

OPTIMAL DURATION OF ANTIPLATELET THERAPY POST PCI

Asian Interventional Cardiovascular Therapeutics
September 2018

Sameer Mehta, MD, FACC, MBA

- Chairman, Lumen Foundation
- Voluntary Associate Professor, University of Miami
- Course Director, Lumen Global
- Chairperson Global STEMI Programs (PRINCE, MIDAS, CHINA, SPAN, DREAM, CHILE, HINT, THAI, LATIN)
 - Co Chair, GLOW
- Global STEMI Director, ITMS Telemedicine, Sao Paulo, Brazil

Benefits and Risk (2017 ESC Documentation Group)

- DAPT reduces the risk of stent thrombosis across the entire spectrum of events, from acute to very late occurrences.
- Since the benefits of prolonged DAPT, especially for mortality endpoints, appear highly dependent on prior cardiovascular history (such as prior ACS/MI vs. stable CAD), and prediction models to estimate on-DAPT bleeding risk have been developed, an individualized approach based on ischemic vs. bleeding risk assessment is warranted.
- Treatment with DAPT beyond 1 year after MI, or after PCI, exerts the majority of its benefit by reducing the rate of spontaneous MI.
- The risk of bleeding in patients on DAPT is proportionally related to its duration both within and beyond 1 year of treatment duration.

Historical Overview

ESC Revascularization
Updated Guidelines

2014

ESC Firestorm
ARC paper – 2006/2007

BARC 2011

6-mo post 2nd gen DES,
<3-6- mo in high bleeding risk

Era of Thrombosis

Bleeding Awareness

Equipoise

- Defined the optimal approach to lower early post-PCI Thrombosis (12M DAPT minimum)
- Recognized late ST
- Identified risk factors for ST, particularly DAPT cessation

Recognized importance of Bleeding

- Variability in Risk /Impact of bleeding

- Safer Stent Platforms
- Better understanding of DAPT cessation
- Experimental approaches (shorter and longer DAPT durations; withdrawal)

Benefits and Risks of Extended Duration Dual Antiplatelet Therapy After PCI in Patients With and Without Acute Myocardial Infarction



Robert W. Yeh, MD, MSc,*†‡ Dean J. Kereiakes, MD,§ Philippe Gabriel Steg, MD,||¶# Stephan Windecker, MD,**
Michael J. Rinaldi, MD,†† Anthony H. Gershlick, MBBS,†‡ Donald E. Cutlip, MD,†‡§§ David J. Cohen, MD, MSc,|||
Jean-Francois Tanguay, MD,¶¶ Alice Jacobs, MD,## Stephen D. Wiviott, MD,†*** Joseph M. Massaro, PhD,† †††
Adrian C. Iancu, MD,††† Laura Mauri, MD, MSc,††*** on behalf of the DAPT Study Investigators

CONCLUSIONS Compared with 12 months of therapy, 30 months of dual antiplatelet therapy reduced the risk of stent thrombosis and MI in patients with and without MI, and increased bleeding. (The Dual Antiplatelet Therapy Study [The DAPT Study]; NCT00977938) (J Am Coll Cardiol 2015;65:2211-21) © 2015 by the American College of Cardiology Foundation.

Bleeding-Related Deaths in Relation to the Duration of Dual-Antiplatelet Therapy After Coronary Stenting

