II CONGRESSO INTERREGIONALE SIMEU ABRUZZO MOLISE
"ITINERARI IN EMERGENZA URGENZA"

SCA: doppia antiaggregazione
Rivisitazione delle L.G. ESC

Marcello Caputo
UOC di Cardiologia e UTIC
Chieti

6-7 maggio 2016
Auditorium Rettorato
Università "G. D'Annunzio"
Chieti

PIETRE MILIARI NELLA GESTIONE DELLE SCA

ANTITROMBOTICI

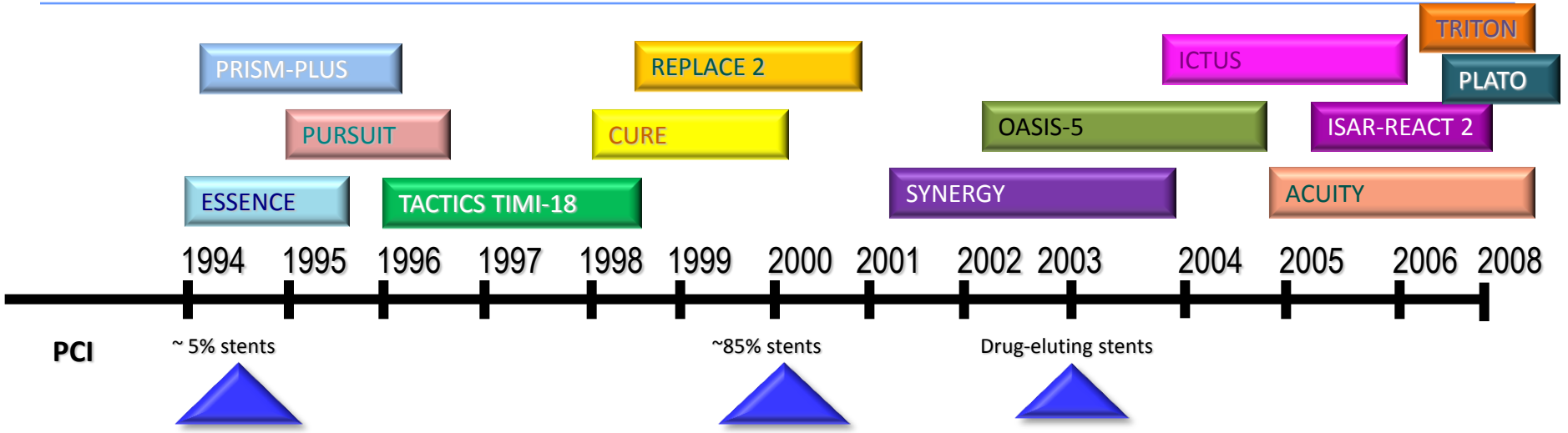
UFH EBPM Bivalirudina Fondaparinux

ANTIPIASTRINICI

Aspirina ANTI GP IIb/IIIa Clopidogrel Prasugrel Ticagrelor

STRATEGIA TERAPEUTICA

Conservativa Invasiva precoce



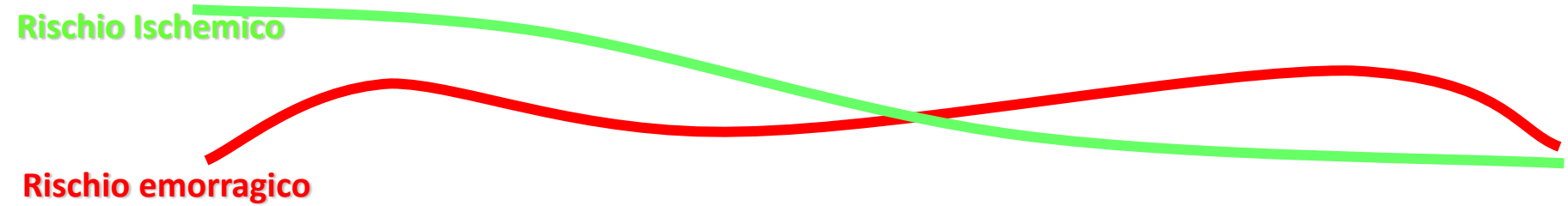


Table 8 $P2Y_{12}$ inhibitors

	Clopidogrel	Prasugrel	Ticagrelor	Cangrelor
Chemical class	Thienopyridine	Thienopyridine	Cyclopentyl-triazolopyrimidine	Stabilized ATP analogue
Administration	Oral	Oral	Oral	Intravenous
Dose	300–600 mg orally then 75 mg a day	60 mg orally then 10 mg a day	180 mg orally then 90 mg twice a day	30 μg/kg bolus and 4 μg/kg/min infusion
Dosing in CKD				
• Stage 3 (eGFR 30–59 mL/min/1.73m^2)	No dose adjustment	No dose adjustment	No dose adjustment	No dose adjustment
• Stage 4 (eGFR 15–29 mL/min/1.73m^2)	No dose adjustment	No dose adjustment	No dose adjustment	No dose adjustment
• Stage 5 (eGFR <15 mL/min/1.73m^2)	Use only for selected indications (e.g. stent thrombosis prevention)	Not recommended	Not recommended	No dose adjustment
Binding reversibility	Irreversible	Irreversible	Reversible	Reversible
Activation	Prodrug, with variable liver metabolism	Prodrug, with predictable liver metabolism	Active drug, with additional active metabolite	Active drug
Onset of loading dose effect[a]	2–6 hours[b]	30 min[b]	30 min[b]	2 min
Duration of effect	3–10 days	7–10 days	3–5 days	1–2 hours
Withdrawal before surgery	5 days[c]	7 days[c]	5 days[c]	1 hour
Plasma half-life of active $P2Y_{12}$ inhibitor[d]	30–60 min	30–60 min[e]	6–12 hours	5–10 min
Inhibition of adenosine reuptake	No	No	Yes	Yes ('inactive' metabolite only)

European Heart Journal (2016) **37**, 267–315
doi:10.1093/eurheartj/ehv320

ESC GUIDELINES

2015 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

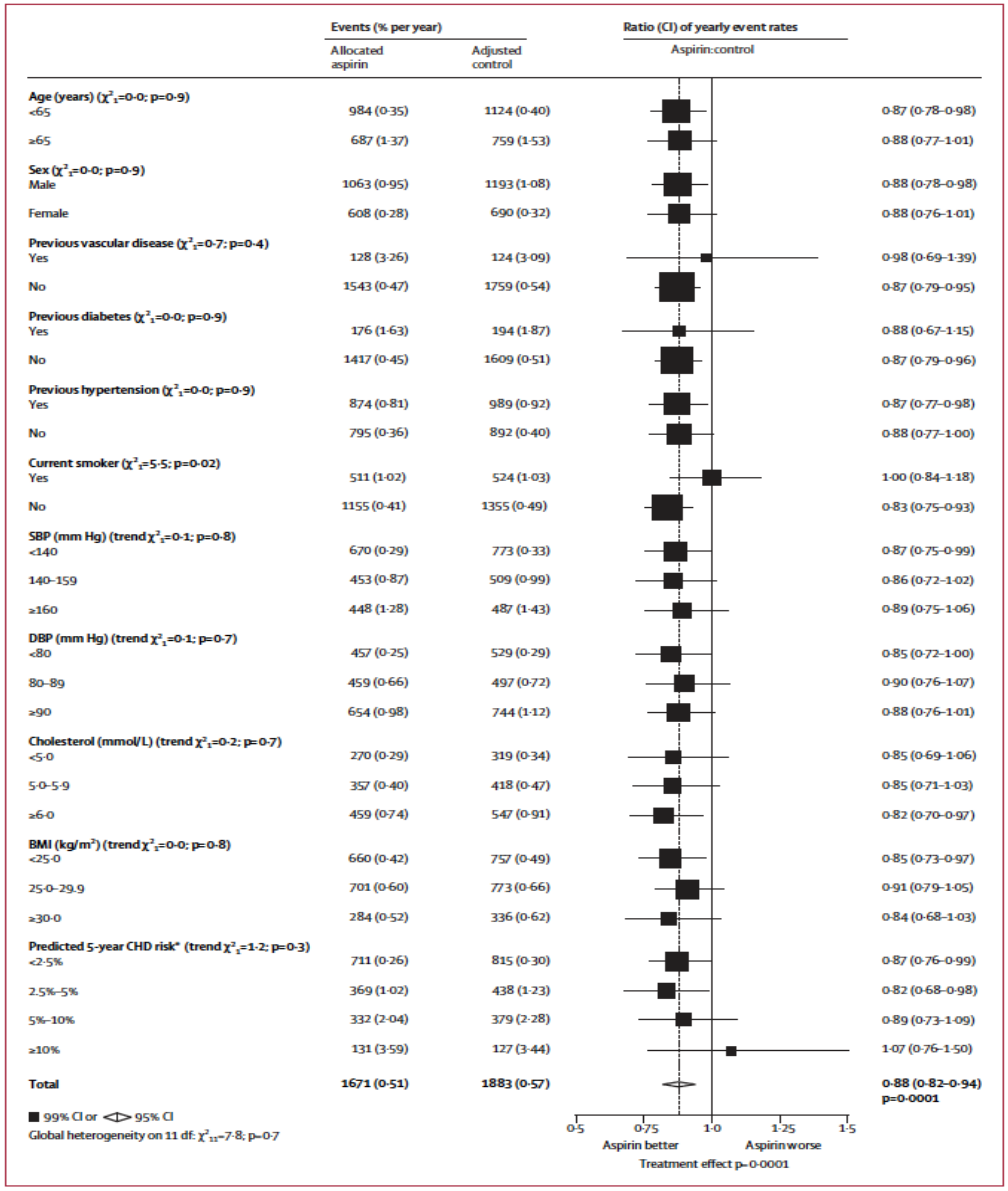
Task Force for the Management of Acute Coronary Syndromes in Patients Presenting without Persistent ST-Segment Elevation of the European Society of Cardiology (ESC)

European Heart Journal (2016) 37, 267–315

Recommendations	Class	Level	Ref.
Oral antiplatelet therapy			
Aspirin is recommended for all patients without contraindications at an initial oral loading dose of 150–300 mg (in aspirin-naive patients) and a maintenance dose of 75–100 mg/day long-term regardless of treatment strategy.	I	A	129–132

Aspirin in the primary and secondary prevention of vascular disease

Antithrombotic Trialists' (ATT) Collaboration



Lancet 2009; 373: 1849–60

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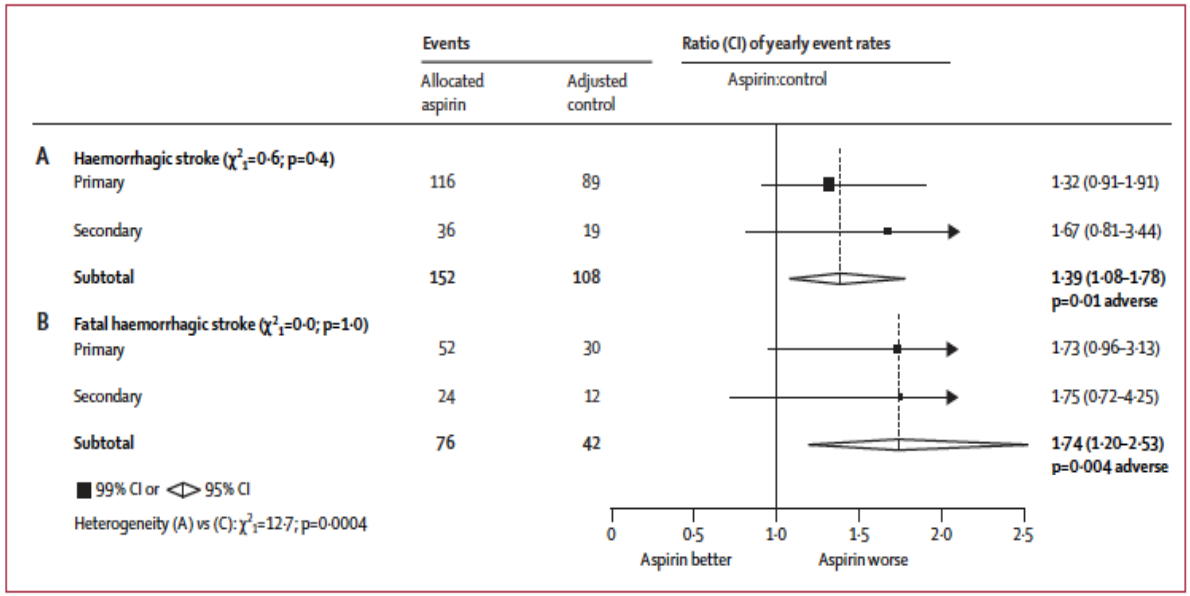

Lancet 2009; 373: 1849–60

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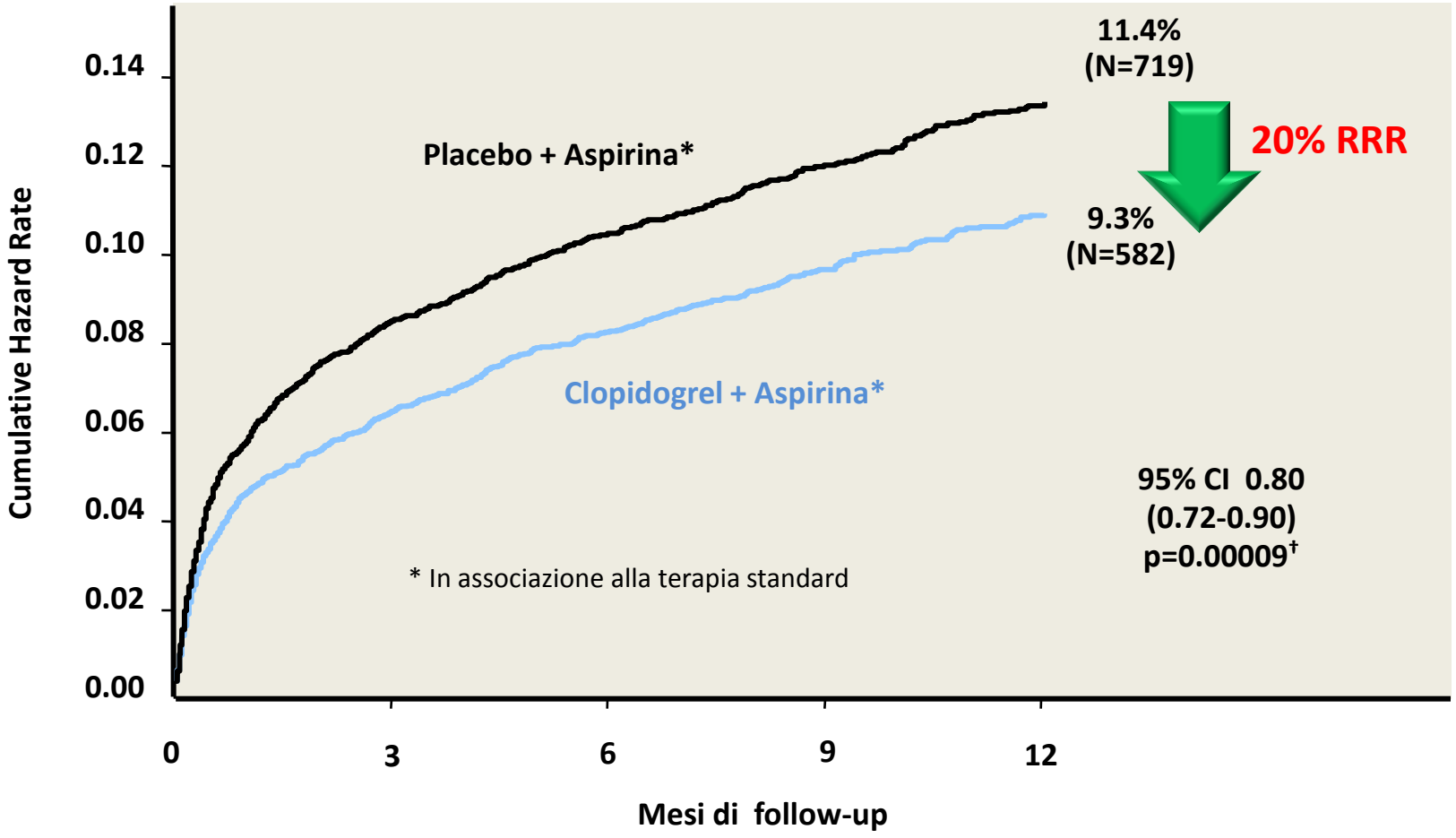
A P2Y12 inhibitor is recommended, in addition to aspirin, for 12 months unless there are contraindications such as excessive risk of bleeds.	I	A	Analysis from CURE PLATO TRITON-TIMI 38
❑ Ticagrelor (180 mg loading dose, 90 mg twice daily) is recommended, in the absence of contraindications, for all patients at moderate-to-high risk of ischaemic events (e.g. elevated cardiac troponins), regardless of initial treatment strategy and including those pretreated with clopidogrel (which should be discontinued when ticagrelor is started).	I	B	PLATO
❑ Prasugrel (60 mg loading dose, 10 mg daily dose) is recommended in patients who are proceeding to PCI if no contraindication.	I	B	TRITON-TIMI 38, ACCOAST
❑ Clopidogrel (300–600 mg loading dose, 75 mg daily dose) is recommended for patients who cannot receive ticagrelor or prasugrel or who require oral anticoagulation.	I	B	Analysis from CURE

