DES, BRS and DCB
New DES Data
Presentation Theater 1, Level 1

Short DAPT trials with Contemporary/Future DES: What Do We Expect?

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Dr. Honoris Causa in Biomedical Engineering

Sunday, Apr 28, 2019
3:42 PM – 3:50 PM

Short DAPT:

- **Published short DAPT studies in HBR population (DES vs. BMS)**
- **Current European Guidelines**
- Published and ongoing Short DAPT Studies
  - in HBR population
  - in all-comer/non-HBR population

Published Short DAPT studies for HBR patients

Study	Device/ drug
LEADERS FREE N=2400	BioFreedom/ BiolimusA9
ZEUS HBR N=828	Endeavor/ Zotarolimus
SENIOR N=1200 (age≥75)	SYNERGY/ Everolimus
LEADERS FREE II N=1200	BioFreedom/ BiolimusA9

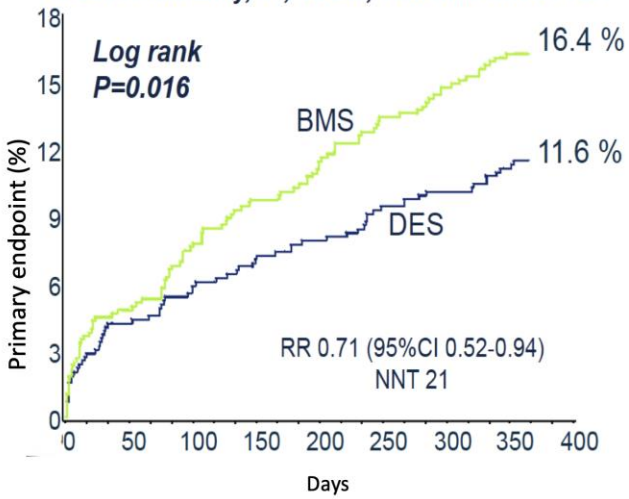
Drug-eluting stents in elderly patients with coronary artery disease (SENIOR): a randomised single-blind trial

Olivier Varenne, Stéphane Cook, Georgios Sideris, Sasko Kedev, Thomas Cuisset, Didier Carrié, Thomas Hovasse, Philippe Garot, Rami El Mahmoud, Christian Spaulding, Gérard Helft, José F Diaz Fernandez, Salvatore Brugaletta, Eduardo Pinar-Bermudez, Josepa Mauri Ferre, Philippe Commeau, Emmanuel Teiger, Kris Bogaerts, Manel Sabate, Marie-Claude Morice, Peter R Sinnaeve, for the SENIOR investigators

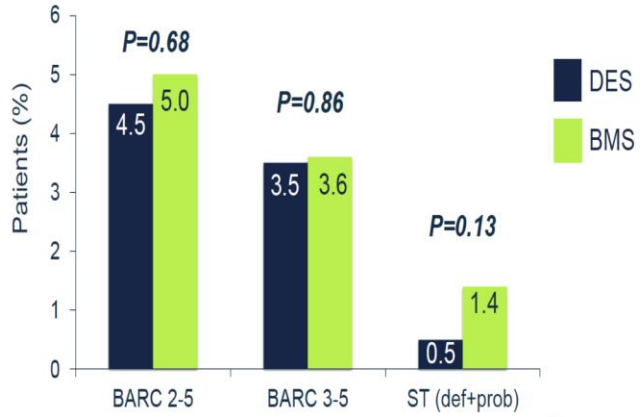
***Lancet* 2018; 391: 41–50**

Primary End Point

All-cause mortality, MI, stroke, ischemia-driven TLR



Safety Endpoints



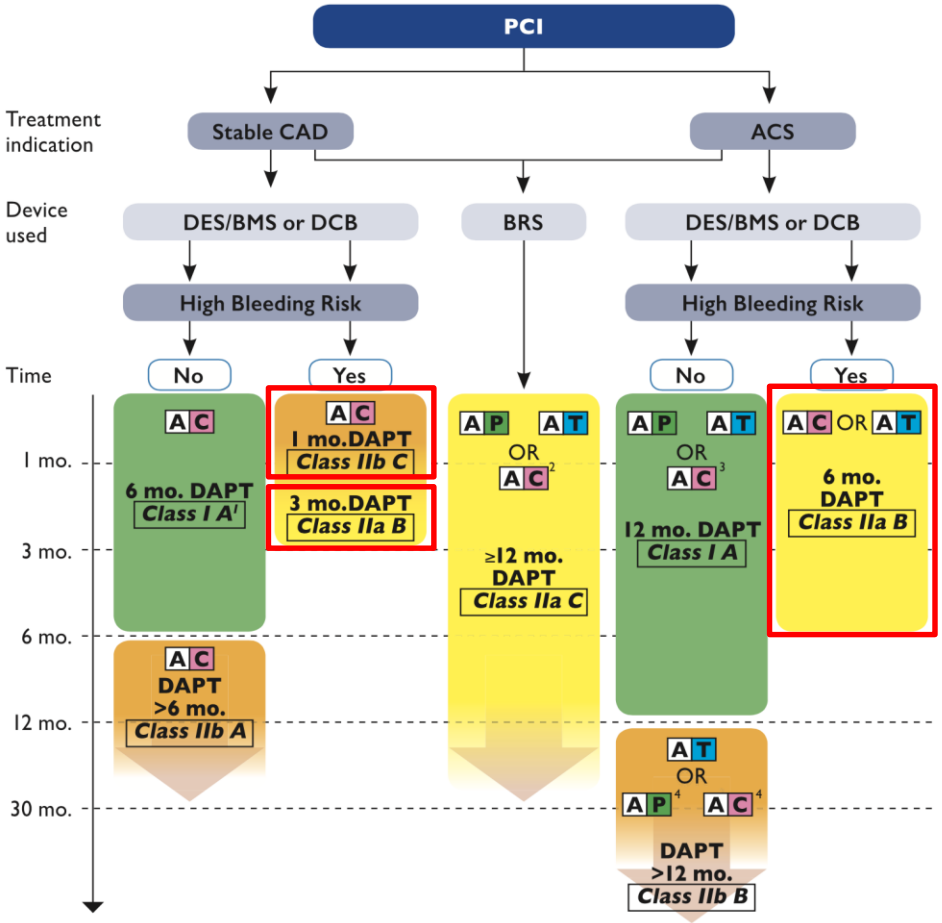
The difference was driven by ischemic driven TLR (1.7 vs. 5.9% P=0.0002)

Varenne O, Cook S, Sideris G, et al. A randomized trial of a bioresorbable polymer-based metallic DES vs BMS with short DAPT in patients with coronary artery disease older than 75 years: the SENIOR trial. Presented at: TCT 2017. November 1, 2017. Denver, CO.

Varenne O, Cook S, Sideris G, Kedev S, Cuisset T, Carrié D, et al. The Lancet Epub ahead of print.

Short DAPT in European Guidelines

2017 ESC focused update on DAPT and 2018 ESC/EACTS guideline on myocardial revascularization



Class I	Evidence and/or general agreement that a given treatment or procedure is beneficial, useful, effective.	Is recommended/is indicated
Class IIa	*Weight of evidence/opinion is in favour of usefulness/efficacy.*	Should be considered
Class IIb	*Usefulness/efficacy is less well established by evidence/opinion.*	May be considered

Recommendations on choice of stent and access site

Recommendations	Class[a]	Level[b]
DES are recommended over BMS for any PCI irrespective of: – clinical presentation – lesion type – planned non-cardiac surgery – anticipated duration of DAPT – concomitant anticoagulant therapy [100,578,579,640]	I	A

be considered.

ACS

6-month DAPT

In patients with ACS and stent implantation who are at high risk of bleeding (PRECISE-DAPT ≥25), discontinuation of P2Y12 inhibitor therapy after 6 months should be considered.

IIa	B

PRODIGY
Meta-analysis
(Palmerini et al)

Short DAPT:

- Published short DAPT studies in HBR population (DES vs. BMS)
- Current European Guidelines
- **Published and ongoing Short DAPT Studies**
  - **in HBR population**
  - in all-comer/non-HBR population

Ongoing Short DAPT studies for HBR patients

Study	Device/ drug	Polymer/ thickness	DAPT Duration	Design	Primary Endpoint
MASTER-DAPT **NCT03023020** N=4300	Ultimaster/ Sirolimus	Biodegradable/ 80µm	1 month	**RCT (DAPT regimen)** Short DAPT vs Guideline DAPT	NACE: Death, MI, stroke and bleeding(BARC 3or5)
COBRA REDUCE **NCT02594501** N=996	Cobra PzF/ No drug	Polyzene-F/ 71µm	2 weeks	**RCT (Stent+DAPT)** 2 Weeks vs.6 M **(COBRA) (any DES)**	Death, MI, def/ prob ST or ischemic stroke
TARGET SAFE **NCT03287167** N=1700	Firehawk/ Sirolimus	Biodegradable/ 89µm	1 month	**RCT (DAPT regimen)** 1M vs. 6M	NACCE: Death, MI, stroke, major bleeding
Onyx ONE **NCT03344653** N=2000	Resolute Onyx/Zotaro	Permanent/ 81µm	1 month	**RCT (Stent Type)** Onyx vs. BioFreedom (Both 1M)	Death,MI or def/prob ST
POEM - **NCT03112707** N=1023	SYNERGY/ Evero	Biodegradable/ 78µm	1 month	**Single arm with OPC**	MACE:C-death,MI or def/prob ST
EVOLVE Short DAPT **NCT02605447** N=2000	SYNERGY/ Evero	Biodegradable/ 78µm	3 months	**Single arm with OPC**	Death,MI or def/prob ST
XIENCE 28 **NCT03355742** N=800	Xience/ Evero	Permanent/ 81µm	1 months	**Single arm with OPC**	NACE: Death, MI, ST, stroke, bleeding (BARC2-5)
XIENCE 90 **NCT03218787** N=2000	Xience/ Evero	Permanent/ 81µm	3 months	**Single arm with OPC**	Death or MI
Onyx ONE Clear **NCT03647475** N=800	Resolute Onyx/Zotaro	Permanent/ 81µm	1 month	**Single arm with OPC**	Death or MI
LEADERS FREE III **NCT03118895** N=370	BioFreedom (CoCr)/ BiolimusA9	Free/ 84-88µm	1 month	**Single arm with OPC** BioFreedom arm in LEADERS FREE (1 month)	MACE: C-death, MI, def/prob ST

Ongoing Short DAPT studies for HBR patients

Study	Device/ drug	Polymer/ thickness	DAPT Duration	Design	Primary Endpoint
MASTER-DAPT **NCT03023020** N=4300	Ultimaster/ Sirolimus	Biodegradable/ 80μm	1 month	**RCT (DAPT regimen)** Short DAPT vs Guideline DAPT	NACE: Death, MI, stroke and bleeding(BARC 3or5)
COBRA REDUCE **NCT02594501** N=996	Cobra PzF/ No drug	Polyzene-F/ 71μm	2 weeks	**RCT (Stent+DAPT)** 2 Weeks vs.6 M **(COBRA)** **(any DES)**	Death, MI, def/ prob ST or ischemic stroke
TARGET SAFE **NCT03287167** N=1700	Firehawk/ Sirolimus	Biodegradable/ 89μm	1 month	**RCT (DAPT regimen)** 1M vs. 6M	NACCE: Death, MI, stroke, major bleeding
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4 RCTs and 6 single arm studies with OPC are ongoing.