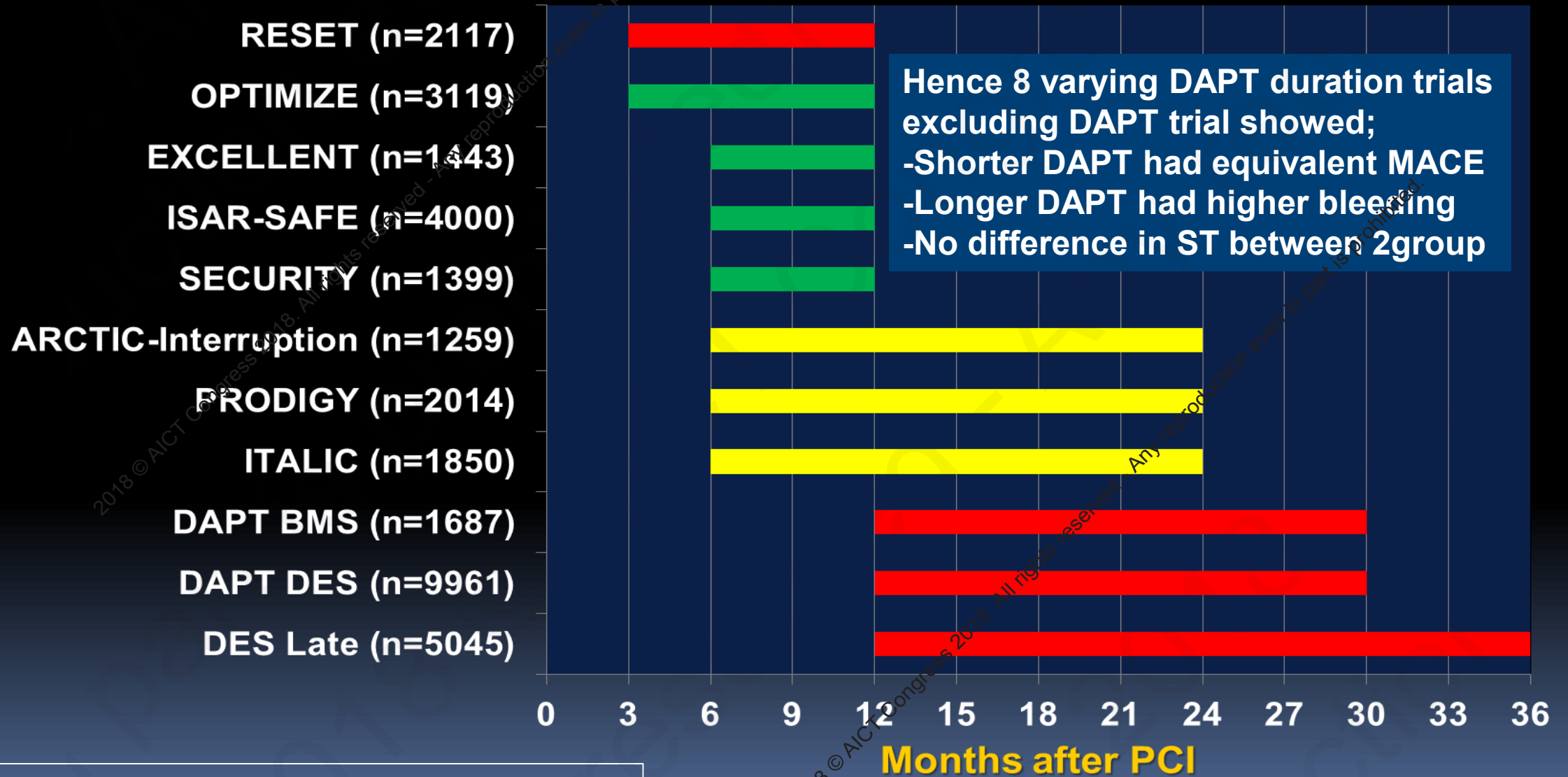


Tullio Palmerini, MD,^a Letizia Bacchi Reggiani, MSTAT,^a Diego Della Riva, MD,^a Mattia Romanello, MD,^a Fausto Feres, MD,^b Alexandre Abizaid, MD,^b Martine Gilard, MD,^c Marie-Claude Morice, MD,^d Marco Valgimigli, MD, PhD,^e Myeong-Ki Hong, MD, PhD,^f Byeong-Keuk Kim, MD, PhD,^f Yangsoo Jang, MD, PhD,^f Hyo-Soo Kim, MD, PhD,^g Kyung Woo Park, MD,^g Antonio Colombo, MD,^h Alaide Chieffo, MD,^h Jungmin Ahn, MD,ⁱ Seung-Jung Park, MD,ⁱ Stefanie Schüpke, MD,^j Adnan Kastrati, MD,^j Gilles Montalescot, MD,^k Philippe Gabriel Steg, MD,^l Abdourahmane Diallo, MD,^m Eric Vicaut, MD,^m Gerard Helft, MD,ⁿ Giuseppe Biondi-Zoccai, MD, MSTAT,^o Bo Xu, MD,^p Yaling Han, MD,^q Philippe Genereux, MD,^r Deepak L. Bhatt, MD, MPH,^s Gregg W. Stone, MD^r

CONCLUSIONS Bleeding was strongly associated with the occurrence of mortality within 1 year after the bleeding event. Shorter compared with longer DAPT was associated with lower risk for bleeding-related death, a finding that may underlie the lower all-cause mortality with shorter DAPT in the RCTs of different DAPT durations after DES. (J Am Coll Cardiol 2017;69:2011-22) © 2017 by the American College of Cardiology Foundation.

