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Drug-eluting stent and dual platelet aggregation: what we must know

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Declaração de Conflito de Interesse

Dr. Eduardo Nagib Gaui CRM 399566/RJ

De acordo com a Norma 1595/2000 do Conselho Federal de Medicina e a Resolução RDC 96/2008 da Agência de Vigilância Sanitária declaro que:

Recebo apoio ou patrocínio para participação em eventos nacionais e internacionais, como participante e palestrante e prestação de consultoria.

AstraZeneca

Bayer

Daiichi Sankyo

Pfizer

Servier

Dupla Antiagregação Plaquetária

Qual é o antiplaquetário a ser associado a aspirina ?

Qual será a duração da terapia antiplaquetária dupla ?

- Cenário: SCA vs Angioplastia Eletiva
- Qual o tipo de Stent utilizado: plataforma ? droga?
- Qual o grau de complexidade da doença/lesão
- Qual o grau de complexidade da intervenção
- Qual o risco de sangramento

Evolução da Terapia de Dupla Antiagregação Plaquetária

AAS

+

Ticlopidina

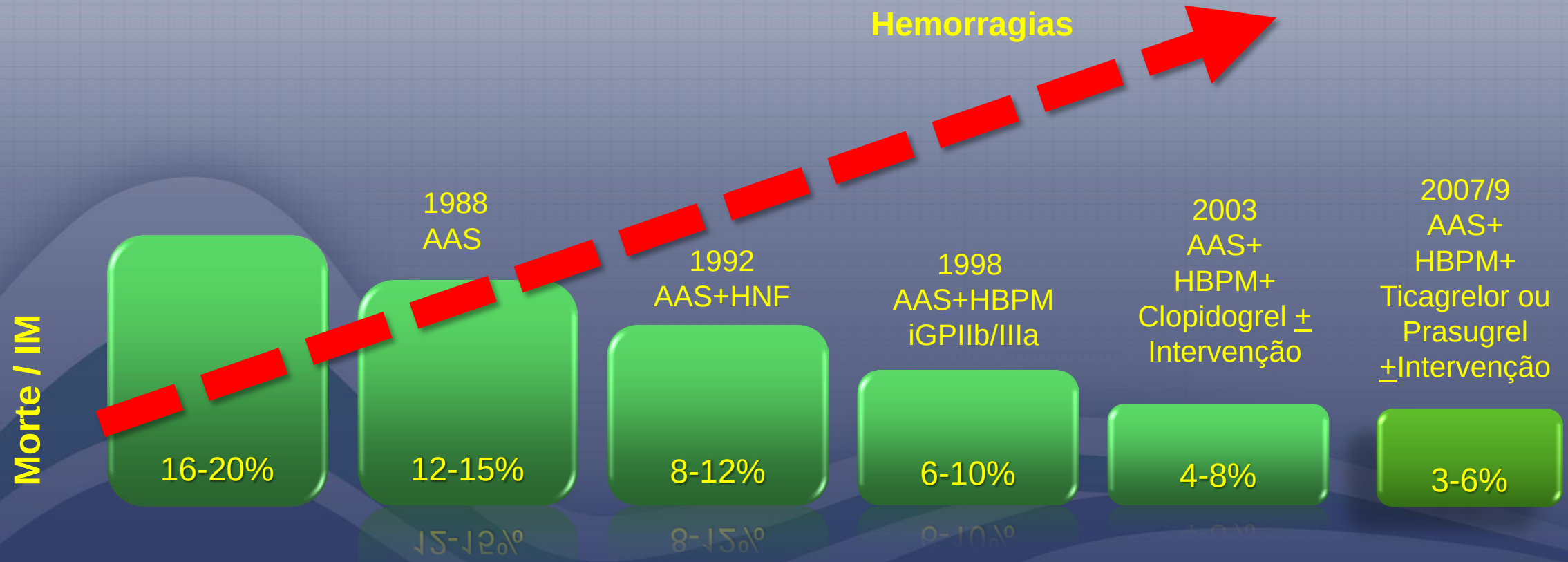
Clopidogrel

Prasugrel

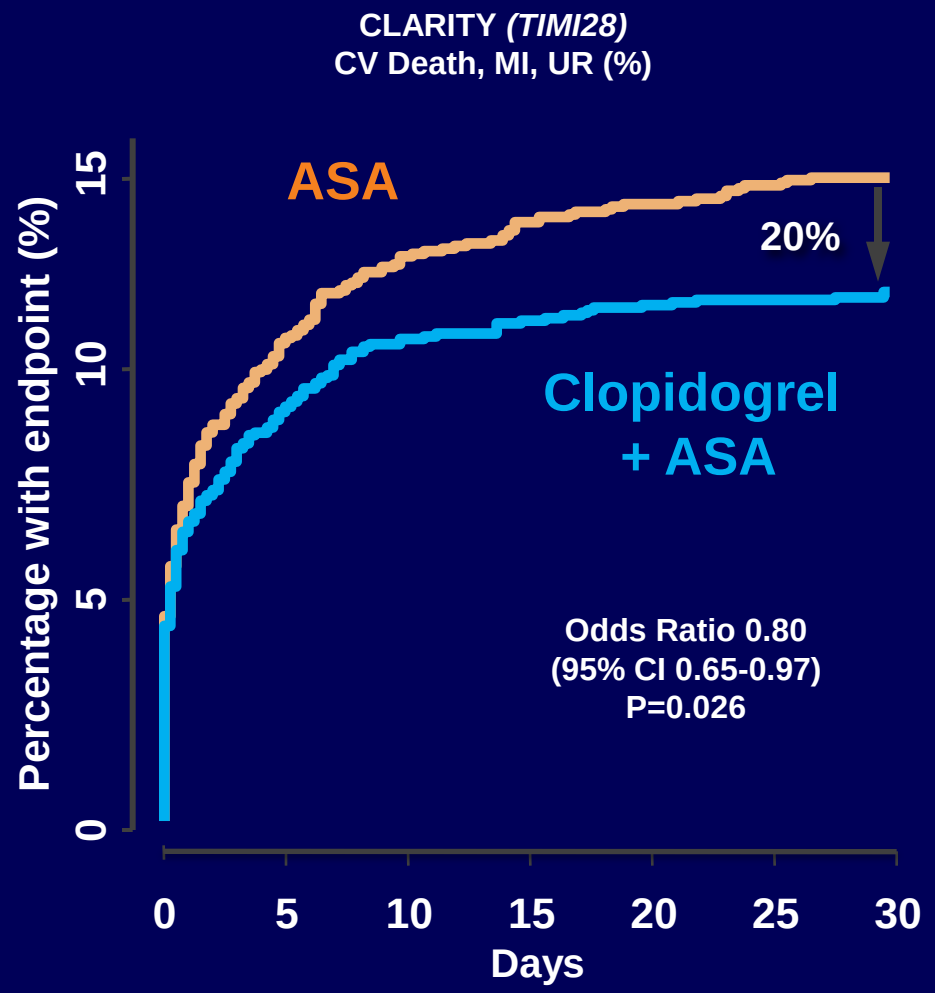
Ticagrelor

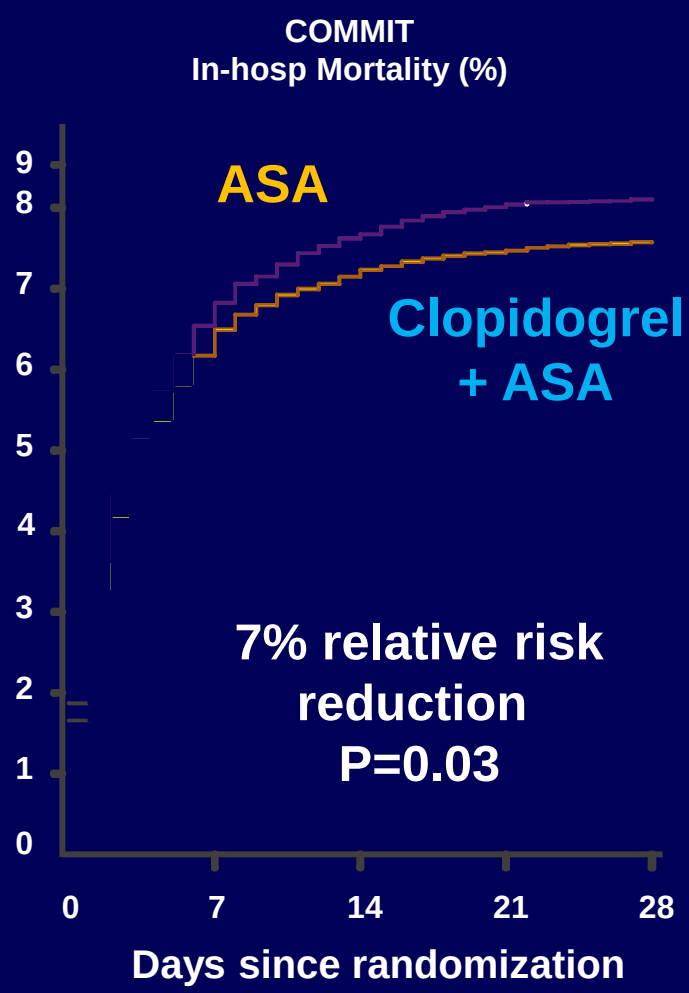
Antiplaquetários com ação rápida e mais potente

