB a centros con hemodinámica(IIa y IIb)
- Elimina la recomendación de normalizar la glucemia con insulina iv

Guías Europeas 2011 SCASEST

Recommendations	Class [a]	Level [b]
Aspirin should be given to all patients without contraindications at an initial loading dose of 150–300 mg, and at a maintenance dose of 75–100 mg daily long-term regardless of treatment strategy.	I	A
A $P2Y_{12}$ inhibitor should be added to aspirin as soon as possible and maintained over 12 months, unless there are contraindications such as excessive risk of bleeding.	I	A
A proton pump inhibitor (preferably not omeprazole) in combination with DAPT is recommended in patients with a history of gastrointestinal haemorrhage or peptic ulcer, and appropriate for patients with multiple other risk factors (*H. elicobacter pylori* infection, age ≥65 years, concurrent use of anticoagulants or steroids).	I	A
Prolonged or permanent withdrawal of $P2Y_{12}$ inhibitors within 12 months after the index event is discouraged unless clinically indicated.	I	C
Ticagrelor (180-mg loading dose, 90 mg twice daily) is recommended for all patients at moderate-to-high risk of ischaemic events (e.g. elevated troponins) , regardless of initial treatment strategy and including those pre-treated with clopidogrel (which should be discontinued when ticagrelor is commenced).	I	B
Prasugrel (60-mg loading dose, 10-mg daily dose) is recommended for $P2Y_{12}$-inhibitor-naïve patients (especially diabetics) in whom coronary anatomy is known and who are proceeding to PCI unless there is a high risk of life-threatening bleeding or other contraindications.[d]	I	B
Clopidogrel (300-mg loading dose, 75-mg daily dose) is recommended for patients who cannot receive ticagrelor or prasugrel.	I	A
A 600-mg loading dose of clopidogrel (or a supplementary 300-mg dose at PCI following an initial 300-mg loading dose) is recommended for patients scheduled for an invasive strategy when ticagrelor or prasugrel is not an option.	I	B

European Heart Journal doi:10.1093/eurheartj/ehr236

CLOPIDOGREL Y PROTECCION GÁSTRICA

Clopidogrel e IBP

EMEA
17 Marzo
2010

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

17 March 2010
EMA/174948/2010

Public statement

Interaction between clopidogrel and proton-pump inhibitors

CHMP updates warning for clopidogrel-containing medicines

Taking all of the currently available data into account, the CHMP and its Pharmacovigilance Working Party have concluded that there are no solid grounds to extend the warning to other PPIs. The class warning for all PPIs has been replaced with a warning stating that only the concomitant use of clopidogrel and omeprazole or esomeprazole should be discouraged. The Committee also recommended that a description of the results of the two recent studies that show the interaction between clopidogrel and omeprazole be added to the product information.

Xavier Luria
Head of Sector, Safety and Efficacy of Medicines

AEMPS
27 Abril 2010

MINISTERIO DE SANIDAD Y POLÍTICA SOCIAL
agencia española de medicamentos y productos sanitarios
SUBDIRECCIÓN GENERAL DE MEDICAMENTOS DE USO HUMANO

COMUNICACIÓN SOBRE RIESGOS DE MEDICAMENTOS PARA PROFESIONALES SANITARIOS

Ref: 2010/04
26 de abril de 2010

Corrección de 27 de abril de 2010

NOTA INFORMATIVA

INTERACCIÓN DE CLOPIDOGREL CON LOS INHIBIDORES DE LA BOMBA DE PROTONES: ACTUALIZACIÓN DE LA INFORMACIÓN Y RECOMENDACIONES DE USO

Se desaconseja el uso concomitante de clopidogrel con omeprazol o esomeprazol o con otros inhibidores de CYP2C19, excepto cuando se considere estrictamente necesario.

Estas recomendaciones no se aplican al resto de IBP diferentes a omeprazol o esomeprazol, ya que, aunque no puede descartarse completamente esta interacción, la evidencia actualmente disponible no apoya esta precaución.

Clopidogrel e IBP

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association®
Learn and Live℠

ACCF/ACG/AHA 2010 Expert Consensus Document on the Concomitant Use of Proton Pump Inhibitors and Thienopyridines: A Focused Update of the ACCF/ACG/AHA 2008 Expert Consensus Document on Reducing the Gastrointestinal Risks of Antiplatelet Therapy and NSAID Use: A Report of the American College of Cardiology Foundation Task Force on Expert Consensus Documents

Writing Committee Members, Neena S. Abraham, Mark A. Hlatky, Elliott M. Antman, Deepak L. Bhatt, David J. Bjorkman, Craig B. Clark, Curt D. Furberg, David A. Johnson, Charles J. Kahi, Loren Laine, Kenneth W. Mahaffey, Eamonn M. Quigley, James Scheiman, Laurence S. Sperling and Gordon F. Tomaselli

Circulation 2010;122;2619-2633; originally published online Nov 8, 2010;

ANTIPLATELET THERAPY

Clopidogrel–PPI interaction, an ongoing controversy

Paul A. Gurbel and Udaya S. Tantry

Nat. Rev. Cardiol. 8, 7–8 (2011)

SPICE Evaluation of the Influence of Statins and Proton Pump Inhibitors on Clopidogrel Antiplatelet Effects

