Rapport de la HAS : les DES dans l'infarctus avec élévation du ST : oui mais …

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Conflits d'intérêts :

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HAS

HAUTE AUTORITÉ DE SANTÉ

BON USAGE DES TECHNOLOGIES DE SANTÉ

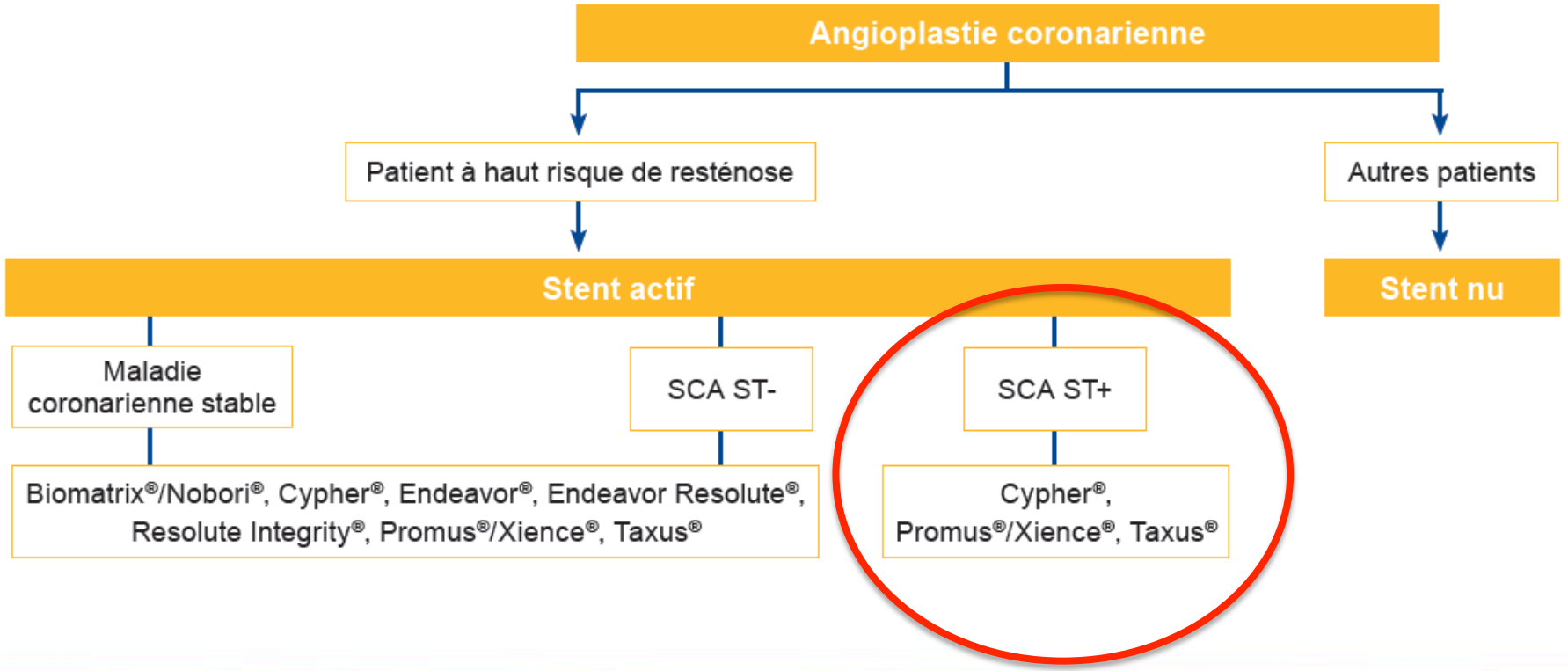
Angioplastie coronarienne : intérêt et limites des « stents actifs »

- Un bénéfice confirmé, mais limité

Les stents actifs ont une efficience limitée par rapport aux stents nus, en raison de leur prix élevé, de leur absence d'effet sur la mortalité, de leur faible impact sur la qualité de vie et de leur efficacité limitée en termes de nombre de patients échappant à une resténose de la lésion cible.

sélectionnés

- Un surcoût par rapport aux stents nus


Angioplastie coronarienne
Patient à haut risque de resténose
Autres patients
Stent actif
Stent nu
Maladie coronarienne stable
SCA ST-
SCA ST+
Biomatrix®/Nobori®, Cypher®, Endeavor®, Endeavor Resolute®, Resolute Integrity®, Promus®/Xience®, Taxus®
Cypher®, Promus®/Xience®, Taxus®

Recommendations	Class[a]	Level[b]	Ref[c]
Indications for primary PCI			
Primary PCI is the recommended reperfusion therapy over fibrinolysis if performed by an experienced team within 120 min of FMC.	I	A	69, 99
Primary PCI is indicated for patients with severe acute heart failure or cardiogenic shock, unless the expected PCI related delay is excessive and the patient presents early after symptom onset.	I	B	100
Procedural aspects of primary PCI			
Stenting is recommended (over balloon angioplasty alone) for primary PCI.	I	A	101, 102
Primary PCI should be limited to the culprit vessel with the exception of cardiogenic shock and persistent ischaemia after PCI of the supposed culprit lesion.	IIa	B	75, 103–105
If performed by an experienced radial operator, radial access should be preferred over femoral access.	IIa	B	78, 79
If the patient has no contraindications to prolonged DAPT (indication for oral anticoagulation, or estimated high long-term bleeding risk) and is likely to be compliant, DES should be preferred over BMS.	IIa	A	80, 82, 106, 107
Routine thrombus aspiration should be considered.	IIa	B	83–85
Routine use of distal protection devices is not recommended.	III	C	86, 108
Routine use of IABP (in patients without shock) is not recommended.	III	A	97, 98