NEWS!
NEWS!

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: CLOPIDOGREL

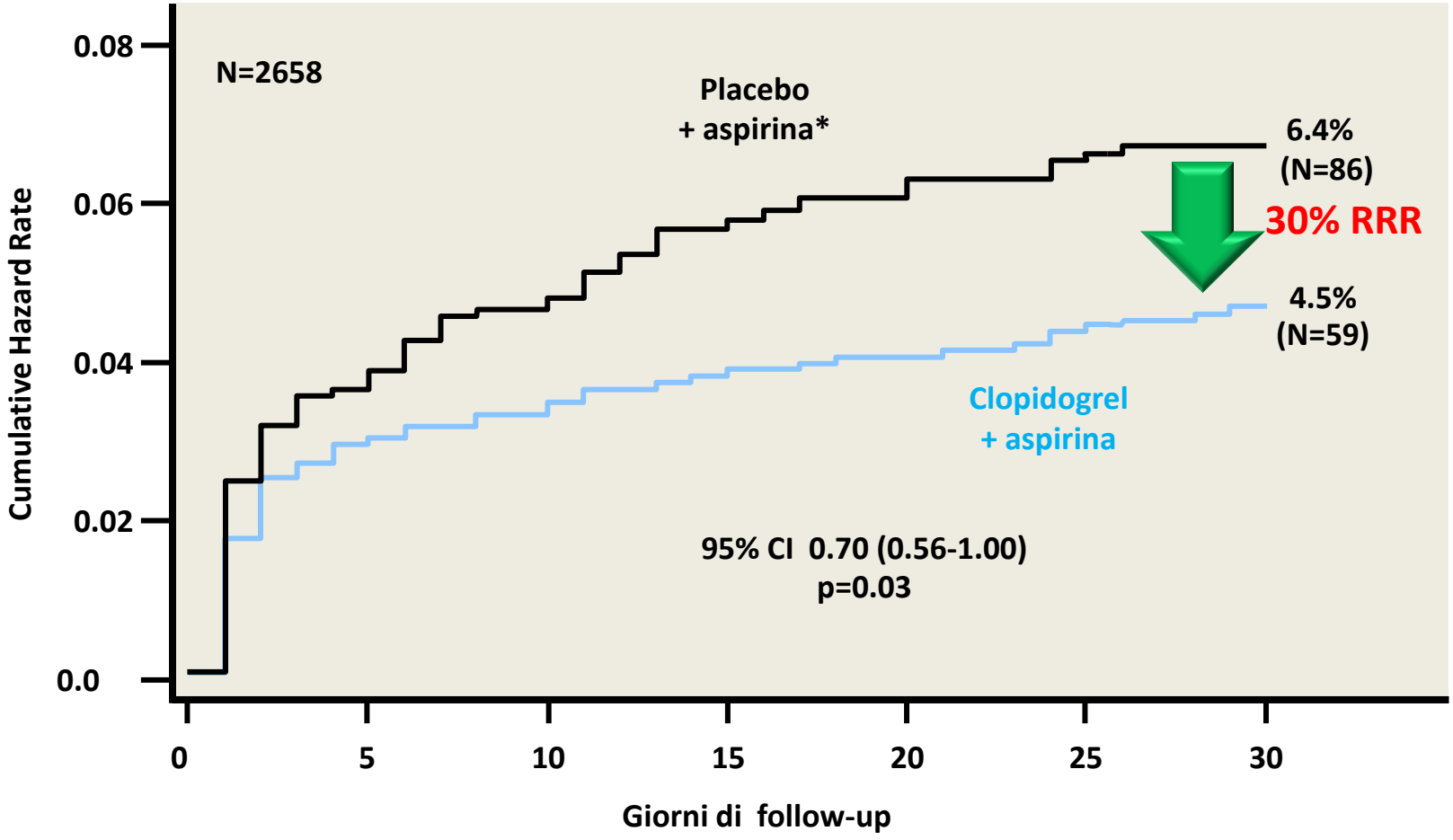
CURE End Point Primario a 12 mesi



CURE Investigators. *N Engl J Med* 2001;345:494-502

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: CLOPIDOGREL

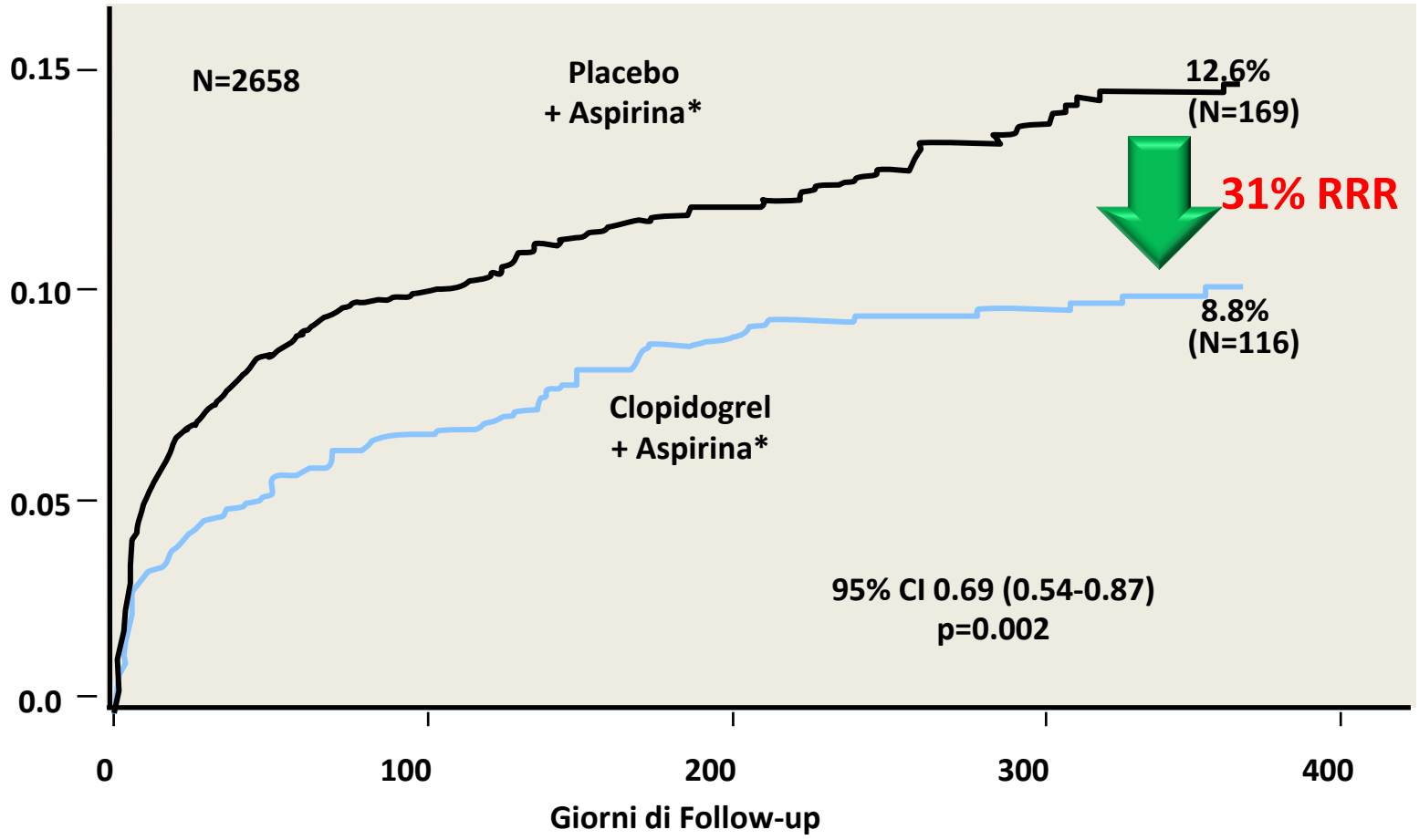
CURE End Point Primario: a 30 giorni dalla PCI