Maior eficácia vs Menos segurança



Clopidogrel no IAM com supra ST

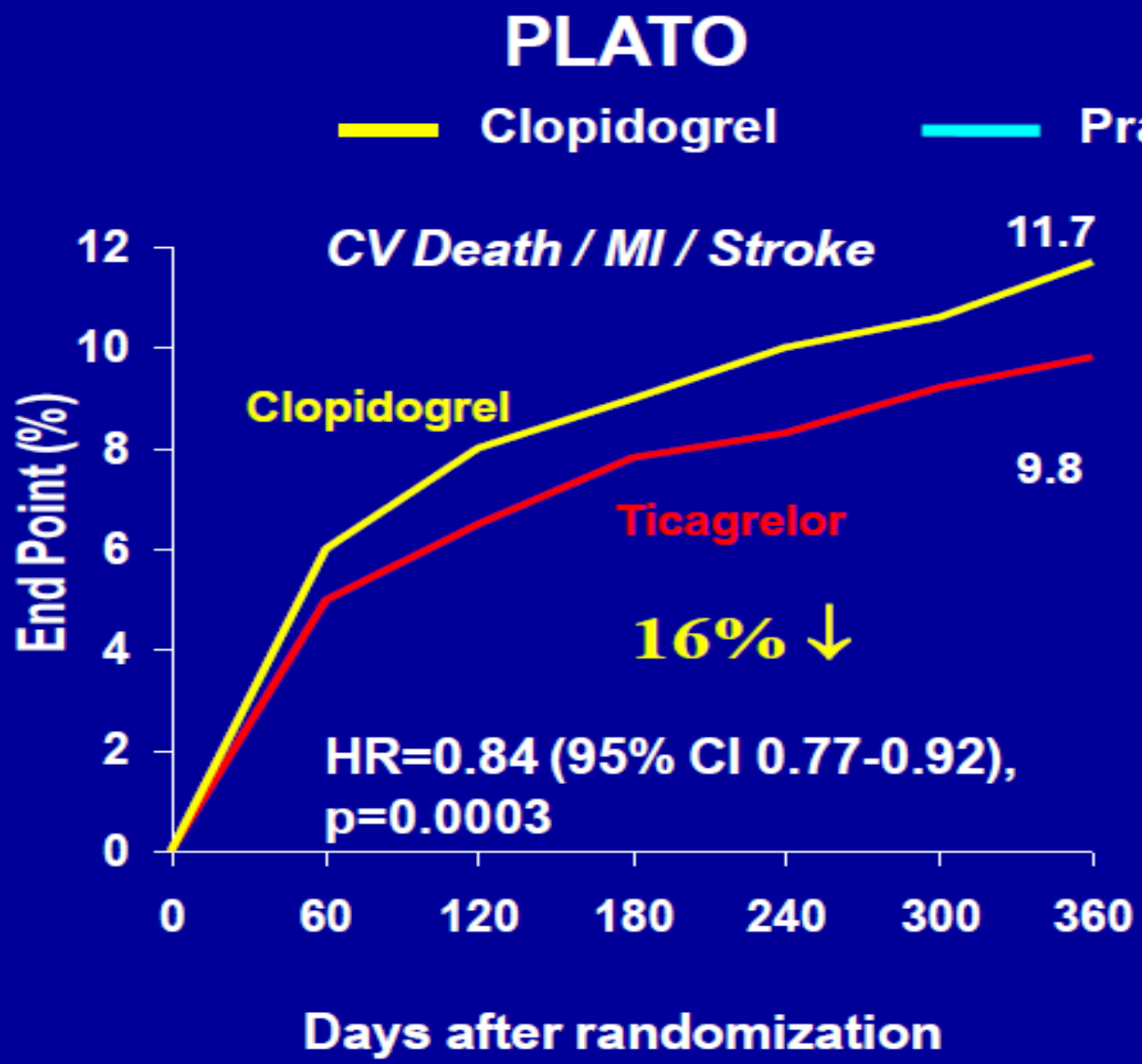


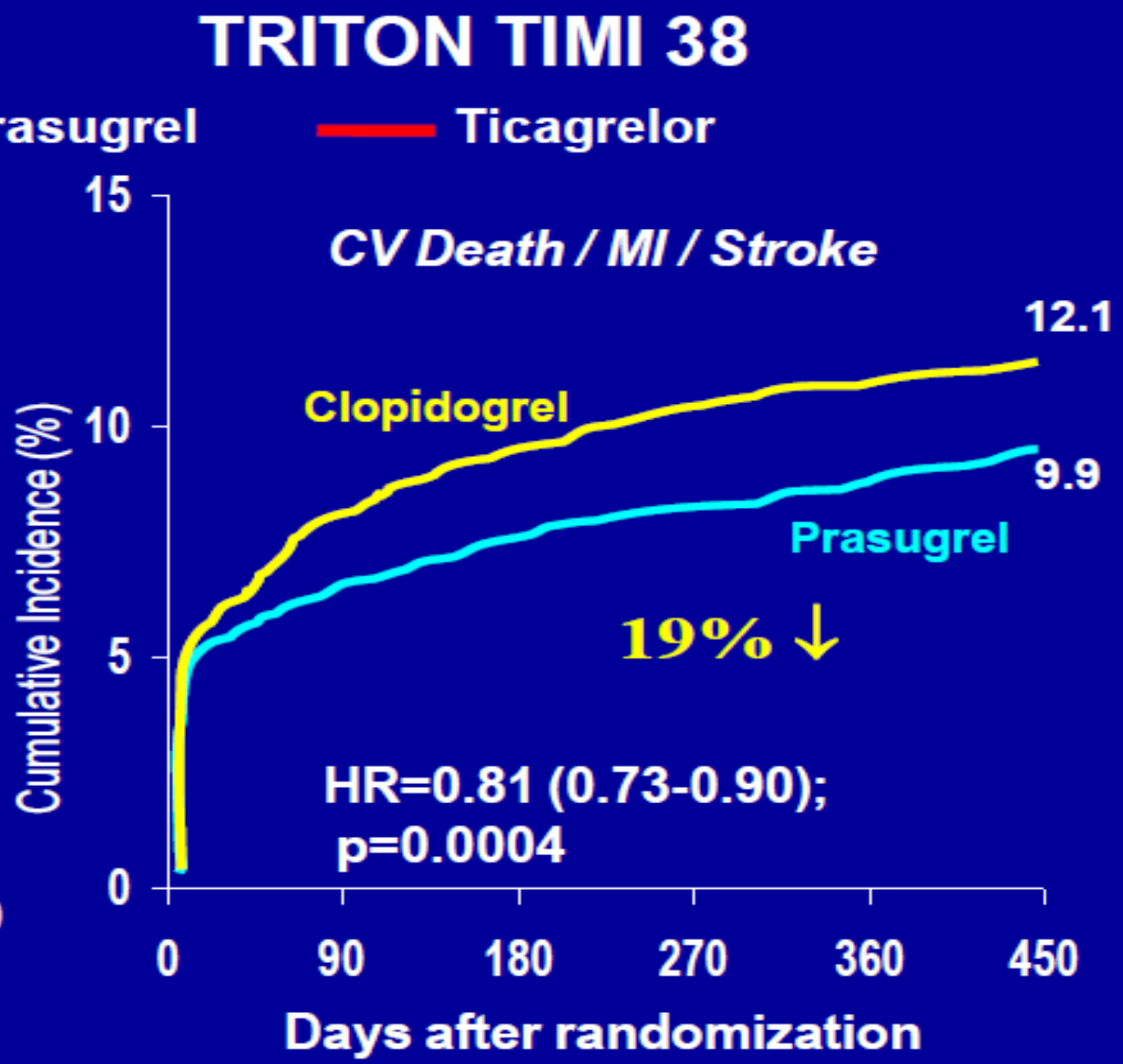


Sabatine MS et al. *NEJM* 2005;352:1179

Chen et al. Lancet 2006

Desfecho 1º: Morte CV , IAM, AVC





Wallentin et al. N Engl J Med 2009;361:1045-57

Wiviott et al. N Engl J Med 2007;357:2001-2015

REGISTRO ACCEPT – N=4.557 pts

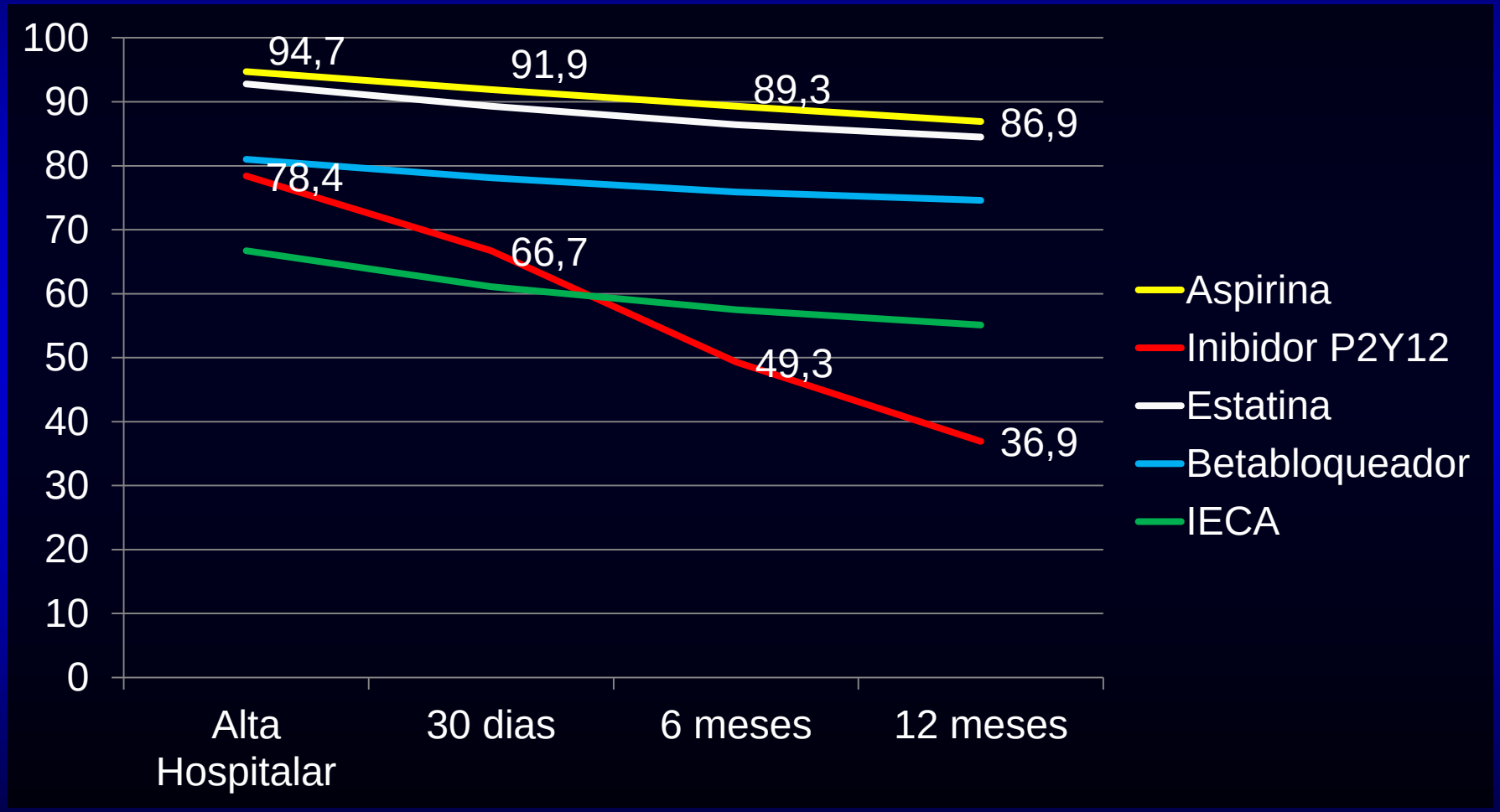
Prescrição no IAM com SST

Definição da SCA	Admissão Hospitalar	Alta Hospitalar
Pacientes	1701	1674
Aspirina	98,6%	96,5%
Inibidor P2Y12	97,5%	89,5%
Heparinas	87,5%	42,8%
Inibidores GP IIb/IIIa	17,2%	0,6%
Betabloqueador	79%	86,2%
IECA	73,3%	75,5%
Estatinas	92%	95,5%

