



Quelle est la place du **BAS** dans le SCA ?

Atelier HEXACATH

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7 juin 2017



2014 ESC/EACTS Guidelines on myocardial revascularization

The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS)

STEMI

Technique			
Stenting is recommended (over balloon angioplasty) for primary PCI.	I	A	241,242
New-generation DES are recommended over BMS in primary PCI.	I	A	128,247,248, 268,269

NSTEMI

The safety and efficacy of DES have not been prospectively tested in a specific population of patients with NSTEMI-ACS, but this subset comprises up to 50% of patients included in most stent trials particularly those with a stent design. There is no particular safety concern with the use of new-generation DES in NSTEMI-ACS patients. Accordingly, new-generation DES are preferred over BMS as the default option. Dual antiplatelet therapy (DAPT) should be maintained for 12 months, irrespective of stent type.

Néanmoins...

DES vs BMS ?

Drug-Eluting or Bare-Metal Stents for Coronary Artery Disease

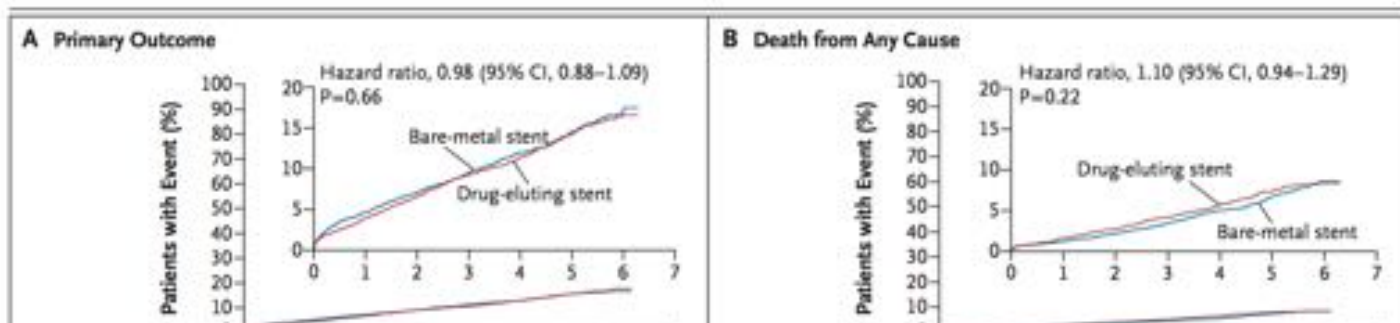
K.H. Bønaa, J. Mannsverk, R. Wiseth, L. Aaberge, Y. Myreng, O. Nygård,
D.W. Nilsen, N.-E. Kløw, M. Uchto, T. Trovik, B. Bendz, S. Stavnes,
R. Bjørnerheim, A.-I. Larsen, M. Slette, T. Steigen, O.J. Jakobsen, Ø. Bleie,
E. Fossum, T.A. Hanssen, Ø. Dahl-Eriksen, I. Njølstad, K. Rasmussen,
T. Wilsgaard, and J.E. Nordrehaug, for the NORSTENT Investigators*



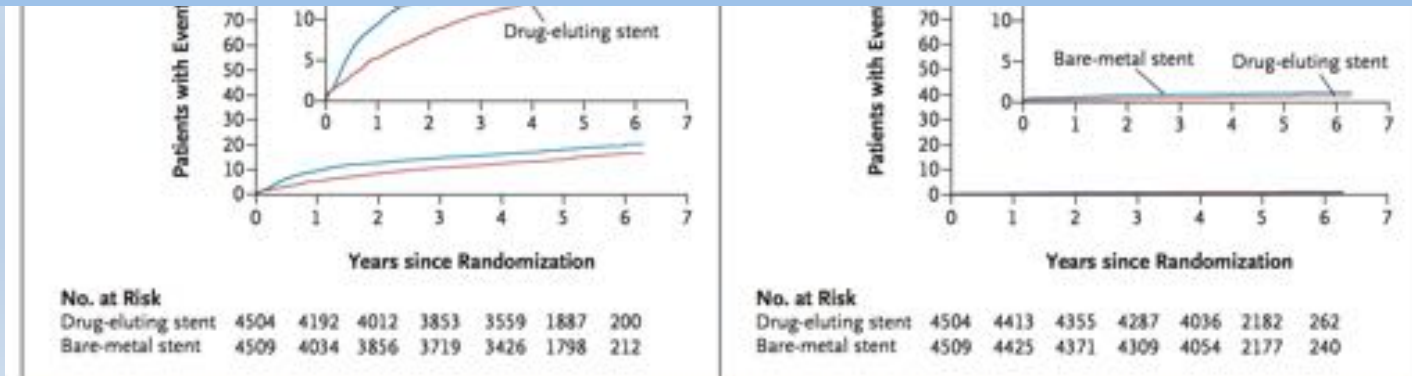
The NEW ENGLAND
JOURNAL of MEDICINE

Sept. 2016

NORSTENT Study



- Bénéfice à long terme DES vs BMS moins important qu'attendu
- Pas de bénéfice de mortalité
- NTT par DES = 30 patients pour éviter 1 TLR



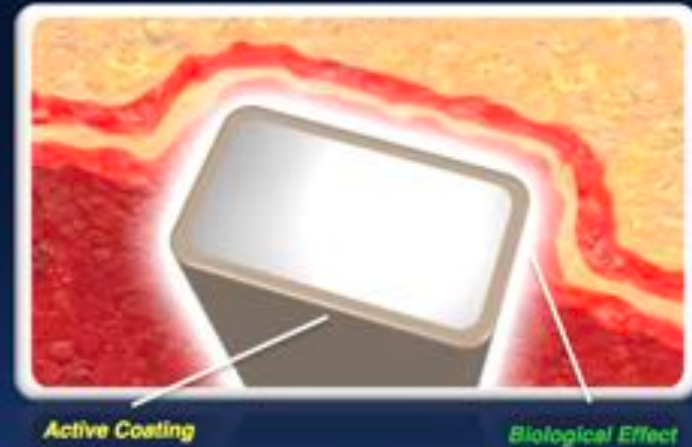
BAS

BMS ↔ BAS ↔ DES



Bio Active Stent (B.A.S.) ?

Titanium Nitride Oxide coating

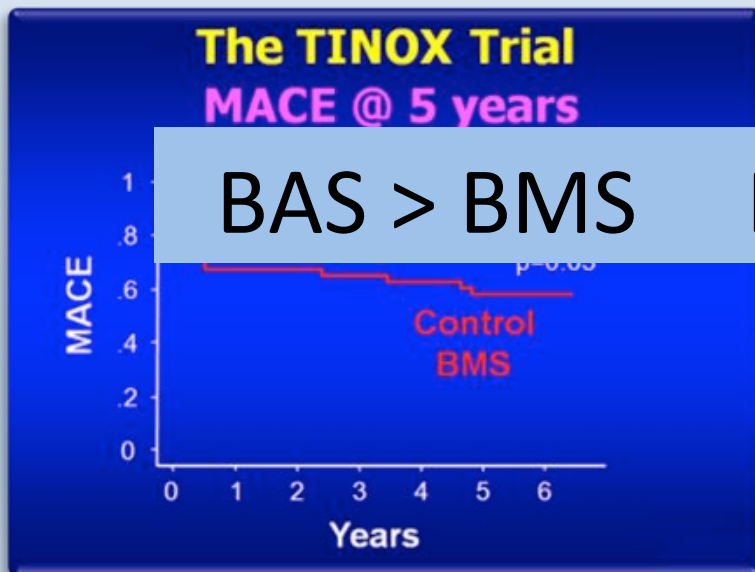


- Titanium-nitride-oxide coating **reduces:**
 - platelet adhesion
 - fibrinogen binding
 - neointimal hyperplasia
 - late luminal loss
 - Restenosis