Mehta SR *Lancet* 2001;358:527-533

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: CLOPIDOGREL

PCI-CURE End point composito alla fine del follow up

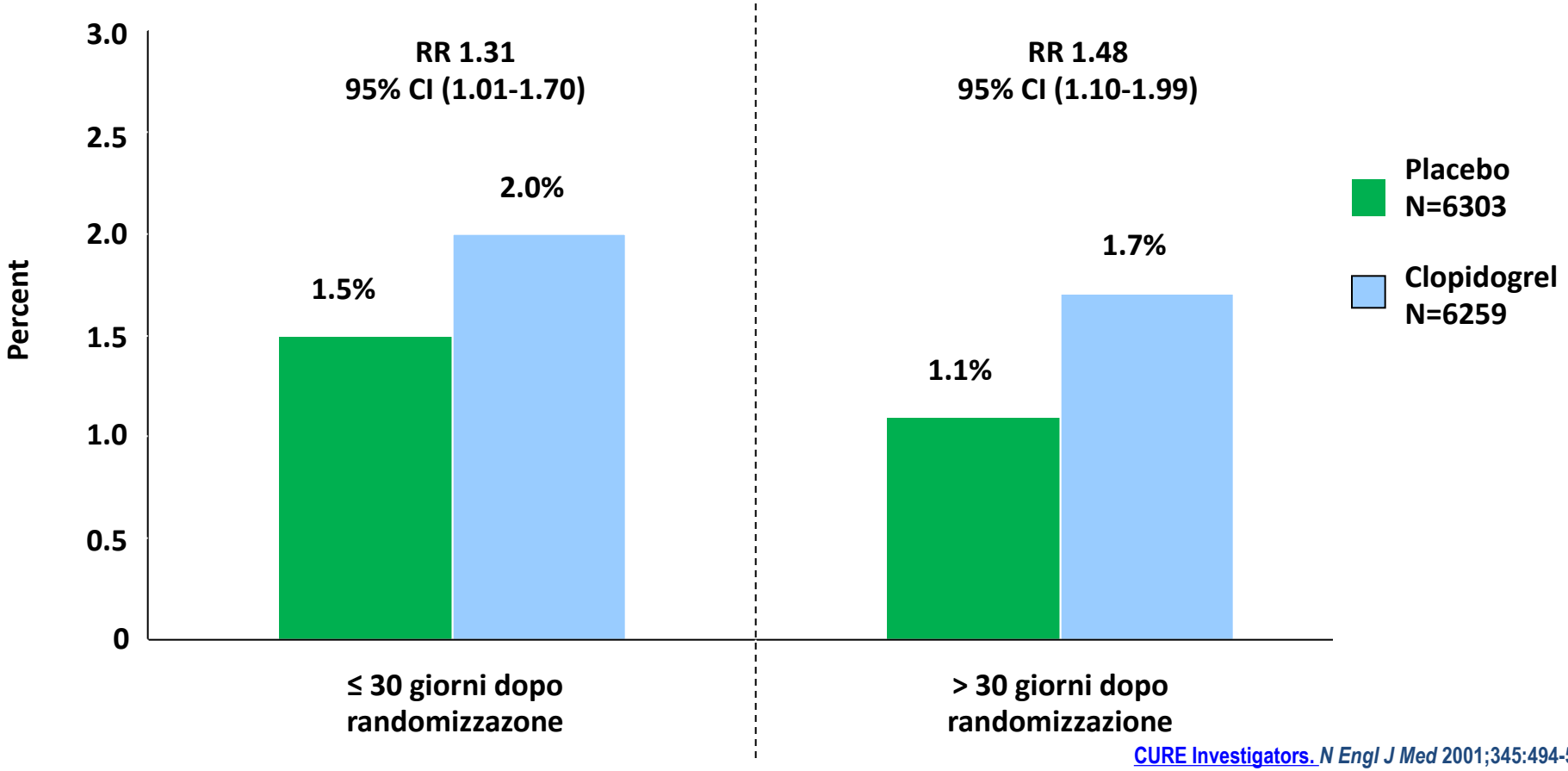


CURE Investigators. *N Engl J Med* 2001;345:494-502

Mehta SR *Lancet* 2001;358:527-533

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: CLOPIDOGREL

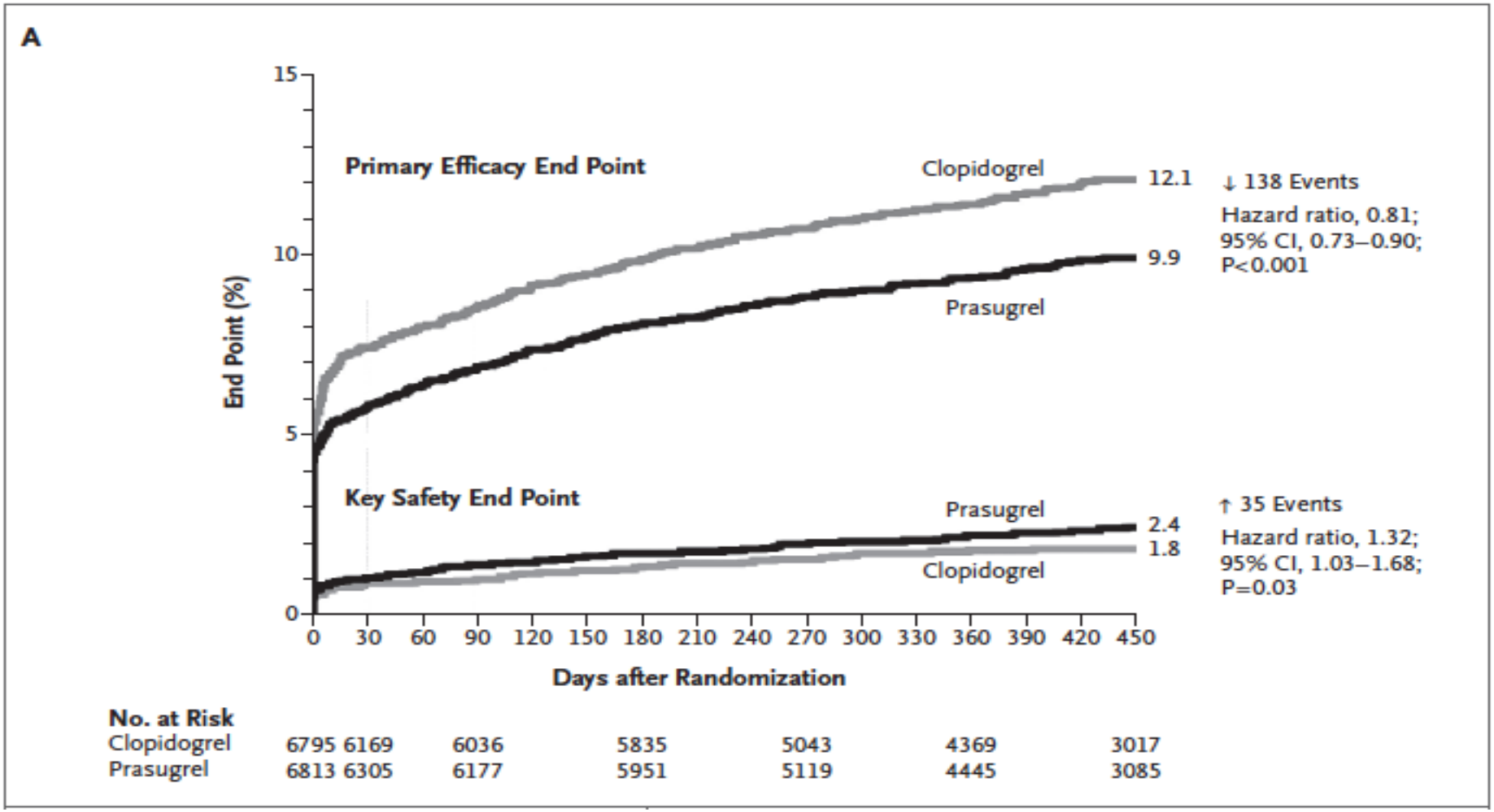
CURE Sanguinamenti Maggiori – precoci e tardivi



CURE Investigators. *N Engl J Med* 2001;345:494-502

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: PRASUGREL

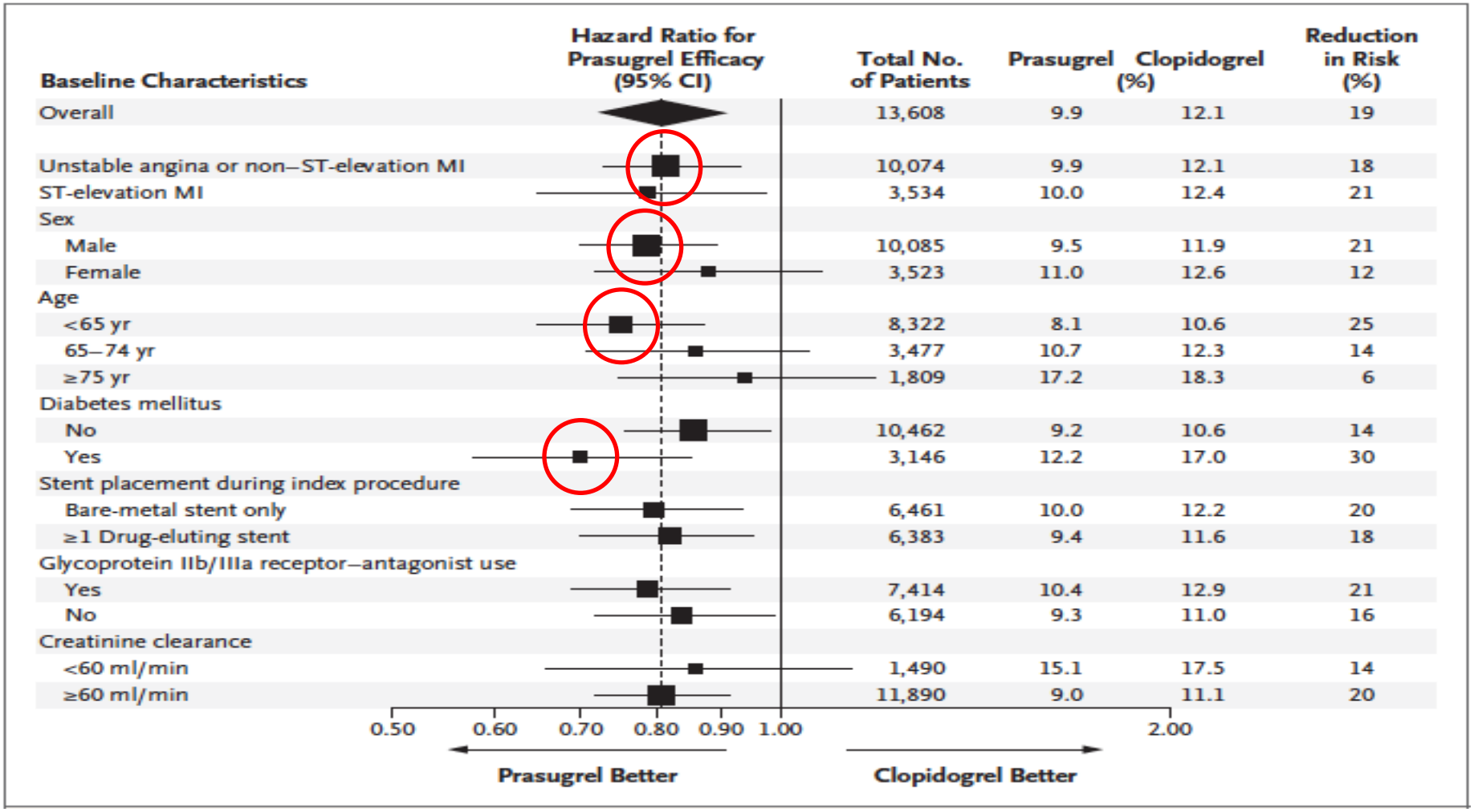
TRITON-TIMI 38 **End point primari di efficacia e sicurezza**



N Engl J Med 2007;357

ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: PRASUGREL

TRITON-TIMI 38

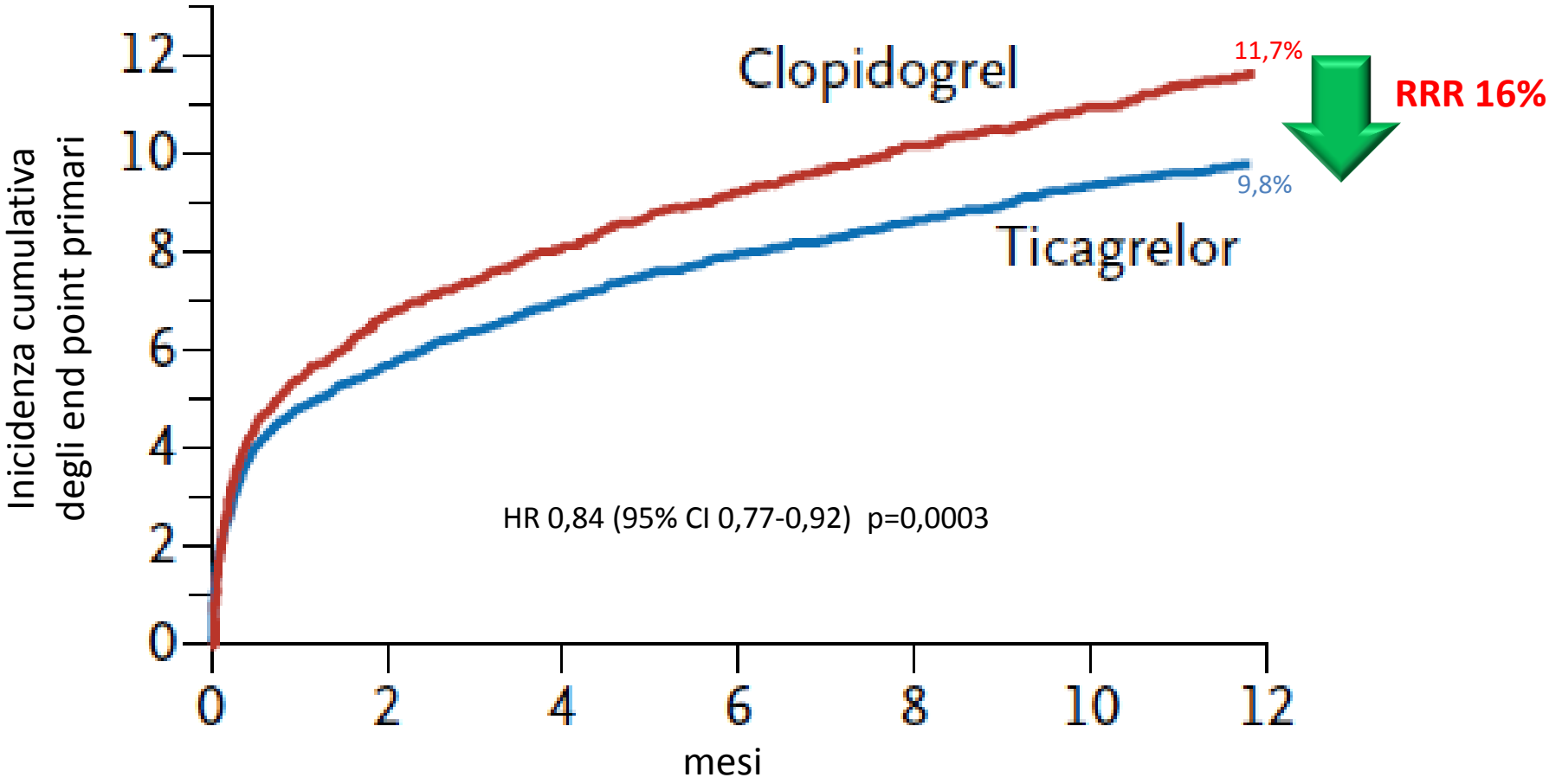


Baseline Characteristics	Total No. of Patients	Prasugrel (%)	Clopidogrel (%)	Reduction in Risk (%)
Overall	13,608	9.9	12.1	19
Unstable angina or non–ST-elevation MI	10,074	9.9	12.1	18
ST-elevation MI	3,534	10.0	12.4	21
Sex				
Male	10,085	9.5	11.9	21
Female	3,523	11.0	12.6	12
Age				
<65 yr	8,322	8.1	10.6	25
65–74 yr	3,477	10.7	12.3	14
≥75 yr	1,809	17.2	18.3	6
Diabetes mellitus				
No	10,462	9.2	10.6	14
Yes	3,146	12.2	17.0	30
Stent placement during index procedure				
Bare-metal stent only	6,461	10.0	12.2	20
≥1 Drug-eluting stent	6,383	9.4	11.6	18
Glycoprotein IIb/IIIa receptor–antagonist use				
Yes	7,414	10.4	12.9	21
No	6,194	9.3	11.0	16
Creatinine clearance				
<60 ml/min	1,490	15.1	17.5	14
≥60 ml/min	11,890	9.0	11.1	20

N Engl J Med 2007;357

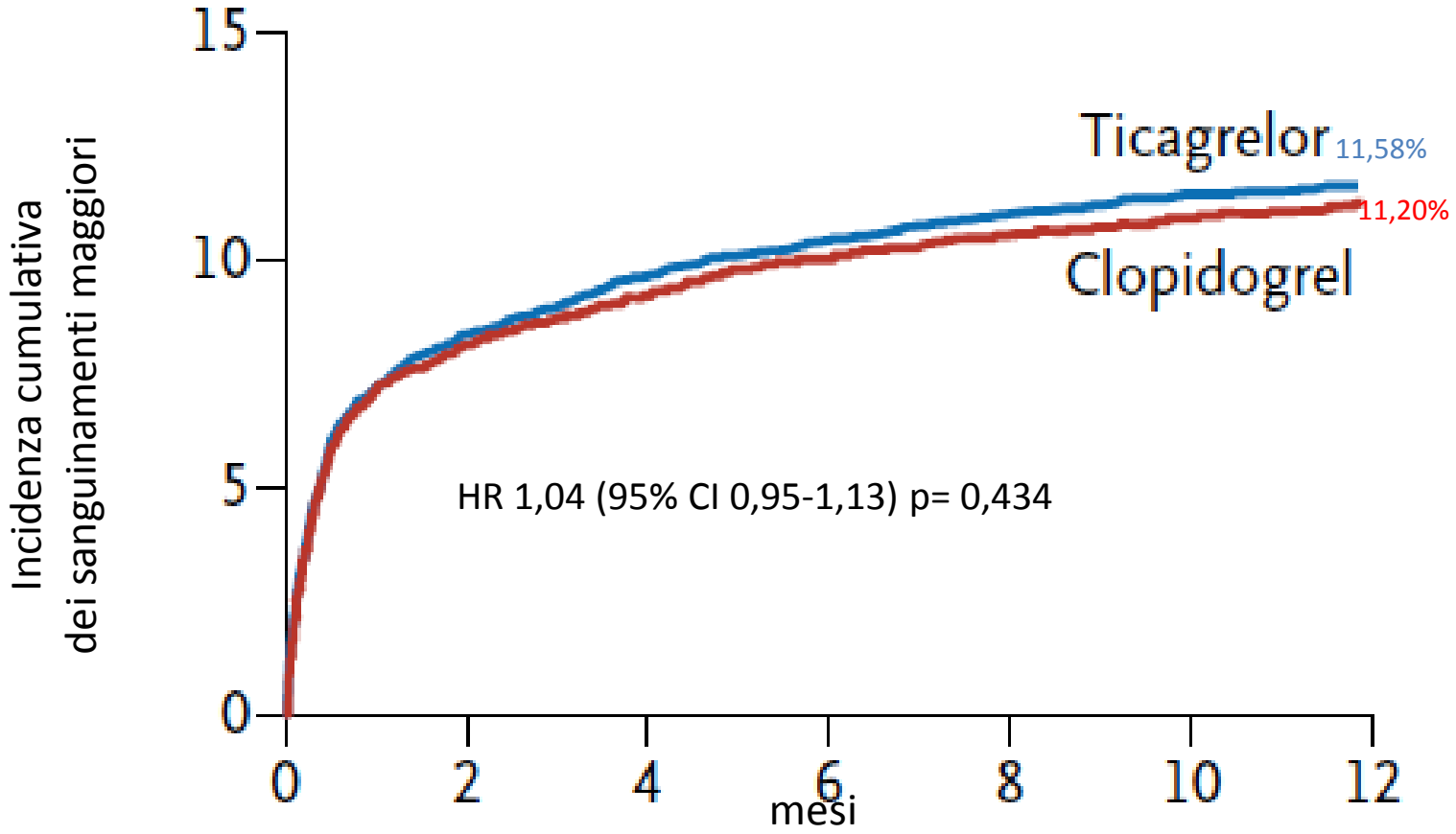
ANTIAGGREGANTI PIASTRINICI
INIBITORI INDIRETTI DI P2Y12: TICAGRELOR

PLATO End point primario: morte cardiovascolare, IM e Stroke



N Engl J Med 2009;361;11

PLATO End point: sanguinamenti maggiori



N Engl J Med 2009;361;11

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A P2Y12 inhibitor is recommended, in addition to aspirin, for 12 months unless there are contraindications such as excessive risk of bleeds.	I	A	Analysis from CURE PLATO TRITON-TIMI 38
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❑ Prasugrel (60 mg loading dose, 10 mg daily dose) is recommended in patients who are proceeding to PCI if no contraindication.	I	B	TRITON-TIMI 38, ACCOAST
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P2Y12 inhibitor administration for a shorter duration of 3–6 months after DES implantation may be considered in patients deemed at high bleeding risk.	IIb	A	RESET (2012) OPTIMIZE (2013) EXCELLENT (2012) ISAR-SAFE (2015)