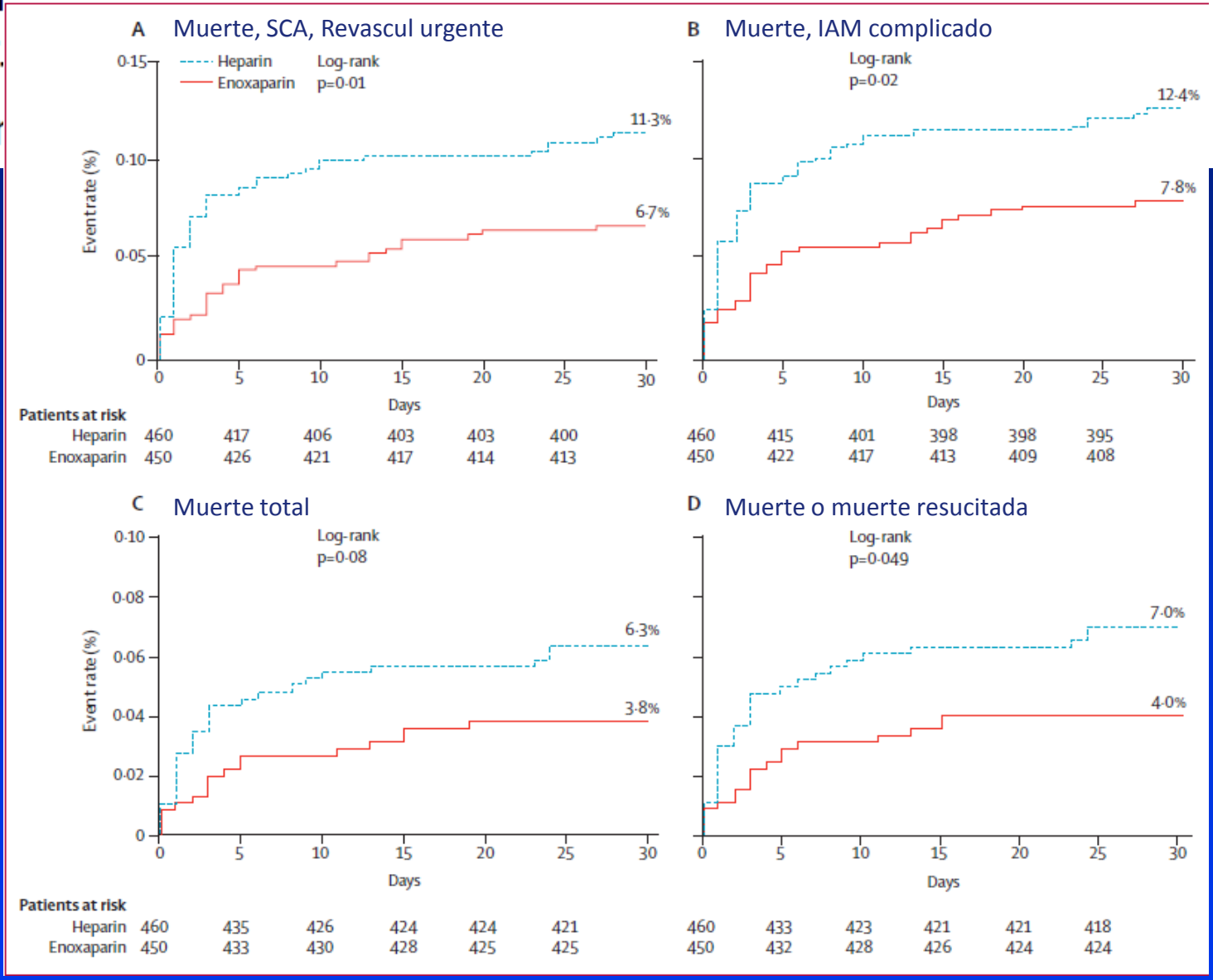
ANTICOAGULANTES

NUEVOS ANTICOAGULANTES en SCA

- **Inhibidores factor Xa**
  - Apixaban (APPRAISE-2): suspensión prematura por aumentos del sangrado con eficacia similar
  - Rivaroxaban (ATLAS ACS2-TIMI 51): Eficacia clínica superior con mayor sangrado (beneficio clínico neto?)
  - Doroxaban (RUBI-1): Fase II. Mayor sangrado sin beneficio clínico. Suspensión investigación
- **Inhibidores PAR-1**
  - Voropaxar (TRACER): Análisis interino seguridad

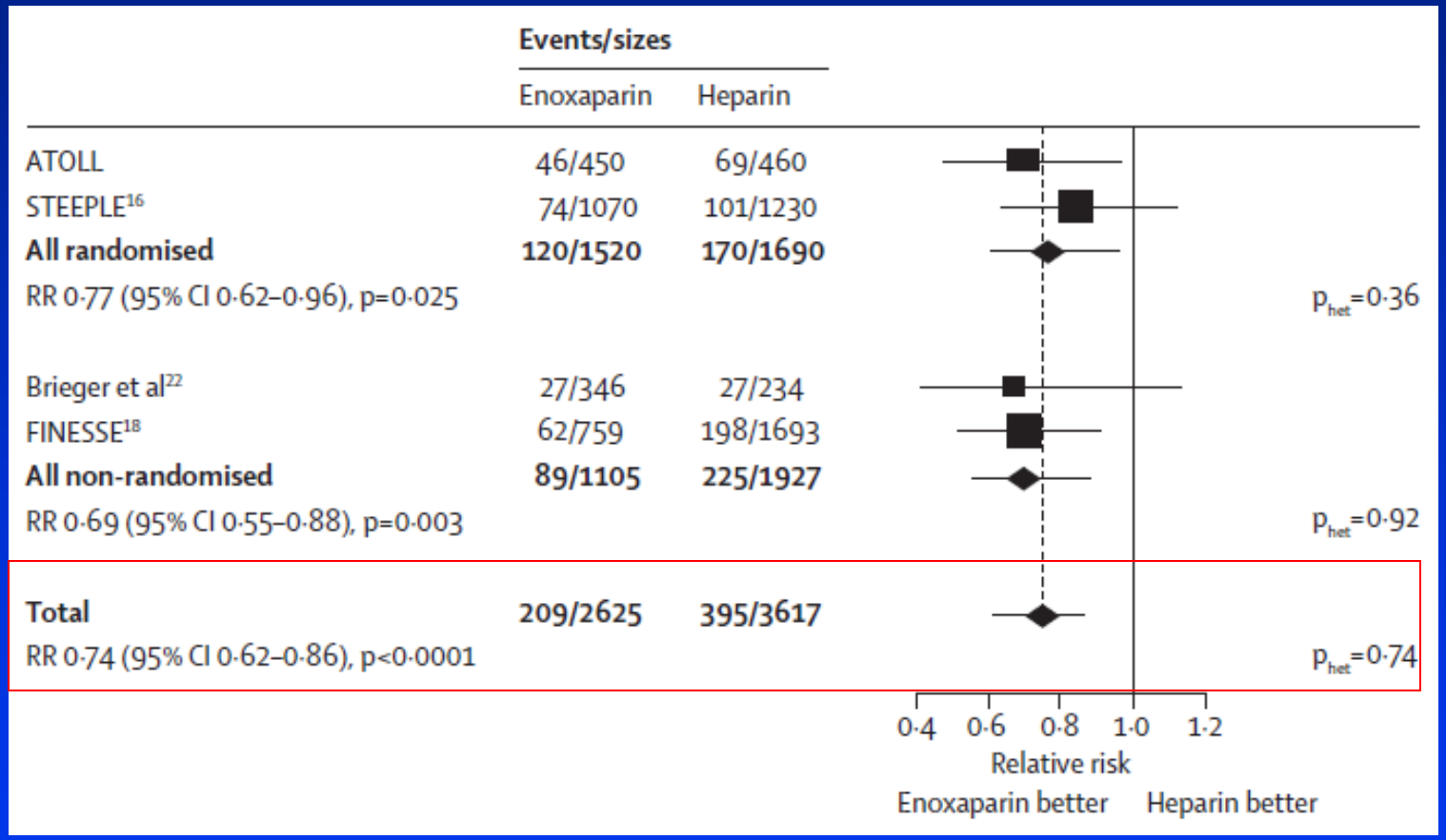
N Engl J Med 2011;365:699-708.
Am Heart J 2011;161:815-821.e6
EHJ online 30 Aug 2011

Intravenous enoxaparin or unfractionated heparin in primary percutaneous coronary intervention for ST- ra



Lancet 2011; 378: 693–703

Intravenous enoxaparin or unfractionated heparin in primary percutaneous coronary intervention for ST-elevation myocardial infarction: the international randomised open-label ATOLL trial



Lancet 2011; 378: 693–703

Qué hacer en los pacientes anticoagulados que requieren doble antiagregación?

Table 11 Antithrombotic strategies following coronary artery stenting in patients with AF at moderate to high thrombo-embolic risk (in whom oral anticoagulation therapy is required)