All trials mandate to use specific type of latest DES.

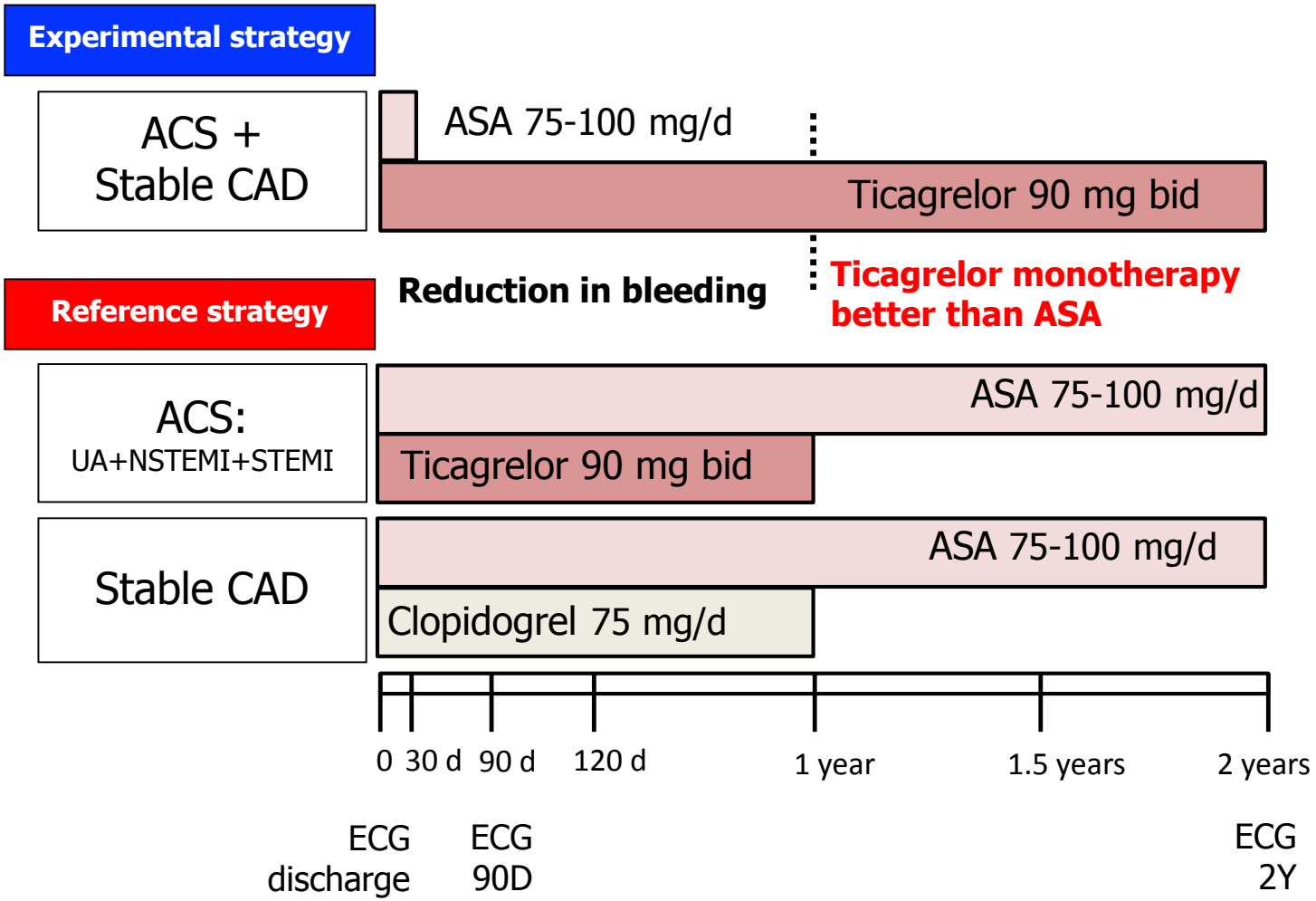
Short DAPT:

- Published short DAPT studies in HBR population (DES vs. BMS)
- Current European Guidelines
- **Published and ongoing Short DAPT Studies**
  - in HBR population
  - **in all-comer/non-HBR population**

Ticagrelor plus aspirin for 1 month, followed by ticagrelor monotherapy for 23 months vs aspirin plus clopidogrel or ticagrelor for 12 months, followed by aspirin monotherapy for 12 months after implantation of a drug-eluting stent: a multicentre, open-label, randomised superiority trial.

Vranckx P, Valgimigli M, Serruys PW, Windecker S, Lancet. 2018 Sep 15;392(10151):940-949.

❑ 15,991 pts randomized



"All-comers" PCI population
N = 15,991
1:1 Randomisation, open-label design, 130 centers worldwide

- Any type of lesions: Left main, SVG, CTO bifurcation, ISR, etc.
- Unrestricted use of DES (number, length)

Bivalirudin-supported

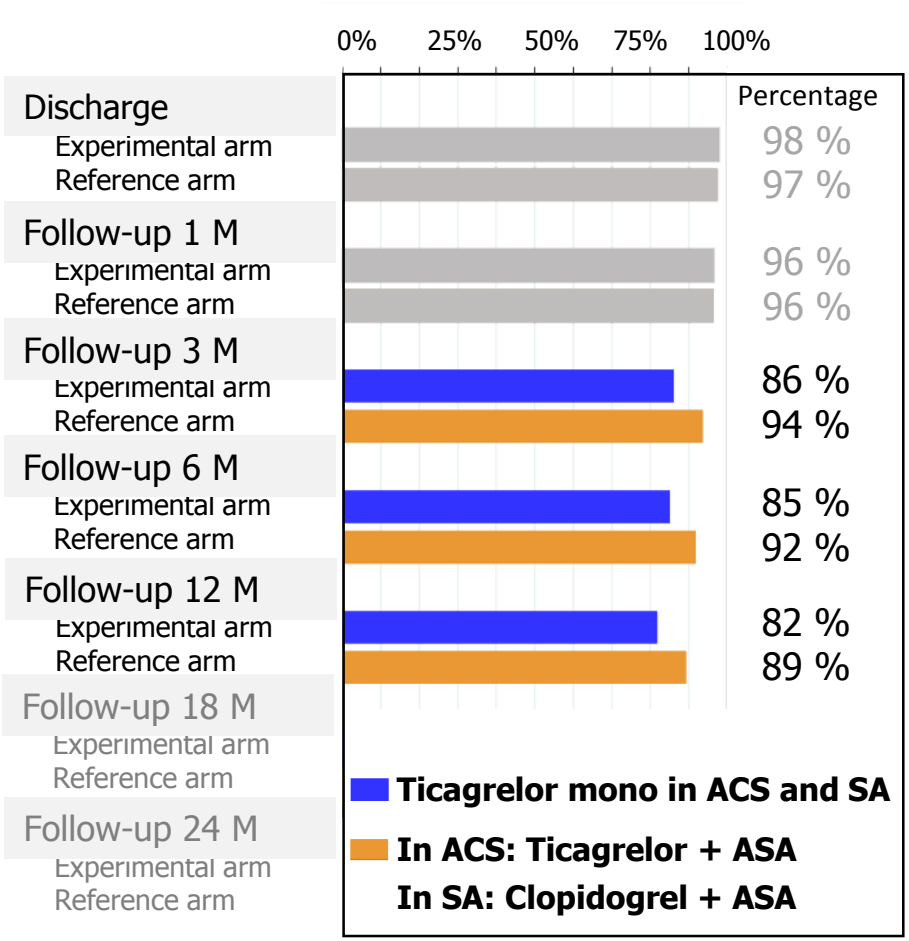
BioMatrix DES by default

Ticagrelor plus aspirin for 1 month, followed by ticagrelor monotherapy for 23 months vs aspirin plus clopidogrel or ticagrelor for 12 months, followed by aspirin monotherapy for 12 months after implantation of a drug-eluting stent: a multicentre, open-label, randomised superiority trial.

GLOBAL LEADERS

Vranckx P, Valgimigli M, Serruys PW, Windecker S, Lancet. 2018 Sep 15;392(10151):940-949.

Adherence to treatment strategies



Primary and secondary outcomes at 12 months (Intention to treat)

	Experimental group	Reference group	Risk Ratio (95% CI)	p-value
Number of pts.	N=7980	N=7988		
All-cause mortality or new Q-wave MI*	**1.95** %, (156)	**2.47** %, (197)	**0.79** (0.64-0.98)	**0.028**
All-cause mortality	**1.35** % (108)	**1.64** % (131)	**0.82** (0.64-1.06)	0.138
New Q-wave MI	**0.60** % (48)	**0.86** % (69)	**0.70** (0.48-1.00)	0.052

*Mantel-Cox method based on time of death or diagnosis of new Q wave MI

**Mantel-Cox log-rank method for secondary safety endpoints

Ticagrelor plus aspirin for 1 month, followed by ticagrelor monotherapy for 23 months vs aspirin plus clopidogrel or ticagrelor for 12 months, followed by aspirin monotherapy for 12 months after implantation of a drug-eluting stent: a multicentre, open-label, randomised superiority trial.

