



CARDIOLOGIE
• CHU •
CLERMONT
FERRAND



Les études marquantes depuis 12 mois

Pascal Motreff
8 Juin 2017

Conflits d'intérêts

Consultant : Abbott Vascular, St Jude Medical, Terumo, Biotronik

Etudes Marquantes = 2 pièges

- Sélection arbitraire
- Interprétation subjective

Recommandations

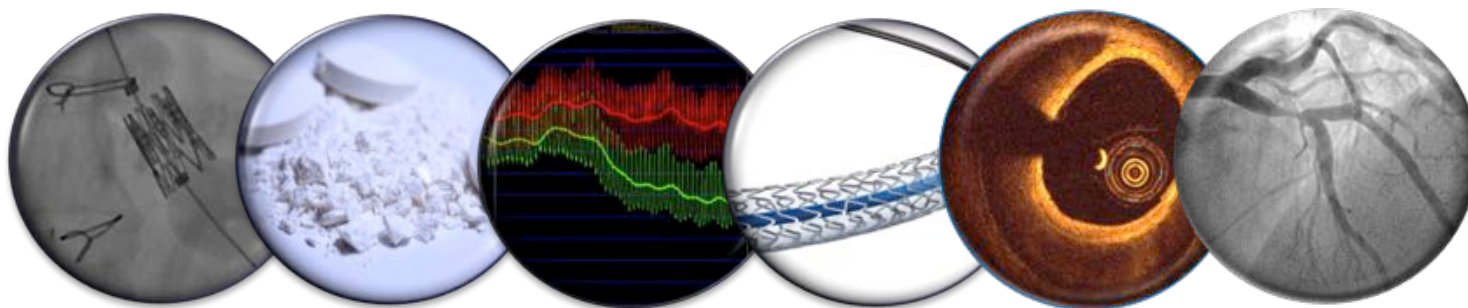
Structurel

Stents et Stenting

Outils diagnostic

Pharmacologie

Maladie coronaire



Recommandations

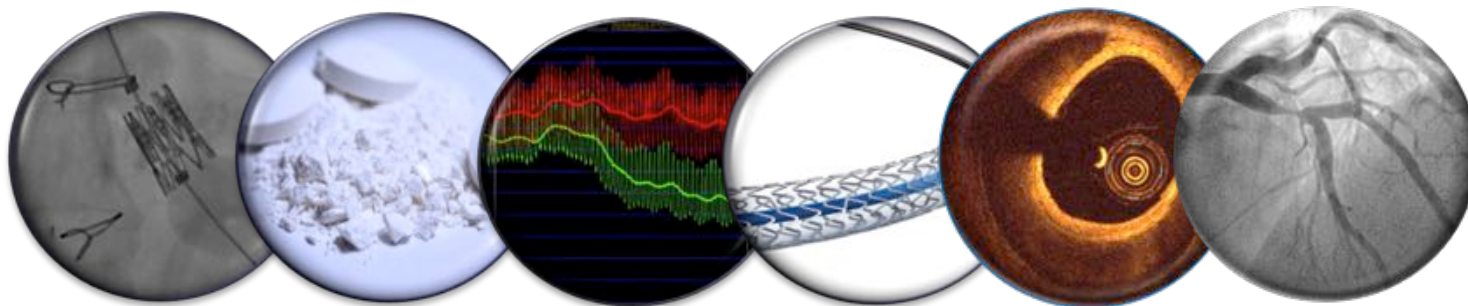
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Recommendations

Guidelines published in 2016

- **Cardio-Oncology (Position Paper)**
Chairpersons: Jose Luis Zamorano & Patrizio Lancellotti
- **Dyslipidaemias**
Chairpersons: Ian Graham & Alberico Catapano
- **CVD Prevention**
Chairpersons: Massimo Piepoli & Arno W. Hoes
- **Atrial Fibrillation**
Chairpersons: Paulus Kirchhof & Stefano Benussi
- **Heart Failure**
Chairpersons: Piotr Ponikowski & Adriaan Voors

Publications planned in 2017

- **AMI-STEMI**
Chairpersons: Stefan James & Borja Ibanez
- **Focused Update on Dual Anti-platelet Therapy**
Chairperson: Marco Valgimigli
- **Peripheral Artery Disease**
Chairpersons: Victor Aboyans & Jean-Baptiste Ricco
- **Valvular Heart Disease**
Chairpersons: Jose Luis Zamorano, Helmut Baumgartner & Volkmar Falk

- **SCA ST+**
- **Double AAP**

Cardiologie interventionnelle 2016-2017

Recommandations

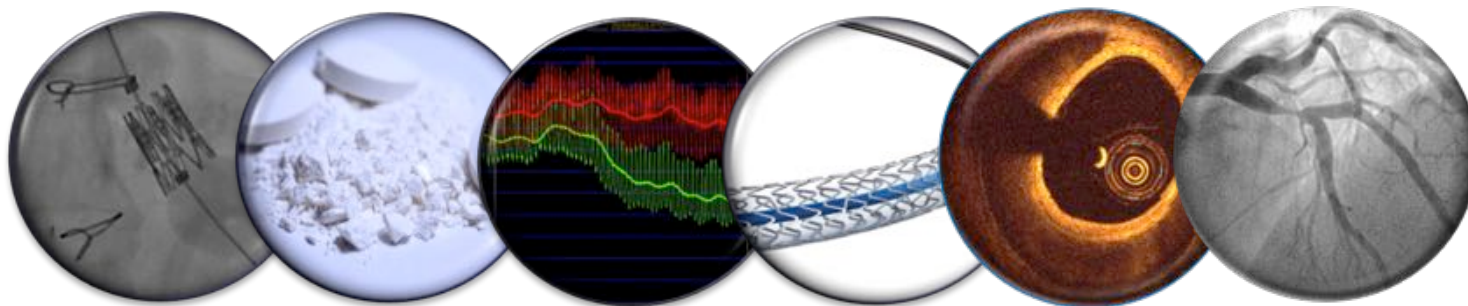
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PARTNER 2

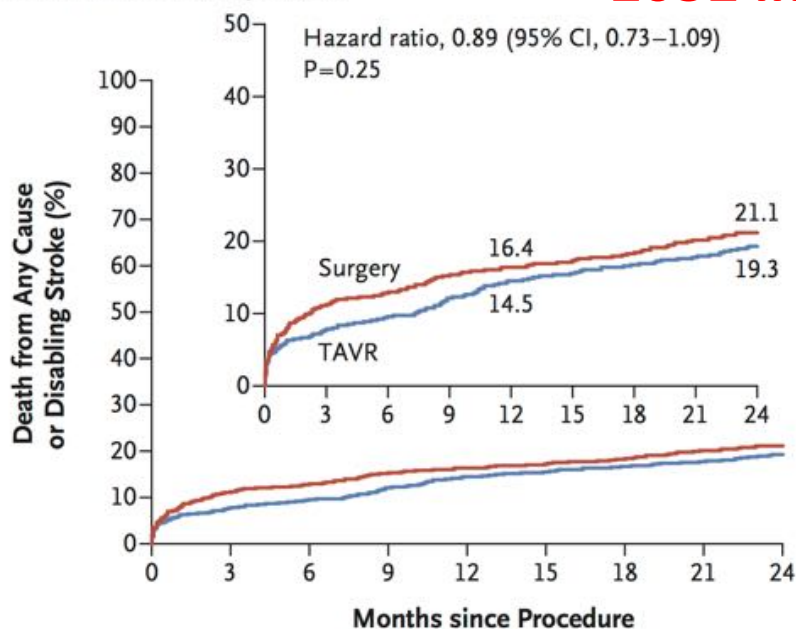
Leon MB, *New Engl J Med* 2016

The NEW ENGLAND
JOURNAL of MEDICINE

Transcatheter or Surgical Aortic-Valve Replacement in Intermediate-Risk Patients

A Intention-to-Treat Population

2032 intermediate-risk patients randomized



CONCLUSIONS

In intermediate-risk patients, TAVR was similar to surgical aortic-valve replacement with respect to the primary end point of death or disabling stroke.



Edwards Sapien XT[®]

SURTAVI

Reardon MJ, New Engl J Med 2017

Surgical or Transcatheter Aortic-Valve
Replacement in Intermediate-Risk Patients

1746 pts, 87 centres, Risques intermédiaires
CoreValve / Evolute R vs Chirurgie = **NON INFÉRIEUR**

All-Cause Mortality or Disabling Stroke



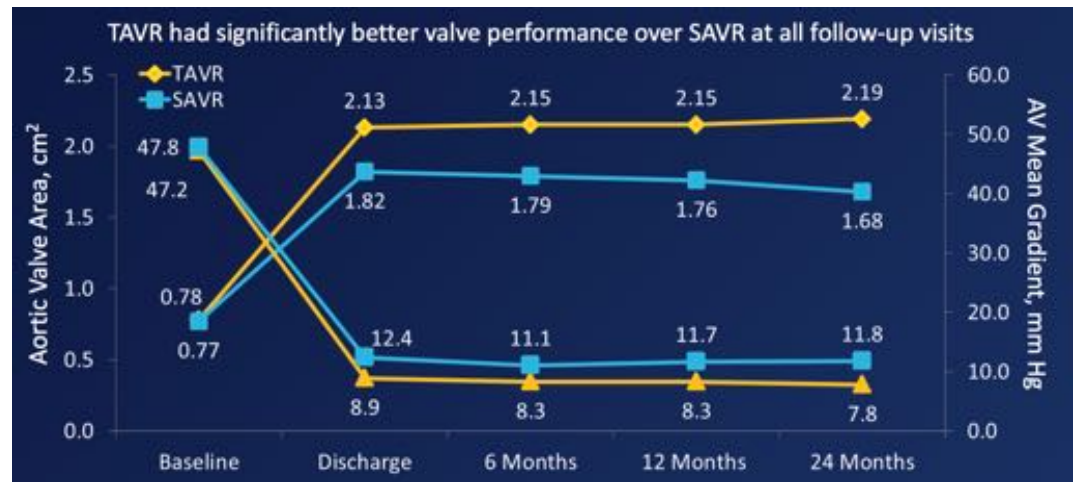
CoreValve® EvoluteR®

SURTAVI

Reardon MJ, New Engl J Med 2017

Chirurgie = plus d'AVC,
d'insuffisance rénale, de FA,
de transfusions

TAVI = plus de fuite
résiduelle, de Pace Maker



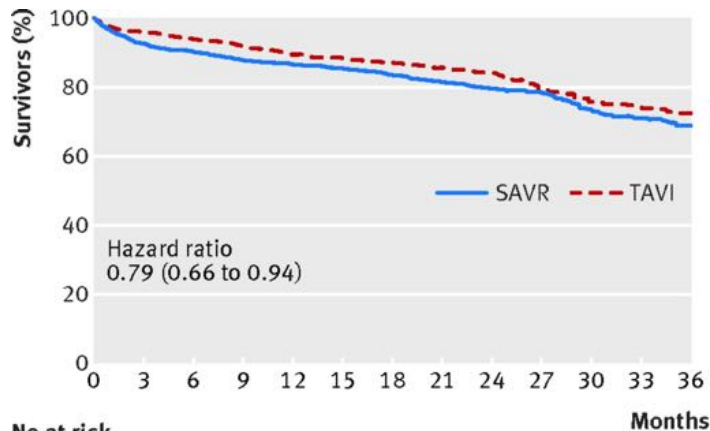
- **Qualité de vie = idem a 2 ans, récupération plus rapide avec TAVI**
- **Meilleurs résultats hémodynamiques avec TAVI**

TAVI in low and intermediate risk

Low and intermediate risk : systematic review and meta-analysis

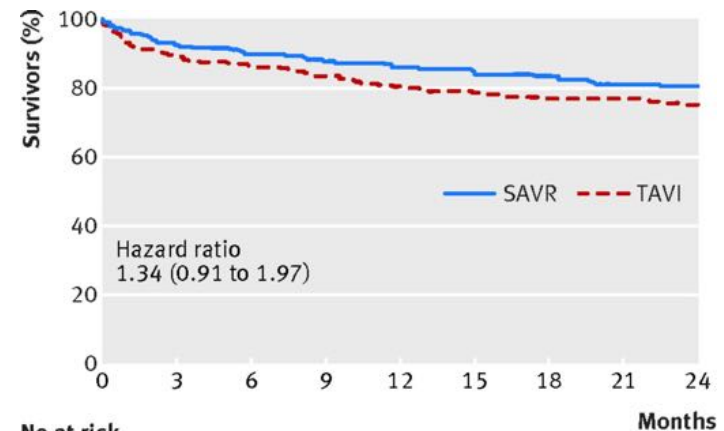
Siemieniuk RA, BMJ 2016

Trans-femoral TAVI



No at risk		Months												
		0	3	6	9	12	15	18	21	24	27	30	33	36
SAVR	1268	1082	1017	849	791	188	148							
TAVI	1308	1215	1143	976	922	229	180							

Trans-apical TAVI



No at risk		Months								
		0	3	6	9	12	15	18	21	24
SAVR	282	192	180	172	163					
TAVI	269	198	183	173	168					

TAVI vs SAVR for treatment of severe aortic stenosis : a meta-analysis of randomized trials *Siontis GCM, Eur Heart J 2016*

Long term performance of TAVI

Washington TCT 2016

Partner 1 Trial, 5 years follow -up

Edwards Sapien Valves Demonstrate Excellent Durability In 5-Year Echo Study

Quality of life after TAVI

Washington TCT 2016

Partner 2, Quality of life

Compared with SAVR, **TAVR improved QOL at 1 month**

(significant improvement only in the TransFemoral subgroup ($P < .001$))

QOL scores were similar among TAVR and SAVR patients at 12 and 24 months

Cerebral Embolic Protection During TAVR

Latib A, J Am Coll Cardiol 2016

363 TAVR

- Safety confirmed
- Sentinel-Trial fails to meet overall primary efficacy endpoint

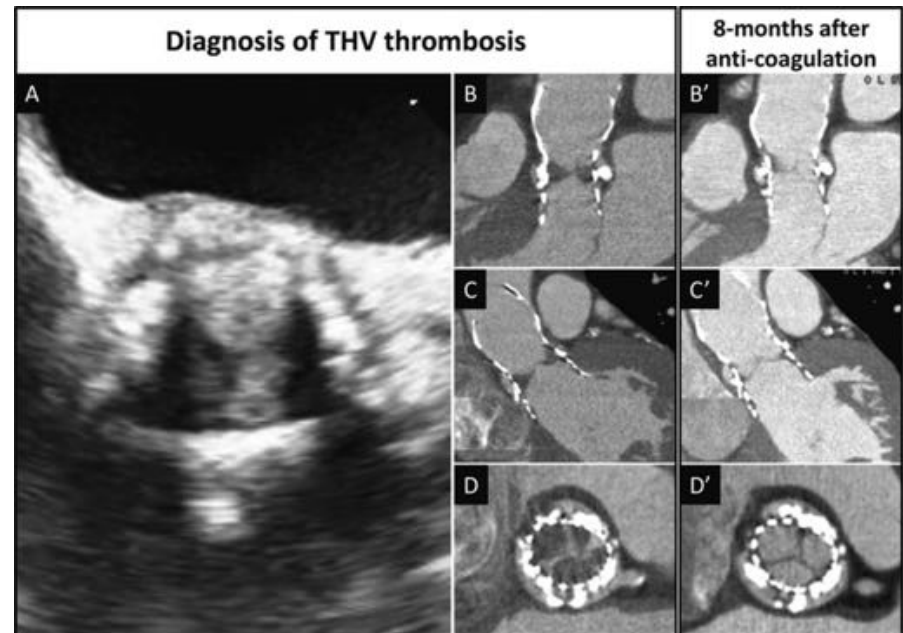


Despite the finding of **histopathologic debris within filters in 99% of pts**, which included thrombus, calcification, valve tissue, artery wall and foreign material, all strokes at 30 days were not significantly different in the device and safety arms versus the control arm (5.6% vs. 9.1%, P=0.25).

Transcatheter Aortic Valve Thrombosis: Incidence, Predisposing Factors, and Clinical Implications

Hansson NC, J Am Coll Cardiol 2016

incidence : 7%



Etudes en cours : AVK, AOD, DAPT...

