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"Congreso Andaluz de las Enfermedades Cardiovasculares"
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Hotel Abades Nevada Palace
Granada
SOCIEDAD ANDALUZA DE CARDIOLOGÍA

Nuevas evidencias en antiagregación en cardiopatía isquémica

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Área de Cardiología
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European Heart Journal
doi:10.1093/eurheartj/ehu505

CLINICAL RESEARCH
Acute Coronary Syndrome

Cardiovascular risk in post-myocardial infarction patients: nationwide real world data demonstrate the importance of a long-term perspective

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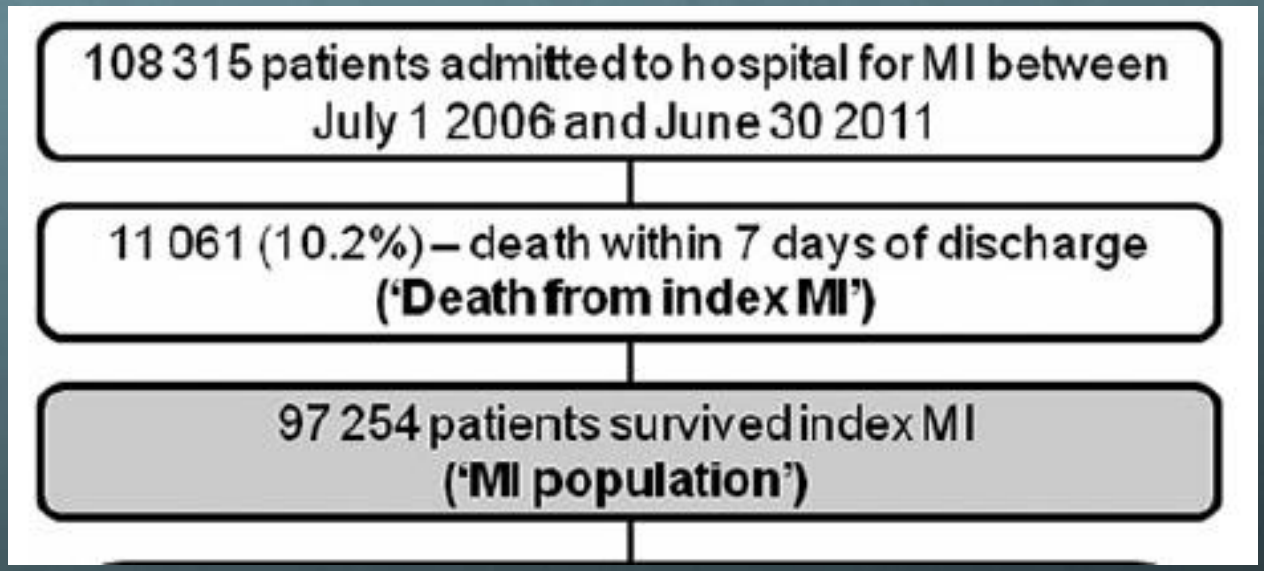
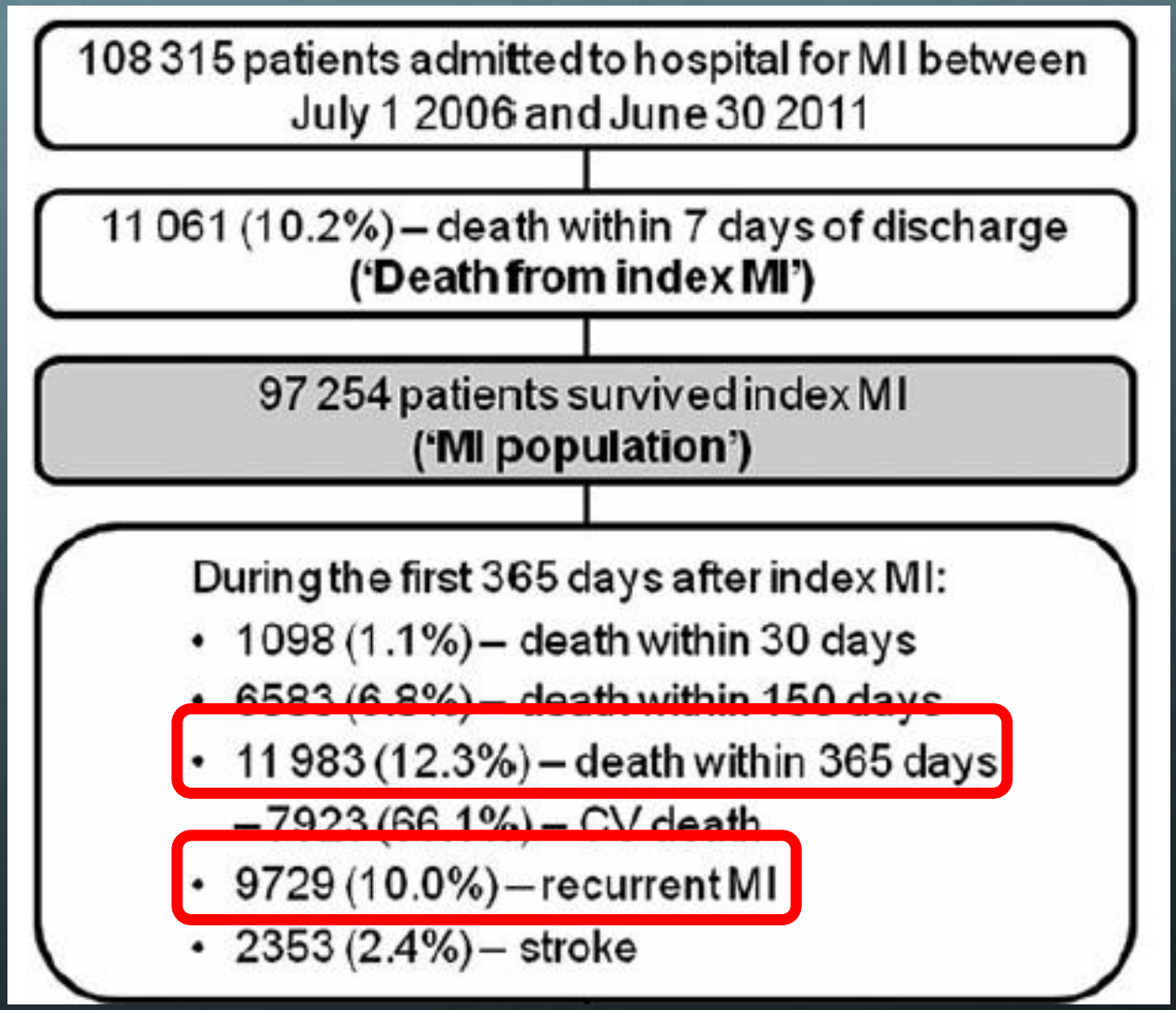
Received 18 July 2014; revised 4 December 2014; accepted 16 December 2014



Jernberg T et a, EHJ. 2015. doi:10.1093/eurheartj/ehu505

EN EL 1º AÑO

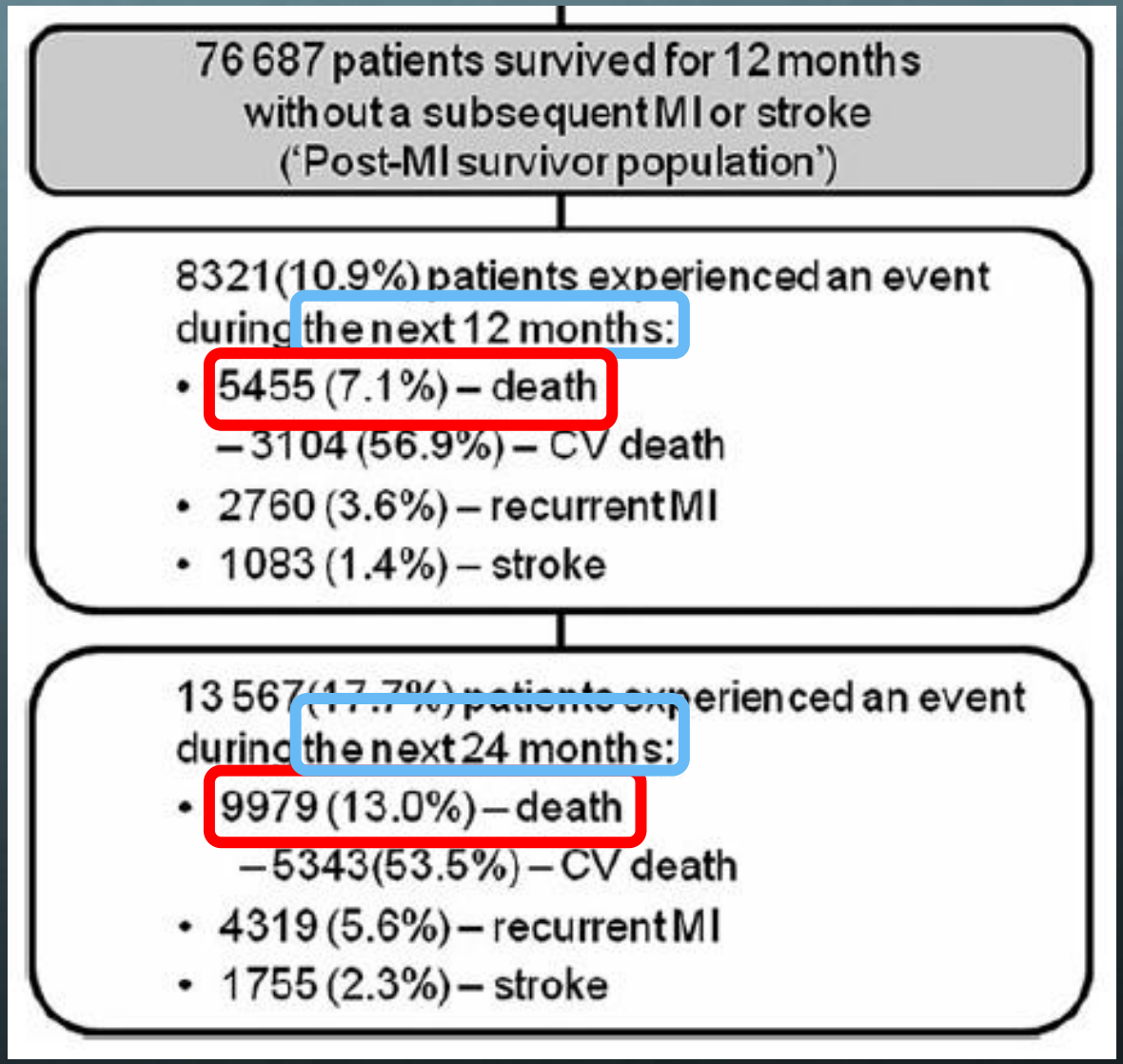


Jernberg T et a, EHJ. 2015. doi:10.1093/eurheartj/ehu505

76 687 patients survived for 12 months without a subsequent MI or stroke ('Post-MI survivor population')

Jernberg T et a, EHJ. 2015. doi:10.1093/eurheartj/ehu505

A PARTIR DEL 1º AÑO



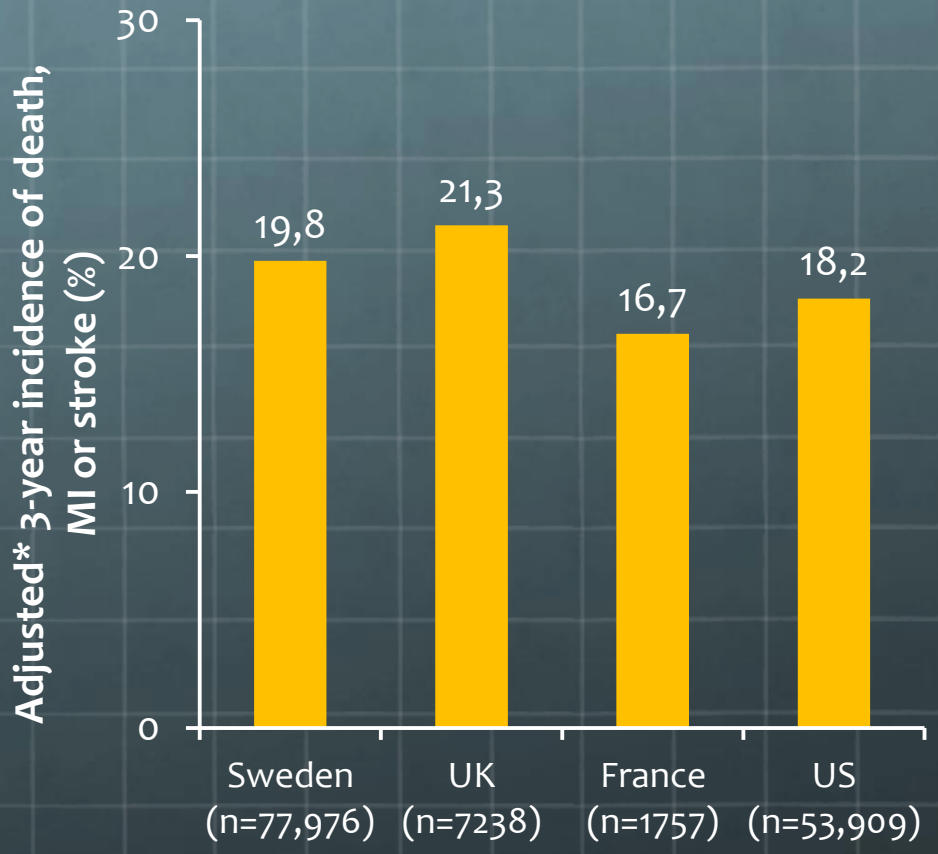
Jernberg T et a, EHJ. 2015. doi:10.1093/eurheartj/ehu505

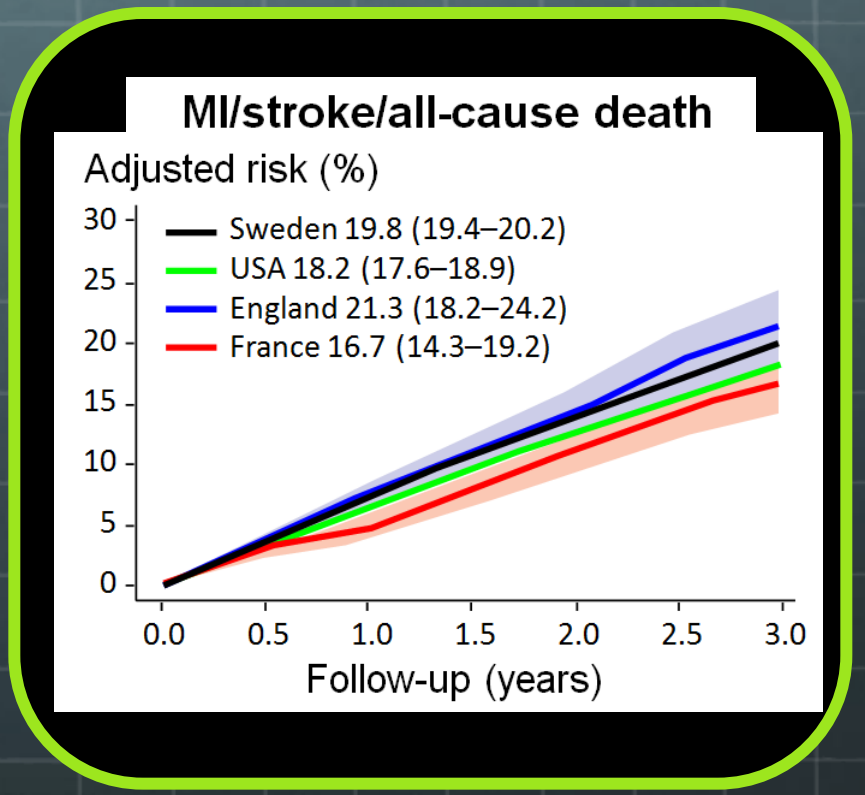
APOLLO: 5 estudios individuales en 4 paises que reunieron >150.000 pacientes

	USA		UK	Sweden	France
Countries					
Databases	*Medicare*	*HealthCore*	*CPRD MINAP HES*	*National registries*	*EGB PMSI*
Details	• Demographics and health insurance claims • Linked to death registry • Age ≥65 years • n=53,909[1]	• Demographics and health insurance claims • Commercially insured • 50–64 years[2] • n=13,492[2]	• Three linked datasets • Longitudinal data • Primary and secondary care • Disease and death registry • n=7238[1]	• Nationwide • Longitudinal data • Hospital discharge data linked to prescribed data register and death registry • n=77,976[1] • n=76,687[3*]	• Sample of national healthcare insurance data • Hospital discharge data linked to death registry • n=1757[1] • n=1764[4*]
Acronyms			CALIBER	HELICON	HORUS

[1]Rapsomaniki E, et al. ESC Late Breaking Registry abstract 2014: In press; [2] DeVore S, et al. ISPOR poster 2014;
[3]Jernberg T, et al. ESC poster 2014: In press; [4]Blin P, et al. ESC poster 2014: In press.
*This differs from the N in the 4-country analysis (Rapsomaniki E, et al) due to harmonisation of the data

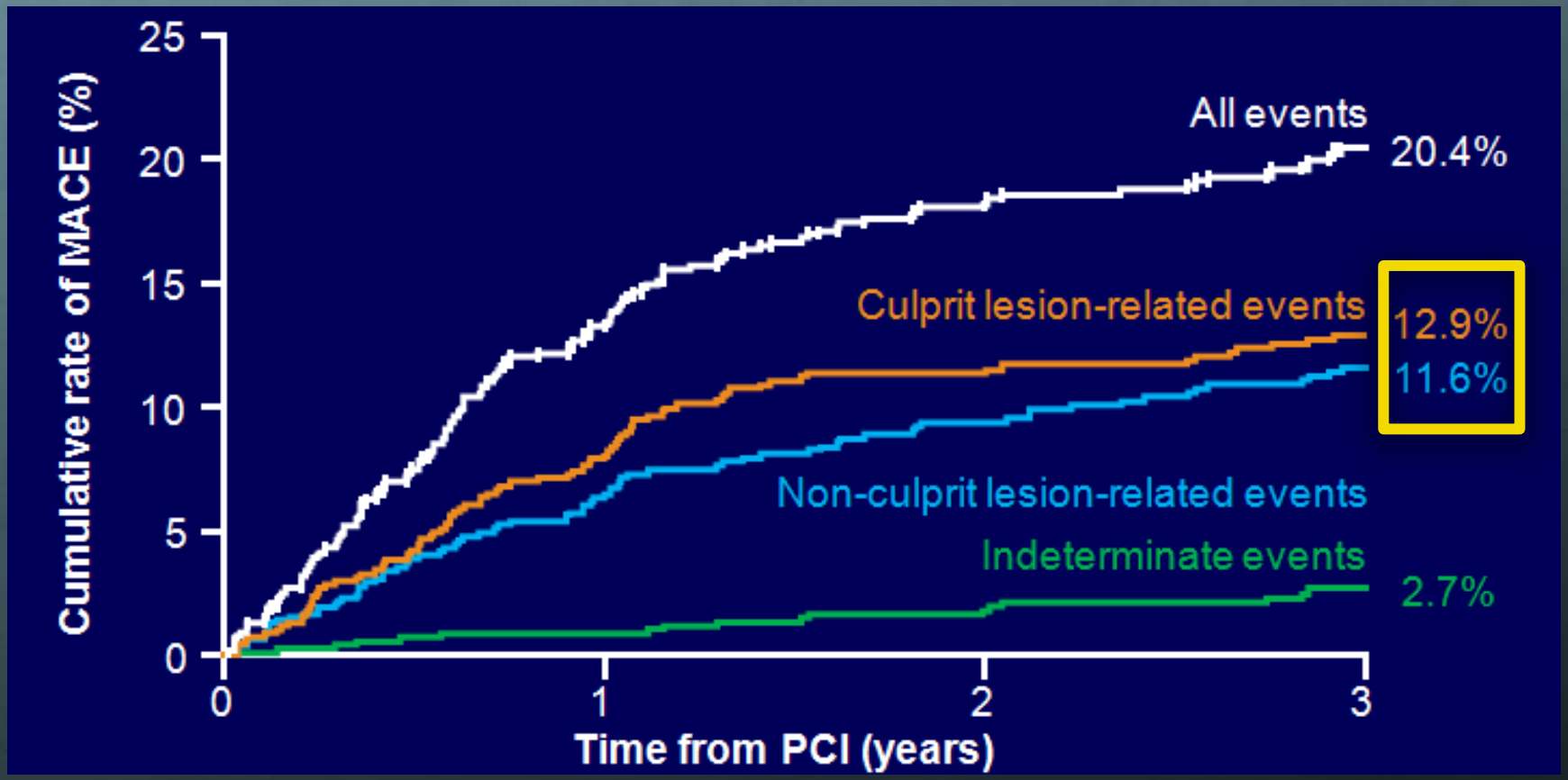
Uno de cada cinco de los pacientes libres de eventos en el primer año tras un infarto, sufrirán en los siguientes tres años un ictus, muerte o infarto





*Adjusted for differences in study populations; MI, myocardial infarction. Shaded areas / figures in brackets [95%CI]
Rapsomaniki E, et al. ESC Late Breaking Registry presentation 2014: In press.