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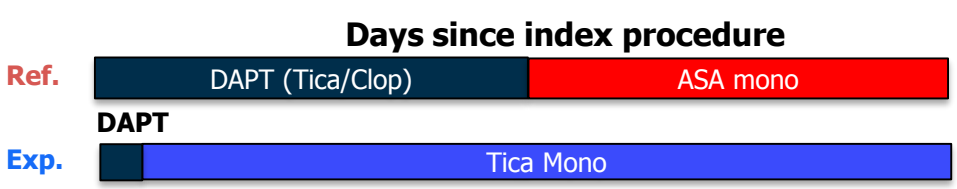
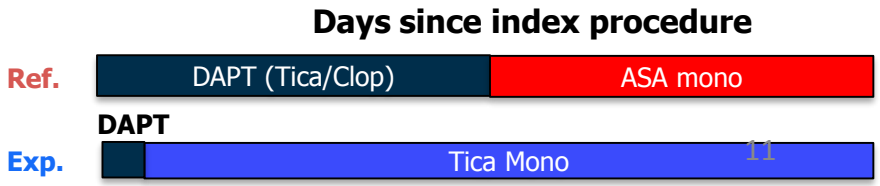
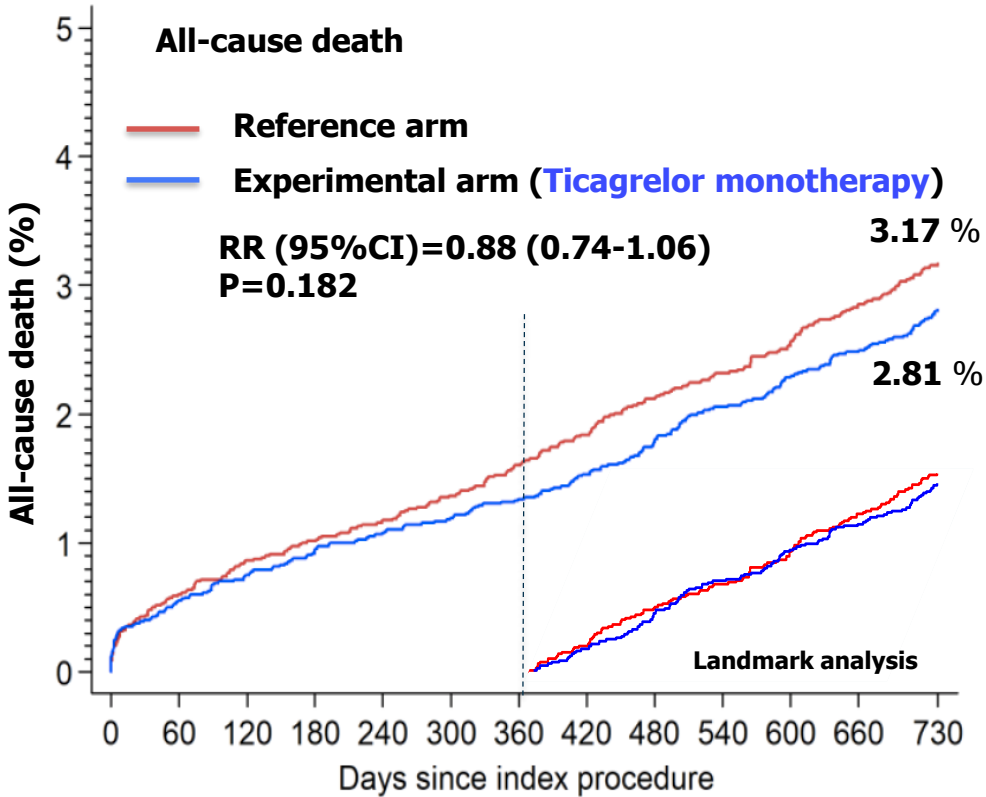
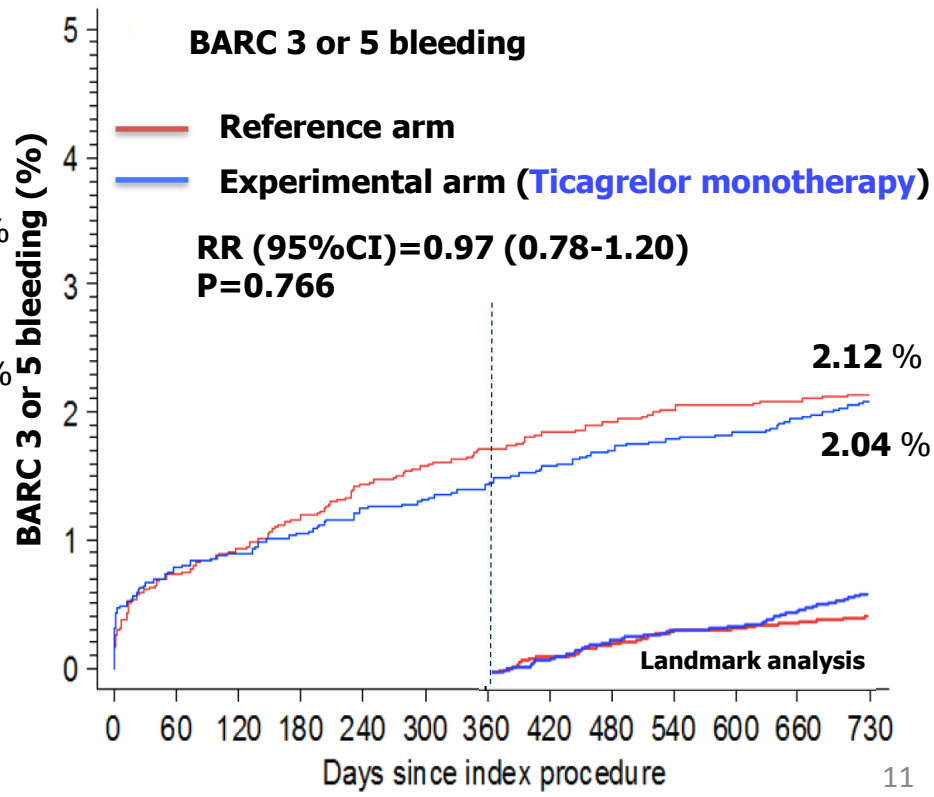
"All-comers" PCI population **N = 15,991**

1:1 Randomisation, open-label design,
BioMatrix DES by default, Unrestricted use of DES (number, length)