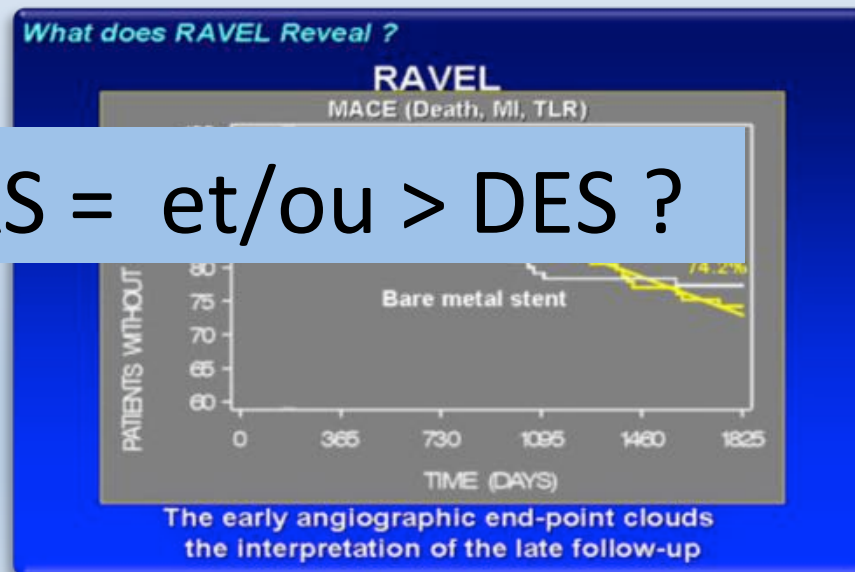
Effet long terme **BAS** vs DES

BAS: TINOX 5-YEAR FOLLOW UP

SES: RAVEL 5-YEAR FOLLOW UP



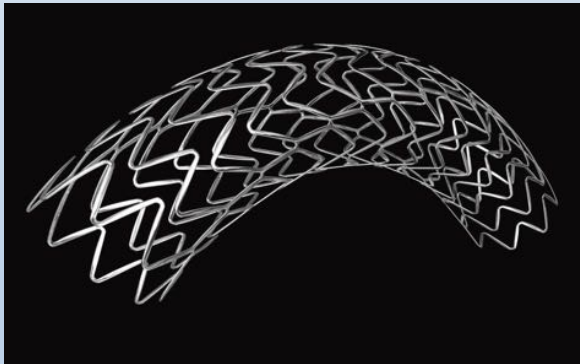
Windecker et al. EuroIntervention 2012



De Bruyne, WCC/ESC 2006

SCA

BAS vs 1^{ère} génération DES ?

