SISTEMA SANITARIO REGIONALE
AZIENDA OSPEDALIERA SAN GIOVANNI ADDOLORATA

REGIONE LAZIO

Il pretrattamento del paziente con NSTEMI: chi ben comincia è a metà dell'opera

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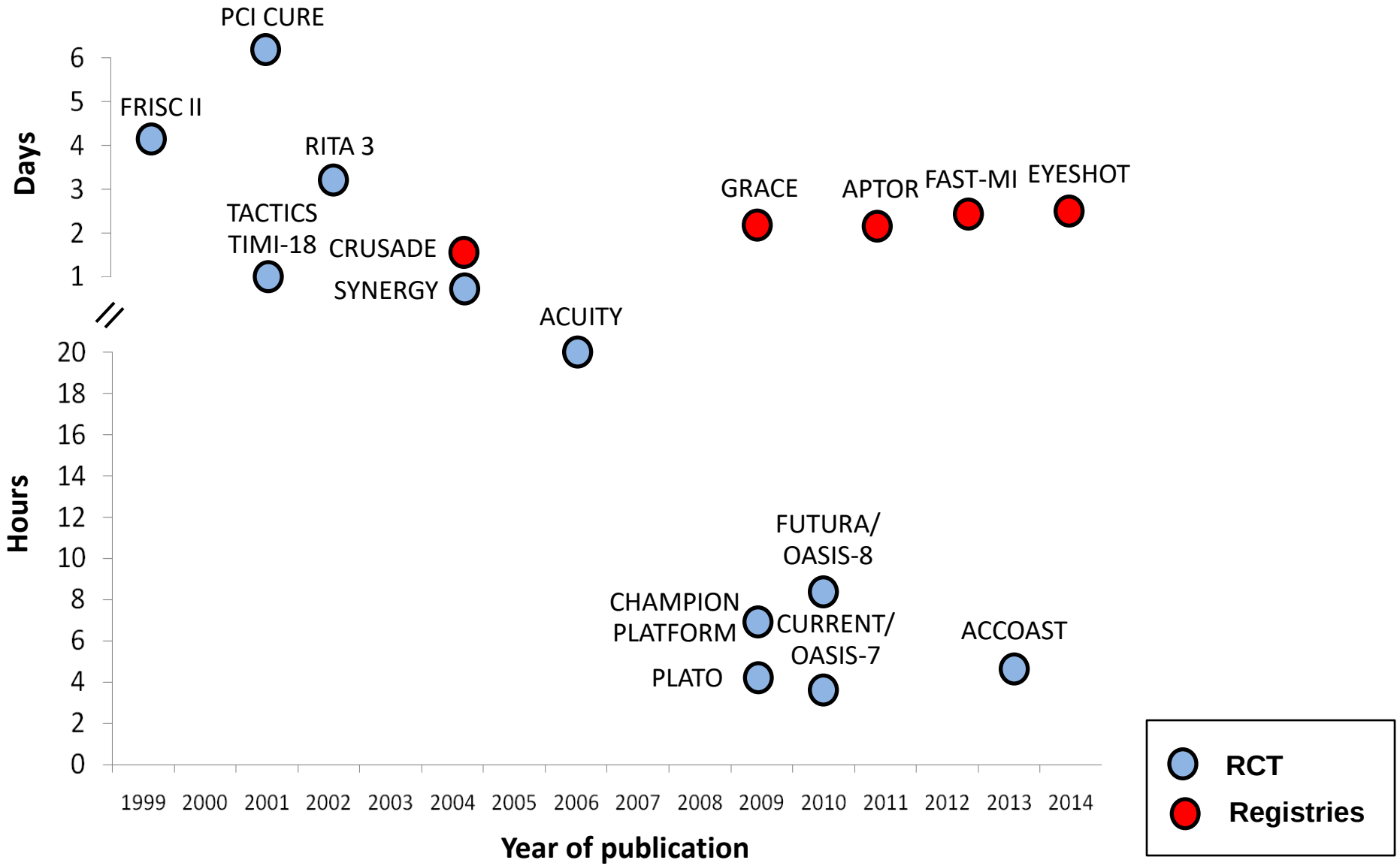
AO San Giovanni Addolorata

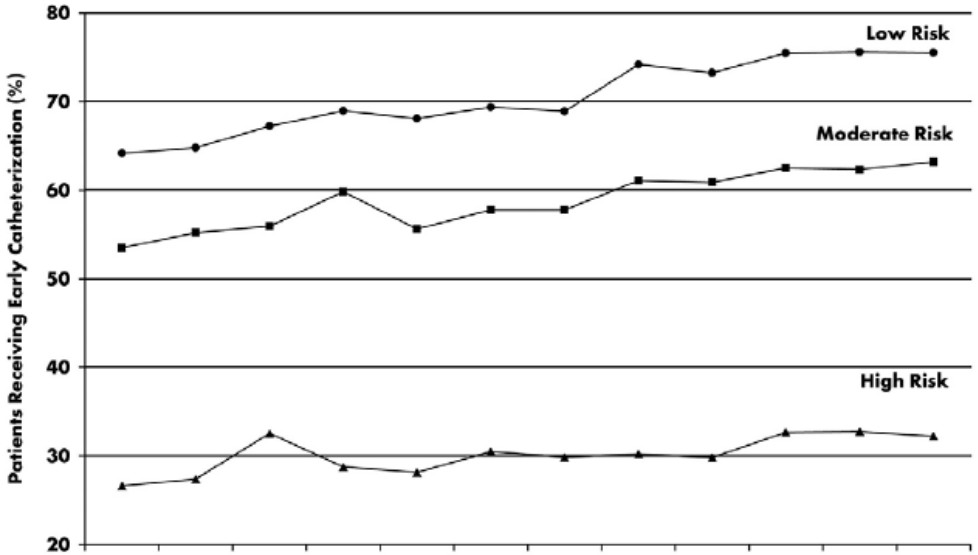
NAPOLI 19 Novembre 2016

X congresso nazionale
simeu
NAPOLI 18-20 NOVEMBRE 2016

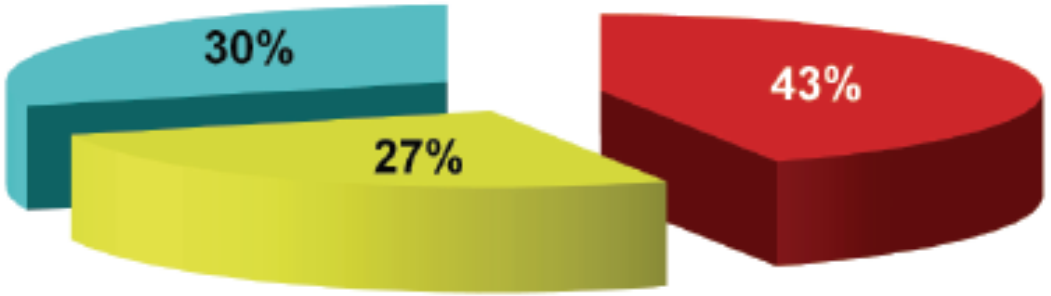
Time to Coronary Angiography



Timing to Coronary Angiography



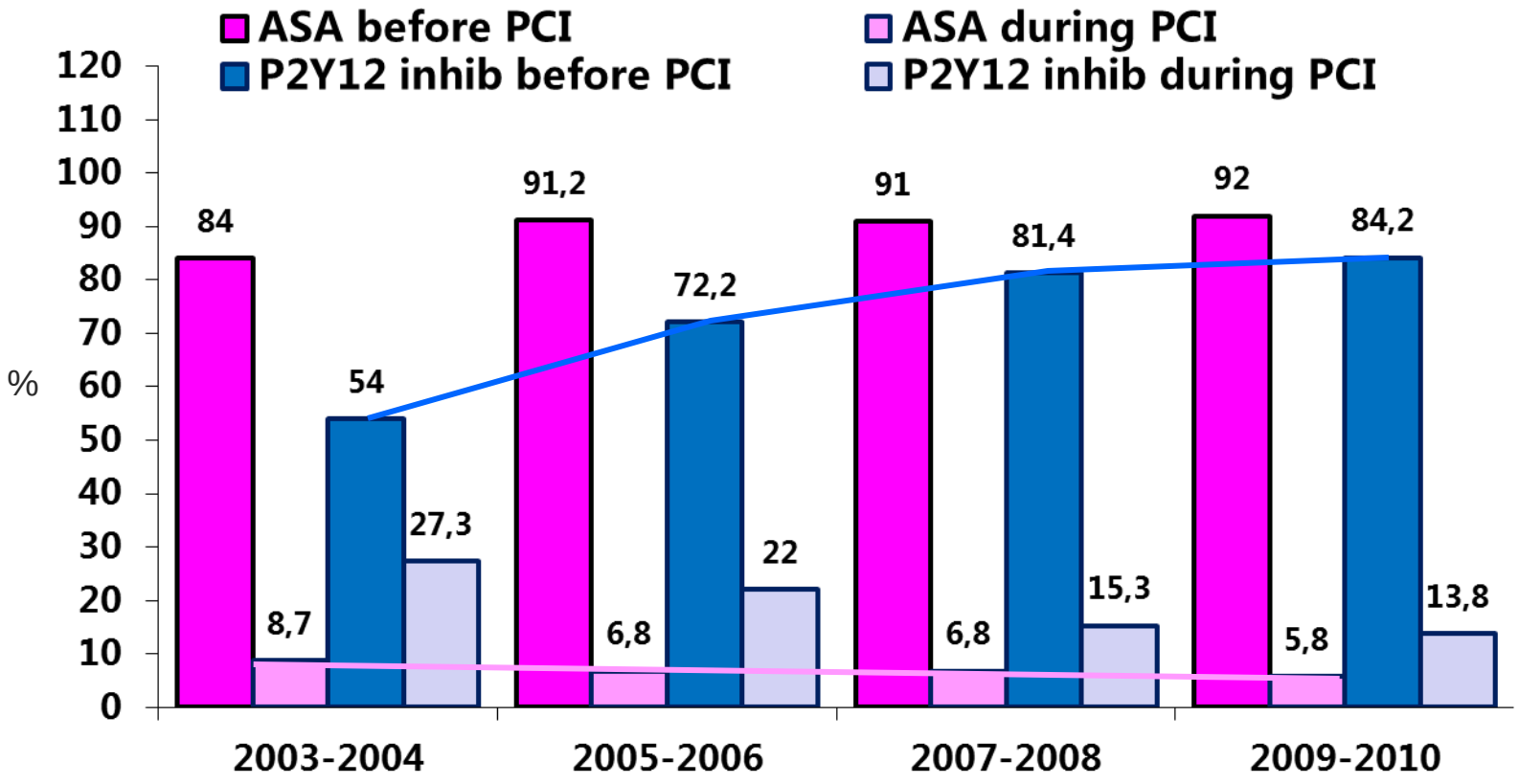
■ Early ≤ 24 hrs ■ 24 < Intermediate < 48 hrs ■ Delayed ≥ 48 hrs



Koh A, et al. Am J Cardiovasc D 2012;2:248

Population Trends in Percutaneous Coronary Intervention

20-Year Results From the SCAAR (Swedish Coronary Angiography and Angioplasty Registry)



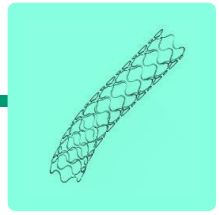
Fokkema ML, et al. J Am Coll Cardiol 2013;61:1222

EYESHOT Registry

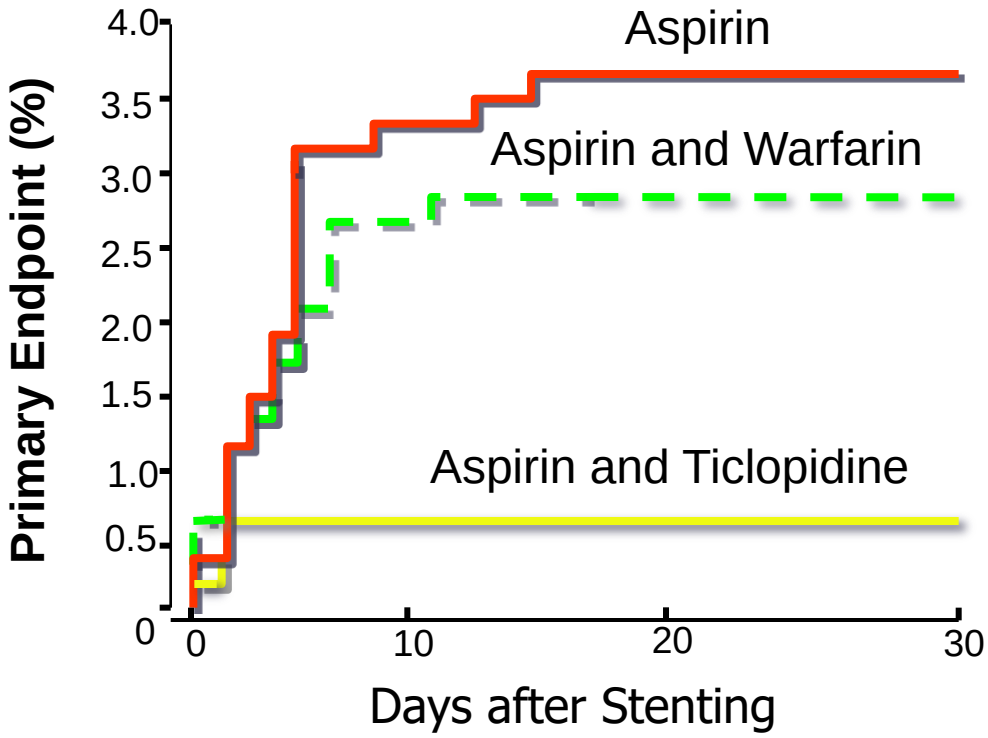
Pre-Treatment with DAPT

79.3% (1807/2280)

79.5% (1395/1755)