Fev 2016

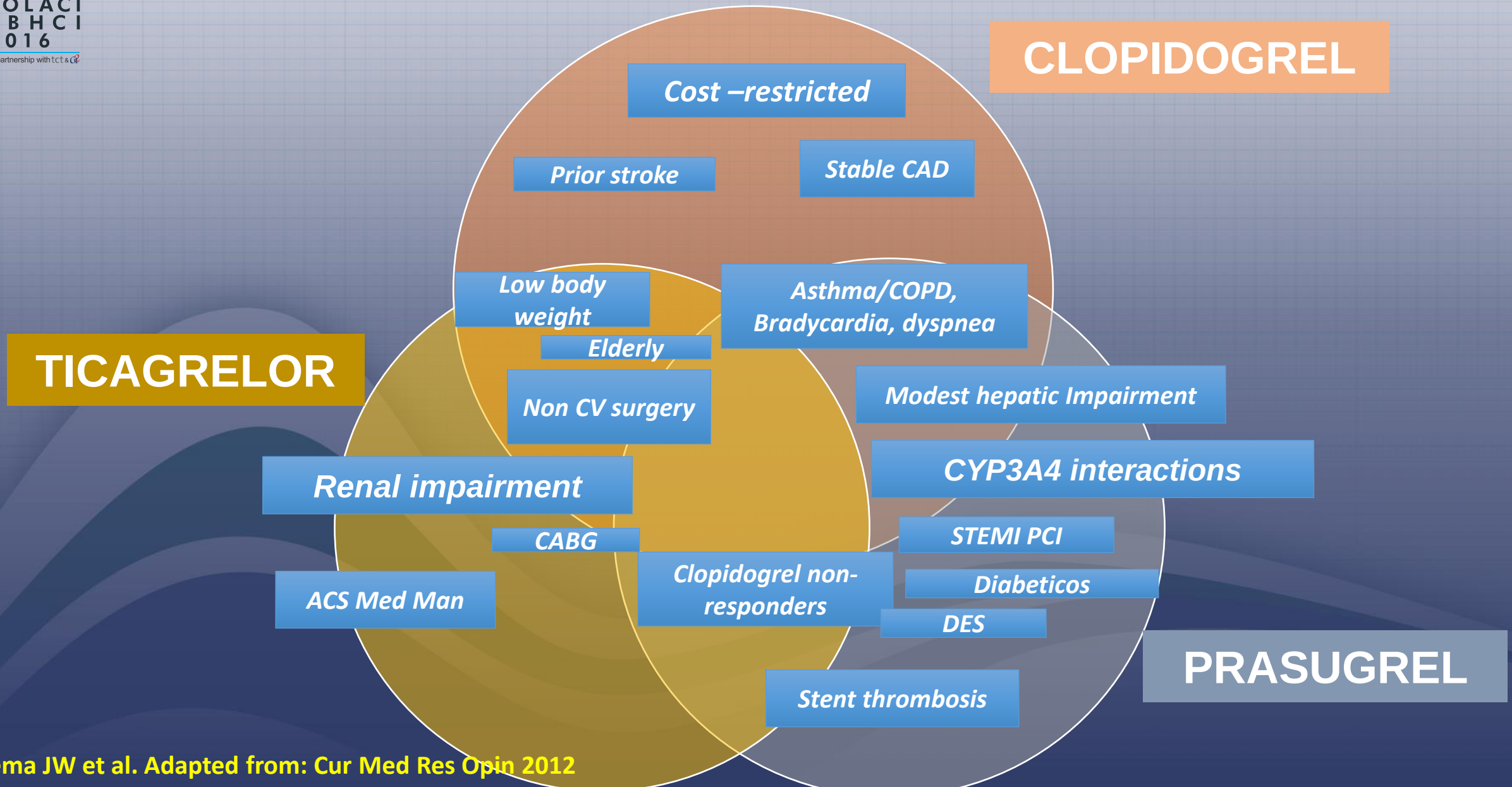
REGISTRO ACCEPT

Prescrição ao longo do tempo



Fev 2016

Como escolher o inibidor da P2Y12 ?



Jukema JW et al. Adapted from: Cur Med Res Opin 2012

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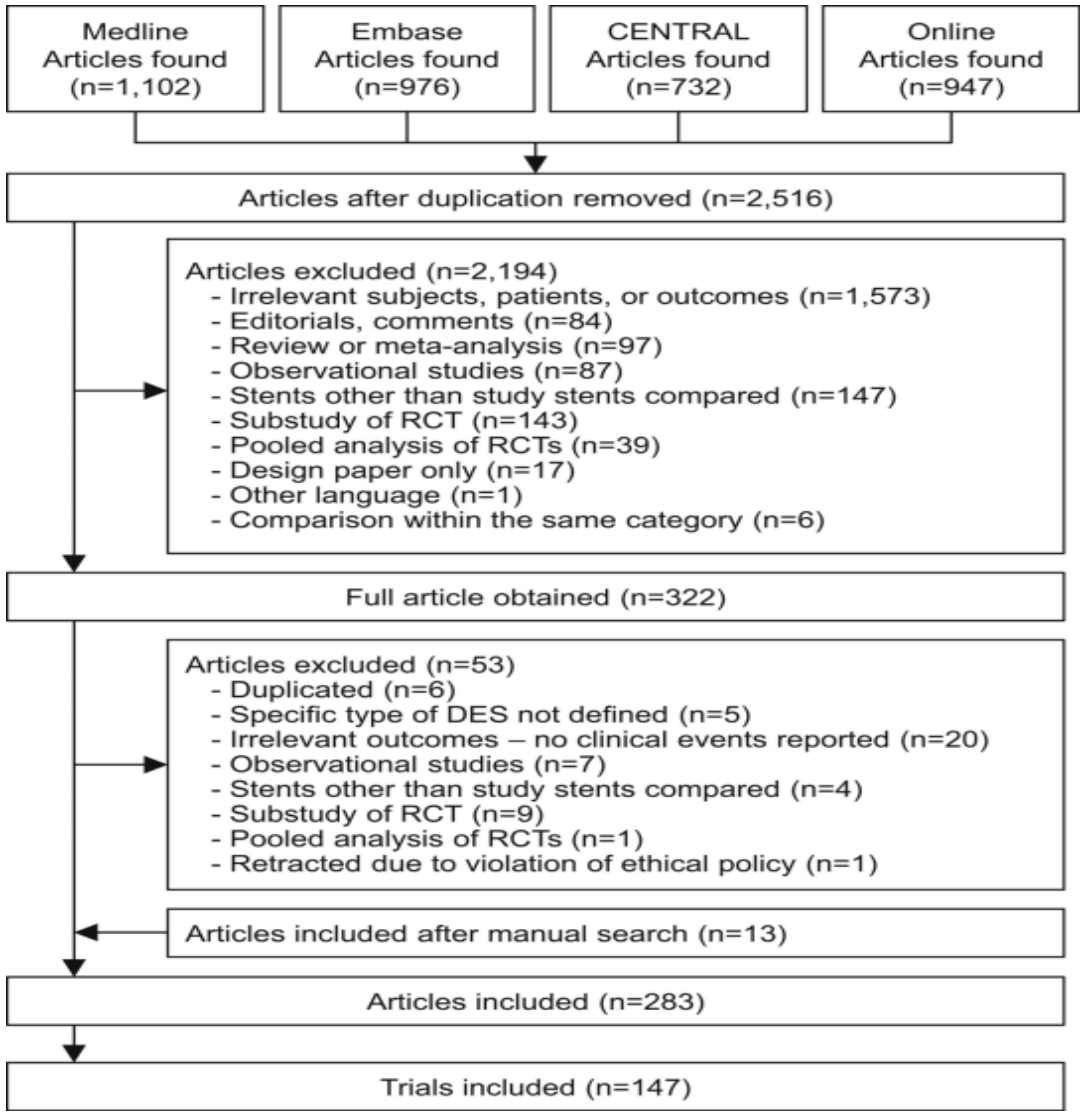
http://dx.doi.org/10.1016/j.jcin.2016.03.038

Stent Thrombosis With Drug-Eluting Stents and Bioresorbable Scaffolds

Evidence From a Network Meta-Analysis of 147 Trials

Si-Hyuck Kang, MD,[a] In-Ho Chae, MD, PhD,[a] Jin-Joo Park, MD, PhD,[a] Hak Seung Lee, MD,[b] Do-Yoon Kang, MD,[c] Seung-Sik Hwang, MD, PhD,[d] Tae-Jin Youn, MD, PhD,[a] Hyo-Soo Kim, MD, PhD[b]

From: Stent Thrombosis With Drug-Eluting Stents and Bioresorbable Scaffolds: Evidence From a Network Meta-Analysis of 147 Trials

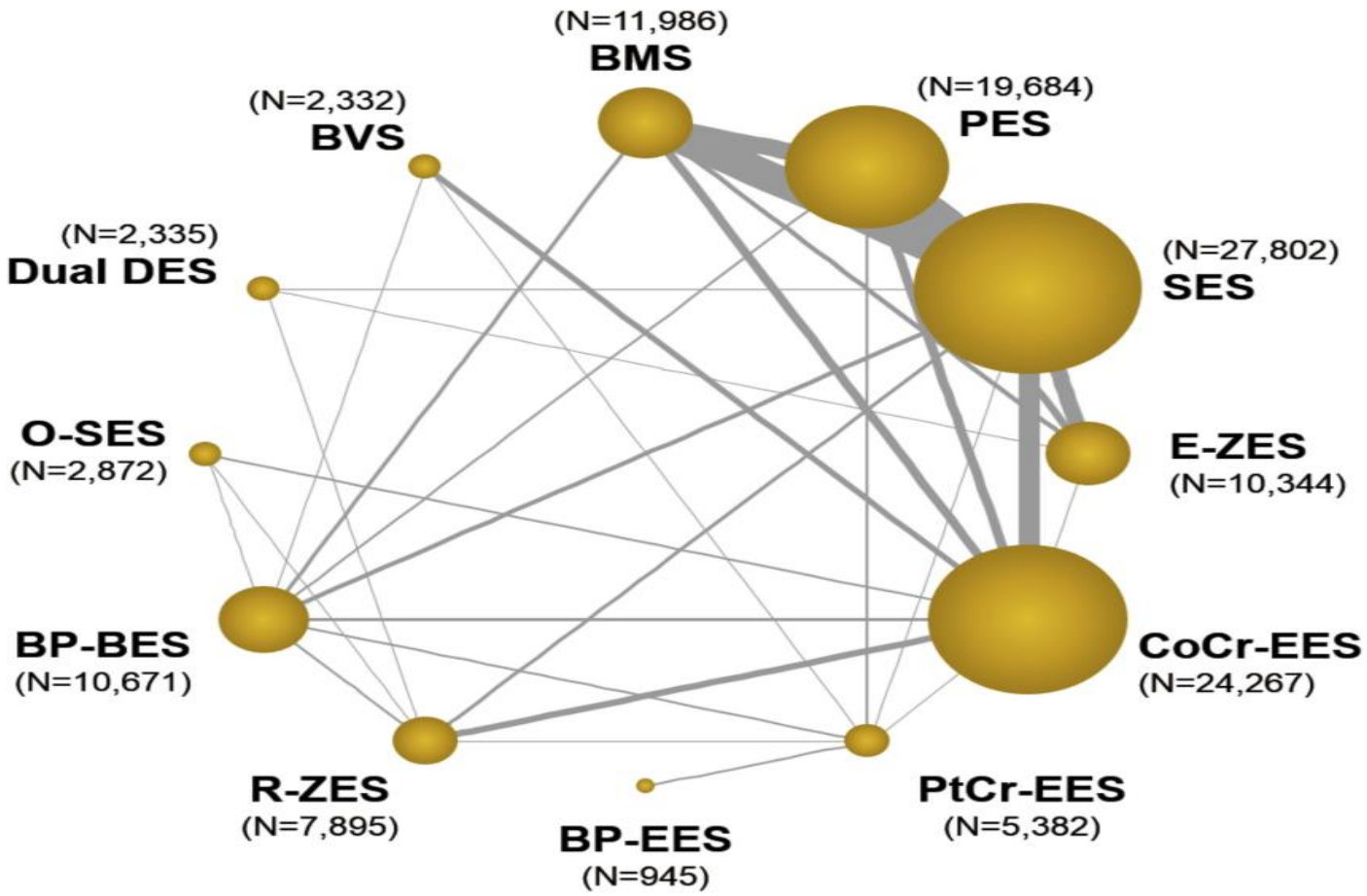


J Am Coll Cardiol Intv. Published online June 01, 2016. doi:10.1016/j.jcin.2016.03.038

Flow Diagram of Systematic Review

The study flow is shown following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. DES = drug-eluting stent(s); RCT = randomized controlled trial.