(ARTE, AUREA, POPular-TAVI, AVATAR, GALILEO, ATLANTIS)

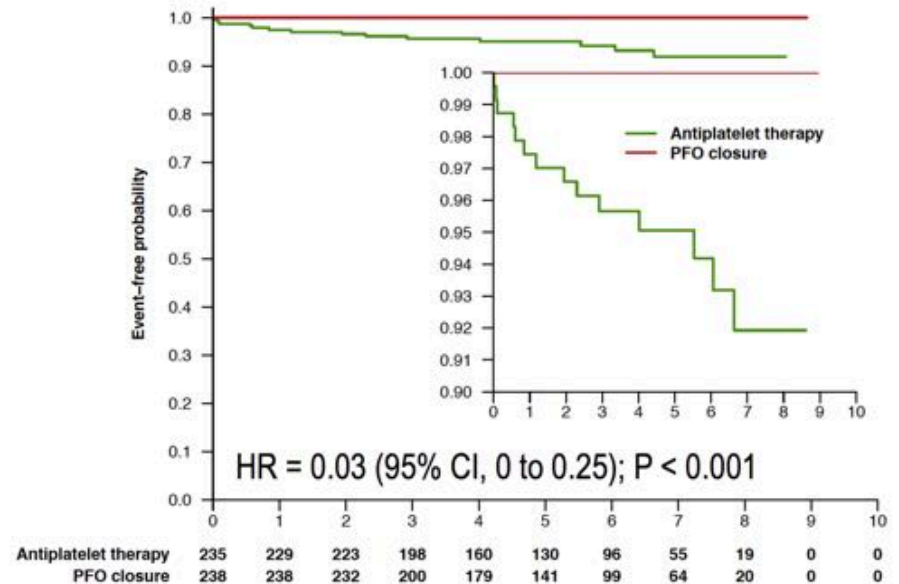
663 pts randomisés

Fermeture PFO vs AAP seul

Aucune récurrence vs 14 récurrences

JL Mas, ESOC 2017

PFO closure vs. Antiplatelet therapy



- PFO closure plus long-term antiplatelet therapy reduced the risk of stroke recurrence in patients 16 to 60 years old with cryptogenic stroke and PFO with atrial septal aneurysm or PFO with large shunt, compared with antiplatelet therapy alone.

Cardiologie interventionnelle 2016-2017

Recommandations

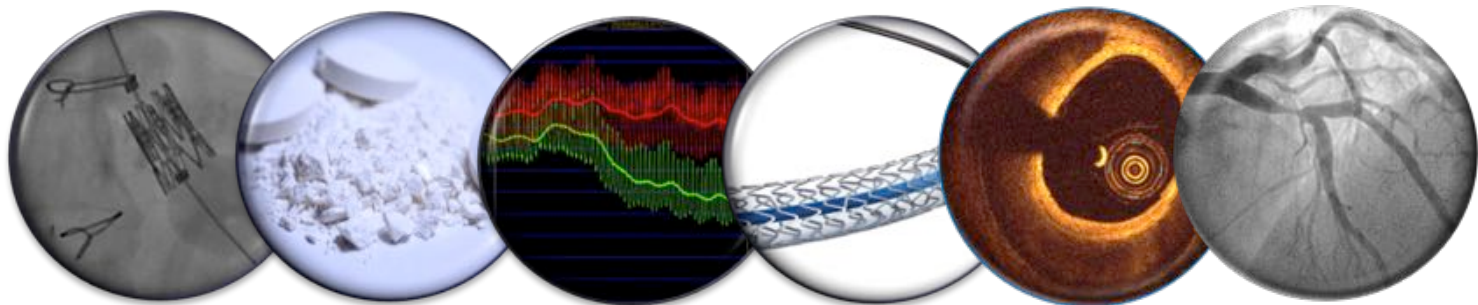
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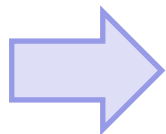
Bio-RESORT

Von Birgelen C, Lancet 2016

Very thin strut biodegradable polymer everolimus-eluting and sirolimus-eluting stents versus durable polymer zotarolimus-eluting stents in allcomers with coronary artery disease (BIO-RESORT): a three-arm, randomised, non-inferiority trial

Comparison of 3 types of Drug Eluting Stent :
3514 all comers pts randomized (70% ACS)

*ORSIRO
SYNERGY
RESOLUTE INTEGRITY*



Non-inferiority of the everolimus-eluting stents and sirolimus-eluting stents compared with zotarolimus-eluting stents was confirmed

12 months follow-up :

5% MACE (cardiac death, MI, TVR)

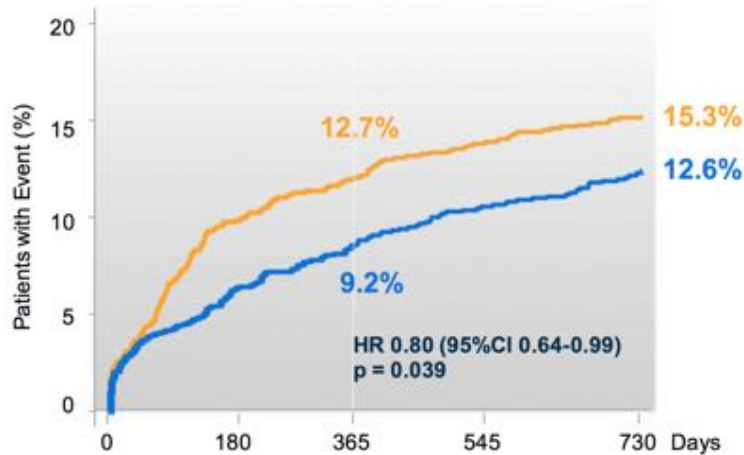
0,3% stent thrombosis

Kumbhani DJ, J Am Coll Cardiol 2016

Safety, efficacy of polymer-free drug-coated stent maintained at 2 years

The LEADERS FREE trial showed that clinical outcomes following biolimus A9 DCS implantation are superior to BMS in patients with high bleeding risk and who are able to take only 1 month of dual antiplatelet therapy (**n=2466 pts**)

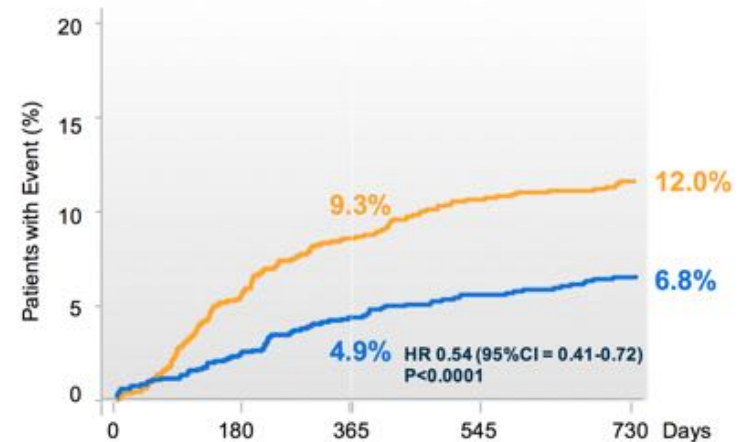
Primary Safety Endpoint (Cardiac Death, MI, ST) at 2 year



Number at Risk

	0	180	365	545	730
DCS	1221	1104	1052	1006	620
BMS	1211	1067	1010	973	587

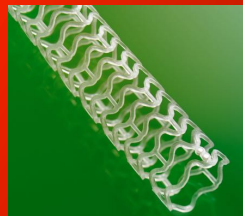
Primary Efficacy Endpoint (Clinically-Driven TLR) at 2 Years



Number at Risk

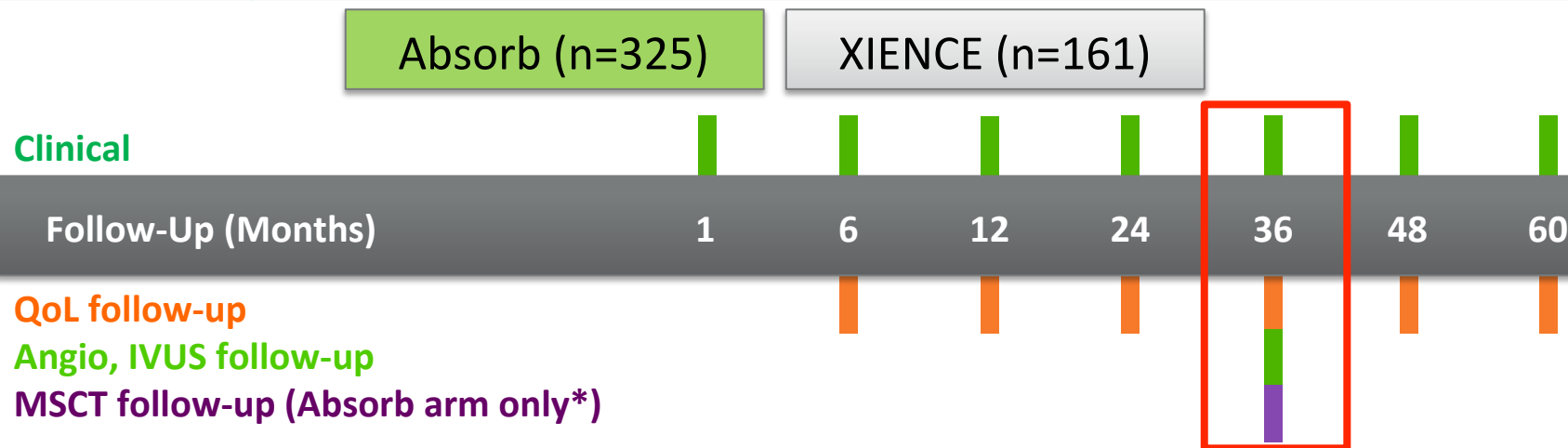
	0	180	365	545	730
DCS	1221	1129	1061	1013	626
BMS	1211	1074	999	945	561

ABSORB 2



Design

Randomized 2:1 , Absorb BVS vs. XIENCE, in 501 patients, in 46 sites in Europe & New Zealand



The trial did not meet its mechanistic **co-primary endpoints** of :

- **superior vasomotor reactivity** because Xience showed unexpected vasomotion.
- non-inferior **late luminal loss** with respect to Xience that was found to have lower late luminal loss than Absorb.

ABSORB 2

ABSORB2 at 3 years, Clinical Outcomes

Absorb (N=325)

Event Free = 79.1%

PoCE= 20.9%

DoCE= 10.5%

Def/Prob ST = 2.8%

XIENCE (N=161)

Event Free = 75.8%

PoCE= 24.2%

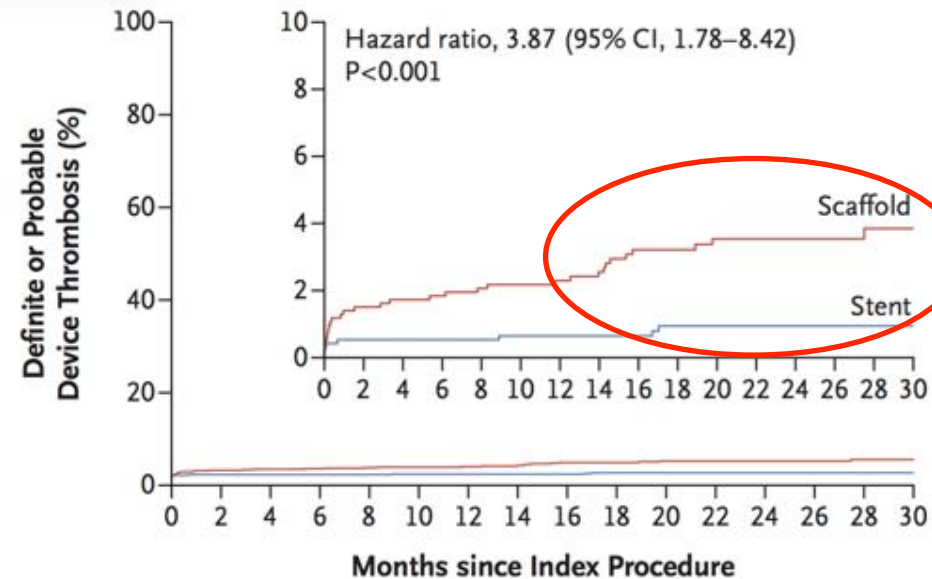
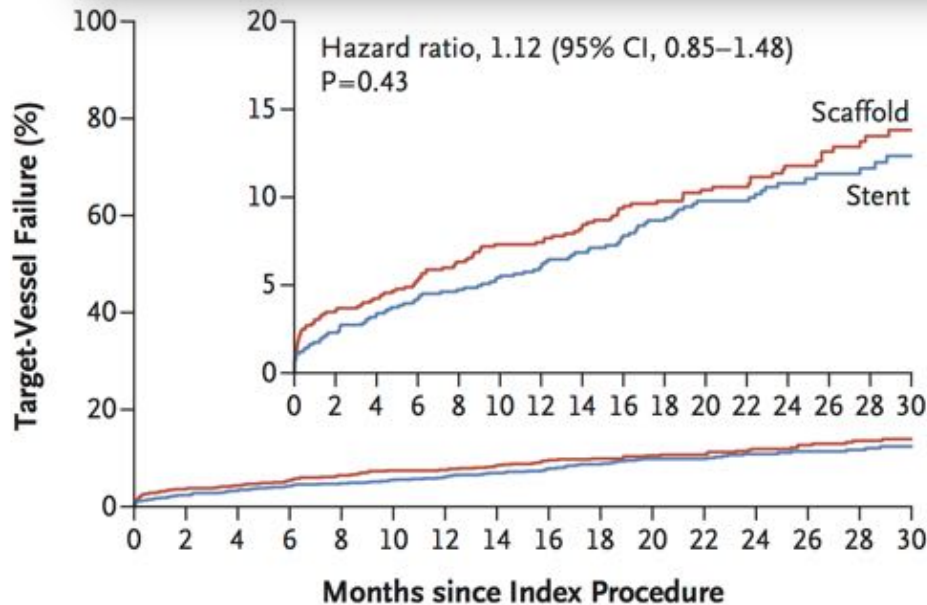
DoCE= 5.0%

Def/Prob ST = 0.0%

Scaffold or stent thrombosis	Absorb 335 patients	Xience 166 patients	p value
Definite	2.5% (8)	0.0% (0)	0.06
Acute (0–1 day)	0.3% (1)	0.0% (0)	1.0
Sub-acute (2–30 days)	0.3% (1)	0.0% (0)	1.0
Late (31–365 days)	0.0% (0)	0.0% (0)	1.0
Very late (>365 days)	1.8% (6)	0.0% (0)	0.19

Bioresorbable Scaffolds versus Metallic Stents in Routine PCI

Wykrzykowska J, N Engl J Med 2017



1845 pts randomisés (Absorb vs DES)

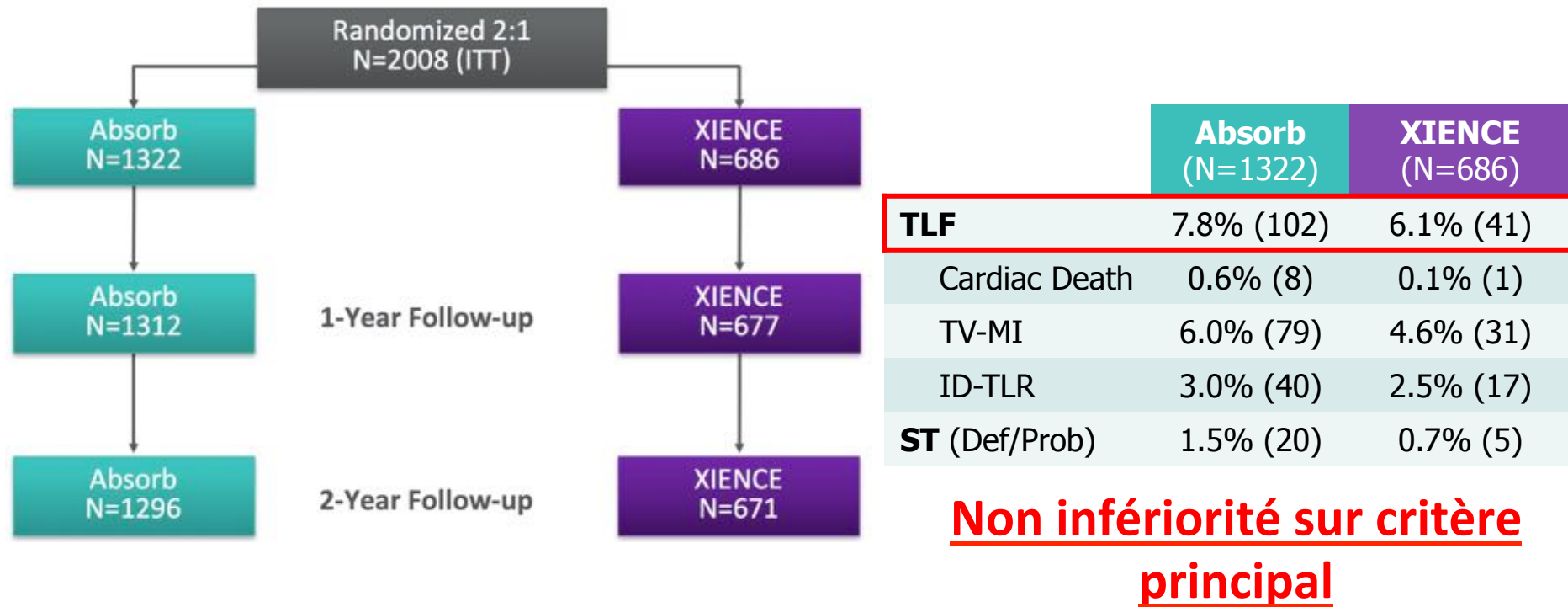
Pas de différence sur critère principal (TVF), sur mortalité