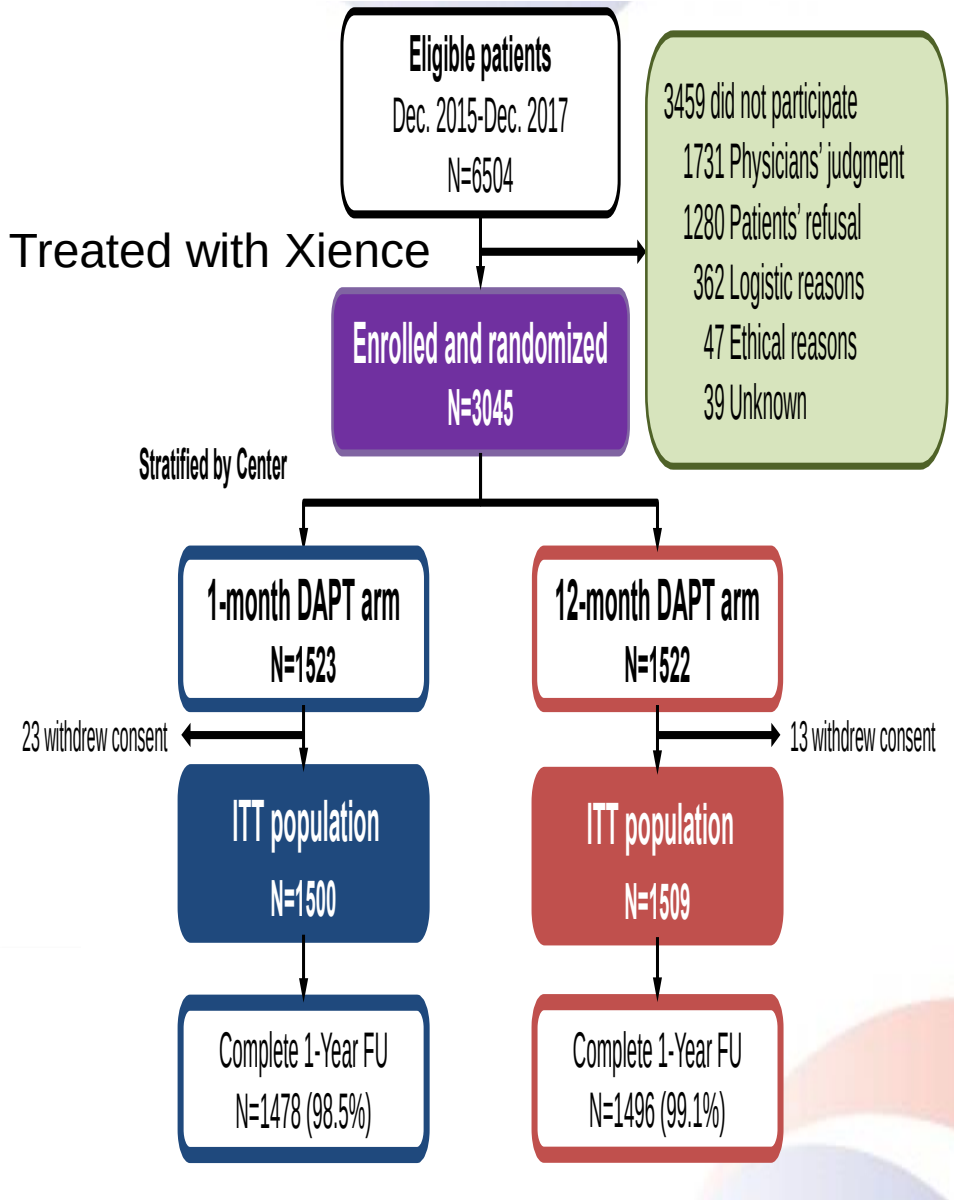






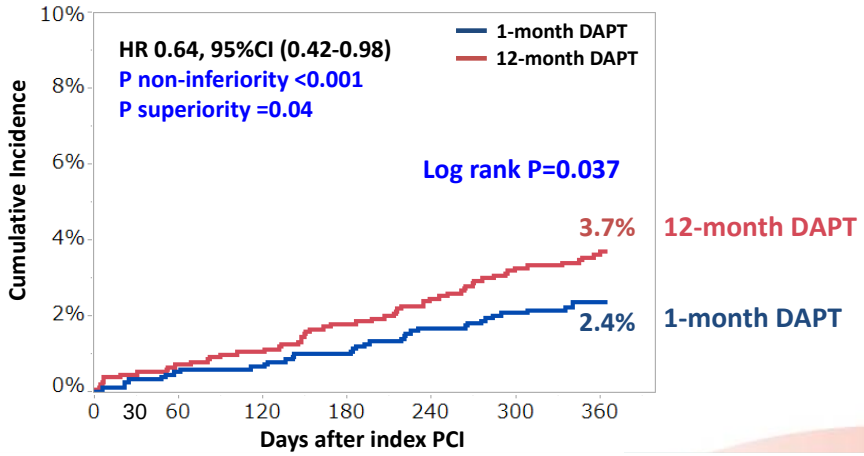


STOPDAPT-2



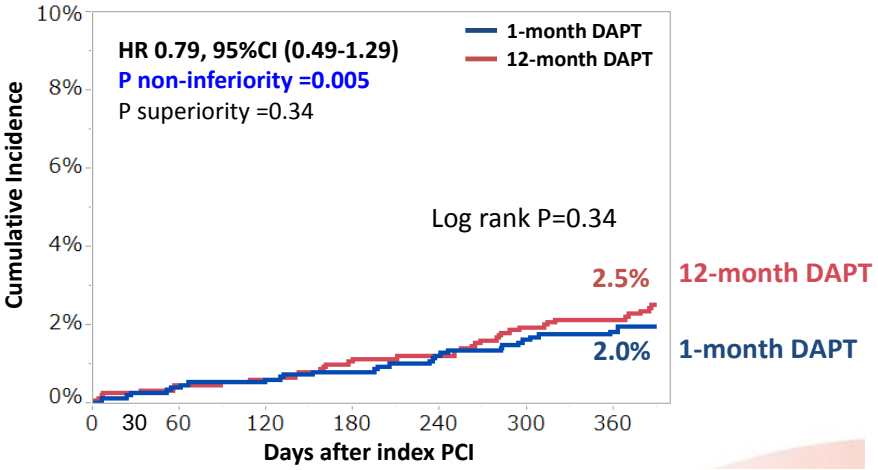
Primary Endpoint: Net clinical benefit

CV death/MI/ST/Stroke/TIMI major/minor bleeding



Major secondary ischemic endpoint

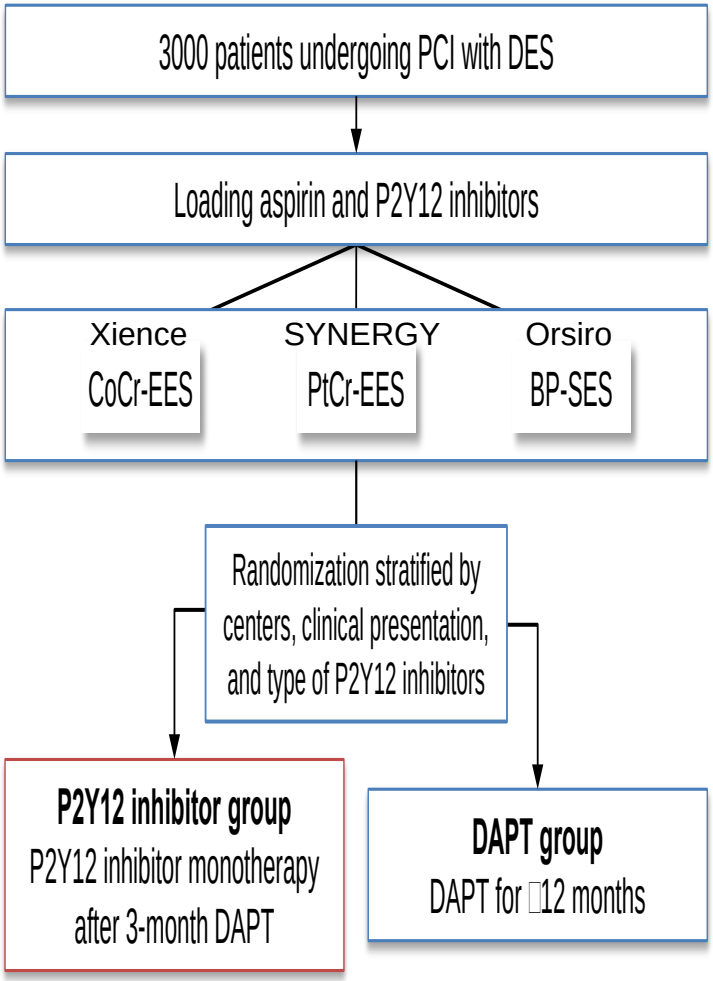
CV death/MI/ST/Stroke



Presented by Watanabe at ACC19

SMART-CHOICE

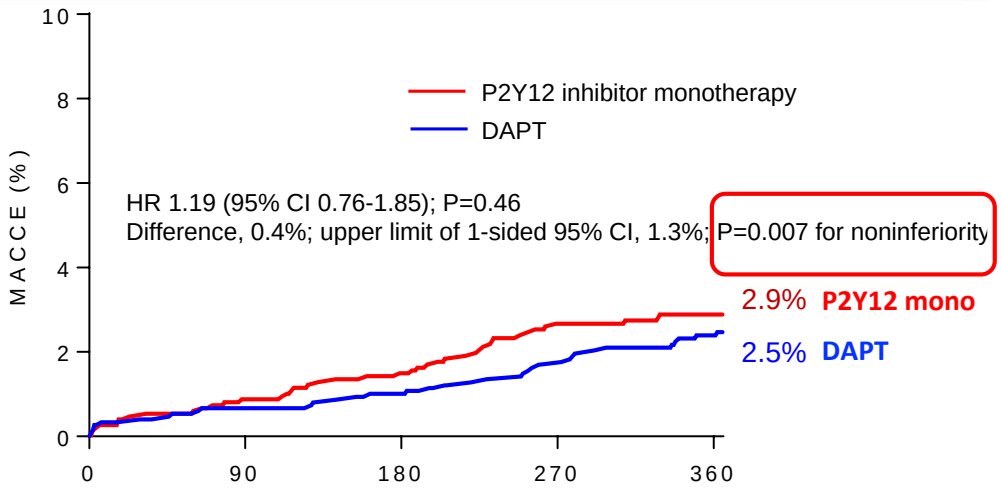
A prospective, multicenter, randomized, open-label, noninferiority trial



Primary endpoint: 12-month MACCE

MACCE at 1Y

All-cause death, MI, and stroke



Bleeding BARC type 2-5 at 1Y

2.0% vs 3.4%

HR 0.58 (95%: 0.36-0.92), p=0.02

Presented by Hahn at ACC19

Ongoing Short DAPT studies for all-comers/ non-HBR

Study	Device/	Population/N	DAPT Duration	Control arm	Primary Endpoint
Followed by P2Y12 inhibitor monotherapy					
TWILIGHT NCT02270242	Any approved DES	High risk PCI 9000	3-M DAPT followed by 12-M Tica mono	15-M DAPT (ASA+Tica)	Bleeding episode at 15 months defined as BARC 2, 3 or 5 bleeding
TICO NCT02494895	Orsiro 60µm	ACS 3056	3-M DAPT followed by 9-M Tica mono	12-M DAPT (ASA+Tica)	MACCE
MODEL U-SES NCT02837003	Ultimaster 80µm	All-comers 1500	3-M DAPT followed by any mono (ASA or P2Y12)	Historical control	Death or MI
ASET NCT03469856	SYNERGY 78µm	Low risk CAD 200	3M prasugrel mono without ASA	Single arm	Composite of C-death, TV-MI, def ST
ISAR DAPT NCT02609698	Coroflex ISAR 55-67µm	Low risk CAD 906	3 months	6 months	MACE (C-death, MI, TLR)
HOST-IDEA NCT02601157	Orsiro vs Coroflex ISAR	Stable CAD 2152	3 months	12 months	NACCE (C-death, TV-MI, CD-TLR, def/prob ST, major bleeding)

Ongoing Short DAPT studies for all-comers/ non-HBR

Followed by P2Y12 inhibitor monotherapy

5 RCTs and 1 single arm study are ongoing.

Majority of trials are implementing P2Y12 inhibitor monotherapy following short DAPT.

5 trials mandate to use specific types of latest DES including 2 ultra-thin strut DES .

Study	Device/	Population/N	DAPT Duration	Control arm	Primary Endpoint
HOST-IDEA **NCT02601157**	Orsiro vs Coroflex ISAR	Stable CAD 2152	3 months	12 months	NACCE (C-death, TV-MI, CD-TLR, def/prob ST, major bleeding)

Ongoing Short DAPT studies for all-comers/ non-HBR

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MODEL U-SES NCT02837003	Ultimaster 80µm	All-comers 1500	3-M DAPT followed by any mono (ASA or P2Y12)	Historical control	Death or MI
NO DAPT trial					
ASET NCT03469856	SYNERGY 78µm	Low risk CAD 200	3M prasugrel mono without ASA	Single arm	Composite of C-death, TV-MI, def ST
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ASET (Acetylsalicylic acid eliminate trial): Trial Schema

Chairman: Patrick W. Serruys, PI: Pedro Lemos

Patients with chronic stable angina or stabilized ACS (normal biomarkers) and SYNTAX score <23

↓

Loading with DAPT standard of care (if not on long-term therapy) at least 2 hours prior to catheterization or PCI

↓

Optimal result with PCI with SYNERGY™ stents
(Based on clinical, angiographic and/or intracoronary imaging findings)

↓ Yes

Loading Prasugrel during/post PCI

↓

ASA discontinued on the day after PCI, Prasugrel monotherapy for 3 months, ASA monotherapy thereafter

↓

3 months reporting of the Primary Endpoint

↓

Additional 1 month observational period (4 months follow-up) after discontinuation of the drug