NEWS!
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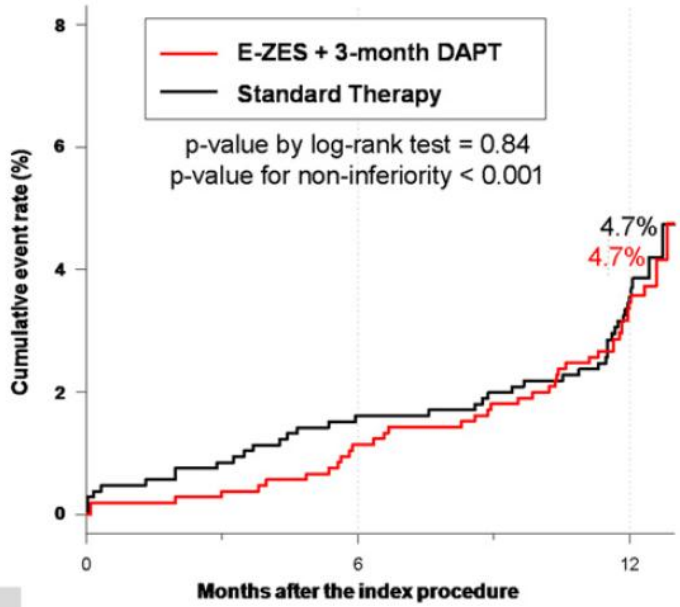
NEWS!

JACC Journals

A New Strategy for Discontinuation of Dual Antiplatelet Therapy

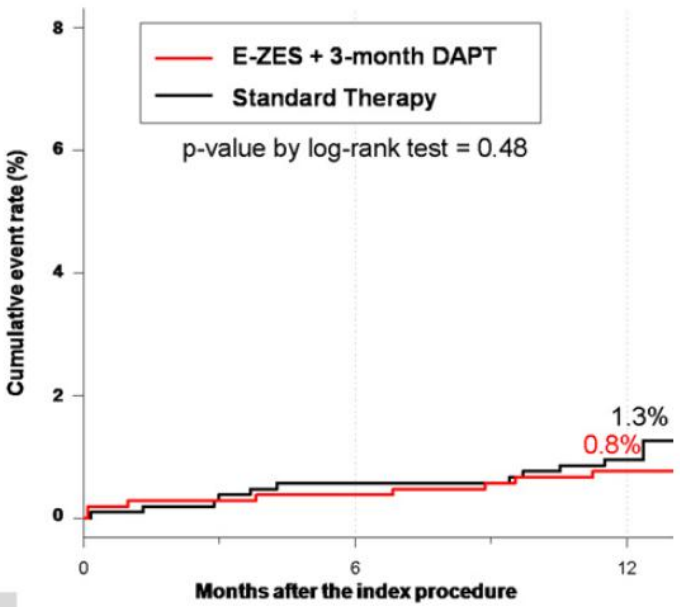
The RESET Trial (REal Safety and Efficacy of 3-month dual antiplatelet Therapy following Endeavor zotarolimus-eluting stent implantation)

A



No. at Risk					
E-ZES + 3-month DAPT	1059	1049	1037	1027	945
Standard Therapy	1058	1046	1032	1024	920

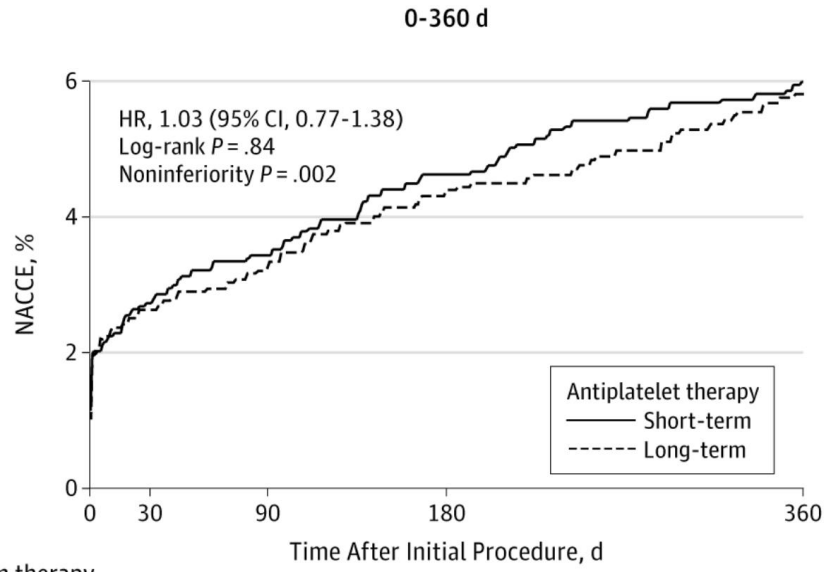
B

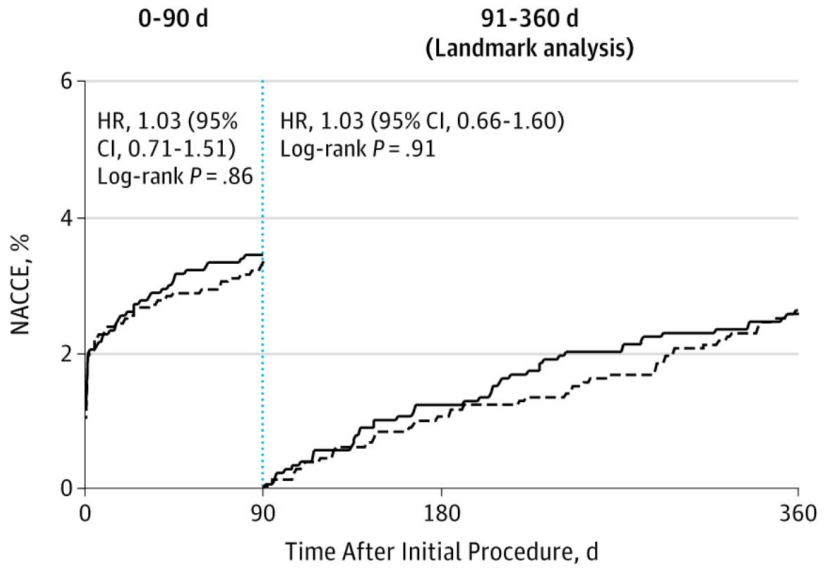


No. at Risk					
E-ZES + 3-month DAPT	1059	1051	1045	1041	966
Standard Therapy	1058	1051	1042	1037	937

J Am Coll Cardiol. 2012;60(15):1340-1348.

The OPTIMIZE Randomized Trial

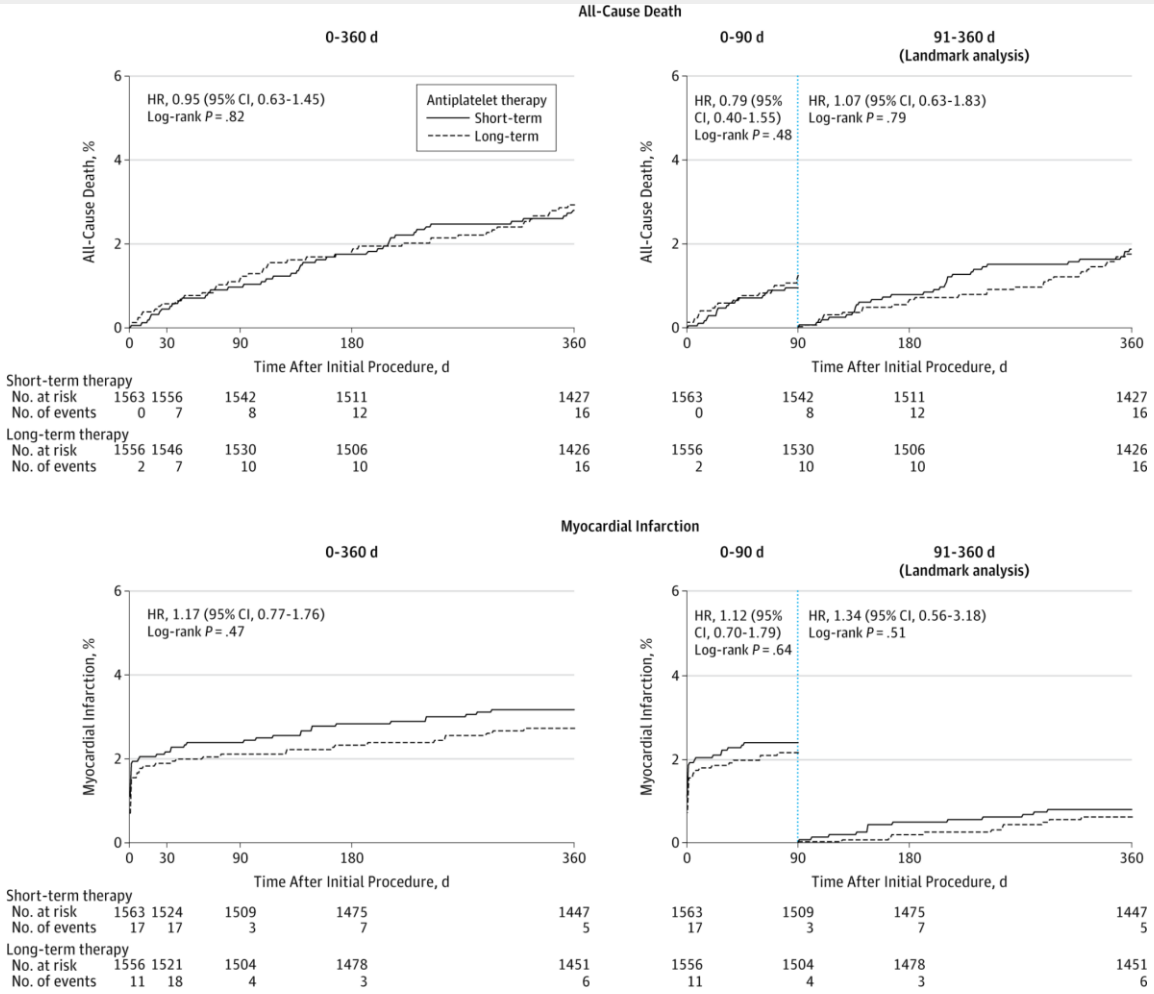




Short-term therapy										
No. at risk	1563	1520	1504	1468	1384	1563	1504	1468	1384	
No. of events	18	25	11	18	21	18	11	18	21	
Long-term therapy										
No. at risk	1556	1514	1497	1466	1381	1556	1497	1466	1381	
No. of events	16	25	11	16	22	16	11	16	22	