Risque de **thrombose tardive x 4** (31 vs 8)

ABSORB 3

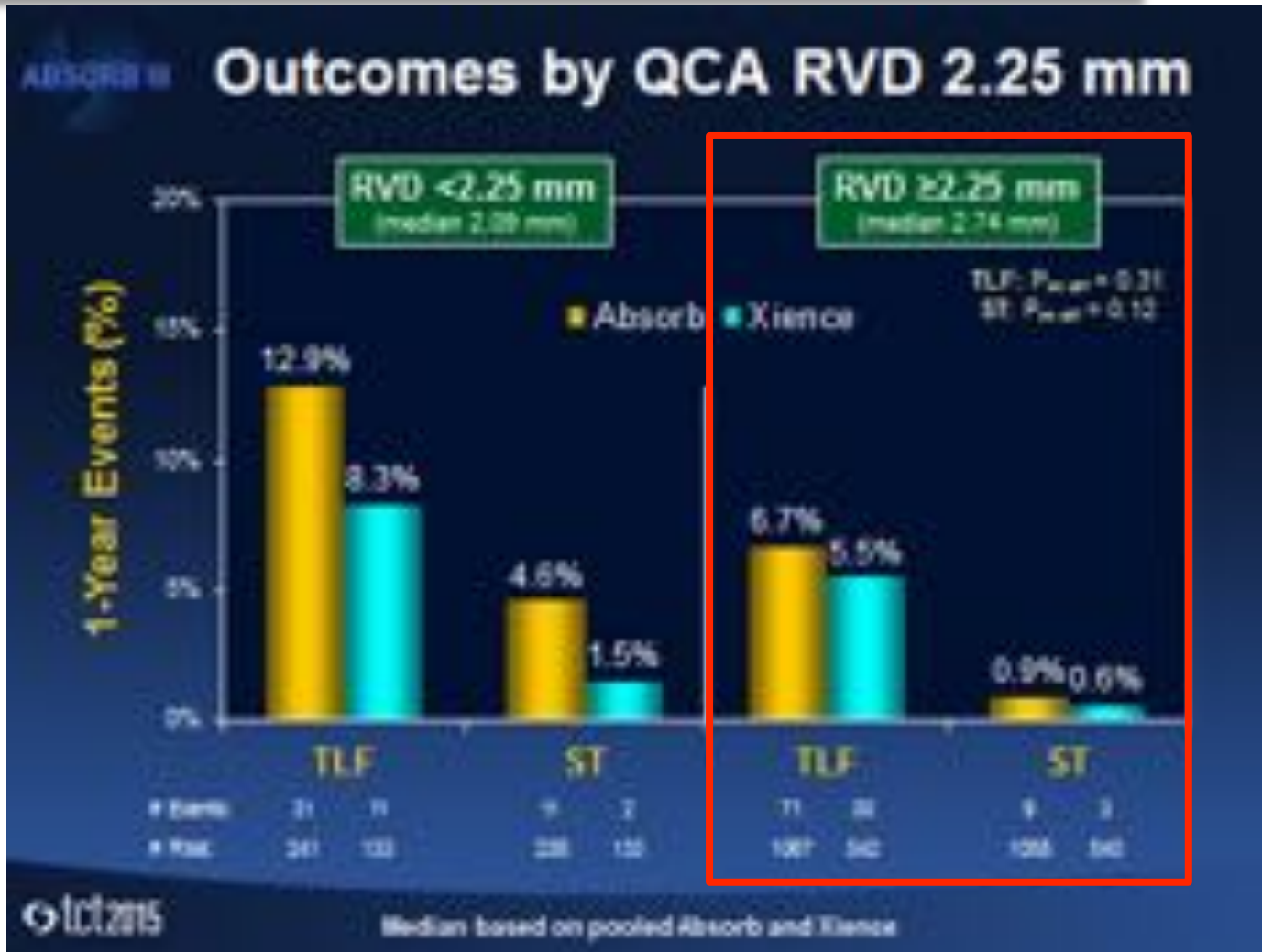
Résultats **ABSORB III** à 2 ans :

Ellis S, ACC 2017



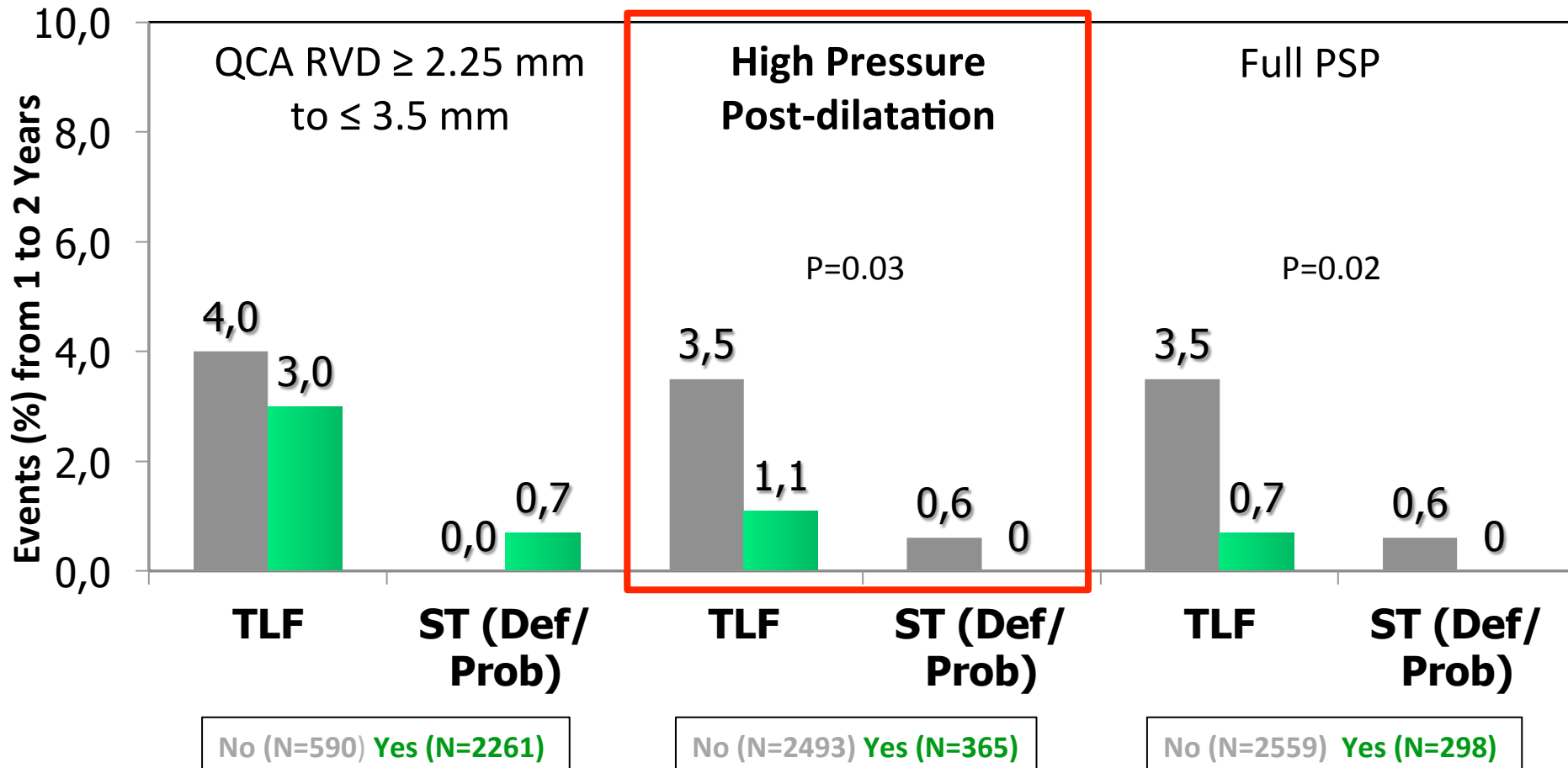
Attention +++ : **respect PSP, exclure petits vaisseaux**

ABSORB 3



Attention +++ : **respect PSP, exclure petits vaisseaux**

Recommendations ABSORB



Based on patient population treated with Absorb BVS in **ABSORB II, ABSORB III, ABSORB China, ABSORB Japan and ABSORB EXTEND**

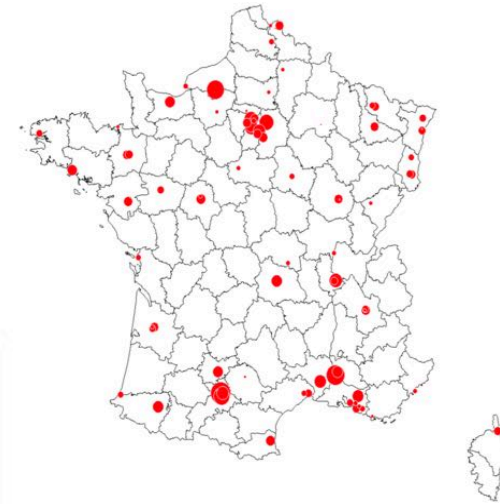
2072 pts (87 centres) , 2818 BVS

Koning R, Euro PCR 2017

euro
PCR

In-Hospital and 1 year MACE

F/U, n=2039 (98.4%)



	in-hospital (n=2072) N (%)	Overall at 1 year (n _{followed} =2039) N (%)
Total death	2 (0.1)	14 (0.7)
Death CV	2 (0.1)	12 (0.6)
Death non CV		2 (0.1)
Non fatal MI	17 (0.8)	45 (2.2)
Any TLR	9 (0.4)	46 (2.2)
At least 1 MACE:	19 (0.9)	81 (3.9)

2072 pts (87 centres) , 2818 BVS

Koning R, Euro PCR 2017

euro
PCR

BVS Stent Thrombosis

	Overall 1 Year (<i>n</i> _{followed} =2039) N (%)
BVS Stent thrombosis	33 (1.6)
Definite	25
Probable	6
Possible	2
Acute	11
Subacute	11
Late	11

In-Hospital: 15 (0.7%)

Registres ABSORB

2017 | euro
PCR

Euro PCR 2017



	France	Allemagne Autriche	Italie	GB	Suède
	France Absorb	GABI-Registry	IT-Disappears	Absorb-UK- Registry	SCAAR
n=	2072	3196	1002	1005	460
Thrombose à J30	0.7% *	0.9%	0.7%	0.9%	
Thrombose à 1 an	1.6%		0.9%	1.7%	1.5%

* hospitalière

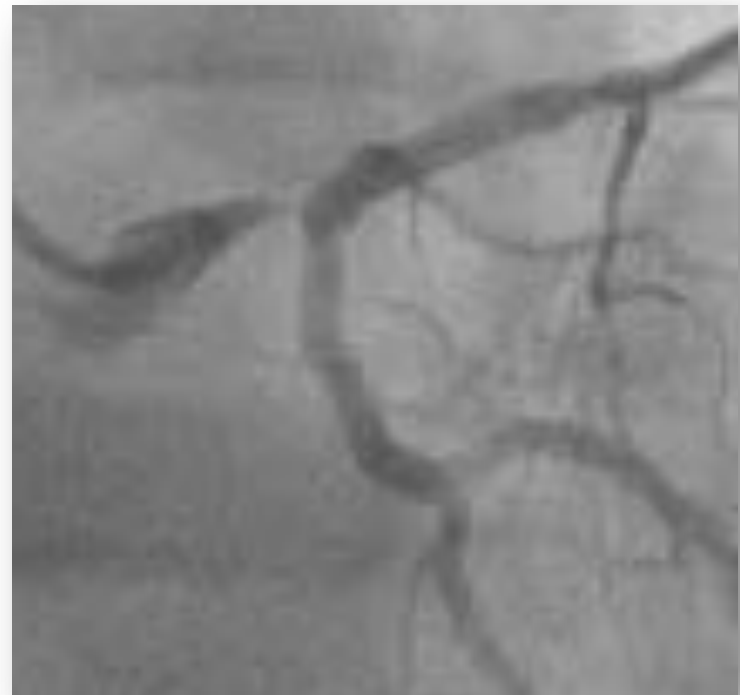
PCI & unprotected LEFT MAIN

ESC Guidelines 2014, Eur Heart J

Recommendations according to extent of CAD	CABG		PCI	
	Class ^a	Level ^b	Class ^a	Level ^b
Left main disease with a SYNTAX score ≤ 22 .	I	B	I	B
Left main disease with a SYNTAX score 23–32.	I	B	IIa	B
Left main disease with a SYNTAX score >32 .	I	B	III	B

NOBLE *Mäkikallio T, Lancet 2016*

EXCEL *Stone GW, N Engl J Med 2016*



Randomized (n= 1201)

Allocated to PCI (n=598)

- Received PCI (n=585)
- Did not receive PCI (n=13)
 - Died before PCI (n=1)
 - Patient declined PCI (n=4)
 - PCI operator declined (n=4)
 - LMCA lesion not significant (n=4)

Lost to follow-up (n=6)

- Emigration (n=1)
- Contact lost (n=2)
- Withdrawal (n=3)

**Patients allocated to PCI in analysis
(n=592)**

580 received PCI
7 received CABG

Allocated to CABG (n=603)

- Received CABG (n=570)
- Did not receive CABG (n=33)
 - Died before CABG (n=1)
 - Patient declined CABG (n=15)
 - Not eligible for CABG (n=15)
 - Cross over by mistake (n=2)

Lost to follow-up (n=11)

