DAPT Guidelines and Controversies
Implications for Double and Triple Therapy

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Chair-Elect, ACC/AHA Task Force on Clinical Practice Guidelines
DAPT Guidelines and Controversies

- Weighing risks and benefits
- The 12 month/365 day “gold standard”
- Short vs Long
- Updated Guidelines
- Double and Triple Therapy
Dual Antiplatelet Therapy: Weighing Ischemic and Bleeding Risks

Spontaneous MI
Stent Thrombosis (Stroke)

Bleeding

Bleeding and Morbidity/Mortality
Mehran R.  EHJ 2009
Manoukian SV.  JACC 2007
Eikelboom JW.  Circ 2006
Rao SV.  JACC 2006
Rao SV.  AJC 2005
Rao SV.  JAMA 2004
CURE Trial:
Primary Composite Endpoint at 12 Months
(MI/CVA/CV Death)

- Placebo + Aspirin
  - 11.4%
  - 20% RRR
  - P = .00009

- Clopidogrel + Aspirin
  - 9.3%

How long were patients actually treated for? 3-12 months (mean 9 months)

Major Bleeding:
2.7% (P) vs 3.7% (C)
RR = 1.38; P = 0.001

CREDO: 1 Year Primary Outcome

Stable coronary artery disease (CAD) and low risk acute coronary syndrome (ACS) Patients Treated with Bare Metal Stents (BMS)

How long were patients actually treated for?

Placebo
N=1063
8.5%
27% RRR
p = 0.02

Clopidogrel
N=1053
11.5%

Major Bleeding:
6.7% (P) vs 8.8% (C)
P = 0.07

Steinhubl SR et al.; JAMA 2002
Late Stent Thrombosis with First Generation Stents

P. Wenaweser and P.W. Serruys, ESC 2006
(Slide courtesy of Roxana Mehran, Columbia University)
What is the name/acronym of the randomized trial that demonstrated that 12 months DAPT in patients treated with first-generation DES is beneficial?
Prevention of Premature Discontinuation of Dual Antiplatelet Therapy in Patients With Coronary Artery Stents

A Science Advisory From the American Heart Association, American College of Cardiology, Society for Cardiovascular Angiography and Interventions, American College of Surgeons, and American Dental Association, With Representation From the American College of Physicians*

Cindy L. Grines, MD, FACC; Robert O. Bonow, MD, FAHA, FACC; Donald E. Casey, Jr, MD, MPH, MBA, FACP; Timothy J. Gardner, MD, FAHA, FACC, FACS; Peter B. Lockhart, DDS, FDS RCSEd; David J. Moliterno, MD, FAHA, FSCAI, FACC; Patrick O’Gara, MD, FAHA, FACC; Patrick Whitlow, MD, FAHA, FACC

Abstract—Dual antiplatelet therapy with aspirin and a thienopyridine has been shown to reduce cardiac events after coronary stenting. However, many patients and healthcare providers prematurely discontinue dual antiplatelet therapy, which greatly increases the risk of stent thrombosis, myocardial infarction, and death. This advisory stresses the importance of 12 months of dual antiplatelet therapy after placement of a drug-eluting stent and educating the patient and healthcare providers about hazards of premature discontinuation. It also recommends postponing elective surgery for 1 year, and if surgery cannot be deferred, considering the continuation of aspirin during the perioperative period in high-risk patients with drug-eluting stents. (Circulation. 2007;115:813-818.)
12 months of DAPT:
A “gold standard” based on modest data

- CURE treated patients 3-12 months, with mean duration 9 months
- CREDO treated patients 12 months, but only 62-64% of patients treated a full 12 months
- 2007 AHA Scientific Statement based on somewhat nebulous conclusions from FDA meeting and modest, non-randomized and observational data
- Nothing magical about 12 months or 365 days. If the Earth were a little closer or farther to the sun than it is, then one year would be more than or less than 12 months or 365 days
Recent Trials of DAPT Duration after Stenting

Timing of aspirin only vs. DAPT

- RESET (n=2117)
- OPTIMIZE (n=3119)
- EXCELLENT (n=1443)
- SECURITY (n=1399)
- ISAR-SAFE (n=4000)
- ITALIC (n=1850)
- ARCTIC-Interruption (n=1259)
- PRODIGY (n=2014)
- DAPT BMS (n=1687)
- DAPT DES (n=9961)
- DES Late (n=5045)
- OPTIDUAL (n = 1795)

More than 30,000 randomized patients!