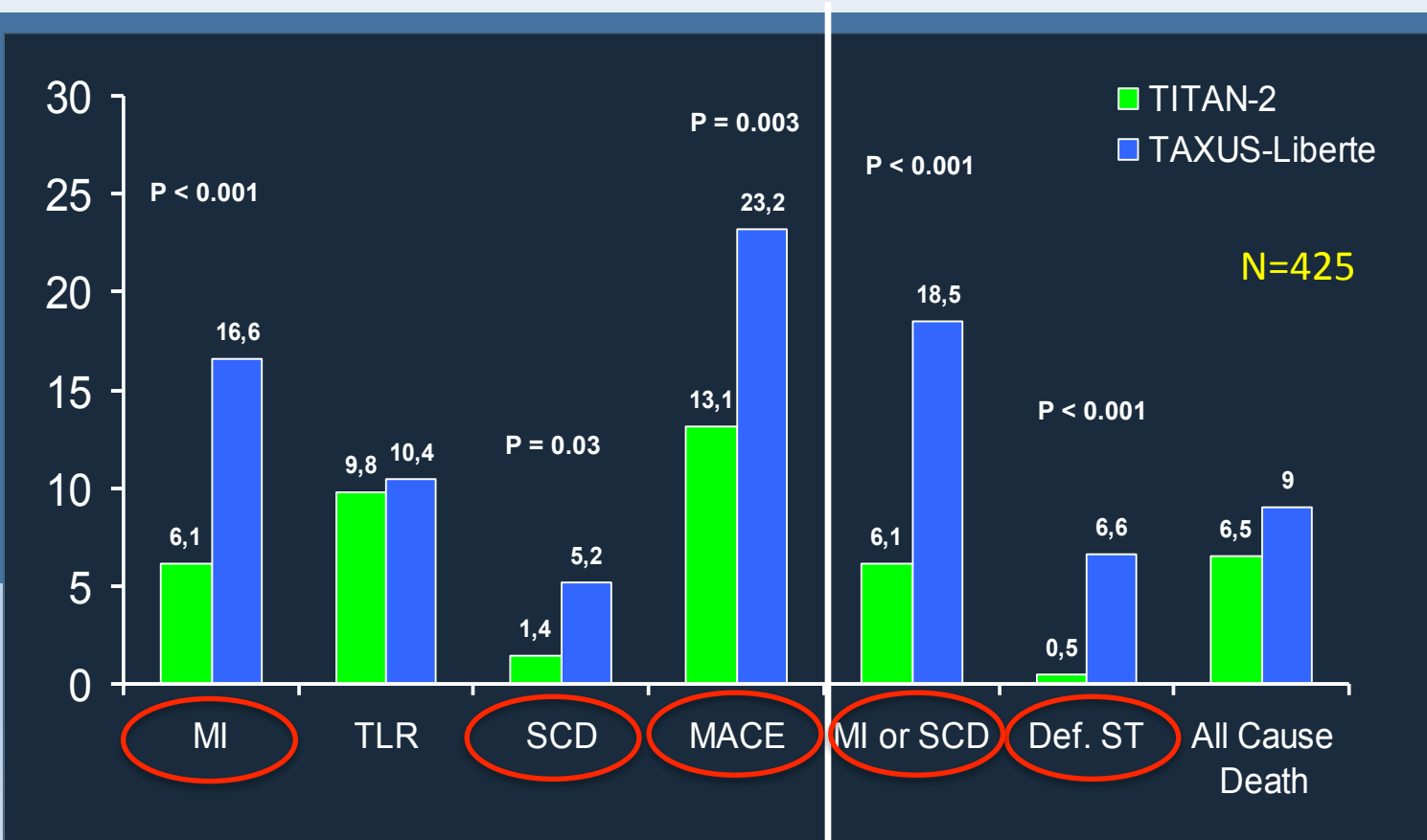


TITAN 2



TAXUS

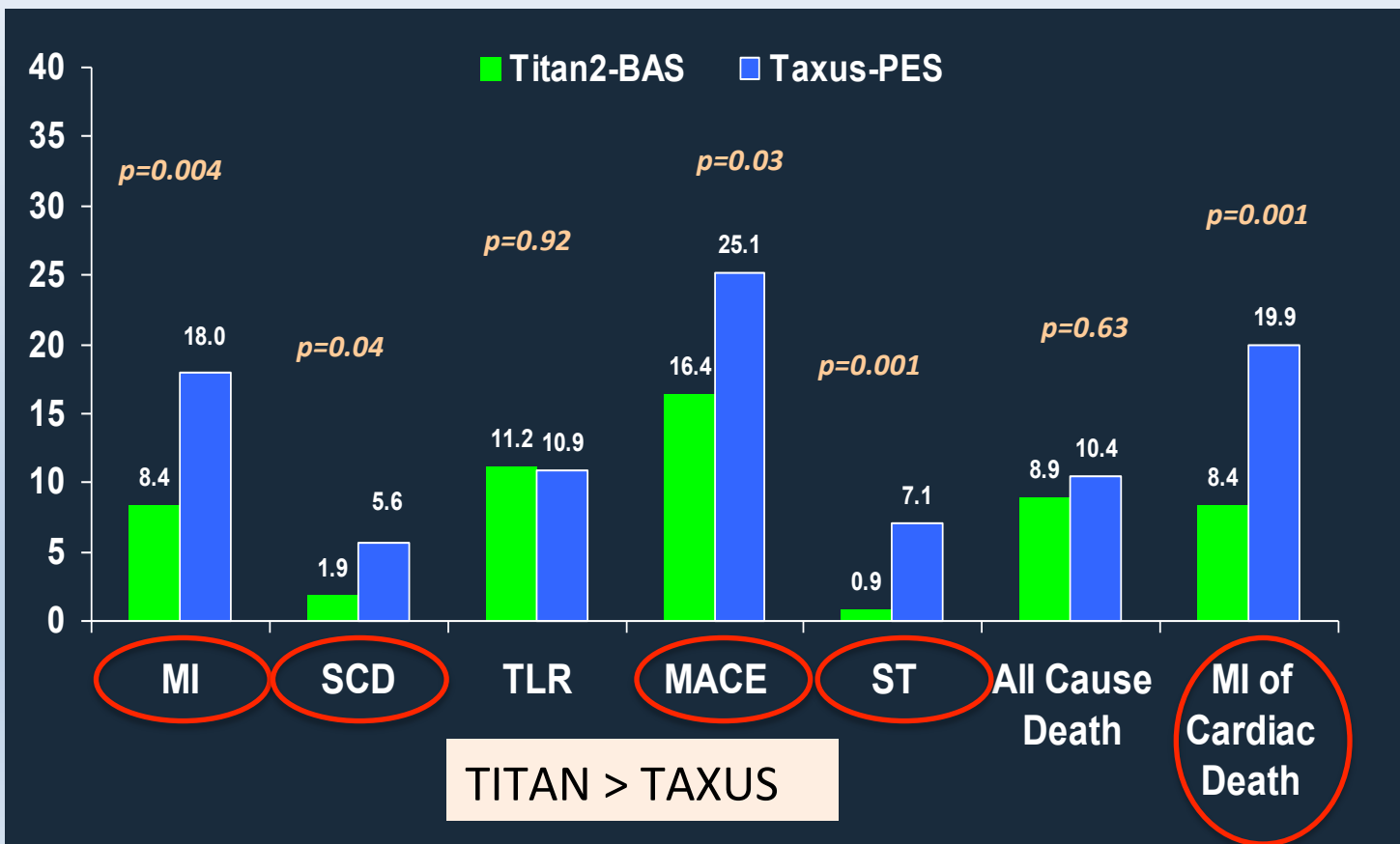
Follow up 3 ans



Five-year clinical outcome of titanium-nitride-oxide-coated bioactive stents versus paclitaxel-eluting stents in patients with acute myocardial infarction: Long-term follow-up from the TITAX AMI trial

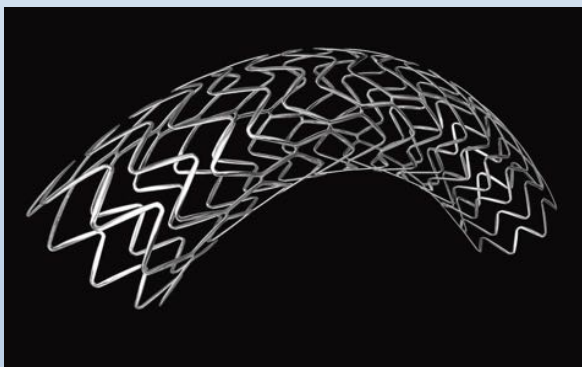
2012

Petri O. Tuomainen ^{a,b,1}, Antti Ylitalo ^a, Matti Niemelä ^c, Kari Kervinen ^c, Mikko Pietilä ^d, Jussi Sia ^e, Kai Nyman ^f, Wail Nammias ^a, K.E. Juhani Airaksinen ^d, Pasi P. Karjalainen ^{a,*1}



SCA

BAS vs 2^{ème} génération DES ?



TITAN 2



XIENCE



PROMUS

A prospective randomised comparison of titanium-nitride-oxide-coated bioactive stents with everolimus-eluting stents in acute coronary syndrome: the BASE-ACS trial

Pasi P. Karjalainen^{1*}, MD, PhD; Matti Niemelä², MD, PhD; Juhani K.E. Airaksinen³, MD, PhD, FESC; Fernando Rivero-Crespo⁴, MD; Hannu Romppanen², MD, PhD; Jussi Sia⁵, MD; Jacques Lalmand⁶, MD; Bernard de Bruyne⁷, MD, PhD; Adam DeBelder⁸, MD; Marc Carlier⁹, MD; Wail Nammias¹, MD, PhD; Antti Ylitalo¹, MD, PhD; Otto M. Hess¹⁰, MD, PhD, FESC; on behalf of the BASE-ACS study Investigators

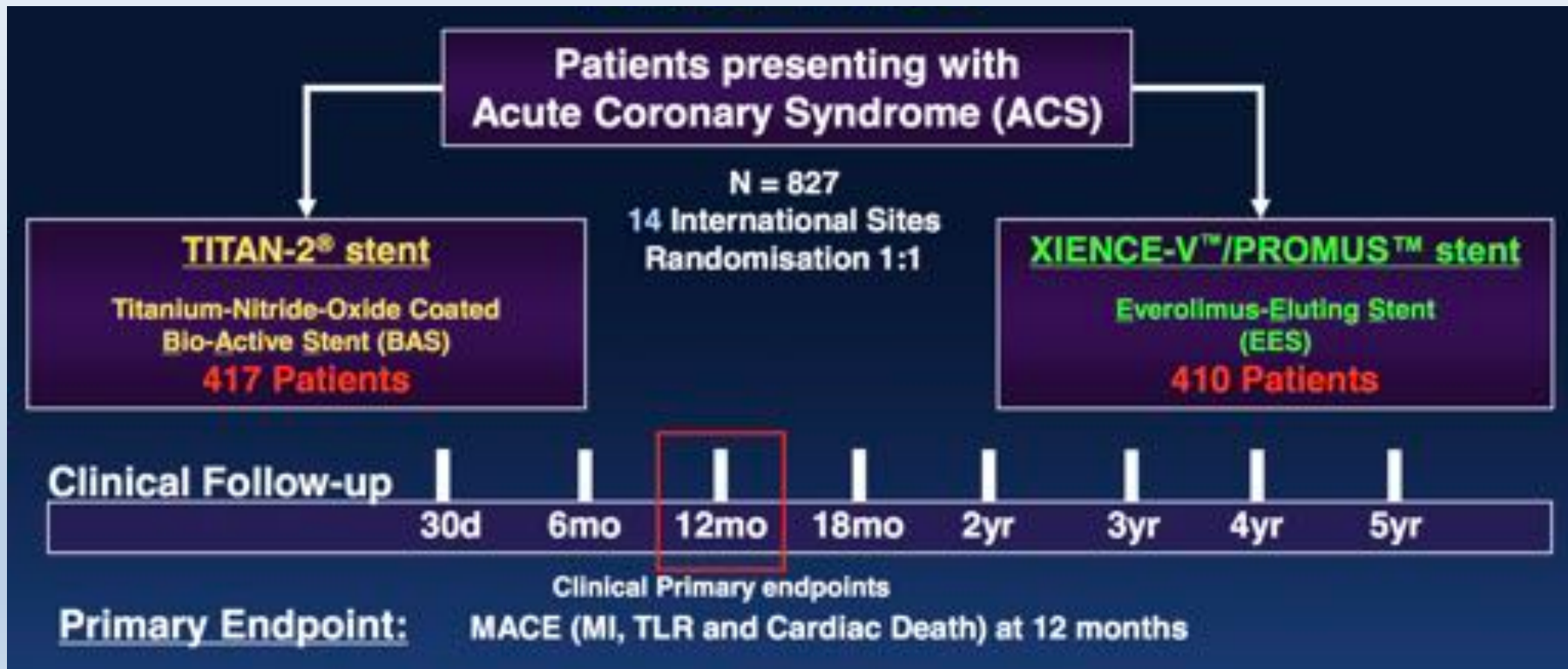
EuroIntervention

Official Journal of EuroPCR and the European Association of Percutaneous Cardiovascular Interventions (EAPCI)