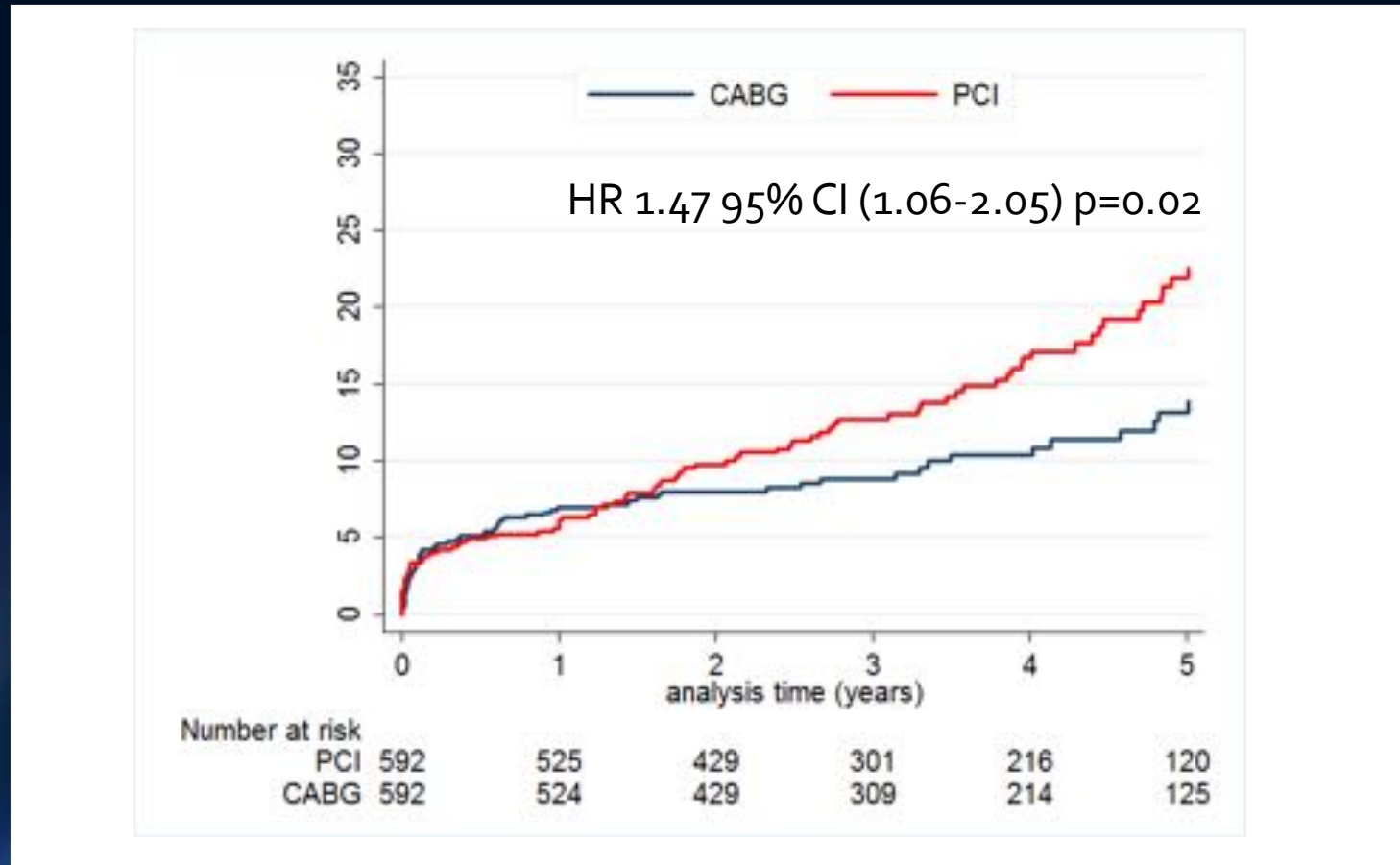
- Emigration (n=0)
- Contact lost (n=0)
- Withdrawal (n=11)

**Patients allocated to CABG in analysis
(n=592)**

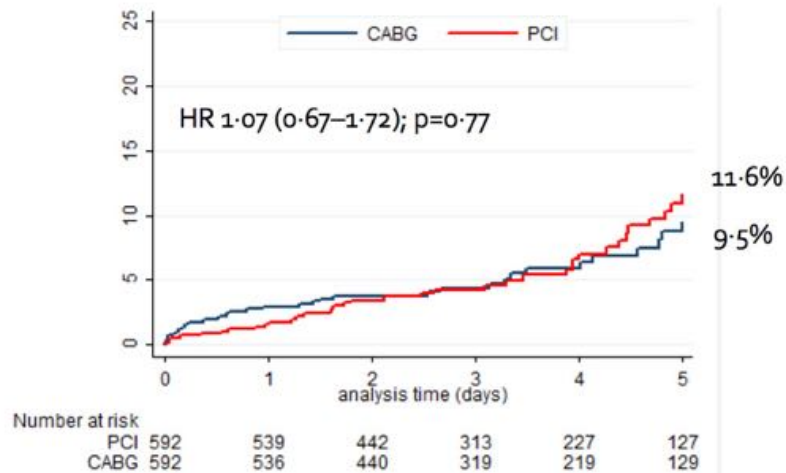
567 received CABG
23 received PCI

Results

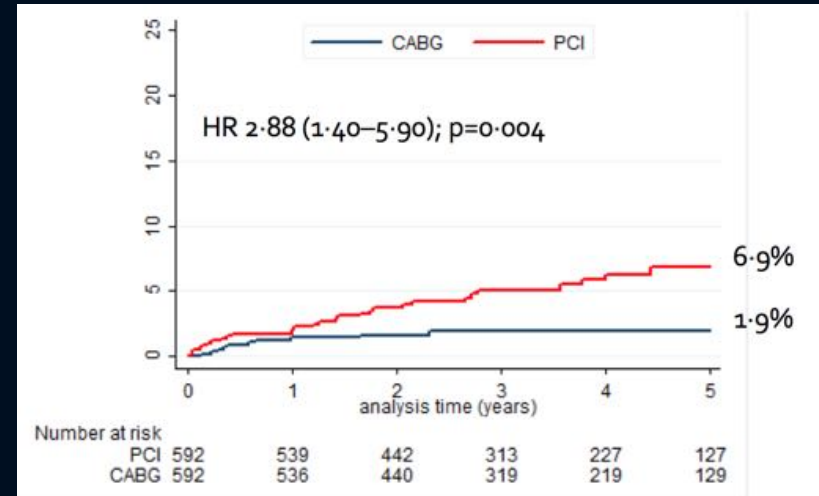
MACCE: Death, MI, stroke



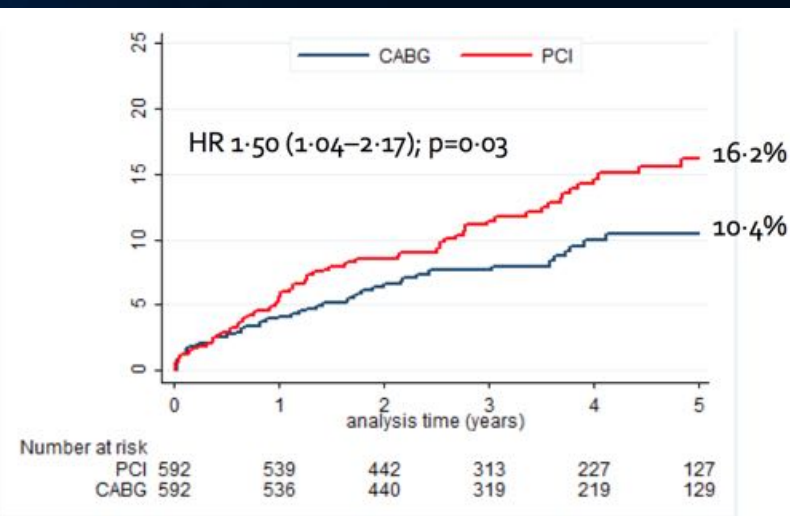
All Cause Mortality



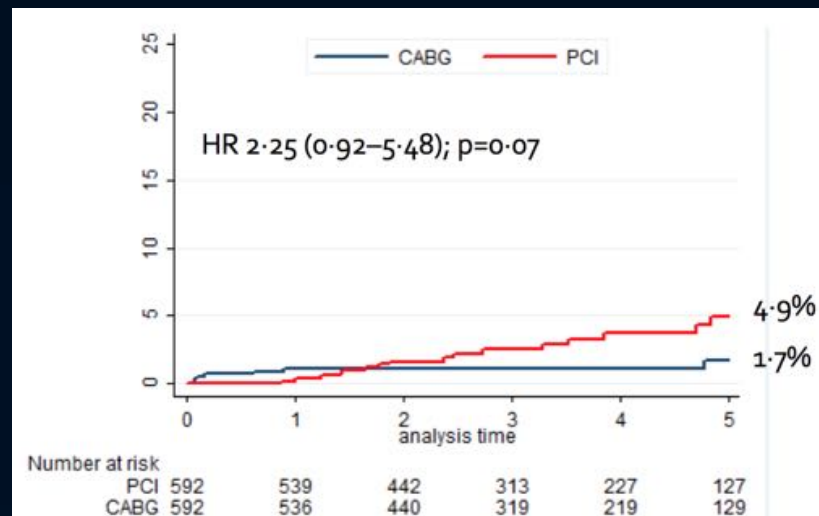
Non procedural MI



Repeat Revascularization



Stroke



Repeat Revascularization

Stroke

Conclusions

- PCI did not meet non-inferiority for the primary endpoint of 5-year MACCE compared to CABG
- **CABG was superior to PCI**
- PCI resulted in higher rates of non-procedural myocardial infarctions
- Repeat revascularization was higher after PCI, primarily due to **de novo lesions and non LMCA target lesion** revascularization
- All-cause mortality was similar for PCI and CABG

Study Design

2900 pts with unprotected left main disease

SYNTAX score ≤ 32

Consensus agreement of eligibility and equipoise by heart team

Yes

(N=1900)

No

(N=1000)

Enrollment registry

Stratified by diabetes, SYNTAX score and center

R

PCI (Xience EES)

(N=950)

CABG

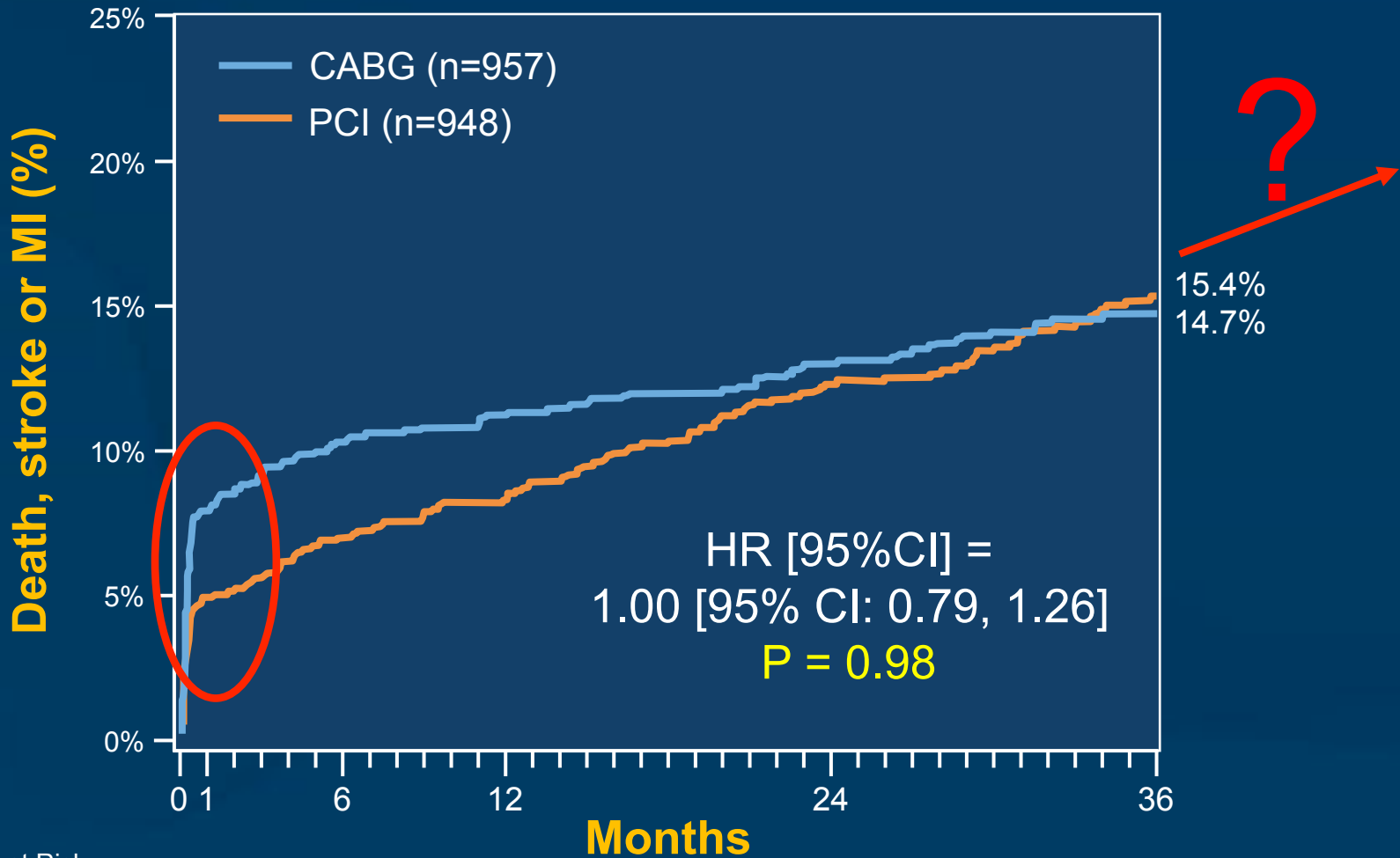
(N=950)

Follow-up: 1 month, 6 months, 1 year, annually through 5 years

Primary endpoint : Measured at a median 3-yr FU, minimum 2-yr FU

Primary Endpoint

Death, Stroke or MI at 3 Years



No. at Risk:

PCI	948	896	875	850	784	445
CABG	957	868	836	817	763	458

Conclusions

- Treatment of patients with LMCAD and low or intermediate SYNTAX scores with CoCr-EES resulted in **similar rates of the primary endpoint of death, stroke or MI at 3 years, with fewer adverse events within 30 days compared to CABG**
- **PCI may thus be considered an acceptable or even preferred revascularization modality** for selected patients with LMCAD, a decision which should be made after heart team discussion, taking into account each patient's individual circumstances and preferences

PCI & unprotected LEFT MAIN

EDITORIAL

Treatment of Left Main Coronary Artery Disease

Eugene Braunwald, N Engl J Med 2016

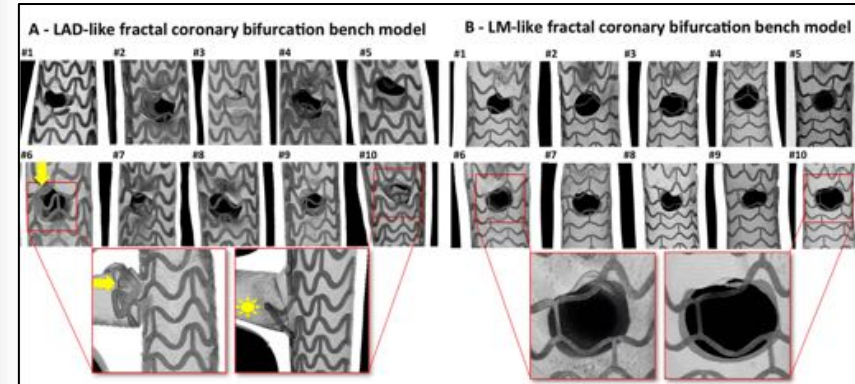
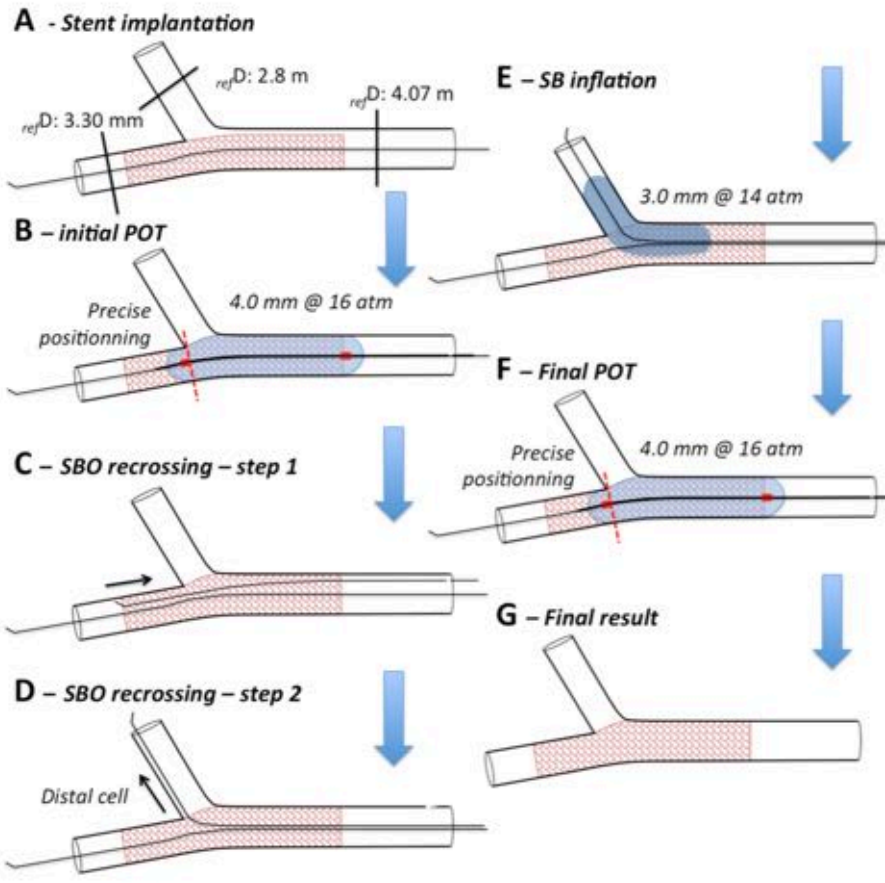


take-home message “is that the majority of patients with unprotected left main coronary artery disease, which was a very serious, life-shortening, and disabling condition early in my professional lifetime, can now be managed equally by means of two strategies of revascularization if carried out by expert, experienced teams such as those participating in the EXCEL trial