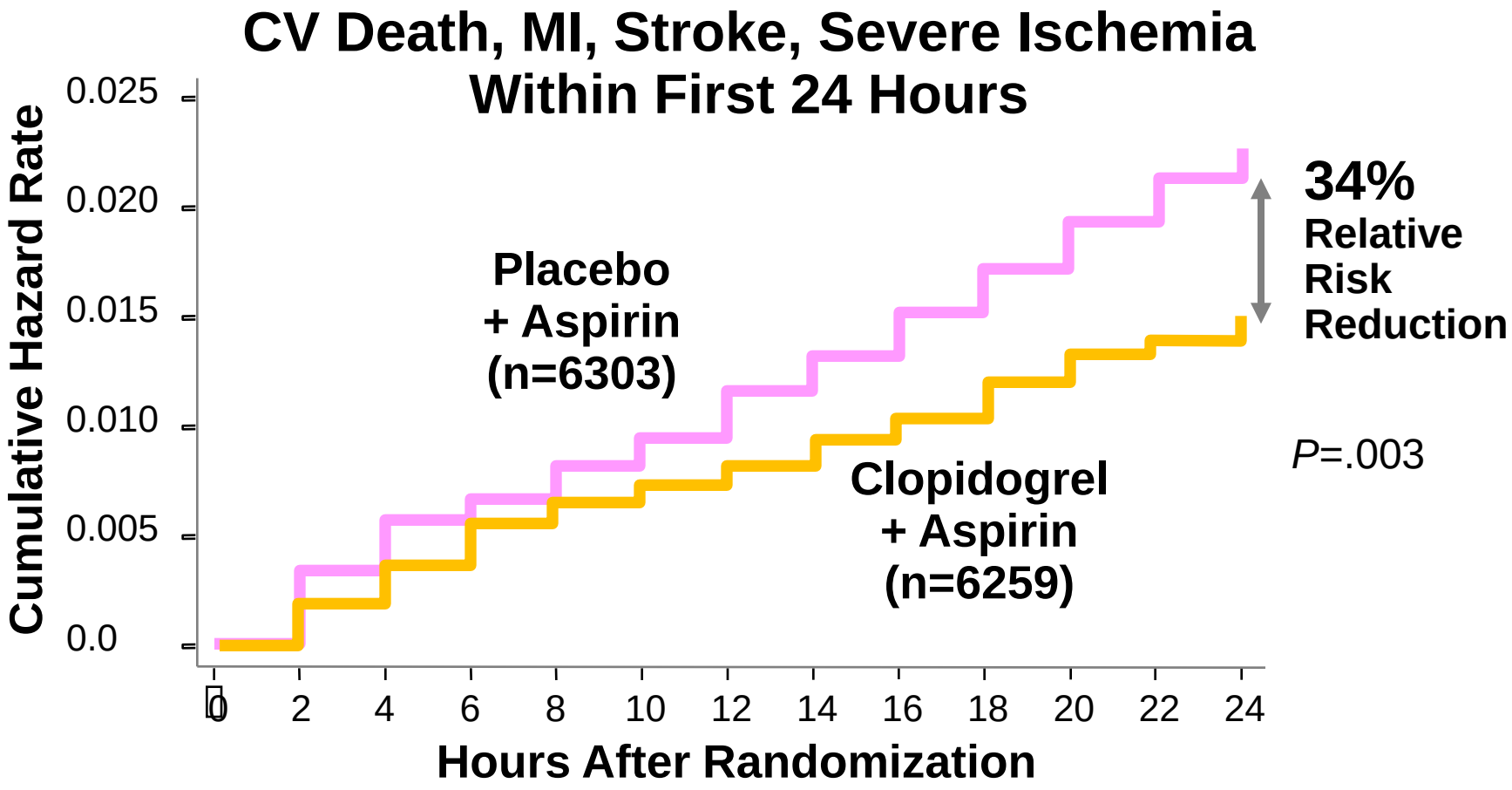


DAPT
History



STARS investigators, N Engl J Med 1998;339:1665

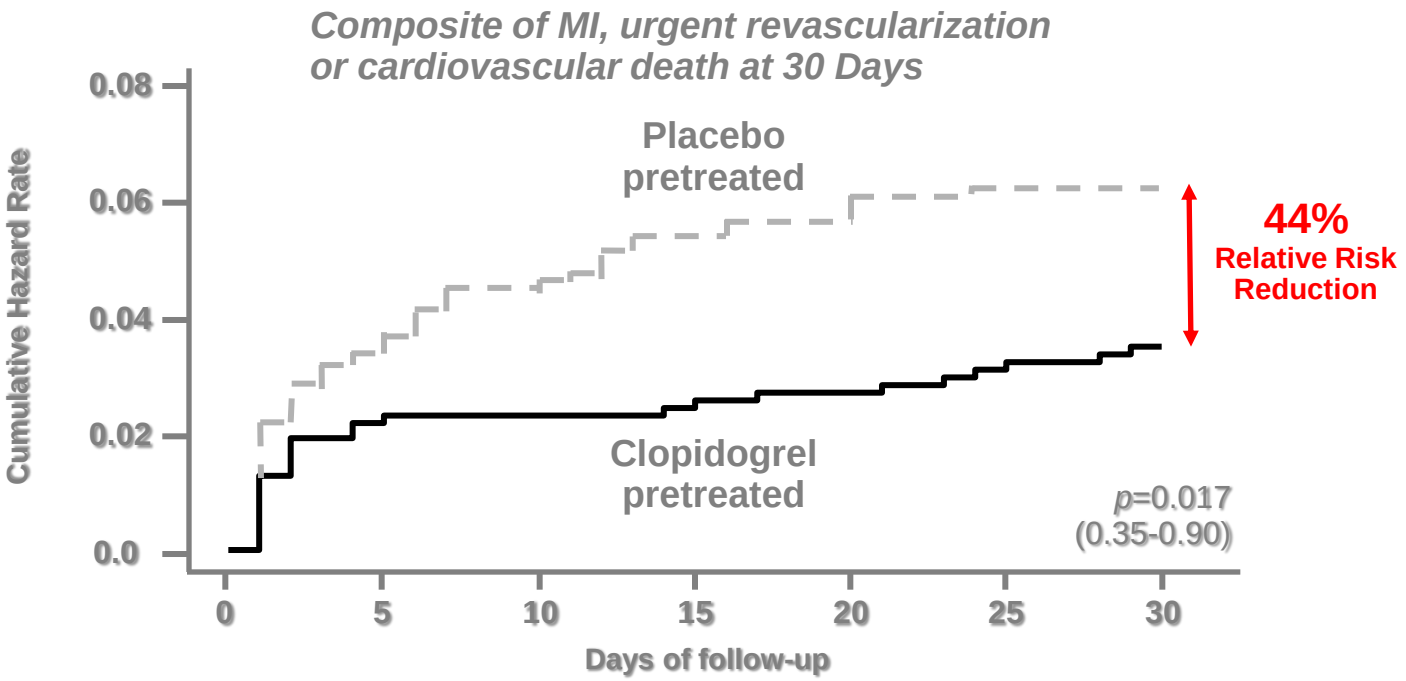
CURE: Very Early Efficacy of Clopidogrel in NSTE ACS



Yusuf S et al. Circulation 2003;107:966

Pre-Treatment with Clopidogrel Prior to PCI and Stenting in ACS Patients

Placebo		Clopidogrel	Placebo
	PCI	30 days	1 year
Clopidogrel		Clopidogrel	Clopidogrel



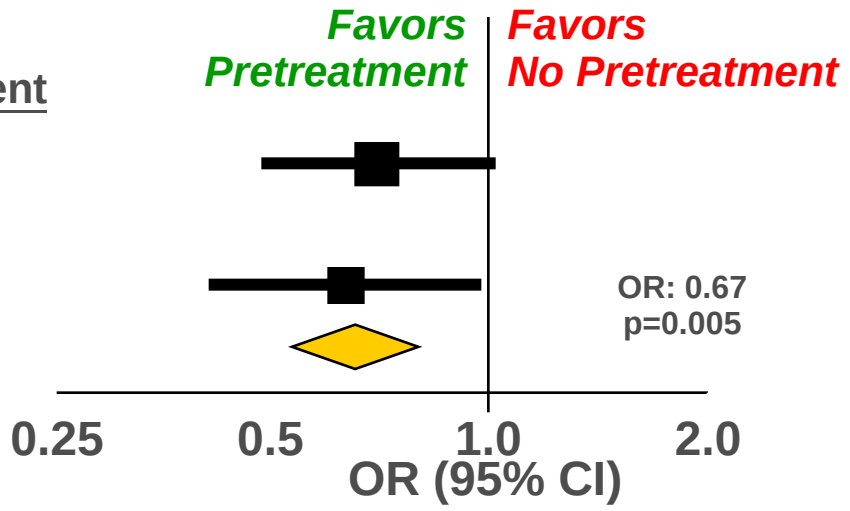
* In addition to other standard therapies.
* Patients did not receive open-label thienopyridine before PCI.

Mehta SR et al for the CURE Investigators. Lancet. 2002

Meta-Analysis of Clopidogrel Pretreatment

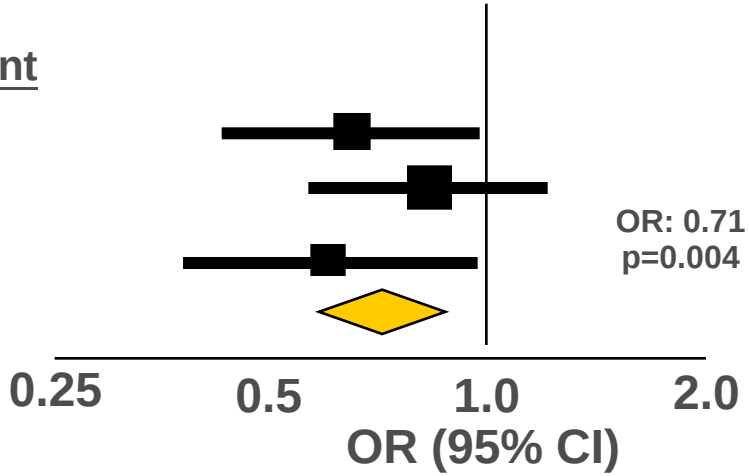
MI before PCI (%)

Trial	Clopidogrel Pretreatment	No Pretreatment
PCI-CURE	3.6	5.1
CREDO	n/a	n/a
PCI-CLARITY	4.0	6.1
Overall	3.7	5.5



CV Death or MI after PCI (%)

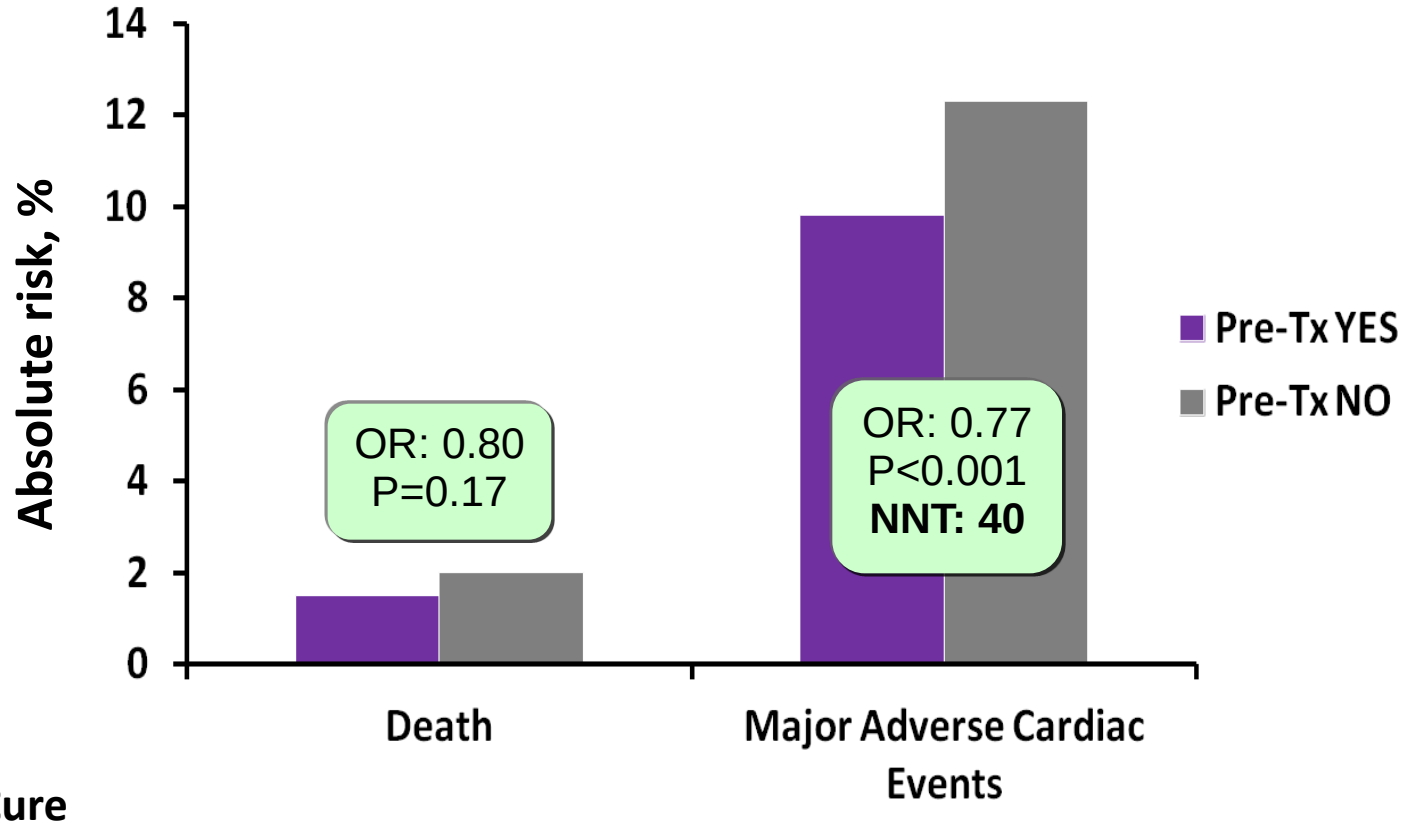
Trial	Clopidogrel Pretreatment	No Pretreatment
PCI-CURE	2.9	4.4
CREDO	6.0	7.1
PCI-CLARITY	3.3	5.4
Overall	3.9	5.5



Sabatine MS, et al. JAMA 2005;294:1224

Clopidogrel and Pre-Treatment in PCI: A Meta-Analysis

8608 patients out of 7 RCTs undergoing PCI, including NSTEACS, STEMI, and elective PCI



PCI Cure		
Relative Weight, %	43.1	49.7

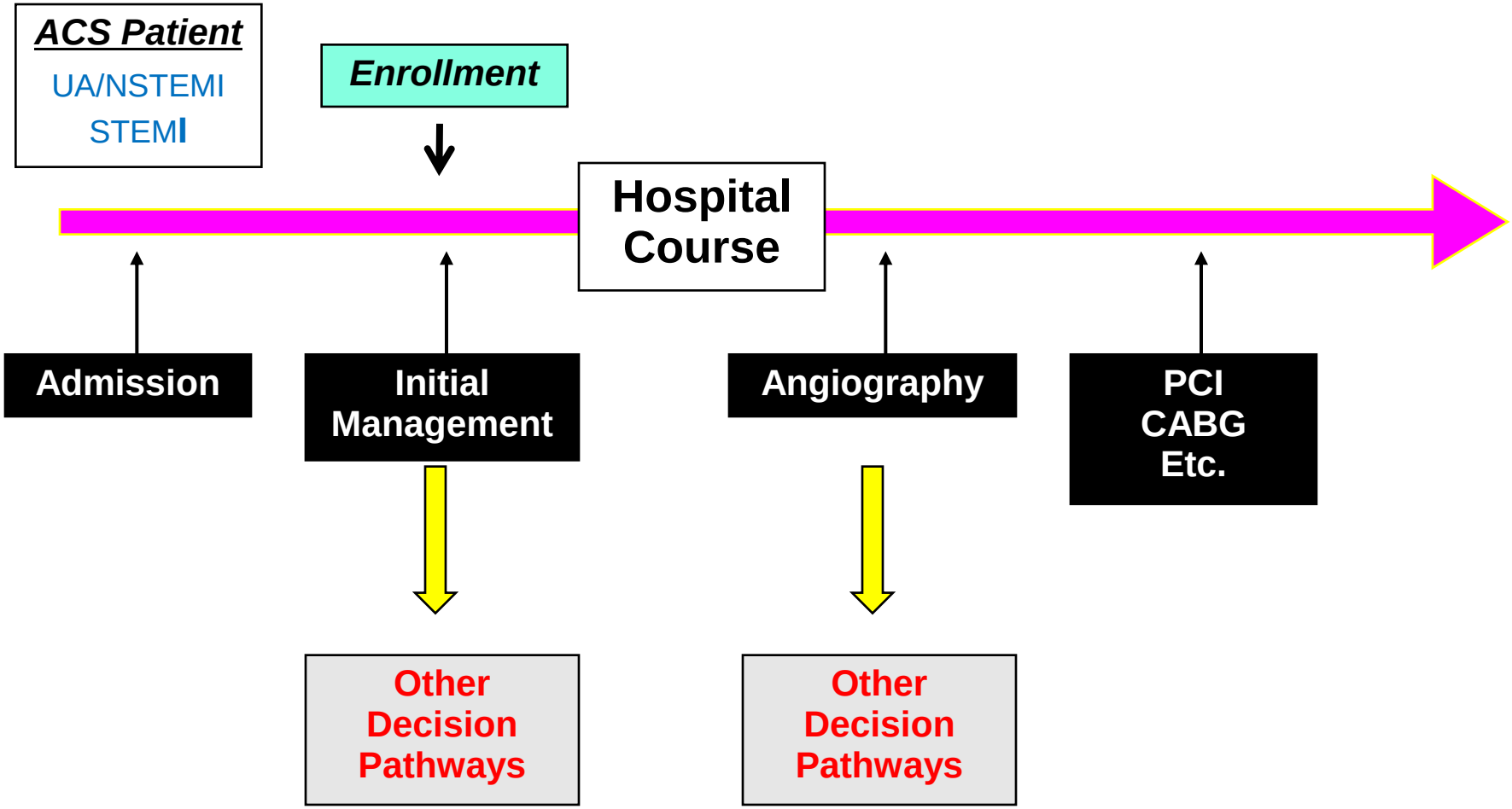
Bellemain-Appaix A, et al. JAMA. 2012;308:2507

Clopidogrel and Pre-Treatment in PCI: A Meta-Analysis

	Major Coronary Event							
	No. of Events		No. of Patients					
Presenting feature	Pretreatment	No Pretreatment	Pretreatment	No Pretreatment	OR (95% CI)	Favors Pretreatment	Favors No Pretreatment	Heterogenity	*P* for Trend χ^2
Elective PCI	53	50	820	816	1.05 (0.70-1.57)				
NSTE ACS	329	414	2366	2408	0.78 (0.66-0.91)			5.1	.08
STEMI	39	70	1097	1101	0.54 (0.36-0.81)				