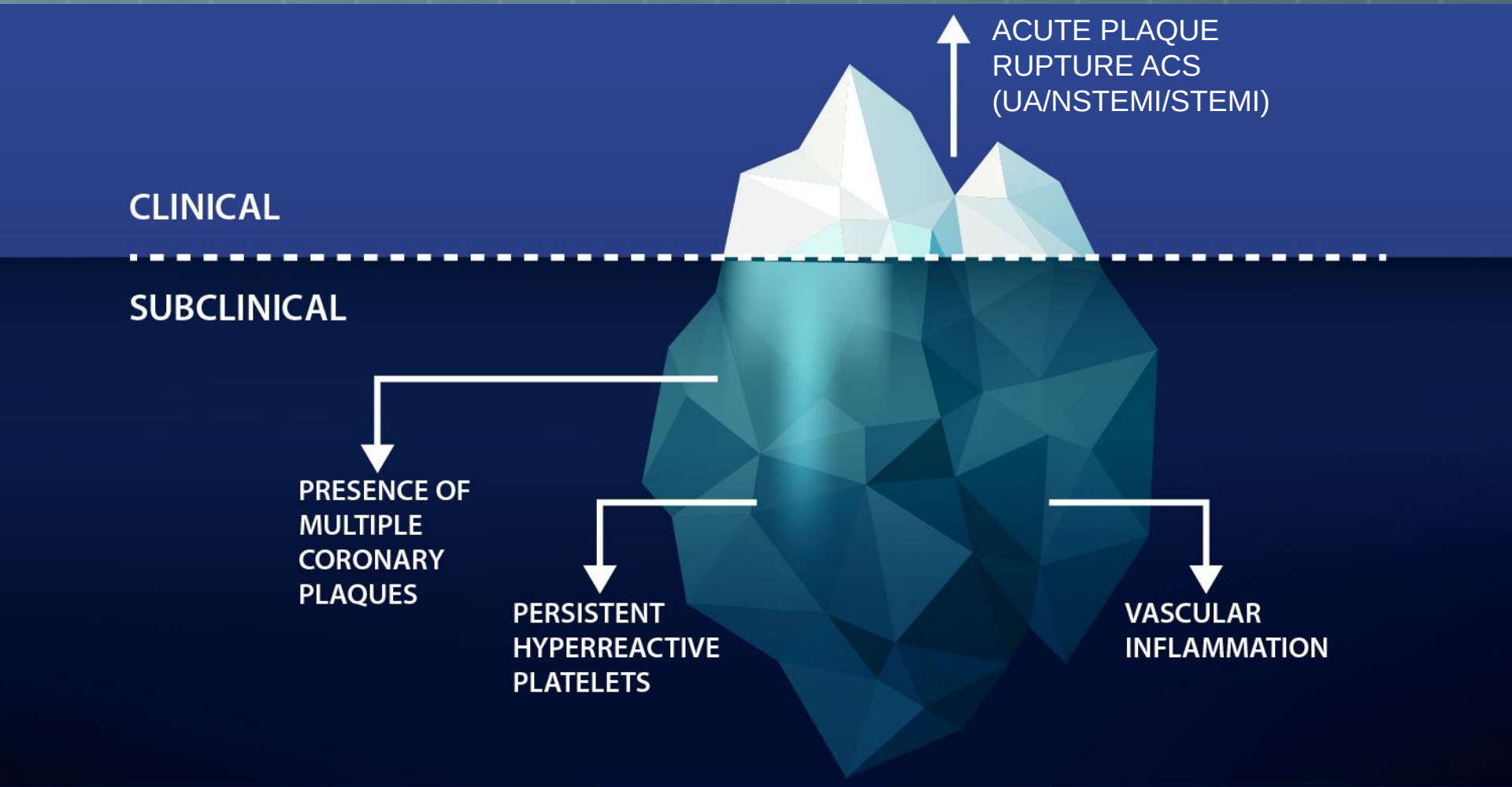
Los eventos recurrentes en los pacientes con SCA pueden ser consecuencia de nuevas placas ATC o de las lesiones culpables iniciales



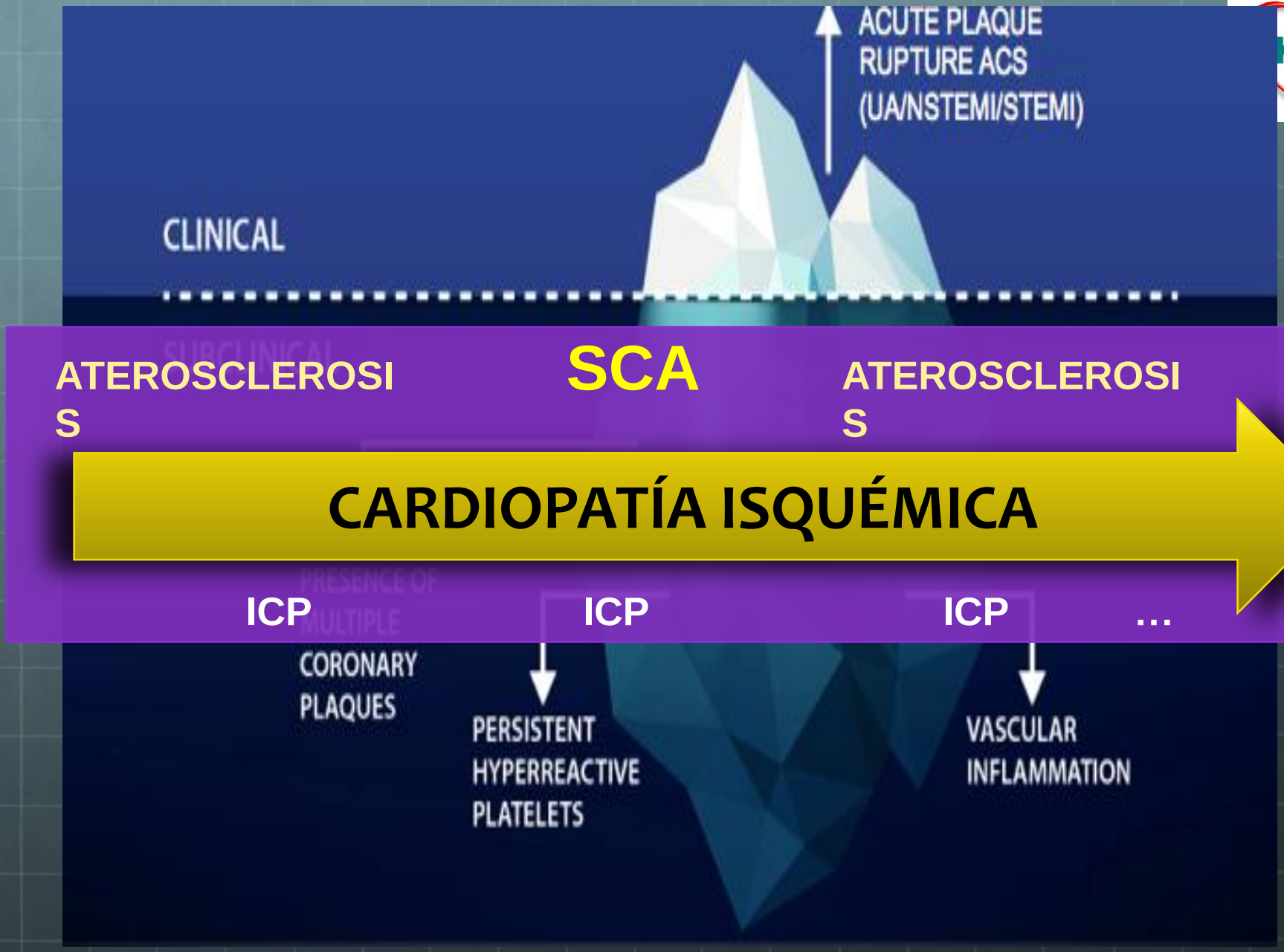
- **PROSPECT study: Prospective study of the natural history of atherosclerosis over 3 years in patients with ACS who underwent PCI (n=697)**

ACS, acute coronary syndromes; MACE, major adverse cardiac events; PCI, percutaneous coronary intervention; PROSPECT, Providing Regional Observations to Study Predictors of Events in the Coronary Tree.
Stone GW, et al. *N Engl J Med* 2011;364:226–235.

El SCA es la punta del "icerberg aterotrombótico"

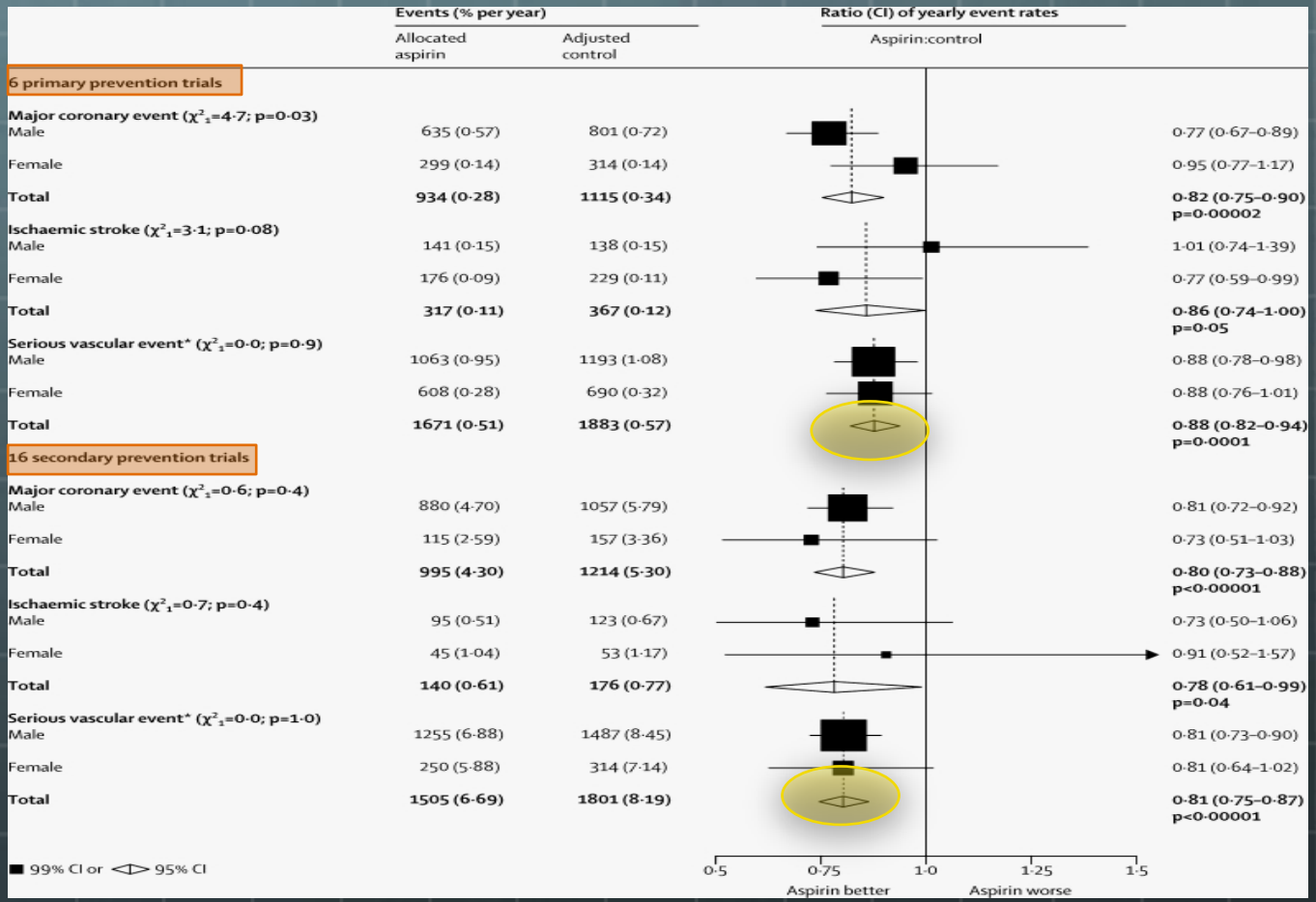


ACS, acute coronary syndrome; NSTEMI, non-ST segment elevation myocardial infarction; STEMI, ST segment elevation myocardial infarction; UA, unstable angina. Goldstein JA. J Am Coll Cardiol 2002;39:1464–1467.


ACUTE PLAQUE
RUPTURE ACS
(UA/NSTEMI/STEMI)
CLINICAL
ATEROSCLEROSIS
SCA
ATEROSCLEROSIS
CARDIOPATÍA ISQUÉMICA
ICP
ICP
ICP
…
CORONARY
PLAQUES
PERSISTENT
HYPERREACTIVE
PLATELETS
VASCULAR
INFLAMMATION

RIESGO RESIDUAL

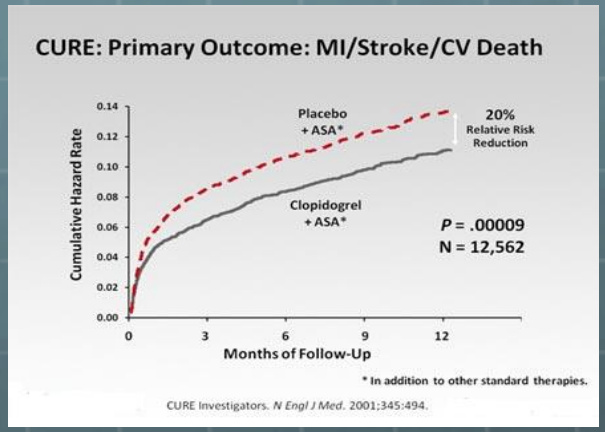
AAS



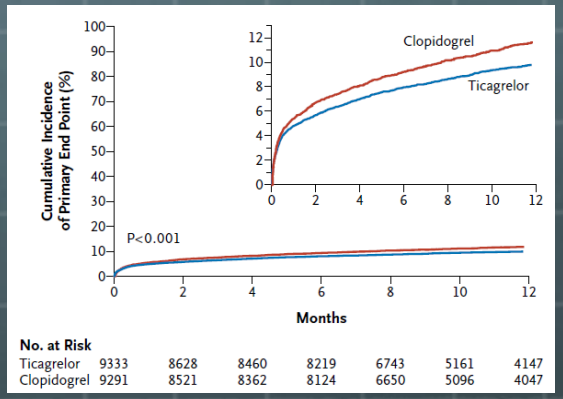
Antithrombotic Trialists' (ATT) Col- laboration. Aspirin in the primary and secondary prevention of vascular disease: collaborative meta-analysis of individual participant data from randomised trials. Lancet 2009;373:1849-60.

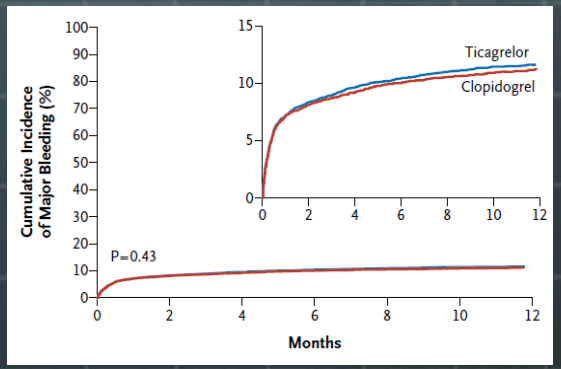
En el primer año tras un SCA…

CURE
Clopidogrel

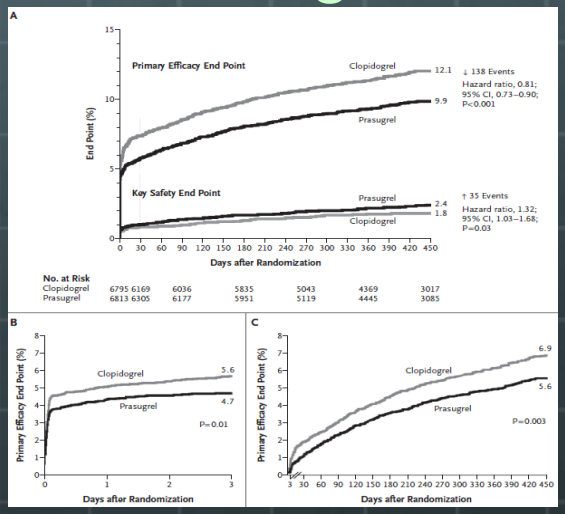


PLATO
Ticagrelor

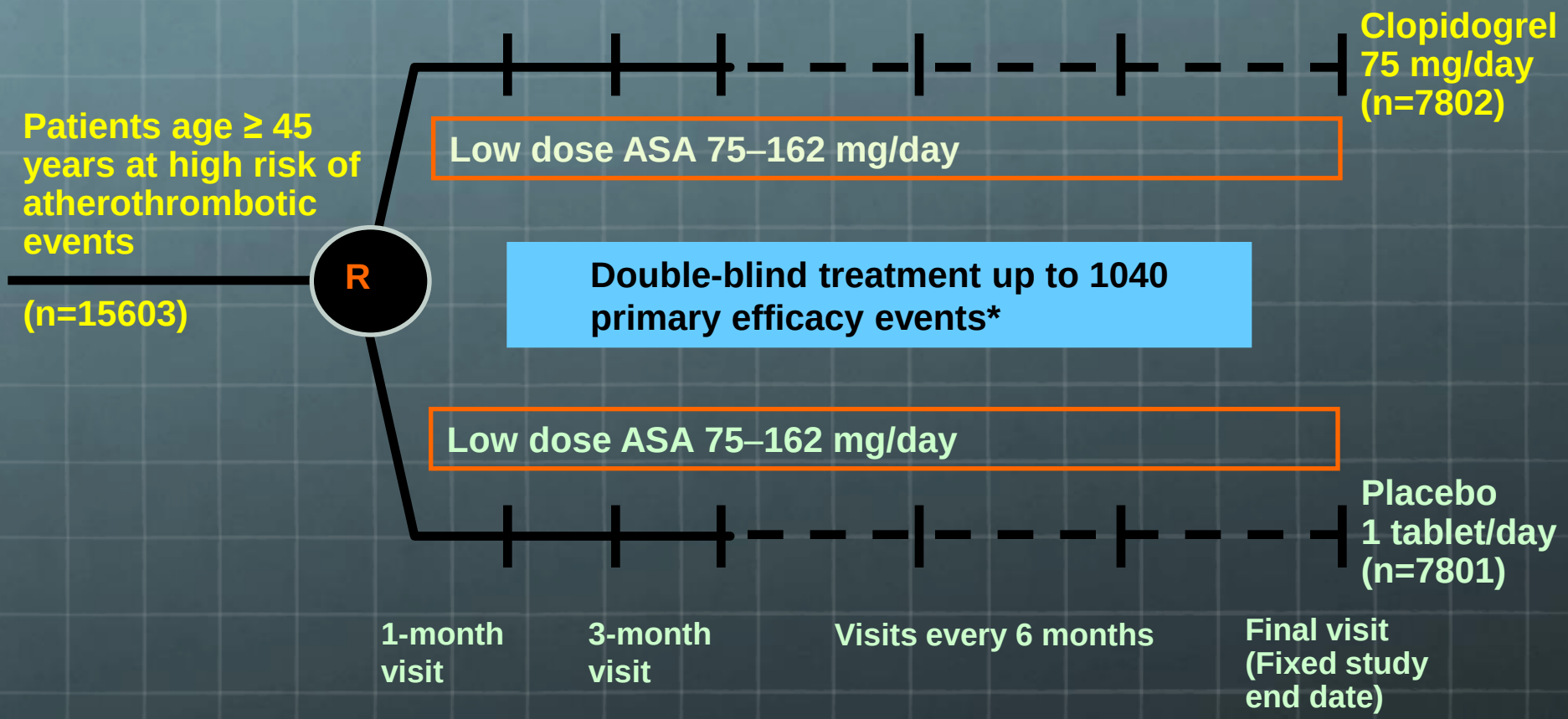




TRITON TIMI 38
Prasugrel

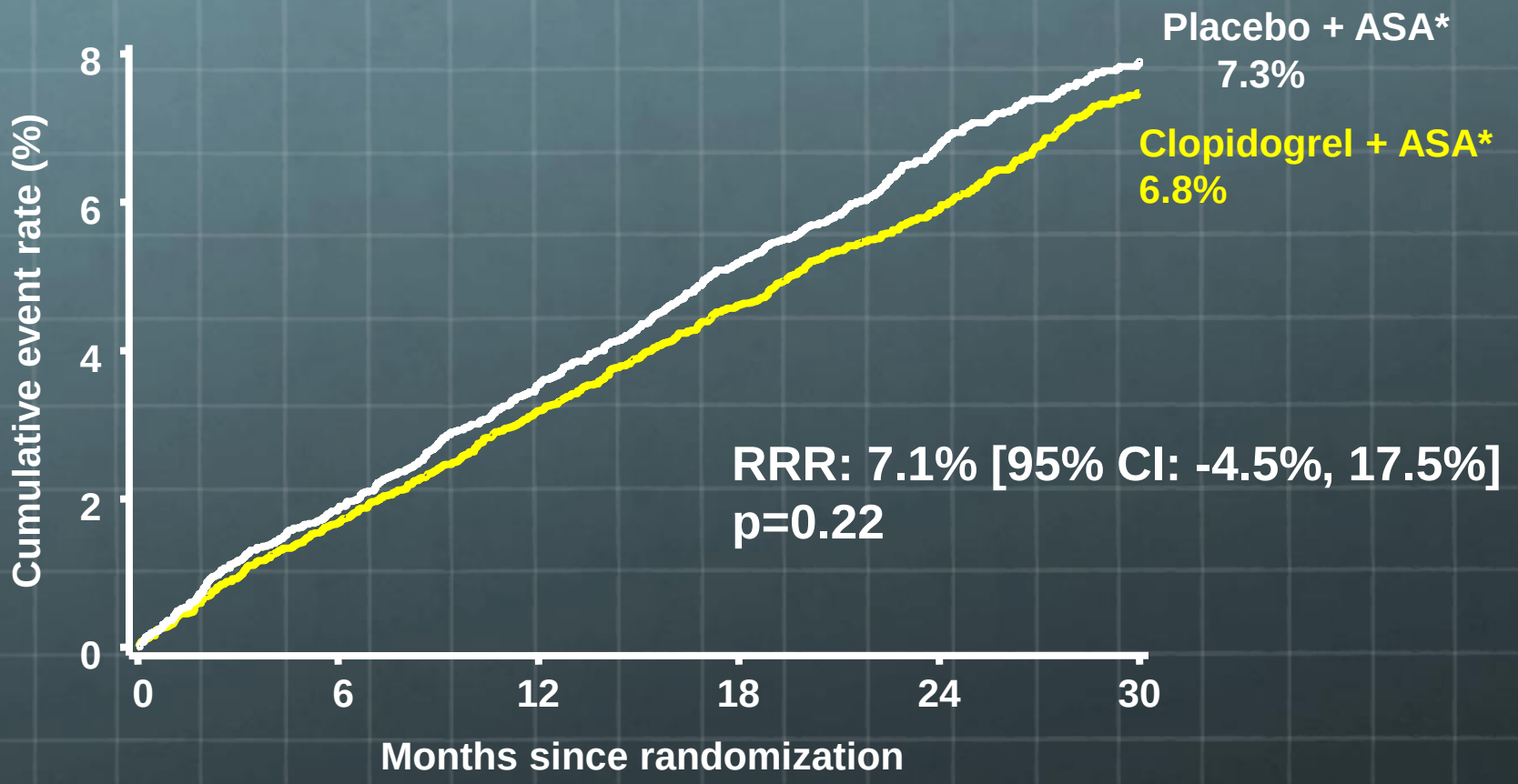


CHARISMA



* MI (fatal or non-fatal), stroke (fatal or non-fatal), or cardiovascular death; event-driven trial Bhatt DL et al. Am Heart J 2004; 148: 263–268.