From: Stent Thrombosis With Drug-Eluting Stents and Bioresorbable Scaffolds: Evidence From a Network Meta-Analysis of 147 Trials

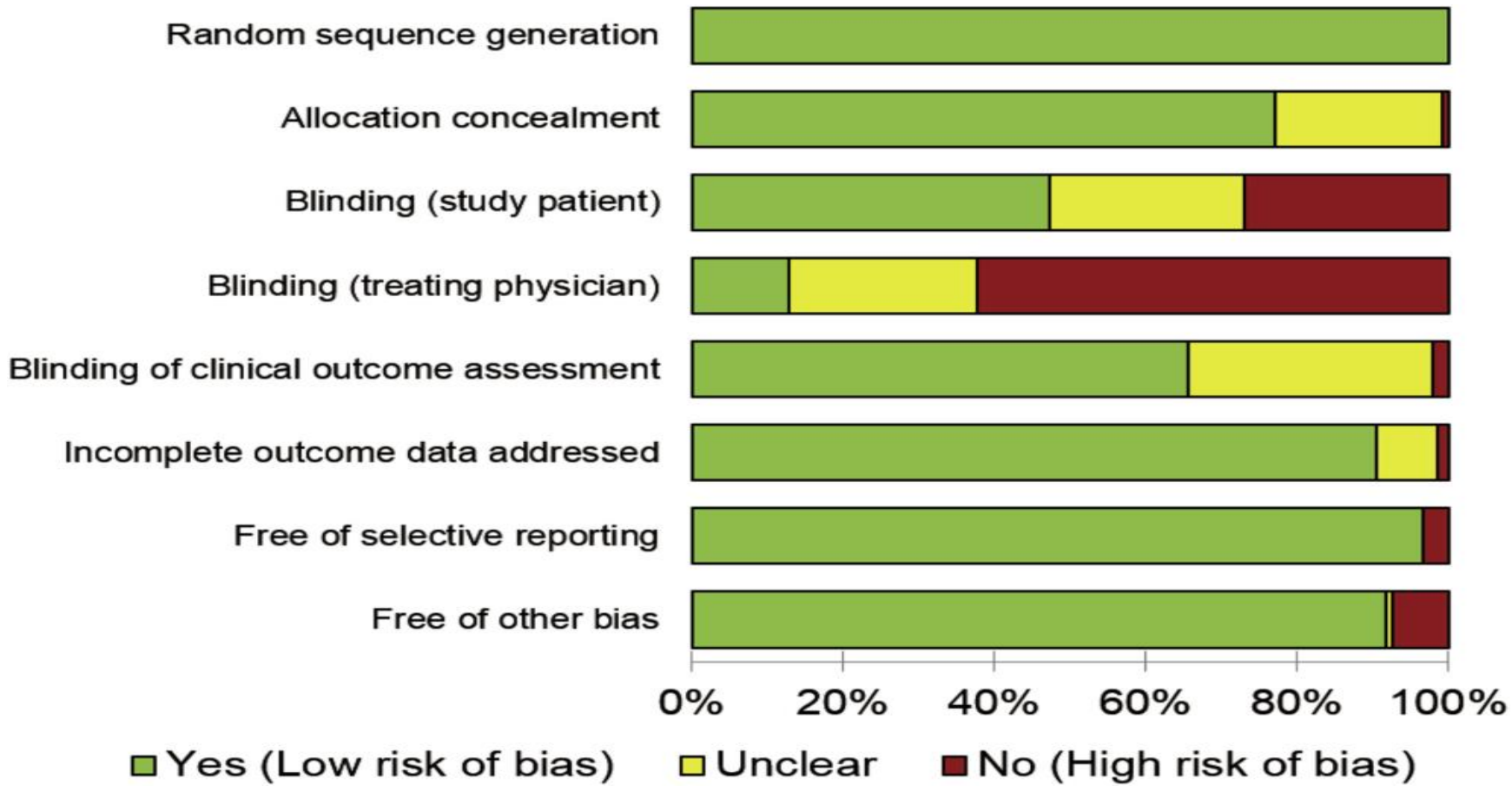


J Am Coll Cardiol Intv. Published online June 01, 2016. doi:10.1016/j.jcin.2016.03.038

Network Plot of Included Trials

Each stent is represented by a node. The size of the node is proportional to the sample size randomized to each stent, whereas the thickness of the line connecting the nodes is proportional to the total randomized sample size in each pairwise treatment comparison. BMS = bare-metal stent(s); BP-BES = biodegradable polymer biolimus-eluting stent(s); BP-EES = biodegradable polymer everolimus-eluting stent(s); BVS = bioresorbable vascular scaffolds; CoCr-EES = cobalt-chromium everolimus-eluting stent(s); dual DES = sirolimus- and probucol-eluting stent(s); E-ZES = Endeavor zotarolimus-eluting stent(s); H-SES = hybrid sirolimus-eluting stent(s) (O-SES); PES = paclitaxel-eluting stent(s); PtCr-EES = platinum-chromium everolimus-eluting stent(s); R-ZES = Resolute zotarolimus-eluting stent(s); SES = sirolimus-eluting stent(s).

From: Stent Thrombosis With Drug-Eluting Stents and Bioresorbable Scaffolds: Evidence From a Network Meta-Analysis of 147 Trials



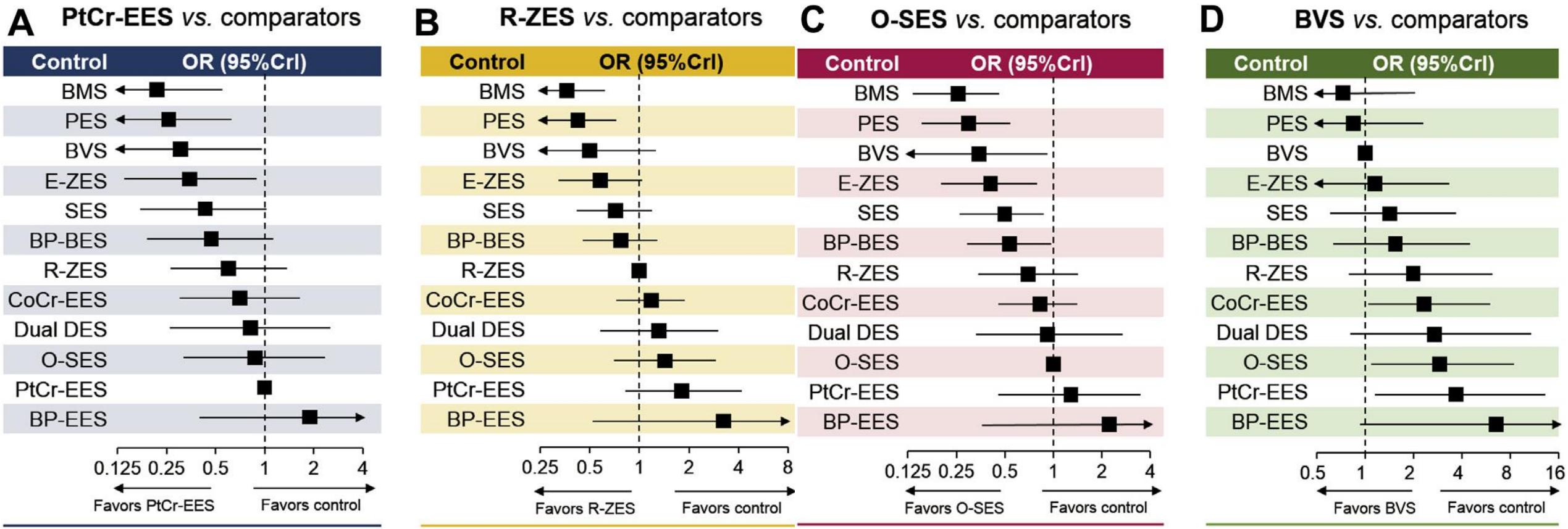
J Am Coll Cardiol Intv. Published online June 01, 2016. doi:10.1016/j.jcin.2016.03.038

Risk of Bias Assessment

Risk of bias of each included trial was assessed with the Cochrane Collaboration's tool. This risk-of-bias graph illustrates the proportion of studies with each of the judgments for each entry in the tool. Green represents "yes" (low risk of bias); yellow is "unclear"; red is "no" (high risk of bias).

From: Stent Thrombosis With Drug-Eluting Stents and Bioresorbable Scaffolds: Evidence From a Network Meta-Analysis of 147 Trials

Definite or Probable Stent Thrombosis at 1 year



J Am Coll Cardiol Intv. Published online June 01, 2016. doi:10.1016/j.jcin.2016.03.038

Stent Thrombosis with DES and BVS: Evidence from a Network Meta-Analysis of 147 Trials

CONCLUSIONS

Contemporary DES, including second-generation biocompatible DP-DES, BP-DES, and polymer-free DES, showed excellent safety profiles in terms of definite or probable ST at 1 year. In contrast, BVS was associated with significantly increased risk of device thrombosis compared with CoCr-EES, PtCr-EES, and H-SES. Results from studies with extended follow-up are anticipated to fully appreciate the long-term safety of contemporary coronary devices.

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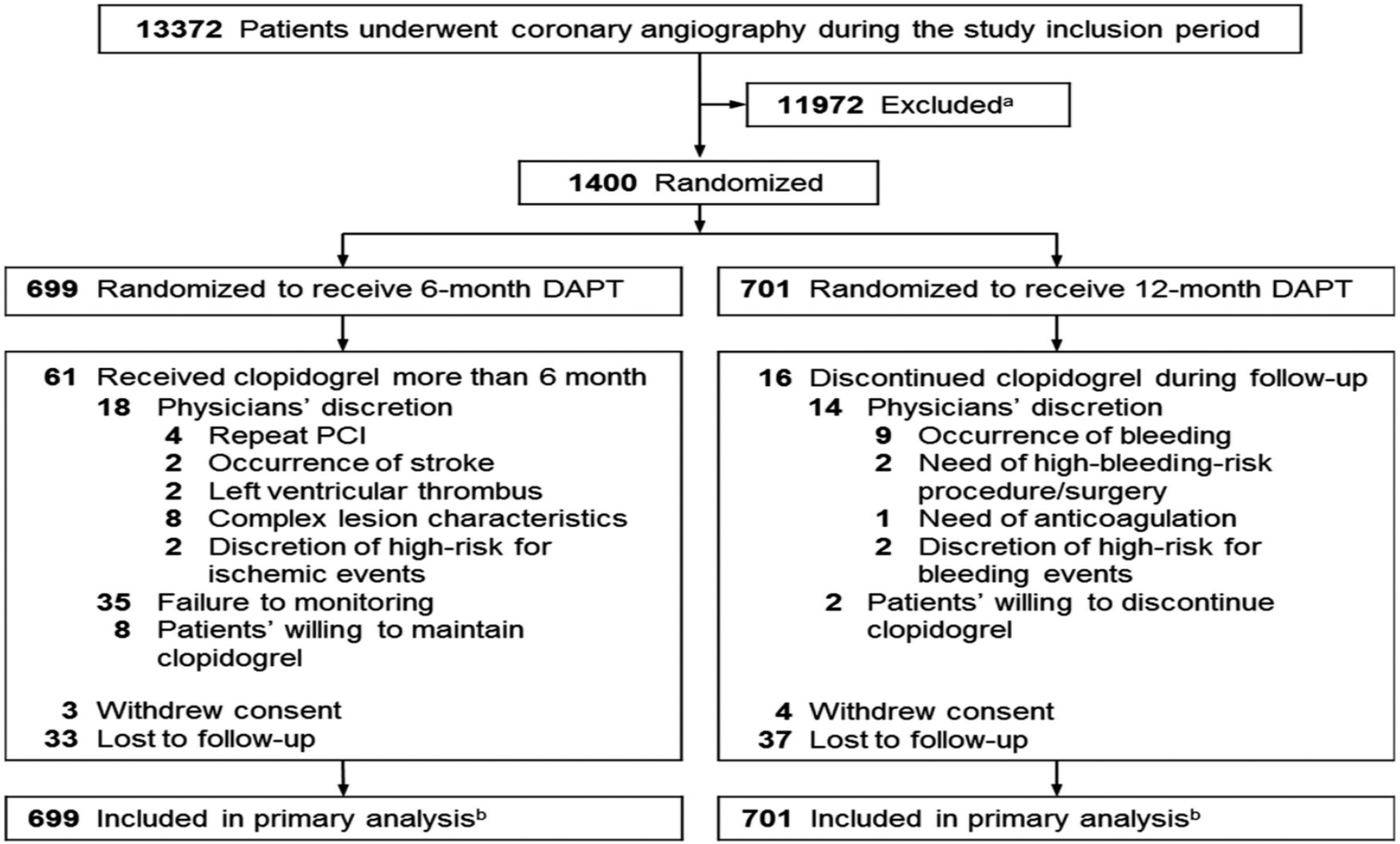
6-Month Versus 12-Month Dual-Antiplatelet Therapy Following Long Everolimus-Eluting Stent Implantation