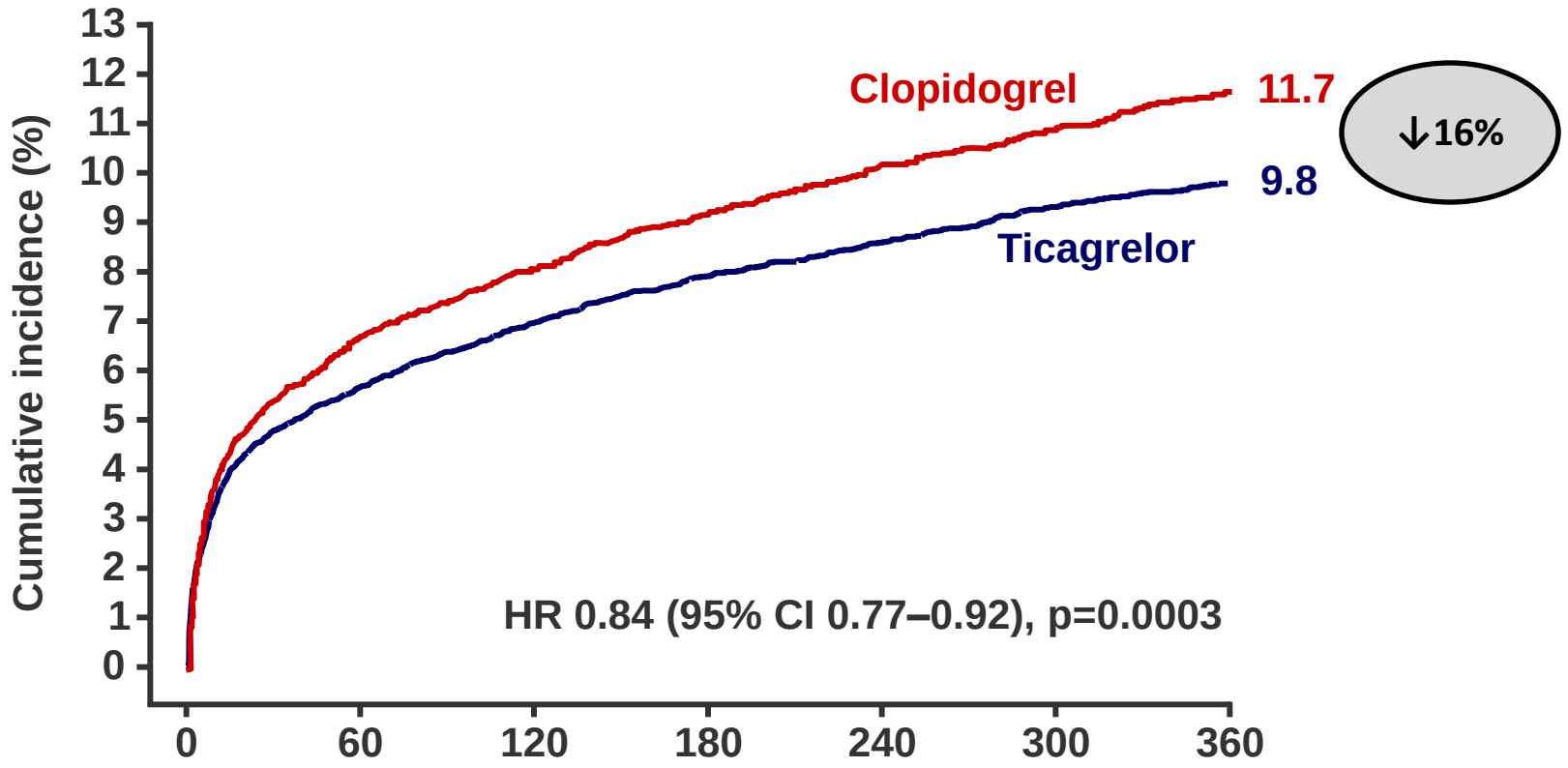
Bellemain-Appaix A, et al. JAMA. 201terial2;308 Supplemental material,

Timing of Enrollment



James S, et al. Am Heart J. 2009;157:599
Wallentin L, et al. N Engl J Med. 2009;361:1045

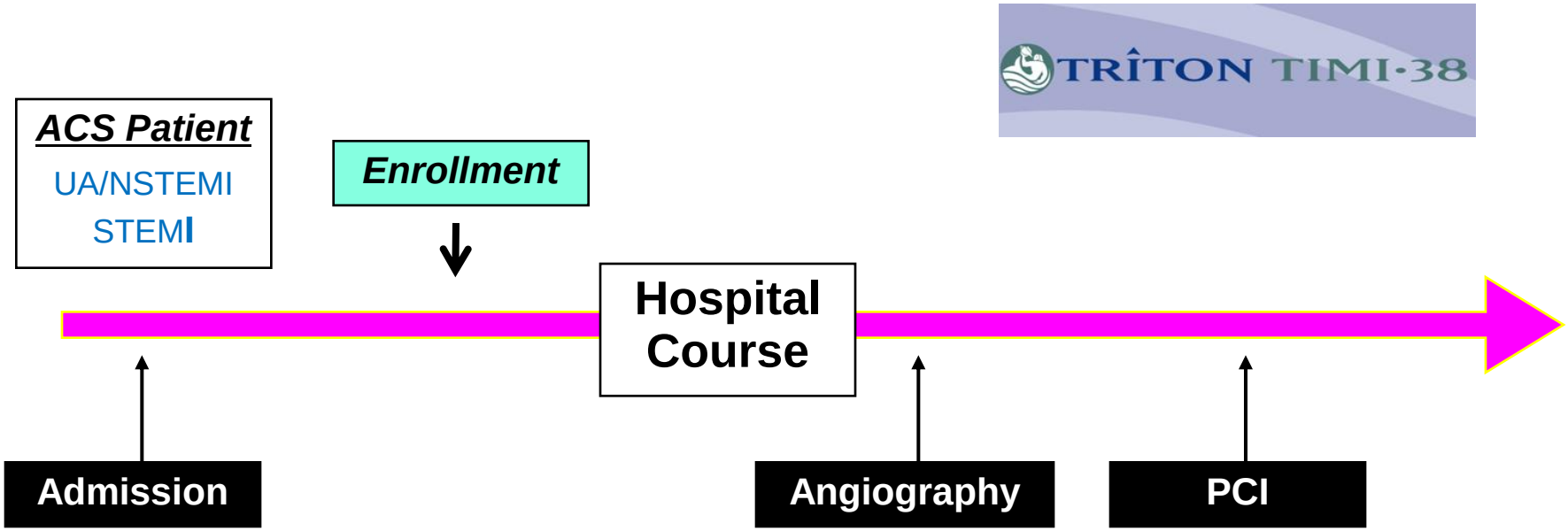
K-M estimate of time to first primary efficacy event (Composite of CV death, MI or stroke)



No. at risk							
Ticagrelor	9,333	8,628	8,460	8,219	6,743	5,161	4,147
Clopidogrel	9,291	8,521	8,362	8,124	6,743	5,096	4,047

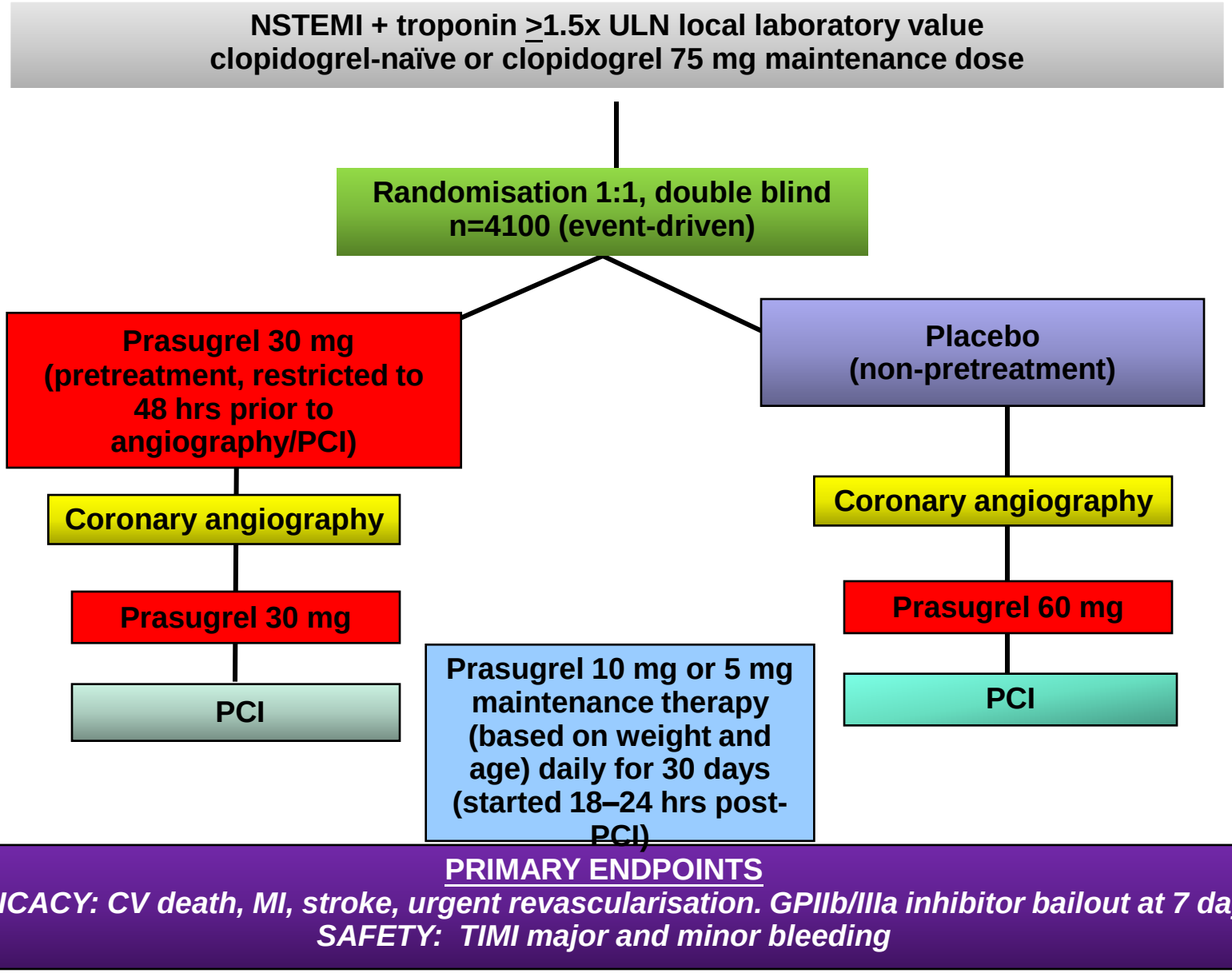
Wallentin L et al. N Engl J Med. 2009;361:1045

Timing of Enrollment



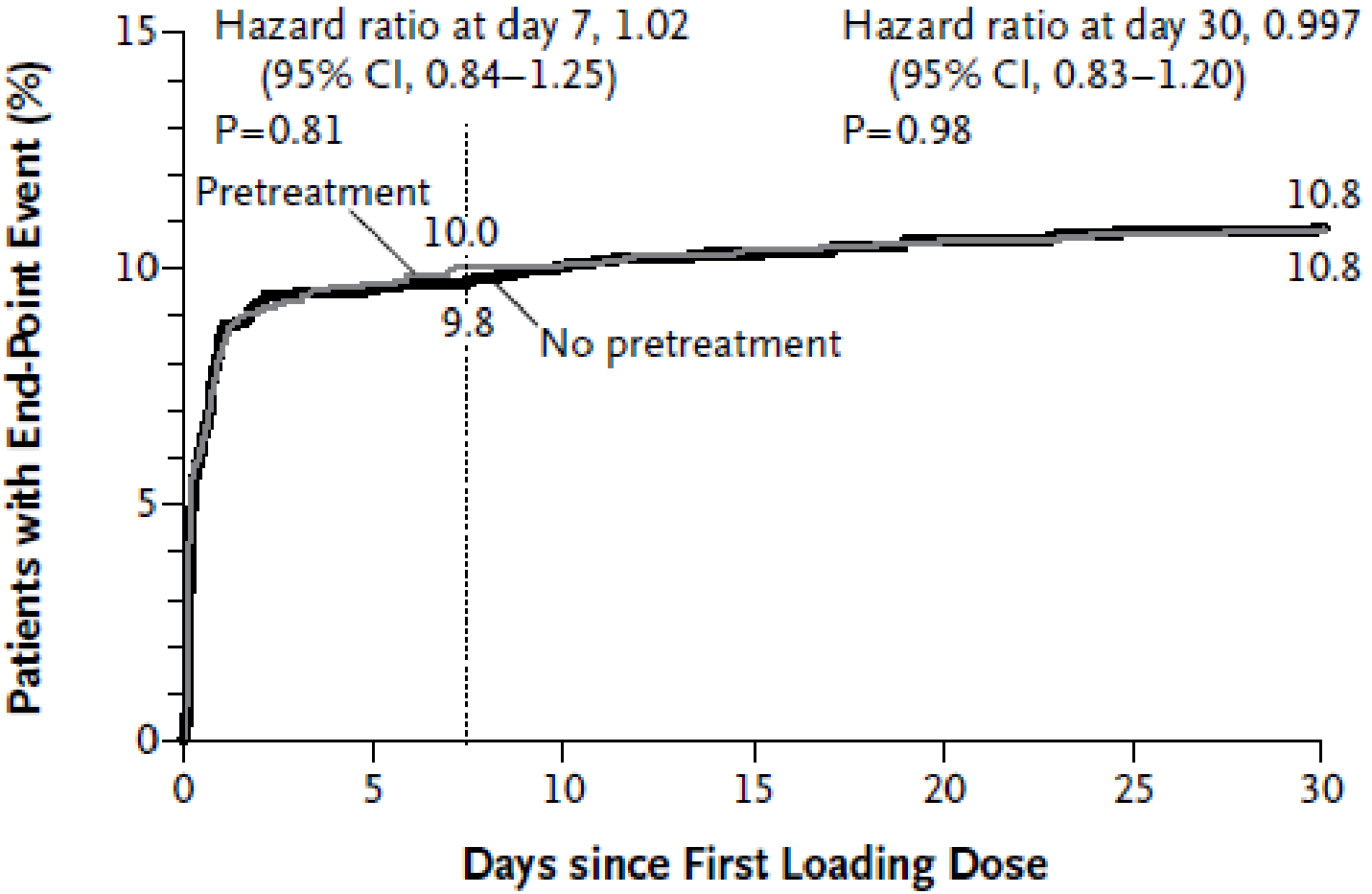
James S, et al. Am Heart J. 2009;157:599
Wallentin L, et al. N Engl J Med. 2009;361:1045

ACCOAST: Study design



CV, cardiovascular; GP, glycoprotein; MI, myocardial infarction; PCI, percutaneous coronary intervention; TIMI, Thrombolysis In Myocardial Infarction; ULN, upper limit of normal.Montalescot G, et

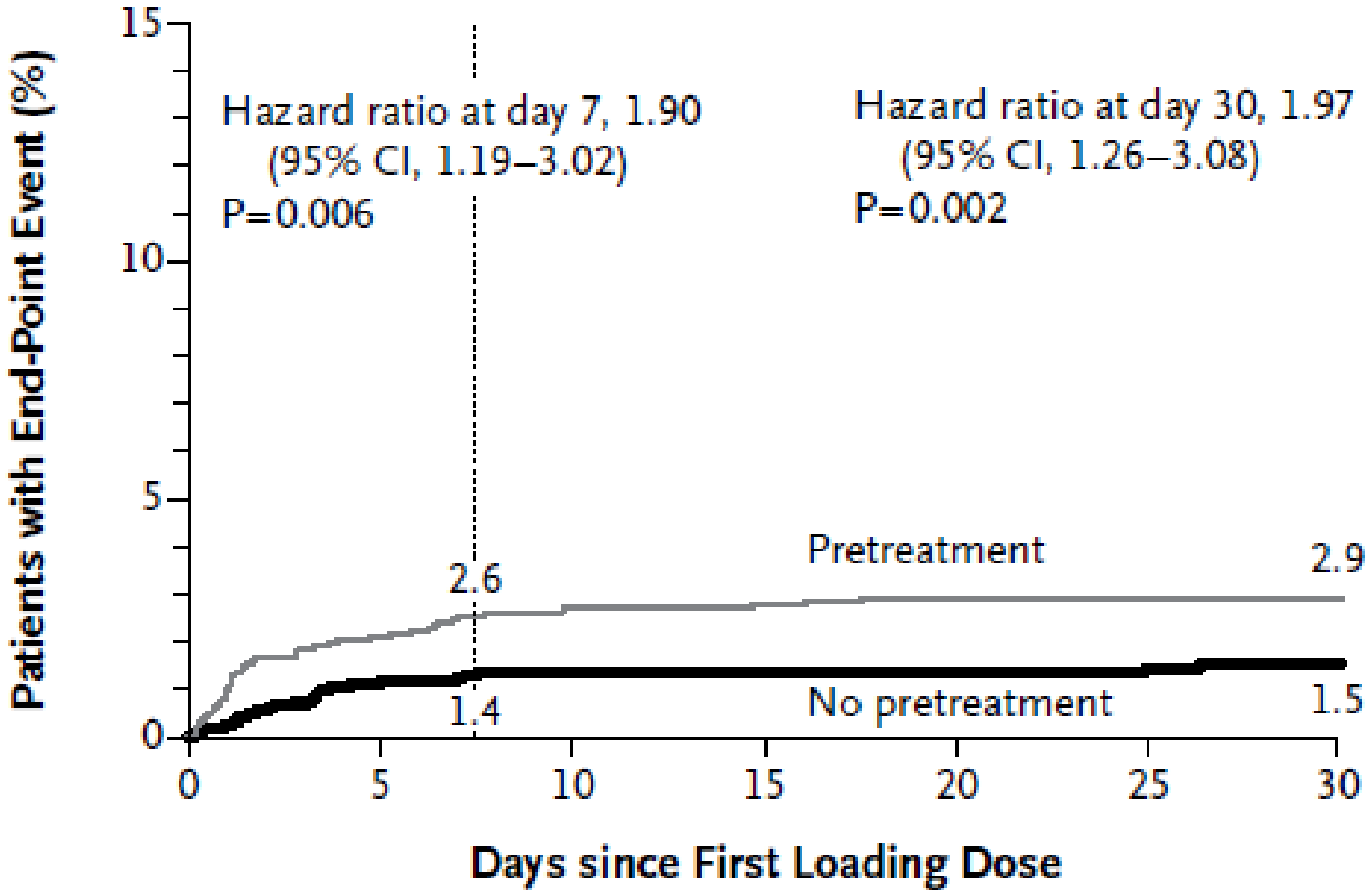
A Primary Efficacy End Point



No. at Risk

No pretreatment	1996	1788	1775	1769	1762	1752	1621
Pretreatment	2037	1821	1809	1802	1797	1791	1616

B **All TIMI Major Bleeding**



No. at Risk

No pretreatment	1996	1947	1328	1297	1288	1284	1263
Pretreatment	2037	1972	1339	1310	1299	1297	1280

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 12, 2013 VOL. 369 NO. 11

Pretreatment with Prasugrel in Non–ST-Segment Elevation Acute Coronary Syndromes

Gilles Montalescot, M.D., Ph.D., Leonardo Bolognese, M.D., Dariusz Dudek, M.D., Ph.D., Patrick Goldstein, M.D., Christian Hamm, M.D., Jean-Francois Tanguay, M.D., Jurrien M. ten Berg, M.D., Ph.D., Debra L. Miller, R.N., Timothy M. Costigan, Ph.D., Jochen Goedicke, M.D., Johanne Silvain, M.D., Ph.D., Paolo Angioli, M.D., Jacek Legutko, M.D., Ph.D., Margit Niethammer, M.D., Zuzana Motovska, M.D., Ph.D., Joseph A. Jakubowski, Ph.D., Guillaume Cayla, M.D., Ph.D., Luigi Oltrona Visconti, M.D., Eric Vicaut, M.D., Ph.D., and Petr Widimsky, M.D., D.Sc., for the ACCOAST Investigators*

CONCLUSIONS

Among patients with NSTE acute coronary syndromes who were scheduled to undergo catheterization, pretreatment with prasugrel did not reduce the rate of major ischemic events up to 30 days but increased the rate of major bleeding complications. (Funded by Daiichi Sankyo and Eli Lilly; ACCOAST ClinicalTrials.gov number, NCT01015287.)