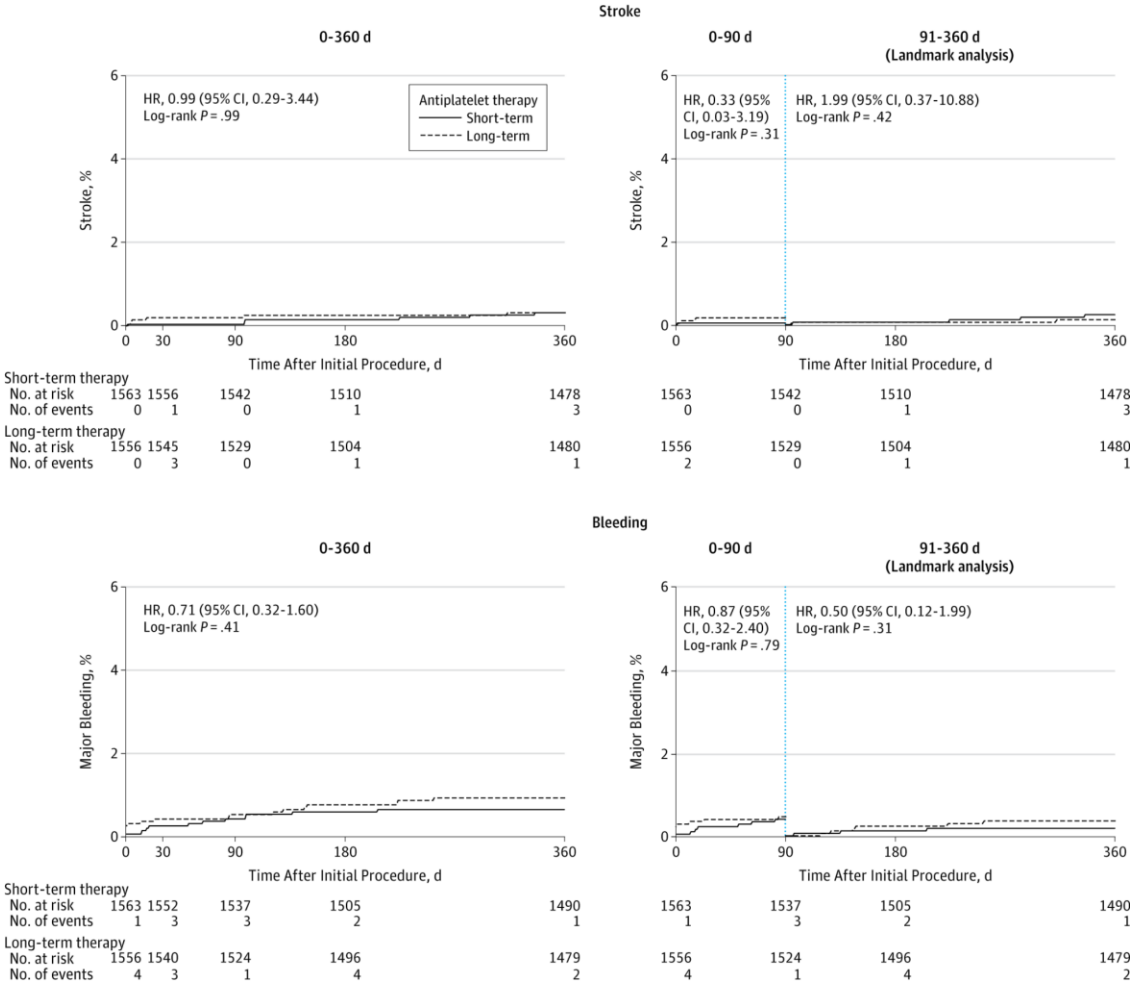
JAMA. 2013;310(23):2510-2522

The OPTIMIZE Randomized Trial



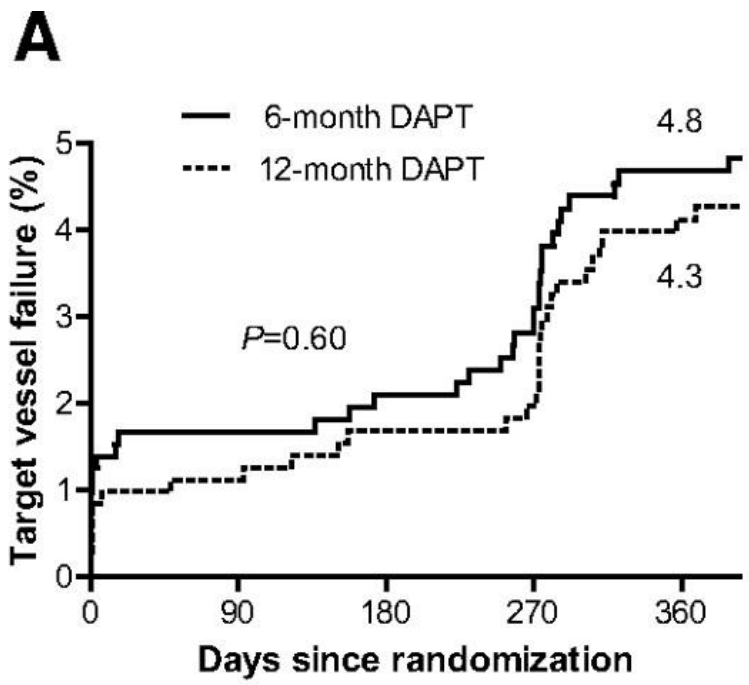
JAMA. 2013;310(23):2510-2522

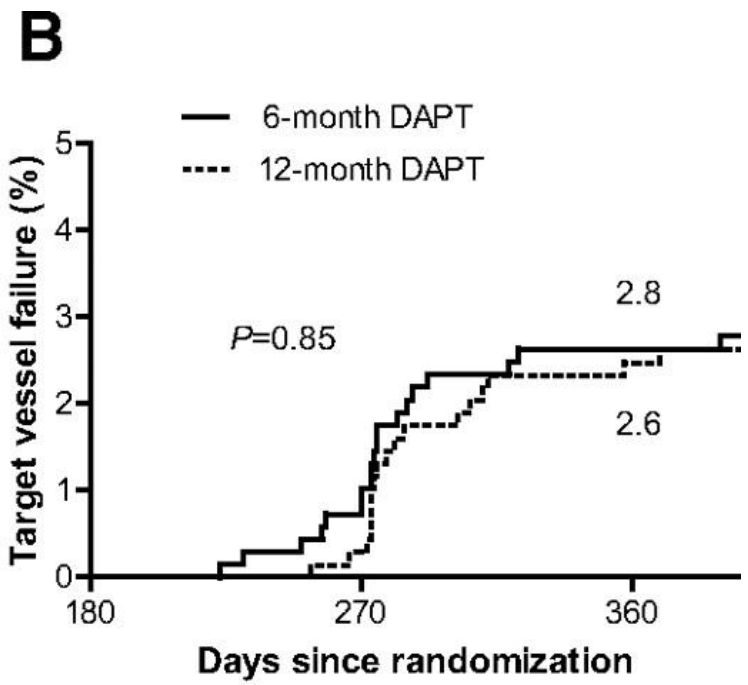
The OPTIMIZE Randomized Trial



JAMA. 2013;310(23):2510-2522

EXCELLENT Study



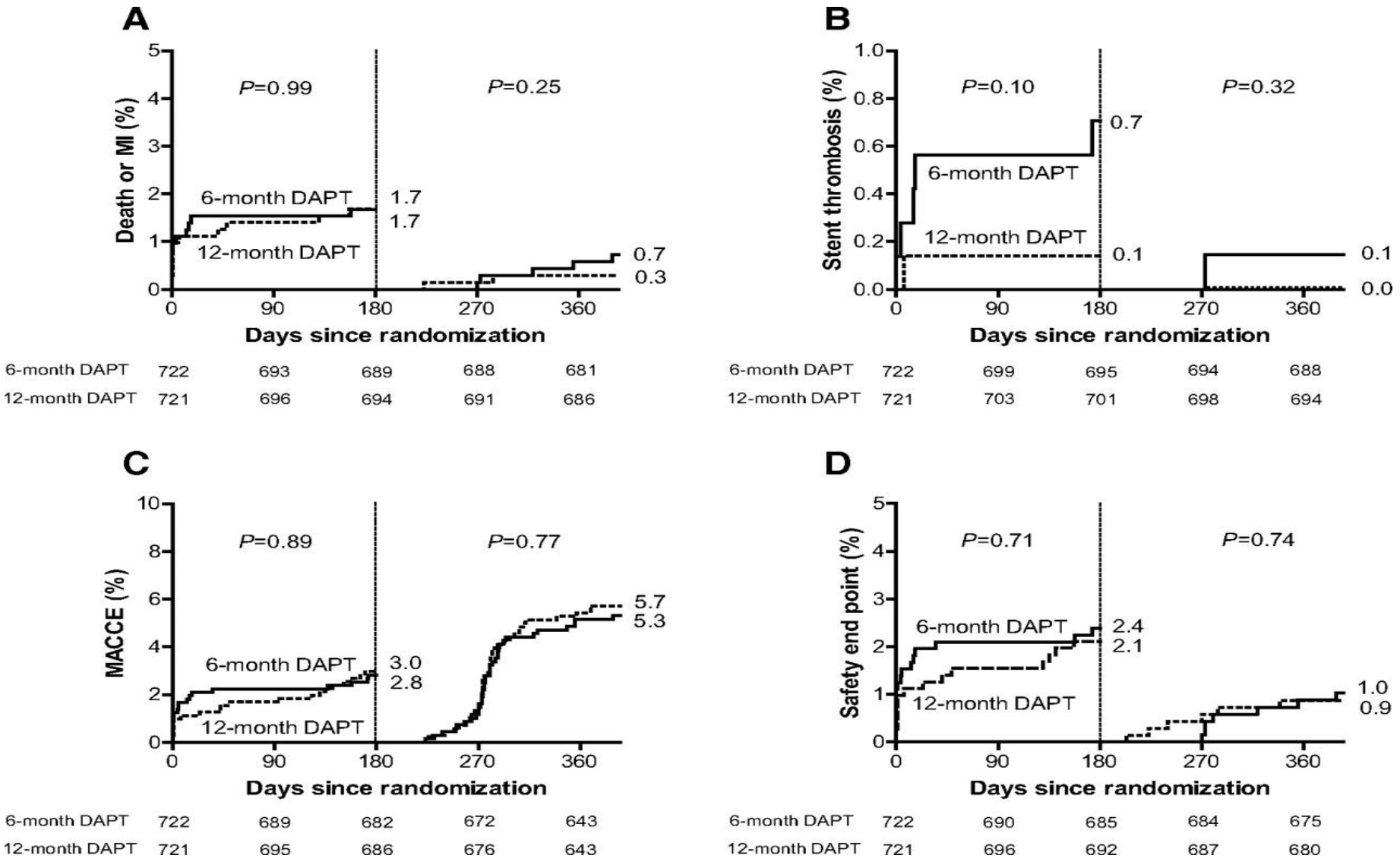


6-month DAPT	722	692	686	680	663
12-month DAPT	721	697	692	687	668

6-month DAPT	686	680	663
12-month DAPT	692	687	668

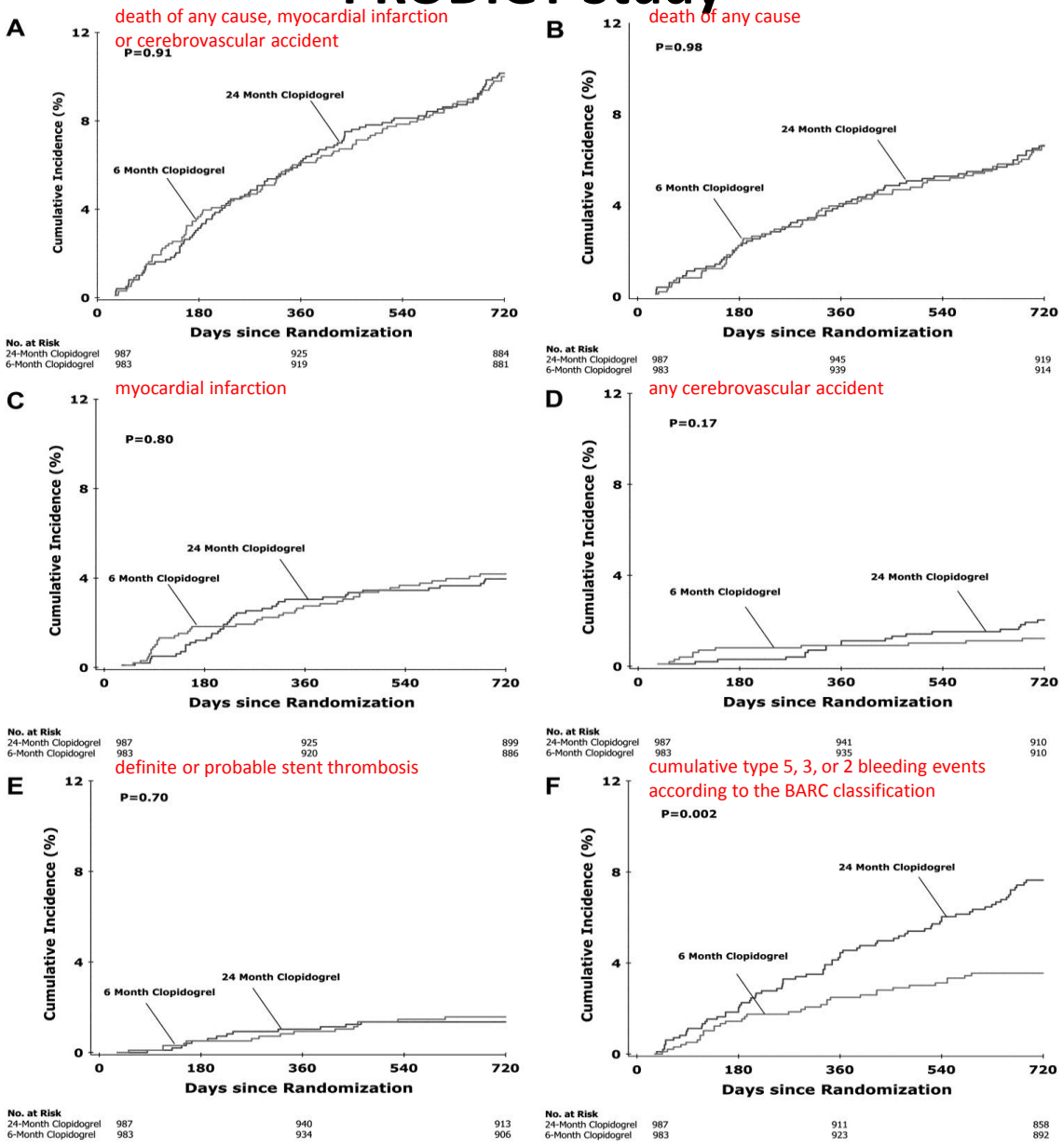
Circulation. 2012;125:505-513

EXCELLENT Study



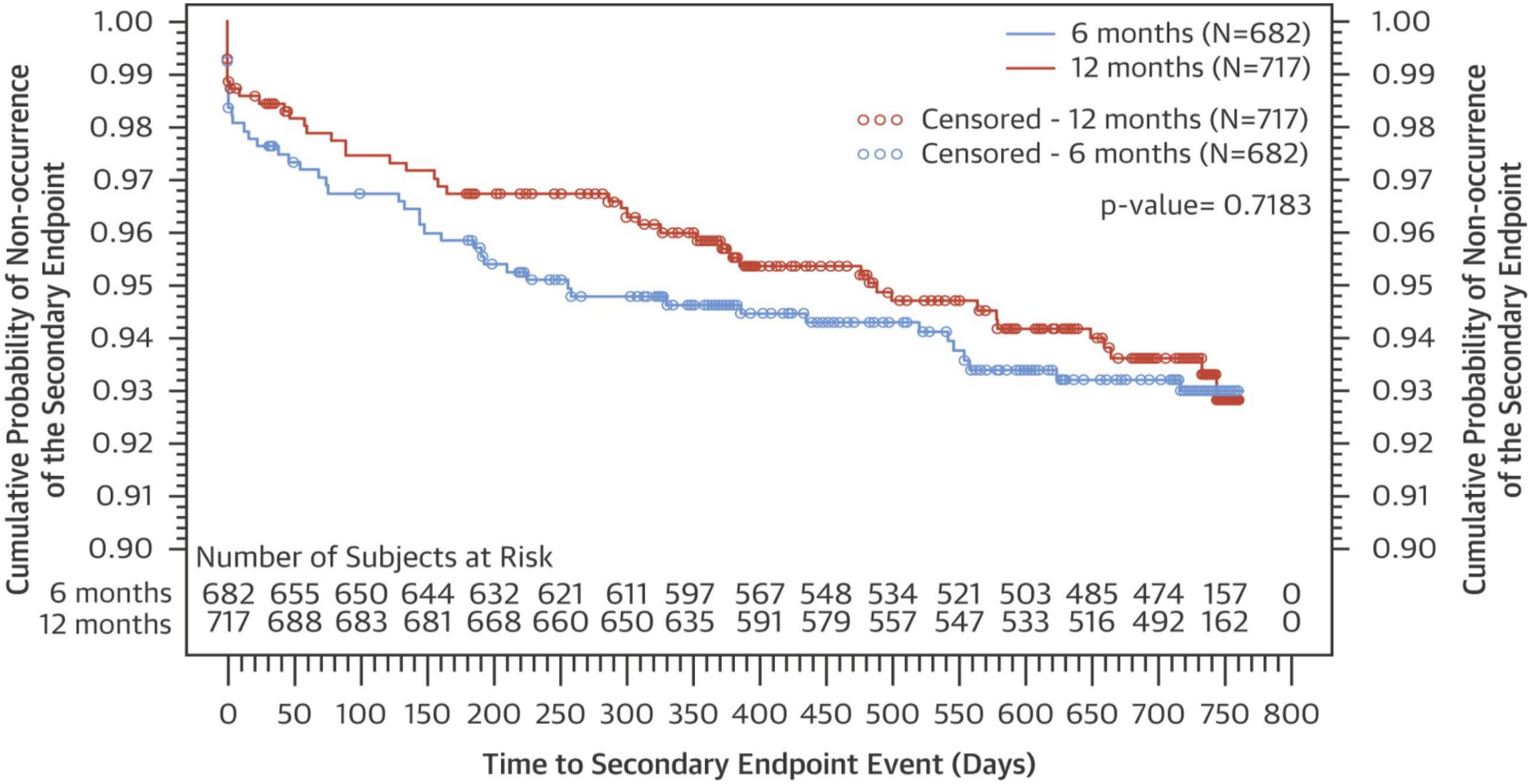
Circulation. 2012;125:505-513

PRODIGY Study



Circulation. 2012;125:2015-2026

The SECURITY Randomized Clinical Trial



J Am Coll Cardiol. 2014;64(20):2086-2097

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P2Y12 inhibitor administration for a shorter duration of 3–6 months after DES implantation may be considered in patients deemed at high bleeding risk.	IIb	A	RESET (2012) OPTIMIZE (2013) EXCELLENT (2012) ISAR-SAFE (2015)
It is not recommended to administer prasugrel in patients in whom coronary anatomy is not known.	III	B	ACCOAST

NEWS!
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NEWS!
NEWS!