↓ No

Conventional DAPT according to institutional protocol

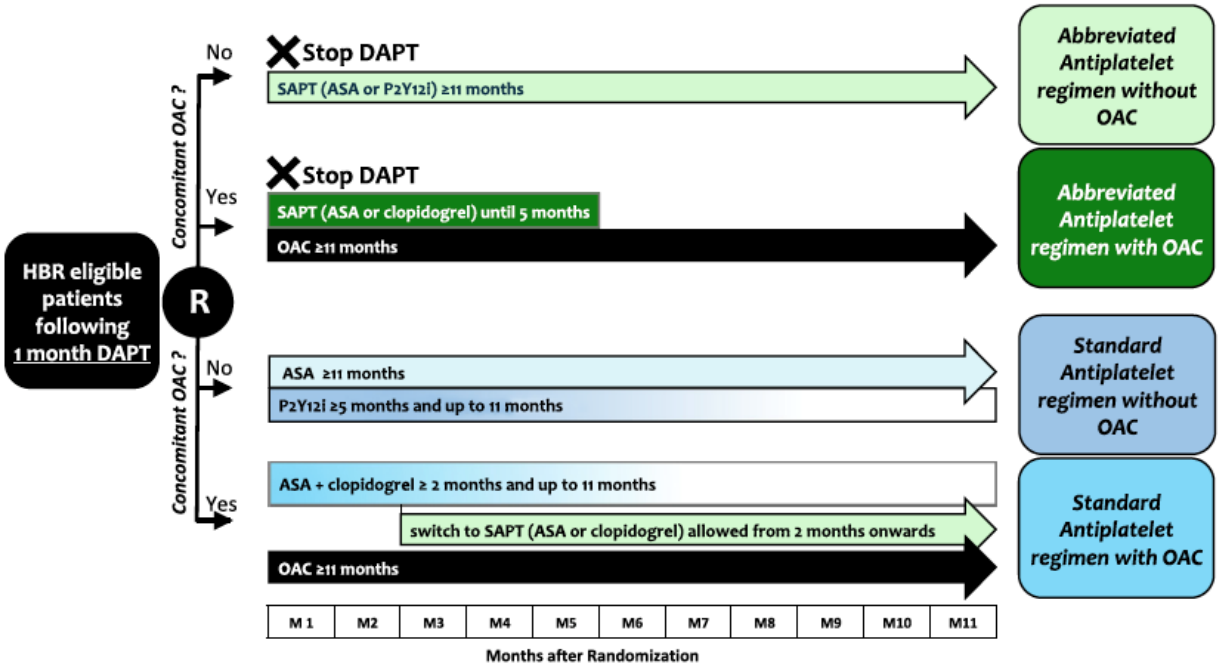
Kogame N, Serruys PW, et al. Eurointervention. 2019 Apr 23. pii: EIJ-D-19-00131

Conclusion

- Many trials to evaluate short DAPT (≤3M) in HBR compare either DAPT regimens, stent types or combination of both.
- In all-comer/ non-HBR population, many trials are implementing P2Y12 mono-therapy following short DAPT (1 or 3M).
- In the Global Leaders trial, 1-month DAPT followed by 23-m ticagrelor monotherapy did not show superiority to 12-month DAPT in all-comers population. However, currently reported two RCTs showed that one- or three-month DAPT followed by P2Y12 inhibitor monotherapy was superior for bleeding and non-inferiority for composite ischemic endpoint to 12-month DAPT at one-year follow-up.
- Majority of ongoing short DAPT trials mandate to use specific type of latest generation DES.
- One "No DAPT" trial is ongoing.

Design and rationale of the Management of High Bleeding Risk Patients Post Bioresorbable Polymer Coated Stent Implantation With an Abbreviated Versus Standard DAPT Regimen (MASTER DAPT) Study

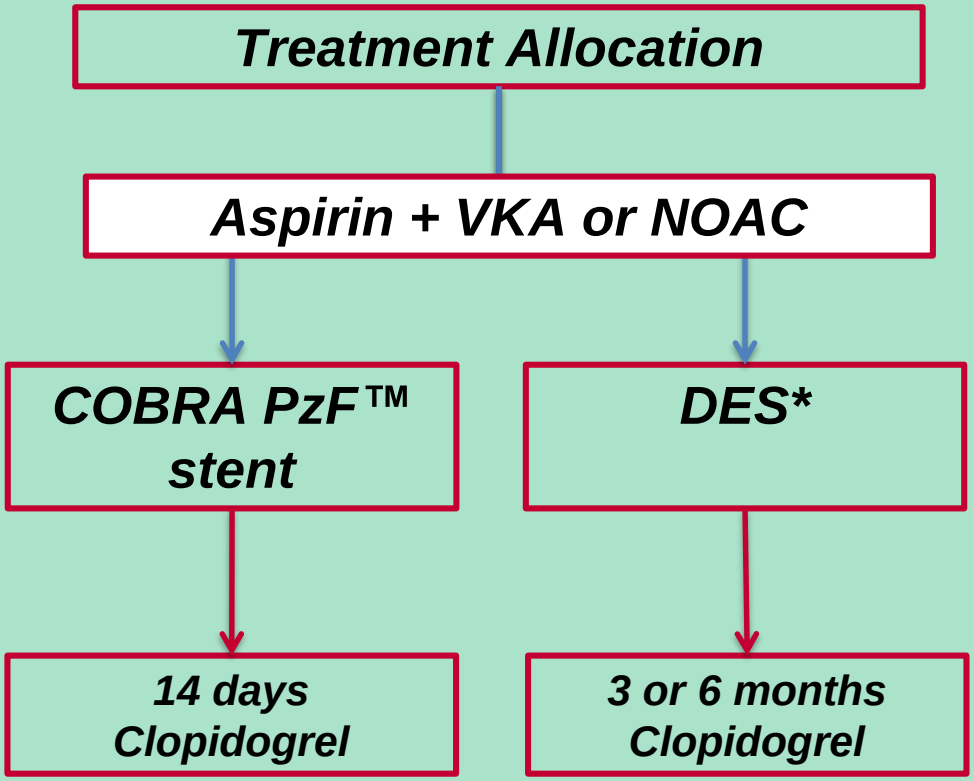
4,300 HBR patients recruited from ≥100 interventional cardiology



Treatment in the experimental and control arm. In patients randomized to an abbreviated antiplatelet regimen without OAC, a single antiplatelet agent (SAPT; either ASA or P2Y12i) is continued until 11 months postrandomization. In patients requiring OAC, an SAPT (either ASA or clopidogrel) is continued until 5 months postrandomization, and OAC is prescribed until at least 11 months postrandomization. In patients randomized to a standard antiplatelet regimen without OAC, aspirin is continued until at least 11 months postrandomization. The P2Y12 inhibitor being taken at the time of randomization is continued for at least 5 months postrandomization and up to 11 months postrandomization. In patients requiring OAC, aspirin and clopidogrel are continued for at 2 months after randomization and up to 11 months postrandomization. Thereafter, a single antiplatelet (SAPT; either aspirin or clopidogrel) is continued up to 11 monthspost randomization. OAC is continued until at least 11 months postrandomization.

Frigoli et al. Am Heart J 2019;209:97-105.

COBRA REDUCE Trial: Trial design



Principal Investigator

- *Prof. Adnan Kastrati, DE*
- *Dr. Robert Byrne, DE*

Primary endpoint

- *BARC ≥2 bleeding event at 6 months (Superiority)*
- *Composite of all-cause death, myocardial infarction, definite or probable stent thrombosis, or ischemic stroke at 6 months (Non-inferiority)*

** FDA-approved second generation DES (Xience, Promus, Synergy or Resolute)*

Onyx ONE Global RCT Study

Short Term (1 Month) DAPT

Leading Investigator: Prof. Stephan Windecker
Co-Investigators: Elvin Kedhi & Azeem Latib

Prospective, Multicenter, Single Blind Randomized Study for High bleeding risk patients undergoing PCI[1]

Resolute ONYX™ DES with 1 Month DAPT (N=1000)

2000 Patients
Up to 90 Global sites
1:1 Randomization

BioFreedom™ DCS with 1 Month DAPT (N=1000)

Primary Endpoint: Composite of Cardiac Death, MI and Stent Thrombosis (def/prob) at 1 year

Powered Secondary Endpoint: Target Lesion Failure (TLF) at 1 year

Other Secondary Endpoints: Acute success rates; BARC bleeding, TVF, revascularizations, all death, stroke and MACE at all timepoints; TLF at other follow-up

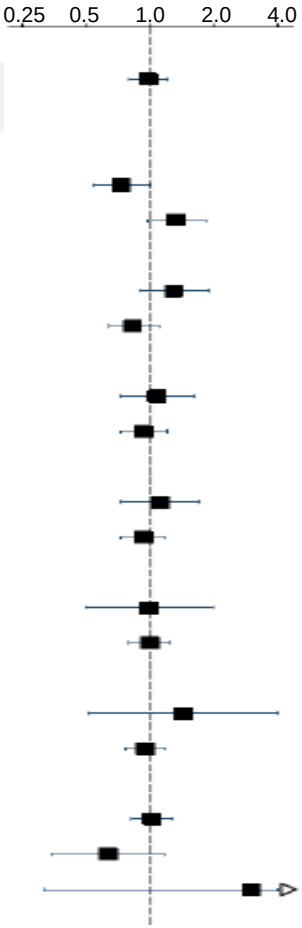
Antiplatelet Therapy: all patients to discontinue DAPT at 1 month, thereafter SAPT only

[1] CAD patients (ACS + stable angina) undergoing PCI who are at increased risk of bleeding or in whom DAPT >1 month is undesirable, see inclusion criteria for HBR definition.

BACKUP

Predefined subgroup analysis of the key secondary safety endpoint of BARC 3 or 5 bleeding