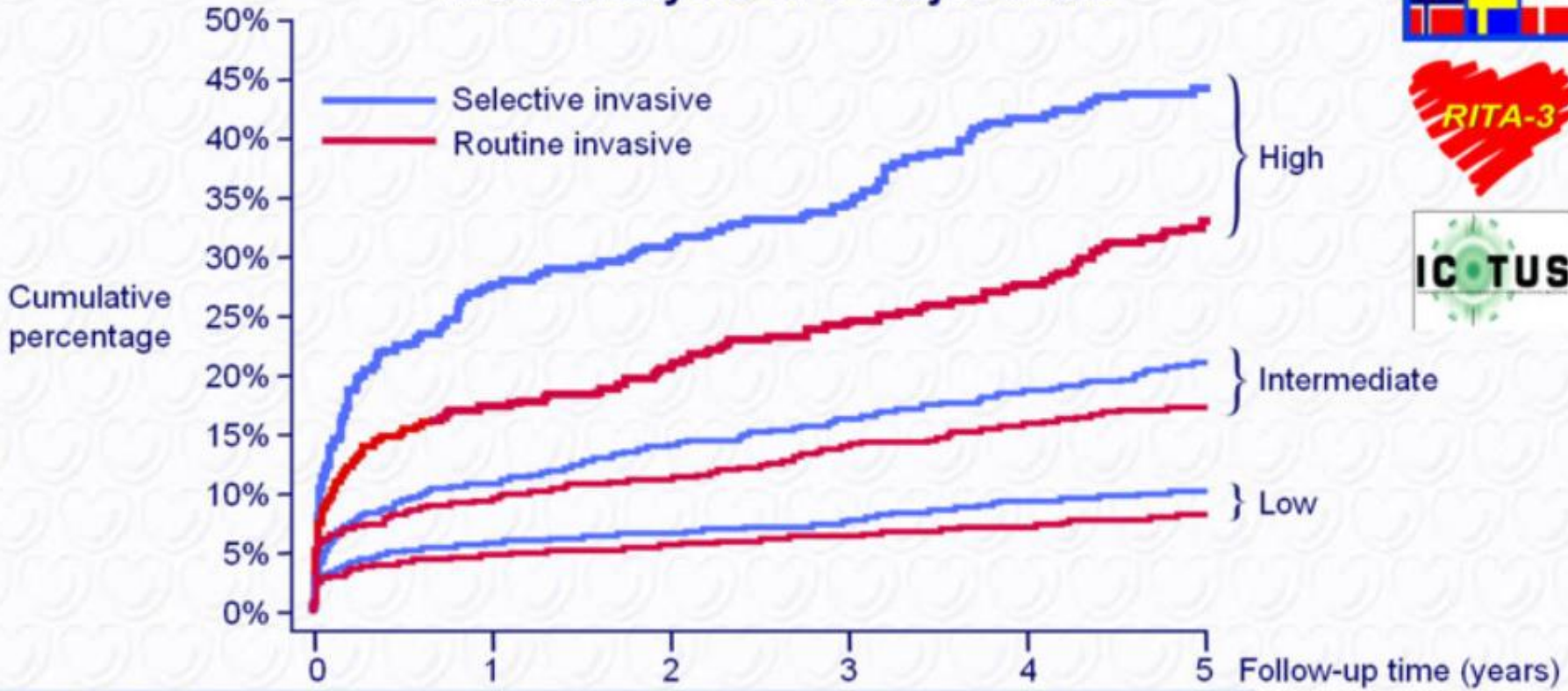
Haemorrhagic risk	Clinical setting	Stent implanted	Anticoagulation regimen
Low or intermediate (e.g. HAS-BLED score 0–2)	Elective	Bare-metal	1 month: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
	Elective	Drug-eluting	3 (-olimus[a] group) to 6 (paclitaxel) months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal/ drug-eluting	6 months: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone
High (e.g. HAS-BLED score ≥3)	Elective	Bare-metal[c]	2–4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Lifelong: VKA (INR 2.0–3.0) alone
	ACS	Bare-metal[c]	4 weeks: triple therapy of VKA (INR 2.0–2.5) + aspirin ≤100 mg/day + clopidogrel 75 mg/day Up to 12th month: combination of VKA (INR 2.0–2.5) + clopidogrel 75 mg/day[b] (or aspirin 100 mg/day) Lifelong: VKA (INR 2.0–3.0) alone

ACS = acute coronary syndrome; AF = atrial fibrillation; INR = international normalized ratio; VKA = vitamin K antagonist.
Gastric protection with a proton pump inhibitor (PPI) should be considered where necessary.
[a]Sirolimus, everolimus, and tacrolimus.
[b]Combination of VKA (INR 2.0–3.0)+aspirin ≤100 mg/day (with PPI, if indicated) may be considered as an alternative.
[c]Drug-eluting stents should be avoided as far as possible, but, if used, consideration of more prolonged (3–6 months) triple antithrombotic therapy is necessary.
Adapted from Lip *et al.*[61]

REVASCULARIZACION

Intended Early Invasive vs. Conservative Strategy

Long term outcome by initial Risk Score
Meta-analysis of 3 major trials



Selective invasive	2746	2452	2351	2178	2077	2005
Routine invasive	2721	2485	2410	2235	2166	2079

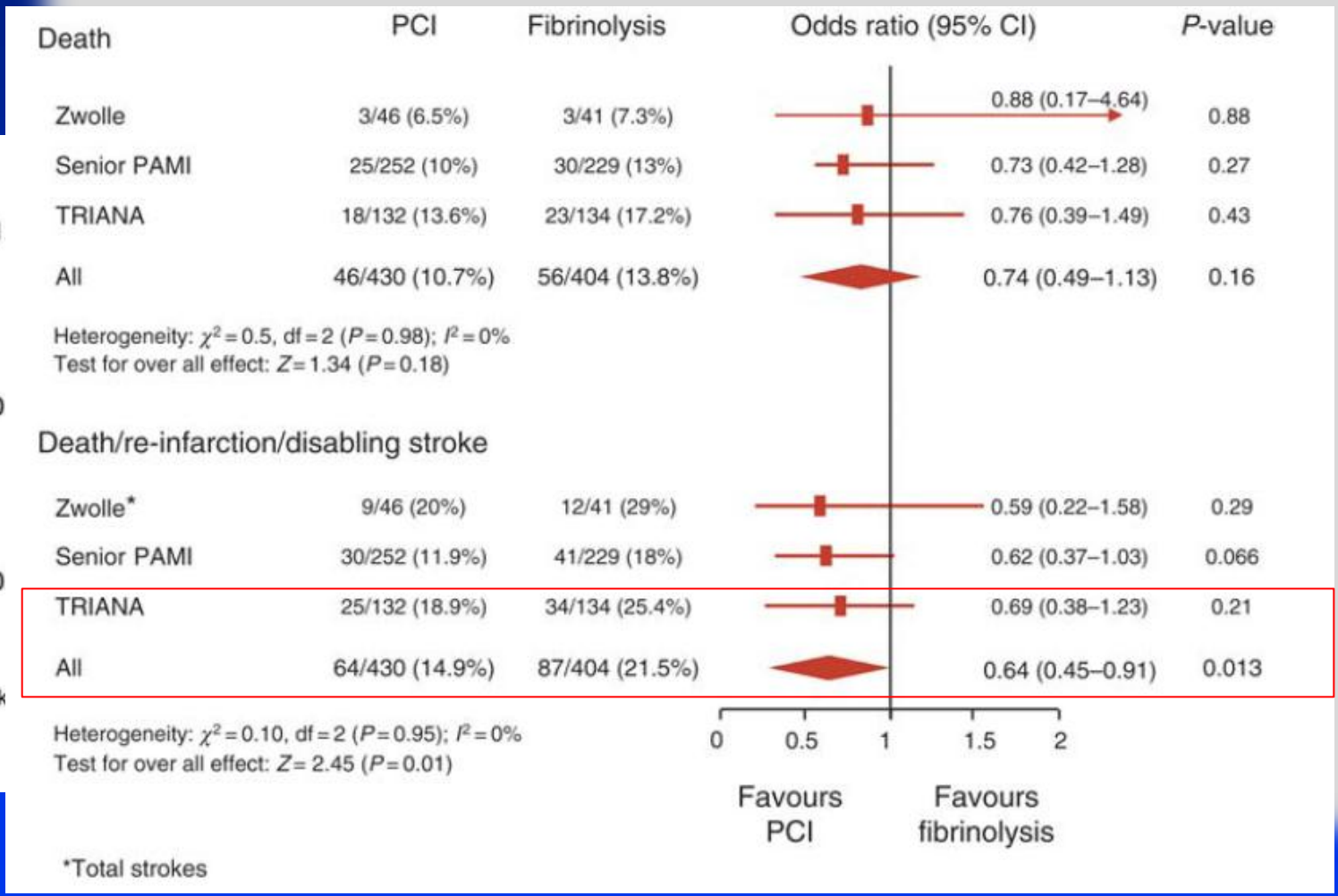
Fox KA et al. *JACC* 2010;55(22):2435-45

FRISC2

RITA-3

ICTUS

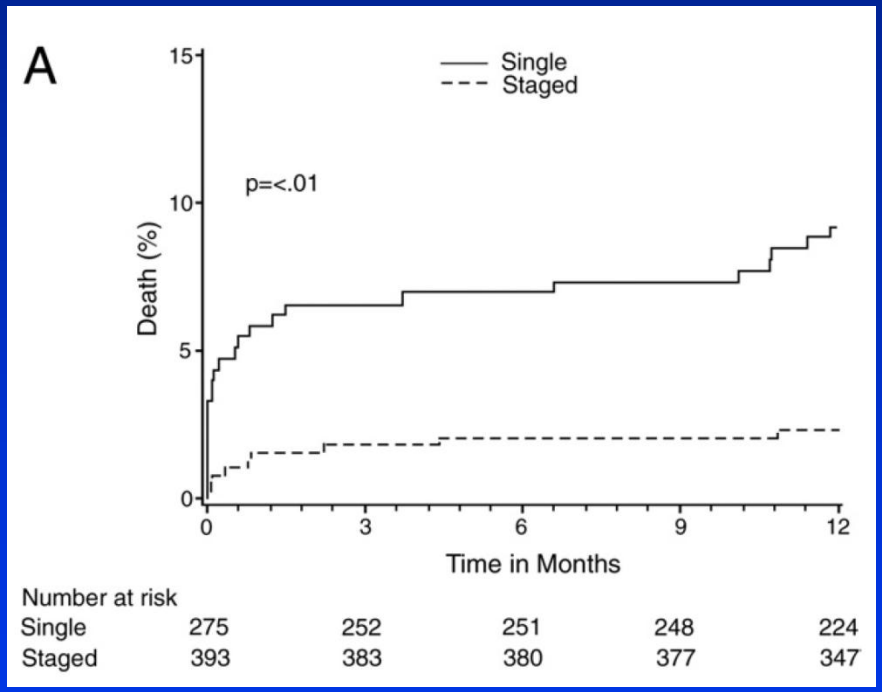
Primary angioplasty vs. fibrinolysis in very old patients with acute myocardial infarction: TRIANA (TRatamiento del Infarto Agudo de miocardio eN Ancianos) randomized trial