Bifurcations

POT-Side-POT ou REPOT

Finet G, JACC Cardiovasc Interv 2015
Derimay F, JACC Cardiovasc Interv 2016
Derimay F, Eurointervention 2017



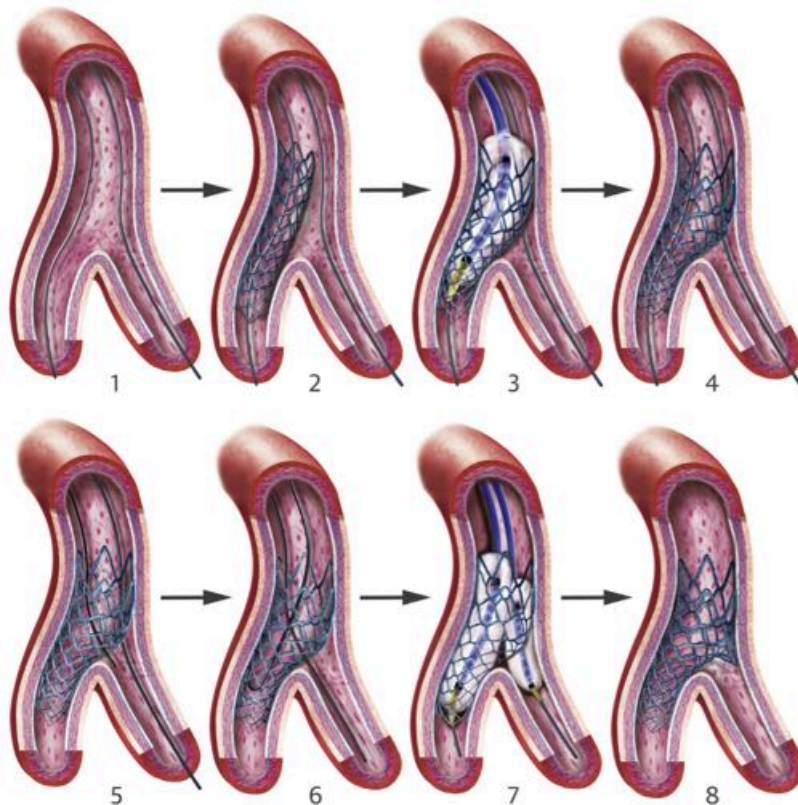
	Promus Premier™	Xience Xpedition™	Resolute Integrity™	Coroflex Isar™	Ultimaster™	Orsiro™
Platform size (mm)	3.5x20	3.5x23	3.5x22	3.5x27	3.5x24	3.5x22
Alloy	PiCr	CoCr	CoCr	CoCr	CoCr	CoCr
Connectors	2	3	2	3	2	3
Connector type	Peak-to-peak	Peak-to-valley	Peak-to-peak	Peak-to-valley	Peak-to-peak	Valley-to-valley
Strut thickness (µm)	86	89	95	64	95	87

Bifurcations

Contemporary Approach to Coronary Bifurcation Lesion Treatment



Fadi J. Sawaya, MD,^a Thierry Lefèvre, MD,^a Bernard Chevalier, MD,^a Phillippe Garot, MD,^a Thomas Hovasse, MD,^a Marie-Claude Morice, MD,^a Tanveer Rab, MD,^b Yves Louvard, MD^a



DES Designs Overexpansion

Balloon Max Size	Synergy	Xpedition	Res. Onyx	Ultimaster	BioMatrix A	Orsiro
4.0	Small vessel (8 crowns, 2-4 connectors) Expansion: 3.6mm	Small vessel (6 crowns, 3 connectors) Expansion: 4.1mm	Small vessel workhorse (6.5 crowns, 2 connectors) Expansion: 3.3mm	Small vessel (8 crowns, 2 connectors) Expansion: 4.3mm	Small vessel (6 crowns, 2 connectors) Expansion: 4.1mm	Small vessel (8 crowns, 3 connectors) Expansion: 4.0mm
5.0	Workhorse (8 crowns, 2-4 connectors) Expansion: 4.2mm		Medium vessel workhorse (8.5 crowns, 2 connectors) Expansion: 4.4mm			
6.0	Large vessel (10 crowns, 2-5 connectors) Exp: 5.7mm	Large vessel (9 crowns, 3 connectors) Expansion: 5.6mm	Large vessel (9.5 crowns, 2.5 connectors) Expansion: 5.6mm	Large vessel (8 crowns, 2 connectors) Expansion: 5.8mm	Large vessel (9 crowns, 3 connectors) Expansion: 5.9mm	Large vessel (6 crowns, 3 connectors) Expansion: 5.3mm
			Extra-Large vessel (10.5 crowns, 2.5 connectors) Expansion: 6.0mm			

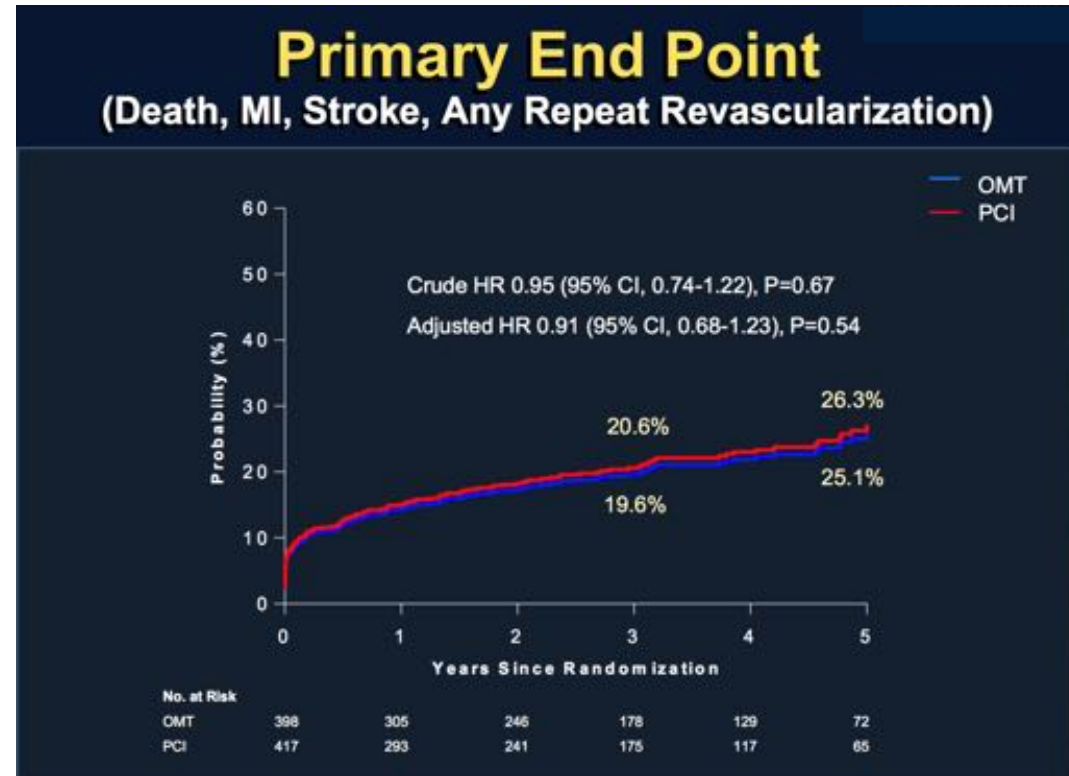
> Expansion : inner stent MLD excluding struts
 > Max balloon size : Maverick 6.0mm at 14 ATM

Occlusions Chroniques

DECISION - CTO

Park SJ, ACC 2017

the therapeutic strategy was non inferior to intervention for the primary endpoint of **death, MI, stroke or any revascularization** at 3 years



Critère principal inadapté?

Faible enrôlement (815 pour 1284 espérés), indications « poussives »

20% cross over !!!

Suivi trop court

Euro - CTO

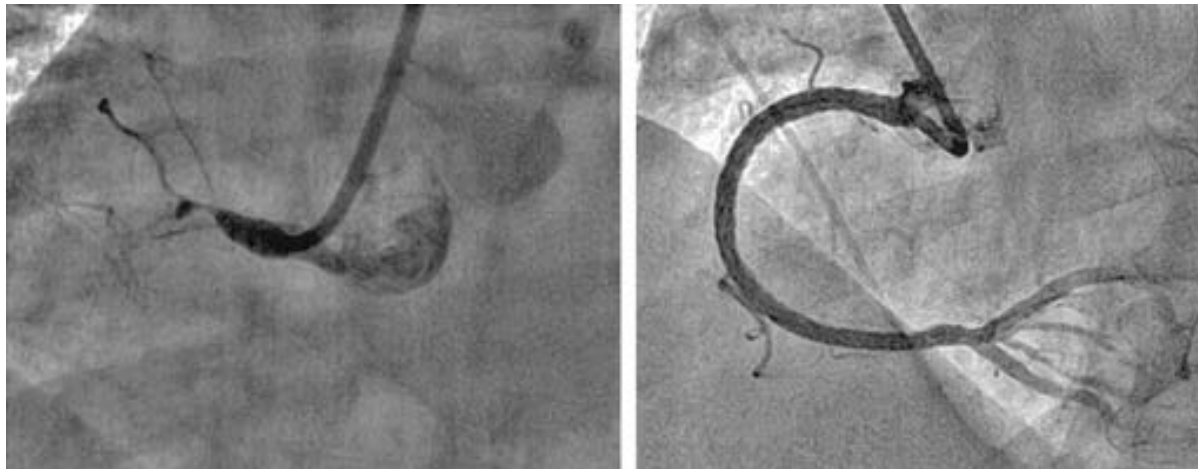
Werner GS, EuroPCR 2017

396 pts randomisés (259 CTO vs 137 medical)

Etude stoppée prématurément faute de recrutement (40% prévus)

Taux de succès = **86%**, complications **1.3%**

CTO = **meilleure qualité de vie** (moins d'angor, + d'activité physique)



Cardiologie interventionnelle 2016-2017

Recommandations

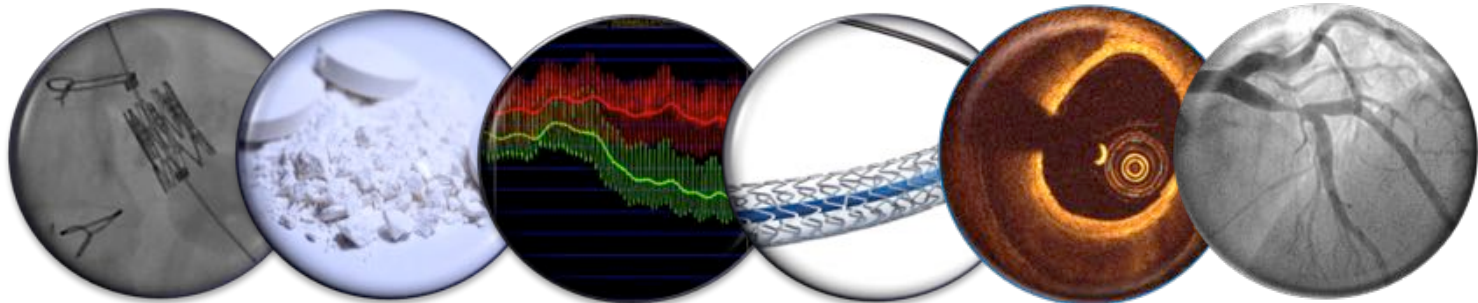
Structurel

Stents et Stenting

Outils diagnostic

Pharmacologie

Maladie coronaire



FUTURE

Rioufol G, AHA 2016



exclusion criteria
STEMI < 12h
no LAD disease
CI to FFR

All-comer Patient with stable or stabilized angina
Multivx-disease (>50% stenosis) including LAD
at the time of angiography

Randomisation 1:1

FFR-guided

Angio-guided

FFR on all target lesions

FFR > 0.80 lesions
disregarded for TT

non-invasive tests
allowed

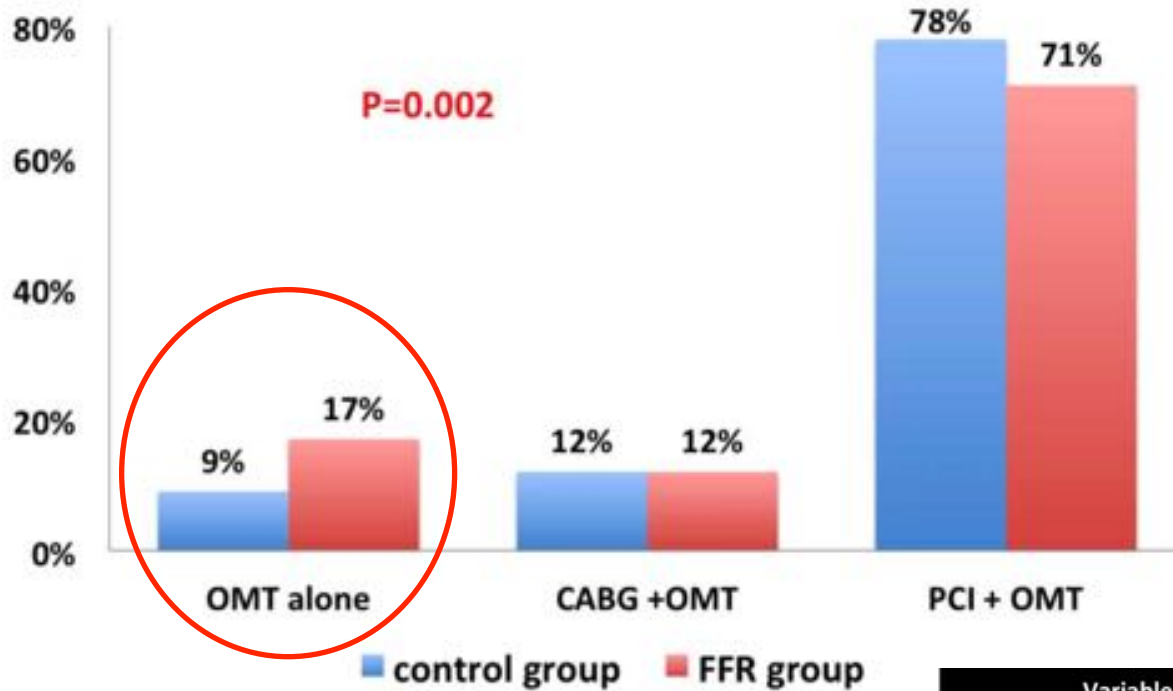
Only lesions with FFR ≤ 0.80
included in stratification

All lesions with %S > 50
included in stratification



- The FUTURE trial was prematurely halted due to an excess of the all-cause mortality (**HR 2.39, p=0.02**) in the group of patients with FFR assessment (DSMB evaluation on n= 836 pts).
- As of today, the follow-up indicates a persistent but non significant (**p=0.11**) difference in the 12-month all-cause mortality (797 pts).