Slide courtesy of Roxana Mehran, MD
First- Versus Second-Generation DES: Stent Endotheliazation

First Generation DES

SES 13 months

PES 11 months

Second Generation DES

ZES 3 months

EES 6 months

Representative Images of 1\textsuperscript{st} vs. 2\textsuperscript{nd} generation DES in Human Coronary Arteries

Less inflammatory response and more rapid vessel endothelialization or healing with 2\textsuperscript{nd} generation stents (zotarolimus- and everolimus-eluting) compared to 1\textsuperscript{st} generation stents ((sirolimus- and paclitaxel-edluting)

# Everolimus-Eluting Stent

**N=4703 Randomized Subjects**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Continued Thienopyridine N=2345</th>
<th>Placebo N=2358</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stent Thrombosis (Definite/Probable)</td>
<td>6 (0.3%)</td>
<td>16 (0.7%)</td>
<td>0.38 (0.15, 0.97)</td>
</tr>
<tr>
<td>MACCE</td>
<td>97 (4.3%)</td>
<td>103 (4.5%)</td>
<td>0.89 (0.67, 1.18)</td>
</tr>
<tr>
<td>MI</td>
<td>48 (2.1%)</td>
<td>72 (3.2%)</td>
<td>0.63 (0.44, 0.91)</td>
</tr>
<tr>
<td>Bleeding (Moderate/Severe)</td>
<td>57 (2.5%)</td>
<td>30 (1.3%)</td>
<td>1.79 (1.15, 2.80)</td>
</tr>
</tbody>
</table>

**Continued thienopyridine better**  **Placebo better**
DAPT ERC Metaanalysis (6 RCTs):
Prolonged (18-48 months) vs Standard (predominantly 12 months) Rx

- Taken as a whole, studies of longer duration (“prolonged” or “extended”) DAPT for an additional 18-36 months after DES found:
  - ≈1% to 2% absolute decrease in late stent thrombosis and ischemic complications
  - ≈1% absolute increase in bleeding complications
- Weighted risk-benefit analysis by ERC found treatment with prolonged DAPT resulted in:
  - 6 fewer MIs per 1,000 patients per year
  - 3 fewer stent thromboses per 1,000 patients per year
  - 5 additional major bleedings per 1,000 patients per year

DAPT ERC Metaanalysis (5 RCTs):
Shorter (3-6 months) vs Standard (12 months) Rx

Predominantly “low risk” patients with stable CAD enrolled in studies underpowered to detect differences in stent thrombosis

<table>
<thead>
<tr>
<th></th>
<th>Standard Events Total</th>
<th>Short Events Total</th>
<th>Odds Ratio (OR)</th>
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<tbody>
<tr>
<td><strong>Stent Thrombosis</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Fixed effect model</td>
<td>23 6055</td>
<td>28 6023</td>
<td>0.82 (0.47–1.42)</td>
</tr>
<tr>
<td>Random effects model</td>
<td></td>
<td></td>
<td>0.87 (0.49–1.55)</td>
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<tr>
<td><strong>Myocardial Infarction</strong></td>
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<tr>
<td>Fixed effect model</td>
<td>82 6055</td>
<td>93 6023</td>
<td>0.87 (0.65–1.18)</td>
</tr>
<tr>
<td>Random effects model</td>
<td></td>
<td></td>
<td>0.87 (0.65–1.18)</td>
</tr>
<tr>
<td><strong>Major Bleeding</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed effect model</td>
<td>37 6055</td>
<td>22 6023</td>
<td>1.67 (0.99–2.84)</td>
</tr>
<tr>
<td>Random effects model</td>
<td></td>
<td></td>
<td>1.65 (0.97–2.82)</td>
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<tr>
<td><strong>Mortality</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Fixed effect model</td>
<td>80 6055</td>
<td>68 6023</td>
<td>1.18 (0.85–1.63)</td>
</tr>
<tr>
<td>Random effects model</td>
<td></td>
<td></td>
<td>1.17 (0.85–1.63)</td>
</tr>
</tbody>
</table>