Población general: Ictus/IAM/Muerte



Bhatt DL, Fox KA, Hacke W, et al. NEJM 2006.

Por subgrupos: Primary Efficacy Results

Population	RR (95% CI)	p value
Qualifying CAD, CVD or PAD * (n=12,153)	0.88 (0.77, .998)	0.046
Multiple Risk Factors * (n=3,284)	1.20 (0.91, 1..59)	0.20
Overall Population† (n=15,603)	0.93 (0.83, 1..05)	0.22

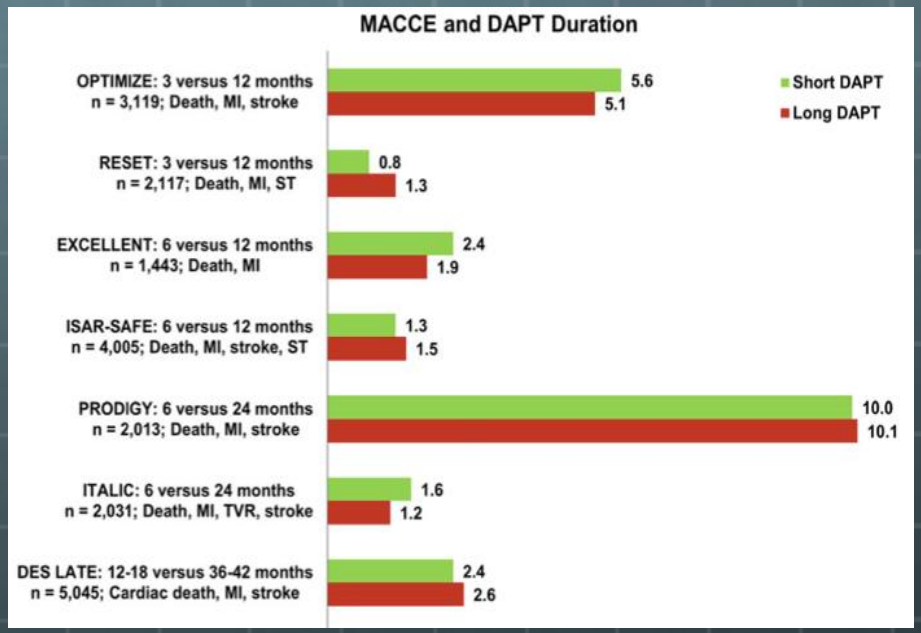
0.4 1.6

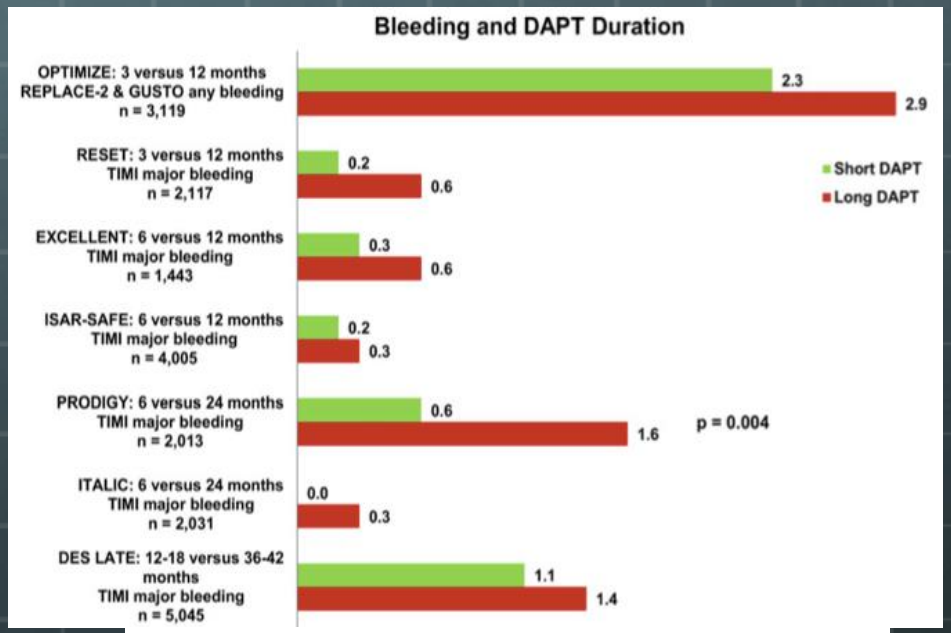
Clopidogrel + ASA Better

Placebo + ASA Better

Beneficio en Prevención Secundaria

Bhatt DL, Fox KA, Hacke W, et al. NEJM 2006





Duration of dual antiplatelet therapy after coronary artery stenting: where is the sweet spot between ischaemia and bleeding?

Ronald K. Binder and Thomas F. Lüscher*

European Heart Journal Advance Access published April 2, 2015

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

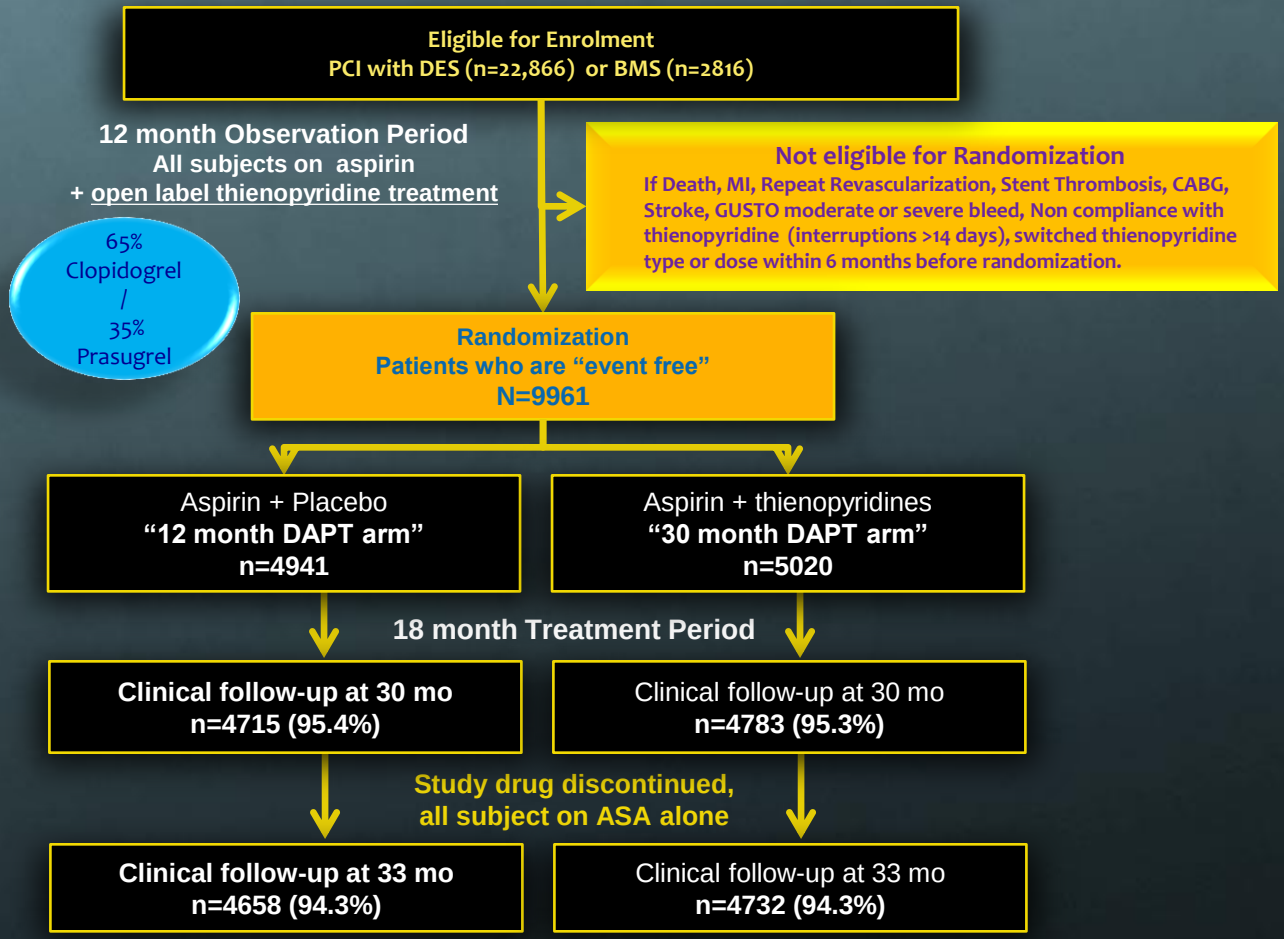
Twelve or 30 Months of Dual Antiplatelet Therapy after Drug-Eluting Stents

Laura Mauri, M.D., Dean J. Kereiakes, M.D., Robert W. Yeh, M.D., Priscilla Driscoll-Shempp, M.B.A., Donald E. Cutlip, M.D., P. Gabriel Steg, M.D., Sharon-Lise T. Normand, Ph.D., Eugene Braunwald, M.D., Stephen D. Wiviott, M.D., David J. Cohen, M.D., David R. Holmes, Jr., M.D., Mitchell W. Krucoff, M.D., James Hermiller, M.D., Harold L. Dauerman, M.D., Daniel I. Simon, M.D., David E. Kandzari, M.D., Kirk N. Garratt, M.D., David P. Lee, M.D., Thomas K. Pow, M.D., Peter Ver Lee, M.D., Michael J. Rinaldi, M.D., and Joseph M. Massaro, Ph.D., for the DAPT Study Investigators*

Mauri L, et al. *N Engl J Med.* Nov 16, 2014. DOI: 10.1056/NEJMe1413297.

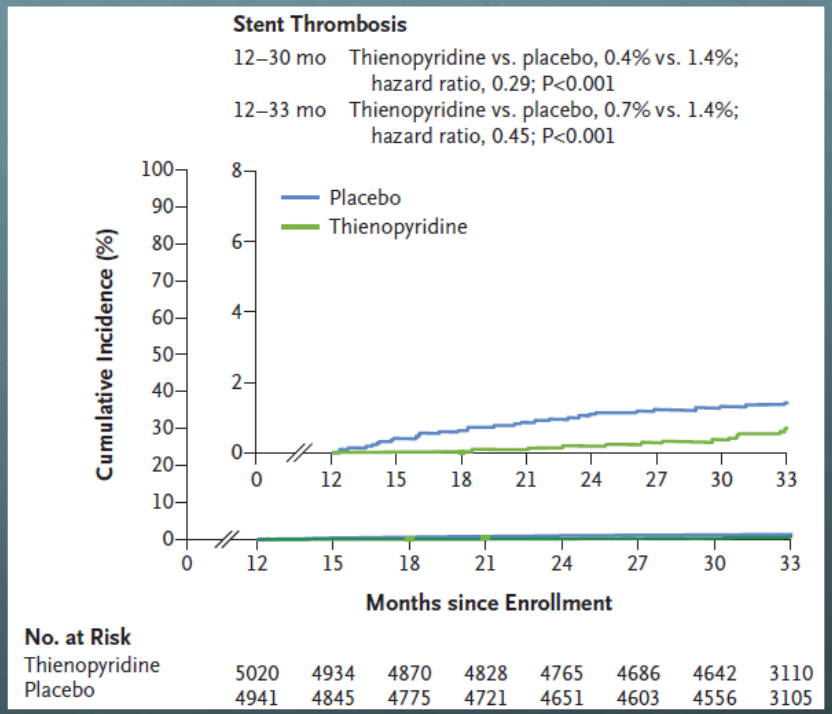
Estudio DAPT

12 vs. 30 months of DAPT-Thienopyridines in patients with a PCI



Mauri L, Kereiakes DJ, Yeh RW, et al. Twelve or 30 months of dual antiplatelet therapy after drug-eluting stents. N Engl J Med 2014;371:2155-66.

Resultados DAPT



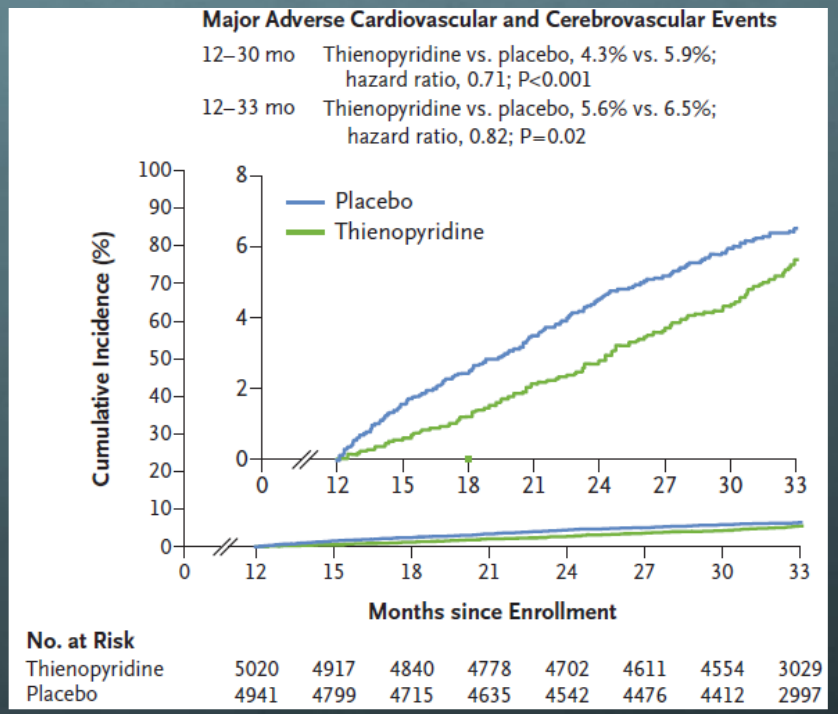


Table 3. Bleeding End Point during Month 12 to Month 30.*

Bleeding Complications	Continued Thienopyridine (N=4710)	Placebo (N=4649)	Difference	Two-Sided P Value for Difference
	no. of patients (%)		*percentage points (95% CI)*	
GUSTO severe or moderate†	119 (2.5)	73 (1.6)	1.0 (0.4 to 1.5)	0.001
Severe	38 (0.8)	26 (0.6)	0.2 (–0.1 to 0.6)	0.15
Moderate	81 (1.7)	48 (1.0)	0.7 (0.2 to 1.2)	0.004
BARC type 2, 3, or 5	263 (5.6)	137 (2.9)	2.6 (1.8 to 3.5)	<0.001
Type 2	145 (3.1)	72 (1.5)	1.5 (0.9 to 2.1)	<0.001
Type 3	122 (2.6)	68 (1.5)	1.1 (0.6 to 1.7)	<0.001
Type 5	7 (0.1)	4 (0.1)	0.1 (–0.1 to 0.2)	0.38

Mauri L, Kereiakes DJ, Yeh RW, et al. Twelve or 30 months of dual antiplatelet therapy after drug-eluting stents. N Engl J Med 2014;371:2155-66.