Background

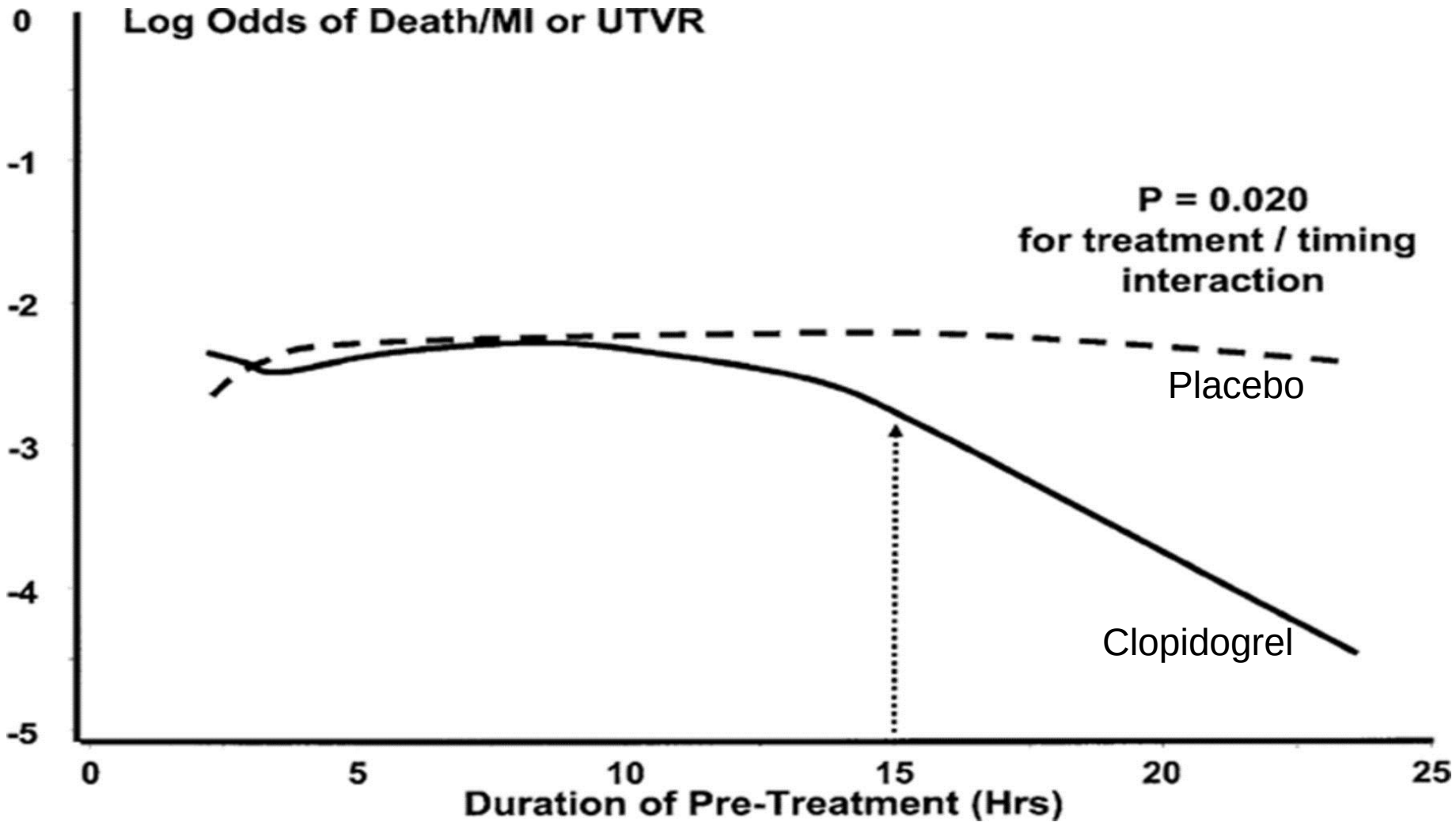
Title	Citation		Class	LOE
2011 ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation	European Heart Journal 2011;32:2999–3054	"A $P2Y_{12}$ inhibitor **as soon as possible"** Clopidogrel 600mg Ticagrelor	**I** **I** **I**	A B B
2010 ESC/EACTS guidelines on myocardial revascularization	European Heart Journal 2010;31:20:2501–2555	"Clopidogrel 600mg **as soon as possible"**	**I**	C

Background

- Pre-treatment with aspirin and a $P2Y_{12}$ antagonist has been a class I recommendation and common practice for the treatment of NSTE-ACS

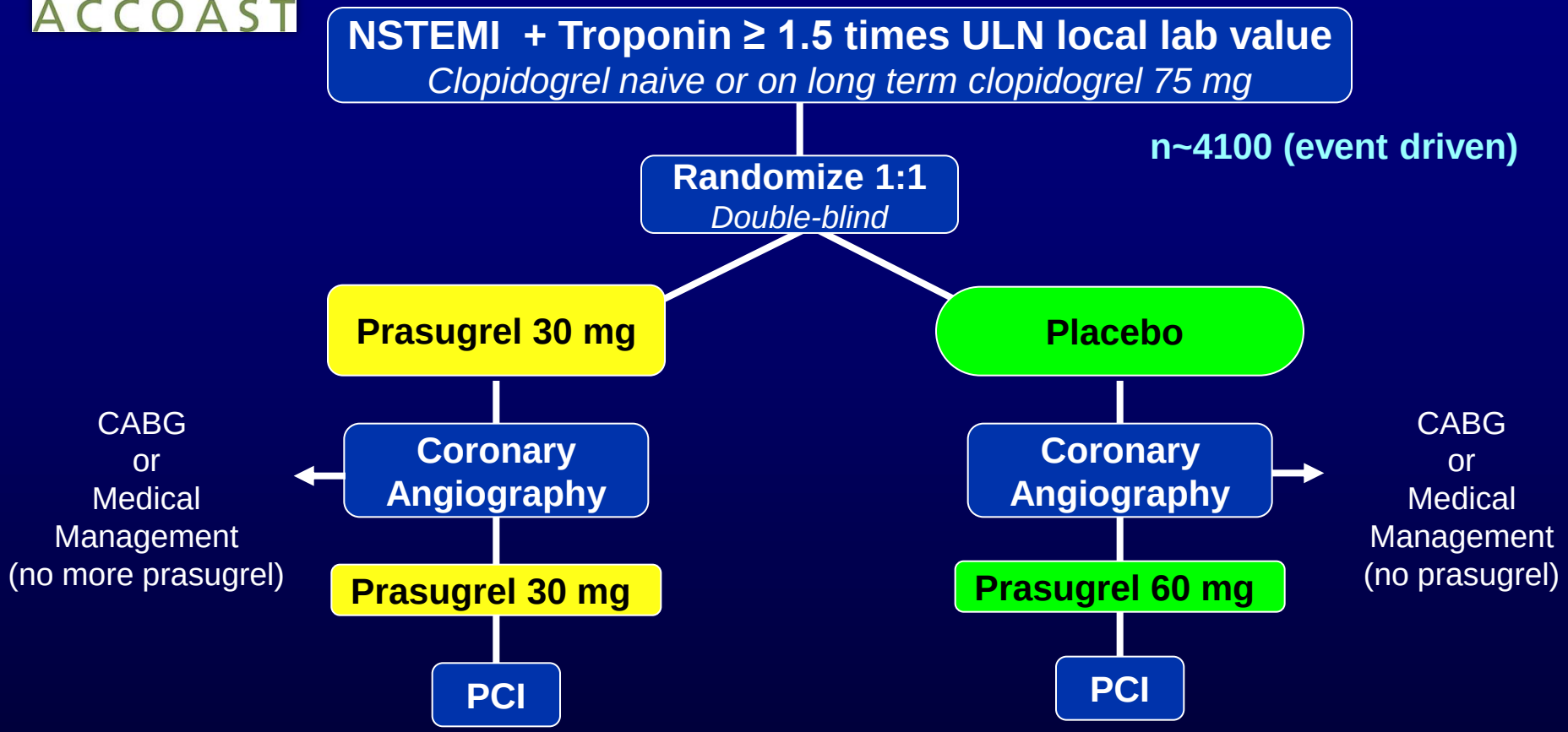
- However, no trial has ever randomized patients presenting with NSTE-ACS, invasively managed, to pre-treatment with clopidogrel, prasugrel or ticagrelor *vs.* no pre-treatment.

Relationship between the duration of clopidogrel treatment before percutaneous coronary intervention and log odds of the primary end point in the Clopidogrel for the Reduction of Events During Observation (CREDO) Trial.