The IVUS-XPL Randomized Clinical Trial

Sung-Jin Hong, MD,[a,b] Dong-Ho Shin, MD, MPH,[b] Jung-Sun Kim, MD,[b] Byeong-Keuk Kim, MD,[b] Young-Guk Ko, MD,[b] Donghoon Choi, MD,[b] Ae-Young Her, MD,[c] Yong Hoon Kim, MD,[c] Yangsoo Jang, MD,[b,d,e] Myeong-Ki Hong, MD,[b,d,e] for the IVUS-XPL Investigators

From: 6-Month Versus 12-Month Dual-Antiplatelet Therapy Following Long Everolimus-Eluting Stent Implantation: The IVUS-XPL Randomized Clinical Trial

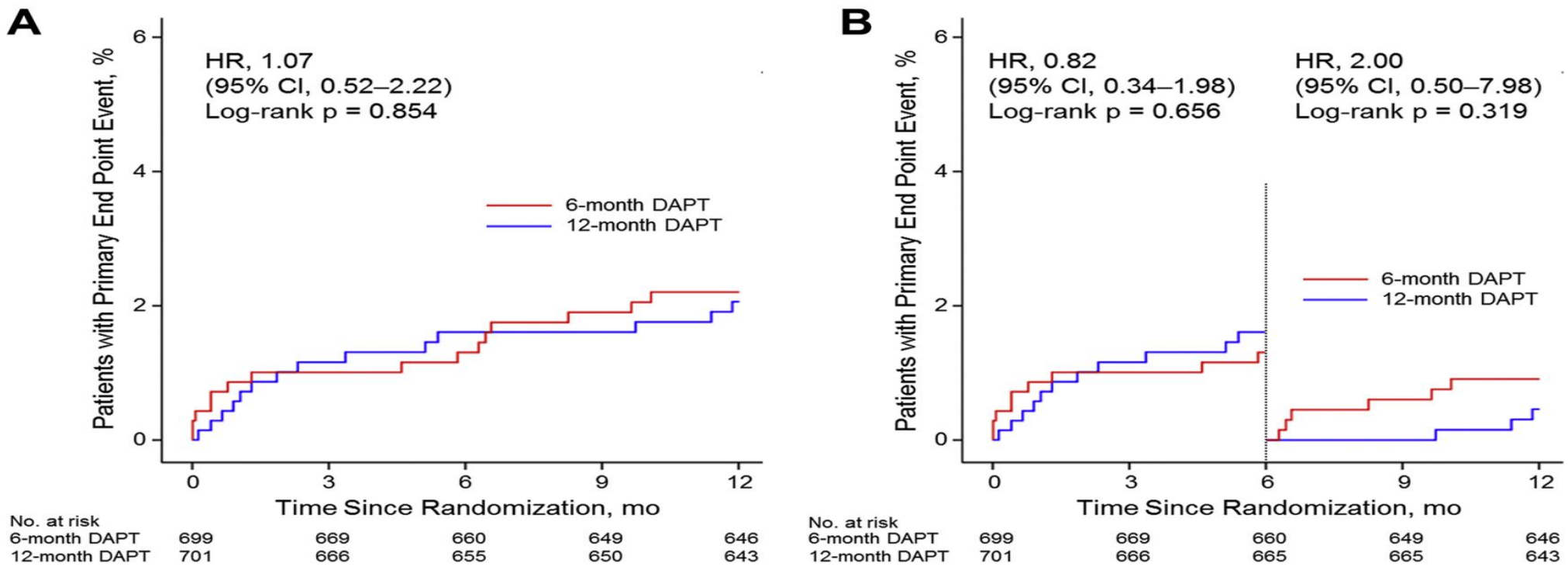
J Am Coll Cardiol Intv. Published online May 17, 2016. doi:10.1016/j.jcin.2016.04.036



JACC Journals

From: 6-Month Versus 12-Month Dual-Antiplatelet Therapy Following Long Everolimus-Eluting Stent Implantation: The IVUS-XPL Randomized Clinical Trial

J Am Coll Cardiol Intv. Published online May 17, 2016. doi:10.1016/j.jcin.2016.04.036



Kaplan-Meier Curves

Primary endpoint (A) and 6-month landmark analysis for the primary endpoint (B). CI = confidence interval; HR = hazard ratio; other abbreviation as in Figure 1.

JACC Journals

From: 6-Month Versus 12-Month Dual-Antiplatelet Therapy Following Long Everolimus-Eluting Stent Implantation: The IVUS-XPL Randomized Clinical Trial

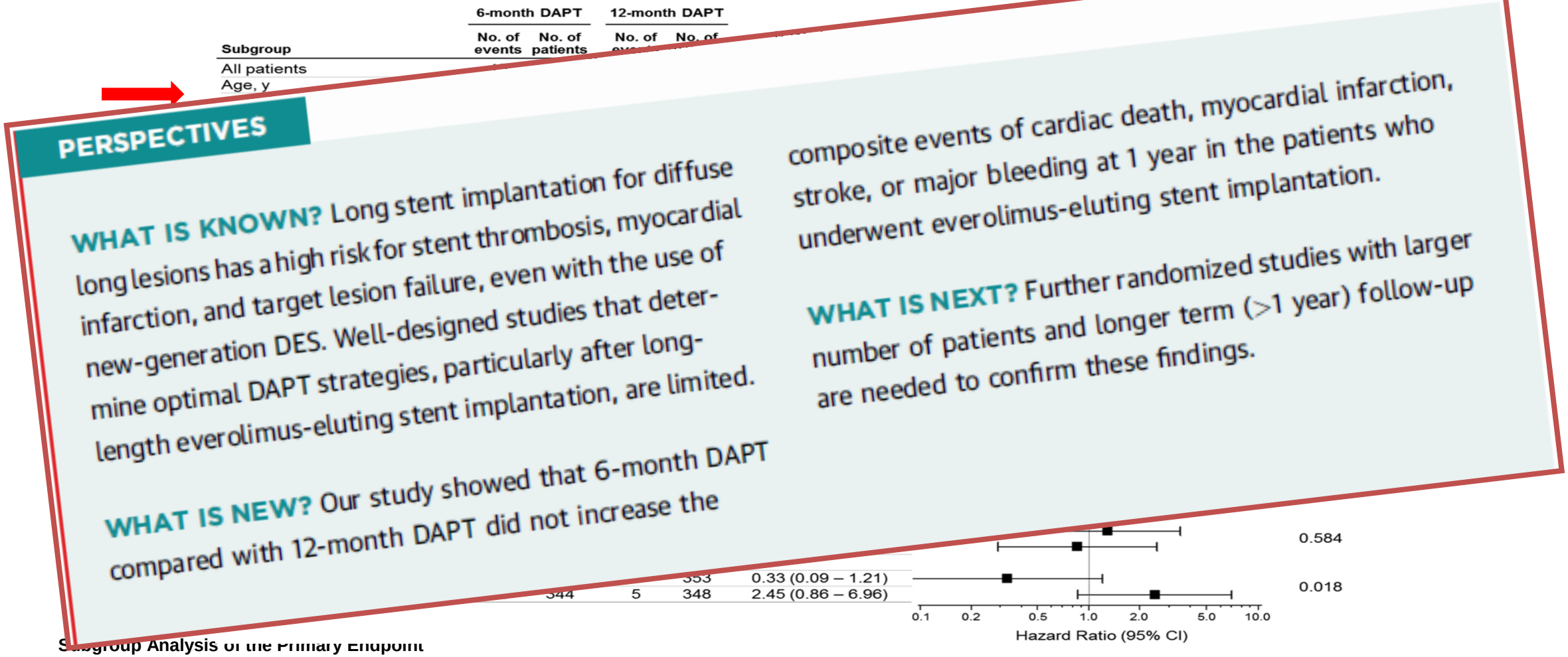
J Am Coll Cardiol Intv. Published online May 17, 2016. doi:10.1016/j.jcin.2016.04.036

PERSPECTIVES

WHAT IS KNOWN? Long stent implantation for diffuse long lesions has a high risk for stent thrombosis, myocardial infarction, and target lesion failure, even with the use of new-generation DES. Well-designed studies that determine optimal DAPT strategies, particularly after long-length everolimus-eluting stent implantation, are limited.

WHAT IS NEW? Our study showed that 6-month DAPT compared with 12-month DAPT did not increase the composite events of cardiac death, myocardial infarction, stroke, or major bleeding at 1 year in the patients who underwent everolimus-eluting stent implantation.

WHAT IS NEXT? Further randomized studies with larger number of patients and longer term (>1 year) follow-up are needed to confirm these findings.



Subgroup Analysis of the Primary Endpoint

European Heart Journal (2016) **37**, 353–364
doi:10.1093/eurheartj/ehv712

REVIEW

Clinical update

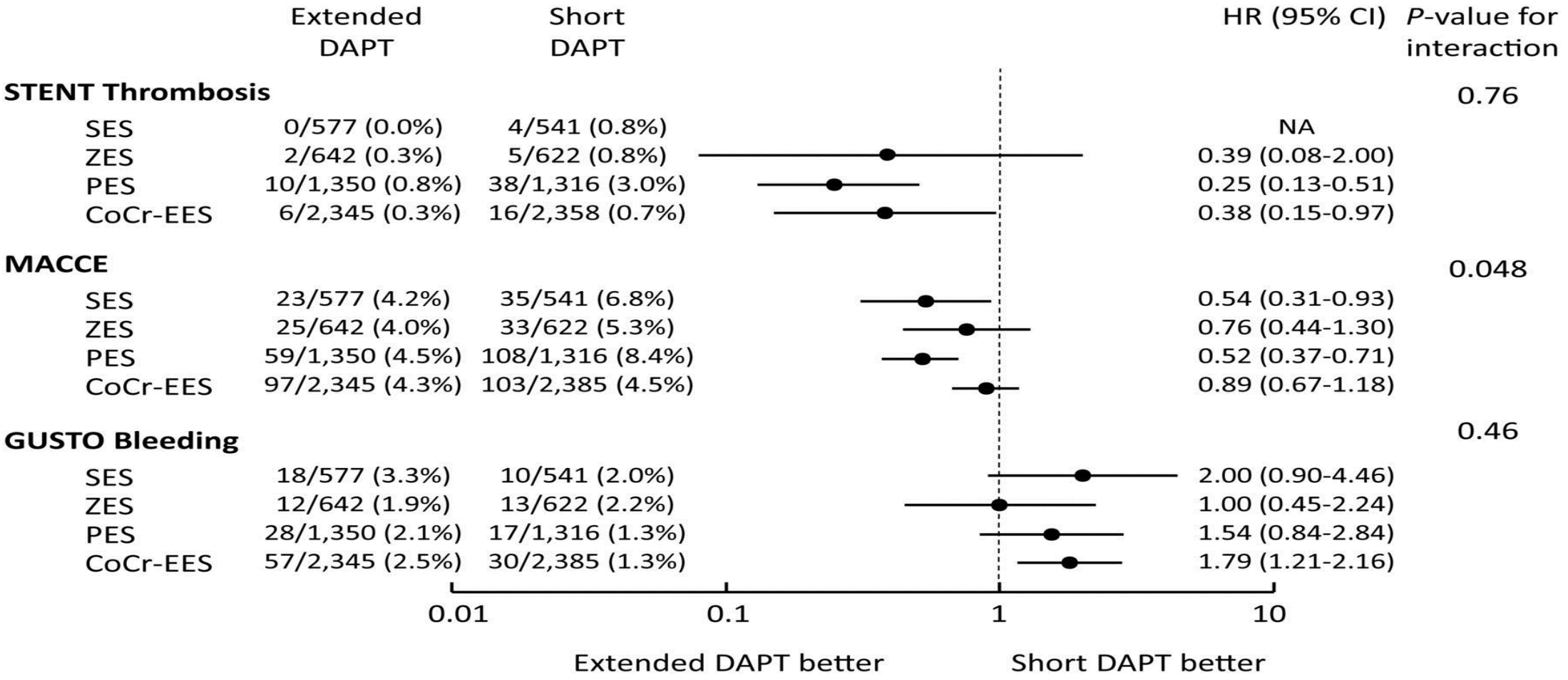
Optimal duration of dual antiplatelet therapy after drug-eluting stent implantation: conceptual evolution based on emerging evidence