Resultados DAPT

Table 2. Stent Thrombosis and Major Adverse Cardiovascular and Cerebrovascular Events.*

Outcome	Continued Thienopyridine (N=5020)	Placebo (N=4941)	Hazard Ratio, Thienopyridine vs. Placebo (95% CI)†	P Value†
	no. of patients (%)			
Stent thrombosis‡	19 (0.4)	65 (1.4)	0.29 (0.17–0.48)	<0.001
Definite	15 (0.3)	58 (1.2)	0.26 (0.14–0.45)	<0.001
Probable	5 (0.1)	7 (0.1)	0.71 (0.22–2.23)	0.55
Major adverse cardiovascular and cerebrovascular events§	211 (4.3)	285 (5.9)	0.71 (0.59–0.85)	<0.001
Death	98 (2.0)	74 (1.5)	1.36 (1.00–1.85)	0.05
Cardiac	45 (0.9)	47 (1.0)	1.00 (0.66–1.52)	0.98
Vascular	5 (0.1)	5 (0.1)	0.98 (0.28–3.39)	0.98
Noncardiovascular	48 (1.0)	22 (0.5)	2.23 (1.32–3.78)	0.002
Myocardial infarction	99 (2.1)	198 (4.1)	0.47 (0.37–0.61)	<0.001
Stroke	37 (0.8)	43 (0.9)	0.80 (0.51–1.25)	0.32
Ischemic	24 (0.5)	34 (0.7)	0.68 (0.40–1.17)	0.16
Hemorrhagic	13 (0.3)	9 (0.2)	1.20 (0.50–2.91)	0.68
Type uncertain	0	1 (<0.1)	—	0.32

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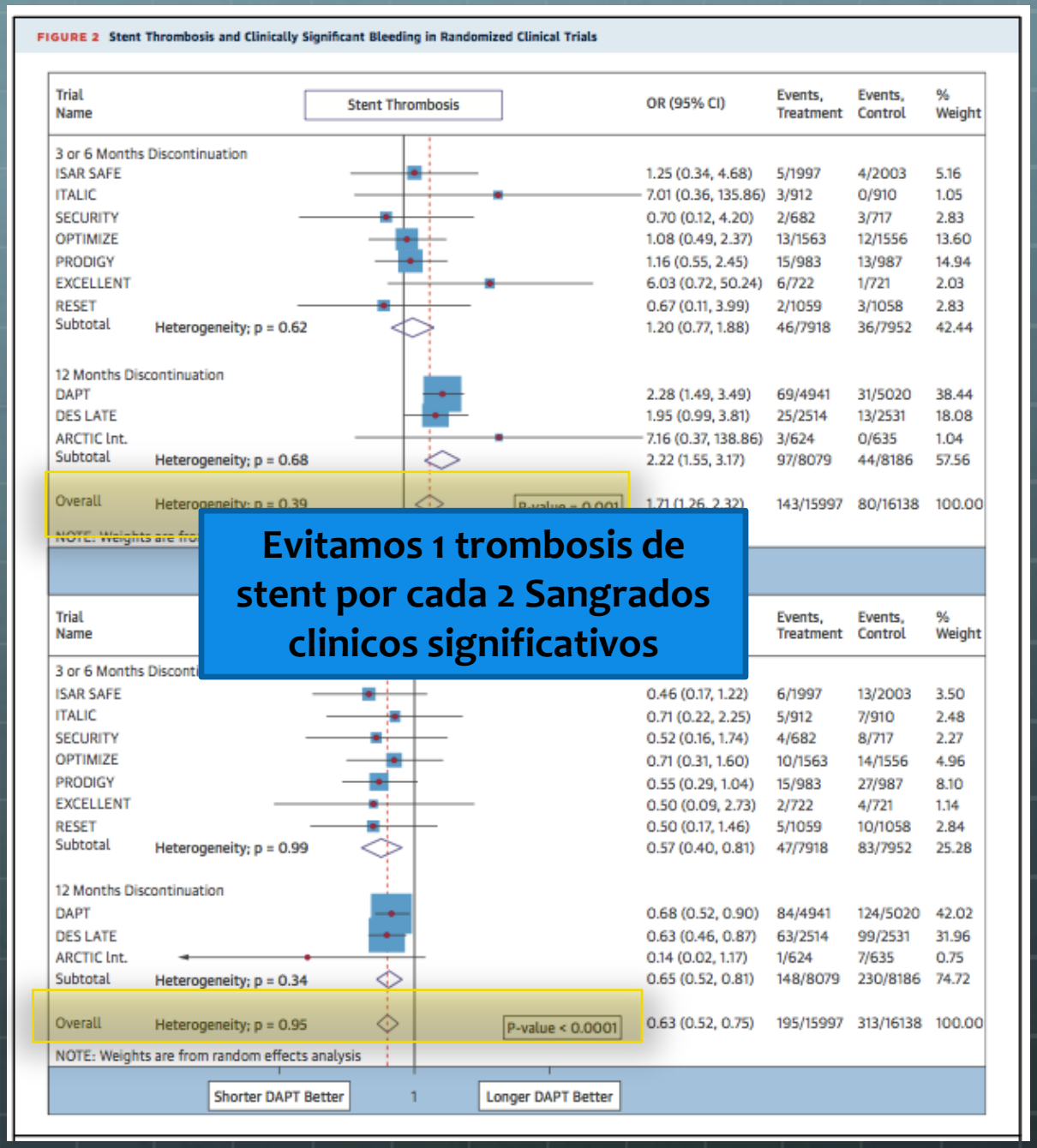
http://dx.doi.org/10.1016/j.jacc.2015.01.039

Duration of Dual Antiplatelet Therapy After Drug-Eluting Stent Implantation

A Systematic Review and Meta-Analysis of Randomized Controlled Trials

Gennaro Giustino, MD,* Usman Baber, MD,* Samantha Sartori, PhD,* Roxana Mehran, MD,* Ioannis Mastoris, MD,* Annapoorna S. Kini, MD,* Samin K. Sharma, MD,* Stuart J. Pocock, PhD,† George D. Dangas, MD, PhD*



Study (Ref. #)	ACS (%)
3- or 6-month DAPT disc	
ISAR-SAFE (16)	40
ITALIC (17)	24
SECURITY (18)	38§
OPTIMIZE (15)	32§
PRODIGY (20)	75
EXCELLENT (19)	52
RESET (14)	54
12-month DAPT discontin	
DAPT (7)	43
DES-LATE (22)	61
ARCTIC-Interruption (21)	–

≈ 45 % SCA

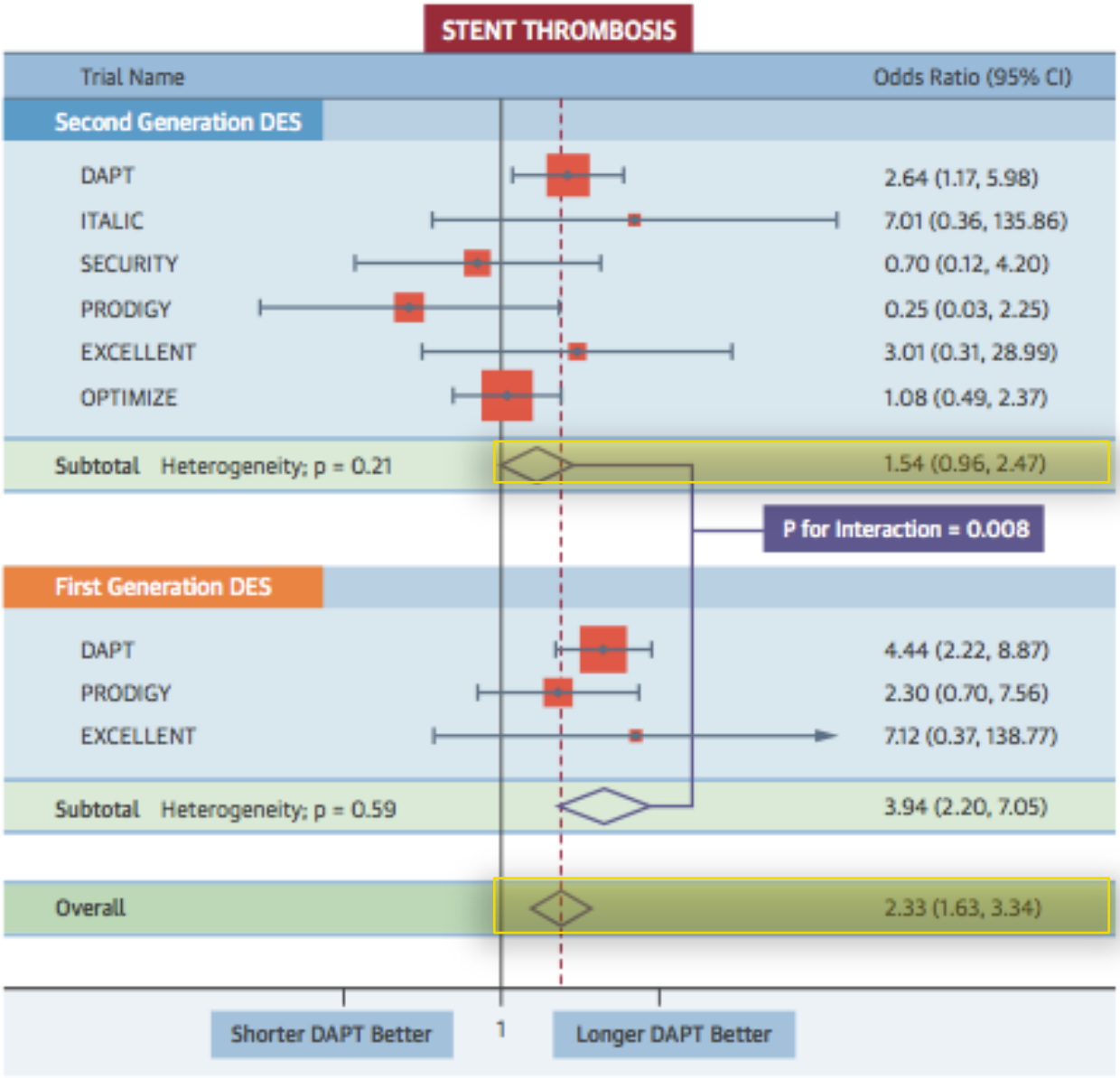

STENT THROMBOSIS
Trial Name
Odds Ratio (95% CI)
Second Generation DES
DAPT
2.64 (1.17, 5.98)
ITALIC
7.01 (0.36, 135.86)
SECURITY
0.70 (0.12, 4.20)
PRODIGY
0.25 (0.03, 2.25)
EXCELLENT
3.01 (0.31, 28.99)
OPTIMIZE
1.08 (0.49, 2.37)
Subtotal Heterogeneity; p = 0.21
1.54 (0.96, 2.47)
P for Interaction = 0.008
First Generation DES
DAPT
4.44 (2.22, 8.87)
PRODIGY
2.30 (0.70, 7.56)
EXCELLENT
7.12 (0.37, 138.77)
Subtotal Heterogeneity; p = 0.59
3.94 (2.20, 7.05)
Overall
2.33 (1.63, 3.34)
Shorter DAPT Better
1
Longer DAPT Better

FIGURE 3 Myocardial Infarction and Stroke in Randomized Clinical Trials

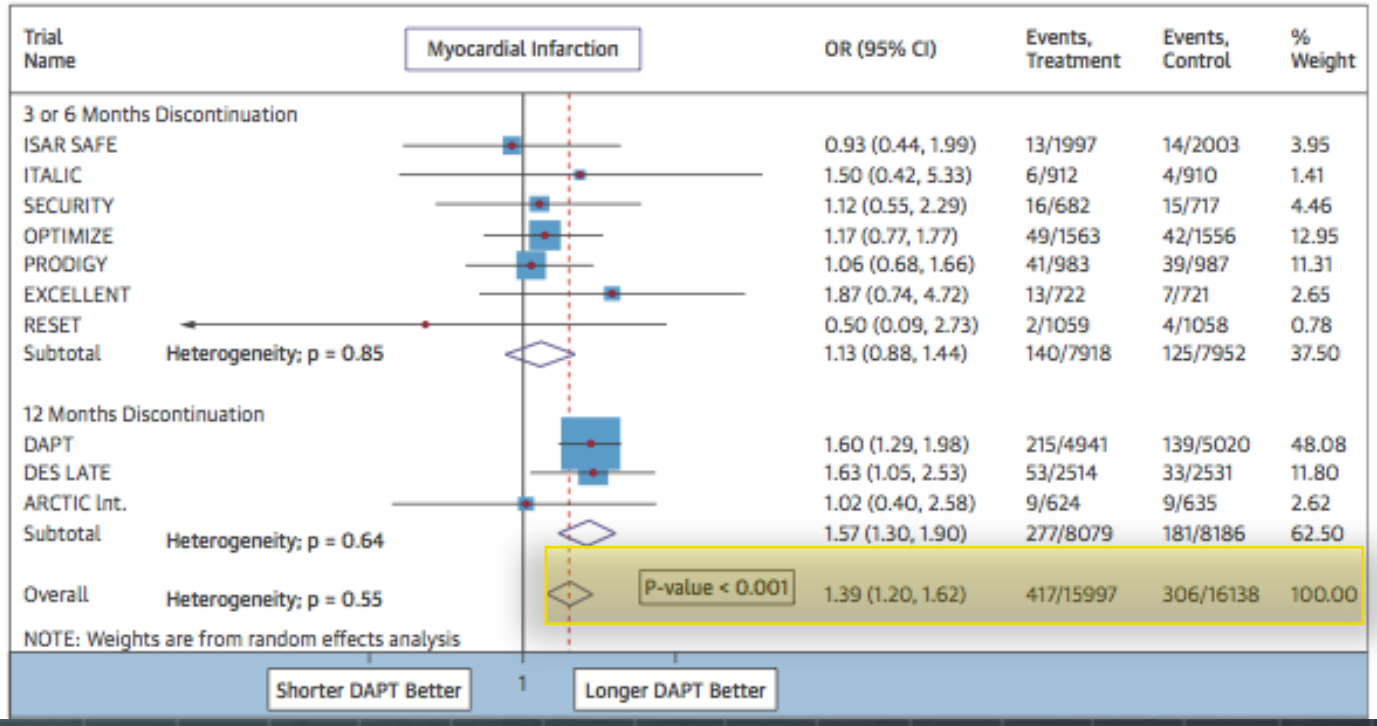
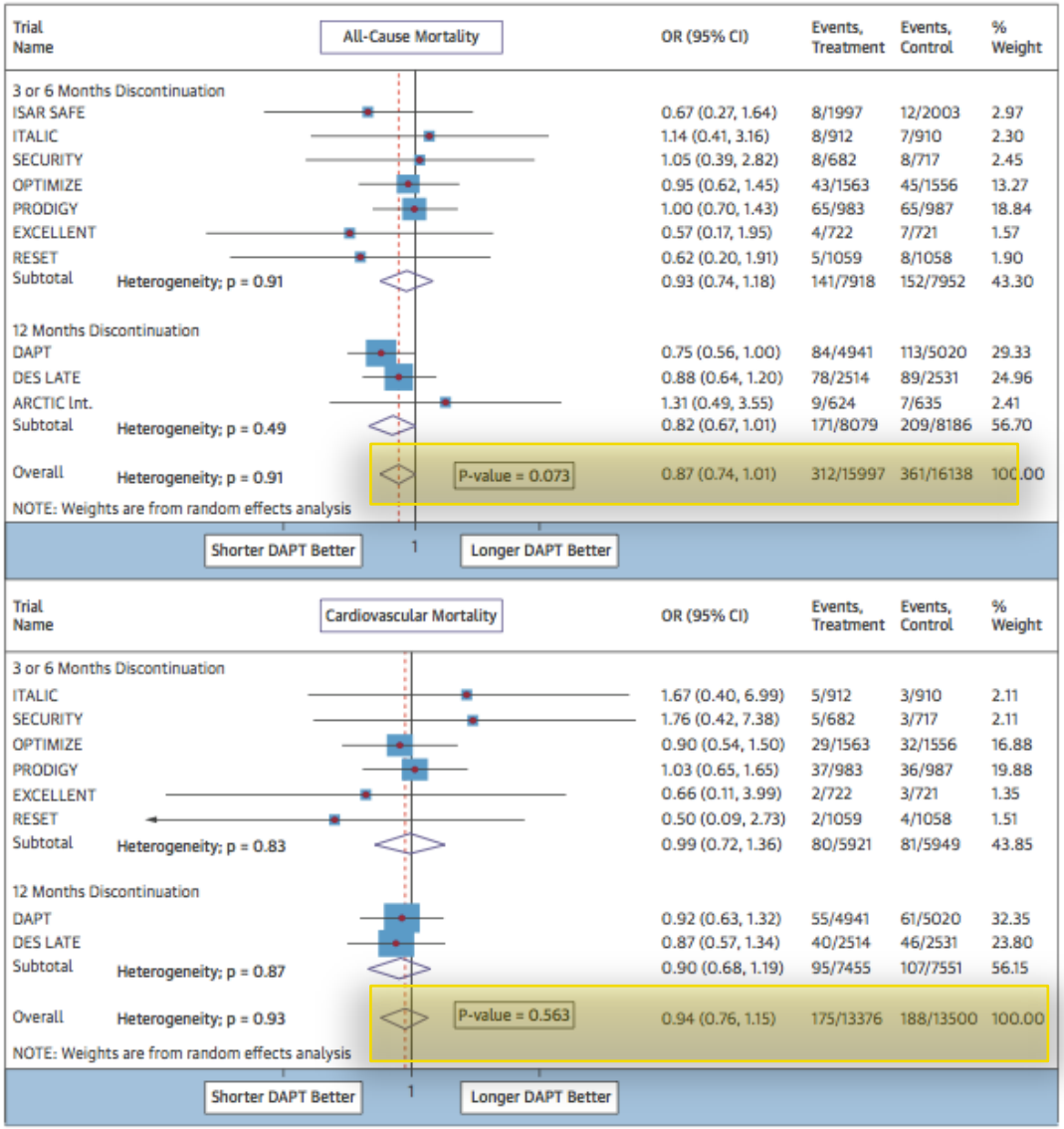


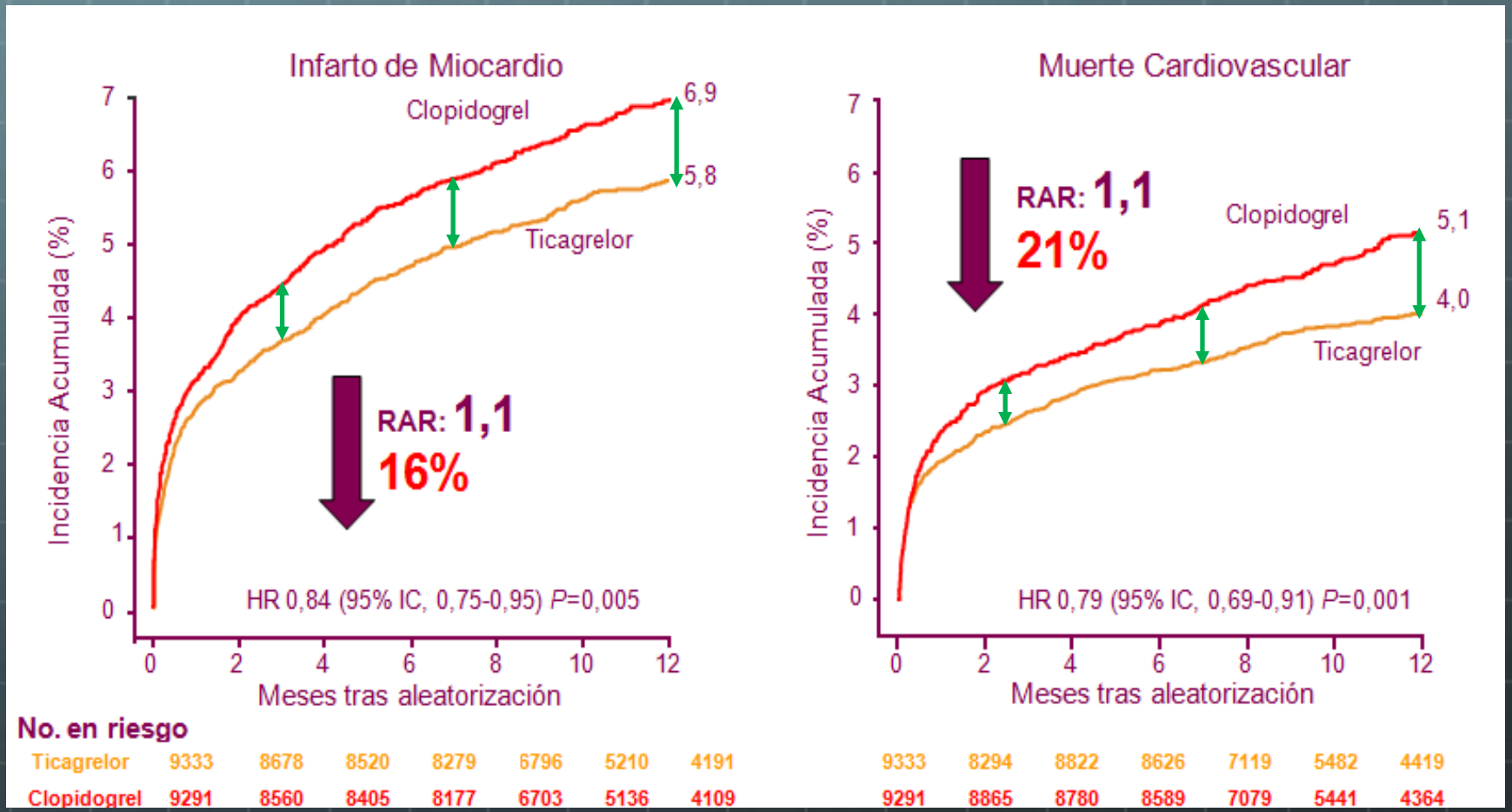
FIGURE 4 All-Cause and Cardiovascular Mortality in Randomized Clinical Trials



Size of central markers reflects the weight of each study. Abbreviations as in Figure 2.

