Recommandations de la Société Européenne de Cardiologie : la fin des BMS dans le ST +

Olivier Varenne

Hôpital Cochin

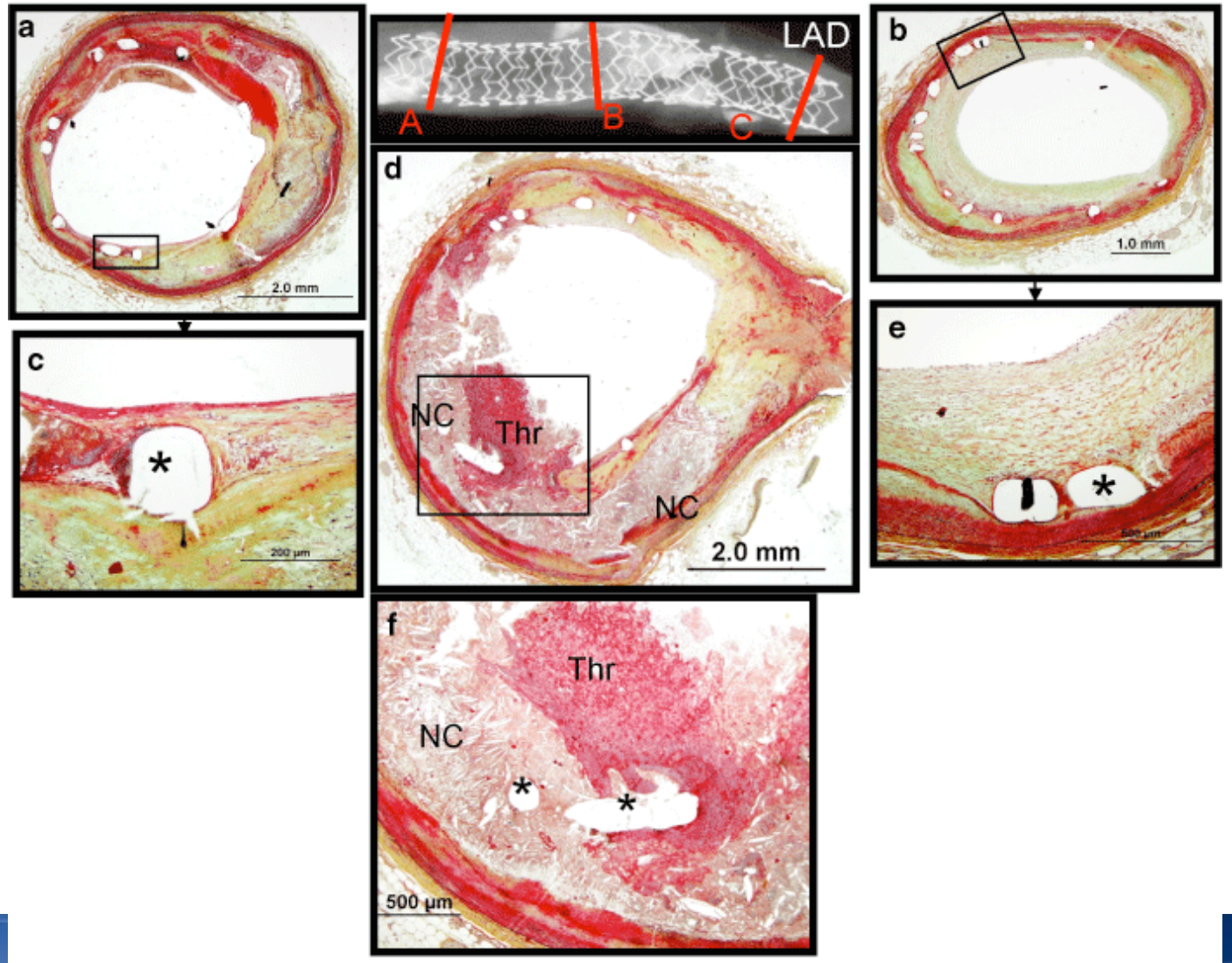
Paris

Mes conflits d'intérêt:

Bourse de recherche clinique: ABBOTT Vascular, Boston Scientific.