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82. Stone GW, Witzenbichler B, Guagliumi G, Peruga JZ, Brodie BR, Dudek D, Kornowski R, Hartmann F, Gersh BJ, Pocock SJ, Dangas G, Wong SC, Fahy M, Parise H, Mehran R. Heparin plus a glycoprotein IIb/IIIa inhibitor vs. bivalirudin monotherapy and paclitaxel-eluting stents vs. bare-metal stents in acute myocardial infarction (HORIZONS-AMI): final 3-year results from a multicentre, randomised controlled trial. *Lancet* 2011;**377**:2193–2204.
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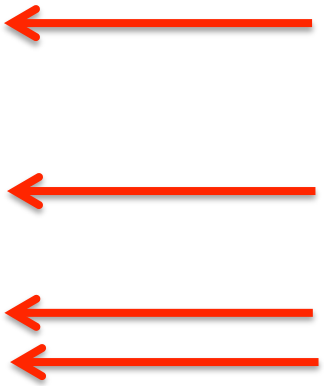
Study	BMS used	DES used
SELECTION	Bx velocity	SES
PASSION	Express, Liberté	PES
TYPHOON	BMS	SES
SESAMI	BMS	SES
PASEO	BMS	SES, PES
BASKET-AMI	Multilink Vision	SES, PES
HORIZONS-AMI	Express	PES
MISSION	BMS	SES
DEDICATION	BMS	SES, PES, Endeavour
Diaz et al	BMS	SES
Pasceri et al	Bx velocity	SES

Quel bénéfice pour les DES dans le ST+ ?

Table 4. Results of Cox Models With Piecewise Time-Constant Regression Coefficients

Outcome	Coefficient	SE (Coef)	HR (95% CI)[a]	*P* Value
Death 0-1 y	–0.075	0.14	0.93 (0.70-1.22)	.14
Death 1-2 y	–0.535	0.23	0.58 (0.37-0.93)	.23
Death >2 y	–0.07	0.18	0.93 (0.65-1.33)	.18
ReMI 0-1 y	–0.1579	0.1572	0.85 (0.63-1.16)	.31
ReMI 1-2 y	0.2970	0.2588	1.34 (0.81-2.23)	.25
ReMI >2 y	0.7262	0.2676	2.06 (1.22-3.49)	.03
ST 0-1 y	–0.1009	0.159	0.90 (0.66-1.23)	.52
ST 1-2 y	0.3216	0.346	1.38 (0.70-2.71)	.35
ST >2 y	1.0362	0.401	2.81 (1.28-6.19)	.04
TVR 0-1 y	–0.72205	0.091	0.48 (0.41-0.58)	<.001
TVR 1-2 y	–0.42056	0.145	0.66 (0.49-0.87)	.01
TVR >2 y	–0.07401	0.20	0.93 (0.62-1.38)	.71



- Les recommandations sont basées sur des stents qui ne sont plus commercialisés ou obsolètes avec des problèmes de thromboses tardives

- Y-a-t-il des données nouvelles avec les stents de « dernières générations »
- Xience/Promus => Examination[1]
- Nobori/Biomatrix => Comfortable AMI[2]
- En résumé :
  - Même efficacité sur le TLR
  - Meilleur profil de sécurité …… à 1 an !

1 Sabate M et al Lancet 2012 ; 380: 1482-90.
2 Räber L et al JAMA 2012 ; 308 : 777-87.

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APPAC
ACTUALISATIONS ET PERSPECTIVES EN PATHOLOGIE CARDIOVASCULAIRE

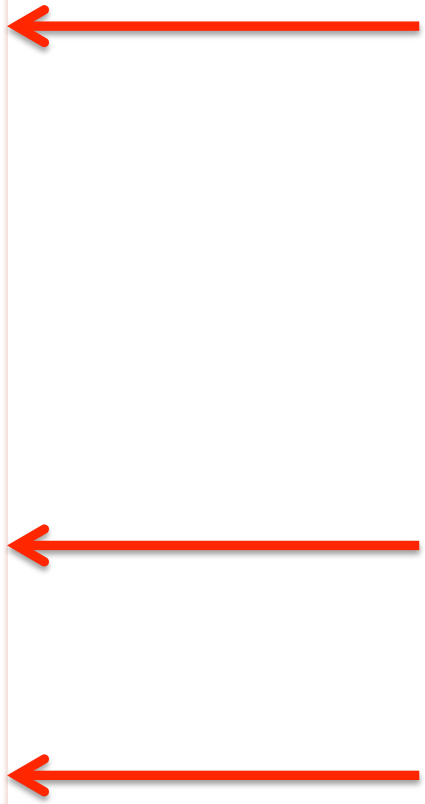
Everolimus-eluting stent versus bare-metal stent in ST-segment elevation myocardial infarction (EXAMINATION): 1 year results of a randomised controlled trial