Ticagrelor versus Clopidogrel in Patients with Acute Coronary Syndromes

Lars Wallentin, M.D., Ph.D., Richard C. Becker, M.D., Andrzej Budaj, M.D., Ph.D., Christopher P. Cannon, M.D., Håkan Emanuelsson, M.D., Ph.D., Claes Held, M.D., Ph.D., Jay Horrow, M.D., Steen Husted, M.D., D.Sc., Stefan James, M.D., Ph.D., Hugo Katus, M.D., Kenneth W. Mahaffey, M.D., Benjamin M. Scirica, M.D., M.P.H., Allan Skene, Ph.D., Philippe Gabriel Steg, M.D., Robert F. Storey, M.D., D.M., and Robert A. Harrington, M.D., for the PLATO Investigators*



Wallentin L, et al. N Engl J Med. 2009;361:1045–1057

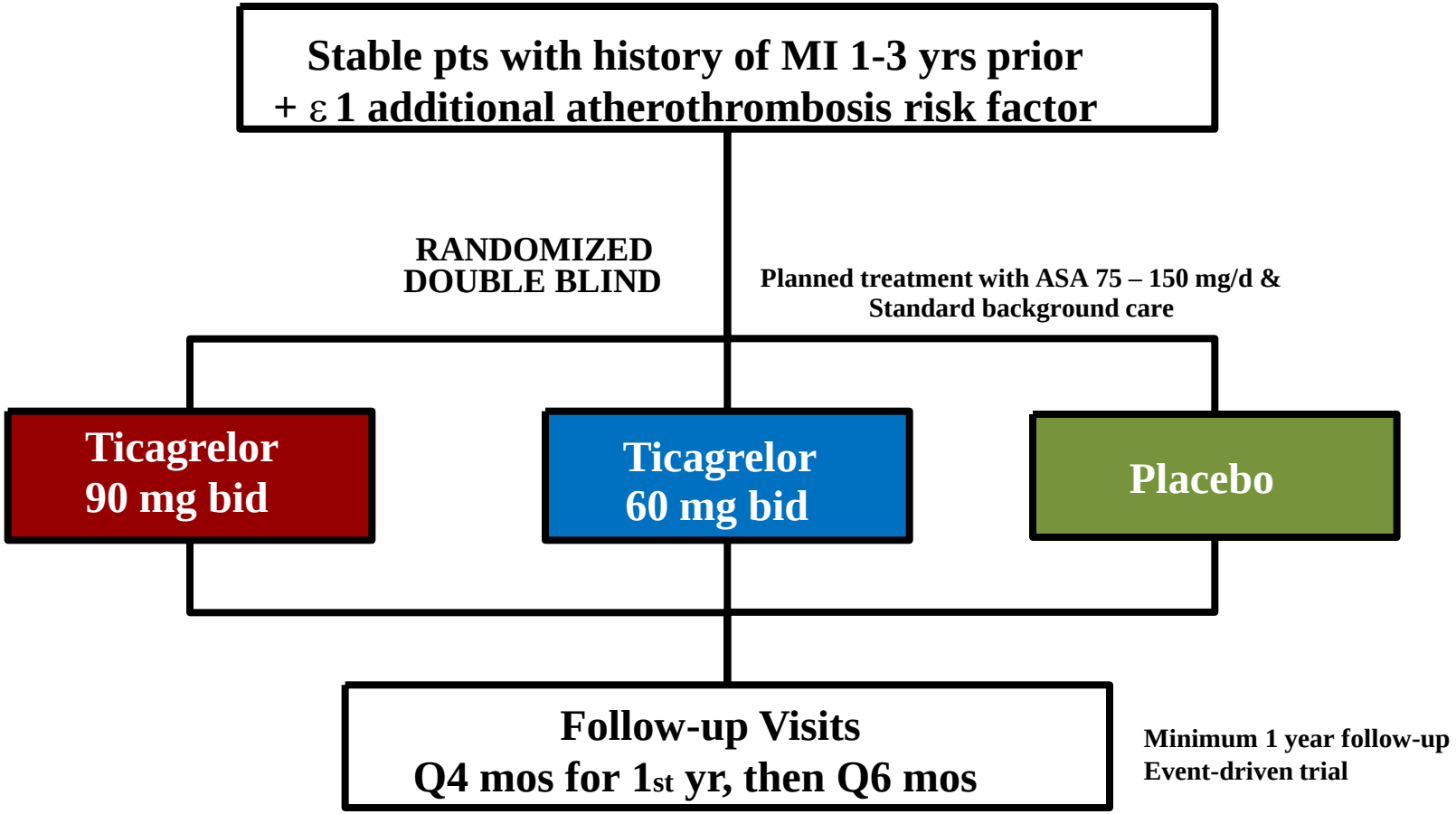
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction

Marc P. Bonaca, M.D., M.P.H., Deepak L. Bhatt, M.D., M.P.H., Marc Cohen, M.D., Philippe Gabriel Steg, M.D., Robert F. Storey, M.D., Eva C. Jensen, M.D., Ph.D., Giulia Magnani, M.D., Sameer Bansilal, M.D., M. Polly Fish, B.A., Kyungah Im, Ph.D., Olof Bengtsson, Ph.Lic., Ton Oude Ophuis, M.D., Ph.D., Andrzej Budaj, M.D., Ph.D., Pierre Theroux, M.D., Mikhail Ruda, M.D., Christian Hamm, M.D., Shinya Goto, M.D., Jindrich Spinar, M.D., José Carlos Nicolau, M.D., Ph.D., Robert G. Kiss, M.D., Ph.D., Sabina A. Murphy, M.P.H., Stephen D. Wiviott, M.D., Peter Held, M.D., Ph.D., Eugene Braunwald, M.D., and Marc S. Sabatine, M.D., M.P.H., for the PEGASUS-TIMI 54 Steering Committee and Investigators*

Trial Design



Bonaca MP et al. *Am Heart J* 2014;167:437-44

Key Inclusion & Exclusion Criteria

KEY INCLUSION

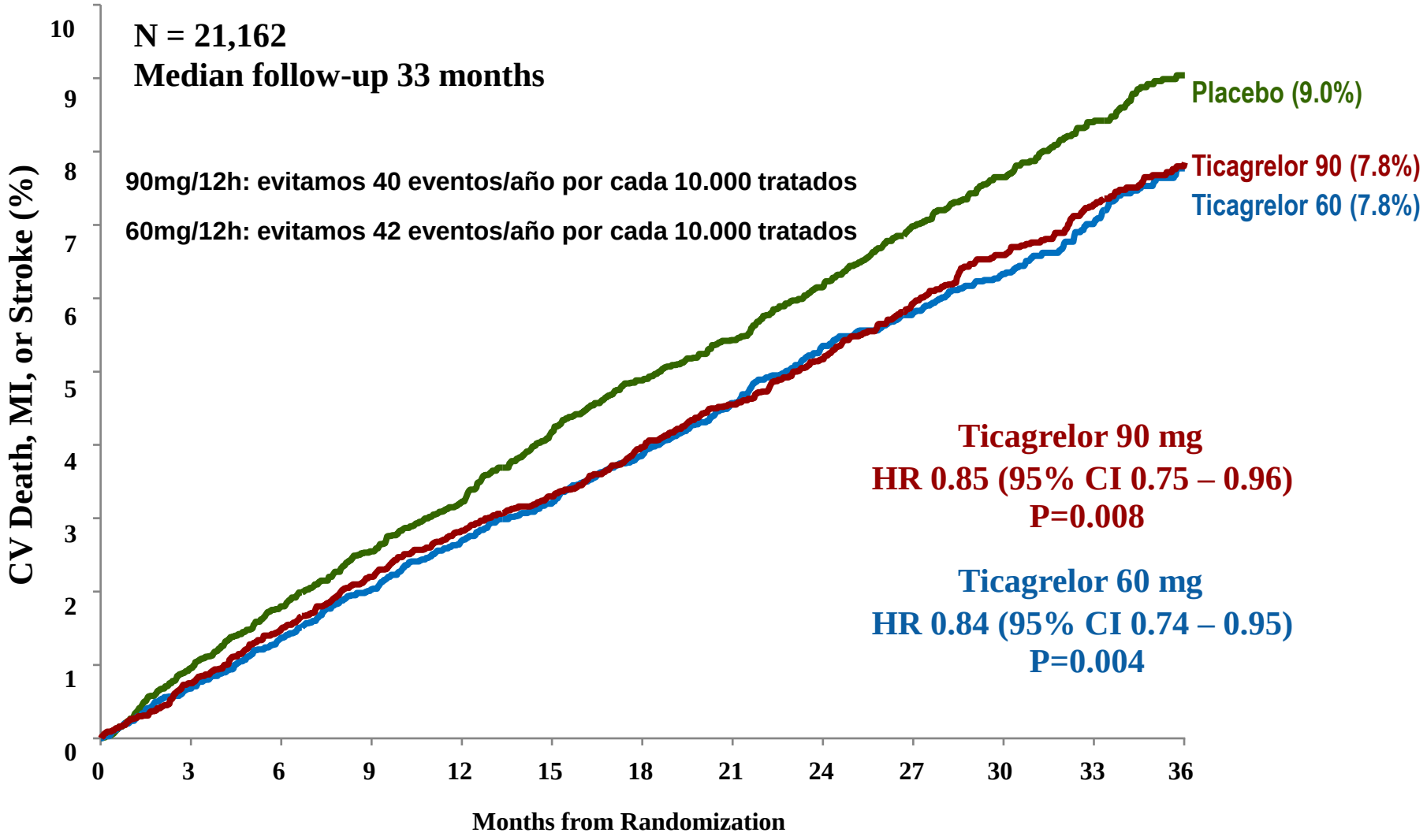
- Age ≥50 years
- At least 1 of the following:
  - Age ≥65 years
  - Diabetes requiring medication
  - 2nd prior MI (>1 year ago)
  - Multivessel CAD
  - CrCl <60 mL/min
- ToleratingASA and able to be dosed at 75-150 mg/d

KEY EXCLUSION

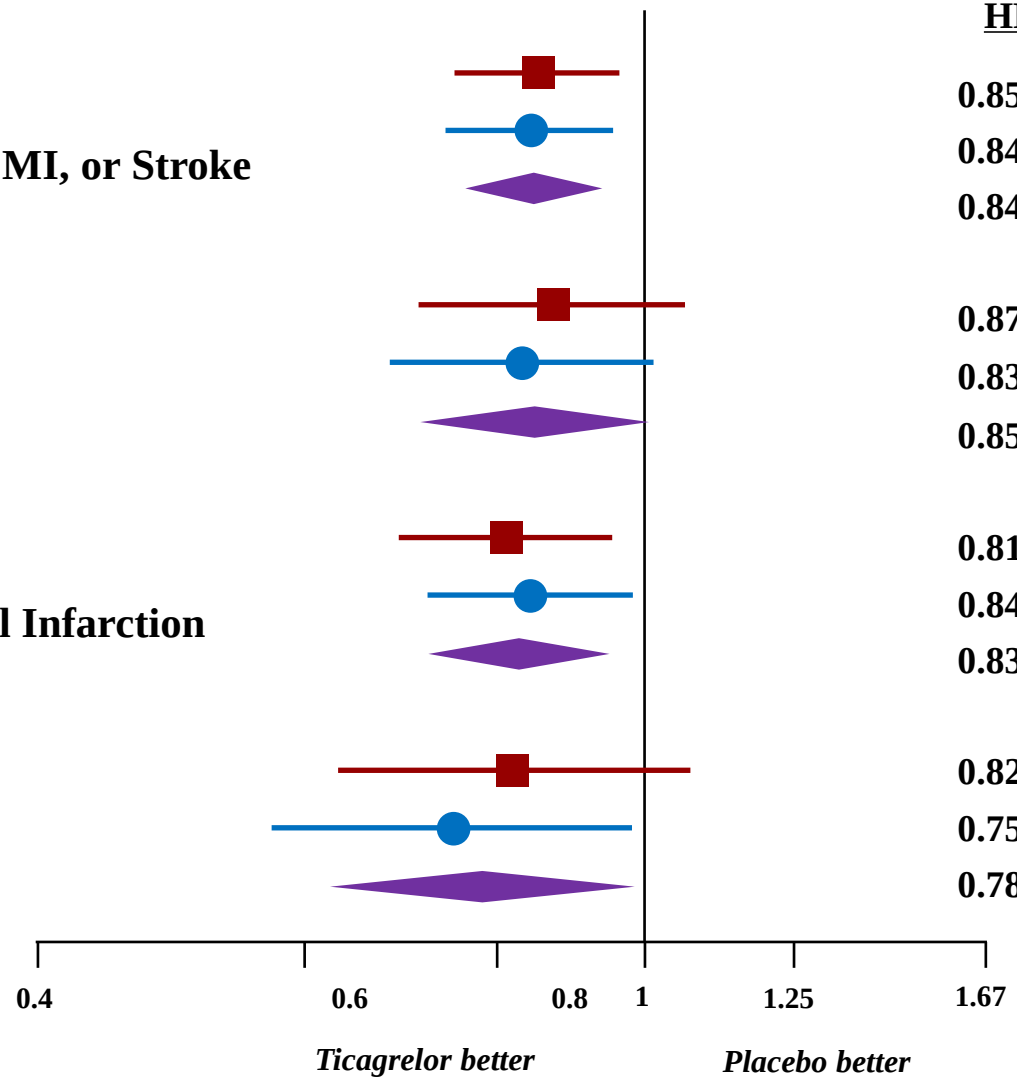
- Planned use of $P2Y_{12}$ antagonist, dipyridamole,cilostazol, or anticoag
- Bleeding disorder
- History of ischemic stroke, ICH, CNS tumor or vascular abnormality
- Recent GI bleed or major surgery
- At risk for bradycardia
- Dialysis or severe liver disease

Bonaca MP et al. *Am Heart J* 2014;167:437-44

Primary Endpoint



Components of Primary Endpoint



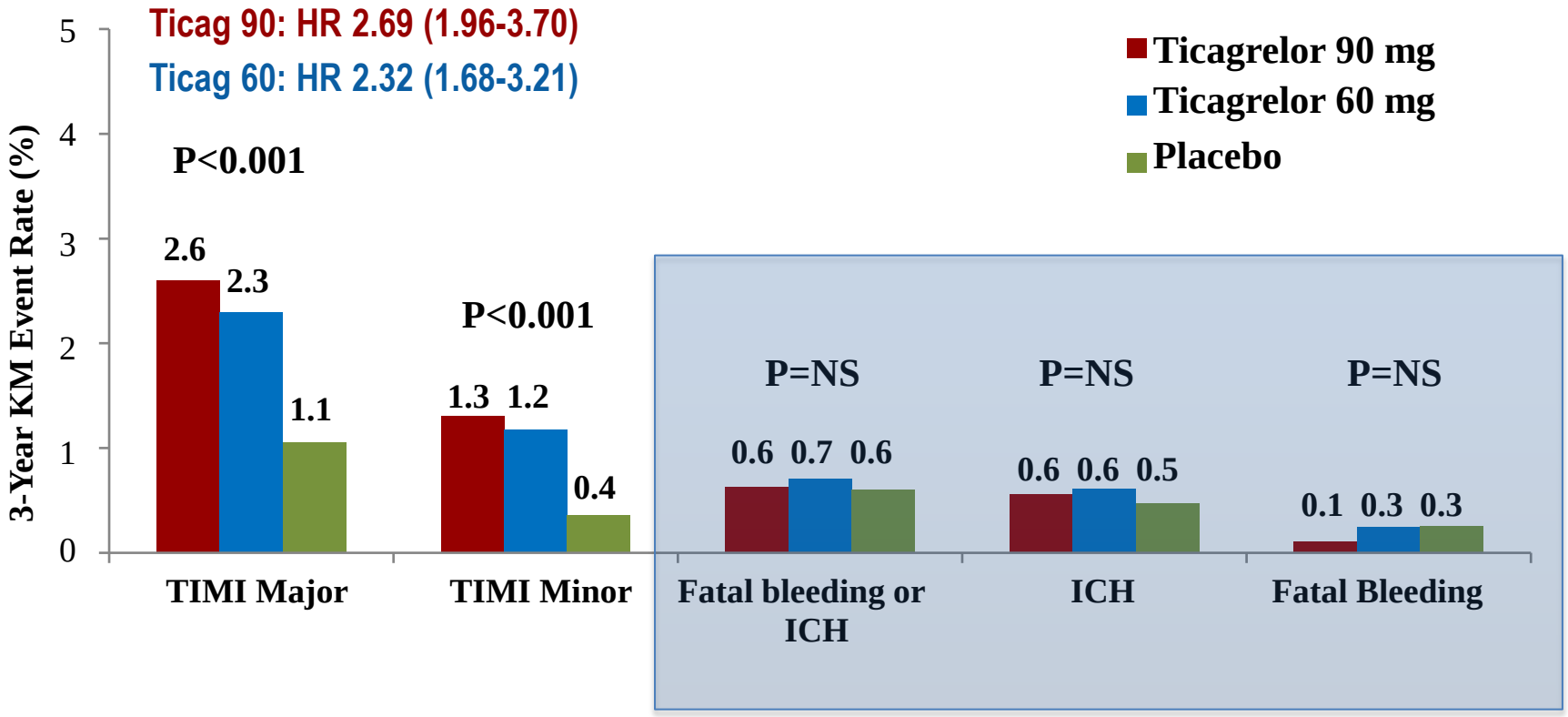
Endpoint	HR (95% CI)	P value
CV Death, MI, or Stroke (1558 events)	0.85 (0.75-0.96)	0.008
	0.84 (0.74-0.95)	0.004
	0.84 (0.76-0.94)	0.001
CV Death (566 events)	0.87 (0.71-1.06)	0.15
	0.83 (0.68-1.01)	0.07
	0.85 (0.71-1.00)	0.06
Myocardial Infarction (898 events)	0.81 (0.69-0.95)	0.01
	0.84 (0.72-0.98)	0.03
	0.83 (0.72-0.95)	0.005
Stroke (313 events)	0.82 (0.63-1.07)	0.14
	0.75 (0.57-0.98)	0.03
	0.78 (0.62-0.98)	0.03

Ticagrelor 90 mg
Ticagrelor 60 mg
Pooled

Bleeding

90mg/12h: Sangrado mayor TIMI : 41 eventos/año por cada 10.000 tratados

60mg/12h: Sangrado mayor TIMI : 31 eventos/año por cada 10.000 tratados



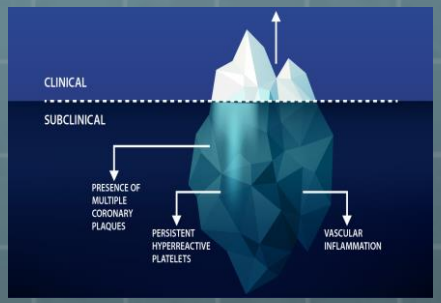
Conclusiones

- **Añadir Ticagrelor a bajas dosis de AAS en pacientes estables con historia de IM reduce el riesgo de muerte CDV, ictus o infarto**

- **Ticagrelor aumenta el riesgo de sangrado mayor TIMI, pero no de sangrado fatal ni intracraneal**

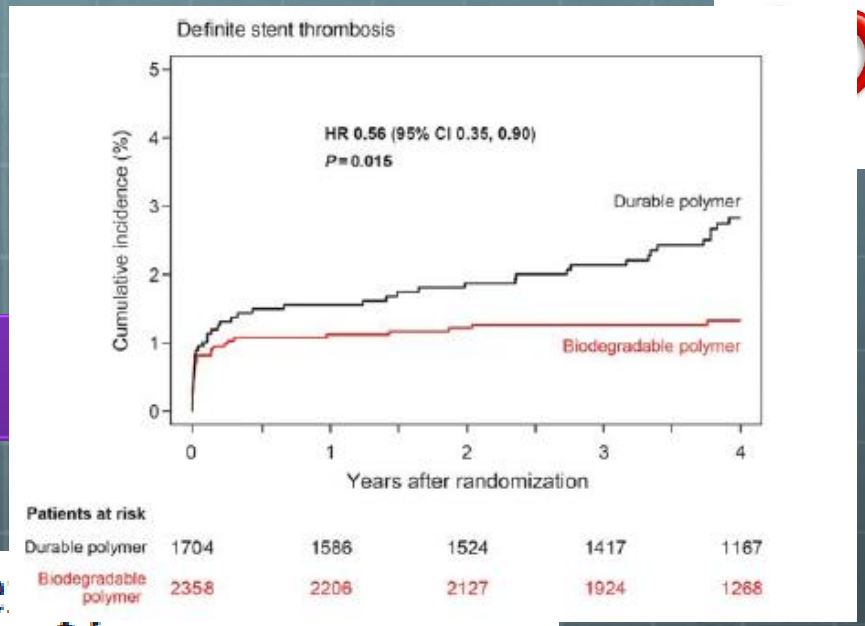
- **Las dos dosis tienen una eficacia similar, pero el sangrado y otros efectos secundarios son menores con la dosis de 60 mg/12h**

RIESGO RESIDUAL



STENT

SINDROME CORONARIO AGUDO



Continued thienopyridine the
with a lower cumulative incidence of myocardial infarction than was placebo (2.1% vs. 4.1%; hazard ratio, 0.47 [95% CI, 0.37 to 0.61]; P<0.001) (Fig. S1 in the Supplementary Appendix); myocardial infarction that was not related to stent thrombosis (1.8% vs. 2.9%; hazard ratio, 0.59; P<0.001) accounted for 55% of the treatment benefit. The two groups had similar rates of death

- El riesgo --- beneficio de la duración de la DAPT debe individualizarse según riesgo isquémico y hemorrágico

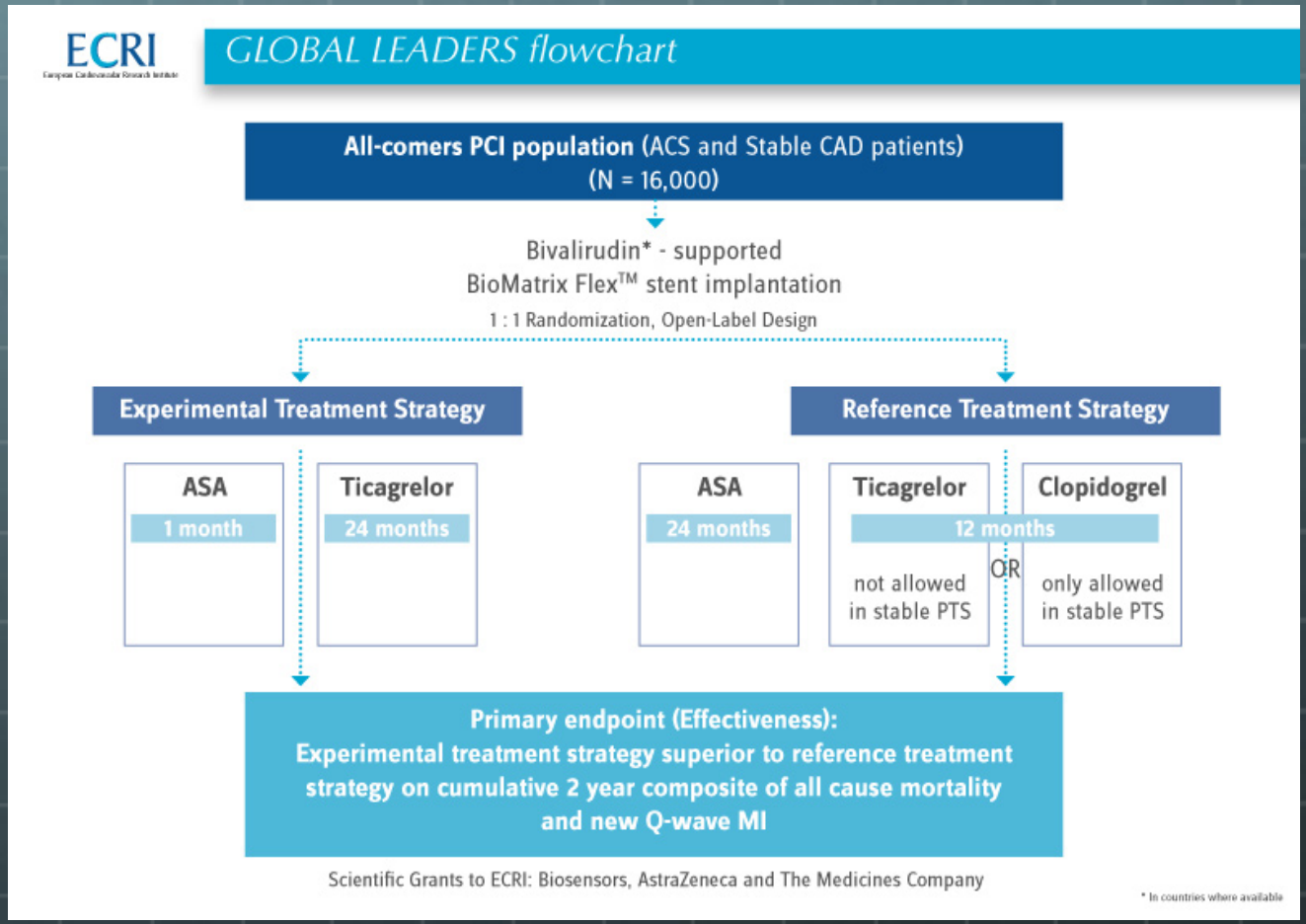
Duration of dual antiplatelet therapy after coronary artery stenting: where is the sweet spot between ischaemia and bleeding?