# Prolonged/Extended DAPT and Mortality:

<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAPT</td>
<td>First or second generation DES (NEJM publication)</td>
<td>All-cause mortality HR=1.36 [95% CI, 1.00 to 1.85]; P = 0.05) Bleeding-related deaths 11 vs 3 pts (P=0.06)</td>
</tr>
<tr>
<td>5 Meta-analyses (published prior to OPTIDUAL)</td>
<td>Predominantly newer generation DES-treated patients</td>
<td>Numerically or statistically significant increased risk of all-cause (though not cardiovascular) death</td>
</tr>
<tr>
<td>1 Meta-analysis (Elmariah S et al)</td>
<td>Post-stent and other indications for DAPT</td>
<td>No increase in CV or non-CV mortality</td>
</tr>
<tr>
<td>ERC Primary Analysis (before OPTIDUAL)</td>
<td>Predominantly newer generation DES-treated patients</td>
<td>Statistically significant increase in all-cause mortality with prolonged DAPT</td>
</tr>
<tr>
<td>ERC Primary Analysis (including OPTIDUAL)</td>
<td>Predominantly newer generation DES-treated patients</td>
<td>No statistically significant difference in all-cause mortality</td>
</tr>
<tr>
<td>Analysis of 6 trials (Udell JA et al)</td>
<td>Patients post-MI treated with DAPT</td>
<td>No increase in CV or non-CV mortality</td>
</tr>
<tr>
<td>FDA Drug Safety Communication</td>
<td>Long-term trials of patients with CV disease or stroke Rx with clopidogrel</td>
<td>No increase (or decrease) in the risk of all-cause mortality or cancer-related death</td>
</tr>
</tbody>
</table>

“Based on all available data, a majority of [ACC/AHA Duration of DAPT Focused Update] writing group members believed the data as a whole did not seem to suggest prolonged DAPT resulted in increased mortality”
CHARISMA: Subgroup Analysis

DAPT (ASA+clopidogrel) vs ASA+placebo in patients with vascular disease or multiple CRF

CAVEAT: Post-hoc analysis of an overall negative (neutral) study

GUSTO Severe Bleeding: 1.7% vs 1.3% (P=0.09)
GUSTO Moderate Bleeding: 2.1% vs 1.3% (P<0.001)

With Prior MI

Without Prior MI

Dual Antiplatelet Therapy Study: Results in Post-MI and SIHD Subgroups

Yeh RW et al. JACC 2015
PEGASUS: Primary Endpoint

N = 21,162
Median follow-up 33 months

CV Death, MI, or Stroke (%)

Ticagrelor 90 mg
HR 0.85
(95% CI 0.75 – 0.96)
P = 0.008
NNT = 84

Ticagrelor 60 mg
HR 0.84
(95% CI 0.74 – 0.95)
P = 0.004
NNT = 79

Ticagrelor 90 (7.85%)
Ticagrelor 60 (7.77%)
Placebo (9.04%)

TIMI Major Bleeding
Ticagrelor 90 mg: 2.6%
Ticagrelor 60 mg: 2.3%
Placebo: 1.1%
P < 0.001

Events per year per 10,000 patients:
• Ischemic events prevented: 40-42
• Bleeding events causes: 31-41

Bonaca MP et al. NEJM 2015
Risk/Benefit of Antiplatelet Therapy for Secondary Prevention

ASA vs placebo  
Ticagrelor + ASA vs ASA alone

### Efficacy

- **Major Vascular Events**
  - Treatment Better: 0.81 (0.75 – 0.87)
  - Treatment Worse: 0.84 (0.74 – 0.95)
- **CV Death**
  - Treatment Better: 0.91 (0.82 – 1.00)
  - Treatment Worse: 0.83 (0.68 – 1.01)
- **Coronary Death**
  - Treatment Better: 0.87 (0.78 – 0.98)
  - Treatment Worse: 0.80 (0.62 – 1.04)

### Safety

- **Major Extracranial Bleed**
  - Treatment Better: 2.69 (1.25 – 5.76)
  - Treatment Worse: 2.32 (1.68 – 3.21)
- **Hemorrhagic Stroke**
  - Treatment Better: 0.97 (0.37 – 2.51)
  - Treatment Worse: 1.67 (0.97 – 2.90)