Manel Sabate, Angel Cequier, Andrés Iñiguez, Antonio Serra, Rosana Hernandez-Antolin, Vicente Mainar, Marco Valgimigli, Maurizio Tespili, Pieter den Heijer, Armando Bethencourt, Nicolás Vazquez, Joan Antoni Gómez-Hospital, José Antonio Baz, Victoria Martin-Yuste, Robert-Jan van Geuns, Fernando Alfonso, Pascual Bordes, Matteo Tebaldi, Monica Masotti, Antonio Silvestro, Bianca Backx, Salvatore Brugaletta, Gerrit Anne van Es, Patrick W Serruys

The primary endpoint of the study was the patient-oriented combined endpoint of all-cause death, any myocardial infarction or any revascularisation at 1 year

Secondary endpoints of the study were the device-oriented combined endpoint of cardiac death, target vessel myocardial infarction or target lesion revascularisation at 1 year;[26] all cause and cardiac death; recurrent myocardial infarction (WHO extended definition[27]); target lesion and target vessel revascularisation; stent thrombosis (according to the ARC definitions[26]); device and procedure success; and major and minor bleeding. Detailed definitions of the endpoints have been reported elsewhere.[25]

	EES	BMS		
Primary endpoint (patient oriented)††	89 (11·9%)	106 (14·2%)	−2·34 (−5·75 to 1·07)	0·19
Device-oriented secondary endpoint‡‡	44 (5·9%)	63 (8·4%)	−2·57 (−5·18 to 0·03)	0·05
Death*	26 (3·5%)	26 (3·5%)	−0·02 (−1·87 to 1·84)	1·00
Cardiac	24 (3·2%)	21 (2·83%)	0·38 (−1·34 to 2·11)	0·76
Vascular	1 (0·1%)	3 (0·4%)	−0·27 (−0·79 to 0·25)‖	0·37
Non-cardiovascular	1 (0·1%)	2 (0·3%)	−0·13 (−0·59 to 0·32)‖	0·62
Myocardial infarction§	10 (1·3%)	15 (2·0%)	−0·68 (−1·97 to 0·62)	0·32
Target-vessel related	8 (1·1%)	15 (2·0%)	−0·94 (−2·19 to 0·30)	0·14
Non-target-vessel related	2 (0·3%)	0	0·27 (−0·10 to 0·63)‖	0·49
Revascularisation	60 (8·0%)	79 (10·6%)	−2·59 (−5·52 to 0·35)	0·09
Target lesion	16 (2·1%)	37 (5·0%)	−2·82 (−4·69 to −0·96)	0·0032
Target vessel	28 (3·7%)	51 (6·8%)	−3·10 (−5·36 to −0·84)	0·0077
Non-target vessel	40 (5·3%)	41 (5·5%)	−0·16 (−2·45 to 2·13)	0·90
Definite stent thrombosis¶	4 (0·5%)	14 (1·9%)	−1·34 (−2·44 to −0·24)	0·0183
Probable stent thrombosis¶	3 (0·4%)	5 (0·7%)	−0·27 (−1·01 to 0·47)‖	0·50
Definite or probable stent thrombosis¶	7 (0·9%)	19 (2·5%)	−1·61 (−2·93 to −0·29)	0·0197
Bleeding	29 (4%)	39 (5%)	−1·4 (−3·47 to 0·75)	0·19
Major	9 (1%)	12 (2%)	−0·4 (−1·60 to 0·78)	0·65
Minor	21 (3%)	30 (4%)	−1·2 (−3·06 to 0·62)	0·21



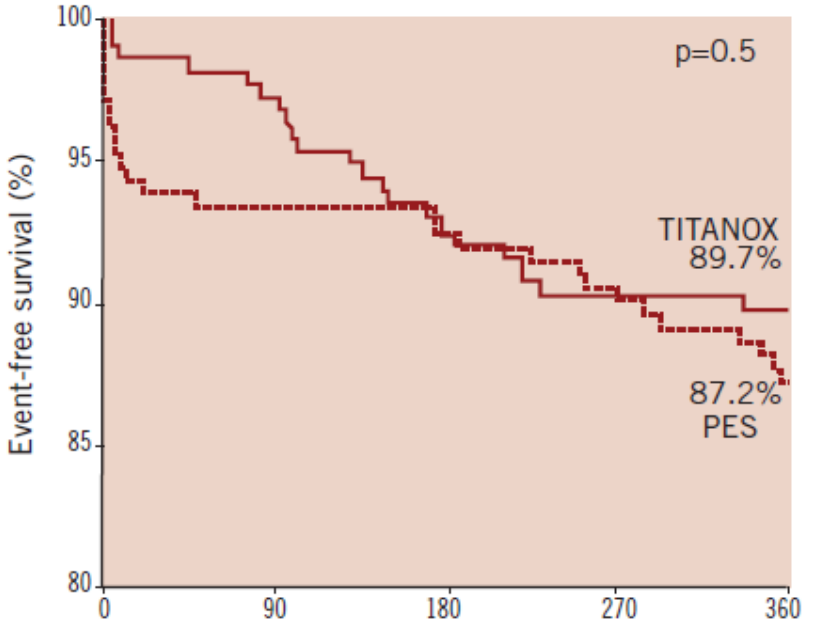
- Y-a-t-il une alternative aux BMS/DES ?