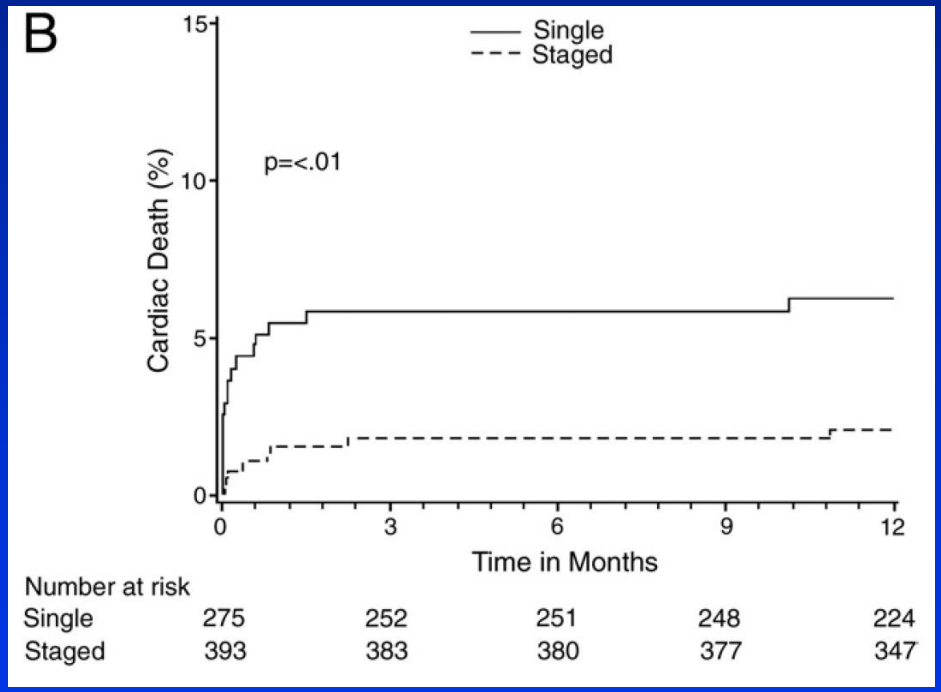


European Heart Journal (2011) 32, 51–60

Prognostic Impact of Staged Versus "One-Time" Multivessel Percutaneous Intervention in Acute Myocardial Infarction

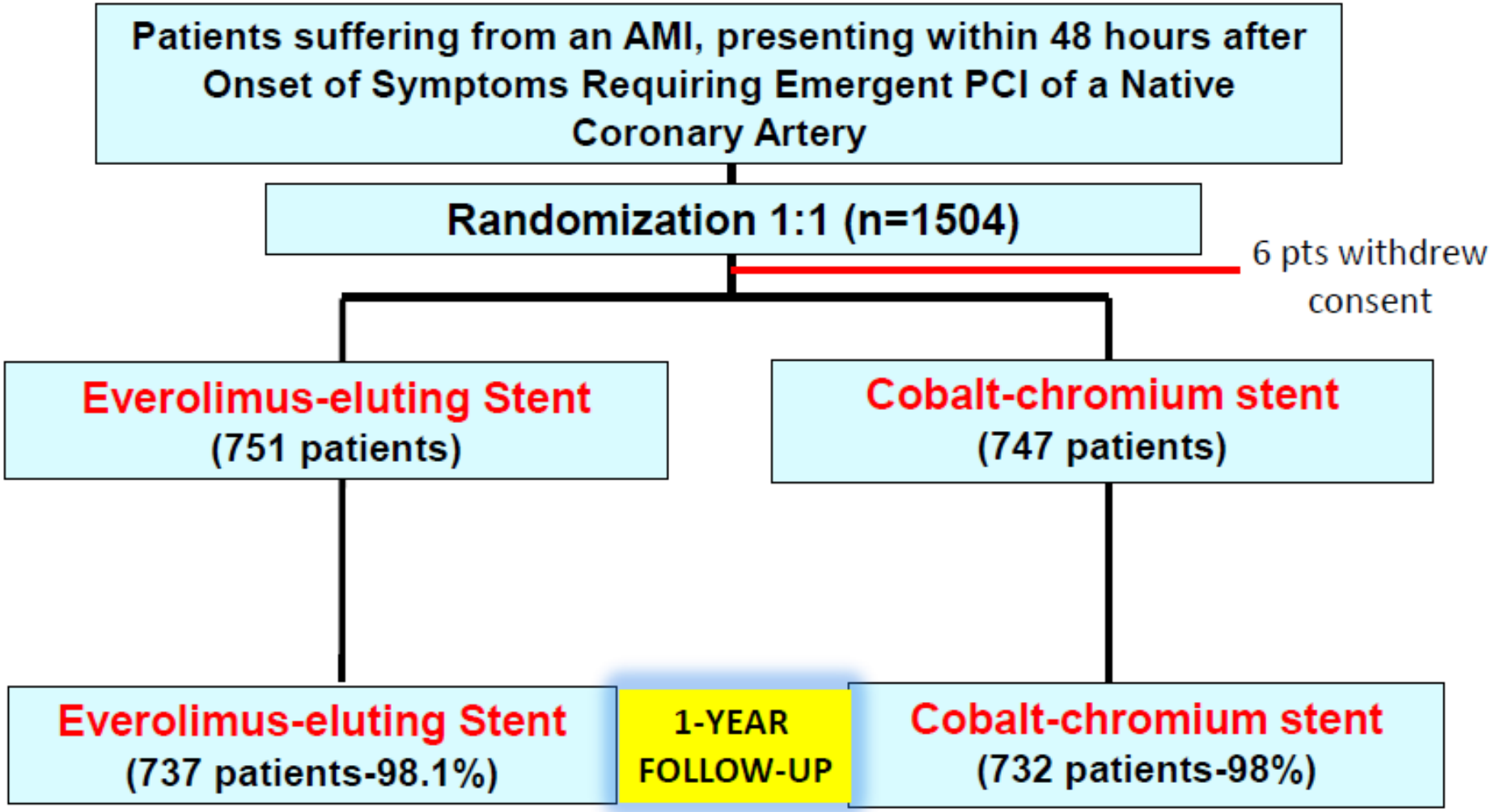
Analysis From the HORIZONS-AMI (Harmonizing Outcomes With Revascularization and Stents in Acute Myocardial Infarction) Trial