Tullio Palmerini[1] and Gregg W. Stone[2]*

[1]Dipartimento Cardio-Toraco-Vascolare, University of Bologna, Bologna, Italy; and [2]Columbia University Medical Center/New York-Presbyterian Hospital, The Cardiovascular Research Foundation, 111 E. 59th Street, 11th Floor, New York, NY 10022, USA

Received 30 July 2015; revised 27 November 2015; accepted 4 December 2015

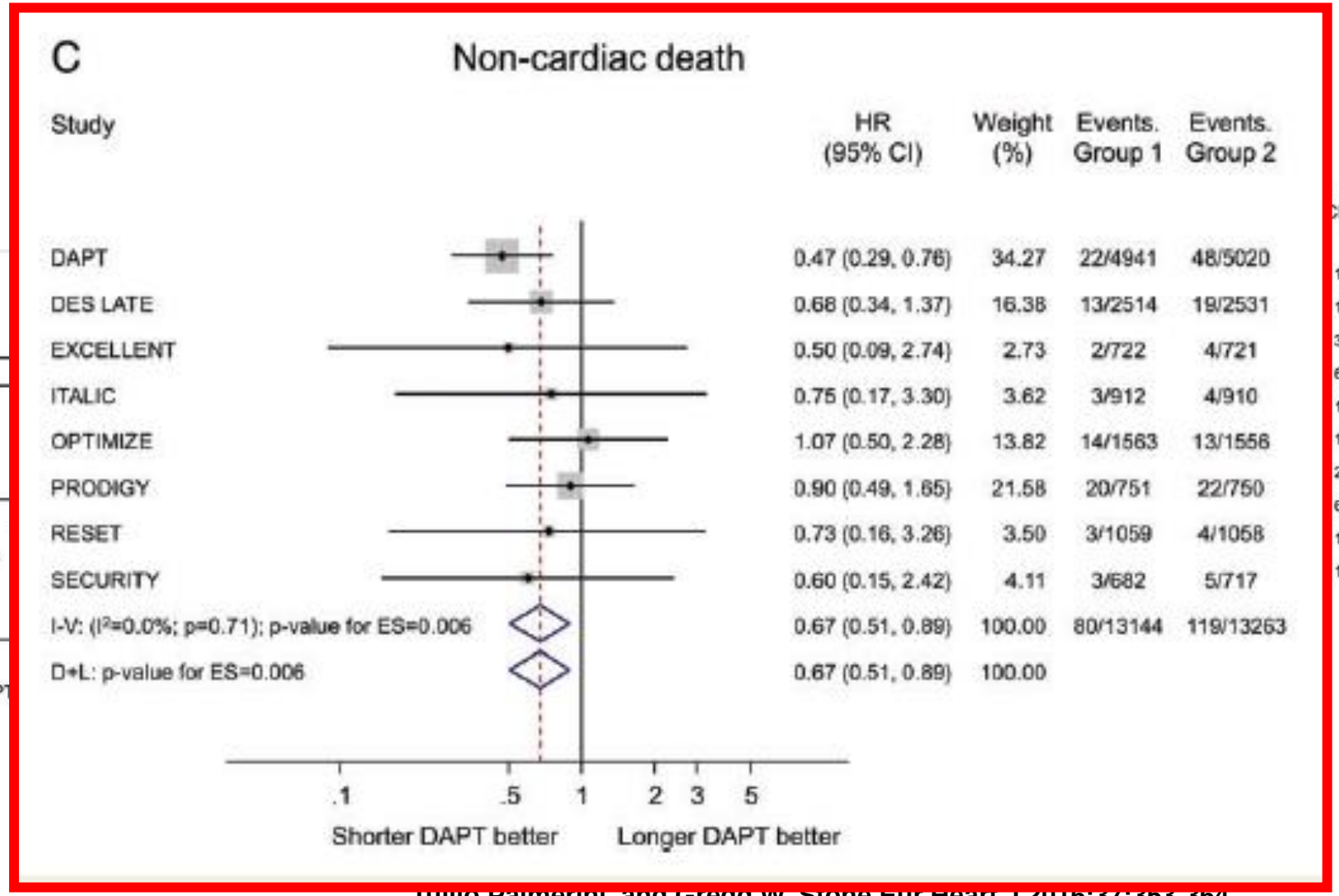
Interaction analysis in the dual antiplatelet therapy trial for the risk of (i) definite or probable stent thrombosis, (ii) major adverse cardiac and cerebrovascular events (death, myocardial infarction, or stroke), and (iii) major bleeding between the type of drug-eluting stent and dual antiplatelet therapy duration.



Tullio Palmerini, and Gregg W. Stone Eur Heart J 2016;37:353-364

European Heart Journal

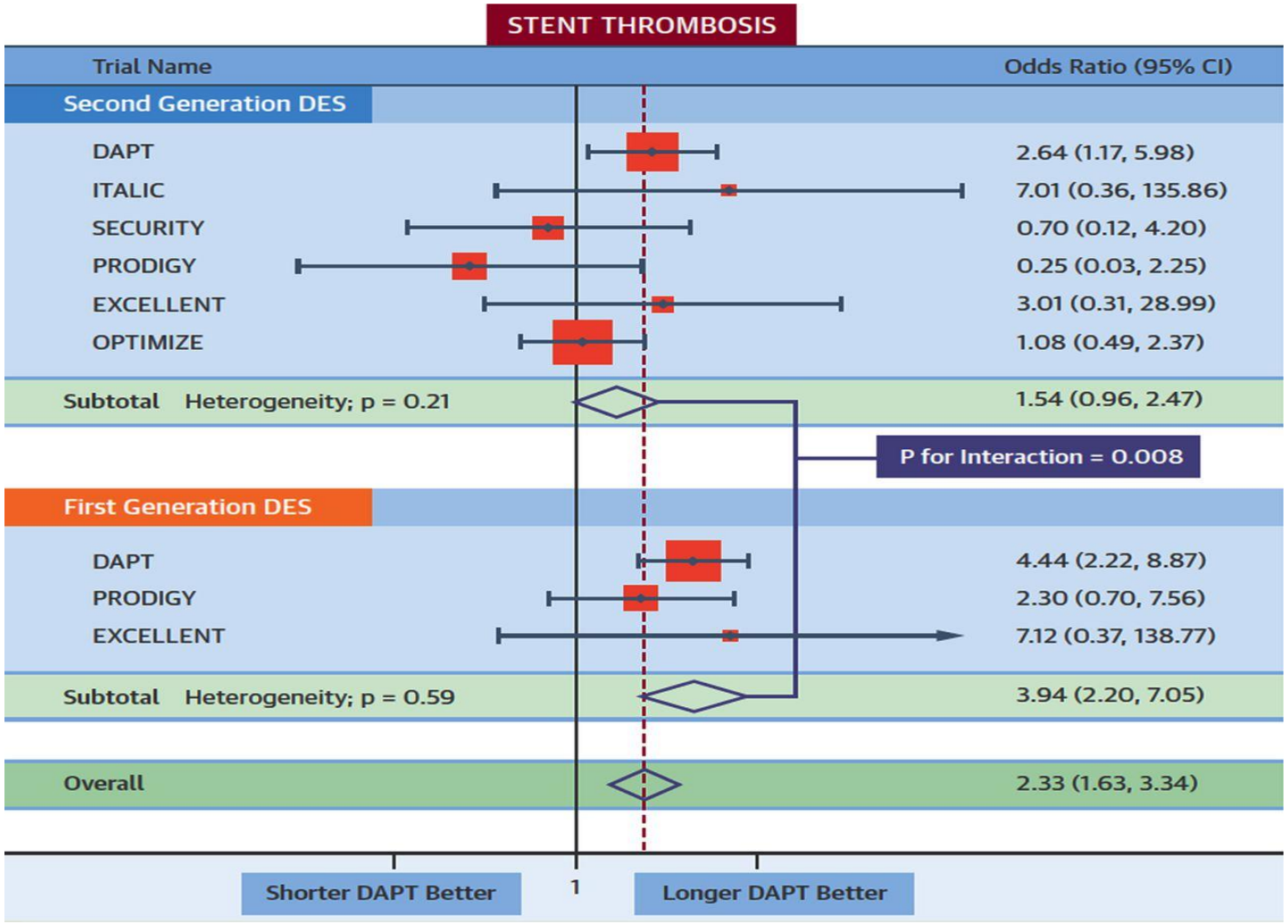
Estimates of risk in the intention to treat population in the meta-analysis by Palmerini et al. for (A) all-cause mortality and (B) cardiac mortality between shorter and longer dual antiplatelet therapy.



Tullio Palmerini, and Gregg W. Stone Eur Heart J 2016;37:353-364

European Heart Journal

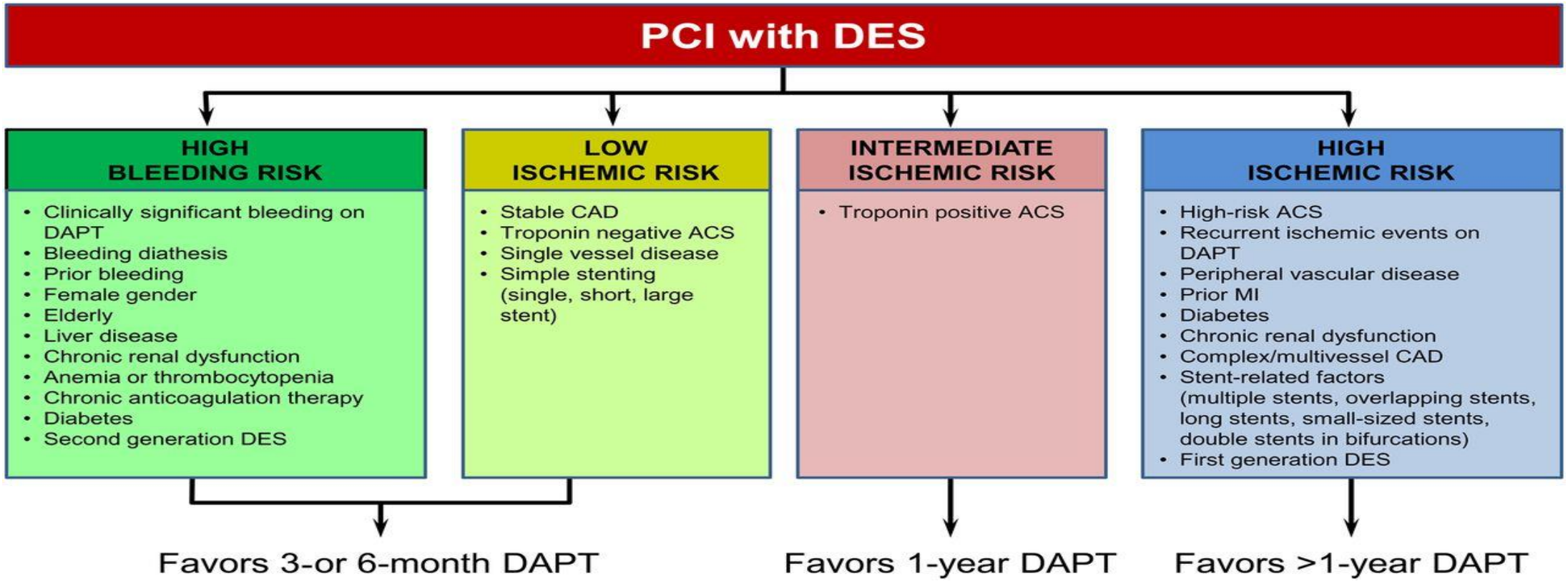
Interaction analysis from the meta-analysis by Giustino et al. between the type of drug-eluting stent and dual antiplatelet therapy duration on the risk of definite or probable stent thrombosis.