Titanium-nitride-oxide coated stents versus paclitaxel-eluting stents in acute myocardial infarction: a 12-months follow-up report from the TITAX AMI trial

Pasi P. Karjalainen[1]*, MD, PhD; Antti Ylitalo[1], MD, PhD; Matti Niemelä[2], MD, PhD; Kari Kervinen[2], MD, PhD; Timo Mäkikallio[2], MD, PhD; Mikko Pietilä[3], MD, PhD; Jussi Sia[4], MD; Petri Tuomainen[5], MD, PhD; Kai Nyman[6], MD; K.E. Juhani Airaksinen[3], MD, PhD

EuroIntervention 2008;2:234-41.

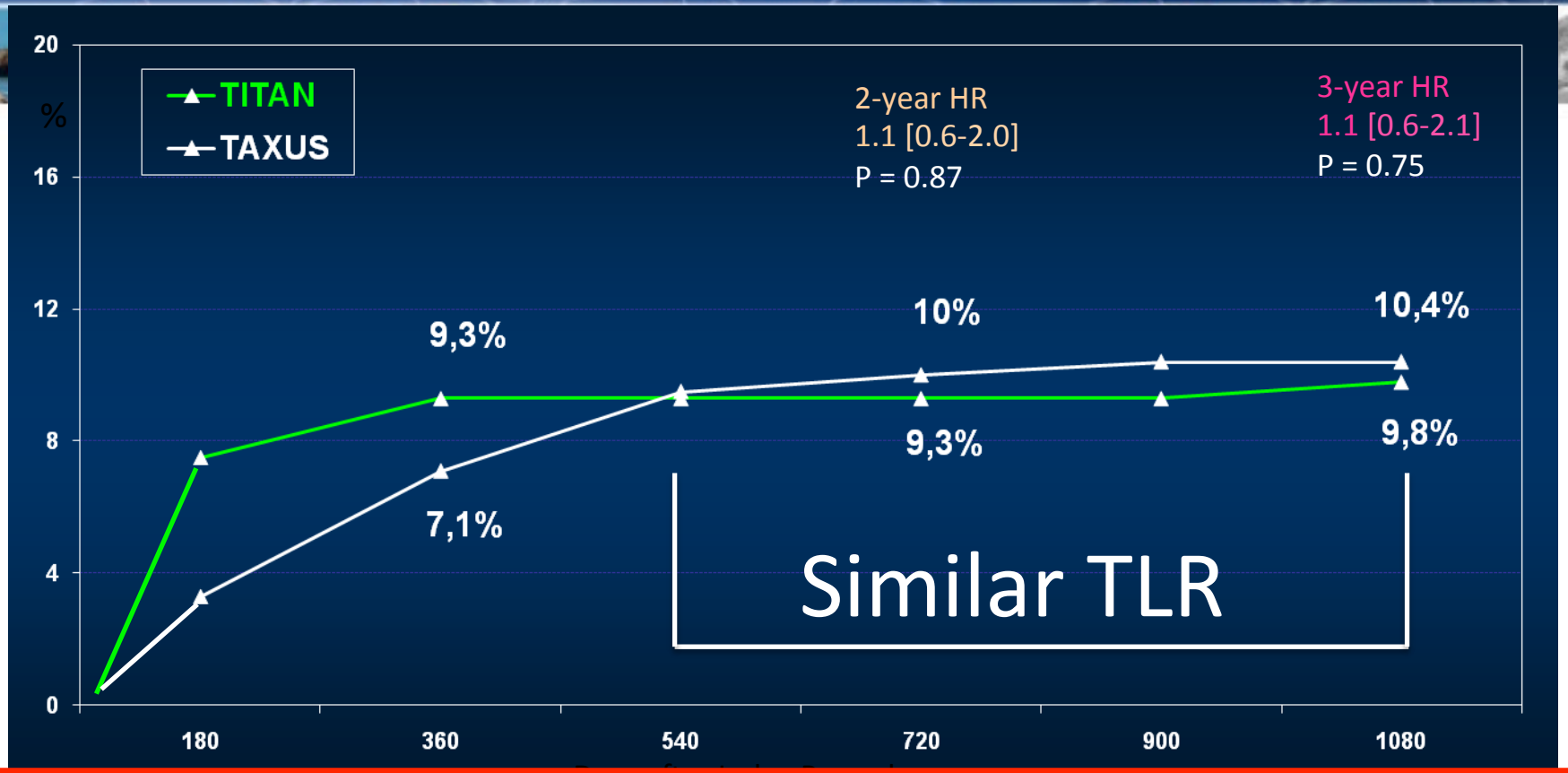
Primary endpoint at 12-month FU



No. at risk					
TITANOX	214	204	194	189	188
PES	211	196	194	188	182

Figure 1. Kaplan-Meier curve of event-free survival in patients randomised to titanium-nitride-oxide-coated stent (TITANOX) vs paclitaxel-eluting stent (PES). P=0.5 by the log-rank test.