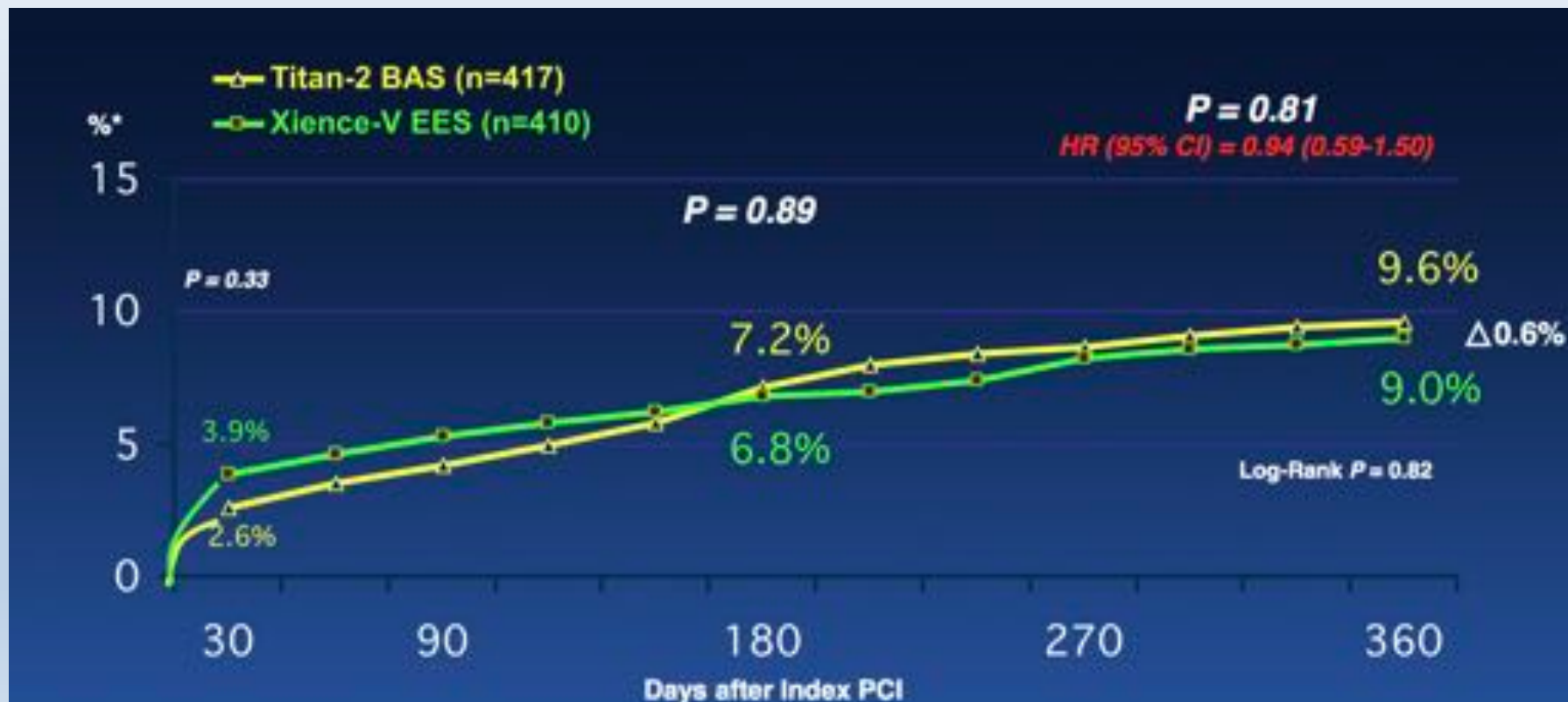
2012;8:306-15

BASE-ACS



BASE-ACS

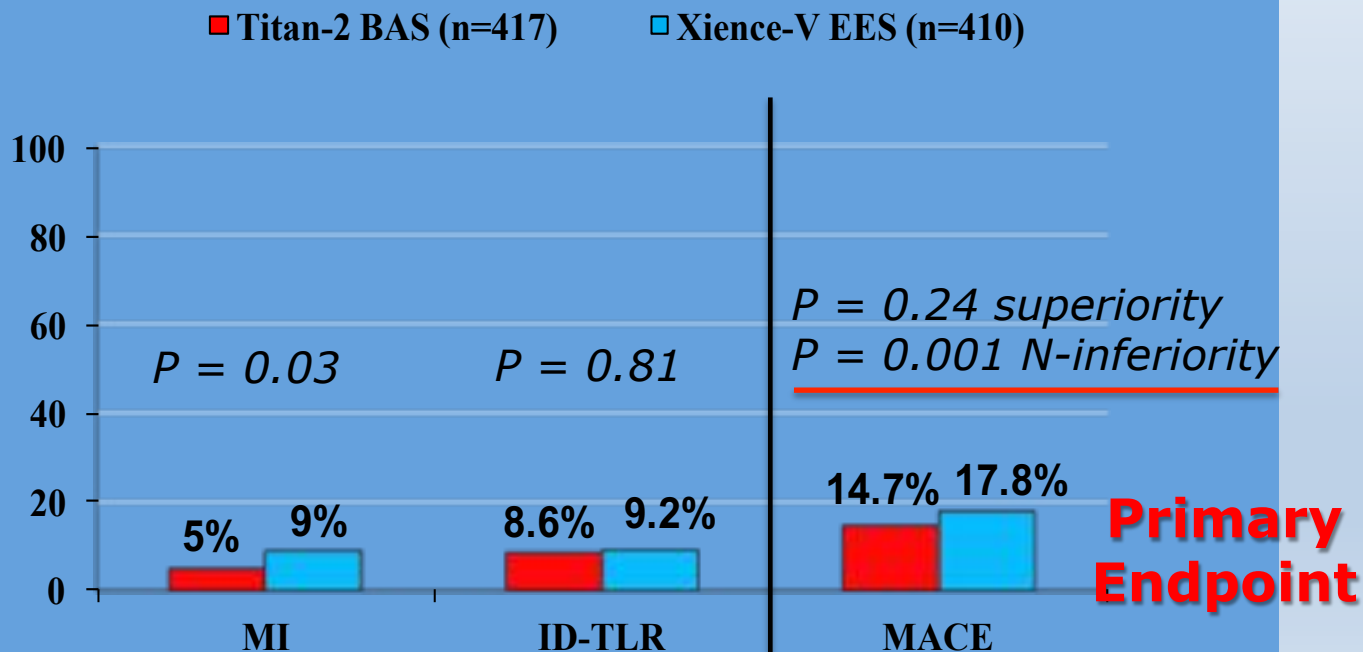
Primary endpoint : MACE à 12 mois



ORIGINAL ARTICLE

4-Year outcome of bioactive stents versus everolimus-eluting stents in acute coronary syndrome

Pasi P. Karjalainen^a, Matti Niemelä^b, Mikko Pietilä^c, Jussi Sia^d, Adam de Belder^e, Fernando Rivero-Crespo^f, Bernard de Bruyne^g and Wail Nammas^a



Long-term clinical outcome of titanium-nitride-oxide-coated stents versus everolimus-eluting stents in acute coronary syndrome: Final report of the BASE ACS trial

Karjalainen P et al.