J. Am. Coll. Cardiol. 2011;58;704-711

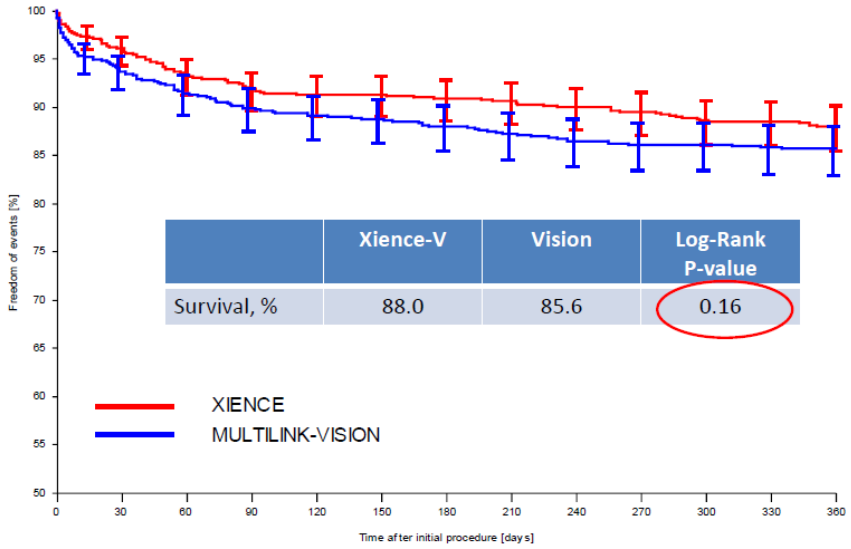
Study Design = All-comer RCT



EXAMINATION trial

Primary Endpoint:

Composite of all-cause death, any MI or any revascularization

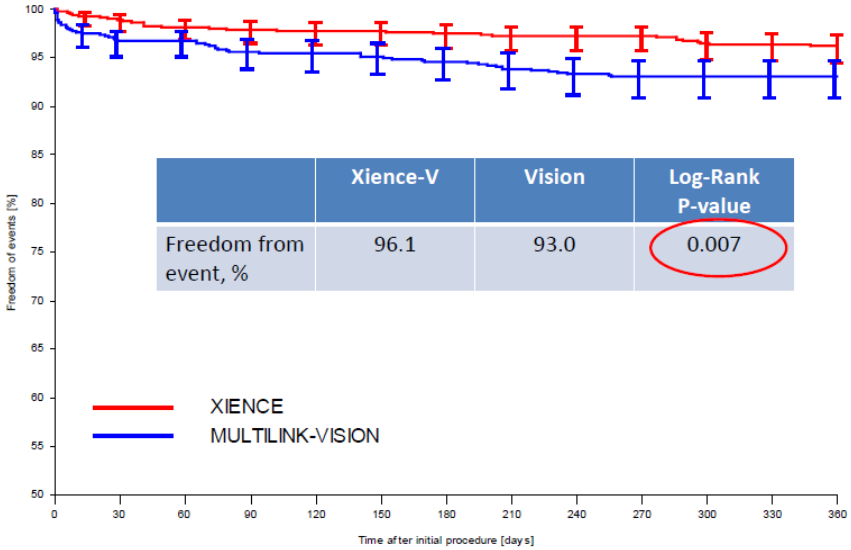


	Xience-V	Vision	Log-Rank P-value
Survival, %	88.0	85.6	0.16

EXAMINATION trial

Secondary Endpoints:

Target Vessel Revascularization

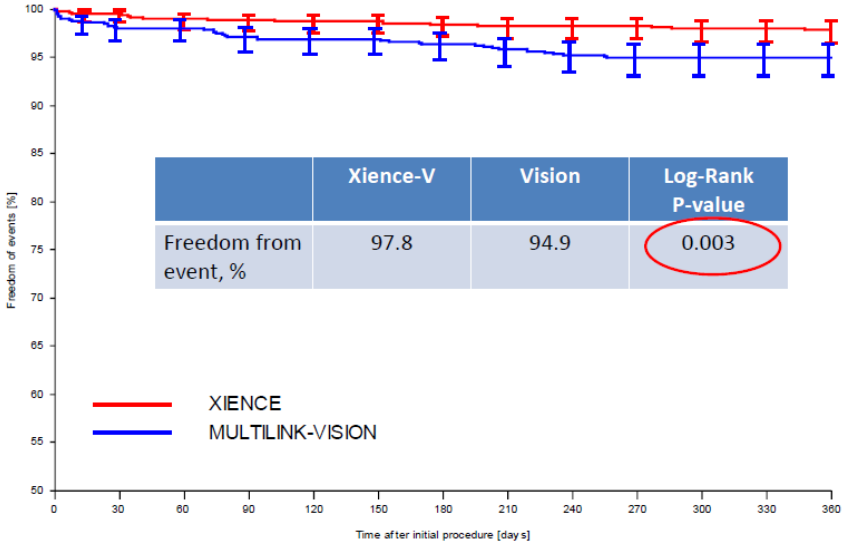


	Xience-V	Vision	Log-Rank P-value
Freedom from event, %	96.1	93.0	0.007

EXAMINATION trial

Secondary Endpoints:

Target Lesion Revascularization

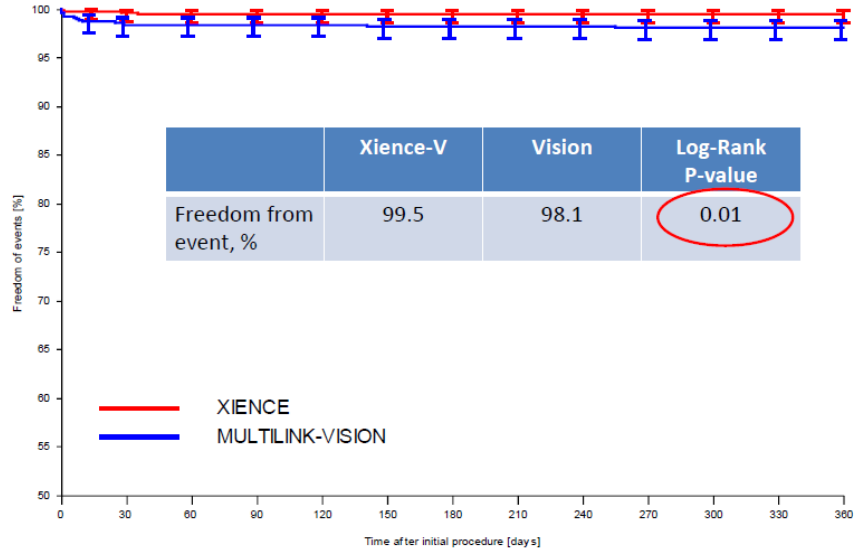


	Xience-V	Vision	Log-Rank P-value
Freedom from event, %	97.8	94.9	0.003

EXAMINATION trial

Secondary Endpoints:

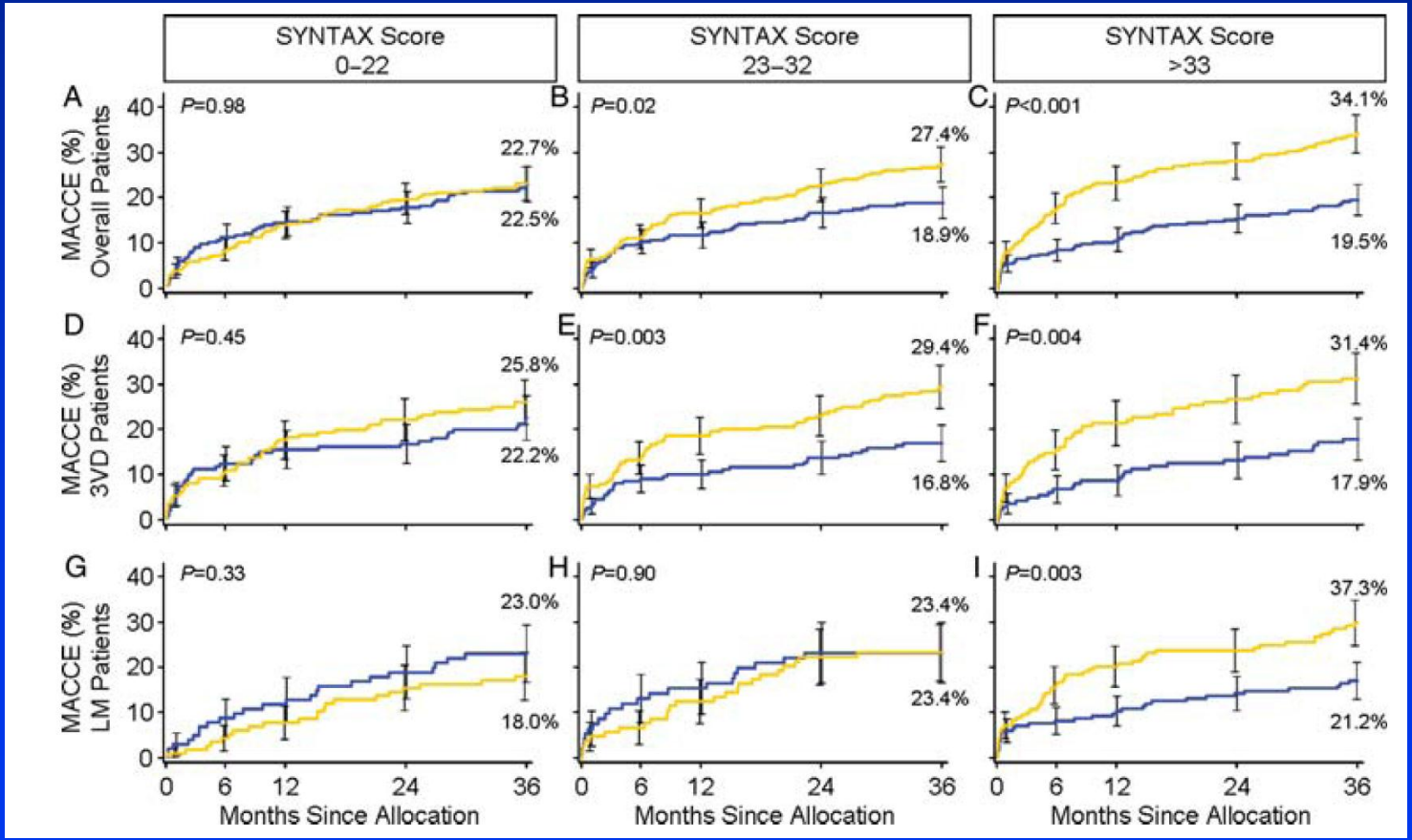
Definite Stent Thrombosis



	Xience-V	Vision	Log-Rank P-value
Freedom from event, %	99.5	98.1	0.01

European Heart Journal (2011) **32**, 2125–2134
doi:10.1093/eurheartj/ehr213

Comparison of coronary bypass surgery with drug-eluting stenting for the treatment of left main and/or three-vessel disease: 3-year follow-up of the SYNTAX trial



Circulation Journal
Official Journal of the Japanese Circulation Society
http://www.j-circ.or.jp

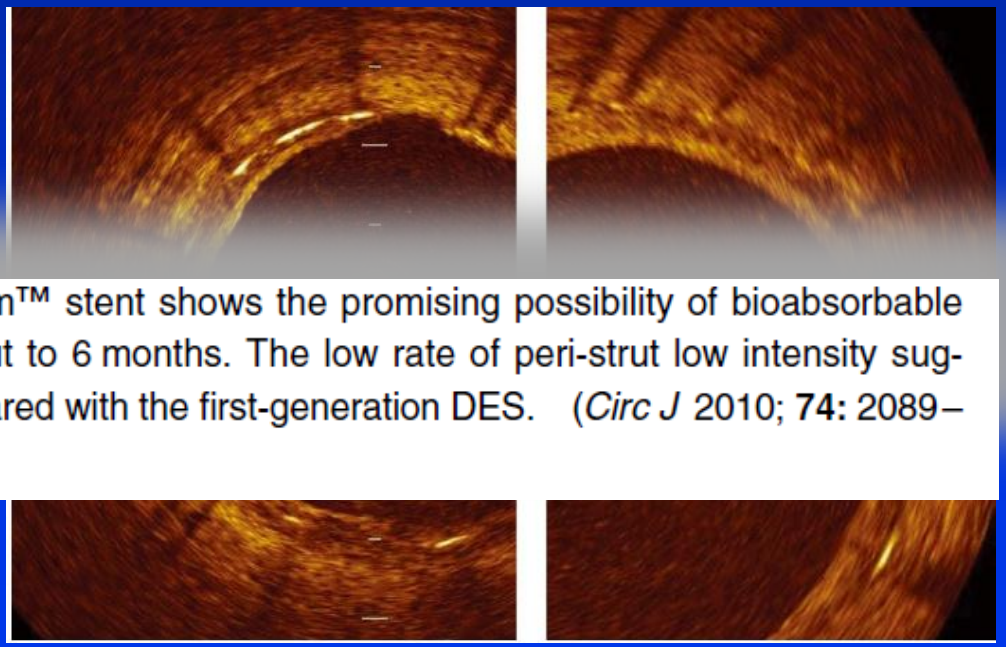
ORIGINAL ARTICLE
Cardiovascular Intervention

STELLIUM 1: First-In-Man Follow-up Evaluation of Bioabsorbable Polymer-Coated Paclitaxel-Eluting Stent

Amane Kozuki, MD; Junya Shite, MD; Toshiro Shinke, MD; Naoki Miyoshi, MD; Takahiro Sawada, MD; Farrel Hellig, MD; Mark Abelson, MD; Basil Brown, MD; Sajidah Khan, MD; Martin Mpe, MD; Mpiko Ntsekhe, MD; Damian Conway; Ken-ichi Hirata, MD

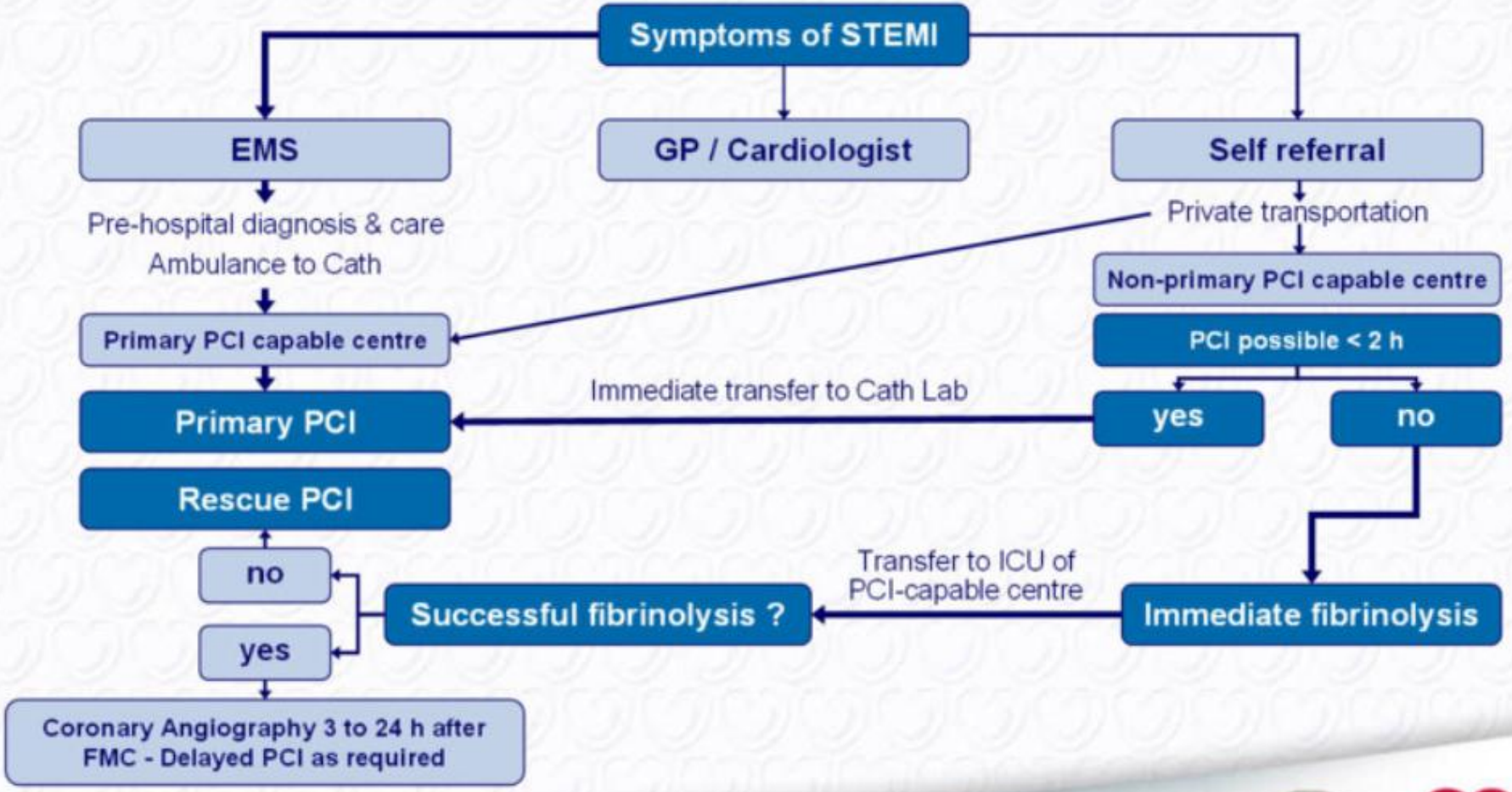
Table 1. Baseline Clinical Characteristics