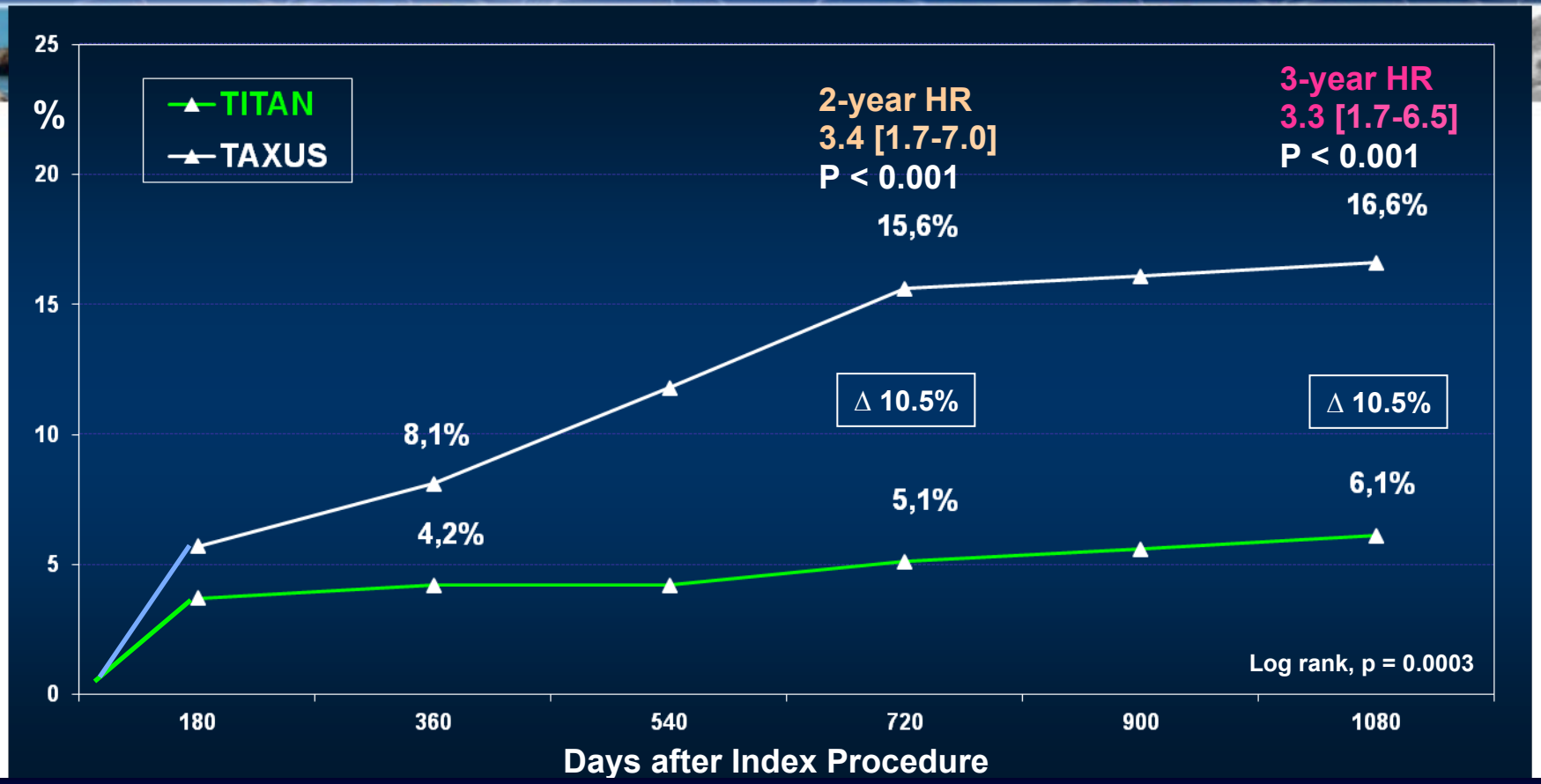
TITAX-AMI trial



Despite a significant difference in Late Loss (*TiTAN: 0.55 & Taxus: 0.39mm) the delayed healing of the DES Technology (Late Catch Up phenomenon) result in a comparable TLR @2 years and beyond