Int Journal of Cardiology nov 2016

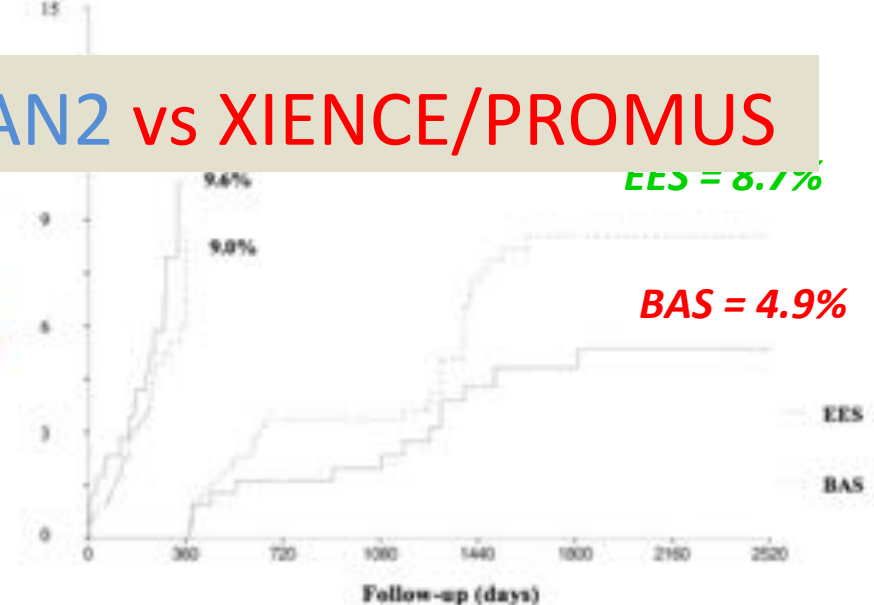
MACE

--> 7 ans

Non infériorité BAS TITAN2 vs XIENCE/PROMUS



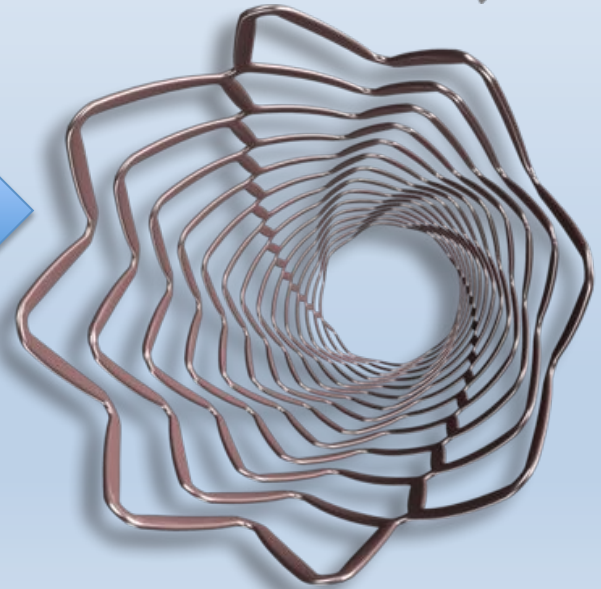
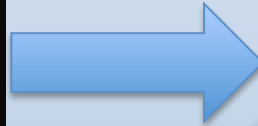
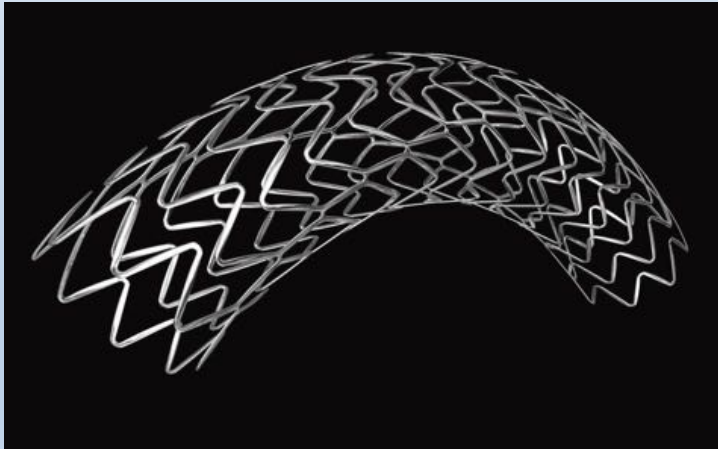
MACE (%) IDM



Evolution technologique B.A.S.

HELISTENT
TITAN2

TITAN OPTiMAX



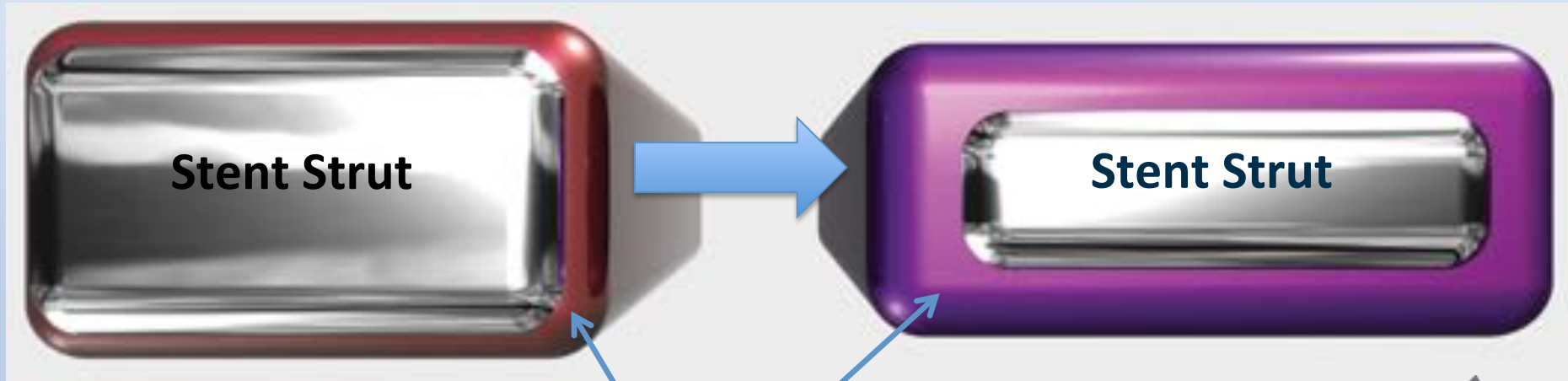
Plateforme et Coating

Acier 316L

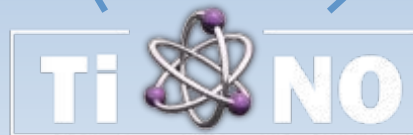
91µm

Cobalt Chrome

75µm



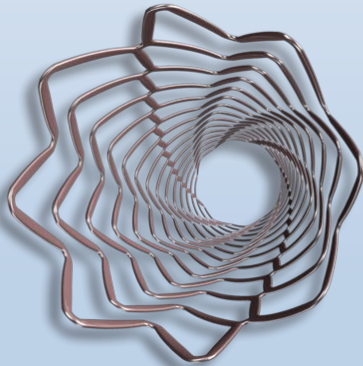
HELISTENT
TITAN2



TITAN OPTiMAX

SCA

CoCr-BAS vs 3^{ème} génération DES ?