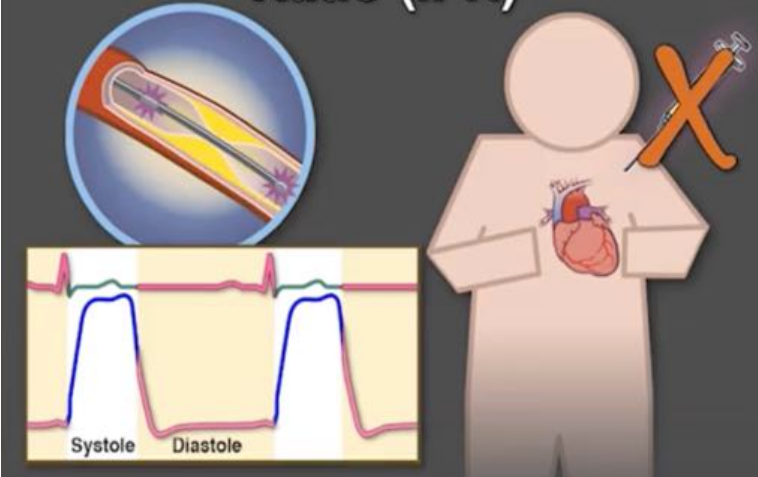
FUTURE



Variable	Control group (n=398)*	FFR Group (n=399)*	HR (95%CI)	P value
Death from any cause (%)	8 (1.8)	17 (3.9)	1.98 (0.85-4.60)	0.07
Cardiovascular death (%)	6 (1.3)	12 (2.7)	1.88 (0.70-5.01)	0.16
MACE(%)	58 (13.2)	65 (15.1)	1.09 (0.76-1.56)	0.63
Myocardial infarction (%)	24 (5.3)	29 (6.5)	1.23 (0.71-2.11)	0.46
Stroke (%)	4 (0.9)	2 (0.4)	0.48 (0.09-2.62)	0.40
Repeat revascularization (%)	33 (7.6)	32 (7.6)	0.97 (0.60-1.58)	0.91
EQ-5D – visual analogue scale	71±18	70±17		0.51

iFR vs FFR

Instantaneous Wave-free Ratio (iFR)



iFR = étude du gradient de pression sans injection d'adénosine, moyennée sur 3 à 5 diastoles (cutoff=0.89)

- **DEFINE-FLAIR**

JE Davies, New Engl J M 2017

- **iFR-SWEDEHEART**

M Götberg, New Engl J M 2017

2 études randomisées de non-infériorité (2492 et 2037 pts)

Non infériorité de l'iFR (vs FFR), pour guider revascularisation

Beaucoup moins de symptômes indésirables (3.1% vs 30.8% et 3.1% vs 68.3%)

ILUMIEN 3

Ali ZA, Lancet 2016

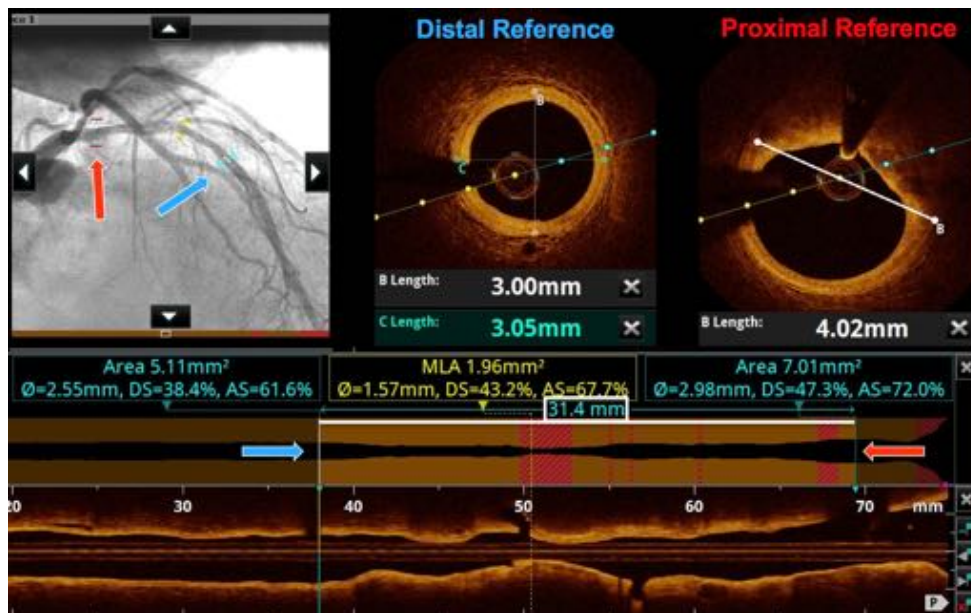
Optical coherence tomography compared with intravascular ultrasound and with angiography to guide coronary stent implantation (ILUMIEN III: OPTIMIZE PCI): a randomised controlled trial

450 Randomized

158 OCT-guided PCI

146 IVUS-guided PCI

146 angiography-guided PCI



Primary Endpoint Final post-PCI MSA by OCT

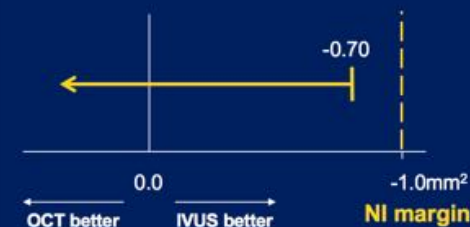
OCT 5.79 mm² [4.54, 7.34]

IVUS 5.89 mm² [4.67, 7.80]

97.5% one-sided CI: [-0.70, -]

$P_{\text{noninferiority}} = 0.001$

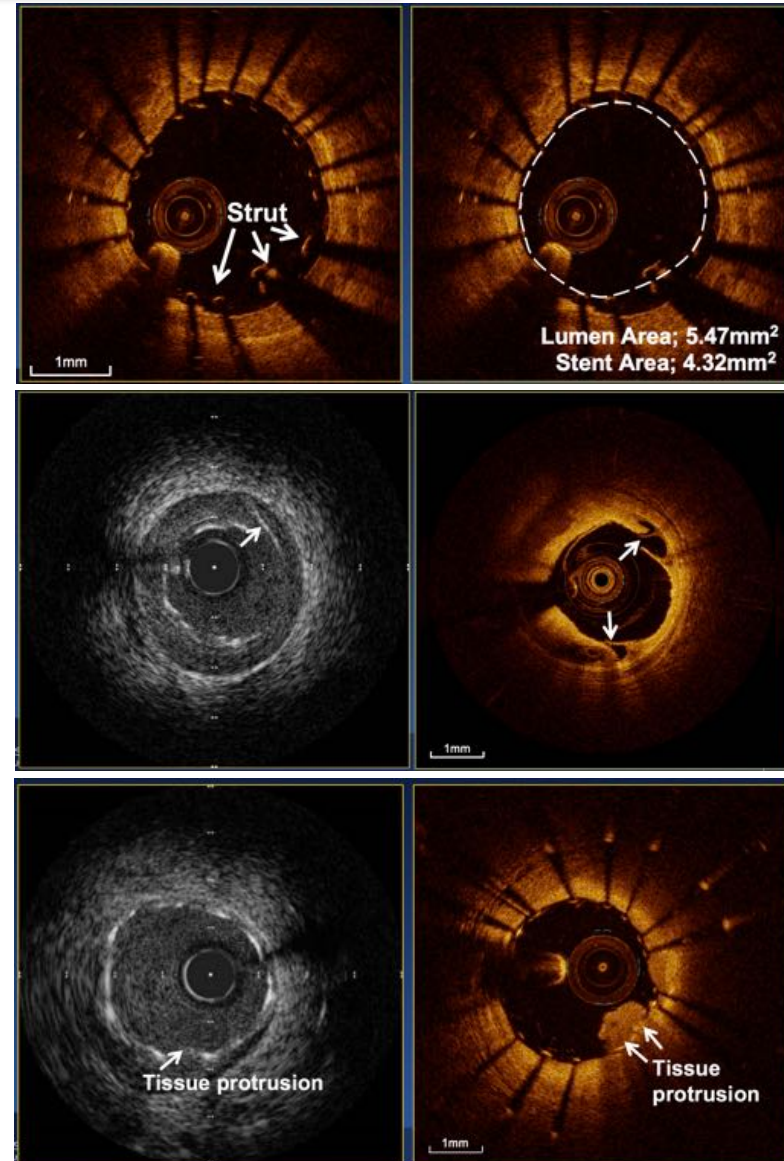
$P_{\text{superiority}} = 0.12$



ILUMIEN 3

Ali ZA, Lancet 2016

- OCT-guided PCI using a specific EEL-based stent optimization strategy **was non-inferior to IVUS-guided PCI for achieving MSA**
- OCT-guided PCI resulted in superior stent expansion and procedural success compared to angiography-guided PCI.
- OCT-guided PCI resulted in the fewest untreated major dissections and areas of major stent malapposition.

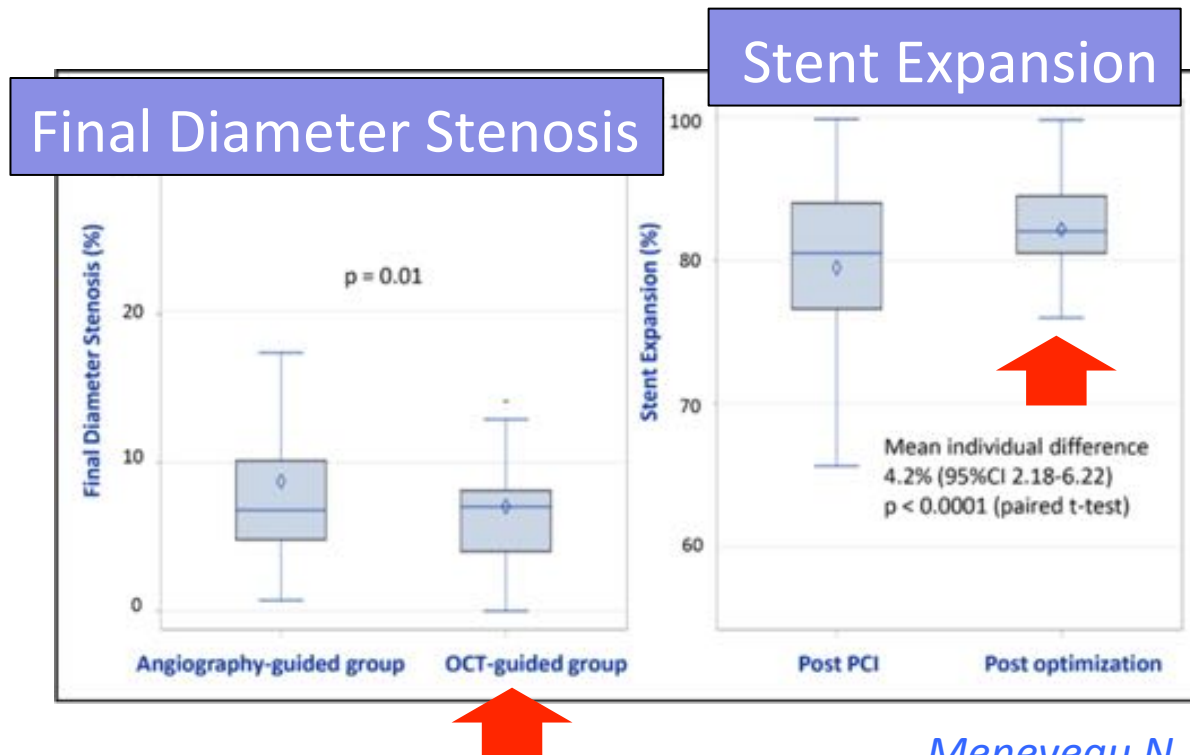


OCT guidance during PCI in patients with NSTEMI

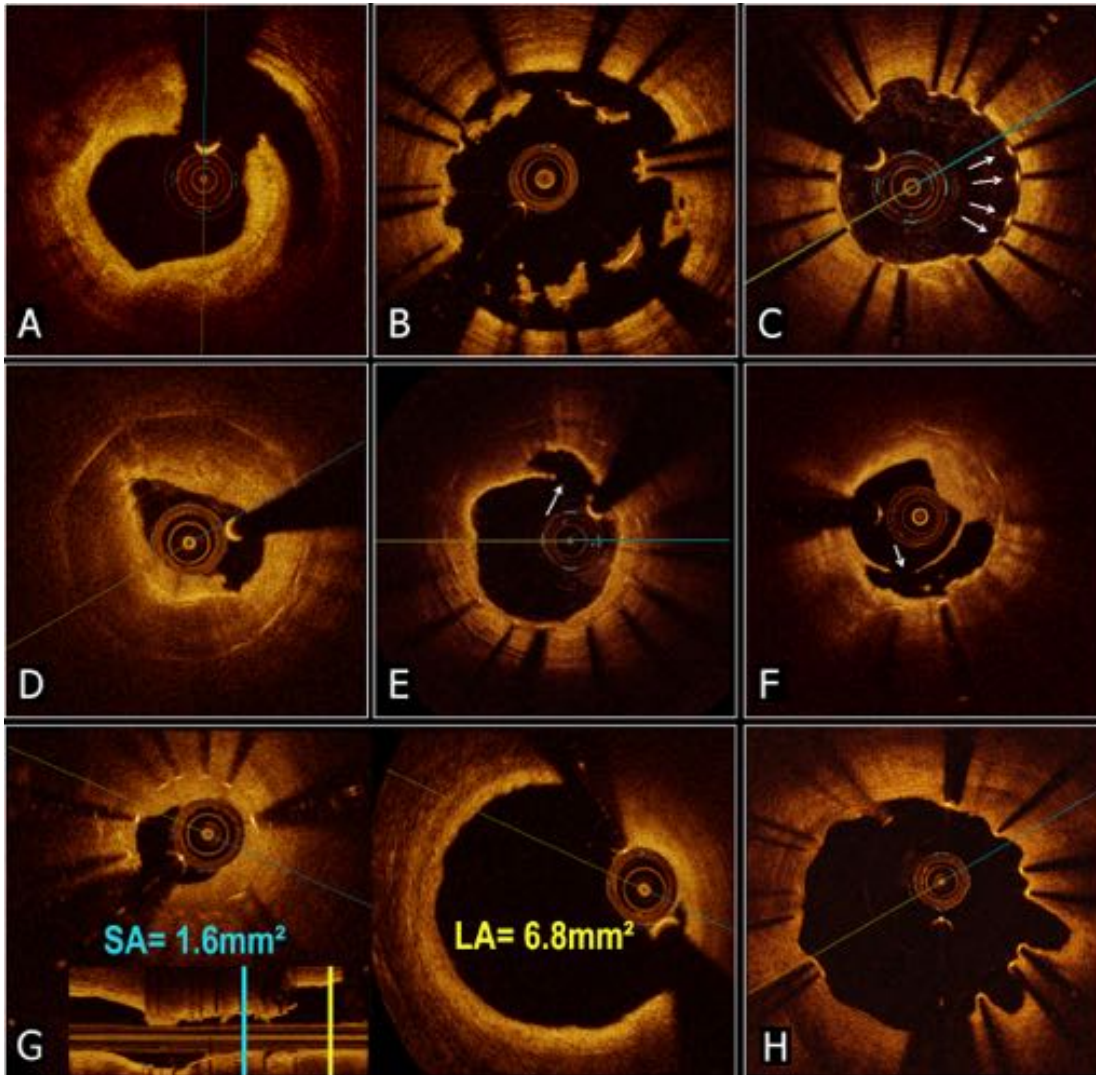
Change in procedural strategy in half the cases in the OCT-guided group.

OCT improved functional outcome compared with PCI guided by fluoroscopy alone, as assessed by FFR.

This improvement seemed to be explained by optimization of stent expansion.