Honoraires conférencier: Hexacath, Abbott Vascular, Astra Zeneca.

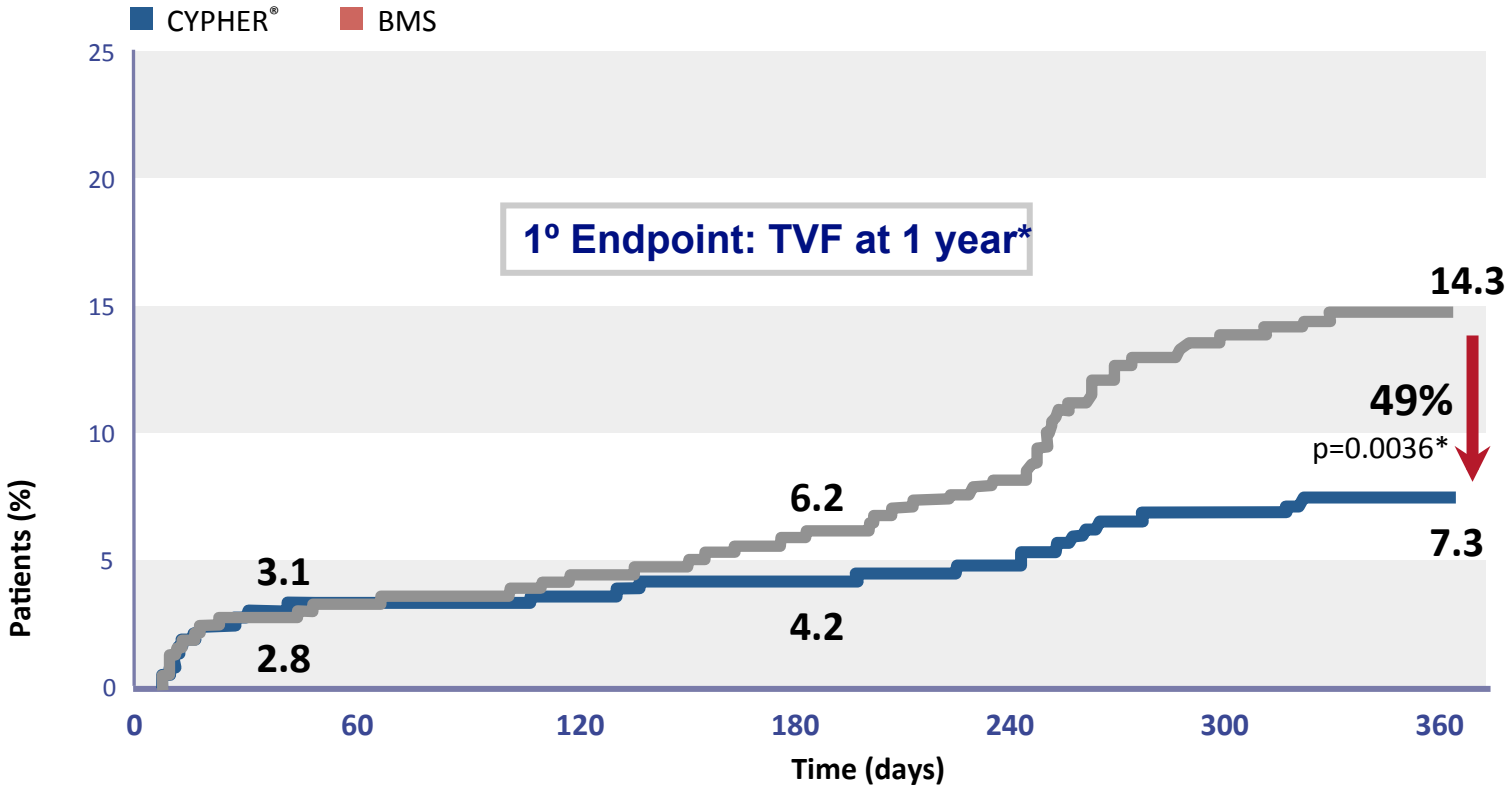
Risque des DES dans le STEMI



"A DES should never be Implanted during PCI for AMI"
Renu Virmani 2007

Risque de TVF DES vs. BMS