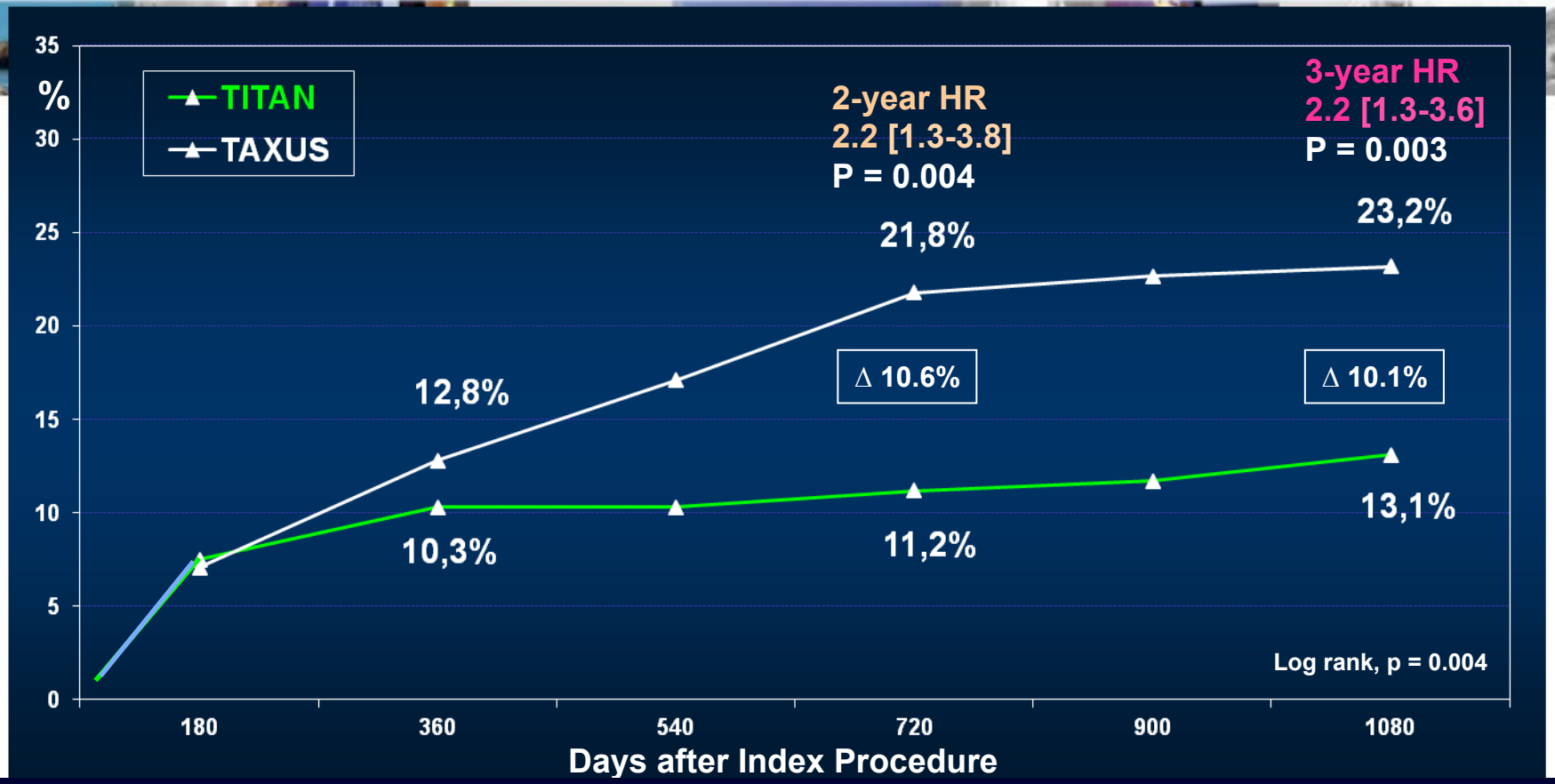
*FIM - Circulation 2005, TAXUS IV - NEJM 2004

TITAX-AMI trial : Myocardial Infarction at 3-Year FU



Number at Risk						
TITAN (214)	202	201	201	195	193	175
TAXUS (211)	197	191	181	168	166	139

TITAX-AMI trial : MACE at 3-Year FU



Number at Risk						
TITAN (214)	194	188	188	182	180	164
TAXUS (211)	194	182	172	160	157	131

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ACTUALISATIONS ET PERSPECTIVES EN PATHOLOGIE CARDIOVASCULAIRE

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 Niemelä[2], MD, PhD; Juhani K.E. Airaksinen[3], MD, PhD, FESC; Fernando Rivero-Crespo[4], MD; Hannu Romppanen[2], MD, PhD; Jussi Sia[5], MD; Jacques Lalmand[6], MD; Bernard de Bruyne[7], MD, PhD; Adam DeBelder[8], MD; Marc Carlier[9], MD; Wail Nammas[1], MD, PhD; Antti Ylitalo[1], MD, PhD; Otto M. Hess[10], MD, PhD, FESC; on behalf of the BACE-ACS study Investigators

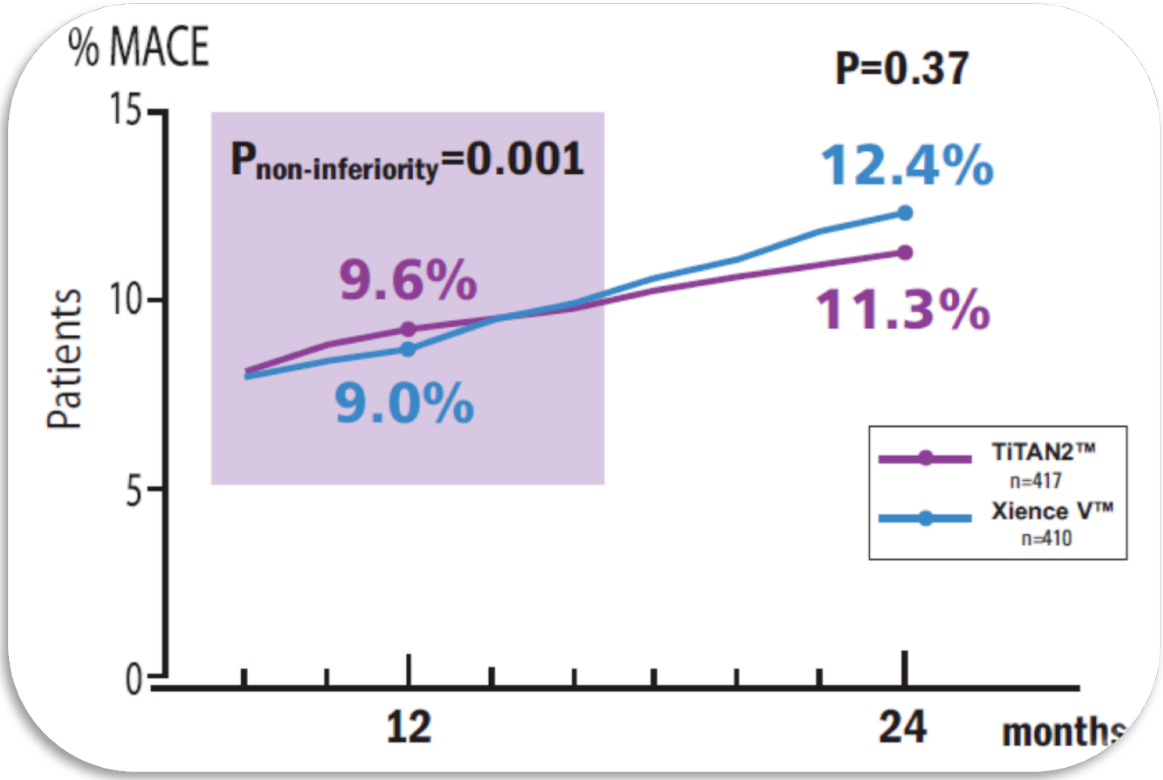
EuroIntervention 2012;8:306-15.