Patients	37
Age (years)	57±9
Male (%)	69
Prior PCI (%)	9



Conclusions: This first-in-man study of the Stellium™ stent shows the promising possibility of bioabsorbable polymeric surface coating paclitaxel-eluting stents out to 6 months. The low rate of peri-strut low intensity suggests low cellular toxicity of the Stellium™ stent compared with the first-generation DES. (*Circ J* 2010; **74:** 2089–2096)

Organisation of STEMI patient disposal describing pre- and in-hospital management, and reperfusion strategies within 12 h of First Medical Contact (FMC)



PROYECTO CO FARTO AGUDO DE MIOCARD ROVINCIA DE

Dr. Jo nzález

en represen to del Infarto

PROYECTO COMUN PARA LA ATENCIÓN DEL INFARTO AGUDO DE MIOCARDIO CON ELEVACION DE ST EN LA PROVINCIA DE SEVILLA

Dr. Jose M. Cruz Fernandez y Dr. Angel Sánchez González

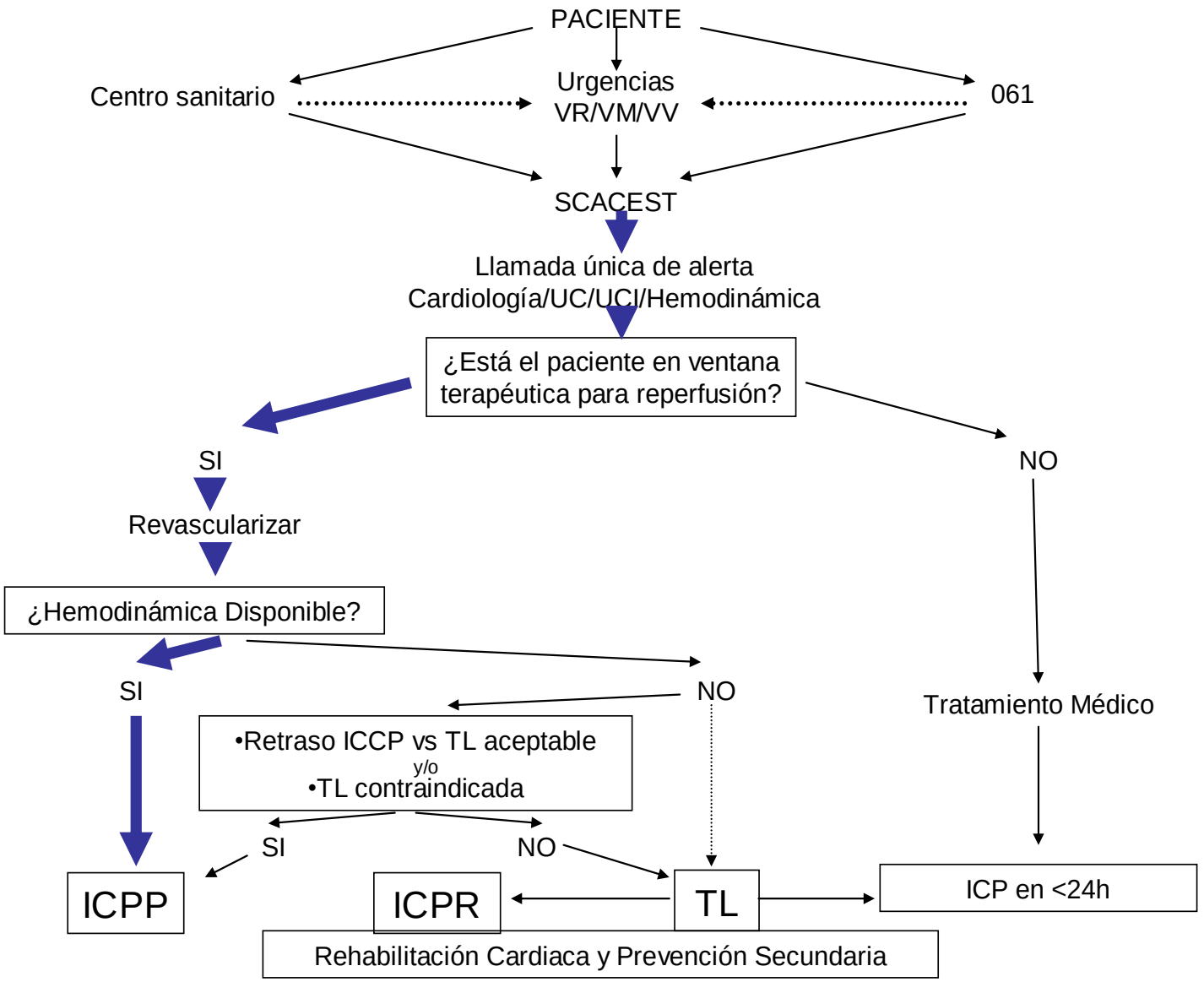
en representación del Grupo de Trabajo para el tratamiento del Infarto agudo de Miocardio en Sevilla.

Sevilla, 15 de Diciembre de 2010

Como resultado de las deliberaciones comunes del Grupo de Trabajo, y de las tres comisiones en las que se dividió el Grupo para un abordaje focalizado de distintas áreas de interés, se ha redactado un documento en donde se recogen los consensos y puntos de vista particulares que se llevaron a cabo en Sevilla entre los días 4 y 5 de Octubre de 2010

PROYECTO DE ACTUACION ANTE EL SCACEST EN SEVILLA

Protocolo de actuación



PROYECTO DE ACTUACION ANTE EL SCACEST EN SEVILLA
Protocolo de actuación

- **Llamadá única:**
  - **Objetivos:**
    - **Comprobar la POSIBILIDAD de ICPP**
      - **Con un retraso vs la TL ASUMIBLE, en función de la gravedad del paciente.**
      - **Si el paciente está en SHOCK CARDIOGENICO o bien si la TROMBOLISIS ESTA CONTRAINDICADA, se indicará ICPP aunque ello suponga una mayor demora en su aplicación**
      - **Inicialmente en el HcH de referencia y, en su defecto, en cualquiera de los otros dos HcH.**
    - **Activar en el HcH todos los recursos necesarios para garantizar el tratamiento completo del paciente incluyendo tanto su acceso directo al laboratorio de Hemodinámica como su posterior traslado a la Unidad Coronaria.**
  - **Números:**
    - **HVR.- 750856 / 697.950.856 HEMODINAMICA**
    - **HVM.- 749242 / 670.949.242 URGENCIAS/CARDIOLOGIA**
    - **HVV.- 698428 / 671 598.428 CUIDADOS INTENSIVOS**