Souteyrand G, Eur Heart J 2016



Mechanisms of Stent Thrombosis (n=120)

- *Malapposition 34%*
- *Neoatherosclerosis 22%*

OCT influences management in 55% of ST cases

- *POBA 37%*
- *Medical therapy in 32%*
- *Stenting 31%*

Cardiologie interventionnelle 2016-2017

Recommandations

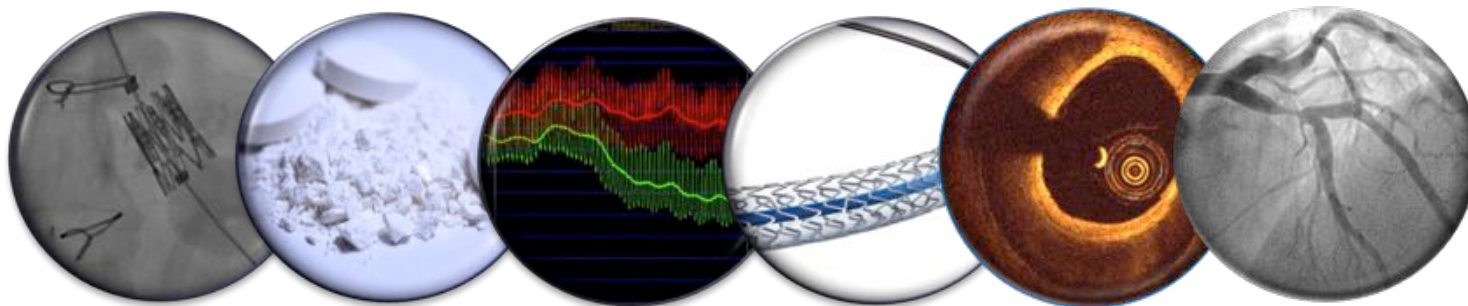
Structurel

Stents et Stenting

Outils diagnostic

Pharmacologie

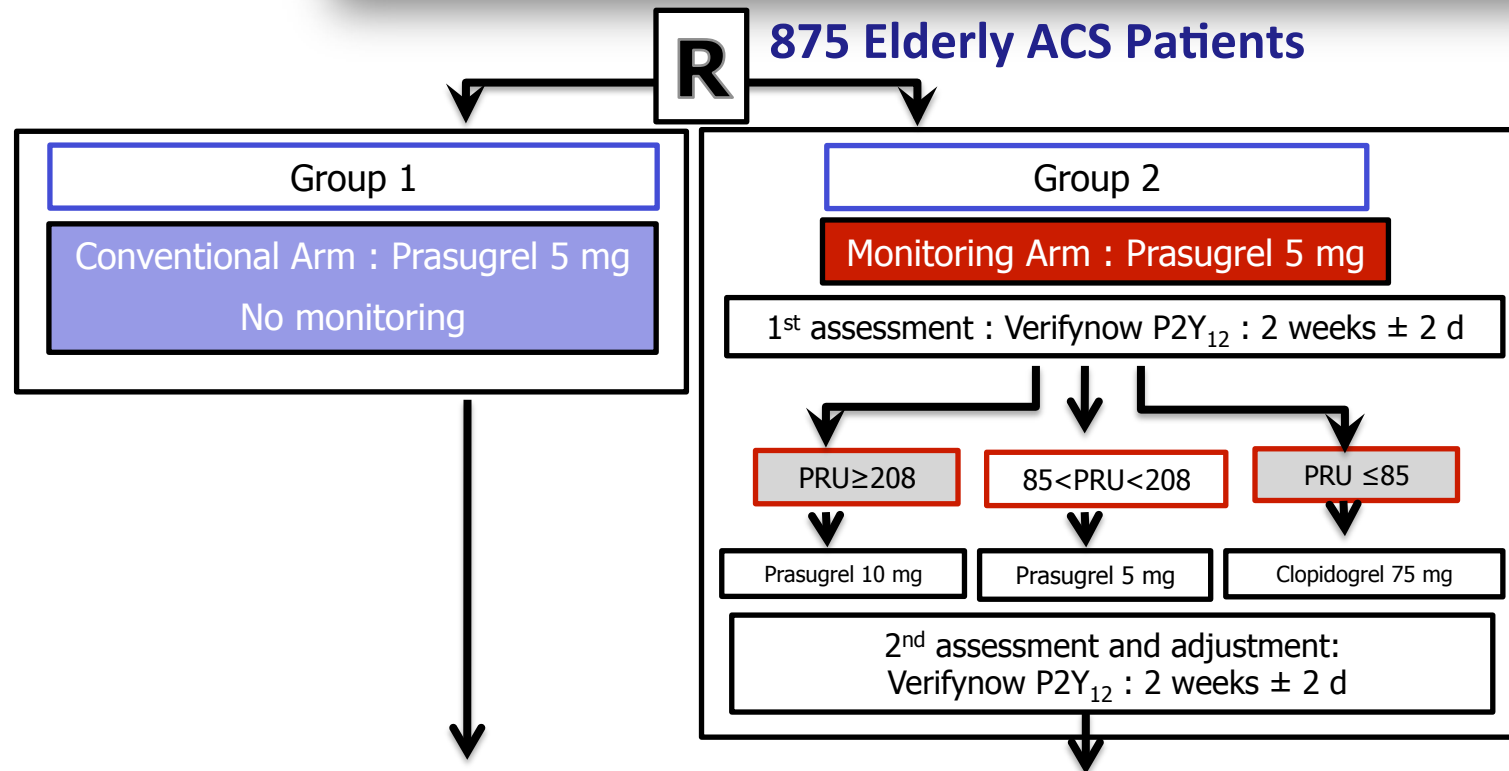
Maladie coronaire



ANTARCTIC

Cayla G, Lancet 2016

Platelet function monitoring to adjust antiplatelet therapy in elderly patients stented for an acute coronary syndrome (ANTARCTIC): an open-label, blinded-endpoint, randomised controlled superiority trial

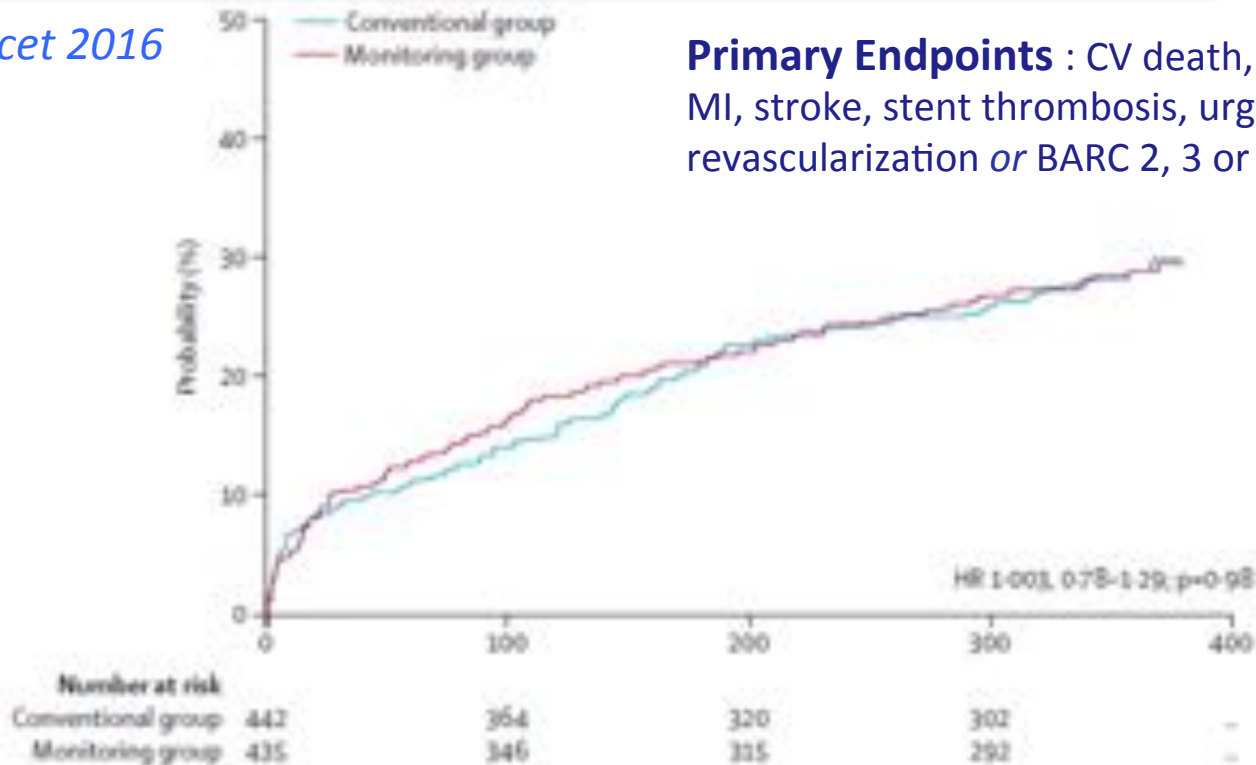


Primary end point (net clinical benefit) over 12 months: Bleeding type 2,3,5 of the BARC definition and MACE (CV death, MI, urgent revascularisation, stent thrombosis, stroke)

ANTARCTIC

Cayla G, Lancet 2016

Primary Endpoints : CV death, MI, stroke, stent thrombosis, urgent revascularization *or* BARC 2, 3 or 5



- Largest randomized PCI **study in the elderly**
- Platelet function monitoring to adjust antiplatelet therapy in elderly patients stented for an ACS does **not improve** their clinical outcomes

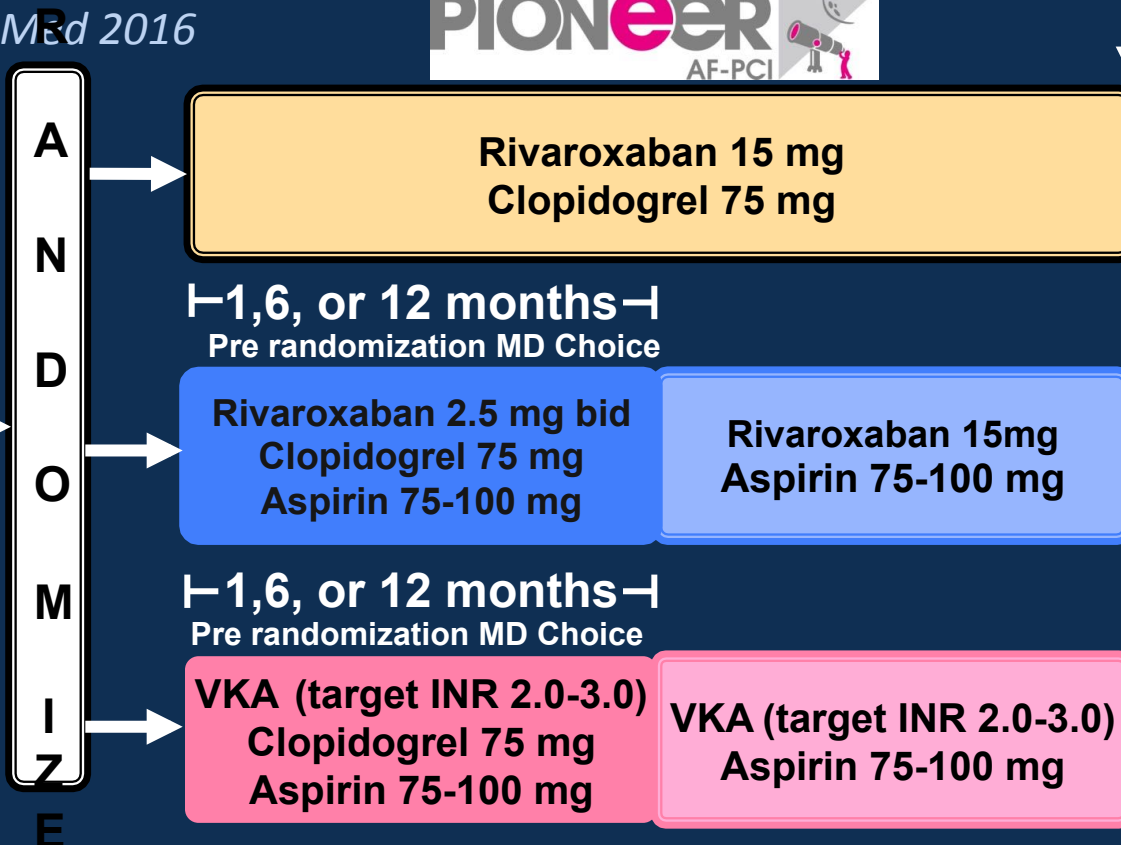
PIONEER AF-PCI

Gibson CM, *New Engl J Med* 2016



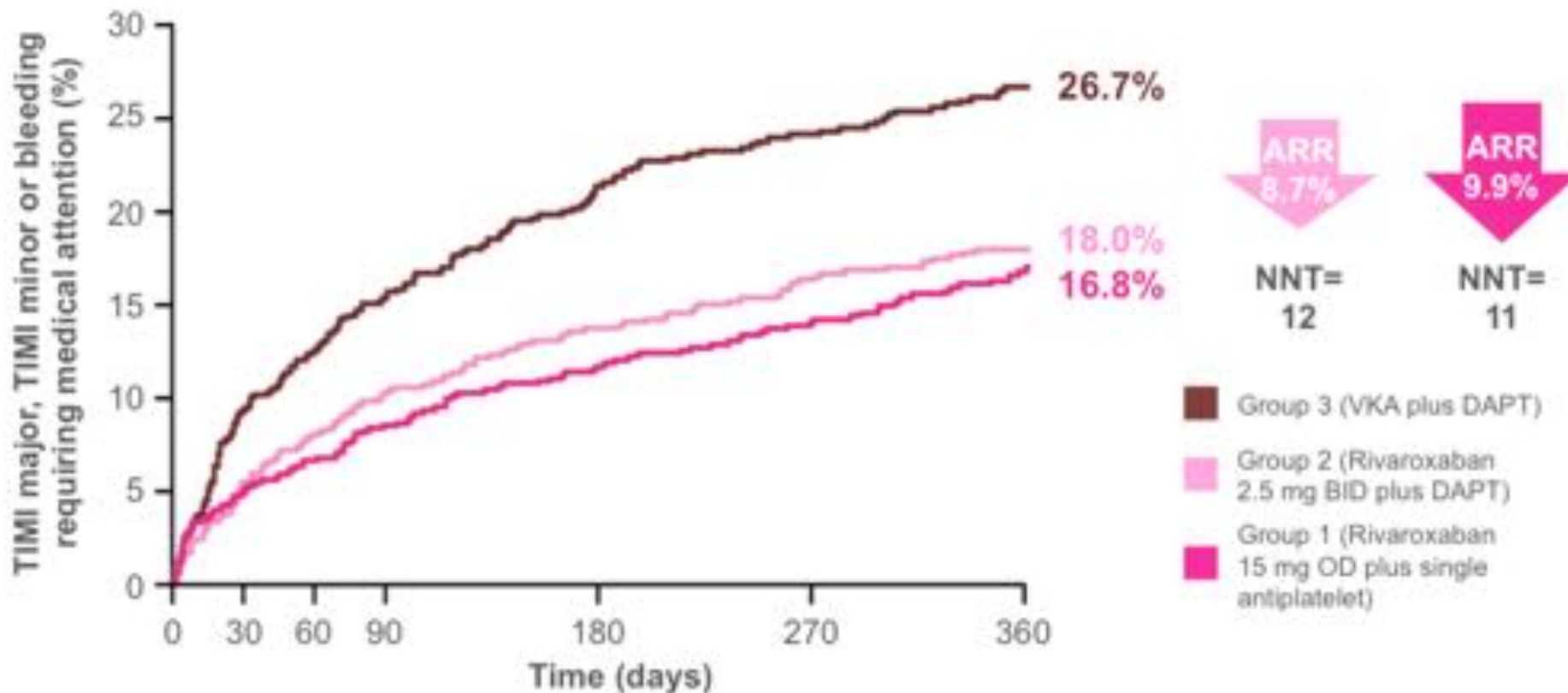
End of
treatment
12 months

- ◆ 2100 patients with NVAF
- ◆ Coronary stenting
- ◆ No prior stroke/TIA, GI bleeding, Hb < 10, CrCl < 30