Outcome events at 12-month FU

	BAS (n=417)	EES (n=410)	HR (95% CI)	*p* value
MACE	40 (9.6)	37 (9.0)	1.04 (0.81-1.32)	0.81
Cardiac death	8 (1.9)	4 (1.0)	1.49 (0.67-3.32)	0.39
Non-fatal MI*	9 (2.2)	24 (5.9)	0.67 (0.54-0.83)	0.007
Ischaemia-driven TLR	27 (6.5)	20 (4.9)	1.17 (0.83-1.64)	0.37
Secondary endpoints				
Non-cardiac death	7 (1.7)	6 (1.5)	1.08 (0.60-1.94)	0.80
All-cause death	15 (3.6)	10 (2.4)	1.25 (0.77-2.03)	0.42
MI or Cardiac death	16 (3.8)	26 (6.3)	0.79 (0.62-1.01)	0.11
Definite stent thrombosis	3 (0.7)	9 (2.2)	0.66 (0.47-0.92)	0.07

Data are number (%). BAS: bioactive stent; EES: everolimus-eluting stent; HR: hazard ratio; CI: confidence interval; MACE: major adverse cardiac events; MI: myocardial infarction; TLR: target lesion revascularisation; *Periprocedural MI occurred in one patient in EES group

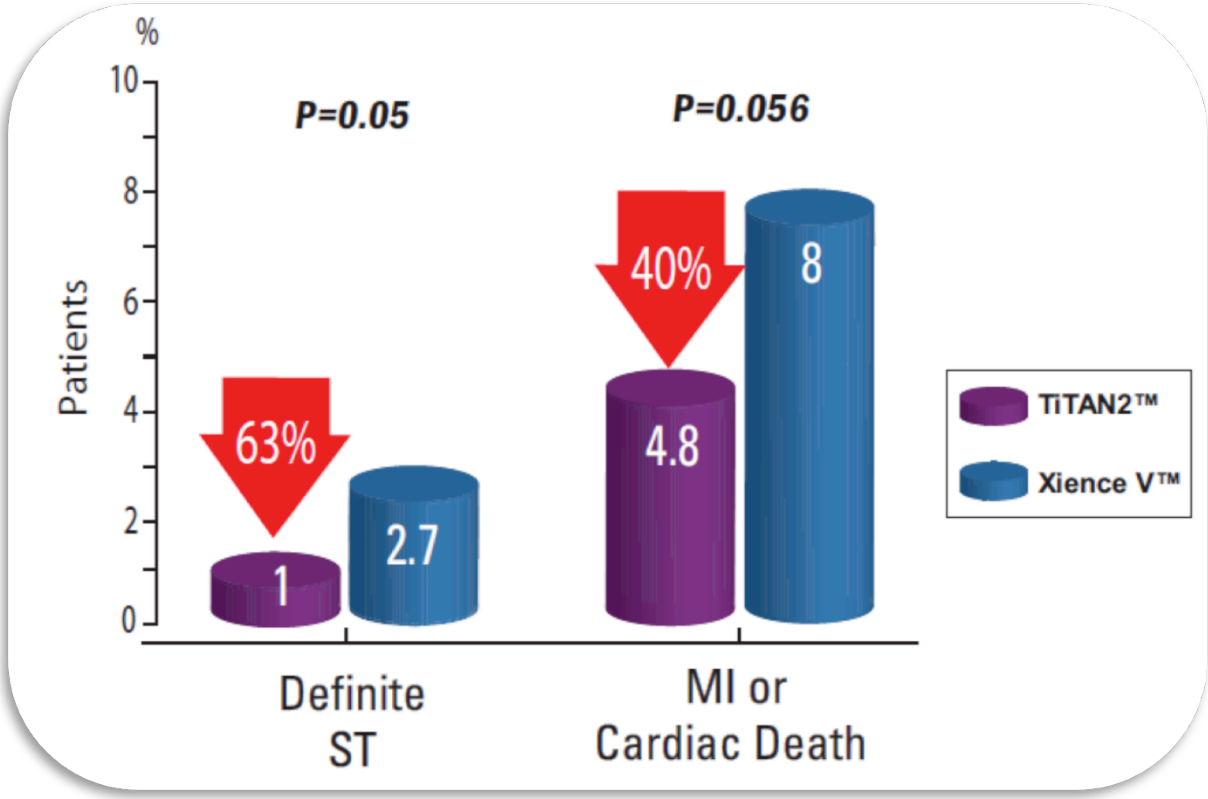
BASE-ACS trial:
MACE at 24 months



TiTAN2 demonstrates non inferiority vs. Xience V in ACS patients in terms of MACE @12 and 24 months.