Tullio Palmerini, and Gregg W. Stone Eur Heart J 2016;37:353-364

European Heart Journal

Comprehensive evaluation of bleeding and ischaemic risk factors related to dual antiplatelet therapy duration after drug-eluting stent implantation.



Tullio Palmerini, and Gregg W. Stone Eur Heart J 2016;37:353-364

European Heart Journal

European Heart Journal (2016) **37**, 344–352
doi:10.1093/eurheartj/ehv377

REVIEW

Clinical update

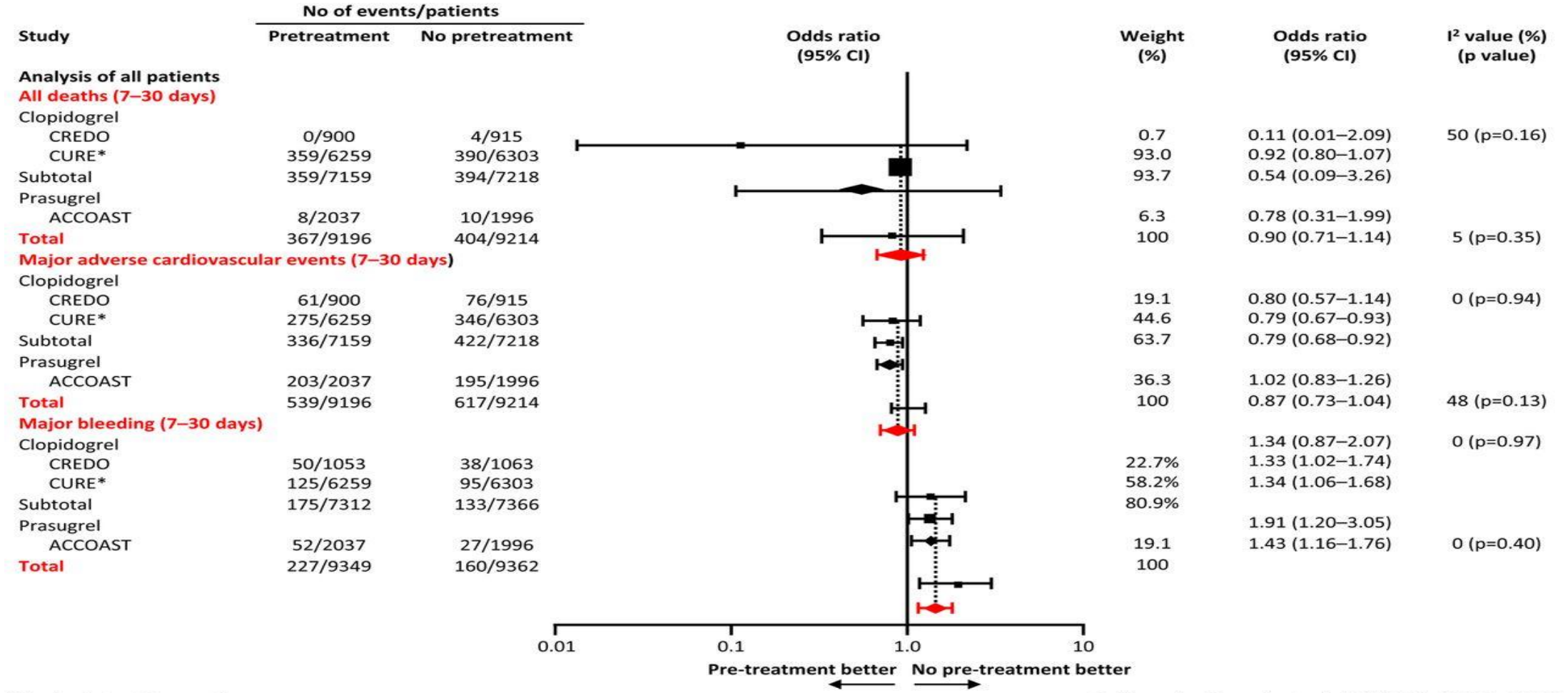
Oral dual antiplatelet therapy: what have we learnt from recent trials?

Gilles Montalescot[1]* and Marc S. Sabatine[2]

[1]ACTION Study Group, Institute of Cardiology, Pitié-Salpêtrière Hospital (AP-HP), Université Paris-6, Paris 75013, France; and [2]TIMI Study Group, Division of Cardiovascular Medicine, Brigham & Women's Hospital and Harvard Medical School, Boston, MA, USA

Received 8 June 2015; revised 14 July 2015; accepted 21 July 2015; online publish-ahead-of-print 6 August 2015

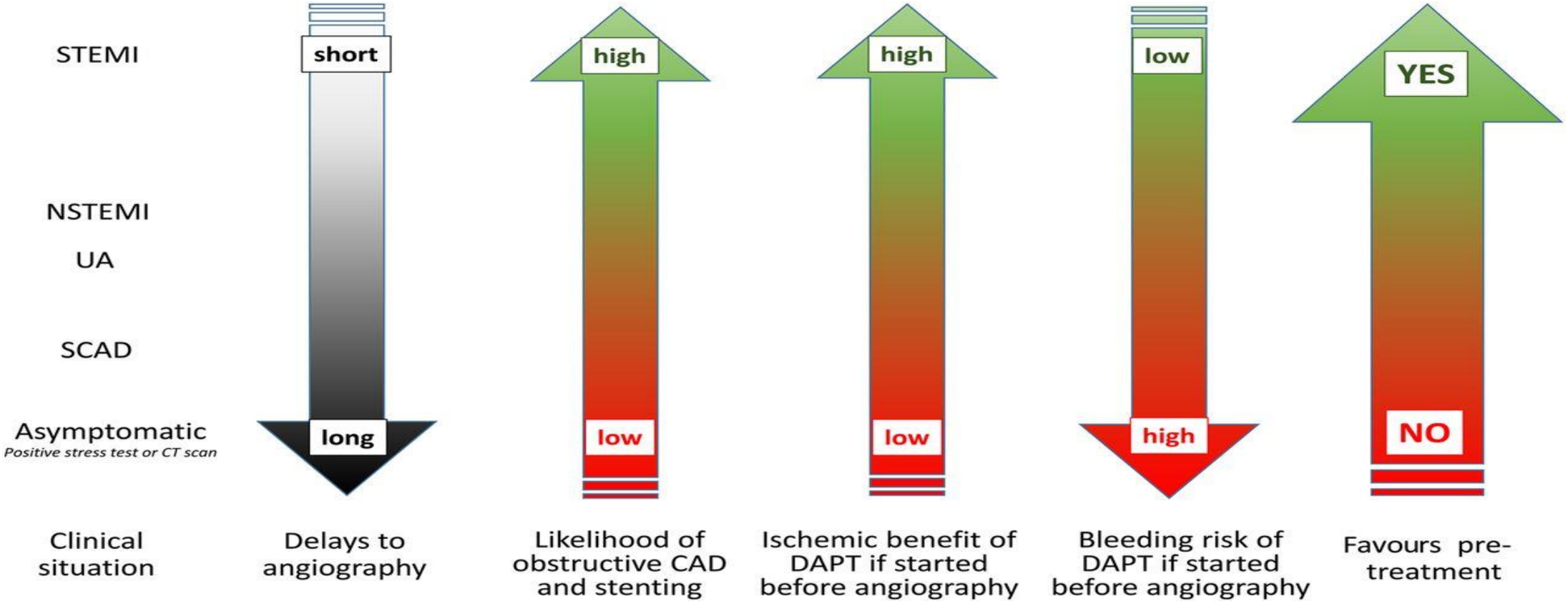
Meta-analysis reporting the benefit and risk of pre-treatment with P2Y12 antagonists in NSTE-ACS, irrespective of the revascularization strategy.



Gilles Montalescot, and Marc S. Sabatine Eur Heart J 2016;37:344-352

European Heart Journal

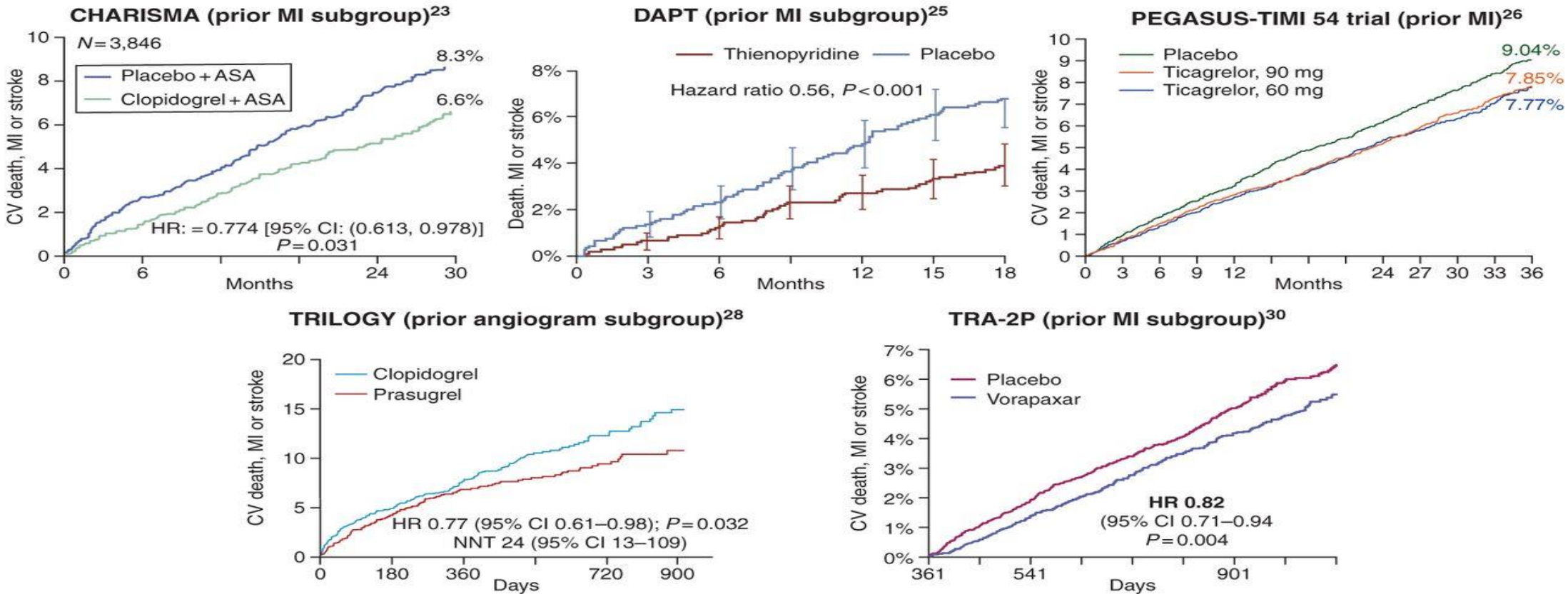
The benefit and risk of pre-treatment depends on the clinical presentation of the patient and the time to angiography.