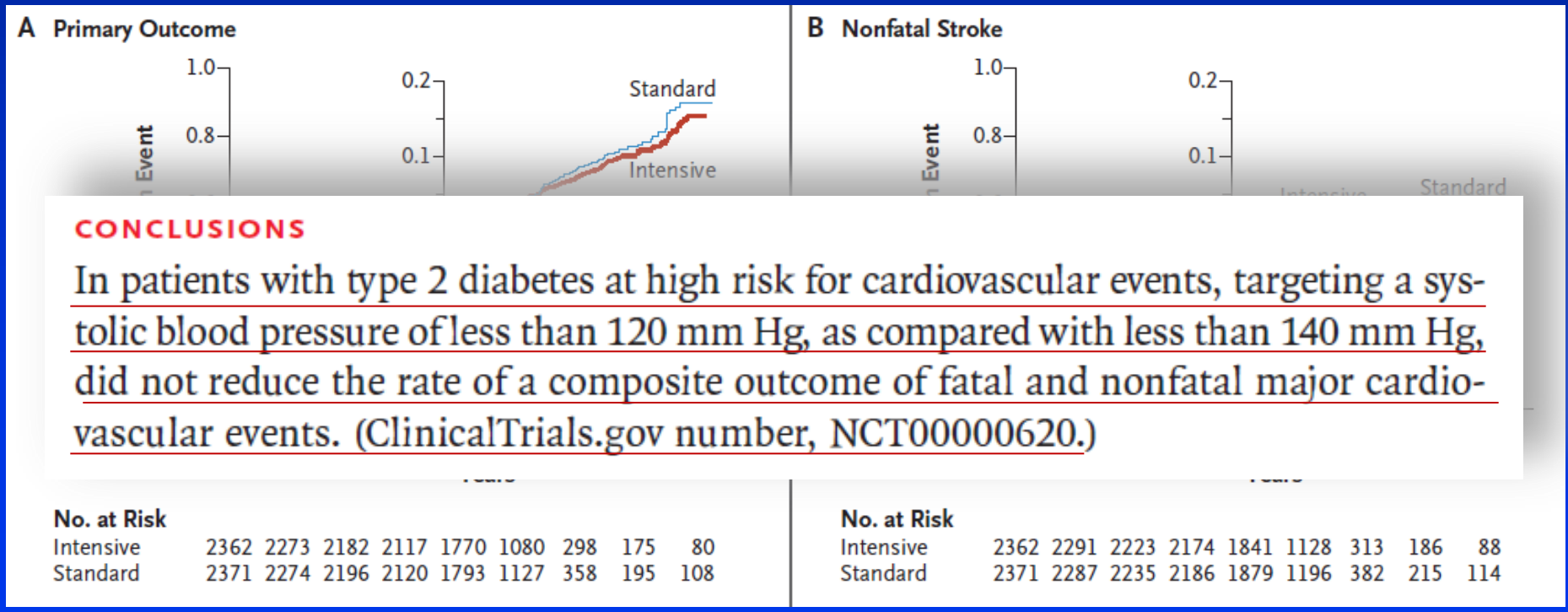
PREVENCION

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Effects of Intensive Blood-Pressure Control in Type 2 Diabetes Mellitus

The ACCORD Study Group*



CONCLUSIONS

In patients with type 2 diabetes at high risk for cardiovascular events, targeting a systolic blood pressure of less than 120 mm Hg, as compared with less than 140 mm Hg, did not reduce the rate of a composite outcome of fatal and nonfatal major cardiovascular events. (ClinicalTrials.gov number, NCT00000620.)

N Engl J Med 2010;362:1575-85

Effects of Varespladib Methyl on Biomarkers and Major Cardiovascular Events in Acute Coronary Syndrome Patients

Robert S. Rosenson, MD,* Colin Hislop, MD,† Michael Elliott, MA,† Yuri Stasiv, PhD,† Michael Goulder, BSc,‡ David Waters, MD§

New York, New York; Hayward and San Francisco, California; Nottingham, United Kingdom

Conclusions

The FRANCIS study demonstrates that treatment with varespladib reduces concentration of LDL-C, hsCRP, and $sPLA_2$ in ACS patients treated with evidence-based therapies inclusive of high-dose atorvastatin. Elevated levels of these biomarkers have been shown to identify CHD patients who remain at high risk for recurrent cardiovascular events; however, in this study there were no treatment differences in clinical cardiovascular events. A large, prospective, double-blind, placebo-controlled trial in ACS patients will be required to explore the future role of varespladib treatment in cardiovascular event reduction.

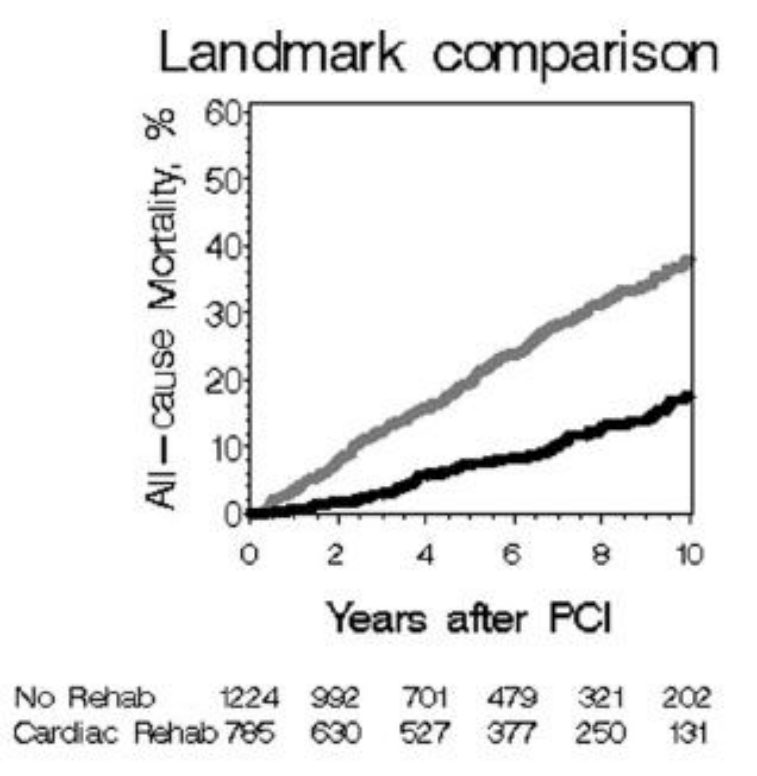
VISTA-16

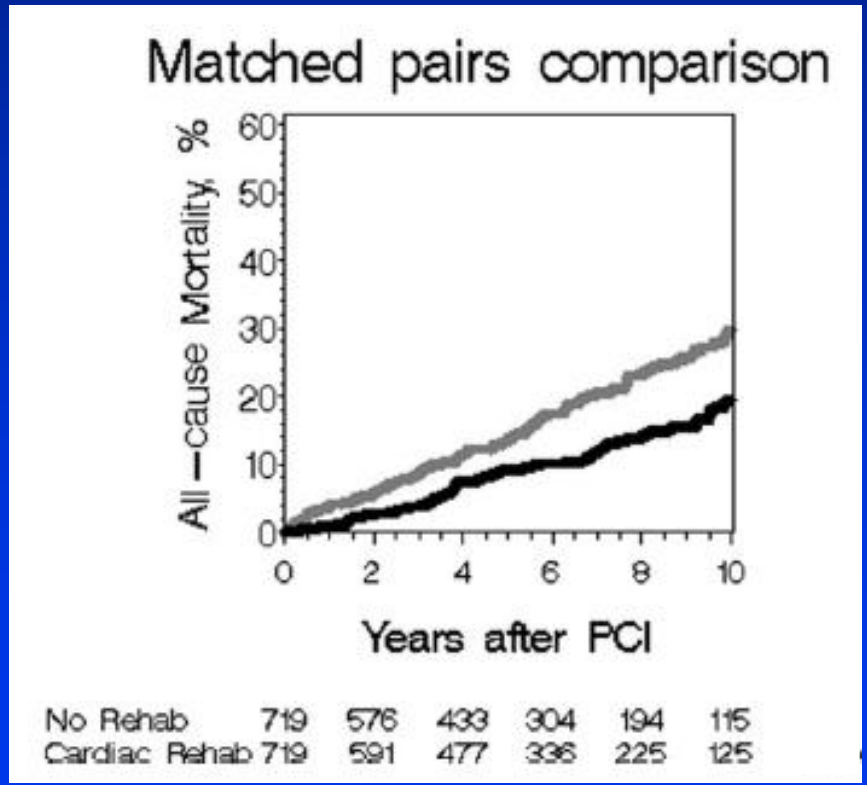
J Am Coll Cardiol 2010;56:1079–88

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

Impact of Cardiac Rehabilitation on Mortality and Cardiovascular Events After Percutaneous Coronary Intervention in the Community

Kashish Goel, Ryan J. Lennon, R. Thomas Tilbury, Ray W. Squires and Randal J. Thomas





Circulation 2011, 123:2344-2352

Muchas Gracias