Ronald K. Binder and Thomas F. Lüscher*

European Heart Journal Advance Access published April 2, 2015

Bleeding Risk \ Ischemic Risk	Low	Moderate	High
Low	6 months	12 months	≥ 30 months
Moderate	3 – 6 months	6 - 12 months	12 months
High	≤ 3 months	3 - 6 months	6 - 12 months

GLOBAL LEADERS TRIAL



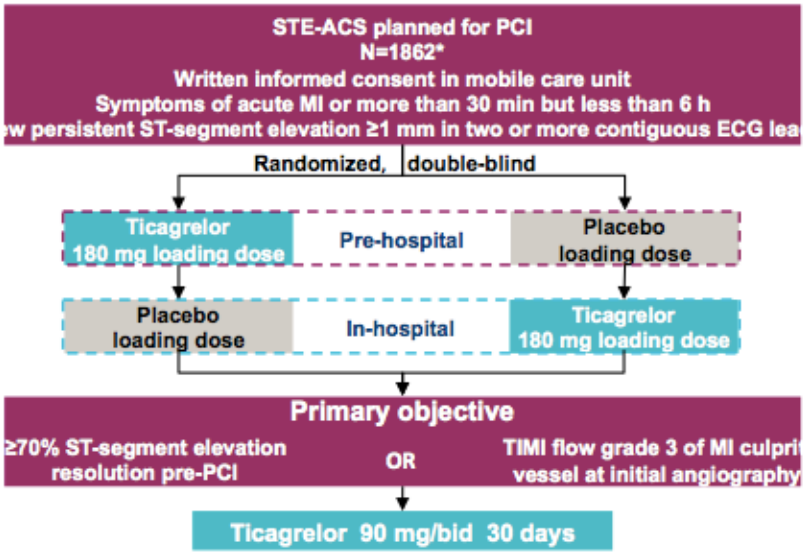
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

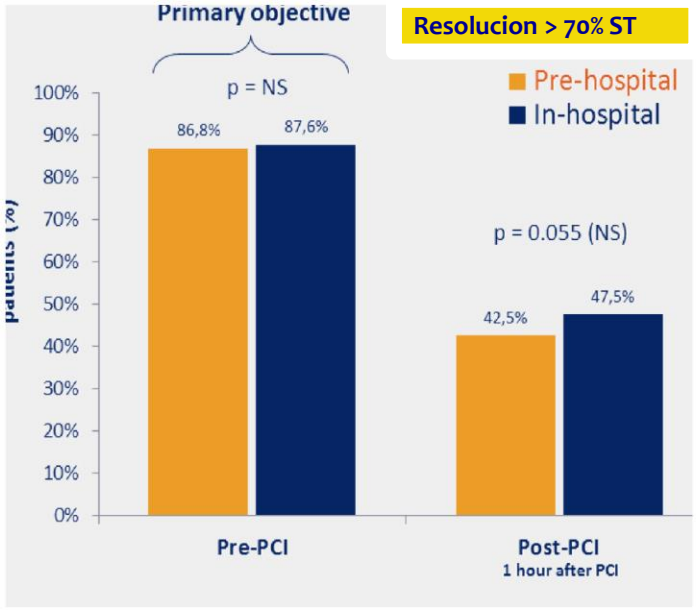
Prehospital Ticagrelor in ST-Segment Elevation Myocardial Infarction

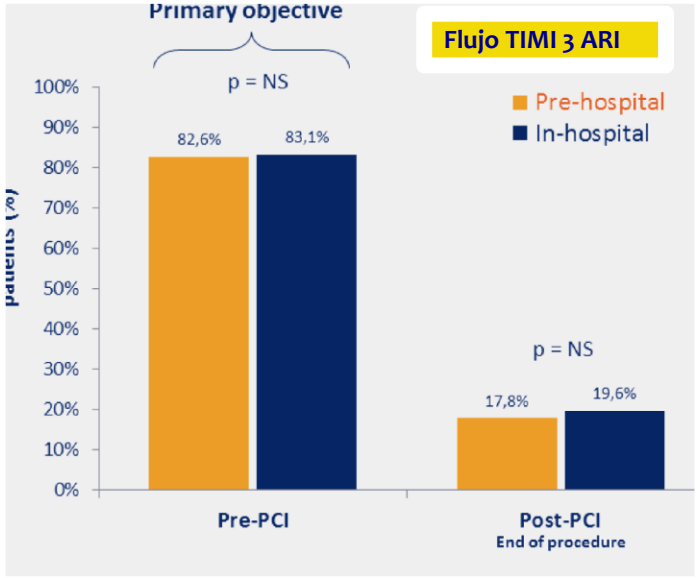
Gilles Montalescot, M.D., Ph.D., Arnoud W. van 't Hof, M.D., Ph.D., Frédéric Lapostolle, M.D., Ph.D., Johanne Silvain, M.D., Ph.D., Jens Flensted Lassen, M.D., Ph.D., Leonardo Bolognese, M.D., Warren J. Cantor, M.D., Ángel Cequier, M.D., Ph.D., Mohamed Chettibi, M.D., Ph.D., Shaun G. Goodman, M.D., Christopher J. Hammett, M.B., Ch.B., M.D., Kurt Huber, M.D., Magnus Janzon, M.D., Ph.D., Béla Merkely, M.D., Ph.D., Robert F. Storey, M.D., D.M., Uwe Zeymer, M.D., Olivier Stibbe, M.D., Patrick Ecollan, M.D., Wim M.J.M. Heutz, M.D., Eva Swahn, M.D., Ph.D., Jean-Philippe Collet, M.D., Ph.D., Frank F. Willems, M.D., Ph.D., Caroline Baradat, M.Sc., Muriel Licour, M.Sc., Anne Tsatsaris, M.D., Eric Vicaut, M.D., Ph.D., and Christian W. Hamm, M.D., Ph.D., for the ATLANTIC Investigators*

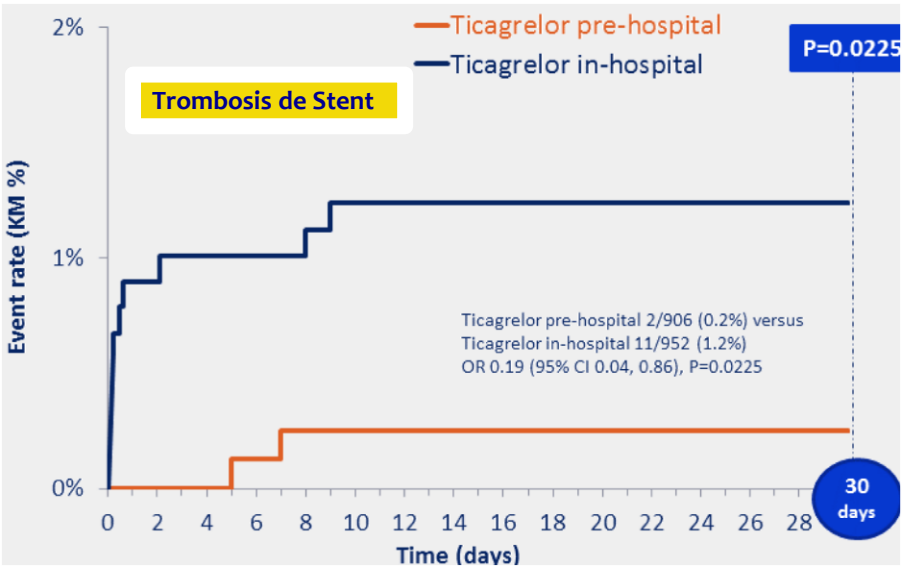
ATLANTIC study population and design

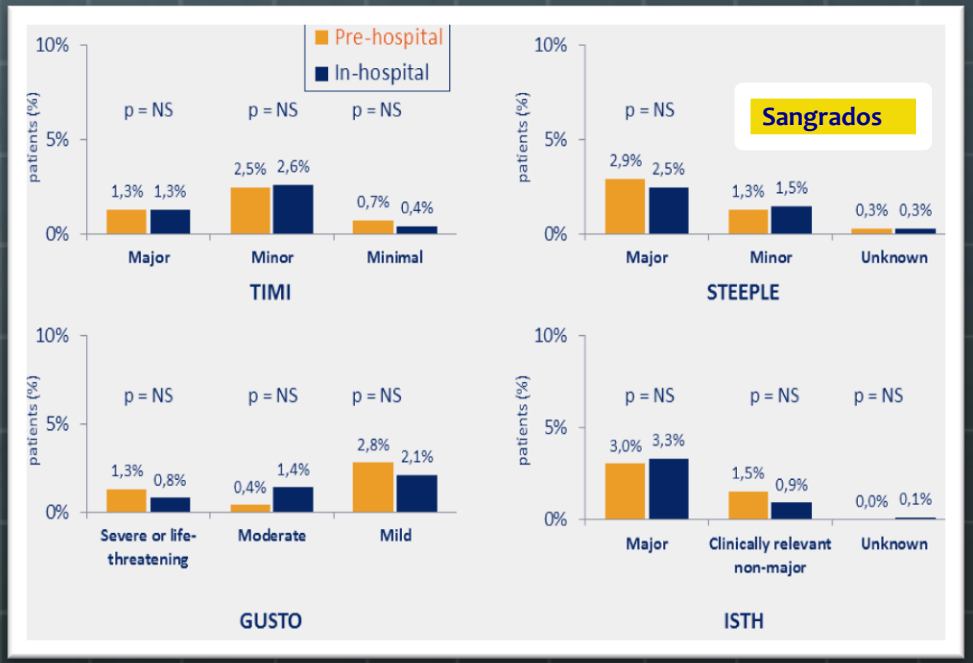


*Consented and randomized
Montalescot G et al. Am Heart J 2013;165:515-522



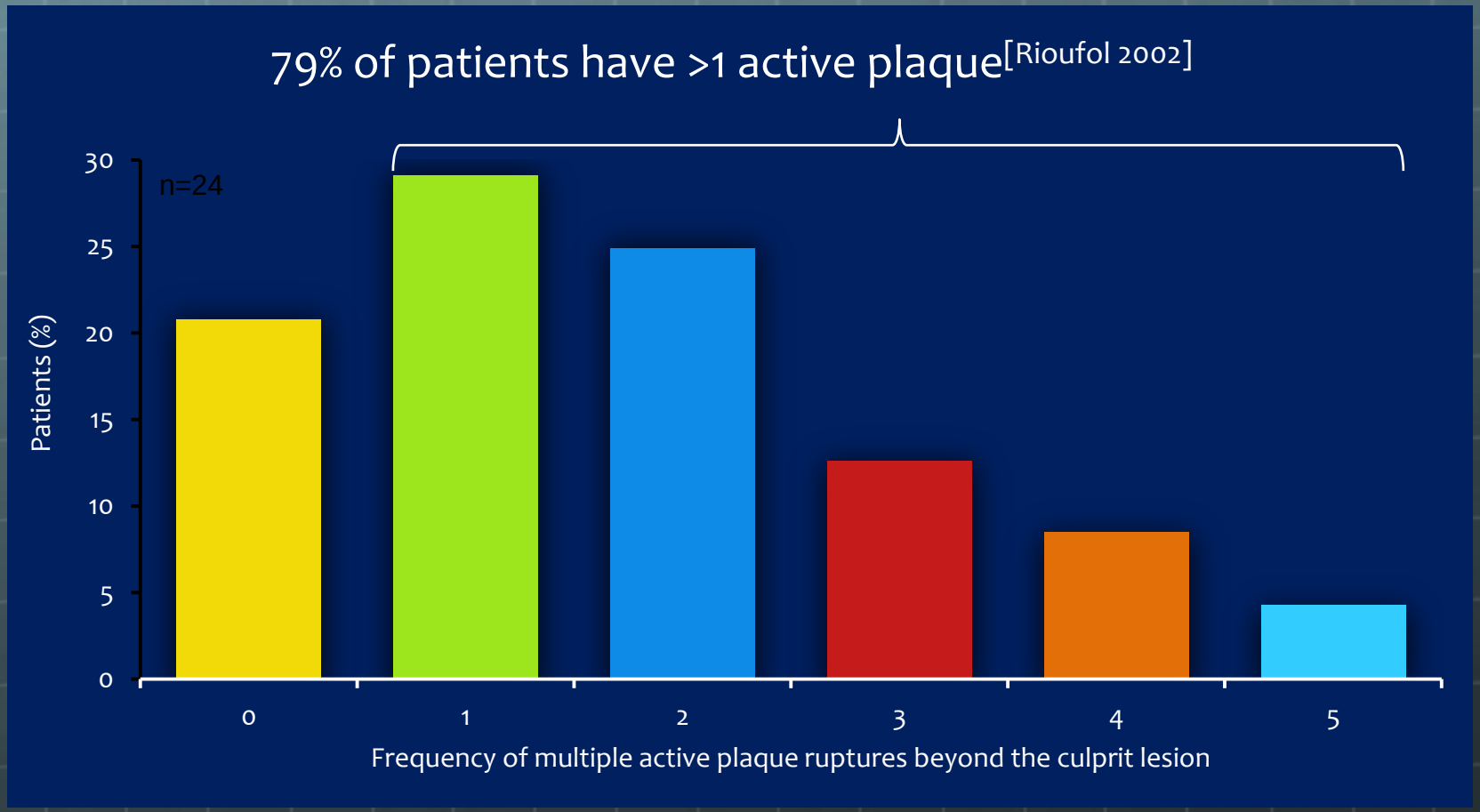



Trombosis de Stent
Ticagrelor pre-hospital
Ticagrelor in-hospital
P=0.0225
Event rate (KM %)
2%
1%
0%
Ticagrelor pre-hospital 2/906 (0.2%) versus
Ticagrelor in-hospital 11/952 (1.2%)
OR 0.19 (95% CI 0.04, 0.86), P=0.0225
30 days
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28
Time (days)


Pre-hospital
In-hospital
Sangrados
patients (%)
10%
5%
0%
p = NS
1,3% 1,3%
2,5% 2,6%
0,7% 0,4%
Major
Minor
Minimal
TIMI
2,9% 2,5%
1,3% 1,5%
0,3% 0,3%
Major
Minor
Unknown
STEEPLE
1,3% 0,8%
0,4% 1,4%
2,8% 2,1%
Severe or life-threatening
Moderate
Mild
GUSTO
3,0% 3,3%
1,5% 0,9%
0,0% 0,1%
Major
Clinically relevant non-major
Unknown
ISTH

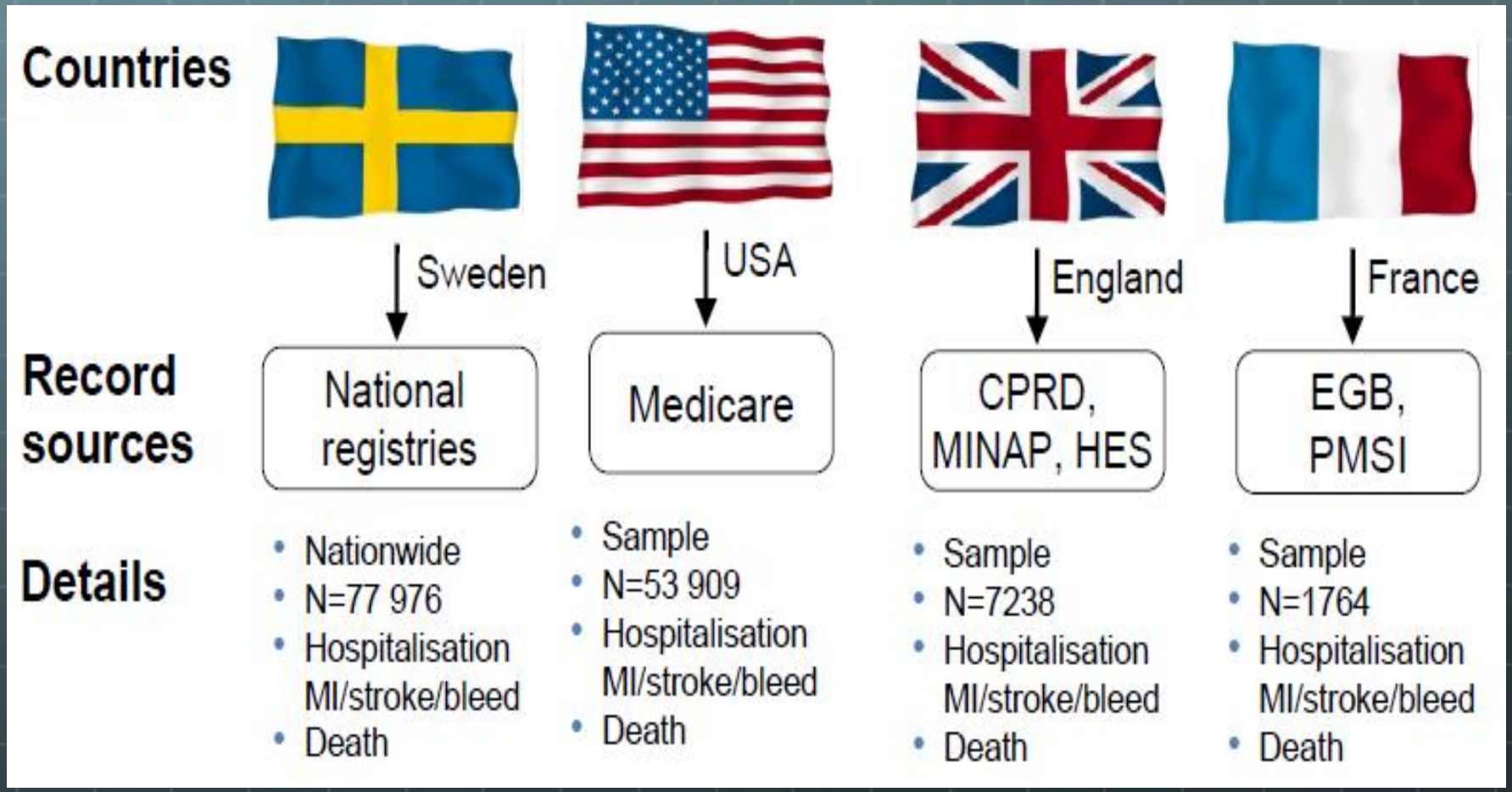
Muchas gracias

Patients with ACS have multiple active plaques



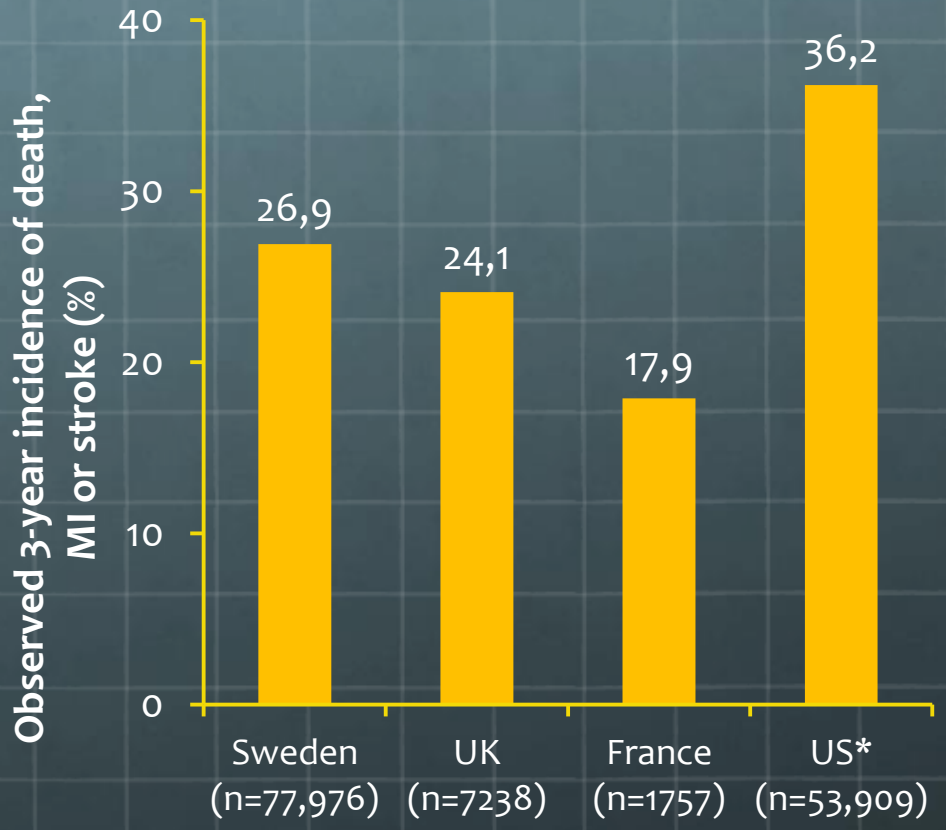
Rioufol G *et al.* Circulation 2002;106:804–808.