Slide courtesy of Marc Sabatine, MD, MPH
# Trials And Trial Subgroups Evaluating DAPT In Patients Treated For Or With Prior ACS Or MI

<table>
<thead>
<tr>
<th>Study</th>
<th>Events Extended DAPT</th>
<th>Total Extended DAPT</th>
<th>Events Aspirin Alone</th>
<th>Total Aspirin Alone</th>
<th>MACE</th>
<th>Risk Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARISMA</td>
<td>125</td>
<td>1903</td>
<td>162</td>
<td>1943</td>
<td></td>
<td>0.77 (0.61 - 0.98)</td>
</tr>
<tr>
<td>PRODIGY</td>
<td>63</td>
<td>732</td>
<td>69</td>
<td>733</td>
<td></td>
<td>0.91 (0.65 - 1.28)</td>
</tr>
<tr>
<td>ARCTIC-Int’n</td>
<td>3</td>
<td>156</td>
<td>4</td>
<td>167</td>
<td></td>
<td>0.79 (0.18 - 3.51)</td>
</tr>
<tr>
<td>DAPT</td>
<td>59</td>
<td>1805</td>
<td>108</td>
<td>1771</td>
<td></td>
<td>0.52 (0.38 - 0.72)</td>
</tr>
<tr>
<td>DES-LATE</td>
<td>56</td>
<td>1512</td>
<td>66</td>
<td>1551</td>
<td></td>
<td>0.85 (0.60 - 1.21)</td>
</tr>
<tr>
<td>PEGASUS</td>
<td>980</td>
<td>14095</td>
<td>578</td>
<td>7067</td>
<td></td>
<td>0.84 (0.76 - 0.94)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1286</strong></td>
<td><strong>20203</strong></td>
<td><strong>987</strong></td>
<td><strong>13232</strong></td>
<td></td>
<td><strong>0.78 (0.67 - 0.90)</strong></td>
</tr>
</tbody>
</table>

$P = 0.001$

1.1% absolute reduction in MACE over mean 31 month DAPT Rx

Trials And Trial Subgroups Evaluating DAPT In Patients Treated For Or With Prior ACS Or MI

<table>
<thead>
<tr>
<th>Study</th>
<th>Extended DAPT</th>
<th>Aspirin Alone</th>
<th>Risk Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHARISMA</td>
<td>Events: 45, Total: 1903</td>
<td>Events: 39, Total: 1943</td>
<td>1.17 (0.76 - 1.79)</td>
</tr>
<tr>
<td>PRODIGY</td>
<td>Events: 9, Total: 732</td>
<td>Events: 6, Total: 733</td>
<td>1.50 (0.53 - 4.20)</td>
</tr>
<tr>
<td>ARCTIC-Int’n</td>
<td>Events: 2, Total: 156</td>
<td>Events: 0, Total: 167</td>
<td>5.35 (0.26 - 110.6)</td>
</tr>
<tr>
<td>DAPT</td>
<td>Events: 34, Total: 1805</td>
<td>Events: 14, Total: 1771</td>
<td>2.38 (1.27 - 4.43)</td>
</tr>
<tr>
<td>DES-LATE</td>
<td>Events: 39, Total: 1512</td>
<td>Events: 31, Total: 1551</td>
<td>1.27 (0.79 - 2.03)</td>
</tr>
<tr>
<td>PEGASUS</td>
<td>Events: 242, Total: 13946</td>
<td>Events: 54, Total: 6996</td>
<td>2.50 (1.86 - 3.36)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Events: 371, Total: 20054</td>
<td>Events: 144, Total: 13161</td>
<td>1.73 (1.19 - 2.50)</td>
</tr>
</tbody>
</table>

0.8% absolute increase in major bleeding over mean 31 month DAPT Rx

Trials And Trial Subgroups Evaluating DAPT In Patients Treated For Or With Prior ACS Or MI