ATLANTIC

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

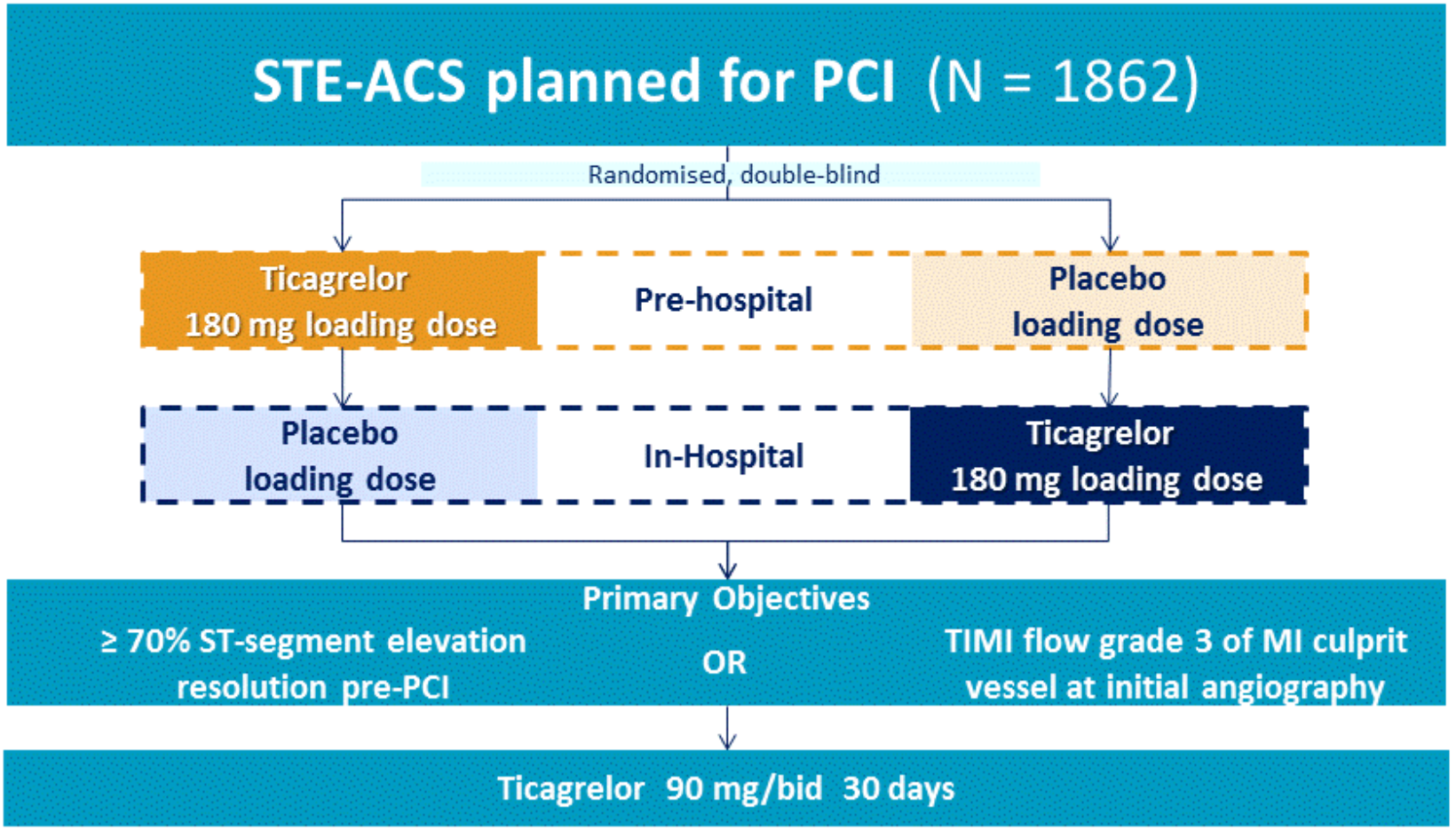
Prehospital Ticagrelor in ST-Segment Elevation Myocardial Infarction

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*

Study population and design

Atlantic Population

- Documented evidence of **STEMI**
- Planned for **angioplasty (PCI)**
- **onset of ischaemic symptoms within 6 h**
- **initially managed by ambulance physician/personnel**; also concerning patients not pre-treated for STEMI in **emergency rooms of non-PCI hospitals**



Montalescot G et al. *Am Heart J.* 2013;165:515–522.

Co-primary Efficacy End Points and Related Secondary End Points in the Modified Intention-to-Treat Population

Table 2. Coprimary Efficacy End Points and Related Secondary End Points in the Modified Intention-to-Treat Population.*

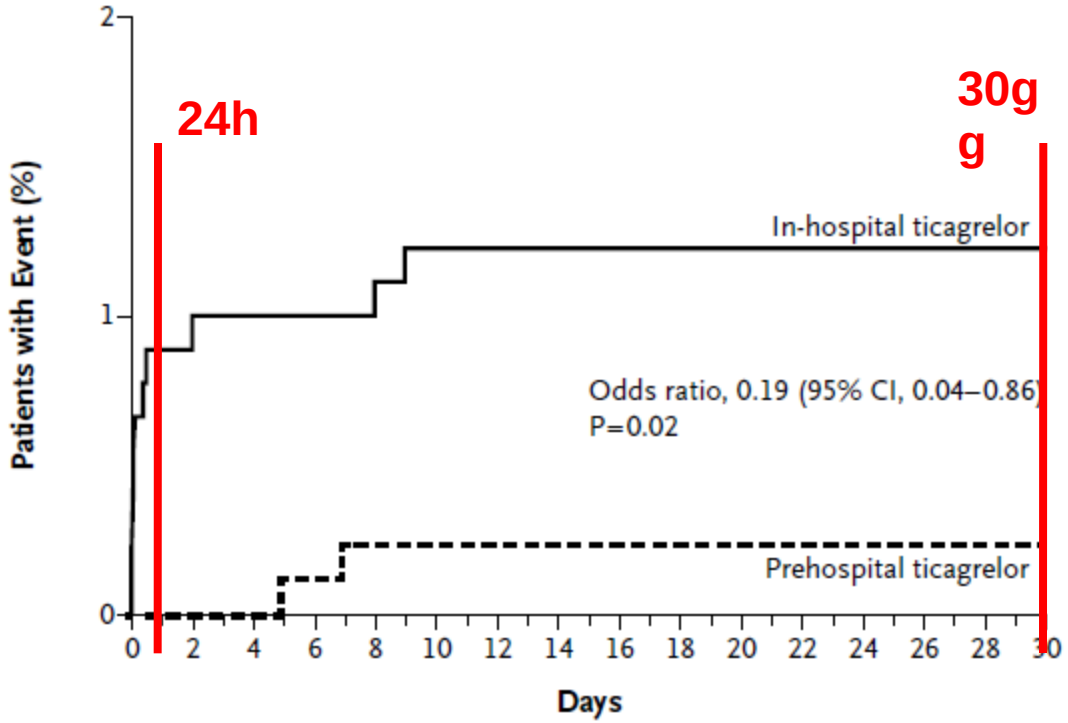
End Point	Prehospital Ticagrelor (N=906)	In-Hospital Ticagrelor (N=952)	Odds Ratio (95% CI)†	P Value†	Difference (95% CI)‡
	no./no. of patients who could be evaluated (%)				
Coprimary end points					
Absence of ST-segment elevation resolution ≥70% before PCI	672/774 (86.8)	722/824 (87.6)	0.93 (0.69 to 1.25)	0.63	–0.008 (–0.041 to 0.025)
Absence of TIMI flow grade 3 in infarct-related artery at initial angiography	681/824 (82.6)	711/856 (83.1)	0.97 (0.75 to 1.25)	0.82	–0.004 (–0.040 to 0.032)
Met one or both coprimary end points					
Both	541/744 (72.7)	571/777 (73.5)	0.96 (0.77 to 1.21)	0.73	–0.008 (–0.052 to 0.037)
One or both	677/719 (94.2)	710/751 (94.5)	0.93 (0.60 to 1.45)	0.75	–0.004 (–0.027 to 0.020)
Secondary end points					
Absence of ST-segment elevation resolution ≥70% after PCI	303/713 (42.5)	353/743 (47.5)	0.82 (0.66 to 1.004)	0.05	–0.050 (–0.101 to 0.001)
Absence of TIMI flow grade 3 in infarct related artery after PCI	135/760 (17.8)	154/784 (19.6)	0.88 (0.68 to 1.14)	0.34	–0.019 (–0.058 to 0.020)
Met one or both secondary end points					
Both	73/763 (9.6)	87/775 (11.2)	0.84 (0.60 to 1.16)	0.29	–0.017 (–0.047 to 0.014)
One or both	339/684 (49.6)	371/703 (52.8)	0.88 (0.71 to 1.09)	0.23	–0.032 (–0.085 to 0.020)

Montalescot G, et al. N Engl J Med 2014;371:1016-1027

ORIGINAL ARTICLE

This article was published on September 1, 2014, at NEJM.org.

Prehospital Ticagrelor in ST-Segment Elevation Myocardial Infarction



	Patients with Event no. (%)	Total No. of Patients
Prehospital ticagrelor	2 (0.2)	906
In-hospital ticagrelor	11 (1.2)	952

Figure 2. Definite Stent Thrombosis up to 30 Days after Ticagrelor Administration in the Modified Intention-to-Treat Population.

study shows that the administration of the potent $P2Y_{12}$-receptor antagonist ticagrelor shortly before PCI does not improve reperfusion of the culprit artery before the procedure but is safe and may prevent postprocedural acute stent thrombosis. The observed preventive benefit is consis-

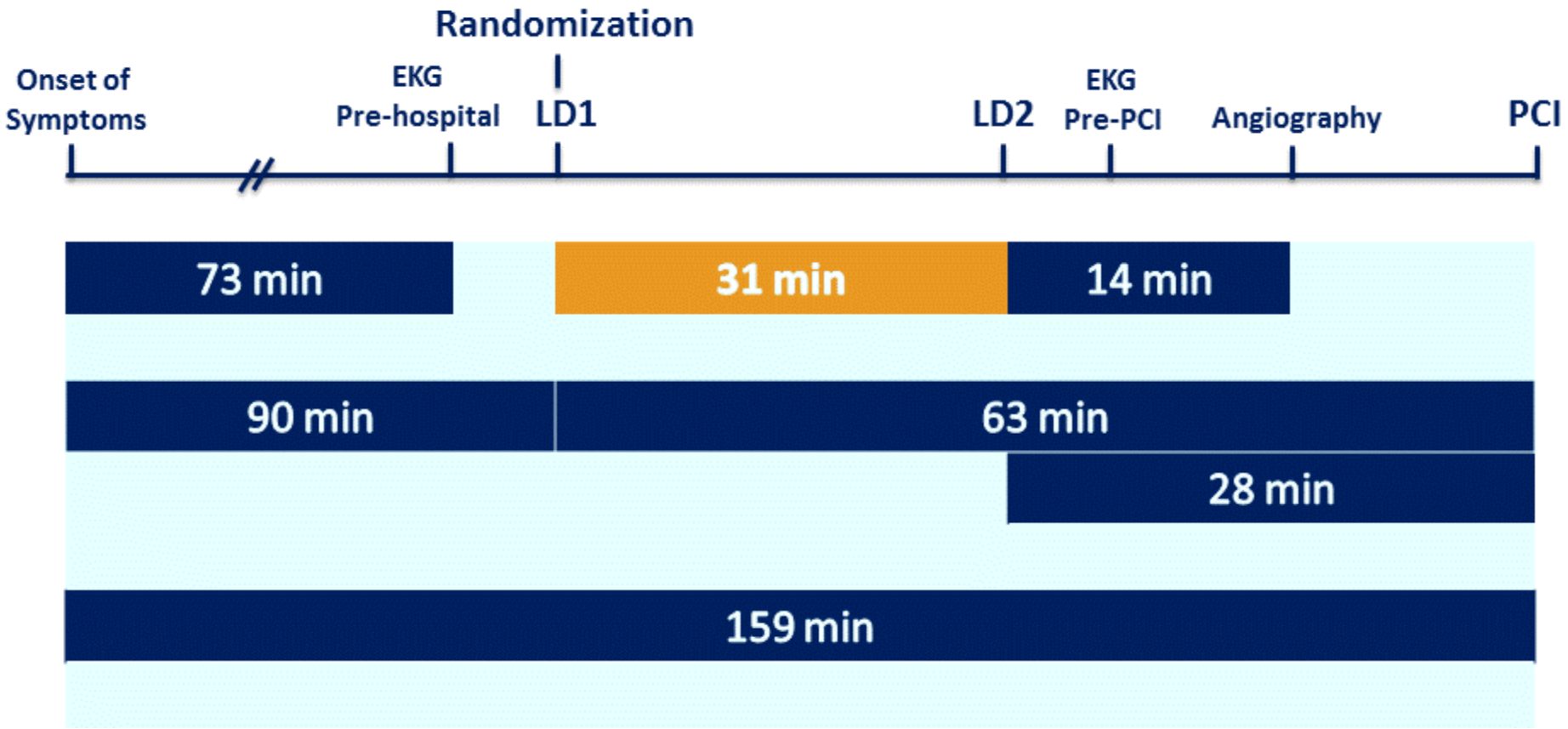
unknown. In this study, all the stent-thrombosis events within the first 24 hours occurred in the in-hospital group, and the difference remained significant in favor of prehospital administration of ticagrelor for up to 30 days. Although our

Safety: “Bleeding”

Bleeding events	Prehospital Ticagrelor	In-Hospital Ticagrelor
No. of patients who could be evaluated	908	950
Non–CABG-related bleeding event, according to PLATO criteria — no. (%)		
≤48 hr after first dose		
Major	16 (1.8)	15 (1.6)
Minor	8 (0.9)	9 (0.9)
Composite of major and minor	24 (2.6)	24 (2.5)
>48 hr and ≤30 days after first dose		
Major	11 (1.2)	11 (1.2)
Minor	7 (0.8)	5 (0.5)
Composite of major and minor	18 (2.0)	16 (1.7)

Non–CABG-related bleeding event at ≤30 days — no. (%)	Prehospital Ticagrelor	In-Hospital Ticagrelor
According to TIMI criteria		
Major	12 (1.3)	12 (1.3)
Minor	23 (2.5)	25 (2.6)
Minimal	6 (0.7)	4 (0.4)
According to STEEPLE criteria		
Major	26 (2.9)	24 (2.5)
Minor	12 (1.3)	14 (1.5)
Unknown	3 (0.3)	3 (0.3)