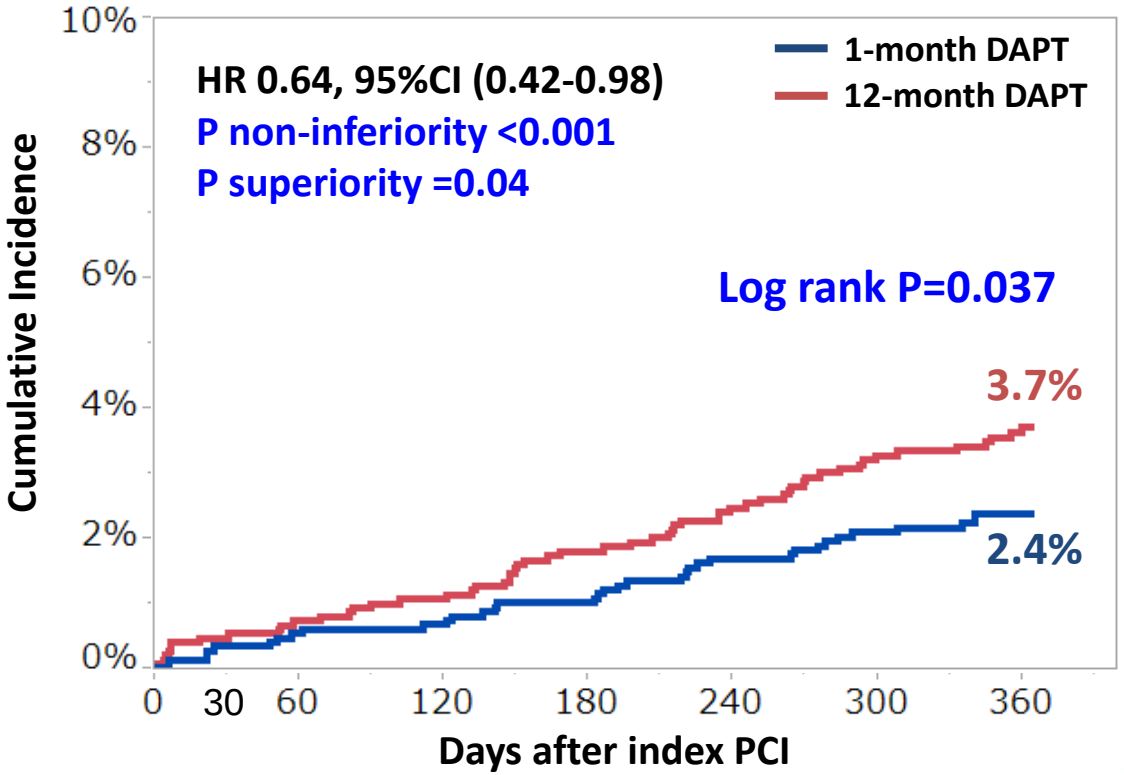
Pre-specified subgroups	Experimental Treatment Strategy	Reference Treatment Strategy	Risk Ratio [Exp/Reference] (95% CI)	p-value for interaction
Overall	**163/7980**	**169/7988**	**0.97 (0.78-1.20)**	
Indication				**0.0068**
ACS	73/3750	100/3737	**0.73 (0.54-0.98)**	
Stable CAD	90/4230	69/4251	1.32 (0.97-1.81)	
Age				0.057
>75 years	65/1292	50/1273	1.29 (0.89-1.86)	
≤75 years	98/6688	119/6715	0.83 (0.63-1.08)	
Diabetes mellitus				0.53
diabetics	52/2049	47/1989	1.07 (0.72-1.59)	
non-diabetics	111/5925	122/5994	0.92 (0.71-1.19)	
Renal failure				0.48
Yes	43/1099	38/1072	1.10 (0.71-1.71)	
No	120/6881	131/6916	0.92 (0.72-1.18)	
PVD				0.99
Yes	15/476	17/529	0.98 (0.49-1.97)	
No	148/7428	150/7389	0.87 (0.78-1.24)	
Left main treated				0.44
Yes	9/197	6/190	1.43 (0.51-4.03)	
No	154/7783	163/7798	0.95 (0.76-1.18)	
Geographic area				0.20
Western Europe	143/6156	141/6167	1.02 (0.81-1.29)	
Eastern Europe*	17/1502	27/1500	0.63 (0.34-1.15)	
Rest of the world	3/322	1/321	3.00 (0.31-28.84)	



*Eastern Europe included Poland, Bulgaria, Hungary

STOPDAPT-2 Primary Endpoint: Net clinical benefit

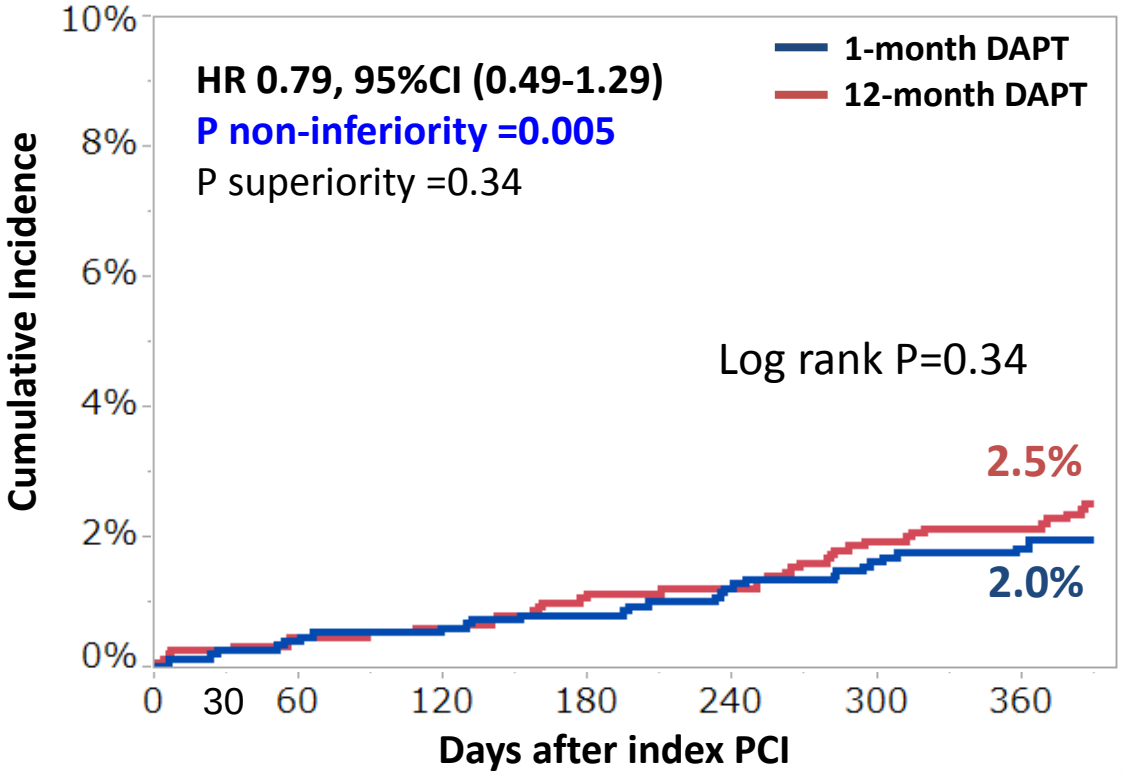
CV death/MI/ST/Stroke/TIMI major/minor bleeding



No. at risk								
12-month DAPT	1509	1501	1486	1481	1469	1458	1442	1159
1-month DAPT	1500	1494	1479	1475	1468	1453	1441	1151

Major secondary ischemic endpoint

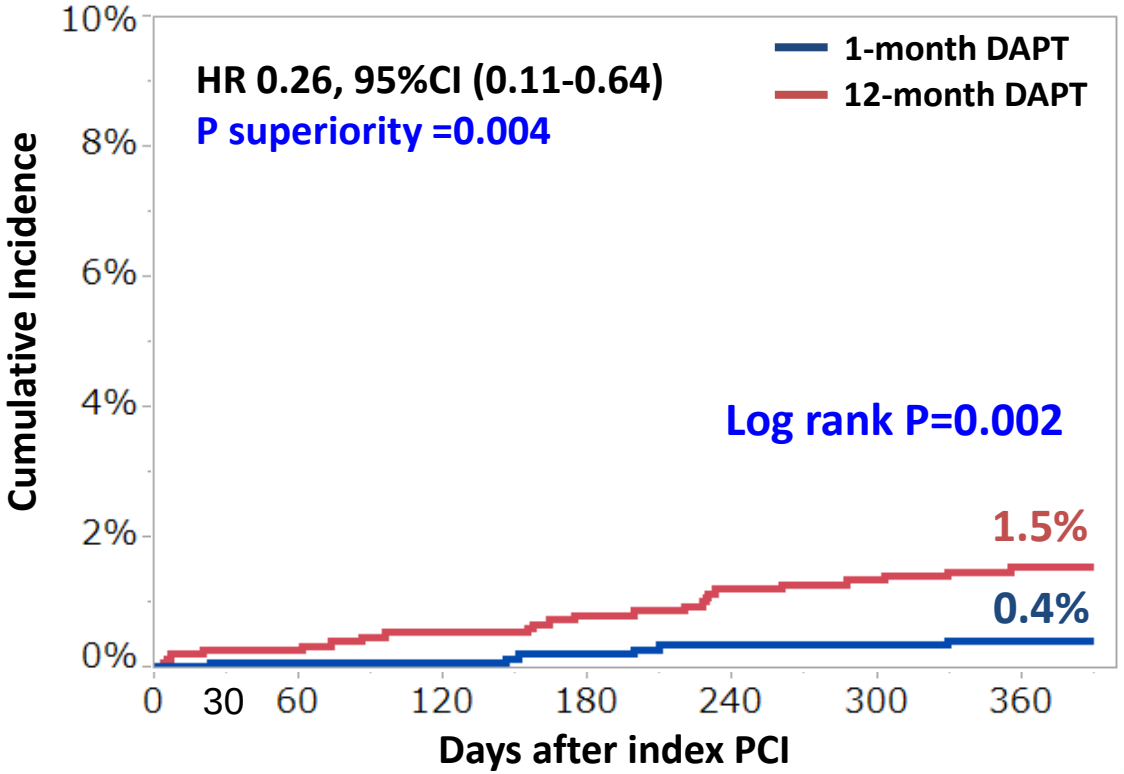
CV death/MI/ST/Stroke



No. at risk								
12-month DAPT	1509	1504	1490	1488	1479	1473	1458	1172
1-month DAPT	1500	1495	1480	1476	1471	1458	1446	1157

Major secondary bleeding endpoint

TIMI major/minor bleeding



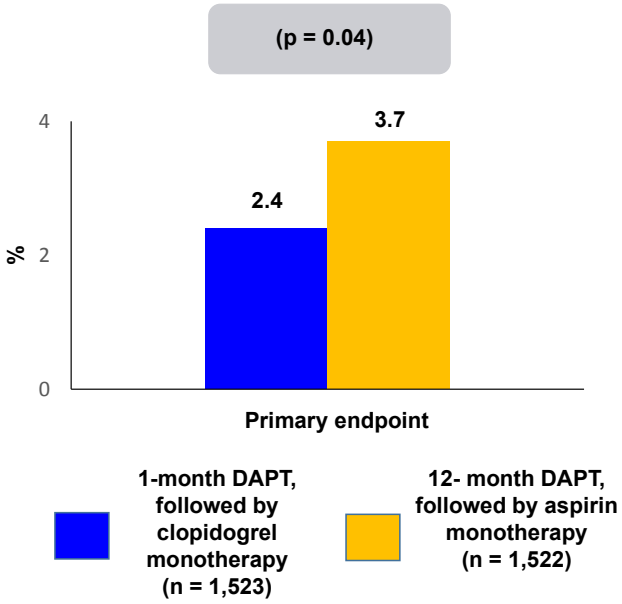
No. at risk								
12-month DAPT	1509	1504	1491	1487	1480	1471	1462	1180
1-month DAPT	1500	1495	1483	1481	1477	1467	1457	1166

STOPDAPT-2

#ACC19

AMERICAN COLLEGE of CARDIOLOGY

Trial Description: Patients undergoing PCI were randomized to 1 month of DAPT followed by clopidogrel monotherapy for 5 years versus 12 months of DAPT followed by aspirin monotherapy for 5 years.