Circulation. 2014;130:1891-1903

ACCOAST design

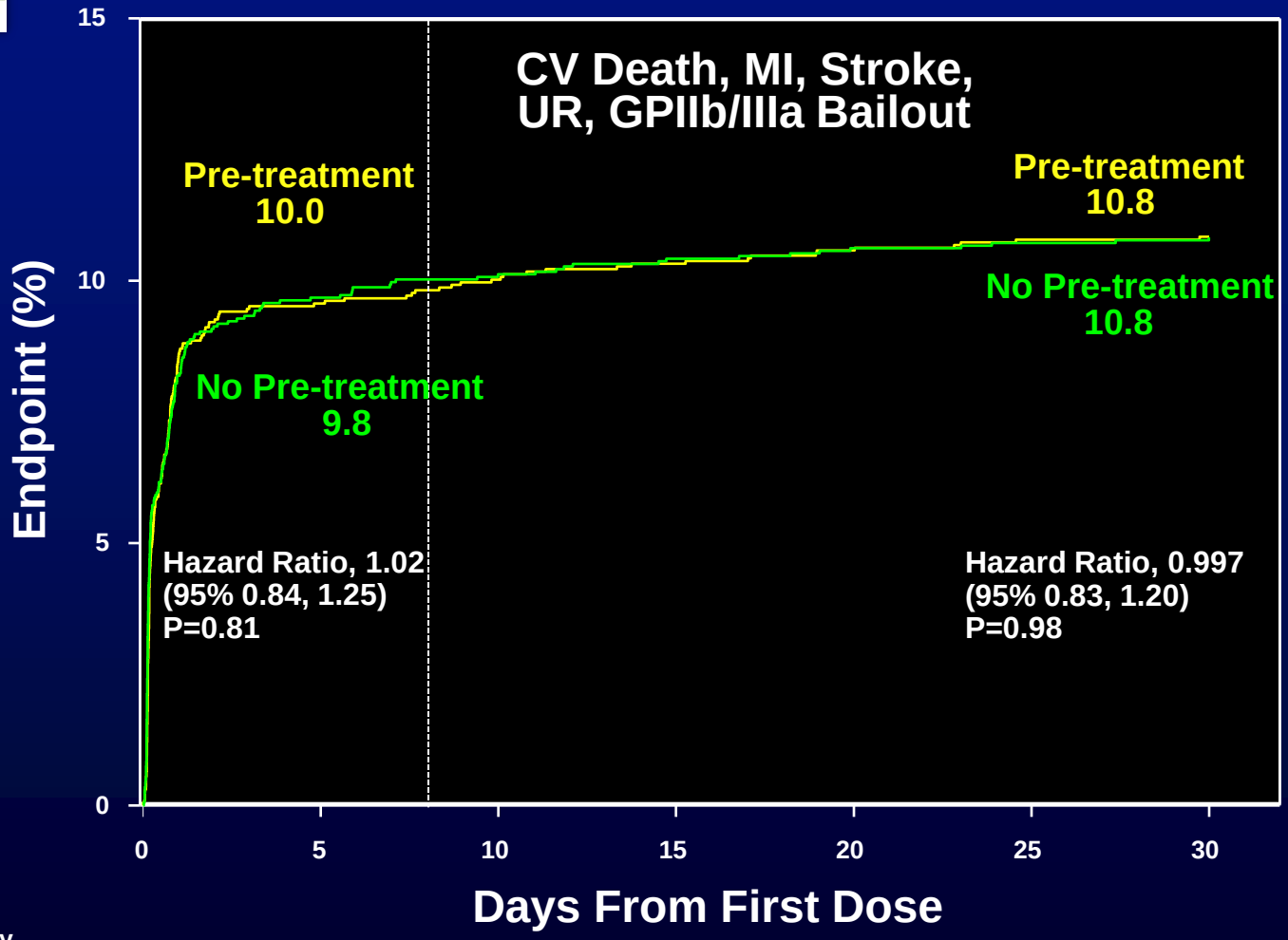


Prasugrel 10 mg or 5 mg (based on weight and age) for 30 days

1° Endpoint: CV Death, MI, Stroke, Urg Revasc, GP IIb/IIIa bailout, at 7 days

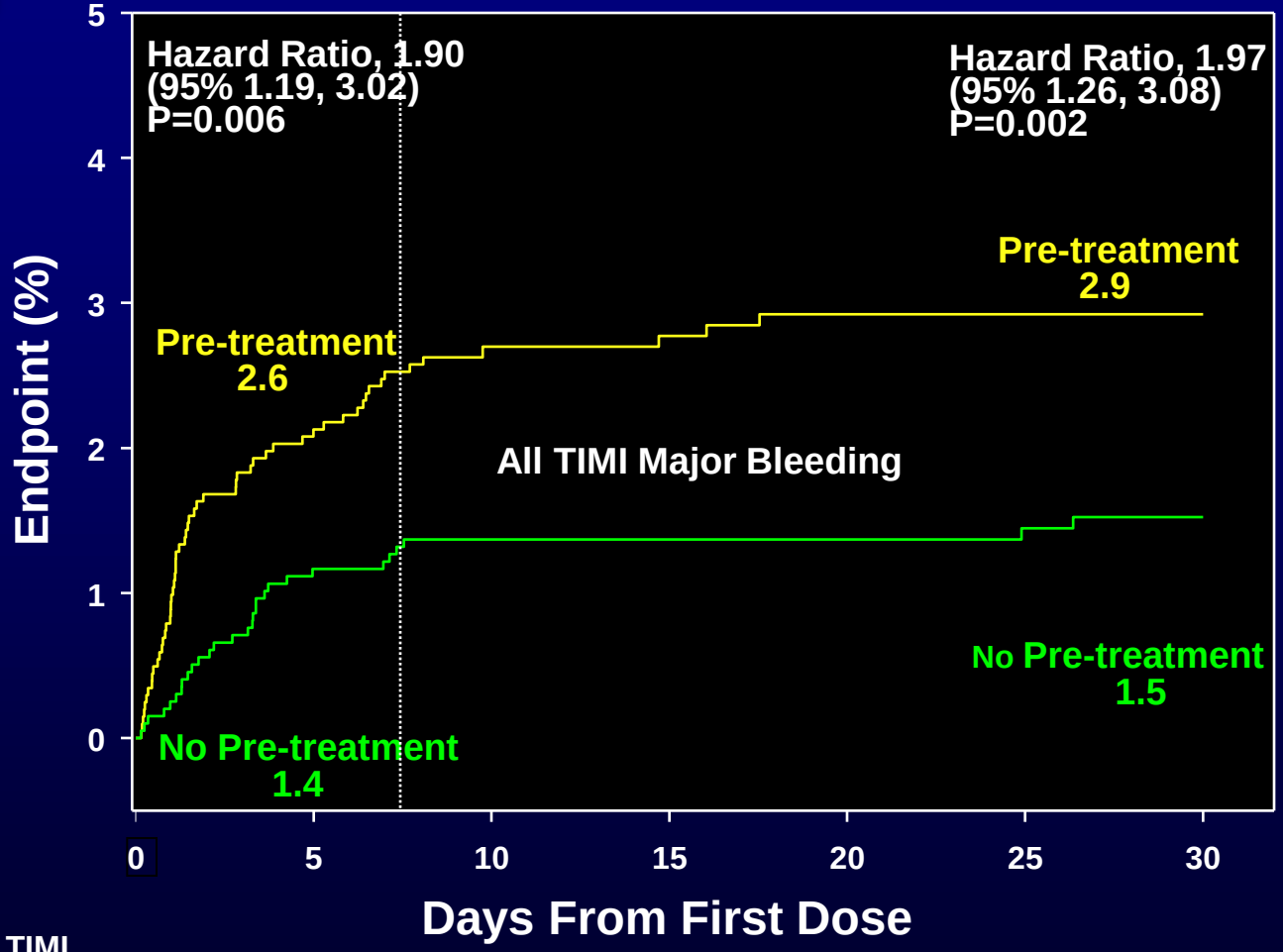
Montalescot G et al. *Am Heart J* 2011;161:650-656

1° Efficacy End Point @ 7 + 30 days (All Patients)



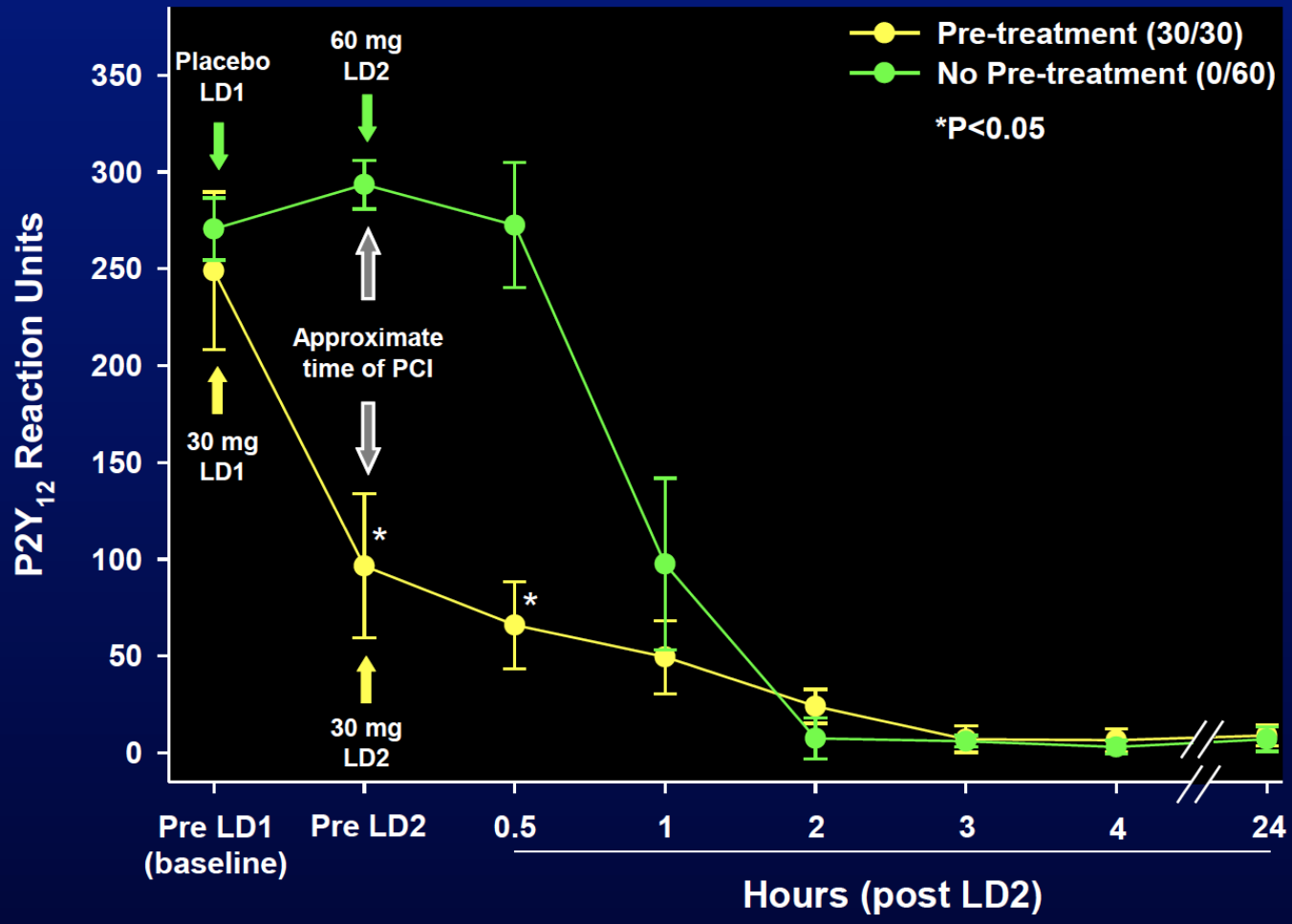
No. at Risk, Primary Efficacy End Point:							
No pre-treatment	1996	1788	1775	1769	1762	1752	1621
Pre-treatment	2037	1821	1809	1802	1797	1791	1616

All TIMI (CABG or non-CABG) Major Bleeding (All Treated patients)



No. at Risk, All TIMI Major Bleeding:							
No pre-treatment	1996	1947	1328	1297	1288	1284	1263
Pre-treatment	2037	1972	1339	1310	1299	1297	1280

Pharmacodynamic Sub-Study



Data presented as median ± SEM. * p<0.05 relative to the No pre-treatment group. LD = loading dose.
Pretreatment=Prasugrel 30 mg/Prasugrel 30 mg; No Pre-treatment=Placebo/Prasugrel 60 mg

A realistic and pragmatic approach would be to make the decision to initiate P2Y12 receptor inhibitor prior to defining the revascularization strategy according to the intended agent and expected delay to obtaining angiography. In patients with a short delay (< 24—48 hours) from admission to angiography, pretreatment should be avoided; in patients with a delay from admission to angiography of > 48 hours, pretreatment with either clopidogrel (on the basis of old data) or ticagrelor (without data) may be considered.

Prof. Jean-Philippe Collet (FR)

The new insights provided by the ACCOAST trials have important every-day practical implications: in patients with an intermediate risk and a short delay (< 24) from admission to angiography, pretreatment should be avoided; in high-risk patients with a delay from admission to angiography of > 24 hours, pretreatment with either clopidogrel (on the basis of old data) or ticagrelor (without data) may be considered.

Dr Leonardo Bolognese, MD, FESC (IT)

Recommendations	Class	Level	Ref.
Intravenous antiplatelet therapy			
GPIIb/IIIa inhibitors during PCI should be considered for bailout situations or thrombotic complications.	IIa	C	
Cangrelor may be considered in P2Y12 inhibitor–naive patients undergoing PCI.	IIb	A	CHAMPION-PCI CHAMPION PLATFORM
It is not recommended to administer GPIIb/IIIa inhibitors in patients in whom coronary anatomy is not known.	III	A	ACUITY (2007), EARLY ACS (2009)

NEWS!

Recommendations	Class	Level	Ref.
Long-term P2Y12 inhibition			
P2Y12 inhibitor administration in addition to aspirin beyond 1 year may be considered after careful assessment of the ischaemic and bleeding risks of the patient.	**IIb**	**A**	DAPT (2014), PEGASUS-TIMI 54 (2015)

NEW!

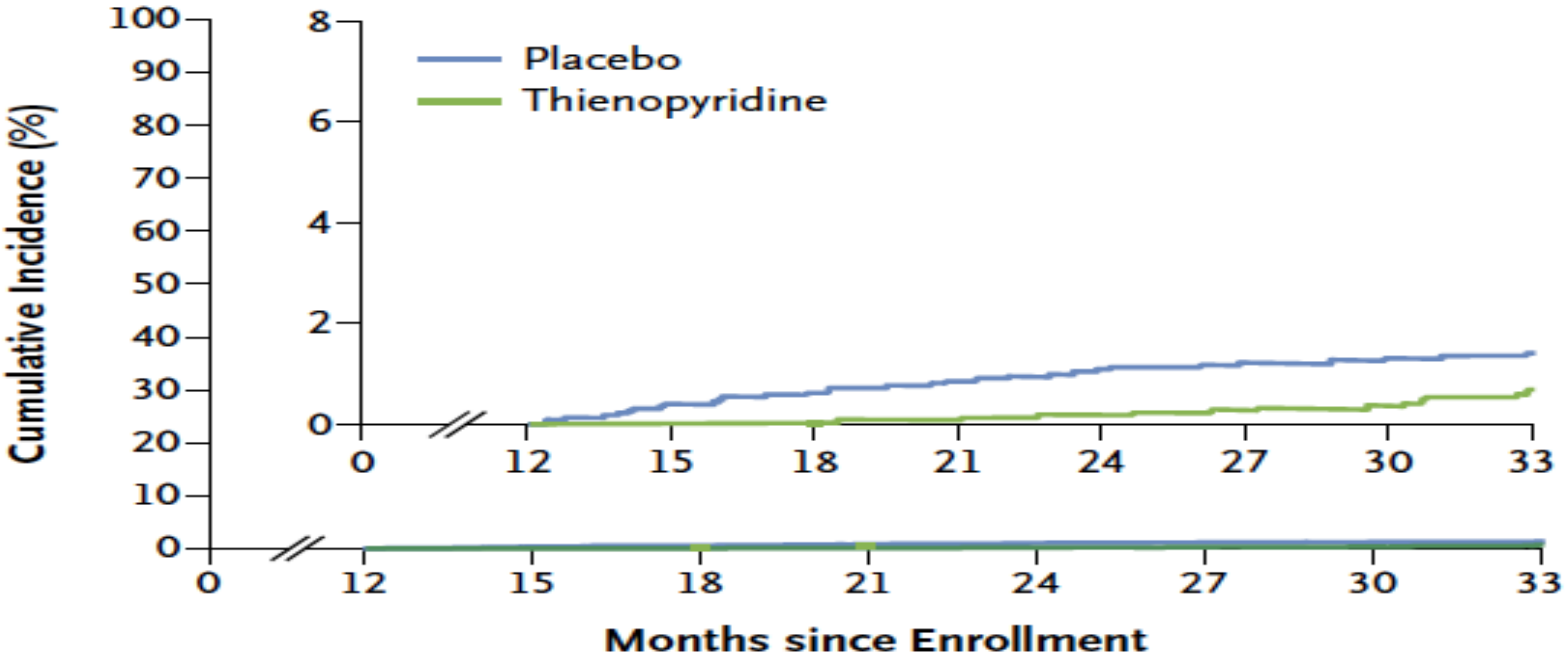
The NEW ENGLAND JOURNAL of MEDICINE

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

Stent Thrombosis

12–30 mo Thienopyridine vs. placebo, 0.4% vs. 1.4%; hazard ratio, 0.29; P<0.001

12–33 mo Thienopyridine vs. placebo, 0.7% vs. 1.4%; hazard ratio, 0.45; P<0.001



No. at Risk

Thienopyridine	5020	4934	4870	4828	4765	4686	4642	3110
Placebo	4941	4845	4775	4721	4651	4603	4556	3105

N Engl J Med 2014;371:2155-66

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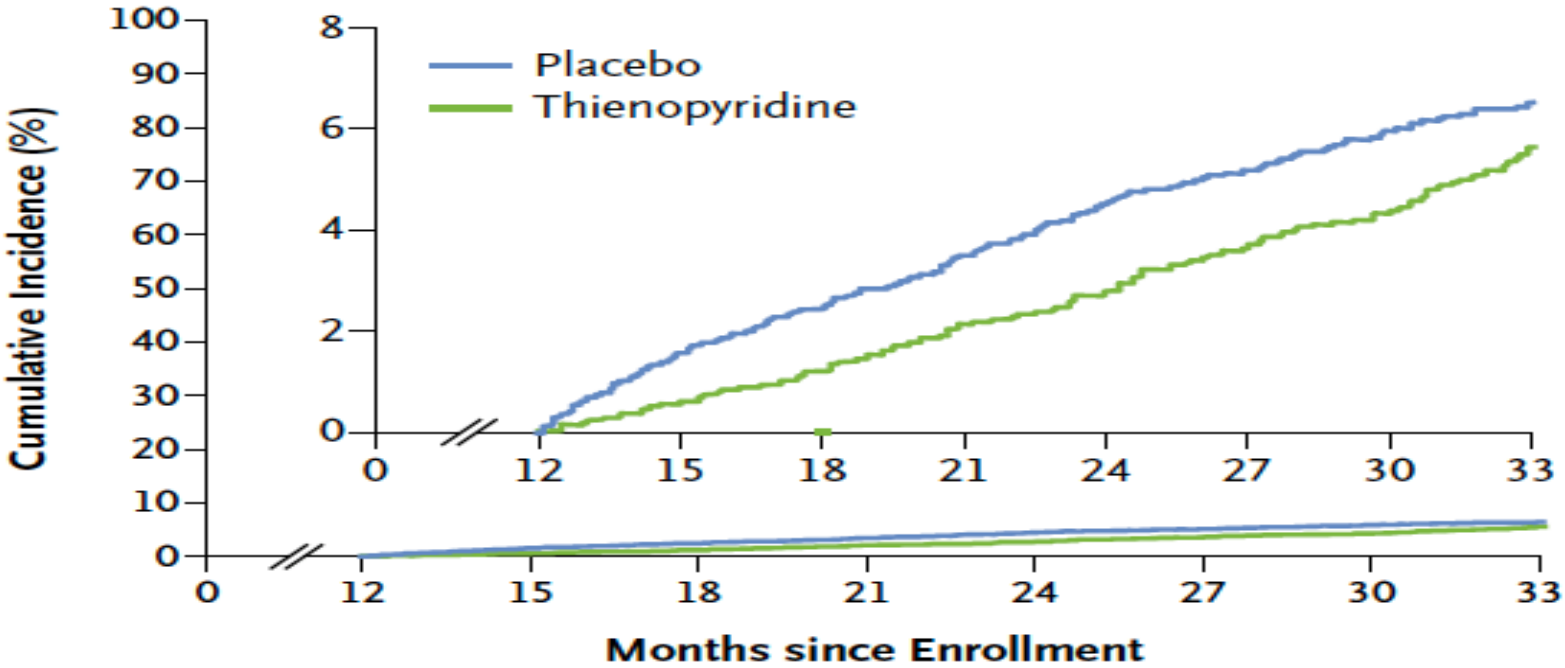
Twelve or 30 Months of Dual Antiplatelet Therapy after Drug-Eluting Stents
DAPT Study