Gilles Montalescot, and Marc S. Sabatine Eur Heart J 2016;37:344-352

European Heart Journal

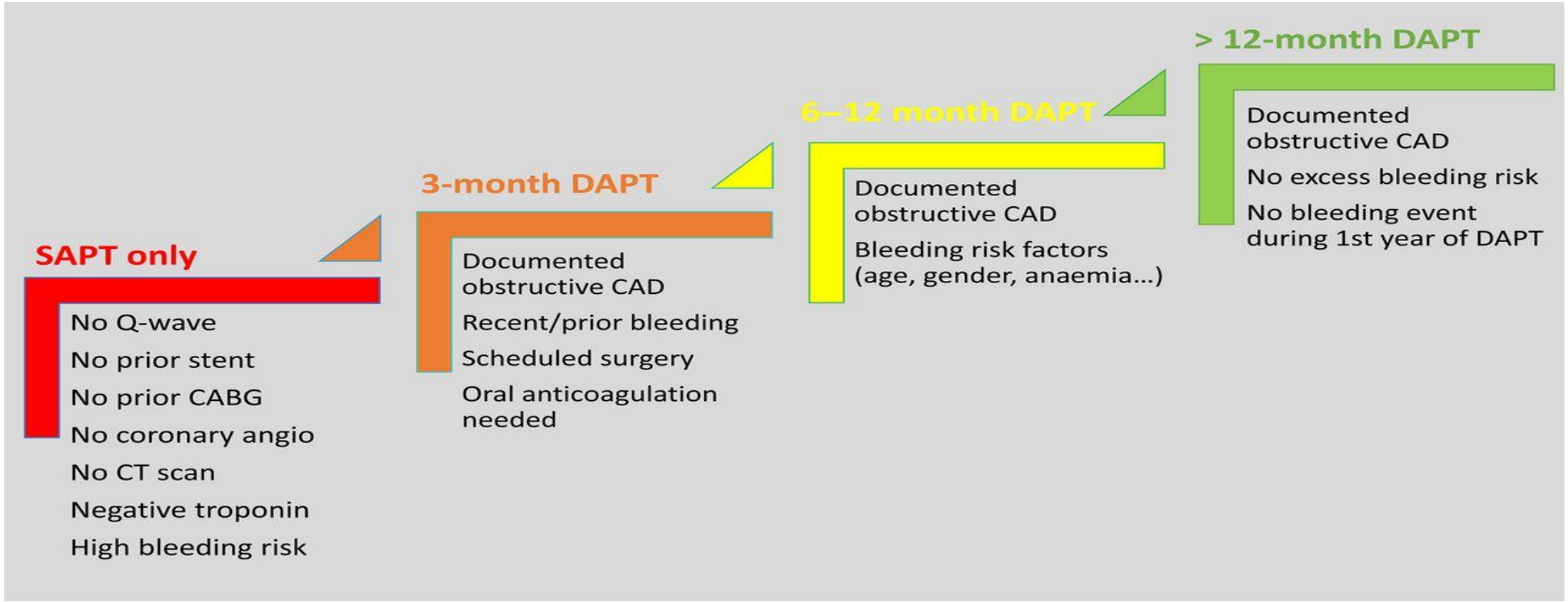
Results of the five studies which tested stronger antiplatelet therapy beyond 1 year vs. standard of care, in patients with proven coronary artery disease (prior myocardial infarction or angiographically proven coronary artery disease).



Gilles Montalescot, and Marc S. Sabatine Eur Heart J 2016;37:344-352

European Heart Journal

The proposed algorithm for the decisions concerning the use and duration of dual antiplatelet therapy in acute coronary syndrome patients, irrespective of the use of stents.



Gilles Montalescot, and Marc S. Sabatine Eur Heart J 2016;37:344-352

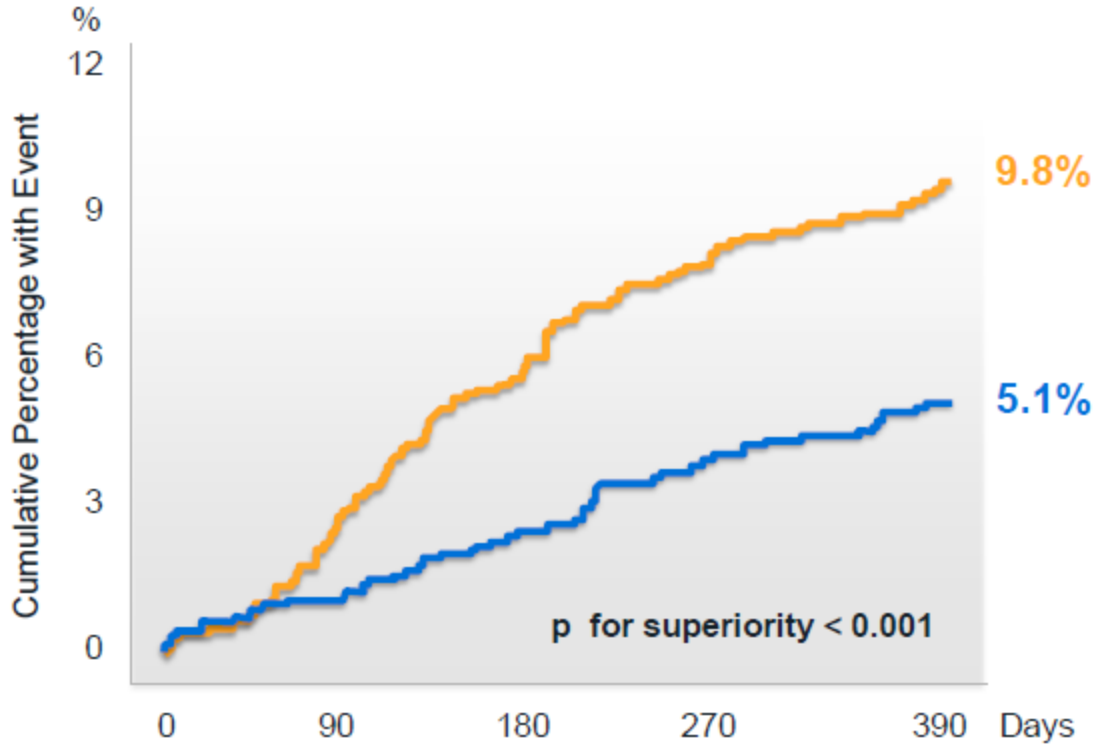
European Heart Journal

LEADERS FREE

Biolimus-Coated vs. Bare-Metal Coronary Stents in High Bleeding Risk Patients

Philip Urban, Alexandre Abizaid, Ian T. Meredith,
Stuart J. Pocock, Didier Carrié, Christoph Naber,
John Gregson, Samantha Greene, Hans Peter Stoll
and Marie-Claude Morice for the LEADERS FREE Investigators

Primary Efficacy Endpoint (Clinically-Driven TLR)



Number at Risk

DCS	1221	1167	1130	1098	1053
BMS	1211	1131	1072	1034	984

390 days chosen for assessing primary EP to capture potential evens driven by the 360 day FU contact

2016 euro PCR

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- ACS -

CK Naber, P Urban, PJ Ong, M Valdes-Chavarri, A Abizaid, SJ Pocock, F Fabbiocchi, C Dubois, S Copt, S Greene and MC Morice

for the LEADERS FREE Investigators

2016 euro PCR

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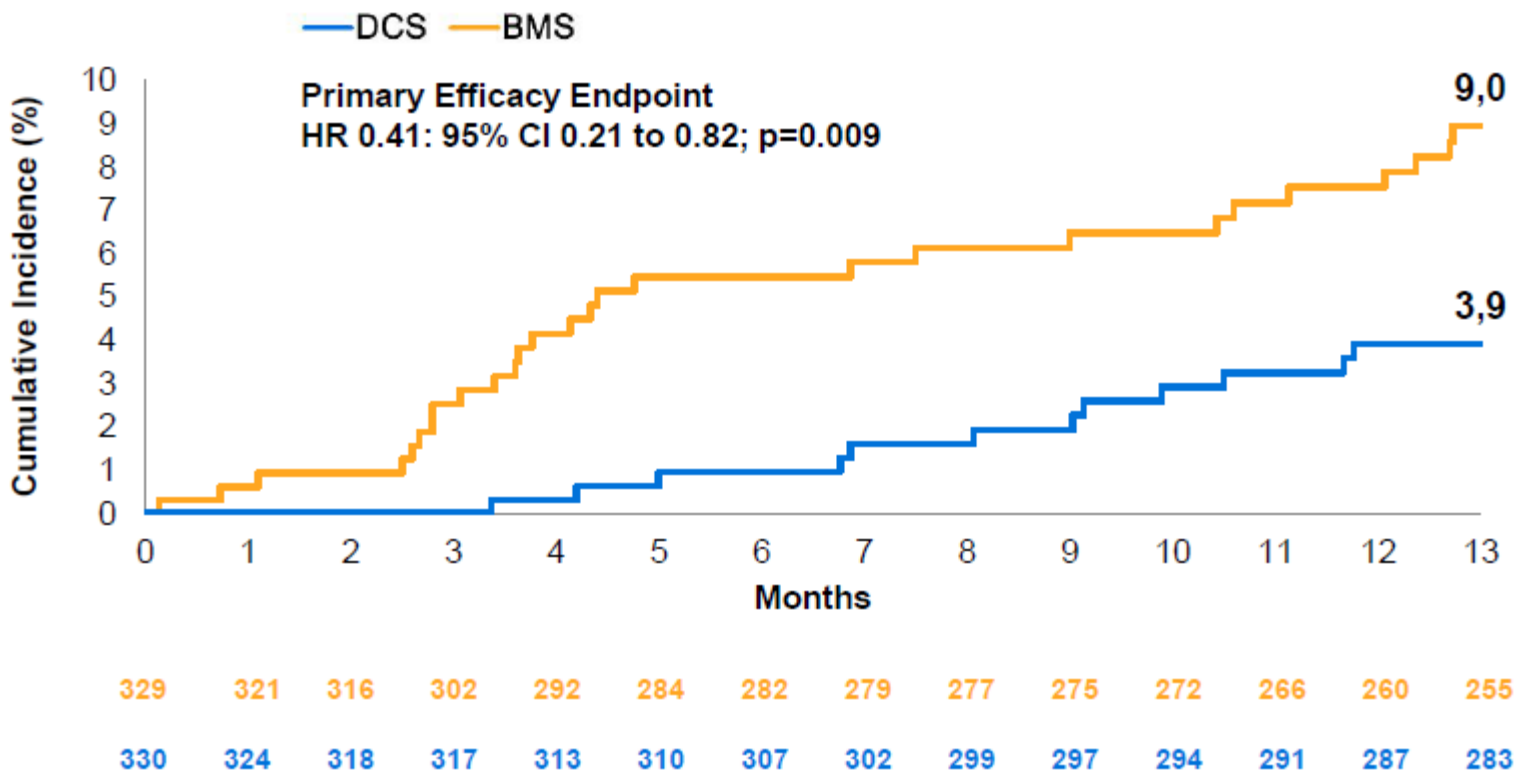
Clinically driven Target Lesion Revascularization - 12 Month FU



Cardiovascular European Research Center

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Conclusões

- DAPT reduz os desfechos CV pós SCA e/ou Angioplastia Coronariana
- Em pacientes estáveis pós ATC com DES de última geração a DAPT deve ser mantida por até 6 meses
- DAPT de longa duração pode ser razoável em pacientes com baixo risco de sangramento e que tolerem bem os fármacos
- Para pacientes pós SCA DAPT prolongada traz benefício e portanto é razoável ser mantida enquanto a terapia for bem tolerada
- O ideal é que a terapia seja individualizada e que o risco vs benefício seja reavaliado periodicamente