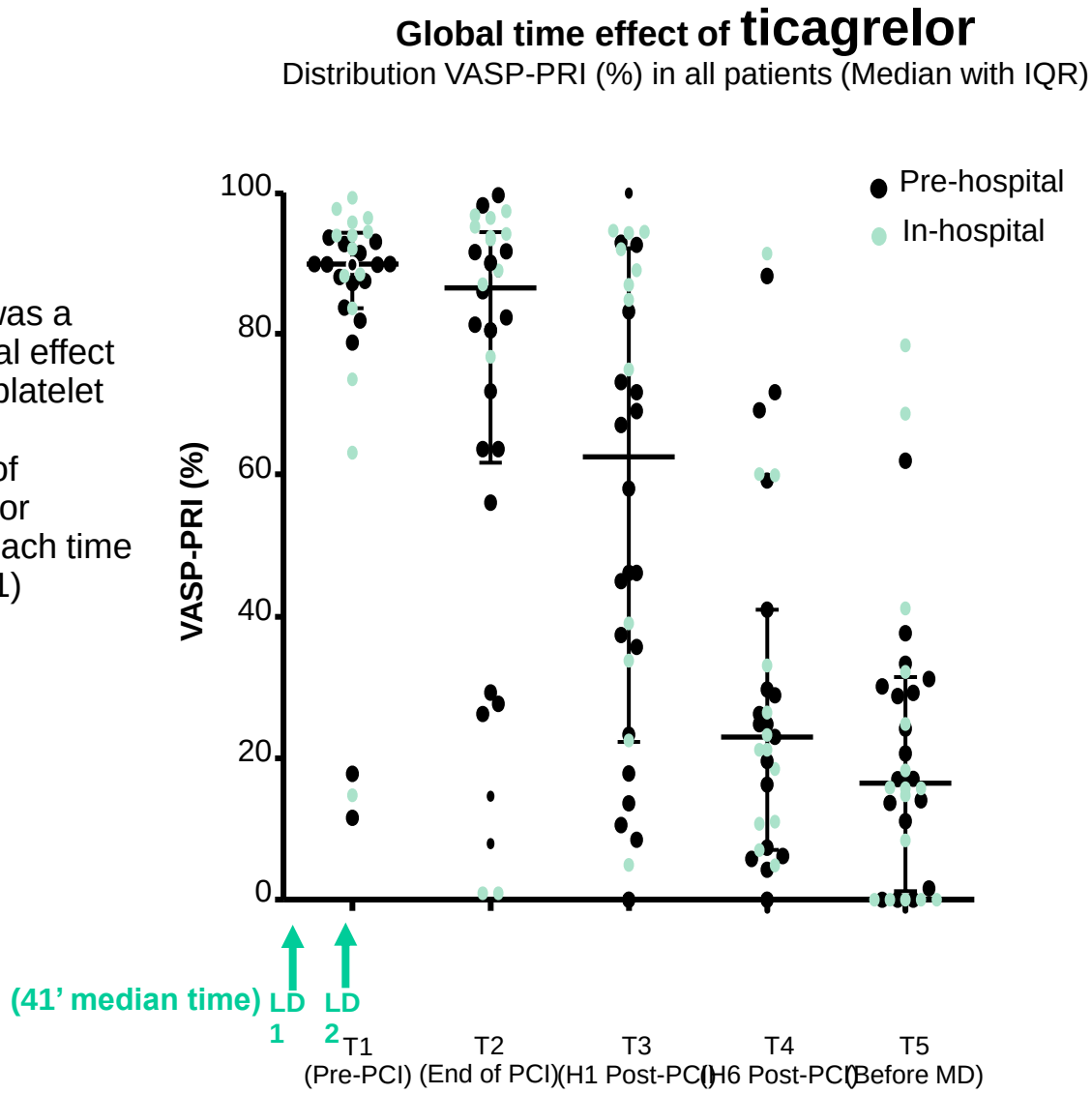
Median times to pre- and in-hospital steps



Montalescot G, et al.
N Engl J Med 2014; 371:1016-1027

1PD – VASP-PRI (A)

Overall, there was a significant global effect of reduction in platelet reactivity after administration of ticagrelor (pre- or in-hospital) at each time point (*P*<0.0001)



Montalescot G et al. N Engl J Med September 1, 2014 [Epub ahead of print; DOI 10.1056/NEJMoa1407024]

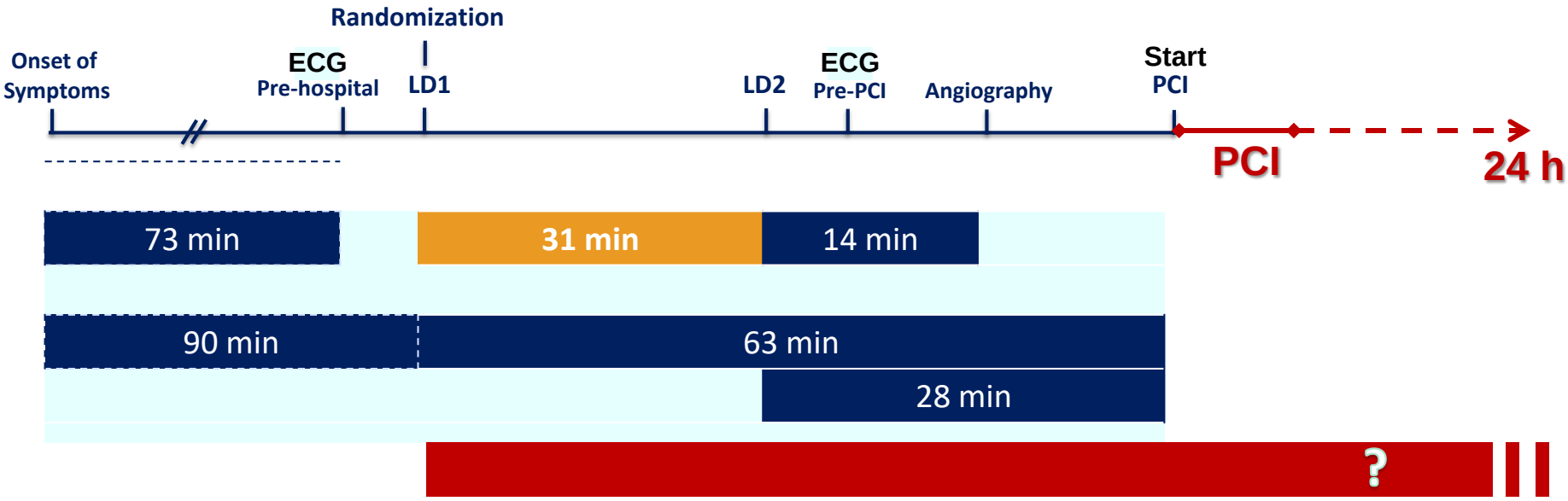
ATLANTIC

Effect of pre-hospital ticagrelor in STEMI patients in the first 24 hours after primary PCI

The ATLANTIC-H^{24} analysis

Gilles Montalescot, Arnoud W. van 't Hof, Leonardo Bolognese, Warren J. Cantor, Jean-Philippe Collet, Kurt Huber, Magnus Janzon, Frédéric Lapostolle, Uwe Zeymer, Christian W. Hamm,
on behalf of the ATLANTIC investigators

Hypothesis



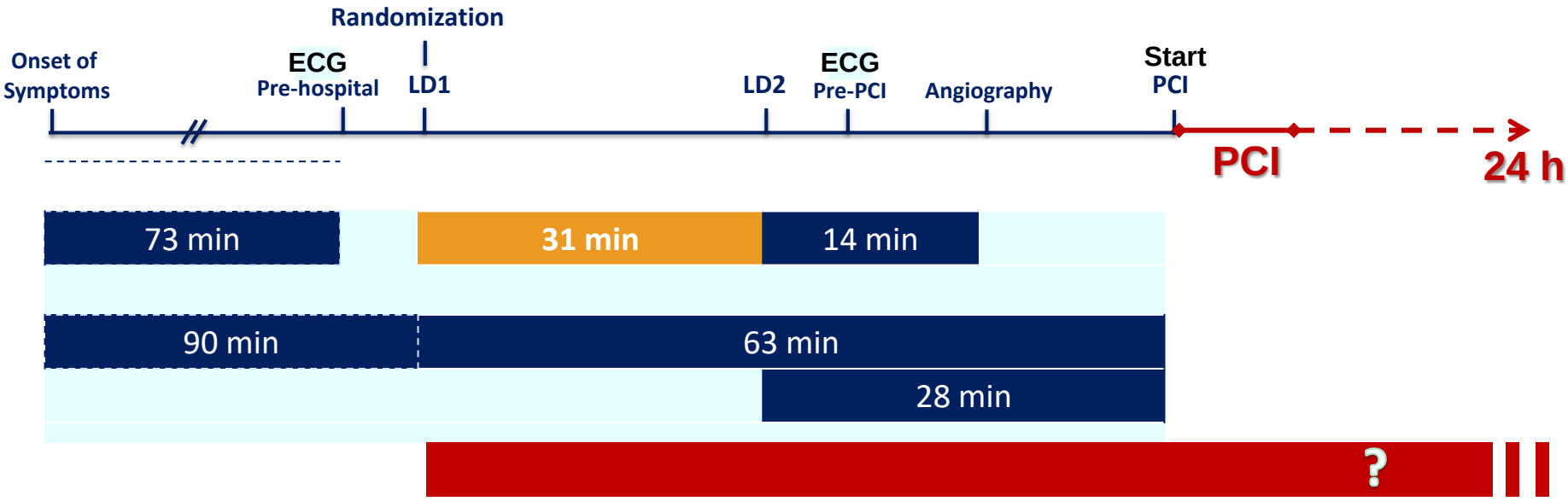
Hypothesis of the present analysis

- **It was hypothesized that the effect of earlier, pre-hospital ticagrelor may not have manifested until after PCI**

ECG, electrocardiogram; LD, loading dose.

Montalescot G et al. *N Engl J Med* 2014;371:1016–1027.

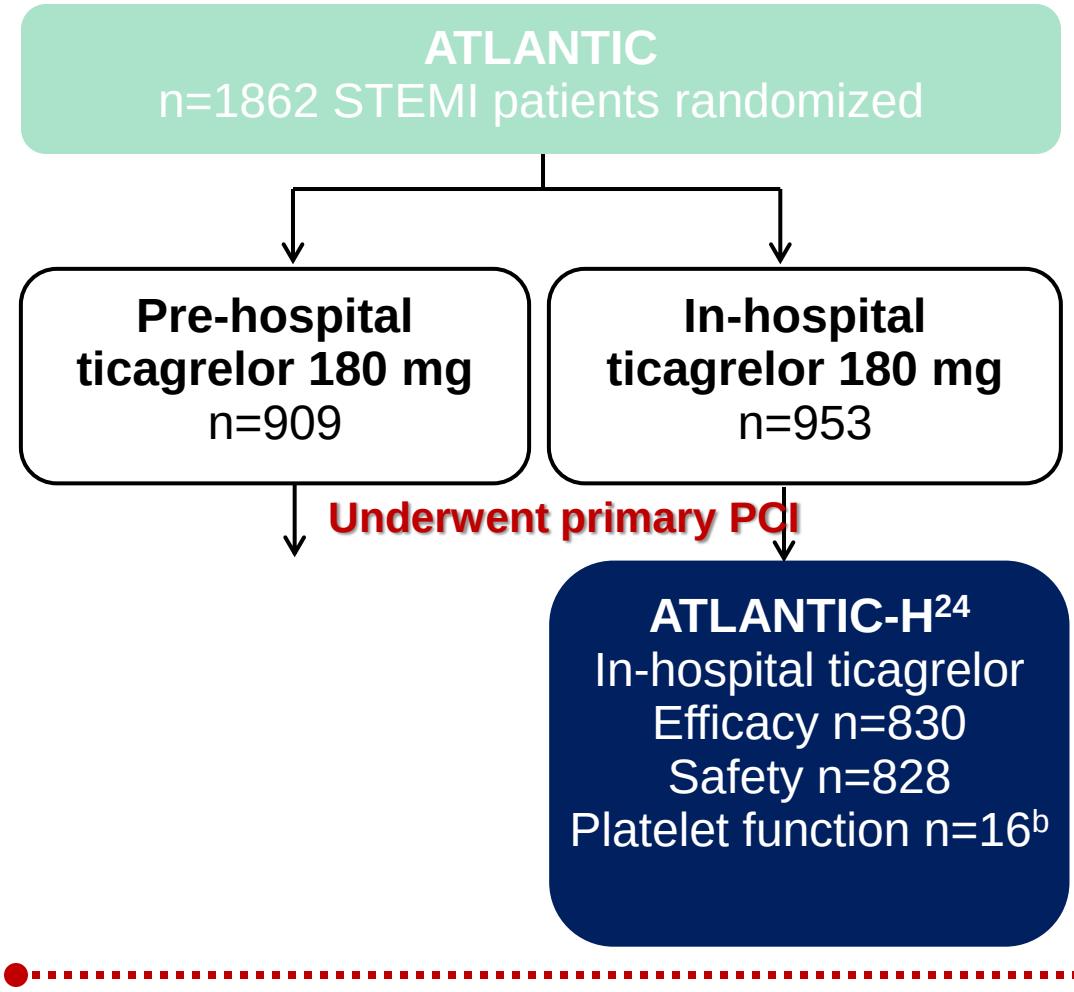
Aim



Aim

- The aim of the exploratory ATLANTIC-H24 study was to examine more closely the effects of pre- versus in-hospital ticagrelor on reperfusion, platelet function and clinical endpoints during the first **24 h after primary PCI**. The statistical analysis is exploratory.

Patient disposition



[a]Two patients were randomized into the in-hospital ticagrelor group but wrongly received pre-hospital ticagrelor.
[b]Patients were recruited into the platelet function substudy from five of the 112 centres that participated in ATLANTIC.

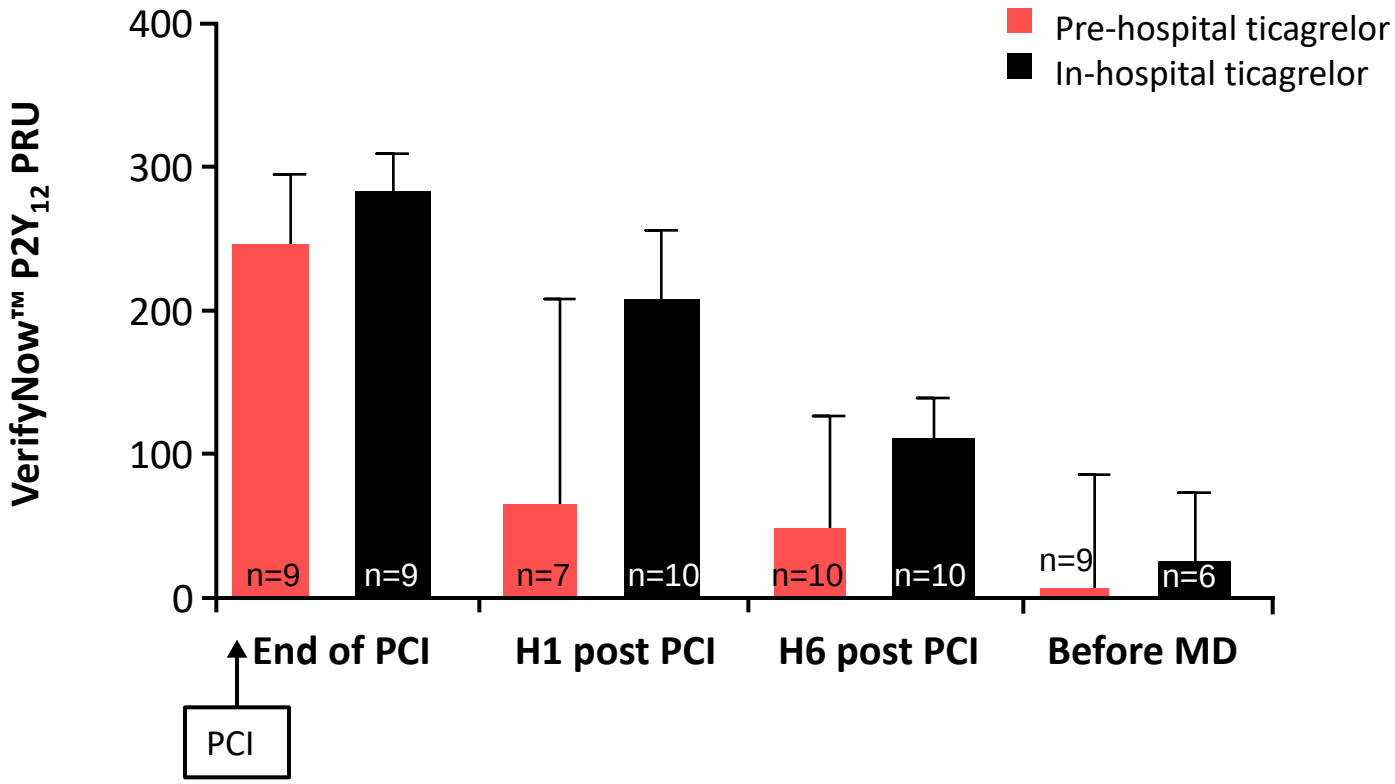
Post-PCI coronary reperfusion

Endpoint	Pre-hospital ticagrelor	In-hospital ticagrelor	Odds ratio (95% CI)	p-value
TIMI flow grade 3 of MI culprit vessel post-PCI				
Number of subjects[a]	760	784		
n (%)	625 (**82.2**)	630 (**80.4**)	1.132 (0.876–1.462)	0.34
ST-segment elevation resolution ≥70% post-PCI				
Number of subjects[a]	713	743		
n (%)	410 (**57.5**)	390 (**52.5**)	1.225 (0.996–1.506)	0.054
Degree of ST-segment elevation resolution post-PCI (%)				
Number of subjects[a]	713	743		
Mean (SD)	66.7 (**36.8**)	63.9 (**34.3**)	–	0.049[b]
Median	75.0	71.4		

[a]Subjects with a PCI performed for the index event and available data on TIMI flow or ST-segment elevation.
[b]p-value from non-parametric Wilcoxon test, comparing median degree of resolution.