OPTIMAX

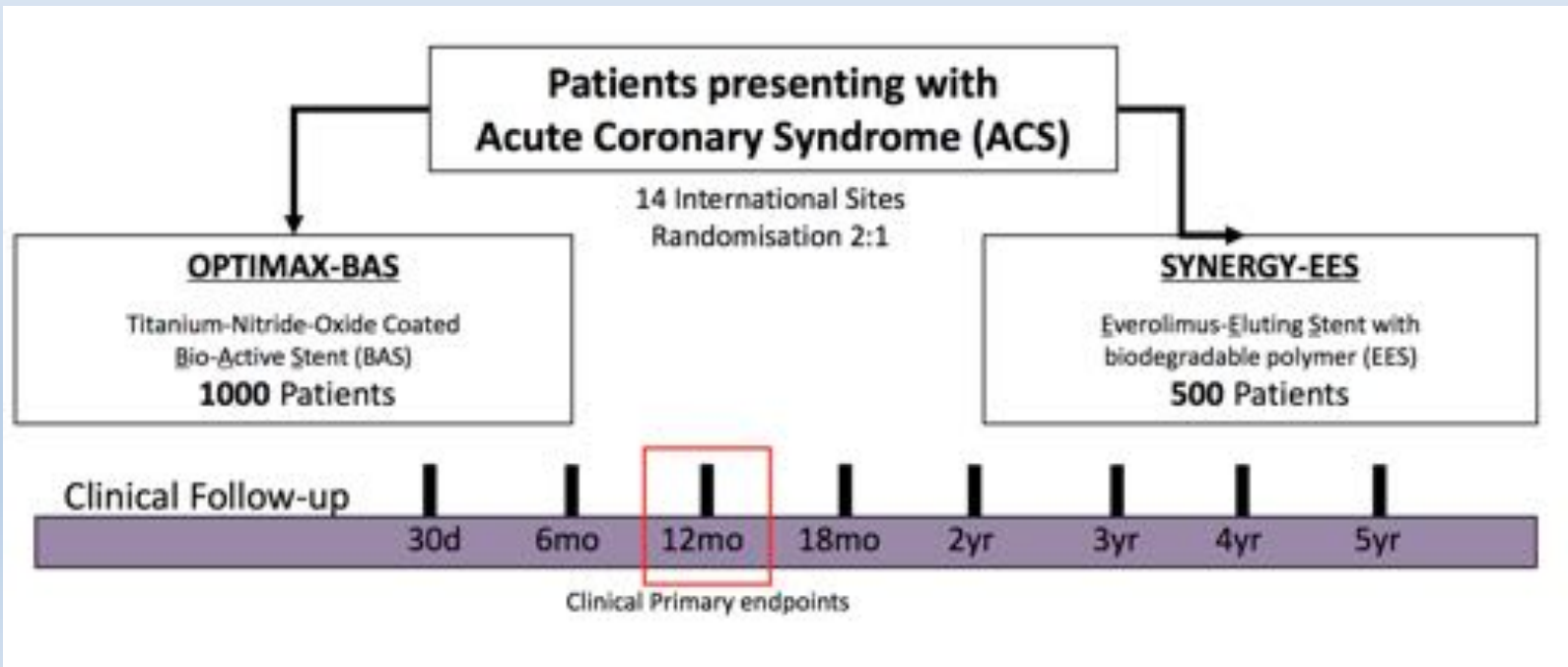


SYNERGY

Stent Plateforme

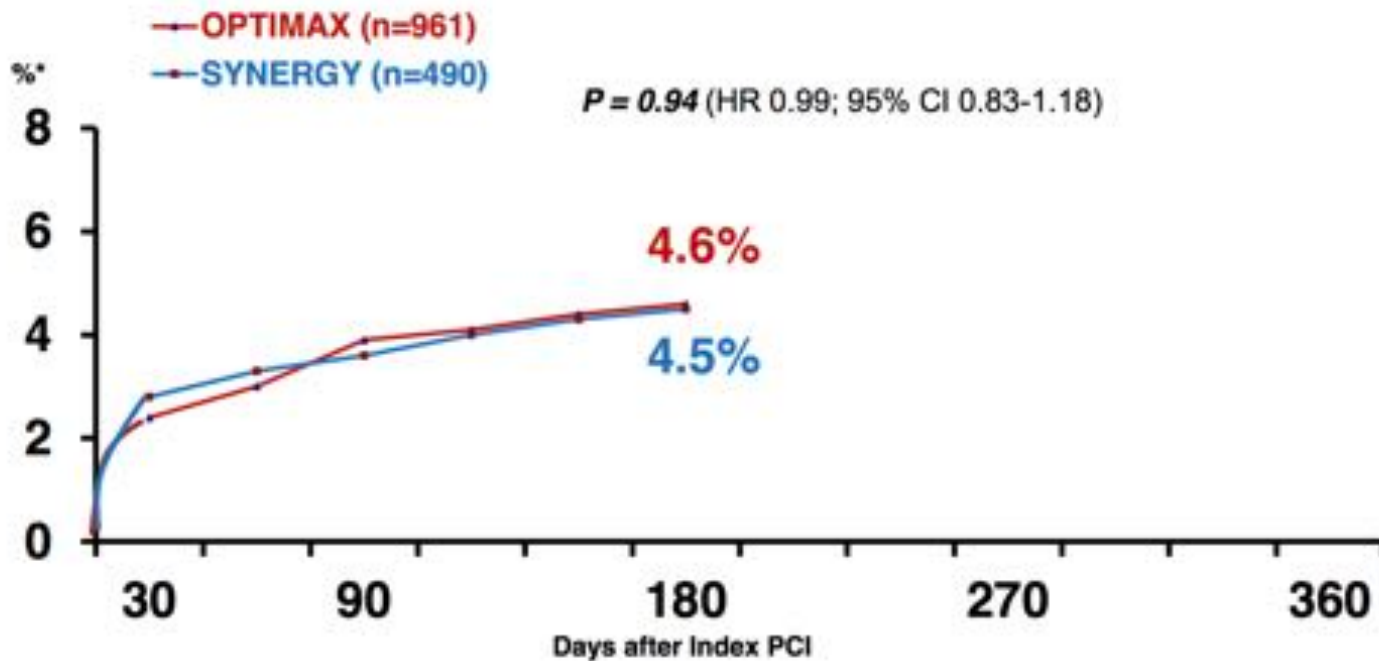
	OPTIMAX	SYNERGY
Stent Platform	Helix L605 Cobalt Chromium Strut Thickness 75μm	Platinum Chromium Strut Thickness 74-81 μm
Manufacturer	Hexacath, France	Boston Scientific, USA
Coating	Titanium-Nitride-Oxide	Everolimus
Polymer	None	Bioabsorbable PLGA, 4 μm thick, abluminal
In-stent late loss	0.49mm (BASE-ACS)	0.10mm (EVOLVE)

Comparison of *Titanium-Nitride-Oxide* coated Bio-Active-Stent (Optimax™) to the *Drug (Everolimus) - Eluting Stent (Synergy™)* in Acute Coronary Syndrome (TIDES-ACS trial)

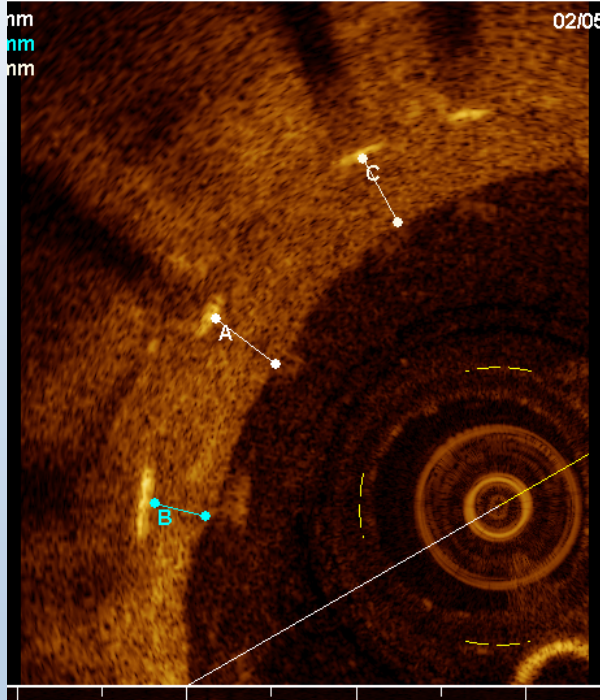


TIDES-ACS

Preliminary MACE at 6 months
(first 1451 patient have had 6 months FU)

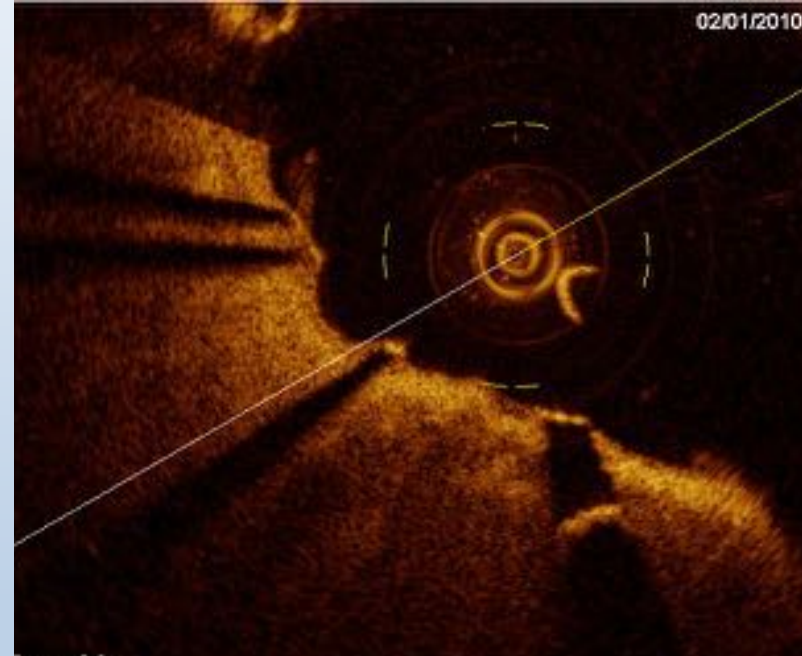


Et le **BAS** en OCT ?