Source: BASE-ACS Randomized Trial/EuroPCR Late Breaking Trials PCRAsia 2012 Late Breaking Trials

BASE-ACS trial: death or MI and definite ST at 24 months

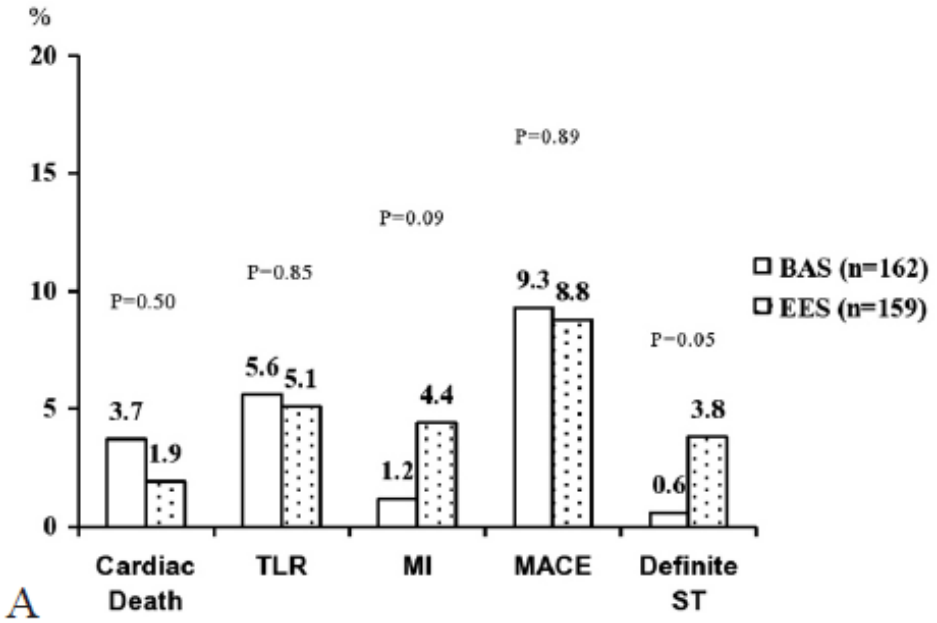


TiTAN2 demonstrates higher level of safety vs. Xience V @24 months.

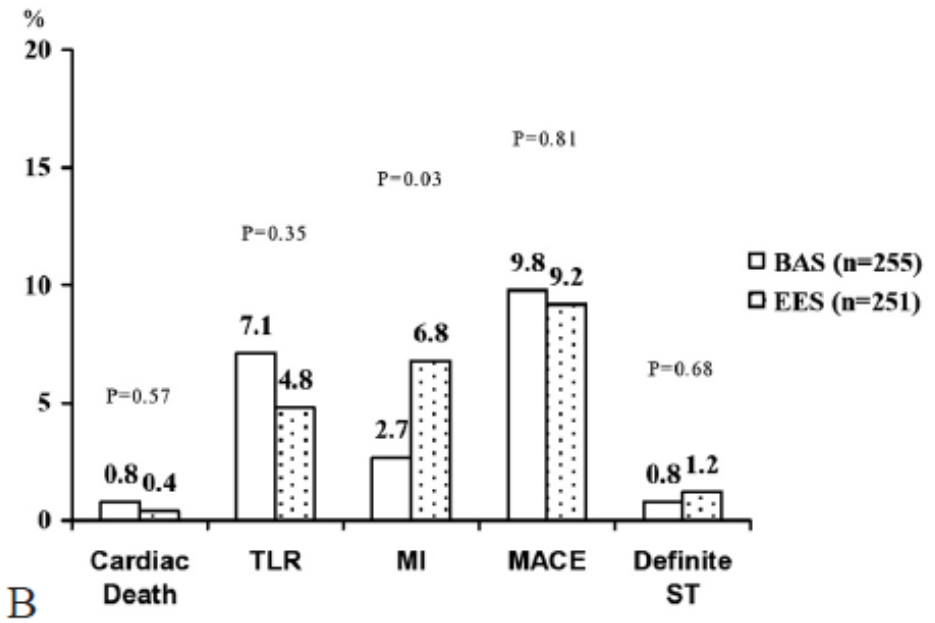
Source: BASE-ACS Randomized Trial/EuroPCR Late Breaking Trials PCRAsia 2012 Late Breaking Trials

BASE ACS: STEMI and NSTEACS by stent subgroups

STEMI



Non STEACS



Romppanen H et al, Minerva Cardioangiol 2013.61:201-9.

Conclusion

- Le bénéfice des DES dans l'infarctus est moins évident que dans la maladie coronaire stable
  - Thrombose tardive pour les 1ere génération
  - Différentiel de TLR est plus faible (type d'atteinte, plateforme)
- Il existe une alternative au couple BMS/DES
- Les stents à l'oxynitrure de titane font aussi bien que les stents à l'everolimus dans cette indication
- Les recommandations de la HAS sont donc justifiées

Take home message

- Il y a une différence entre les recommandations de l'ESC et la HAS
- Au vu des essais à notre disposition l'avis de la HAS semble justifié
- Les essais récents dans le ST+ n'apportent pas d'éléments nouveaux
- Le stent à l'oxynitrure de titane fait mieux qu'un DES 1ere génération et aussi bien qu'un DES dernière génération dans cette indication