Platelet function

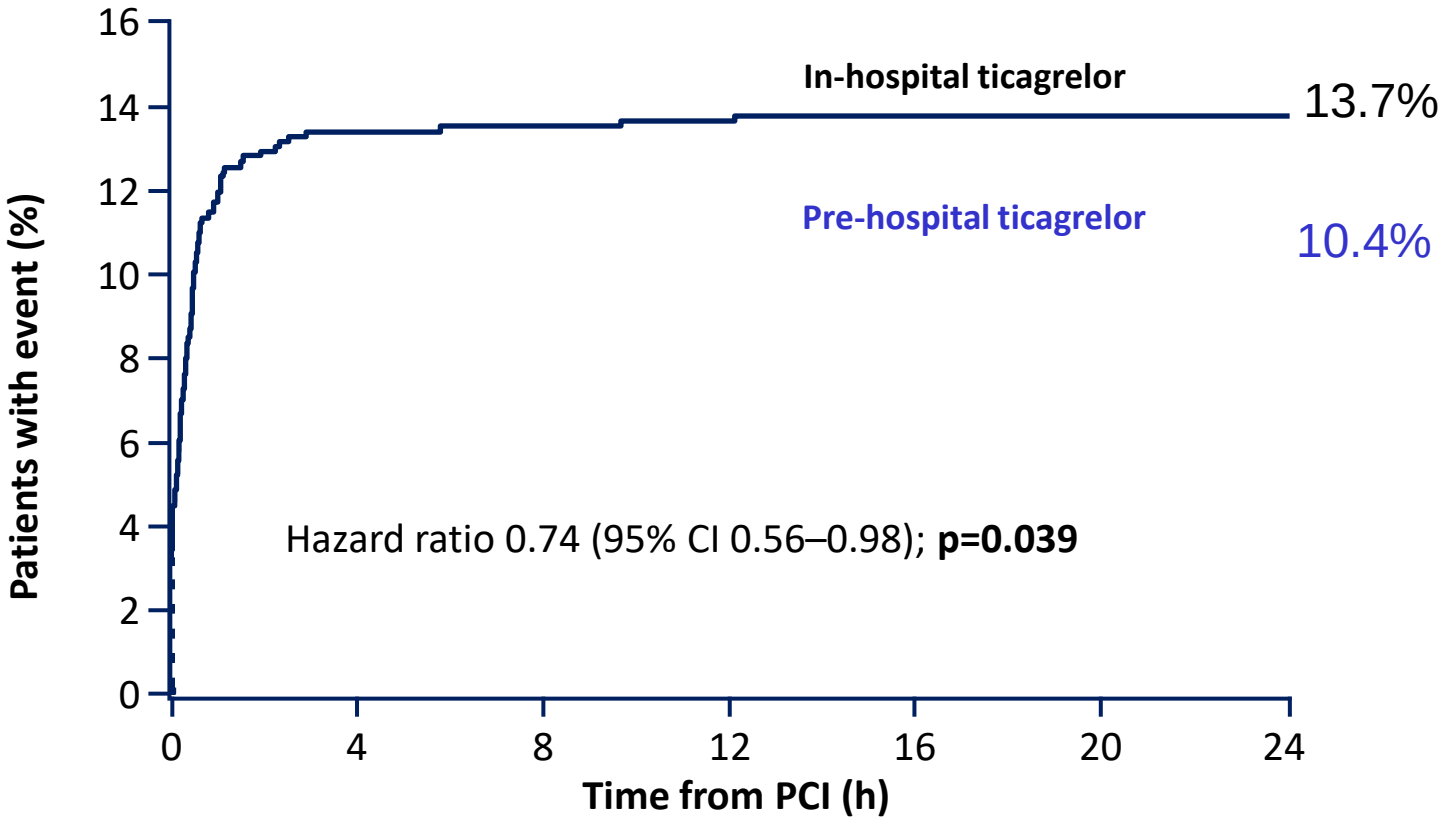
- **Pre-hospital ticagrelor effect on platelet function appears after PCI**
- **Largest between-group difference observed 1–6 h after PCI**



Values are median (IQR); MD, maintenance dose
p-values were all NS

Clinical outcomes

Composite ischaemic endpoint

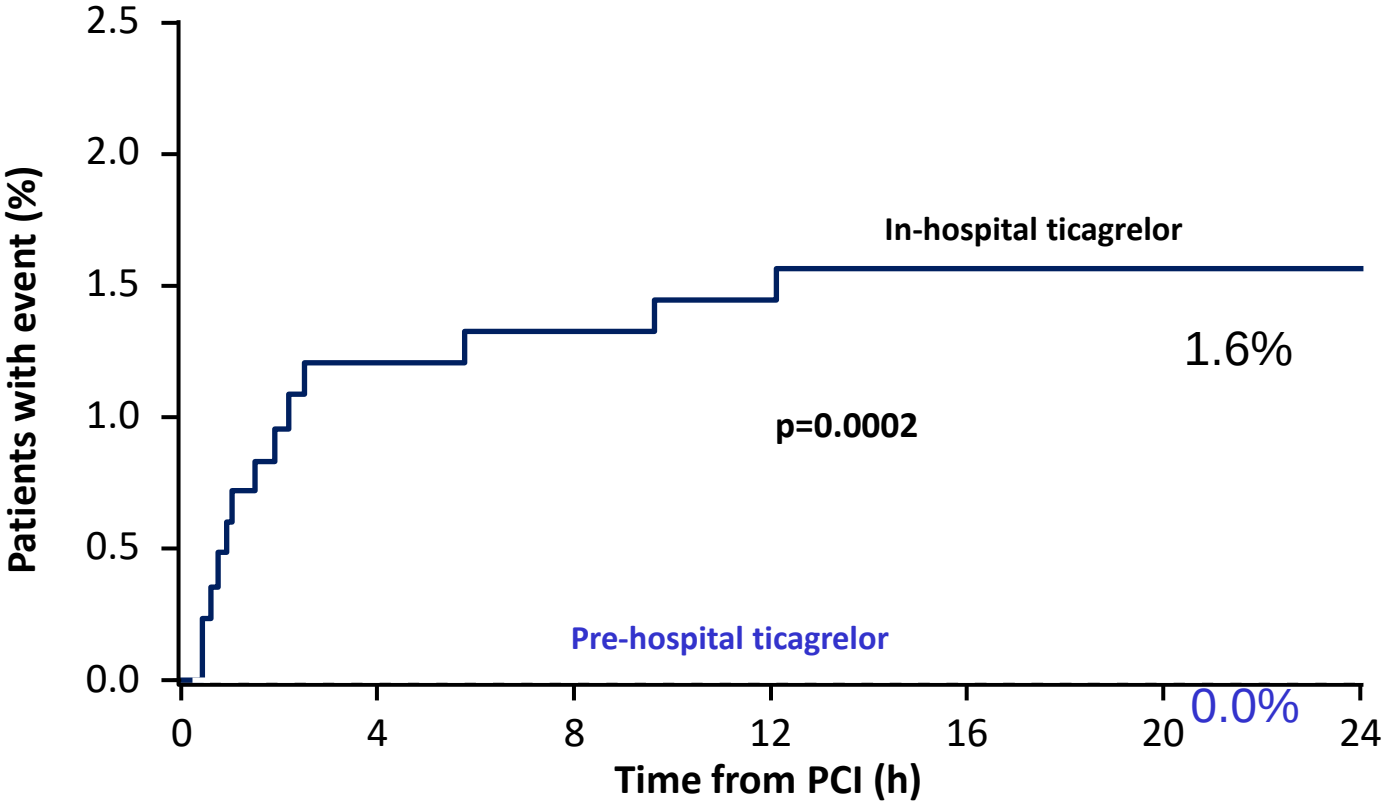


	Patients with event, no. (%)	Total no. of patients
Pre-hospital ticagrelor	83 (10.4)	799
In-hospital ticagrelor	114 (13.7)	830

Composite ischaemic endpoint: death, MI, urgent revascularization, definite stent thrombosis or bail-out GP IIb/IIIa inhibitor use

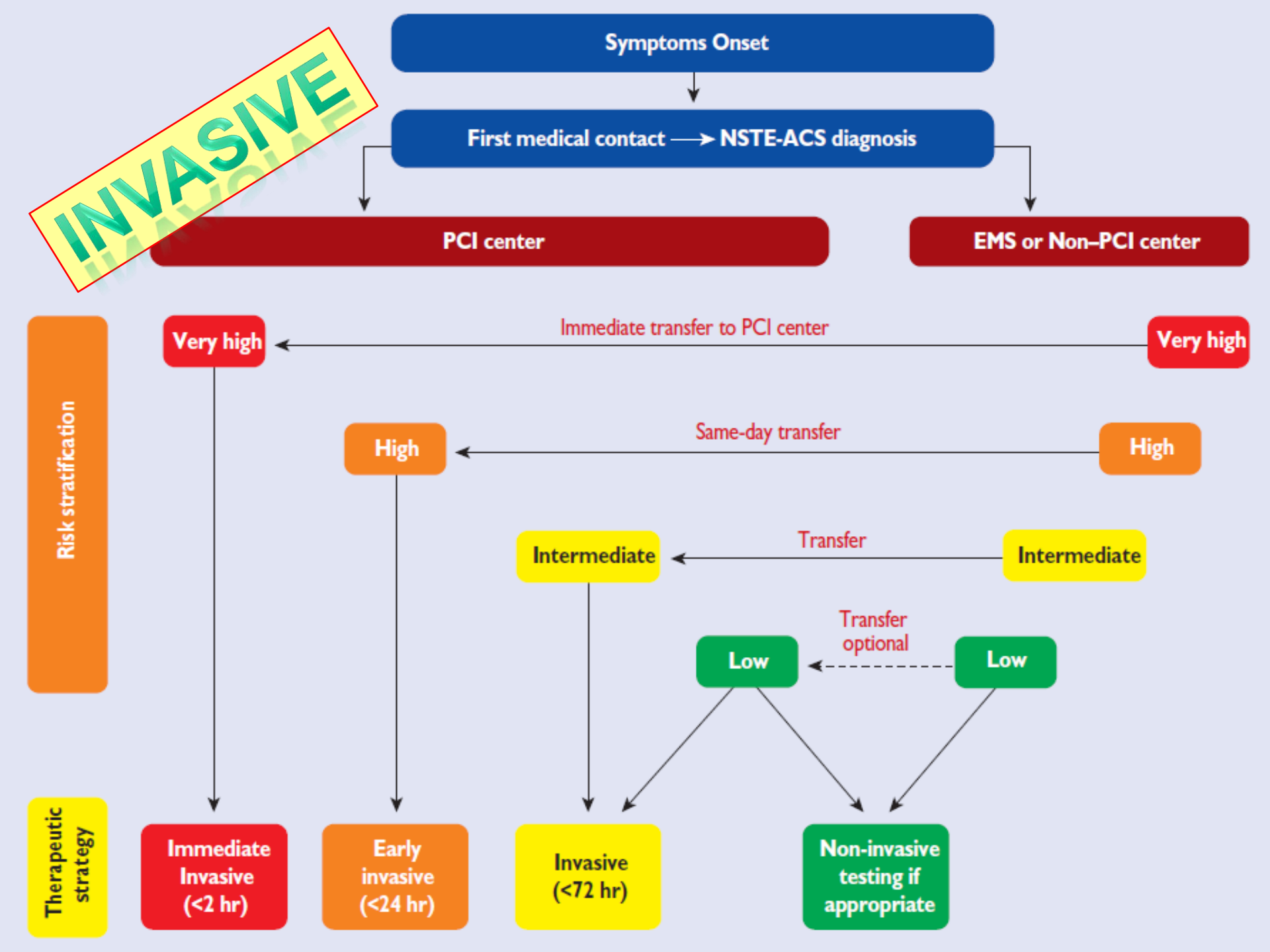
Clinical outcomes

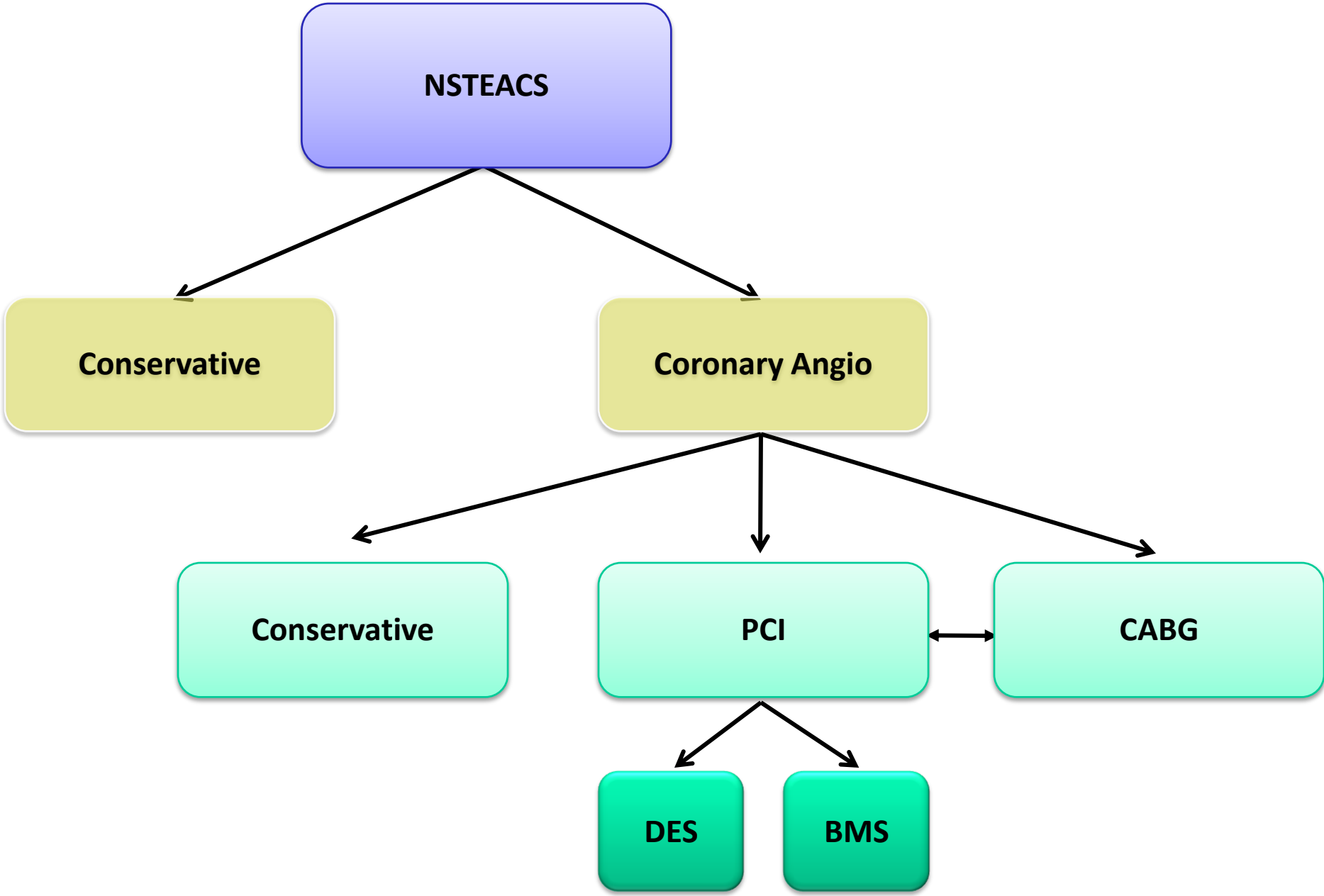
New MI or definite stent thrombosis



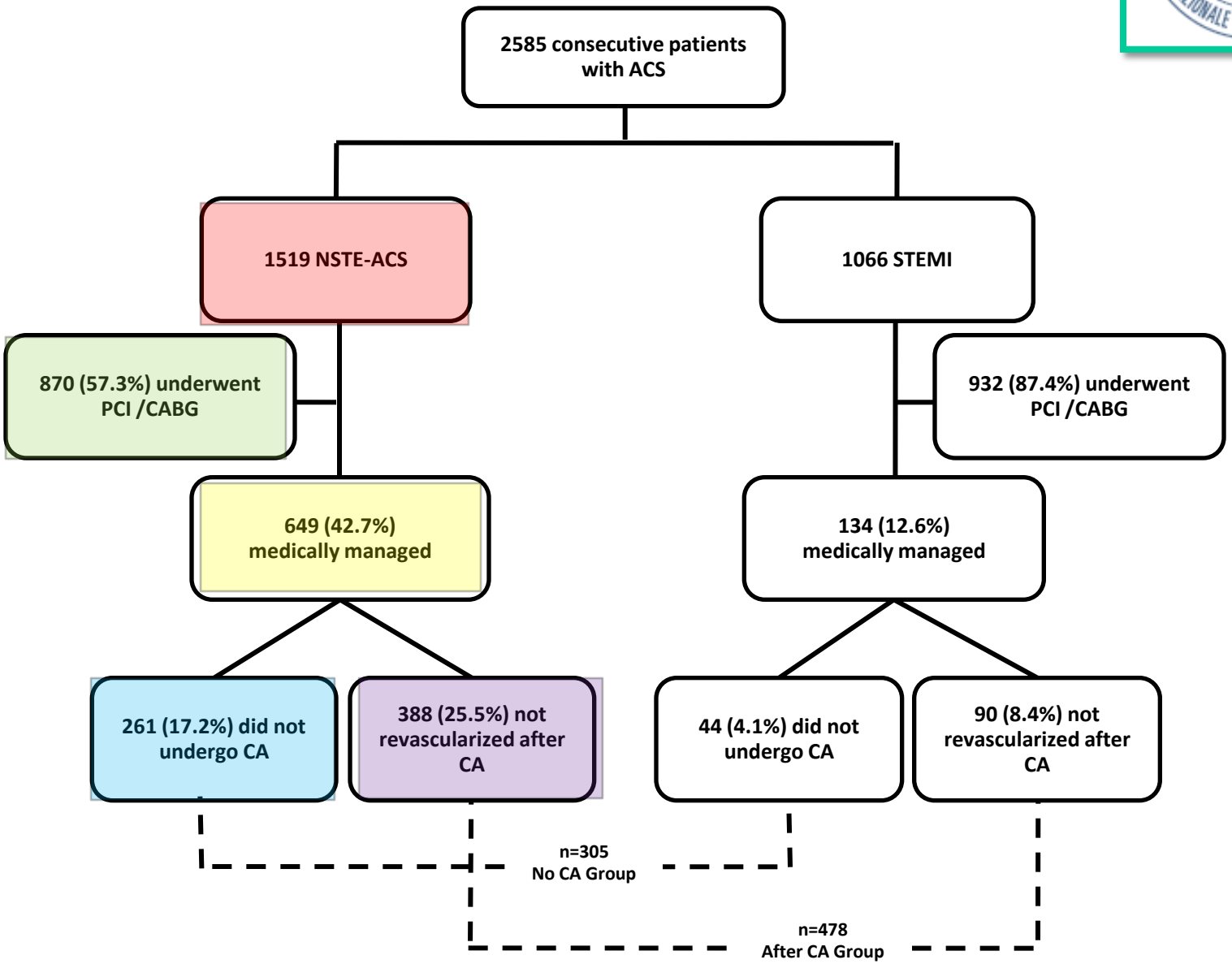
	Patients with event, no. (%)	T otal no. of patients
Pre-hospital ticagrelor	0 (0)	799
In-hospital ticagrelor	13 (1.6)	830