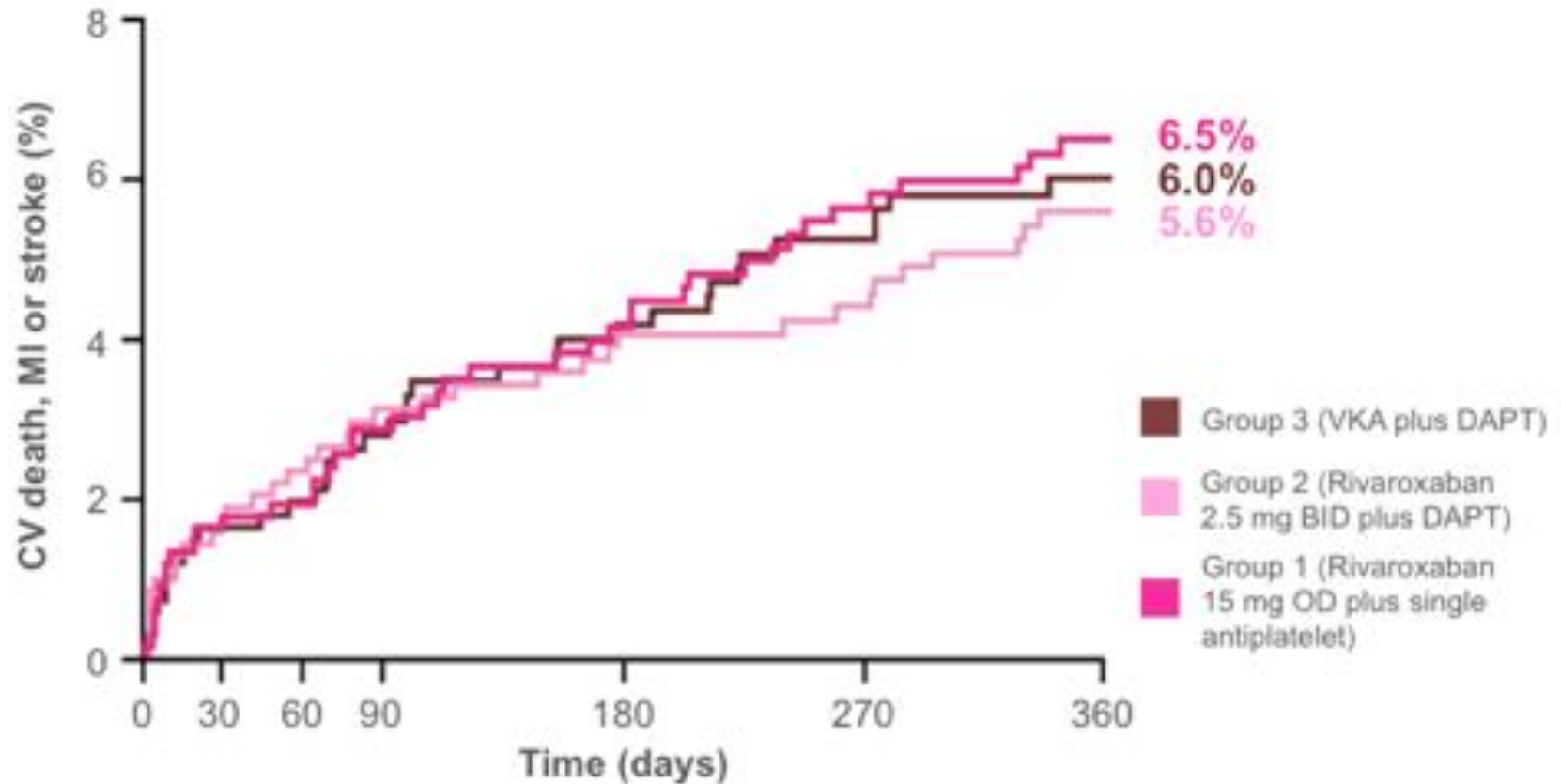


- Primary endpoint: TIMI major + minor + bleeding requiring medical attention
- Secondary endpoint: CV death, MI, and stroke (Ischemic, Hemorrhagic, or Uncertain Origin)

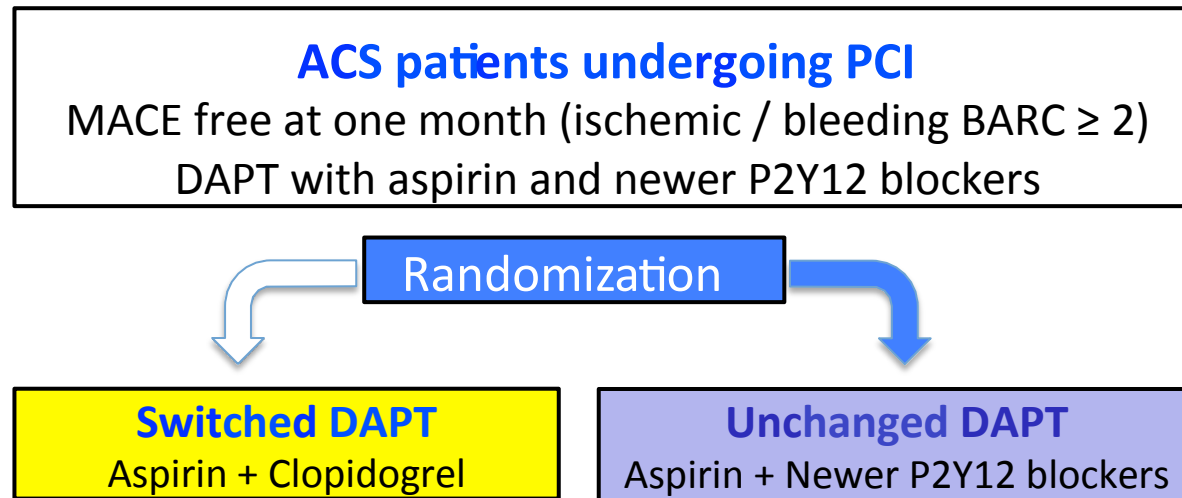
Primary endpoint : First Occurrence of Clinically Significant Bleeding Events



First Occurrence of CV Death, MI or Stroke



Benefit of switching dual antiplatelet therapy after acute coronary syndrome :
The TOPIC (Timing Of Platelet Inhibition after acute Coronary Syndrome) randomized study



Follow-up at one year

Composite primary endpoints

Death, urgent revasc, stroke, BARC bleedings ≥ 2

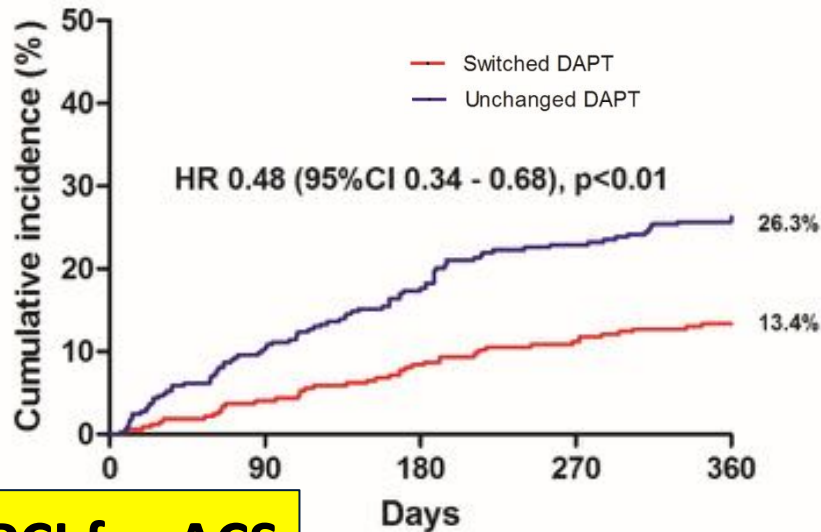
Secondary endpoints

Each component of primary endpoints

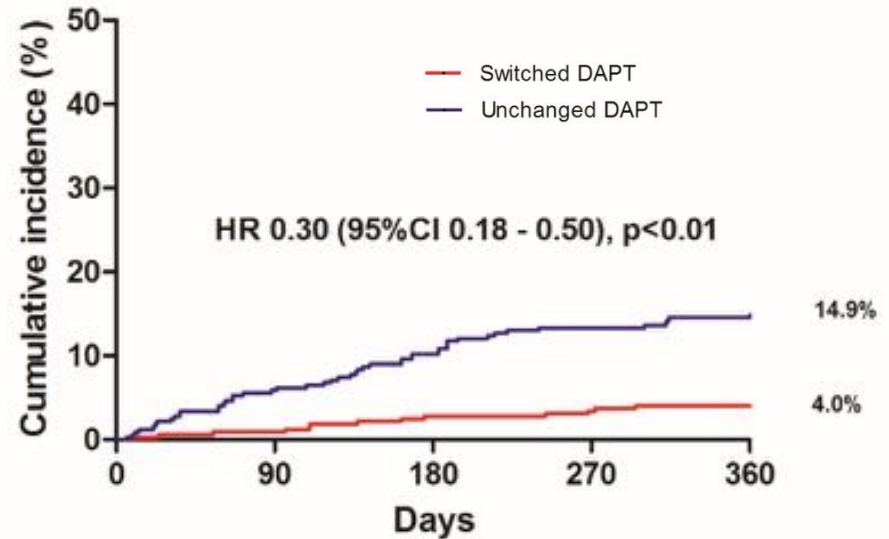
All BARC bleeding, TIMI bleeding

Primary Endpoint

Death, Urgent revasc., Stroke, BARC ≥ 2



BARC bleedings ≥ 2



PCI for ACS

- Better Prognosis with **switched DAPT** with less bleedings
- New strategy integrating dynamic risk for post ACS patients

Aspirin + Potent P2Y12

Aspirin + Clopidogrel

M12

M1 Switch

Cuisset T, Eur Heart J 2017

Cardiologie interventionnelle 2016-2017

Recommandations

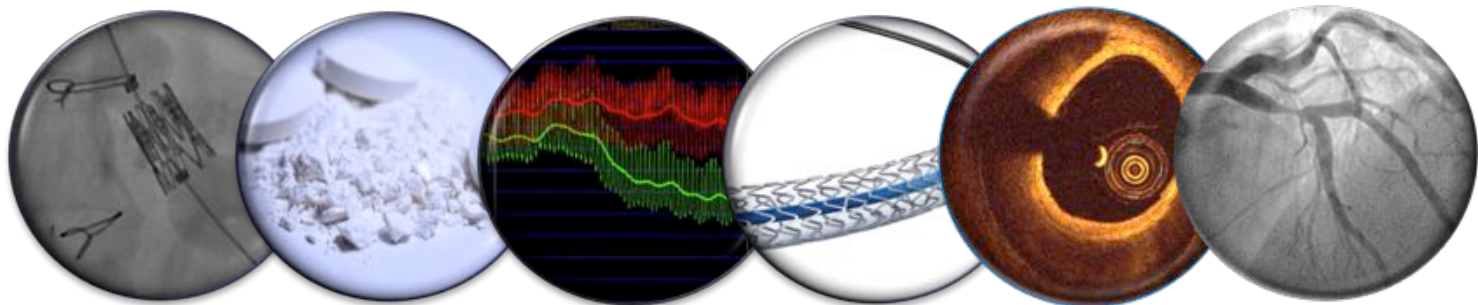
Structurel

Stents et Stenting

Outils diagnostic

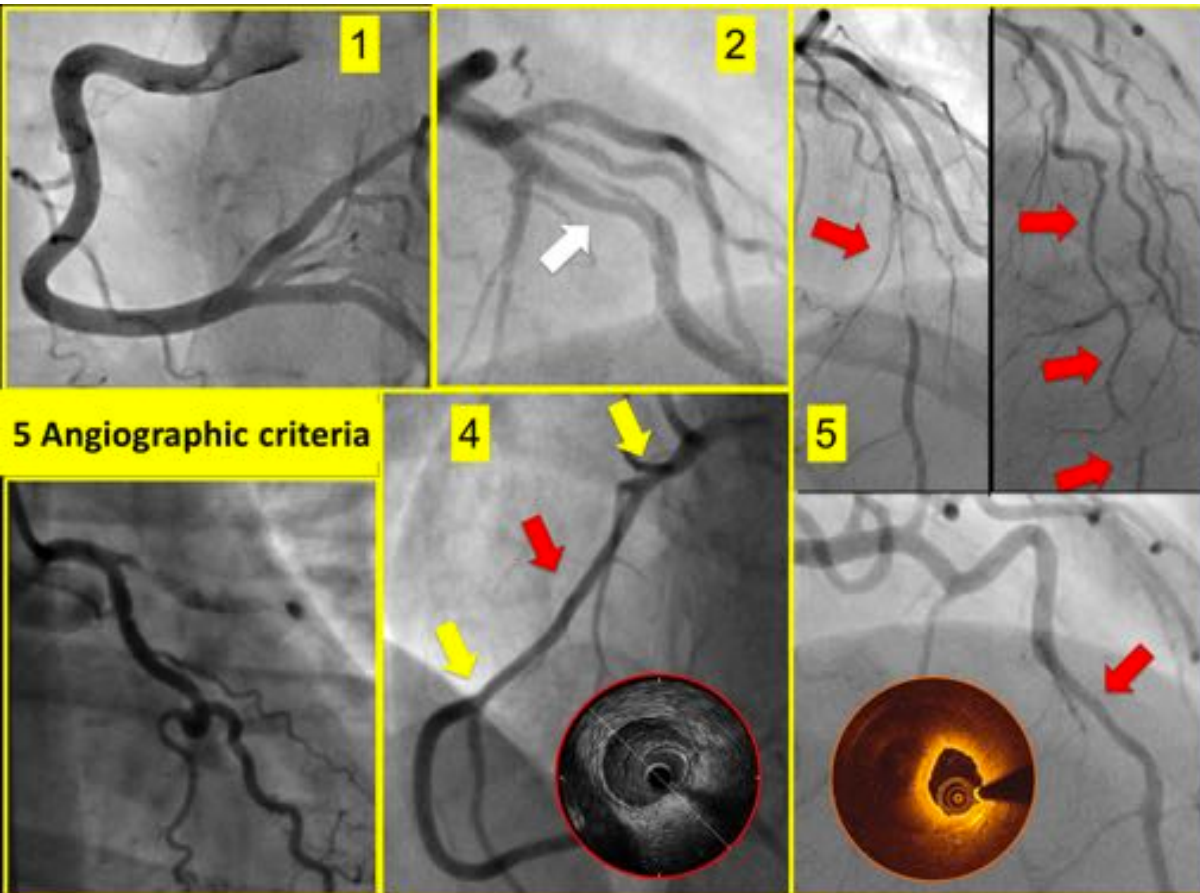
Pharmacologie

Maladie coronaire

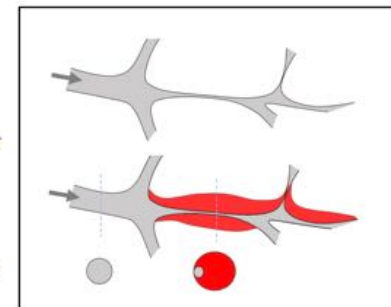
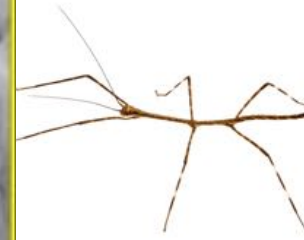
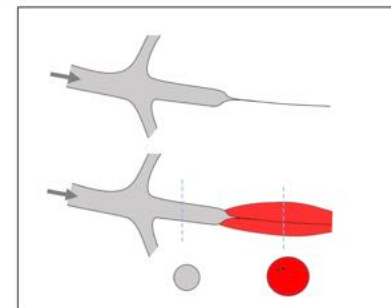


Dissections coronaires spontanées

How and when to suspect spontaneous coronary artery dissection?
Motreff P, Eurointerv 2016



**SCAD = 1/3 SCA
illégitime de la
femme jeune**



DISCO



Société Française de Cardiologie

GACI



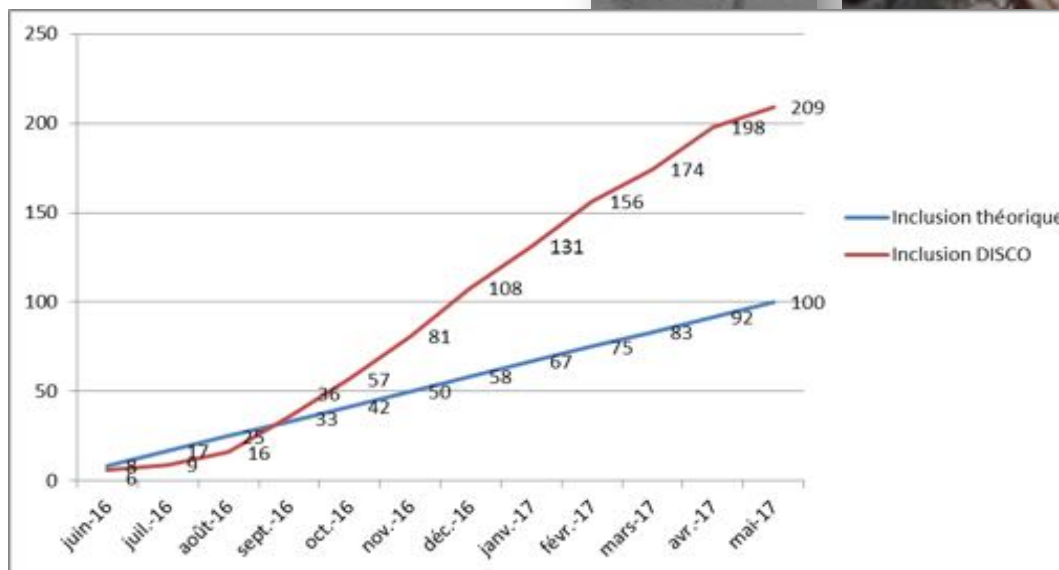
DISCO

209 inclusions en 12 mois !

39 centres

Etude DISCO

Etude génotypique et phénotypique de la prévalence de la Dysplasie Fibro Musculaire dans une population prise en charge pour hématomate ou **DIS**section **CO**ronaire Spontanés



Les études marquantes depuis 12 mois en Cardiologie Interventionnelle

- Beaucoup d'études Françaises
- Registres Nationaux

Eurointervention 2017