<table>
<thead>
<tr>
<th>Event</th>
<th>Risk Ratio (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major adverse cardiovascular events</td>
<td>0.78 (0.67 - 0.90)</td>
<td>0.001</td>
</tr>
<tr>
<td>Cardiovascular death</td>
<td>0.85 (0.74 - 0.98)</td>
<td>0.03</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>0.70 (0.55 - 0.88)</td>
<td>0.003</td>
</tr>
<tr>
<td>Stroke</td>
<td>0.81 (0.68 - 0.97)</td>
<td>0.02</td>
</tr>
<tr>
<td>Stent Thrombosis (Definite/Probable)</td>
<td>0.50 (0.28 - 0.89)</td>
<td>0.02</td>
</tr>
<tr>
<td>Major Bleeding</td>
<td>1.73 (1.19 - 2.50)</td>
<td>0.004</td>
</tr>
<tr>
<td>Non-cardiovascular death</td>
<td>1.03 (0.86 - 1.23)</td>
<td>0.76</td>
</tr>
<tr>
<td>All-cause death</td>
<td>0.92 (0.83 - 1.03)</td>
<td>0.13</td>
</tr>
</tbody>
</table>
Treatment Algorithm for Duration of P2Y$_{12}$ Inhibitor Therapy in Patients With SIHD (Without ACS Within the Past Year)

SIHD

- No Hx of MI, PCI or recent CABG
- Prior MI, currently on DAPT
- S/P CABG

BMS

- Class I: At least 1 mo (clopidogrel)
  - No high risk of bleeding and no significant overt bleeding on DAPT
  - Class IIb: >1 mo may be reasonable

Class IIb: 12 mo may be reasonable (clopidogrel)

- Class III: No Benefit
  - 0 mo
  - 1 mo
  - 3 mo
  - 6 mo
  - 12 mo

DES

- Class I: At least 6 mo (clopidogrel)
  - No high risk of bleeding and no significant overt bleeding on DAPT
  - Class IIb: >6 mo may be reasonable

- Discontinuation after 3 mo may be reasonable

Treatment Algorithm for Duration of P2Y12 Inhibitor Therapy in Patient With Recent ACS (NSTE-ACS or STEMI)

Recent ACS (NSTE-ACS or STEMI)

- CABG
- Medical Therapy
- Lytic (STEMI)
- PCI (BMS or DES)

0 mo

Class I: After CABG, resume P2Y12 inhibitor to complete 1 y of DAPT (clopidogrel, ticagrelor)

6 mo

Class I: At least 12 mo (clopidogrel, ticagrelor)

Class I: At least 14 d and up to 12 mo (clopidogrel)

Class I: At least 12 mo (clopidogrel, prasugrel, ticagrelor)

12 mo

No high risk of bleeding and no significant overt bleeding on DAPT

Class Ib: Discontinuation after 6 mo may be reasonable

High bleeding risk* or significant overt bleeding

Class Ib: >12 mo may be reasonable

### Clinical and Procedural Factors Associated with Increased Ischemic Risk (Including Stent Thrombosis) or Increased Bleeding Risk

<table>
<thead>
<tr>
<th>Increased Ischemic Risk/Risk of Stent Thrombosis (may favor longer duration DAPT)</th>
<th>Increased Bleeding Risk (may favor shorter duration DAPT)</th>
</tr>
</thead>
</table>
| **Increased Ischemic Risk** | • History of prior bleeding  
• Oral anticoagulant therapy  
• Female sex  
• **Advanced age**  
• Low body weight  
• **CKD**  
• **Diabetes mellitus**  
| **Increased Risk of Stent Thrombosis** | • History of prior bleeding  
• Oral anticoagulant therapy  
• Female sex  
• **Advanced age**  
• Low body weight  
• **CKD**  
• **Diabetes mellitus**  
• Anemia  
• Chronic steroid or NSAID therapy  
| **Advanced age**  
• ACS presentation  
• Multiple prior MI  
• Extensive CAD  
• **Diabetes mellitus**  
• CKD  
| **ACS presentation**  
• Diabetes mellitus  
• Left ventricular ejection fraction <40%  
• First generation drug-eluting stent  
• Stent under-sizing or under-deployment  
• Small stent diameter or greater stent length  
• Bifurcation stents  
• In-stent restenosis  
• “Complex PCI”  