New MI: 0.0% versus 0.7%, p=0.0311
Definite stent thrombosis: 0.0% versus 1.0%, p=0.0078


INVASIVE
Symptoms Onset
First medical contact → NSTE-ACS diagnosis
PCI center
EMS or Non–PCI center
Risk stratification
Very high
Immediate transfer to PCI center
Very high
High
Same-day transfer
High
Intermediate
Transfer
Intermediate
Transfer optional
Low
Low
Therapeutic strategy
Immediate Invasive (<2 hr)
Early invasive (<24 hr)
Invasive (<72 hr)
Non-invasive testing if appropriate


NSTEACS
Conservative
Coronary Angio
Conservative
PCI
CABG
DES
BMS

EYESHOT Registry:
Pts Managed without Revascularization



Conclusioni EYE SHOT Registry:

- ♥I pazienti con SCA reclutati nei centri arruolati (UTIC) hanno un rischio ischemico alto ed un rischio emorragico basso moderato.
- ♥Il 42% dei pazienti con NSTE-ACS esegue terapia conservativa.
- ♥Il pretrattamento con DAPT è pari circa all'80%.
- ♥La terapia antiaggregante intrapresa all'inizio della diagnosi in emergenza viene poco cambiata sia durante il ricovero che alla dimissione (RUOLO del MEDICO che fa la PRESA IN CARICO del paziente con NSTE-ACS).
- ♥Alla dimissione 1/3 dei NSTE-ACS e 2/3 dei STEMI ricevono un nuovo P2Y12.

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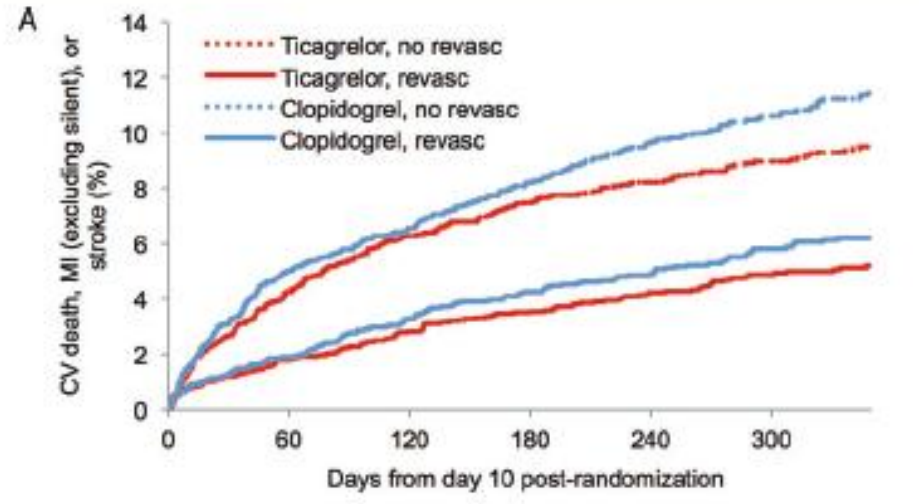
European Heart Journal
doi:10.1093/eurheartj/ehu160

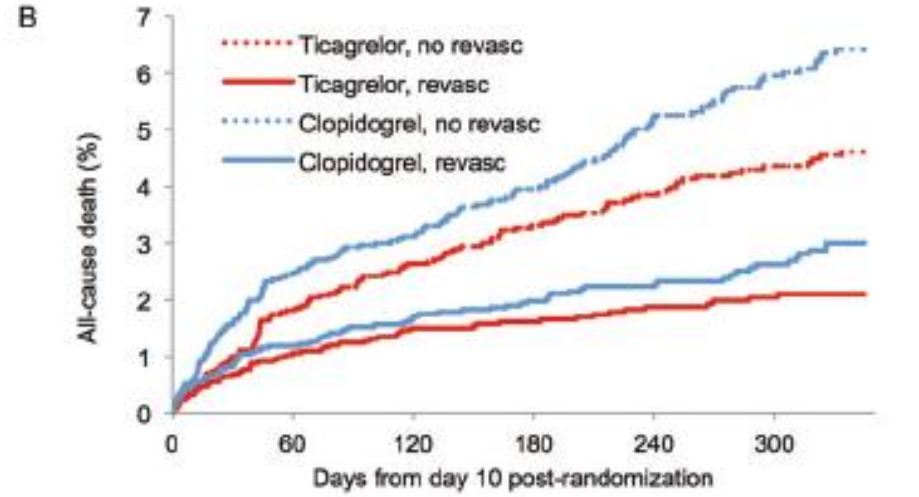
CLINICAL RESEARCH
Acute coronary syndromes

Ticagrelor vs. clopidogrel in patients with non-ST-elevation acute coronary syndrome with or without revascularization: results from the PLATO trial

Daniel Lindholm[1], Christoph Varenhorst[1], Christopher P Cannon[2], Robert A Harrington[3], Anders Himmelmann[4], Juan Maya[5], Steen Husted[6], Philippe Gabriel Steg[7,8,9,10], Jan H Cornel[11], Robert F Storey[12], Susanna R Stevens[13], Lars Wallentin[1], and Stefan K James[1]*

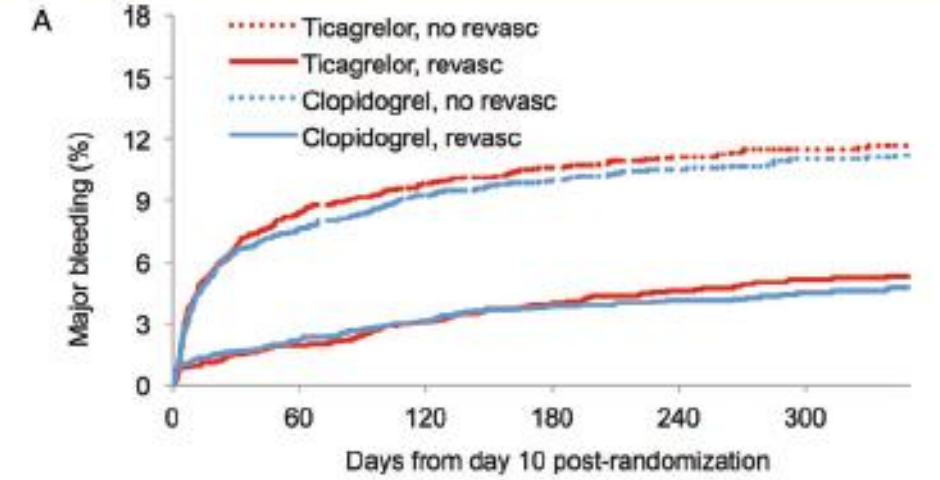


C, no rv	2571	2413	2362	2084	1829	1326	1104
C, revasc	2676	2590	2547	2299	2075	1528	1291
T, no rv	2618	2461	2394	2142	1911	1398	1160
T, revasc	2738	2665	2626	2340	2116	1553	1312

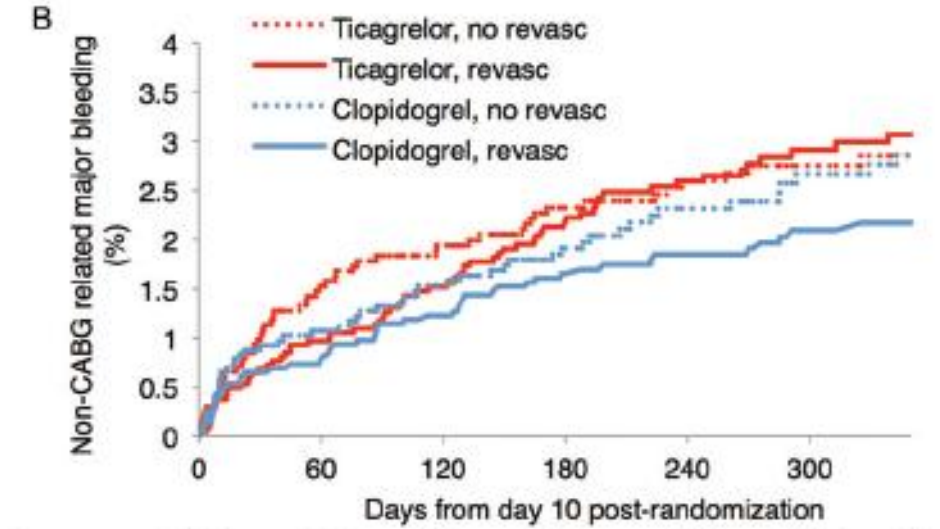


C, no rv	2590	2501	2472	2207	1948	1426	1194
C, revasc	2804	2740	2718	2467	2239	1649	1397
T, no rv	2627	2541	2505	2265	2028	1493	1239
T, revasc	2842	2789	2767	2478	2251	1663	1412

Figure 2 Efficacy endpoints stratified by management strategy—Kaplan–Meier estimates of time to first occurrence of: (A) primary endpoint, (B) all-cause death, from 10 days post-randomization onward.



T, no rv	2472	1887	1746	1571	1299	951	859
T, revasc	2504	2231	2117	1908	1610	1193	1106
C, no rv	2459	1933	1792	1601	1311	955	879
C, revasc	2478	2223	2140	1975	1666	1214	1121



T, no rv	2472	2003	1875	1698	1407	1037	941
T, rev	2653	2357	2248	2028	1709	1268	1178
C, no rv	2461	2053	1926	1734	1420	1046	965
C, rev	2617	2364	2282	2108	1781	1302	1199

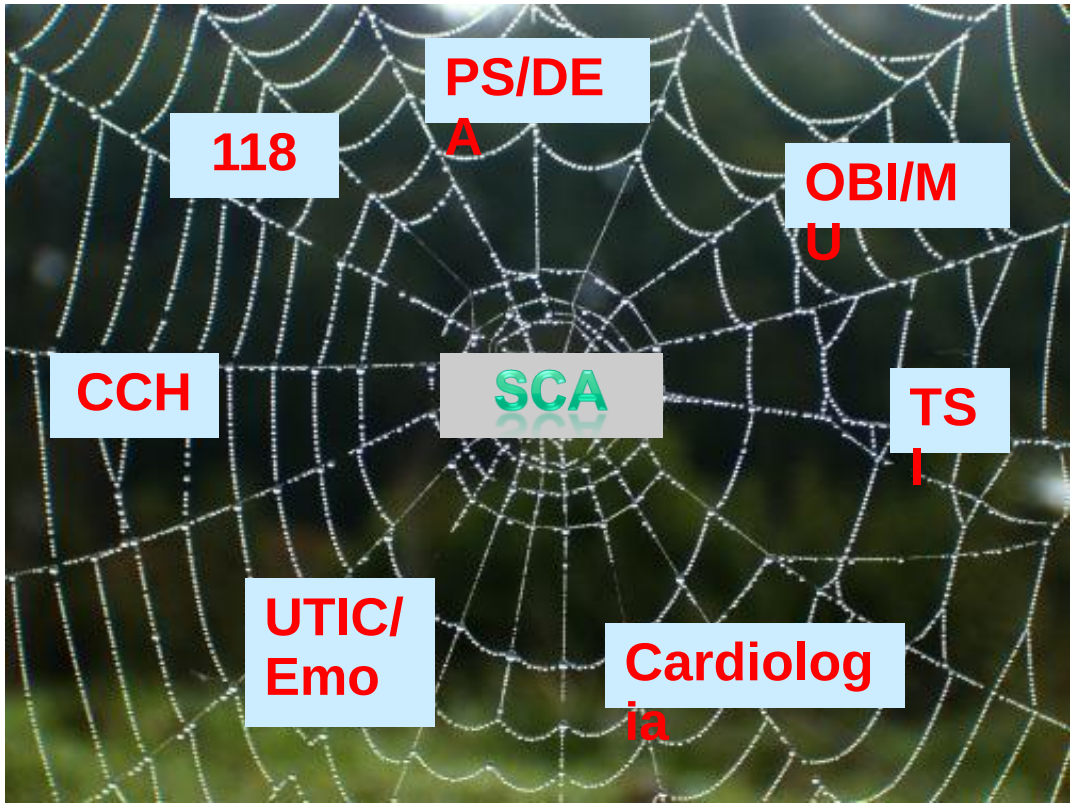
Figure 3 Bleeding stratified by revascularization—Kaplan–Meier estimate of (A) time to major bleeding according to the PLATO criteria from day 10 post-randomization, and (B) time to non-CABG major bleeding.

QUANDO INIZIARE???