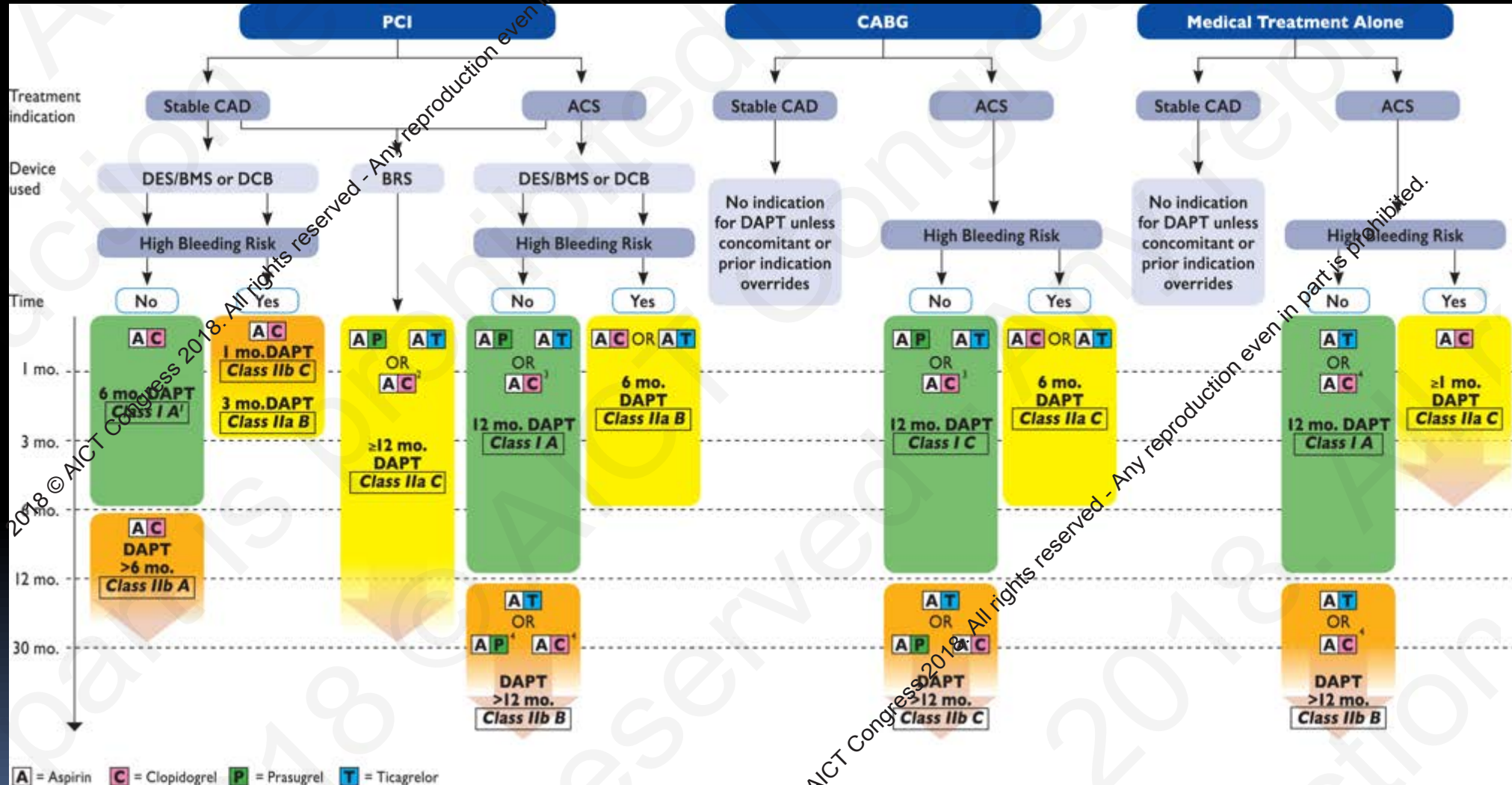
Trials of DAPT Duration After Stenting

Timing of aspirin only vs. DAPT



32,495 randomized patients

Dual antiplatelet therapy and percutaneous coronary intervention ESC 2017



From: 2017 ESC focused update on dual antiplatelet therapy in coronary artery disease developed in collaboration with EACTS The Task Force for dual antiplatelet therapy in coronary artery disease of the European Society of Cardiology (ESC) and of the European Association for Cardio-Thoracic Surgery (EACTS) Eur Heart J. 2017;39(3):213-260. doi:10.1093/eurheartj/ehx419

P2Y₁₂ inhibitor selection

- Clopidogrel is considered the default P2Y₁₂ inhibitor in patients with stable CAD treated with PCI, those with indication to concomitant oral anticoagulation, as well as in ACS patients in whom ticagrelor or prasugrel are contraindicated.
- Ticagrelor or prasugrel is recommended in ACS patients unless drug-specific contraindications exist.
- Irrespective of the type of metallic stent implanted, the duration of DAPT is 1–6 month(s) depending on the bleeding risk.
- Irrespective of the final revascularization strategy (e.g. medical therapy, PCI, or CABG), the default DAPT duration in these patients is 12 months.