RESULTS

- Primary outcome, death, MI, stent thrombosis, stroke, TIMI major/minor bleeding at 1 year: 2.4% of 1-month DAPT group compared with 3.7% of 12-month DAPT group (p for superiority = 0.04)
- Death, MI, stent thrombosis, or stroke at 1 year: 2.0% of 1-month DAPT group compared with 2.5% of 12-month DAPT group (p for noninferiority = 0.005)

CONCLUSIONS

- Among patients undergoing PCI for stable and unstable cardiovascular disease, 1-month DAPT followed by clopidogrel monotherapy was superior to 12-month DAPT followed by aspirin monotherapy at preventing net adverse clinical events
- 1-month DAPT was noninferior to 12-month DAPT at preventing major adverse ischemic events

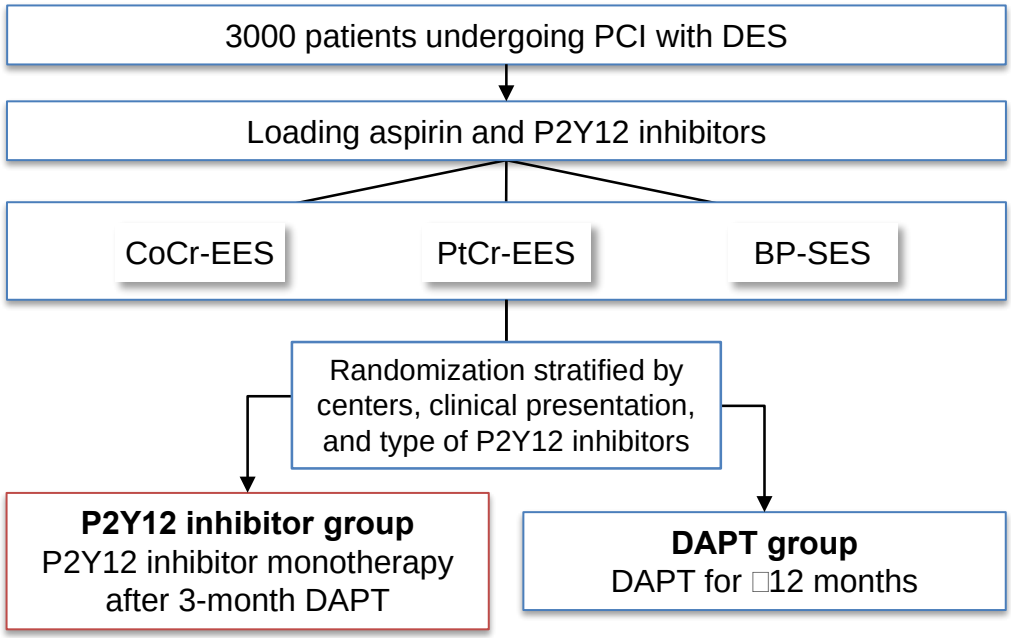
Presented by Dr. Hirotoshi Watanabe at ACC 2019

SMART-CHOICE

SMART-CHOICE

Study design

A prospective, multicenter, randomized, open-label, noninferiority trial



- CoCr-EES: cobalt-chromium everolimus eluting stent (Xience series)
- PtCr-EES: platinum-chromium everolimus-eluting stent (Promus series and Synergy)
- BP-SES: bioresorbable polymer- sirolimus-eluting stent (Orsiro)

Primary endpoint: 12-month MACCE

ClinicalTrials.gov NCT02079194

Song YB,…, Gwon HC, Hahn JY. Am Heart J 2018

ACC LBCT 2019

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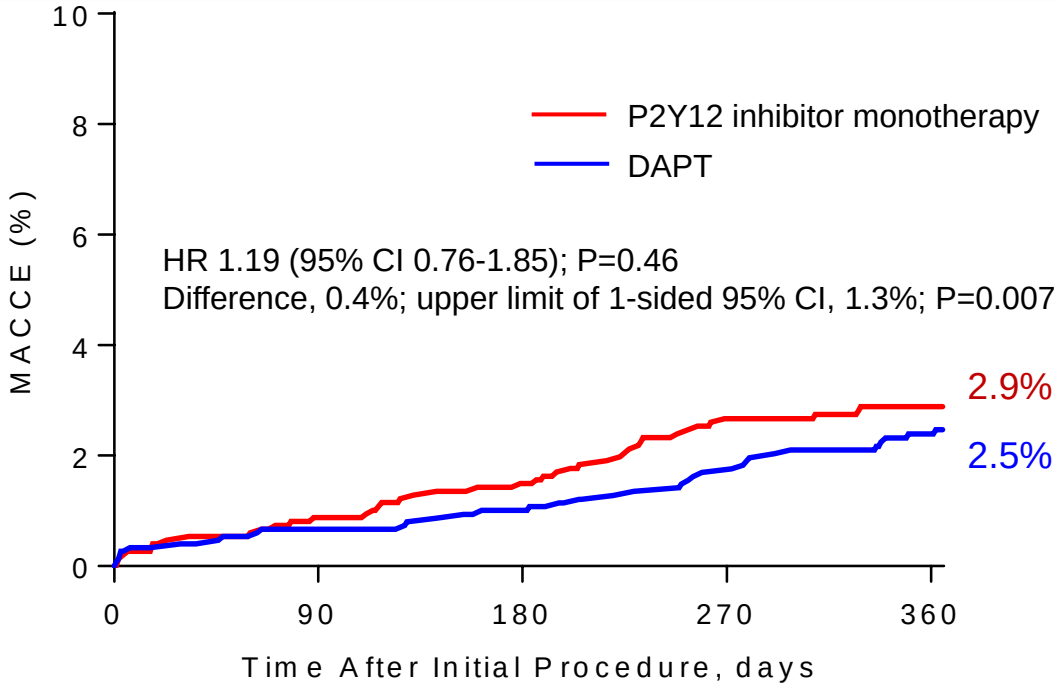
Primary end point (MACCE)



No. at risk					
DAPT	1498	1471	1454	1436	1220
P2Y12 inhibitor	1495	1456	1430	1402	1202

* MACCE = A composite of all-cause death, myocardial infarction, or stroke

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Clinical outcomes at 12 months

Outcome	P2Y12 inhibitor monotherapy (n=1495)	Dual antiplatelet therapy (n=1498)	HR (95% CI)	P Value
MACCE	42 (2.9%)	36 (2.5%)	1.19 (0.76-1.85)	0.46
Death	21 (1.4%)	18 (1.2%)	1.18 (0.63-2.21)	0.61
Myocardial infarction	11 (0.8%)	17 (1.2%)	0.66 (0.31-1.40)	0.28
Cerebrovascular accident	11 (0.8%)	5 (0.3%)	2.23 (0.78-6.43)	0.14
Death or myocardial infarction	31 (2.1%)	32 (2.2%)	0.98 (0.60-1.61)	0.94
Cardiac death	11 (0.8%)	13 (0.9%)	0.86 (0.38-1.91)	0.70
Cardiac death or myocardial infarction	22 (1.5%)	27 (1.9%)	0.83 (0.47-1.45)	0.50
Stent thrombosis	3 (0.2%)	2 (0.1%)	1.51 (0.25-9.02)	0.65
Bleeding BARC type 2-5	28 (2.0%)	49 (3.4%)	0.58 (0.36-0.92)	0.02
Major bleeding	12 (0.8%)	14 (1.0%)	0.87 (0.40-1.88)	0.72
Net adverse clinical and cerebral events	65 (4.5%)	81 (5.6%)	0.81 (0.58-1.12)	0.20

Major bleeding was defined as BARC type 3-5 bleeding.
Net adverse clinical and cerebral events were defined as MACCE plus BARC type 2-5 bleeding.

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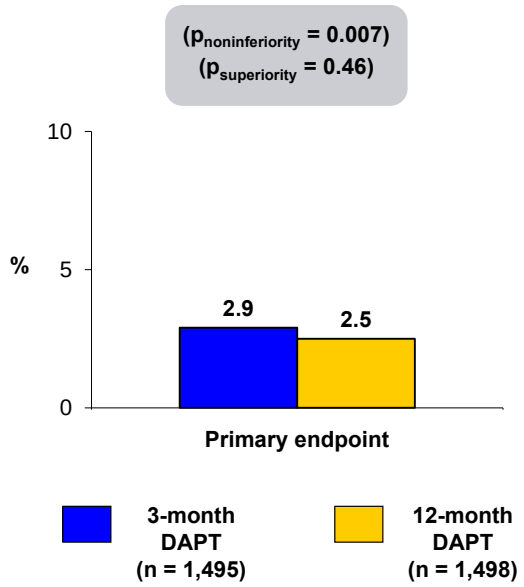
Trial Description: Patients undergoing DES-PCI were randomized in a 1:1 fashion to either dual antiplatelet therapy (DAPT) for 3 months followed by P2Y12 inhibitor monotherapy for 9 months, or DAPT for 12 months. They were followed for 1 year.



RESULTS

- Primary endpoint: MACCE (death, MI, stroke) at 12 months, for 3- vs. 12-month DAPT: 2.9% vs. 2.5%, p for noninferiority = 0.007; p for superiority = 0.46
- Death: 1.4% vs. 1.2%, p = 0.61; MI: 0.8% vs. 1.2%, p = 0.28; stent thrombosis: 0.2% vs. 0.1%, p = 0.65
- Bleeding BARC 2-5: 2.0% vs. 3.4%, p = 0.02

CONCLUSIONS

- 3 months of DAPT followed by P2Y12 inhibitor use as monotherapy for 9 months is noninferior to 12 months of DAPT among unselected patients undergoing PCI with a DES; bleeding was lower with this strategy
- Interesting findings, adds to other trials seeking to drop aspirin rather than the P2Y12 inhibitor as antiplatelet agent long-term; outcomes may be different among patients with ACS vs. stable ischemic heart disease

Presented by Dr. Joo-Yong Hahn at ACC 2019

PCI With Synergy EES in High Bleeding Risk Patients Followed By 1 Month DAPT

Patients With CAD At High Bleeding Risk (N=1023)

PCI with Synergy EES

- Age ≥75 years
- Need for OAC
- Hb <11 g/l
- Recent transfusion
- Platelets <100'000
- Bleeding event <12 months
- Stroke <12 months
- History of ICH
- Severe chronic liver disease
- GFR <40 ml/min,
- Cancer <3 years
- Planned major surgery
- Need for glucocorticoids/NSAIDS
- Non-adherence to >30 days DAPT

Multicenter trial

1-month clinical follow-up

12-month clinical follow-up

1EP: cardiac death, MI, or def/prob ST @12 months

Antithrombotic Strategy

NCT03112707 Presented by Stefanini at JIM 2018.