The Dilemma of Selecting Appropriate Patients for Short or Long Term DAPT

Analysis of the PARIS Registry

Baber, Mehran et al – JACC 2016. Slide courtesy of Roxana Mehran, MD
*VKA target INR when used as part of triple therapy = 2.0-2.5
Ideal vs Real Studies of Double/Triple Therapy
<table>
<thead>
<tr>
<th>Trial</th>
<th>Arm 1</th>
<th>Arm 2</th>
<th>Arm 3</th>
<th>Arm 4</th>
<th>Duration</th>
<th>1° Endpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOEST</td>
<td>OAC (VKA) + clopidogrel</td>
<td>OAC (VKA) + clopidogrel + ASA</td>
<td></td>
<td></td>
<td>1 year</td>
<td>Any bleeding episode</td>
</tr>
<tr>
<td>ISAR-TRIPLE</td>
<td>OAC (VKA) + ASA + 6 weeks clopidogrel</td>
<td>OAC (VKA) + ASA + 6 months clopidogrel</td>
<td></td>
<td></td>
<td>9 Months</td>
<td>Composite of death, MI, stent thrombosis, stroke, TIMI major bleeding</td>
</tr>
<tr>
<td>PIONEER AF-PCI</td>
<td>Rivaroxaban 15 mg qD + P2Y12</td>
<td>Rivaroxaban 2.5 mg BID + DAPT (1, 6 or 12 mo) then ASA alone</td>
<td>VKA + DAPT (1, 6 or 12 mo) then ASA alone</td>
<td></td>
<td>12 months</td>
<td>“Clinically significant bleeding” (TIMI major + requiring med attn + minor)</td>
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<tr>
<td>P2Y12/DAPT:</td>
<td>Clop or “alternate P2Y12” (Pras or Tic)</td>
<td></td>
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</tr>
<tr>
<td>RE-DUAL</td>
<td>Dabigatran 150 mg BID + P2Y12</td>
<td>Dabigatran 110 mg BID + P2Y12</td>
<td>Warfarin + ASA (1-3 mo) + P2Y12</td>
<td></td>
<td>Event driven, up to 30 months Rx</td>
<td>ISTH major or Clinically relevant non-major bleeding</td>
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<td></td>
<td></td>
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<tr>
<td>P2Y12 = Clop or Tic</td>
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<td></td>
</tr>
<tr>
<td>AUGUSTUS</td>
<td>Apixaban 2.5 or 5 mg BID + P2Y12</td>
<td>Apixaban 2.5 or 5 mg BID + P2Y12 + ASA</td>
<td>Warfarin + P2Y12 + ASA</td>
<td>Warfarin + P2Y12</td>
<td>6 months</td>
<td>Major or Clinically relevant non-major bleeding</td>
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<tr>
<td>P2Y12 = Clop (expected for most patients) or Prag or Tic</td>
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<tr>
<td>ENTRUST AF-PCI</td>
<td>Edoxaban 60 mg qD + P2Y12</td>
<td>VKA + P2Y12 + ASA</td>
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<td></td>
<td>12 months</td>
<td>ISTH major or CRNM bleeding</td>
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<tr>
<td>P2Y12:</td>
<td>Clop (or if indicated Pras or Tic)</td>
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Additional smaller trials: APPROACH-ACS-AF; AOC-ALONE; MUSICA-2; MANJUSRI
Summary

• There is no such thing as a free lunch. Addition (DAPT vs monotherapy), intensification (ticagrelor/prasugrel vs clopidogrel), or prolongation (>12 months) of antiplatelet therapy necessitates an unavoidable tradeoff between reduction in ischemic events and increase in bleeding events

• Prolonged DAPT for 2-3 years leads to a ≈1-2% reduction in ischemic events (stent thrombosis, spontaneous MI) at the cost of a ≈1% increase in major bleeding

• New ACC/AHA Duration of DAPT Guideline Focused Update allows and encourages individualized duration of DAPT (short, standard, or prolonged) based on the patient’s ischemic/bleeding (benefit/risk) profile

• Selecting patients for short, standard or prolonged therapy often easier said than done

• It will be challenging to synthesize generalizable practice recommendations from ongoing studies of double/triple therapy

• Paucity of data on optimal DAPT duration for 3rd (bioresorbable polymer) and 4th (bioresorbable vascular scaffold) DES, let alone triple therapy with these stents