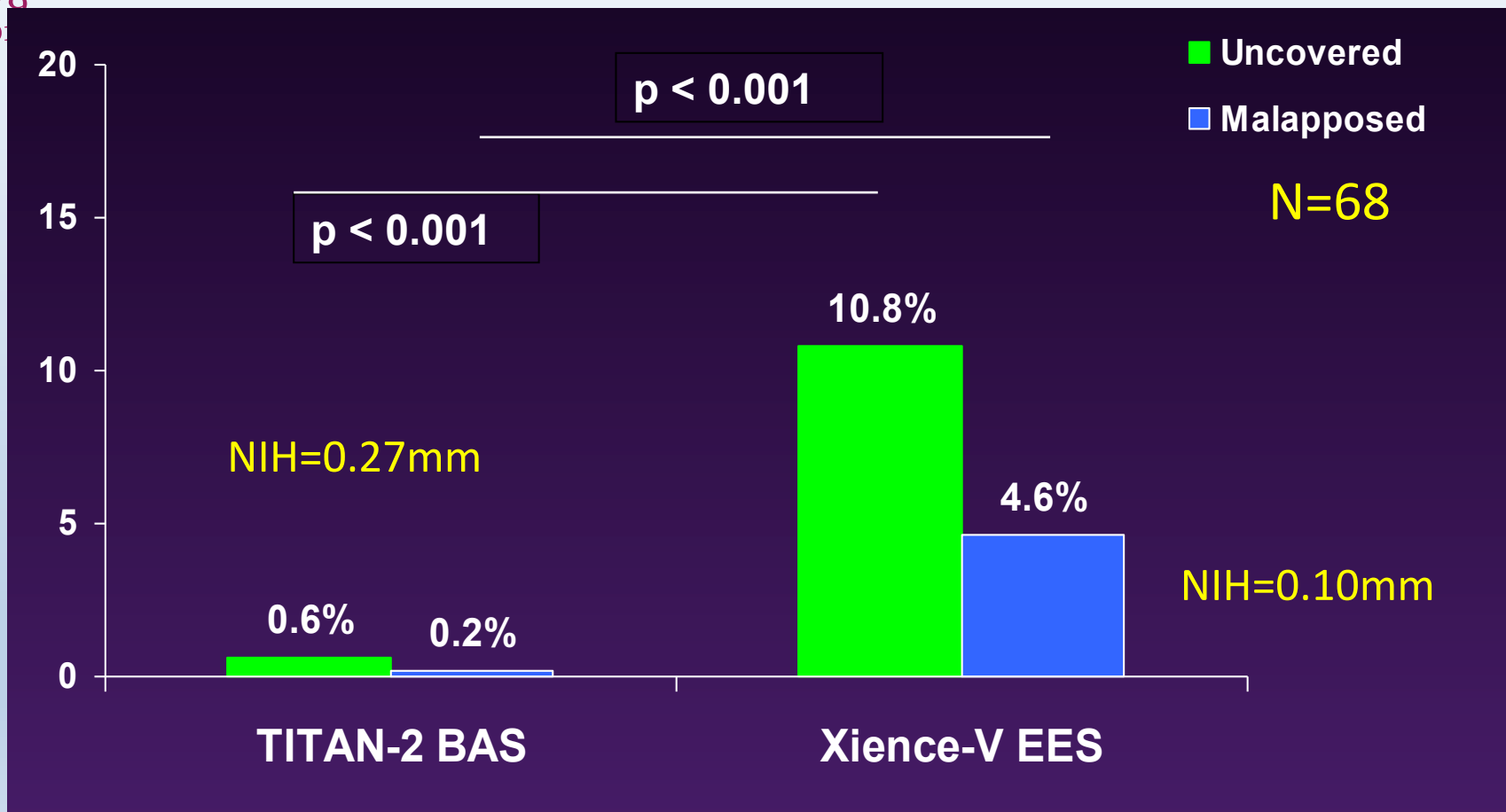
NIH : Hyperplasie Néo-Intimale

« coverage »