DIAGNOSTICA

Tempi

Organizzazione



Monaldi Arch Chest Dis
2013; 80: 7-16

Strategie Assistenziali e Scelta della Terapia Antitrombotica nei Pazienti Ricoverati con Diagnosi di Sindrome Coronarica Acuta - Sintesi Operativa per la Pratica Clinica

Documento congiunto delle Sezioni Regionali del Lazio dell'Associazione Nazionale Medici Cardiologi Ospedalieri (ANMCO) e della Società Italiana di Medicina di Emergenza-Urgenza (SIMEU)

Management strategies and choice of antithrombotic treatment in patients admitted with acute coronary syndrome - Executive summary for clinical practice

Consensus Document of the Regional Chapters of the Italian National Association of Hospital Cardiologists (ANMCO) and of the Italian Society of Emergency Medicine (SIMEU)

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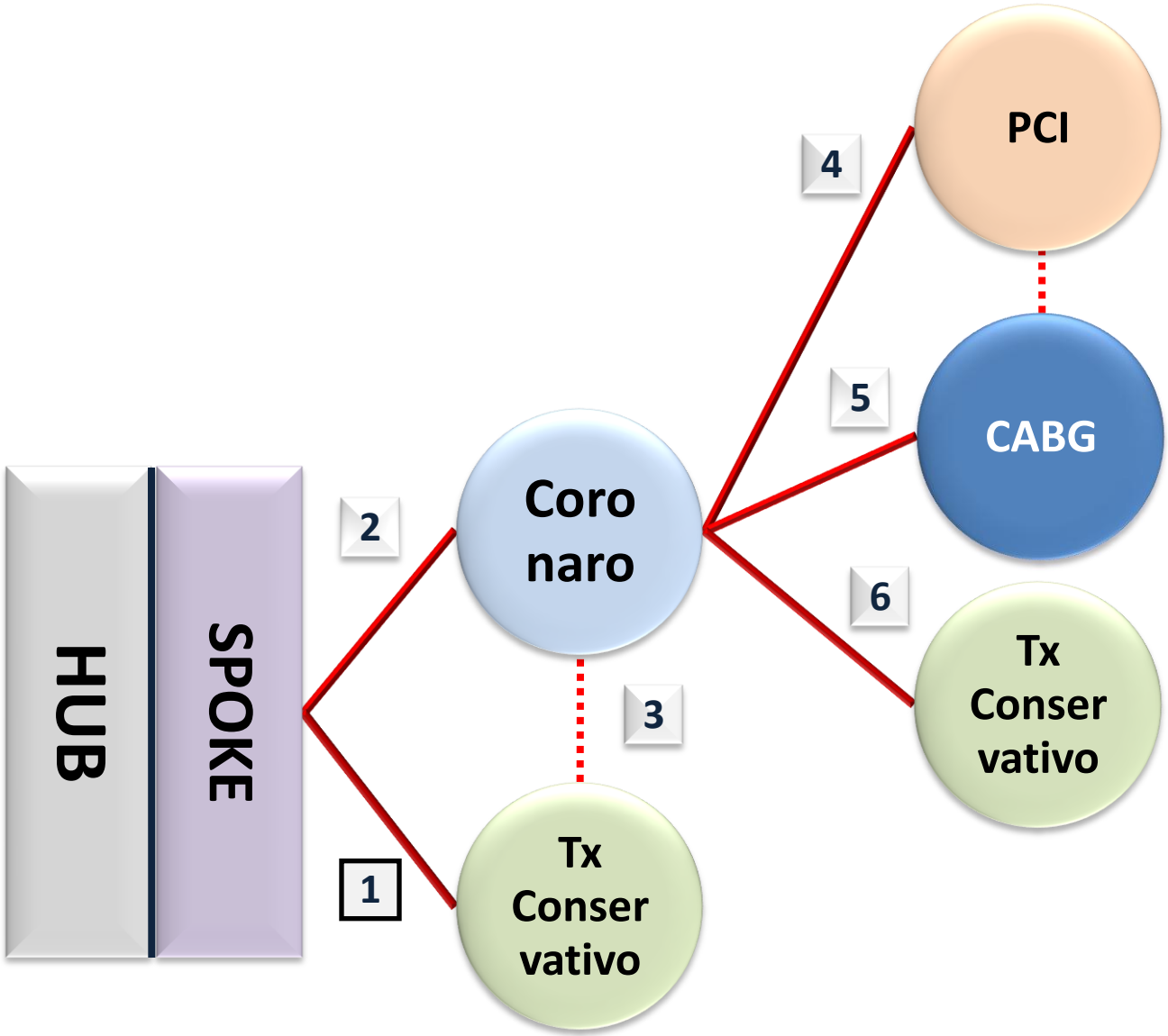
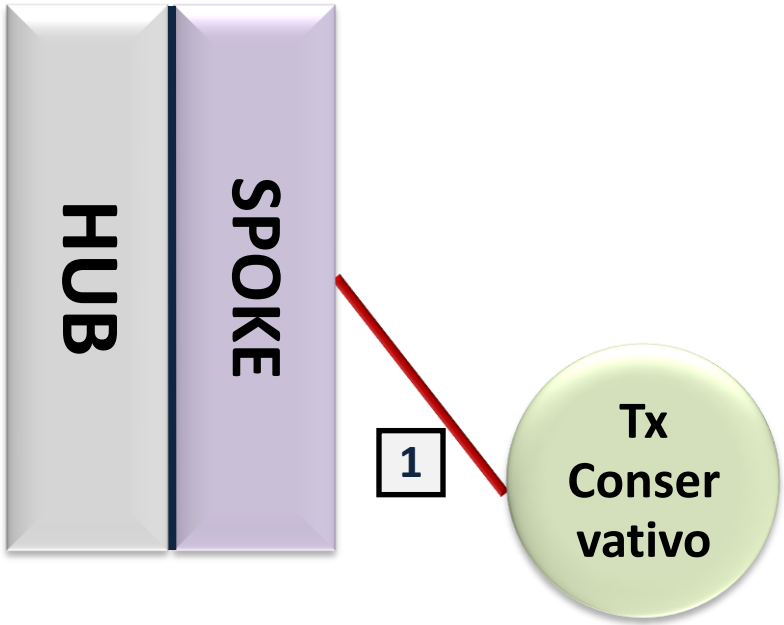
Sono stati consultati in qualità di esperti:
Fabrizio Ammirati[1], Gerardo Ansalone[1], Andrea Avella[1], Paolo Azzolini[1], Giuliano Bertazzoni[2], Paolo Brama[2], Giuseppe Cacciatore[1], Massimo De Luca[1], Massimo De Simone[2], Stefania Angela Di Fusco[1], Giuseppe Ferraiuolo[1], Fabio Ferranti[1], Antonino Granatelli[1], Paolo Loschiavo[1], Roberto Mezzanotte[1], Enrico Mirante[2], Francesco Monti[1], Giuseppe Pajes[1], Luciano Pandolfo[1], Fabrizio Proietti[1], Alessandra Revello[2], Stefano Rigattieri[1], Francesco Sabetta[2], Alessandro Sciahbasi[1], Roberto Scioli[1], Roberto Serdoz[1], Beniamino Susi[2], Giovanni Maria Vincentelli[2], Giuseppe Zuccalà[2], Luigi Zulli[2]


HUB
SPOKE
1
2
3
4
5
6
Coro naro
Tx Conser vativo
PCI
CABG
Tx Conser vativo

Raccomandazioni generali

- In tutti i pazienti con SCA è raccomandato l'uso della doppia terapia antiaggregante con ASA in combinazione con un inibitore del recettore piastrinico P2Y12. Il trattamento deve iniziare il prima possibile, non appena posta la diagnosi

Percorso 1 -
Trattamento inizialmente conservativo



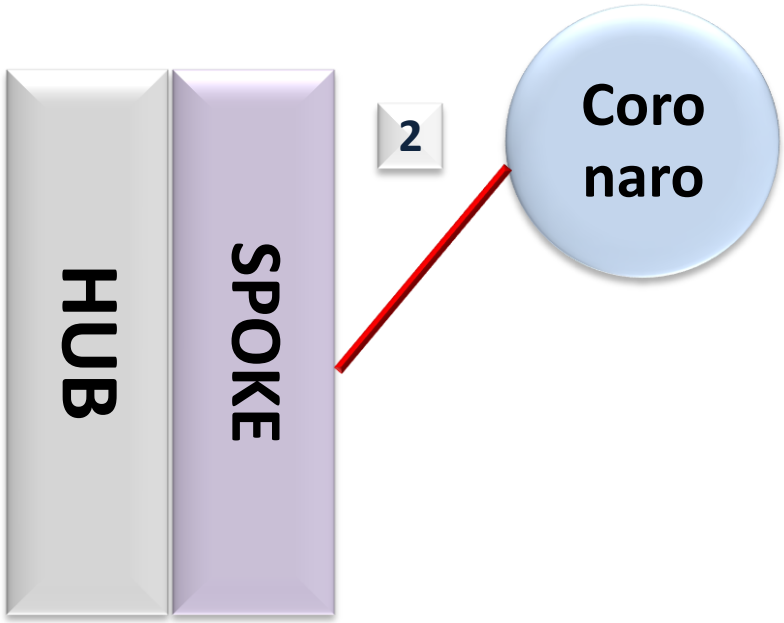
Percorso 1 - Trattamento inizialmente conservativo

Terapia antiaggregante

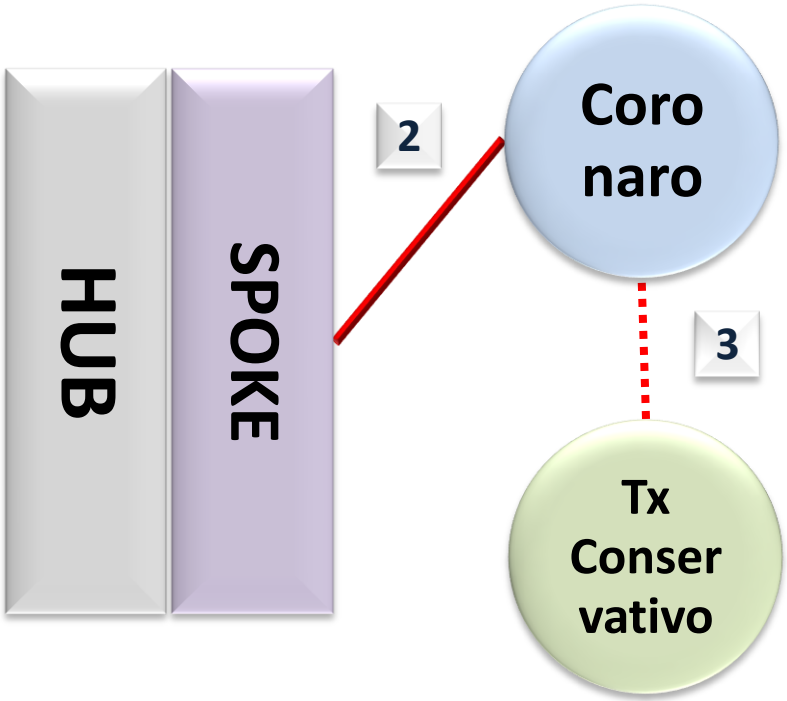
NSTE-SCA

- ASA il prima possibile alla dose iniziale di 150-325 mg, seguiti da 75-100 mg/die
- ticagrelor (dose di carico di 180 mg, seguiti da 90 mg x 2/die)
- in caso di controindicazioni o indisponibilità del ticagrelor: clopidogrel 300 mg come carico orale, seguiti da 75 mg/die

Percorso 2 - gestione della SCA con avvio del paziente ad una valutazione coronarografica



Percorso 3 – gestione della SCA con avvio del paziente ad una valutazione coronarografica dopo un trattamento inizialmente conservativo



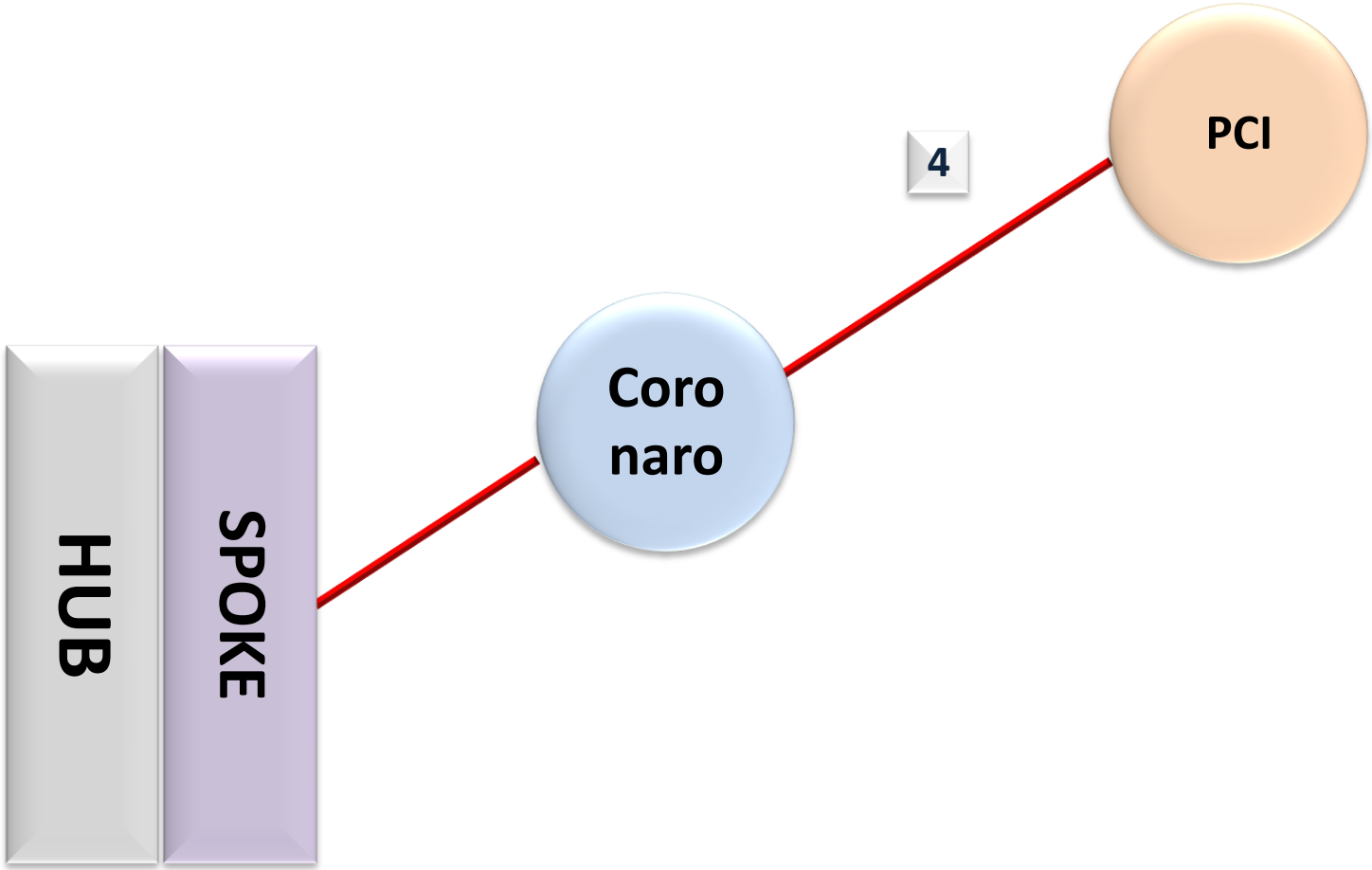
Percorsi 2 e 3 –
Invio del paziente a valutazione coronarografica

Terapia antiaggregante

NSTE-SCA

1. ASA il prima possibile alla dose iniziale di 150-325 mg, seguiti da 75-100 mg/die
2. ticagrelor il prima possibile (180 mg come dose di carico, seguiti da 90 mg x 2 /die)
3. in caso di controindicazioni o indisponibilità del ticagrelor: clopidogrel 300 mg come carico orale, seguiti da 75 mg al dì

Percorso 4 - gestione della SCA in previsione di procedura di angioplastica coronarica (PCI)



Percorso 4 – Angioplastica coronarica (PCI)

Terapia antiaggregante

NSTE-SCA

1. continuare l'ASA alla dose di 75-100 mg/die e l'inibitore del recettore piastrinico P2Y12 scelto durante l'avvio del paziente a coronarografia
2. nei pazienti pre-trattati con clopidogrel (per indisponibilità dei nuovi inibitori di P2Y12) è possibile uno switch a ticagrelor, con dose di carico di 180 mg e dose di mantenimento di 90 mg x 2/die
3. nei pazienti che, contrariamente a quanto precedentemente indicato, giungono all'esecuzione della PCI senza aver ricevuto alcun pre-trattamento antiaggregante (clopidogrel naive) è indicato l'uso di prasugrel con dose di carico di 60 mg seguiti da 10 mg/die (età < 75 anni, peso corporeo > 60 kg e senza storia clinica di TIA/stroke) o di ticagrelor con dose di carico di 180 mg seguiti da 90 mg x 2/die
4. considerare l'utilizzo di GPI in bail-out o nei pazienti ad elevato rischio ischemico.

Clinical pathways and management of antithrombotic therapy in patients with acute coronary syndrome (ACS): a position paper from the Italian Association of Hospital Cardiologists (ANMCO), Italian Society of Cardiology (SIC), Italian Society of Emergency Medicine (SIMEU) and Italian Society of Invasive Cardiology (SICI-GISE)

Leonardo De Luca, MD, PhD[1]; Furio Colivicchi, MD[2]; Giuseppe Patti, MD[3]; Francesco Rocco Pugliese, MD[4]; Maria Pia Ruggieri, MD[7]; Giuseppe Musumeci, MD[8]; Gian Alfonso Cibinel, MD[9]; Francesco Romeo, MD[10]; Michele Massimo Gulizia, MD[11]

Eur Heart J (in press)

Pathways

- 1: pre-hospital management of ACS;
- 2: initially conservative management of ACS;
- 3: management with immediate referral for coronary angiography;
- 4: management with referral for coronary angiography after an initially conservative treatment;
- 5: management in case of percutaneous coronary intervention (PCI);
- 6: management in case of surgical myocardial revascularization procedure;
- 7: management with definite conservative treatment after coronary angiography.

Eur Heart J (in press)

NSTEMI

- ASA as soon as possible at a LD of 150-325 mg, followed by 75-100 mg/day

- ticagrelor (LD of 180 mg, followed by 90 mg x 2/day)

- in case of very high bleeding risk, contraindications to or unavailability of ticagrelor, it is reasonable to use clopidogrel (LD of 300 mg, followed by 75 mg/day)

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

Recommendations for platelet inhibition in non-ST-elevation acute coronary syndromes

Recommendations	Class[a]	Level[b]
Oral antiplatelet therapy		
Aspirin is recommended for all patients without contraindications at an initial oral loading dose[d] 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
A $P2Y_{12}$ inhibitor is recommended, in addition to aspirin, for 12 months unless there are contraindications such as excessive risk of bleeds.	I	A
• Ticagrelor (180 mg loading dose, 90 mg twice daily) is recommended, in the absence of contraindications,[e] 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

• Prasugrel (60 mg loading dose, 10 mg daily dose) is recommended in patients who are proceeding to PCI if no contraindication.[e]	I	B
• 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
$P2Y_{12}$ 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

Conclusions

1. **Antiplatelet agents are a mainstay of the treatment of ACS for the prevention of acute thrombotic and recurrent ischemic events;**

2. **Current guidelines from the ESC and the ACC/AHA give a class I recommendation for pretreatment in all types of ACS;**

3. **Soon after a diagnosis of ACS has been made, start the best available antiplatelet therapy (ASA+Ticagrelor for the vast majority of pts)**

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