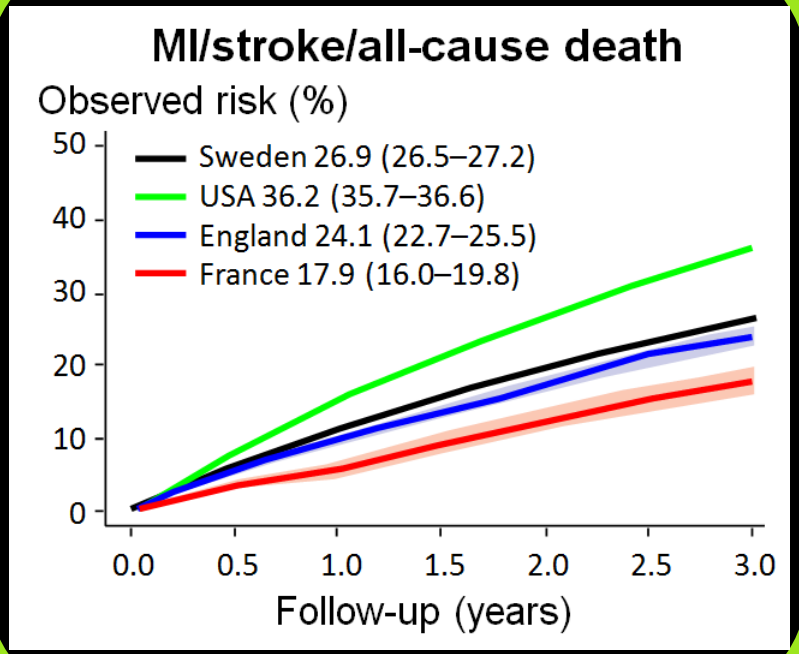
APOLLO: 5 individual studies in 4 countries encompassing >150,000 patients



Mas de 1/3 de los pacientes libres de eventos en el primer año tras un infarto, sufrirán en los siguientes tres años un ictus, muerte o infarto

APOLLO 4-country analysis : Incidencia Observada



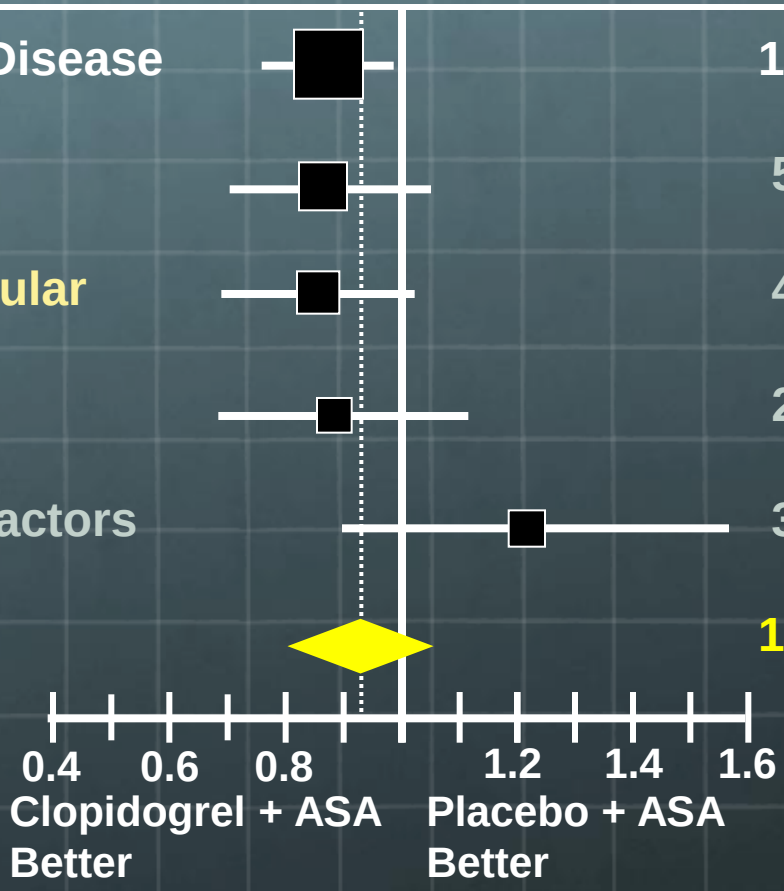


*US sample restricted to patients aged ≥65 years. MI, myocardial infarction. Shaded areas / figures in brackets [95%CI]

Rapsomaniki E, et al. ESC Late Breaking Registry presentation 2014: In press.

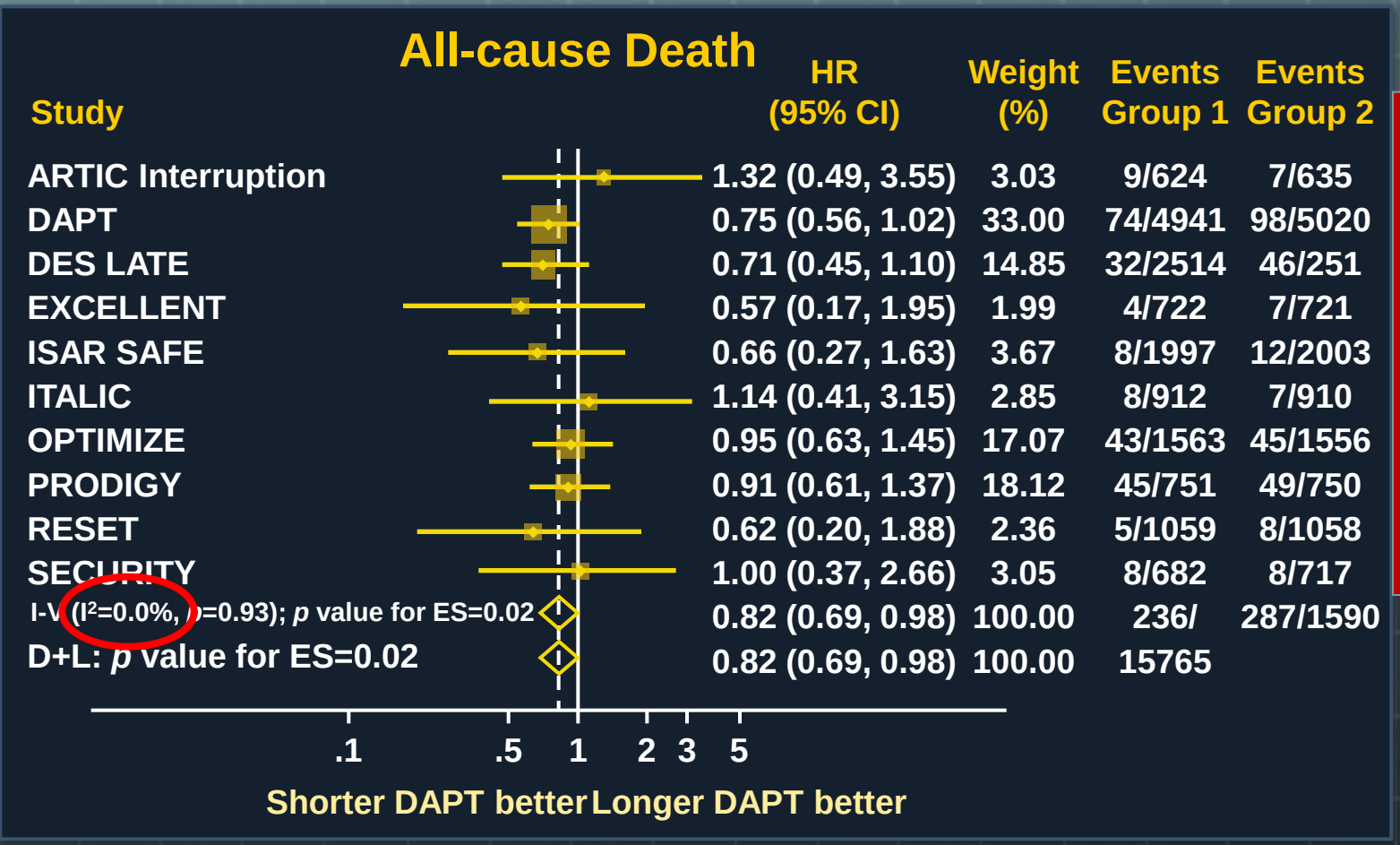
Primary Efficacy Results (MI/Stroke/CV Death) by Category of Inclusion Criteria

Population	N	RR (95% CI)	p value
Qualifying CV Disease	12,153	0.88 (0.77, 0.998)	0.046
Coronary	5,835	0.86 (0.71, 1.05)	0.13
Cerebrovascular	4,320	0.84 (0.69, 1.03)	0.09
PAD	2,838	0.87 (0.67, 1.13)	0.29
Multiple Risk Factors	3,284	1.20 (0.91, 1.59)	0.20
	15,603	0.93 (0.83, 1.05)	0.22



Bhatt DL. Presented at ACC 2006.

Mortality with Extended Duration DAPT After DES: Meta-Analysis of 10 RCTs and 31,666 Pts

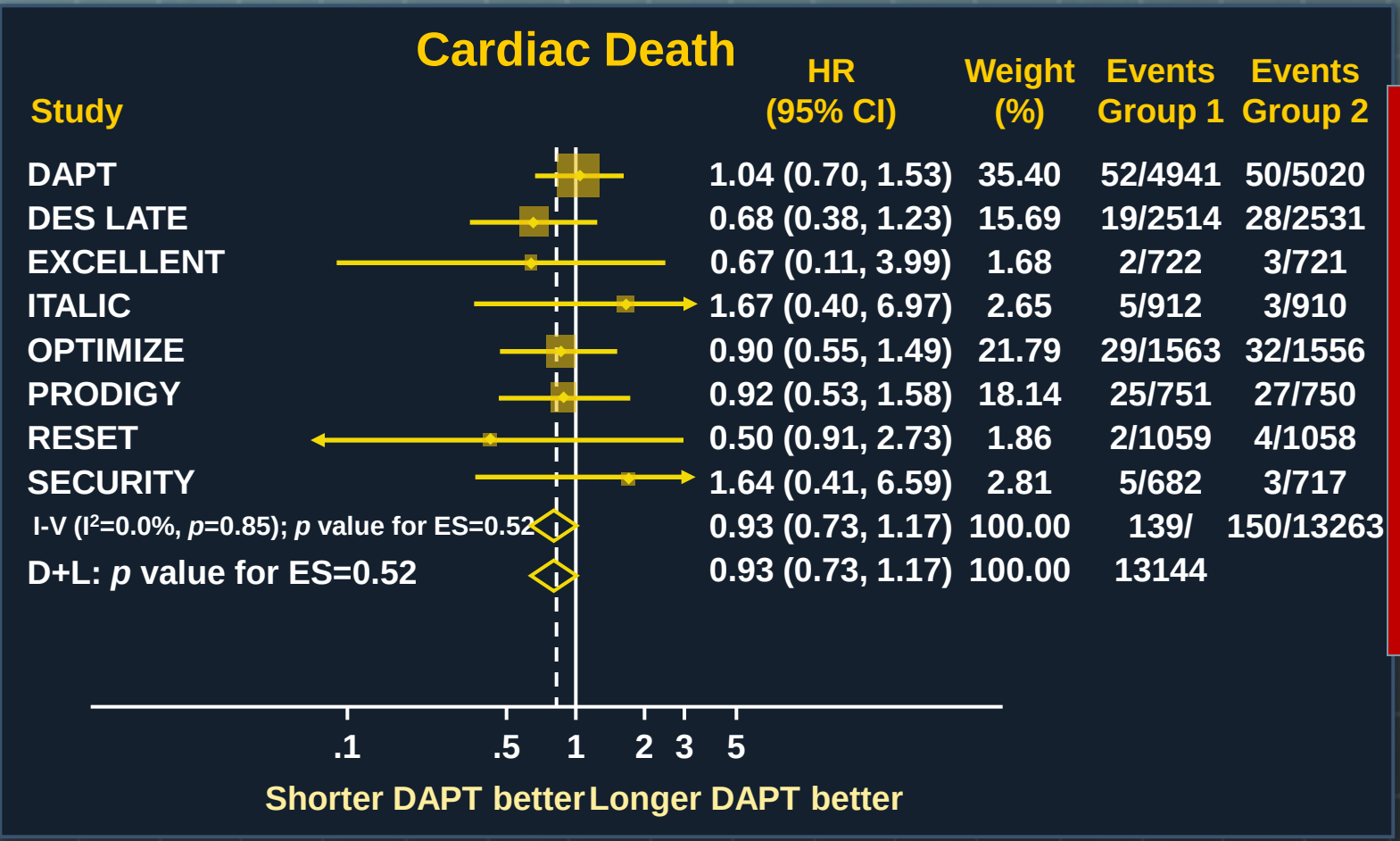


22% ↑ mortality with prolonged DAPT (p=0.02)

ES=effect size

Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES:
Meta-Analysis of 10 RCTs and 31,666 Pts

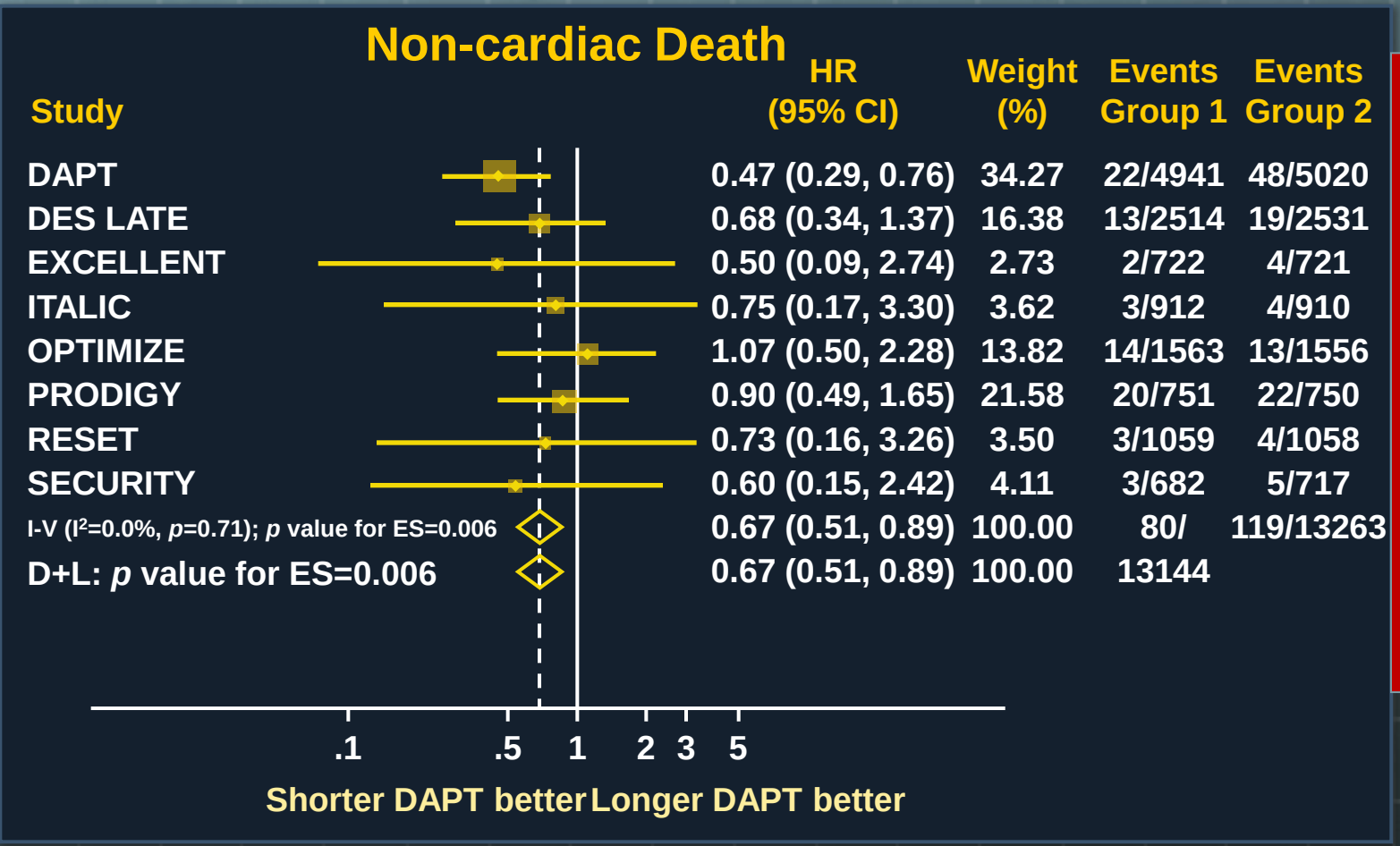


8% ↑ cardiac mortality with prolonged DAPT (p=NS)

ES=effect size

Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES:
Meta-Analysis of 10 RCTs and 31,666 Pts