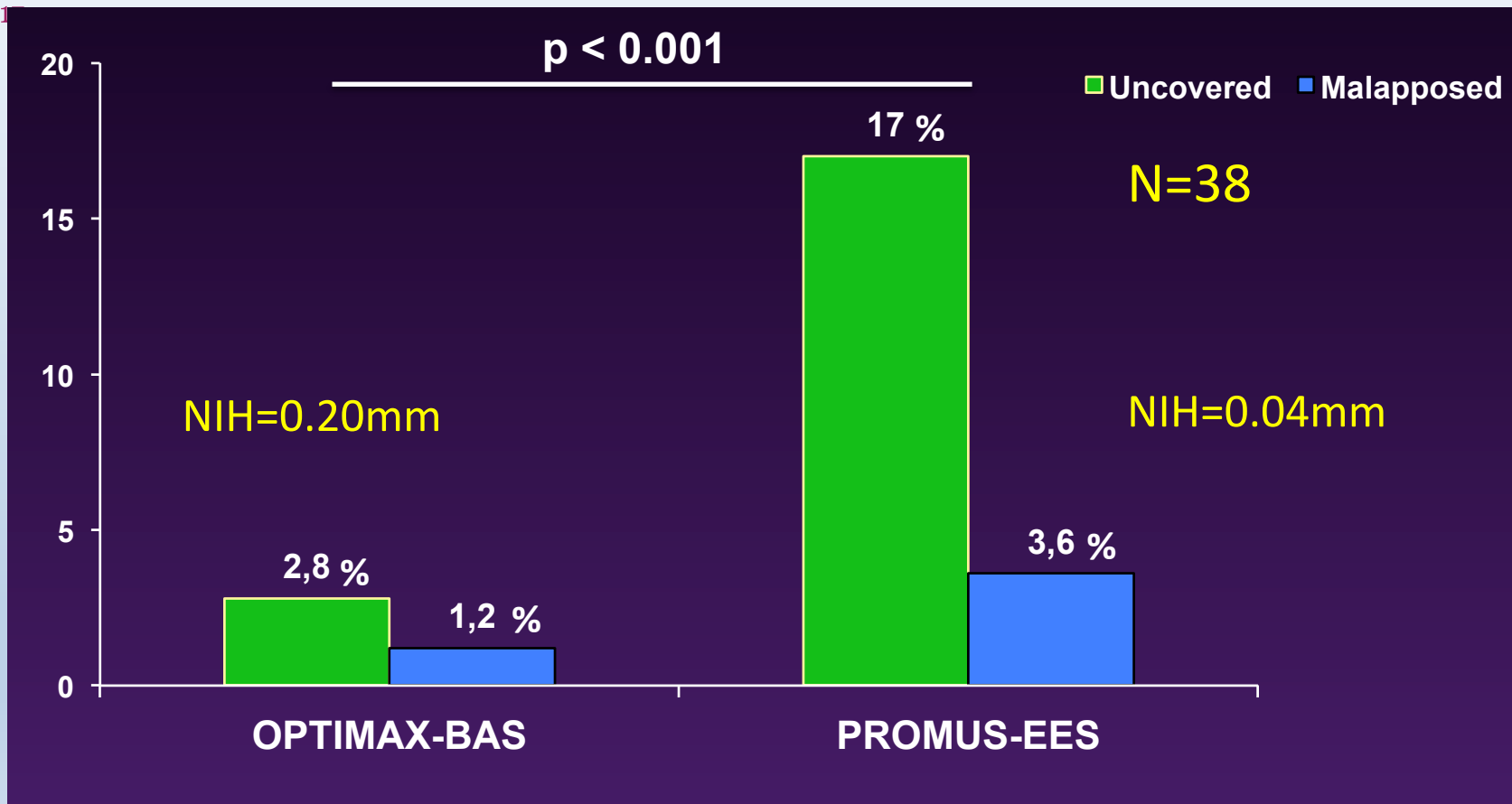


Mal-apposition

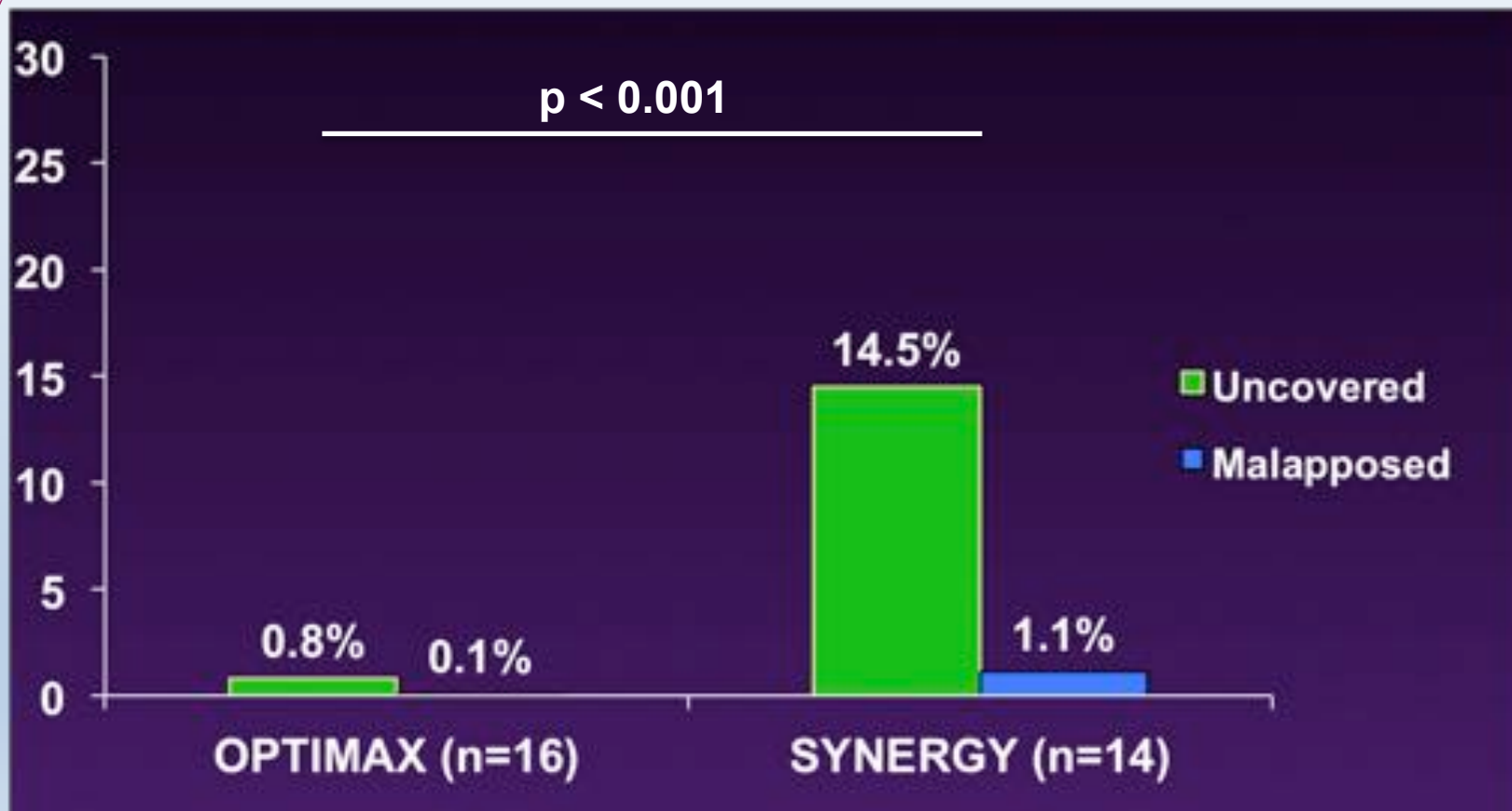
BASE-OCT à 9 mois



TIDES-OCT à 2 mois



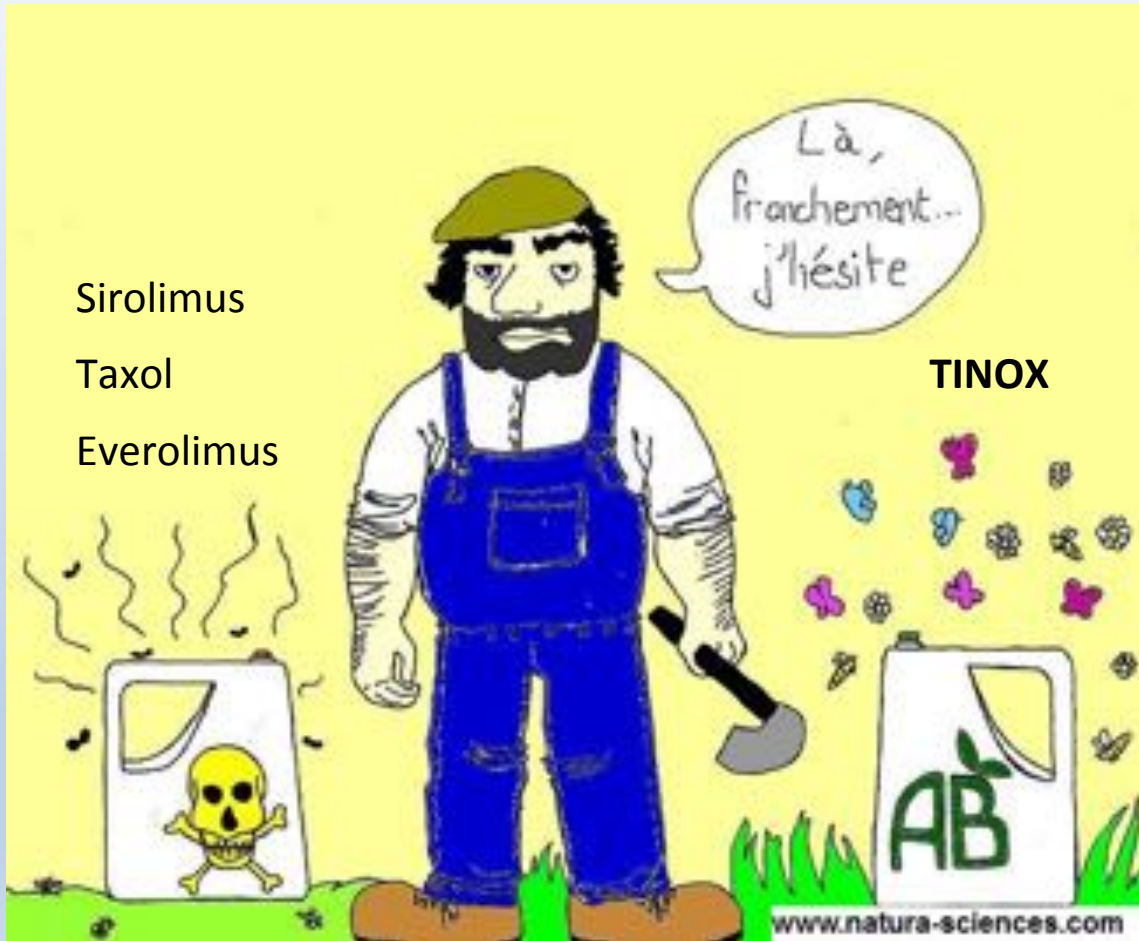
OPTIMAX-OCT à 6 mois



CONCLUSION: **BAS** et SCA

- **BAS** > BMS **BAS** semble = DES
- **TINOX** Technology
- Evolution plateforme: TITAN -> OPTIMAX
- Endothélialisation **précoce** du stent / **durée DAPT** ?
- Place du **BAS** dans les prochaines **reco** ?
- Bonne **alternative** au **DES** dans le SCA
chez patient à risque hémorragique +++

Sirolimus
Taxol
Everolimus



TINOX