Trial Design: XIENCE 28 Global

A prospective, single arm, multi-center, open label, non-randomized trial to evaluate the safety of 1-month* (as short as 28 days) DAPT in HBR subjects undergoing PCI with XIENCE

Key inclusion criteria: High bleeding risk (one or more of the following):

i: Age ≥ 75 years ii: Chronic anticoagulation therapy iii: History of major bleeding iv: History of stroke
v: Renal insufficiency or failure vi: thrombocytopenia or coagulation disorders vii: anemia

Key exclusion criteria: AMI; LVEF < 30%; LM; total occlusion; graft; ISR, thrombus containing lesion; judged by physician as inappropriate for discontinuation from P2Y12 inhibitor use at 1 month

50 sites in Europe and Asia
N=800

Primary Endpoint (NI): Composite of all-cause death, all MI, ST, stroke or major bleeding from 1-6 months**

*For eligible patients who are "1-month clear", defined as patients who are event free and compliant with DAPT within 1 month of index procedure.
**Propensity adjusted comparison to historical control patients treated with standard DAPT will be performed.

NCT03355742

Presented by Mehran at TCT 2018.

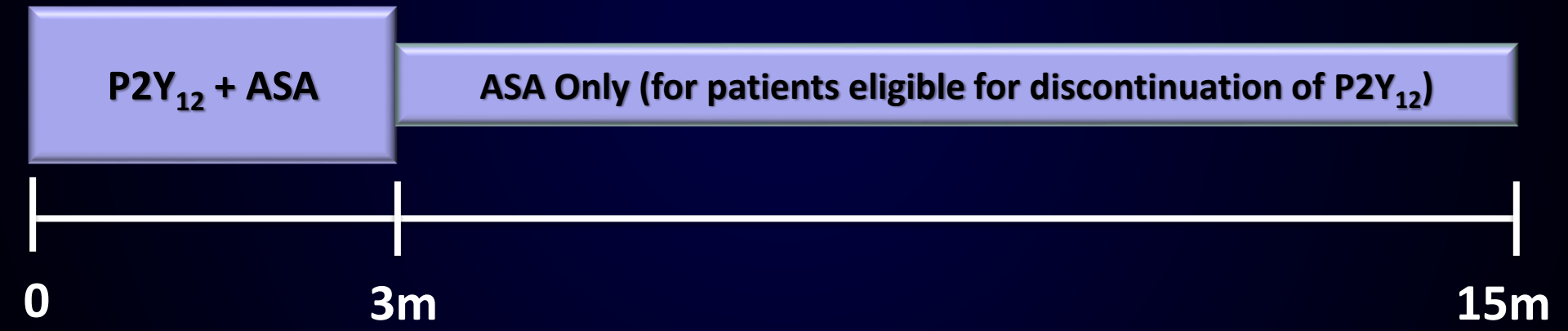
EVOLVE Short DAPT Study Design

Prospective, N= ~2000 patients, ~120 global sites

Key Inclusion Criteria

Patients considered by the treating physician to be at high risk for bleeding:
i) ≥75 years of age and high bleeding risk; ii) History of major bleeding; iii) Anticoagulation therapy; iv) History of stroke or renal insufficiency/failure; v) Platelet count ≤100,000/µL

(excluded LM disease, ostial lesions, >2 vessels, >3 lesions, CTO, SVG, ISR, NSTEMI or STEMI)

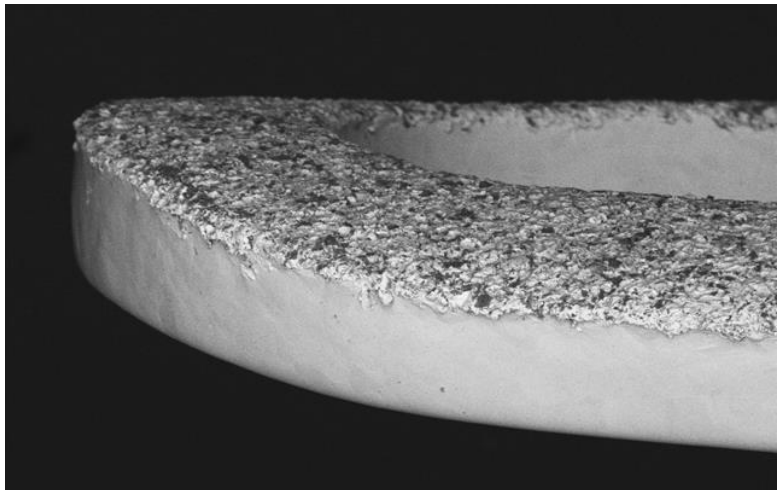


Co-primary Endpoints: (1) Death or MI, and (2) ARC definite/probable ST
Secondary Endpoint: Rate of major bleeding (BARC bleeding classification 2,3,5)

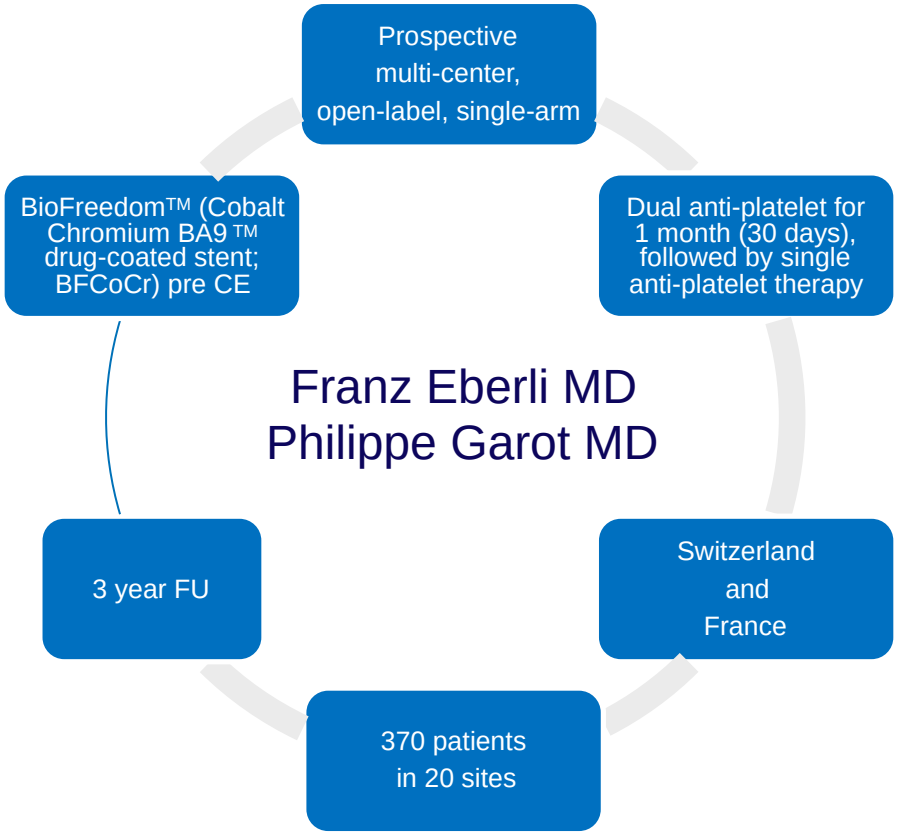
Co-primary and secondary endpoints will be evaluated between 3 and 15 months; Propensity adjusted comparison to historical control patients treated with standard DAPT will be performed

Presented by Mauri at TCT 2015.

LEADERS FREE III



CoCr thin struts (84-88 µm)



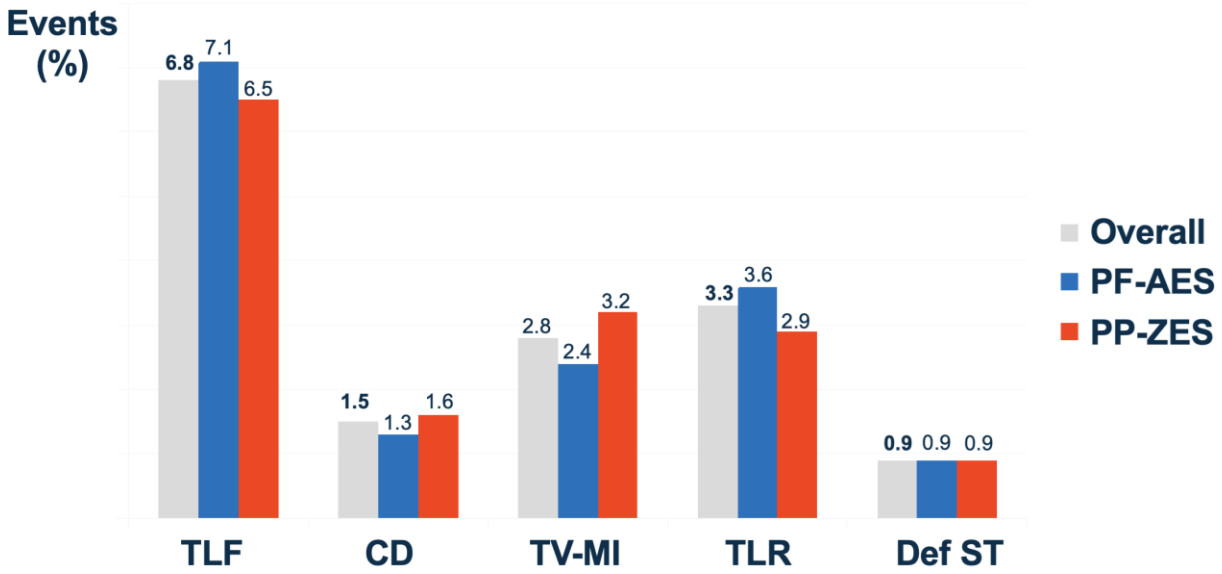
Cardiovascular European Research Center

A Permanent Polymer Zotarolimus-eluting Stent versus a Polymer-Free Amphilimus-eluting Stent in all-comers
Results of the ReCre8 Trial

UMC Utrecht

Sub-study: 1-month DAPT

Individual outcomes at 12-months



No statistical significant differences between stents at the p<0.05 level

tct2018

Cardiovascular Research Foundation

P. Stella et al. TCT 2018