- For patients in whom the ischemic risk prevails over the risk of bleeding, a longer DAPT duration may be considered.

Putting it all together!

2018 © AICT Congress 2018. All rights reserved - Any reproduction even in part is prohibited.

2018 © AICT Congress 2018. All rights reserved - Any reproduction even in part is prohibited.

Optimal Duration of Dual Antiplatelet Therapy After DES Implantation

Patient should be prescribed dual antiplatelet therapy for **6-12 months**

Shortened Duration (new DES, <6M)

- Bleeding events within 6 months
- **Need for non-cardiac surgery**
- **High bleeding risk**
 - Anticoagulation need (e.g. Afib)
 - Renal failure
 - Co-morbidities at risk of bleeding (GI, Stroke, Cirrhosis, Frail, bleeding dia.)

Extended Duration (3yrs+)

- Thrombotic events within 6-12 mths
- First generation DES
- High ischemic risk
 - Prior MI, Diabetes**
 - Multiple stents >3, LM stent
 - Bifurcation 2 stents
 - Prior Stent Thrombosis**

14th

AICT

ASIAN INTERVENTIONAL CARDIOVASCULAR THERAPEUTICS
THE OFFICIAL CONGRESS OF APSIC



2018 © AICT Congress 2018. All rights reserved - Any reproduction even in part is prohibited.

2018 © AICT Congress 2018. All rights reserved - Any reproduction even in part is prohibited.

7 - 9th September 2018

Hong Kong

Convention and Exhibition Centre (HKCEC)