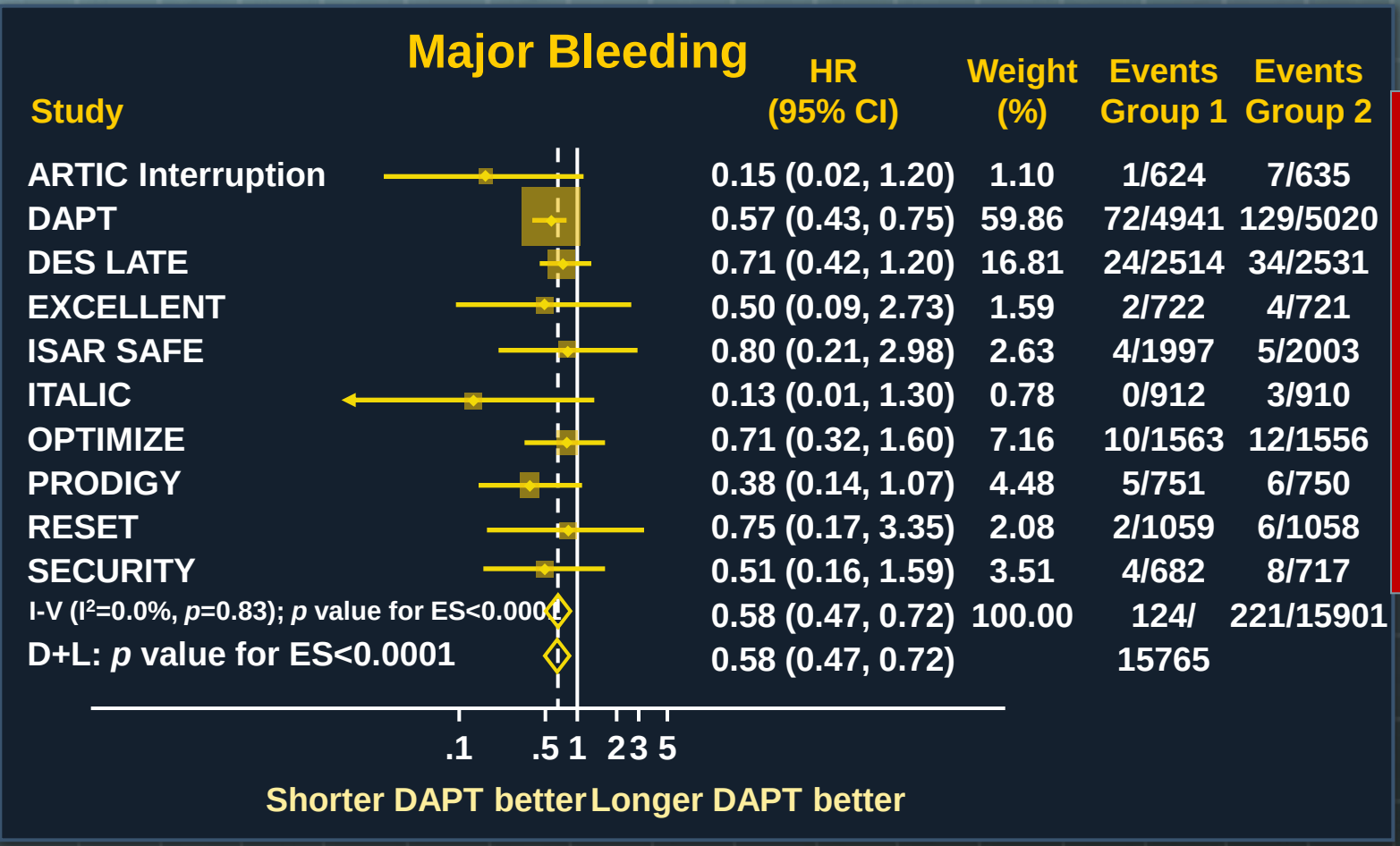


49%↑ non-cardiac mortality with prolonged DAPT (p=0.006)

ES=effect size

Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES:
Meta-Analysis of 10 RCTs and 31,666 Pts

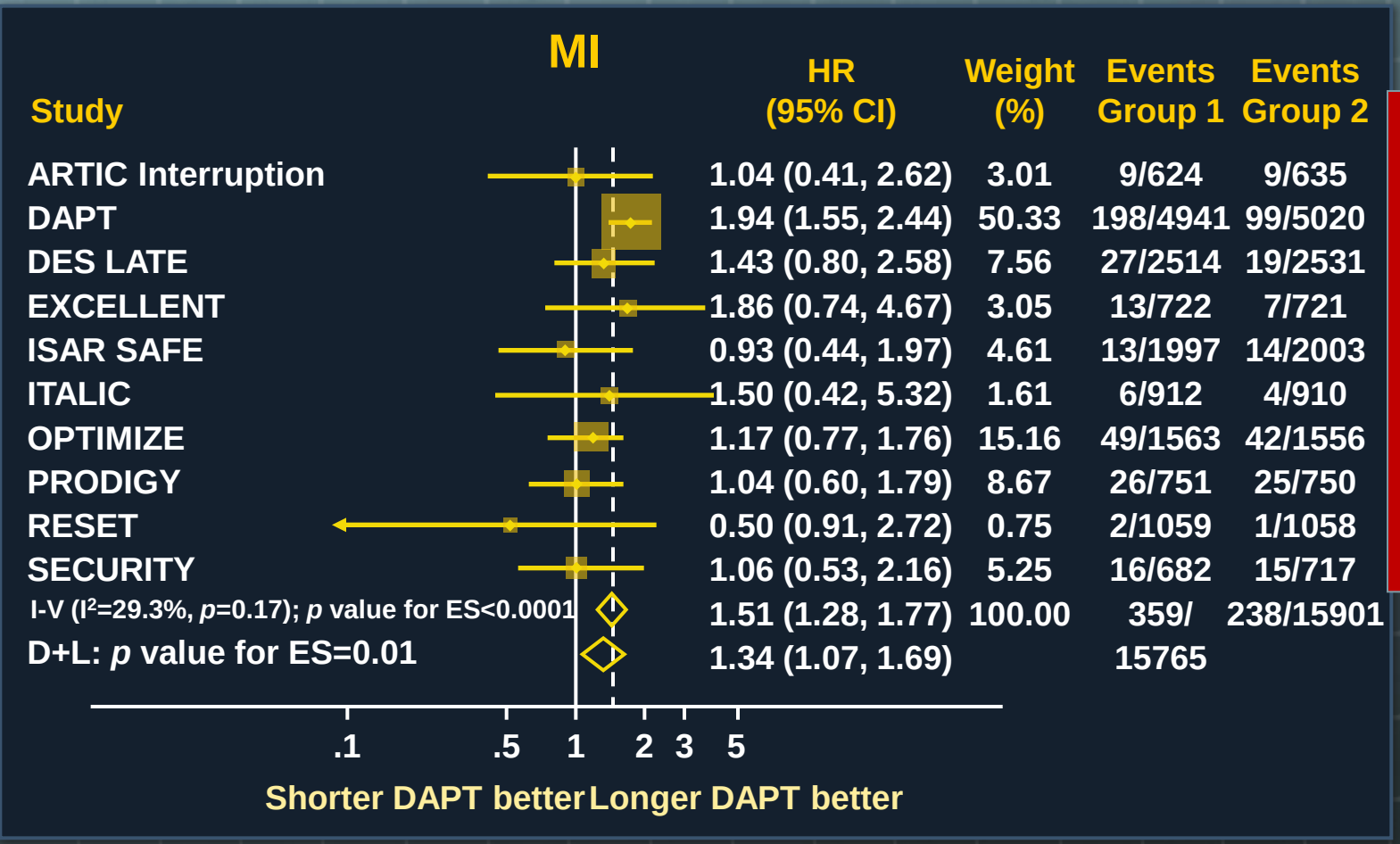


72%↑ bleeding with prolonged DAPT (p<0.0001)

ES=effect size

Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES:
Meta-Analysis of 10 RCTs and 31,666 Pts

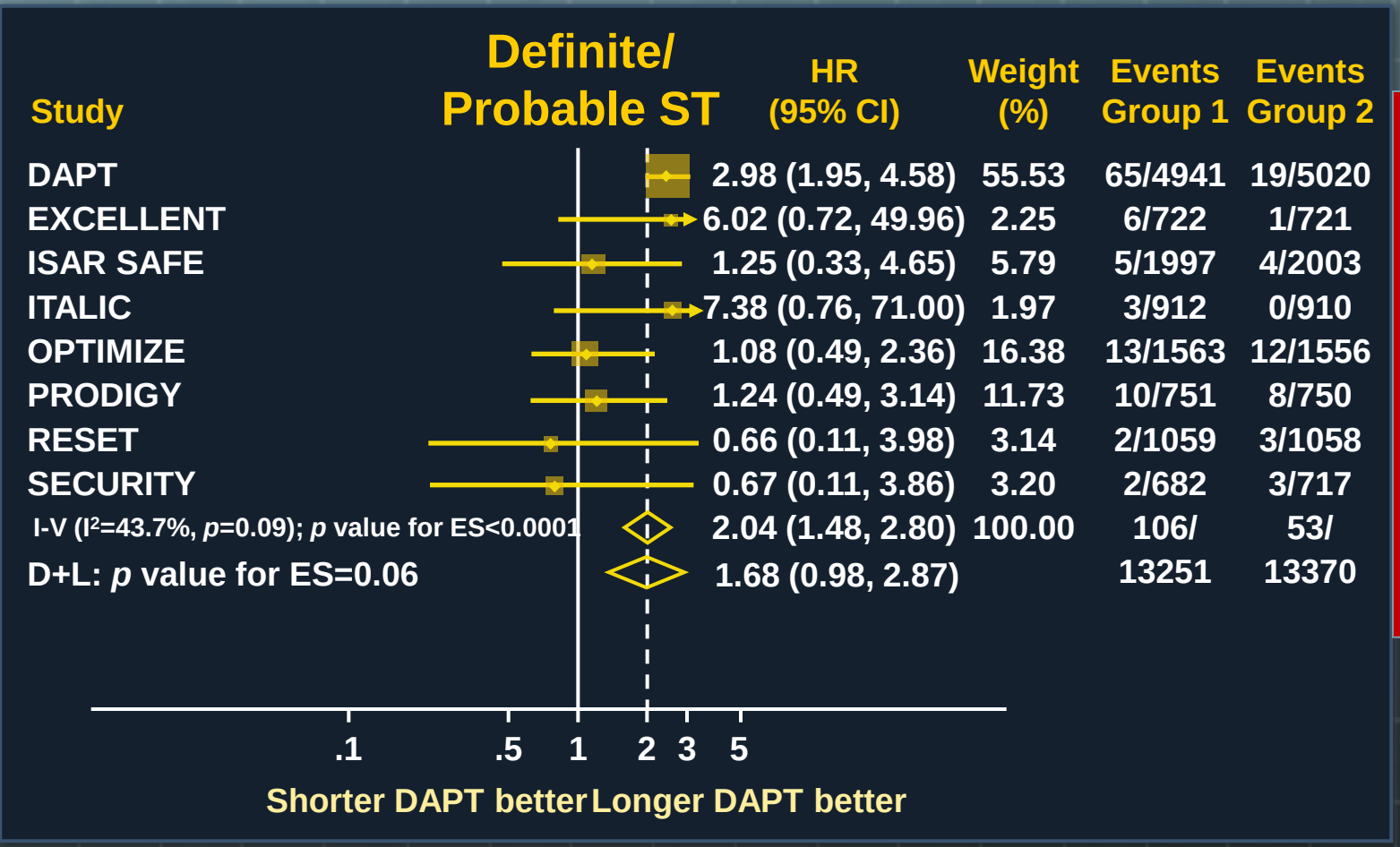


25%↓ MI with prolonged DAPT (p=0.01)

ES=effect size

Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES:
Meta-Analysis of 10 RCTs and 31,666 Pts



41%↓ stent thrombosis with prolonged DAPT (p=0.06)

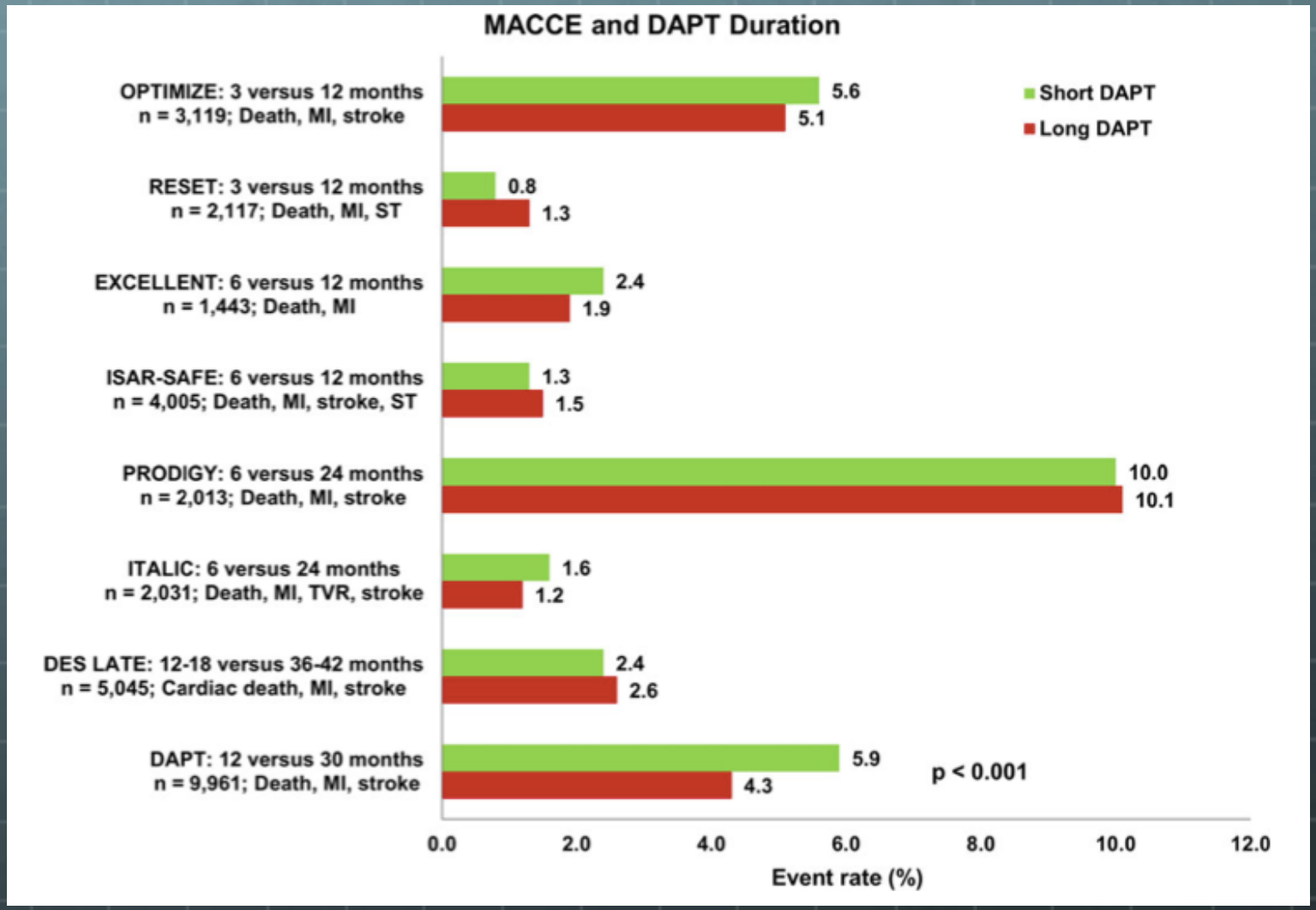
ES=effect size

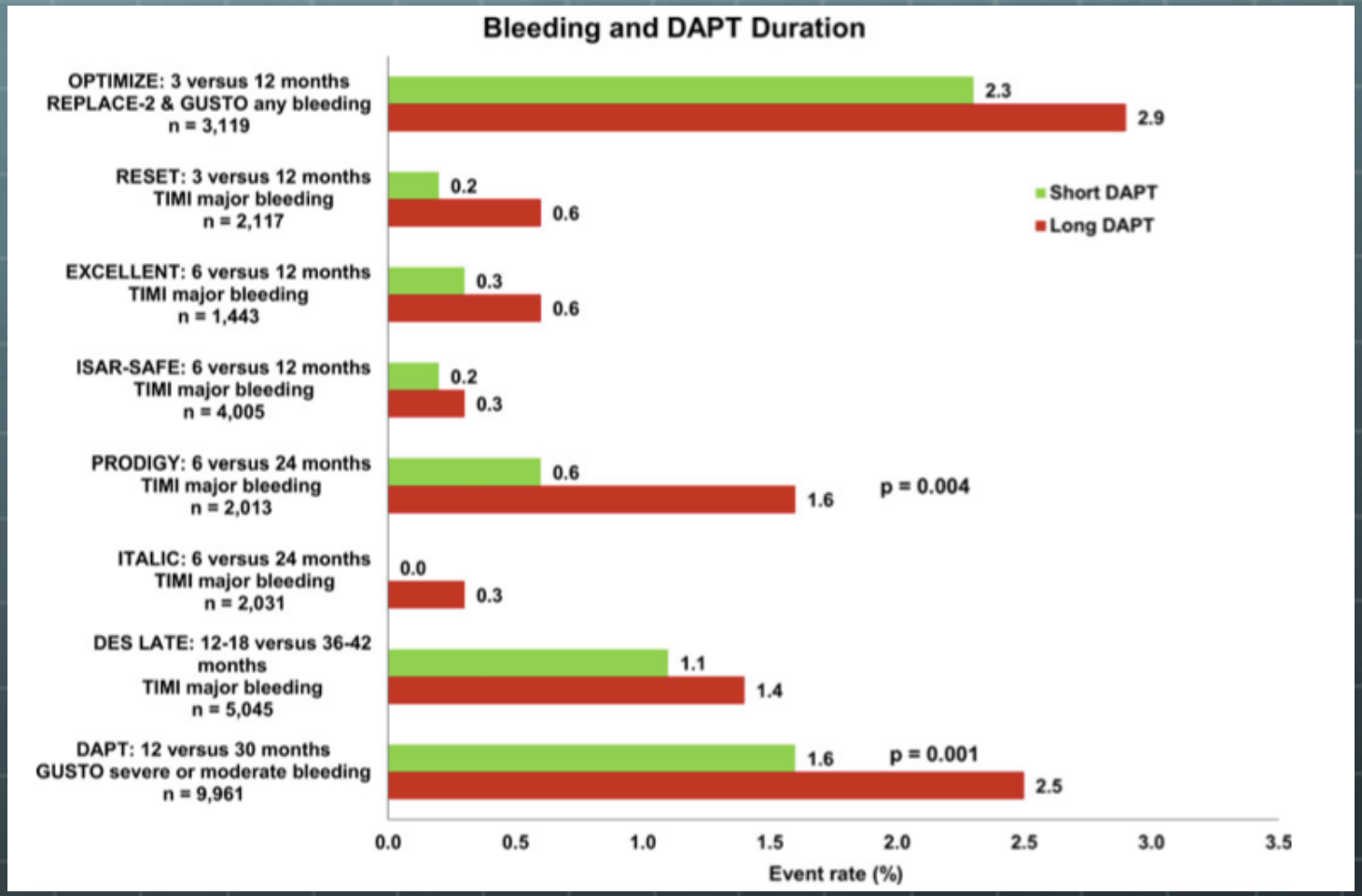
Palmerini T and Stone GW. Lancet 2015

Mortality with Extended Duration DAPT After DES: Meta-Analysis of 10 RCTs and 31,666 Pts

Yellow: sig ↓ w/short DAPT Orange: sig ↑ w/short DAPT	≤6-month vs 1-year DAPT HR (95% CrI)	6-month vs >1-year DAPT HR (95% CrI)	1-year vs >1-year DAPT HR (95% CrI)
All-cause death	0.95 (0.76-1.20)	0.78 (0.59-1.00)	0.82 (0.65-1.00)
- Cardiac	0.96 (0.68-1.40)	0.90 (0.62-1.30)	0.93 (0.69-1.20)
- Non-cardiac	1.00 (0.69-1.60)	0.65 (0.41-1.00)	0.61 (0.42-0.87)
Myocardial infarction	1.00 (0.75-1.30)	1.70 (1.30-2.40)	1.70 (1.40-2.10)
Def/prob stent thrombosis	1.10 (0.66-1.70)	2.70 (1.50-5.00)	2.50 (1.70-4.00)
Major bleeding	0.59 (0.36-0.95)	0.34 (0.20-0.55)	0.58 (0.45-0.74)

Palmerini T and Stone GW. Lancet 2015


MACCE and DAPT Duration
OPTIMIZE: 3 versus 12 months
n = 3,119; Death, MI, stroke
5.6
5.1
RESET: 3 versus 12 months
n = 2,117; Death, MI, ST
0.8
1.3
EXCELLENT: 6 versus 12 months
n = 1,443; Death, MI
2.4
1.9
ISAR-SAFE: 6 versus 12 months
n = 4,005; Death, MI, stroke, ST
1.3
1.5
PRODIGY: 6 versus 24 months
n = 2,013; Death, MI, stroke
10.0
10.1
ITALIC: 6 versus 24 months
n = 2,031; Death, MI, TVR, stroke
1.6
1.2
DES LATE: 12-18 versus 36-42 months
n = 5,045; Cardiac death, MI, stroke
2.4
2.6
DAPT: 12 versus 30 months
n = 9,961; Death, MI, stroke
5.9
4.3
p < 0.001
Short DAPT
Long DAPT
0.0
2.0
4.0
6.0
8.0
10.0
12.0
Event rate (%)


Bleeding and DAPT Duration
OPTIMIZE: 3 versus 12 months
REPLACE-2 & GUSTO any bleeding
n = 3,119
2.3
2.9
RESET: 3 versus 12 months
TIMI major bleeding
n = 2,117
0.2
0.6
Short DAPT
Long DAPT
EXCELLENT: 6 versus 12 months
TIMI major bleeding
n = 1,443
0.3
0.6
ISAR-SAFE: 6 versus 12 months
TIMI major bleeding
n = 4,005
0.2
0.3
PRODIGY: 6 versus 24 months
TIMI major bleeding
n = 2,013
0.6
1.6
p = 0.004
ITALIC: 6 versus 24 months
TIMI major bleeding
n = 2,031
0.0
0.3
DES LATE: 12-18 versus 36-42 months
TIMI major bleeding
n = 5,045
1.1
1.4
DAPT: 12 versus 30 months
GUSTO severe or moderate bleeding
n = 9,961
1.6
p = 0.001
2.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
Event rate (%)