Major Adverse Cardiovascular and Cerebrovascular Events

12–30 mo Thienopyridine vs. placebo, 4.3% vs. 5.9%; hazard ratio, 0.71; P<0.001

12–33 mo Thienopyridine vs. placebo, 5.6% vs. 6.5%; hazard ratio, 0.82; P=0.02



No. at Risk								
Thienopyridine	5020	4917	4840	4778	4702	4611	4554	3029
Placebo	4941	4799	4715	4635	4542	4476	4412	2997

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

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

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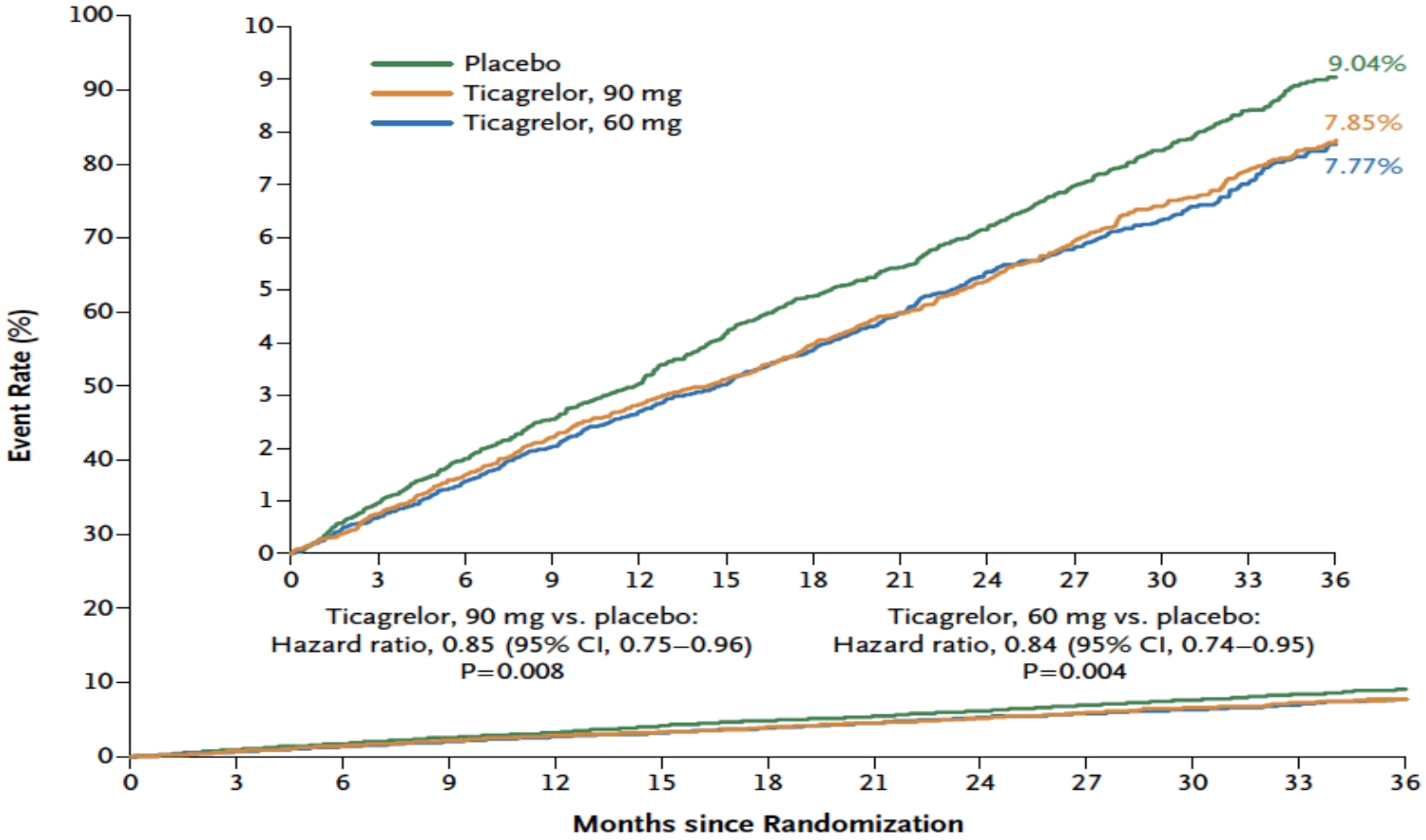
Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction
PEGASUS-TIMI 54 Study



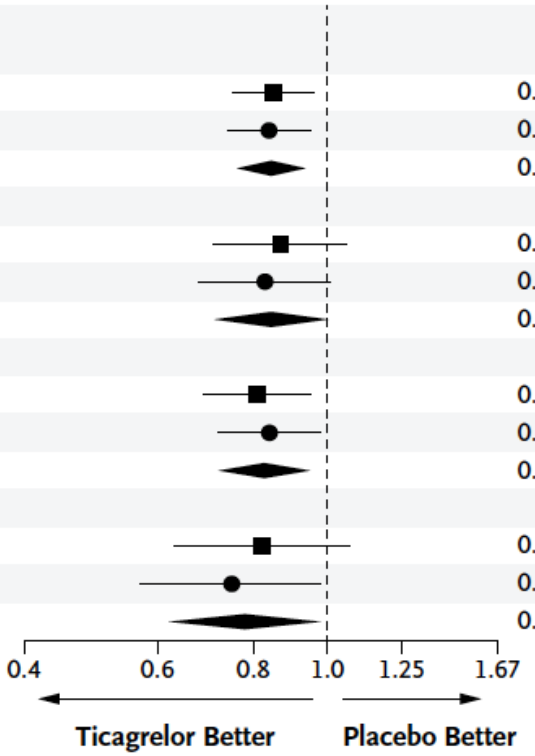
No. at Risk													
Placebo	7067	6979	6892	6823	6761	6681	6508	6236	5876	5157	4343	3360	2028
Ticagrelor, 90 mg	7050	6973	6899	6827	6769	6719	6550	6272	5921	5243	4401	3368	2038
Ticagrelor, 60 mg	7045	6969	6905	6842	6784	6733	6557	6270	5904	5222	4424	3392	2055

N Engl J Med 2015;372:1791-800

The NEW ENGLAND JOURNAL of MEDICINE

Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction
PEGASUS-TIMI 54 Study

End Point	Ticagrelor	Placebo	Hazard Ratio (95% CI)	P Value
	3-yr Kaplan–Meier event rate (%)			
Cardiovascular death, myocardial infarction, or stroke				
Ticagrelor, 90 mg	7.85	9.04	0.85 (0.75–0.96)	0.008
Ticagrelor, 60 mg	7.77	9.04	0.84 (0.74–0.95)	0.004
Ticagrelor pooled	7.81	9.04	0.84 (0.76–0.94)	0.001
Cardiovascular death				
Ticagrelor, 90 mg	2.94	3.39	0.87 (0.71–1.06)	0.15
Ticagrelor, 60 mg	2.86	3.39	0.83 (0.68–1.01)	0.07
Ticagrelor pooled	2.90	3.39	0.85 (0.71–1.00)	0.06
Myocardial infarction				
Ticagrelor, 90 mg	4.40	5.25	0.81 (0.69–0.95)	0.01
Ticagrelor, 60 mg	4.53	5.25	0.84 (0.72–0.98)	0.03
Ticagrelor pooled	4.47	5.25	0.83 (0.72–0.95)	0.005
Stroke				
Ticagrelor, 90 mg	1.61	1.94	0.82 (0.63–1.07)	0.14
Ticagrelor, 60 mg	1.47	1.94	0.75 (0.57–0.98)	0.03
Ticagrelor pooled	1.54	1.94	0.78 (0.62–0.98)	0.03



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Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction
PEGASUS-TIMI 54 Study

End Point	Ticagrelor, 90 mg (N = 6988)	Ticagrelor, 60 mg (N = 6958)	Placebo (N = 6996)	Ticagrelor, 90 mg vs. Placebo		Ticagrelor, 60 mg vs. Placebo	
				Hazard Ratio (95% CI)	P Value	Hazard Ratio (95% CI)	P Value
	number (percent)						
Bleeding							
TIMI major bleeding	127 (2.60)	115 (2.30)	54 (1.06)	2.69 (1.96–3.70)	<0.001	2.32 (1.68–3.21)	<0.001
TIMI minor bleeding	66 (1.31)	55 (1.18)	18 (0.36)	4.15 (2.47–7.00)	<0.001	3.31 (1.94–5.63)	<0.001
Bleeding requiring transfusion	122 (2.43)	105 (2.09)	37 (0.72)	3.75 (2.59–5.42)	<0.001	3.08 (2.12–4.48)	<0.001
Bleeding leading to study-drug discontinuation	453 (7.81)	354 (6.15)	86 (1.50)	5.79 (4.60–7.29)	<0.001	4.40 (3.48–5.57)	<0.001
Fatal bleeding or nonfatal intracranial hemorrhage	32 (0.63)	33 (0.71)	30 (0.60)	1.22 (0.74–2.01)	0.43	1.20 (0.73–1.97)	0.47
Intracranial hemorrhage	29 (0.56)	28 (0.61)	23 (0.47)	1.44 (0.83–2.49)	0.19	1.33 (0.77–2.31)	0.31
Hemorrhagic stroke	4 (0.07)	8 (0.19)	9 (0.19)	0.51 (0.16–1.64)	0.26	0.97 (0.37–2.51)	0.94
Fatal bleeding	6 (0.11)	11 (0.25)	12 (0.26)	0.58 (0.22–1.54)	0.27	1.00 (0.44–2.27)	1.00
Other adverse event							
Dyspnea	1205 (18.93)	987 (15.84)	383 (6.38)	3.55 (3.16–3.98)	<0.001	2.81 (2.50–3.17)	<0.001
Event leading to study-drug discontinuation	430 (6.50)	297 (4.55)	51 (0.79)	8.89 (6.65–11.88)	<0.001	6.06 (4.50–8.15)	<0.001
Serious adverse event	22 (0.41)	23 (0.45)	9 (0.15)	2.68 (1.24–5.83)	0.01	2.70 (1.25–5.84)	0.01
Renal event	166 (3.30)	173 (3.43)	161 (2.89)	1.17 (0.94–1.46)	0.15	1.17 (0.94–1.45)	0.15
Bradyarrhythmia	107 (2.04)	121 (2.32)	106 (1.98)	1.15 (0.88–1.50)	0.31	1.24 (0.96–1.61)	0.10
Gout	115 (2.28)	101 (1.97)	74 (1.51)	1.77 (1.32–2.37)	<0.001	1.48 (1.10–2.00)	0.01

N Engl J Med 2015;372:1791-800

Recommendations	Class	Level	Ref.
General recommendations			
A proton pump inhibitor in combination with DAPT is recommended in patients at higher than average risk of gastrointestinal bleeds (i.e. history of gastrointestinal ulcer/haemorrhage, anticoagulant therapy, chronic NSAID/corticosteroid use or two or more of the following: age ≥65 years, dyspepsia, gastro-oesophageal reflux disease, Helicobacter pylori infection, chronic alcohol use).	**I**	**B**	COGENT (2010)
In patients on P2Y12 inhibitors who need to undergo non-emergency major non-cardiac surgery, postponing surgery for at least 5 days after cessation of ticagrelor or clopidogrel, and for 7 days for prasugrel, should be considered if clinically feasible and unless the patient is at high risk of ischaemic events.	**IIa**	**C**	
In case of a non-cardiac surgical procedure that cannot be postponed or of a bleeding complication, discontinuation of the P2Y12 inhibitor may be considered after a minimum of 1 and 3 months from PCI with BMS and new-generation DES, respectively.	**IIb**	**C**	

Conclusioni

La duplice terapia antiaggregante (DAPT), basata sull'associazione di aspirina ed un inibitore di P2Y12, è raccomandata in tutti i pazienti affetti da SCA.

I nuovi inibitori di P2Y12 (ticagrelor, prasugrel) sono da preferirsi al clopidogrel

Le precedenti LG del 2011 consigliavano l'assunzione degli antiaggreganti appena posta la diagnosi, indipendentemente da quando il paziente sarebbe entrato nella sala di emodinamica (il cosiddetto pretrattamento). A seguito dei risultati del **trial ACCOAST,** il pretrattamento con prasugrel nei pazienti in SCA-NSTE non è raccomandato (COR III, LOE B).

Riguardo il pretrattamento con ticagrelor e clopidogrel, nessun trial ha individuato il giusto timing di somministrazione in caso di strategia invasiva programmata: pertanto, resta un "gap in evidences" non colmato e che richiede ulteriori approfondimenti.

Entrano a far parte dell'armamentario terapeutico antiaggregante nel NSTEMI il **cangrelor** (nuovo inibitore di P2Y12) per uso endovenoso e, per via orale, il **vorapaxar** (inibitore selettivo del recettore PAR-1 della trombina).

Conclusioni

Escono definitivamente di scena **gli inibitori delle glicoproteine IIb/IIIa** in pretrattamento (COR III, LOE A) nei pazienti nei quali non è nota l'anatomia coronarica, il cui ruolo resta confinato all'utilizzo in sala di emodinamica durante PCI.

La giusta **durata della DAPT** resta argomento di discussione e dovrebbe esser basata sulla valutazione individuale del rischio ischemico versus quello emorragico (cosidetta tailored duration).
L'estensione della DAPT oltre i convenzionali 12 mesi dovrebbe essere considerata nei pazienti a basso rischio di sanguinamento con alto rischio ischemico fino a 30 mesi (con prasugrel o clopidogrel) o fino a 48 mesi (con ticagrelor, preferibilmente riducendo dopo un anno la posologia a 60 mg bid) in base ai risultati dei **trial DAPT** e **PEGASUS** (COR IIb, LOE A).

La durata della DAPT può essere ridotta nei pazienti ad alto rischio di sanguinamento a 3-6 mesi (COR IIb, LOE A), alla luce dei miglioramenti tecnologici degli stent medicati e della drastica riduzione dei casi di trombosi intrastent.

Conclusioni

L’approccio radiale rispetto a quello femorale è incentivato in considerazione dei risultati derivanti dagli studi **RIVAL** (The RadIal Vs femorAL access for coronary intervention) e **MATRIX** (Minimizing Adverse Haemorrhagic Events by TRansradial Access Site and Systemic Implementation of angioX) che dimostrano una superiorità del primo nella riduzione delle complicanze vascolari, degli eventi di sanguinamento maggiori e di tutte le cause di mortalità.