Intention-to-Treat Analysis at 1 year

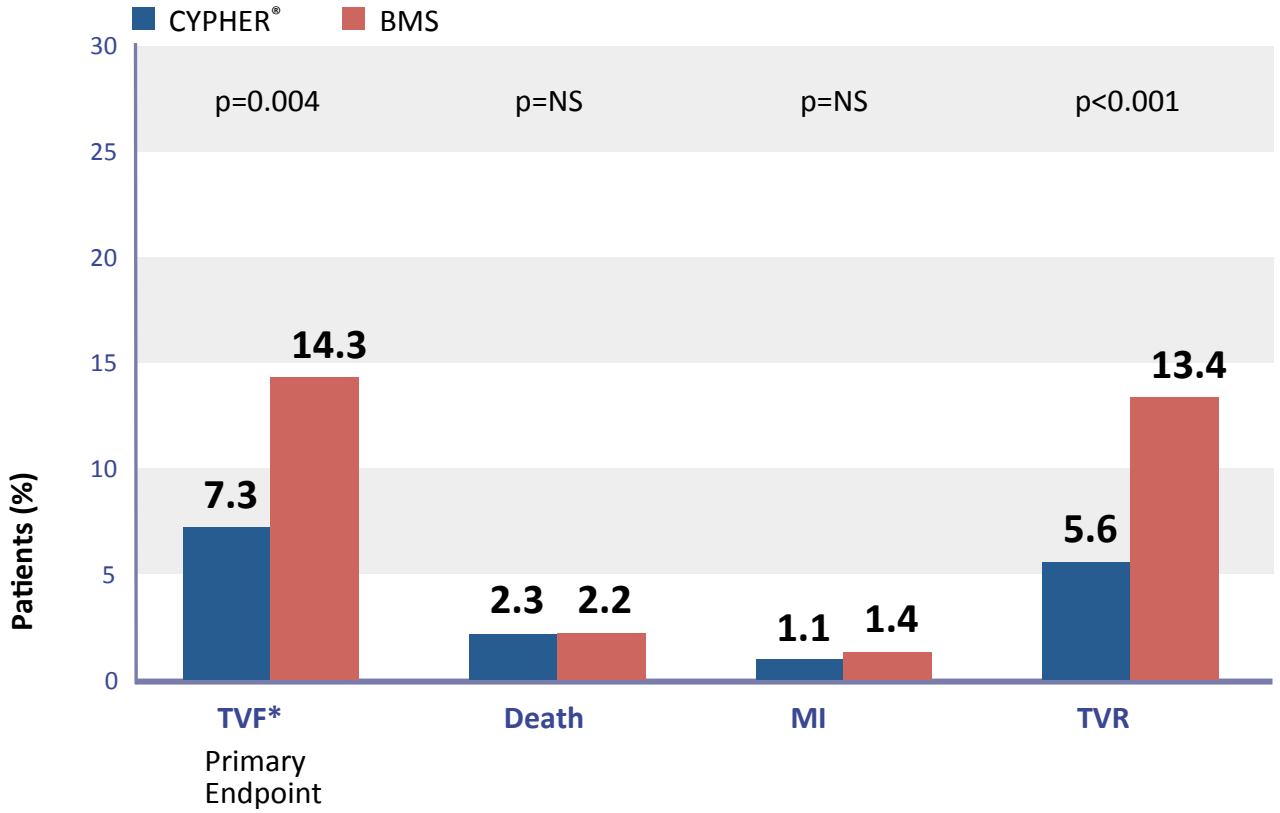


* Defined as ischaemia driven TVR, recurrent MI, or target vessel-related cardiac death

Spaulding C, et al. N Engl J Med. 2006.

Evènements cliniques

Intention-to-Treat Analysis at 1 year

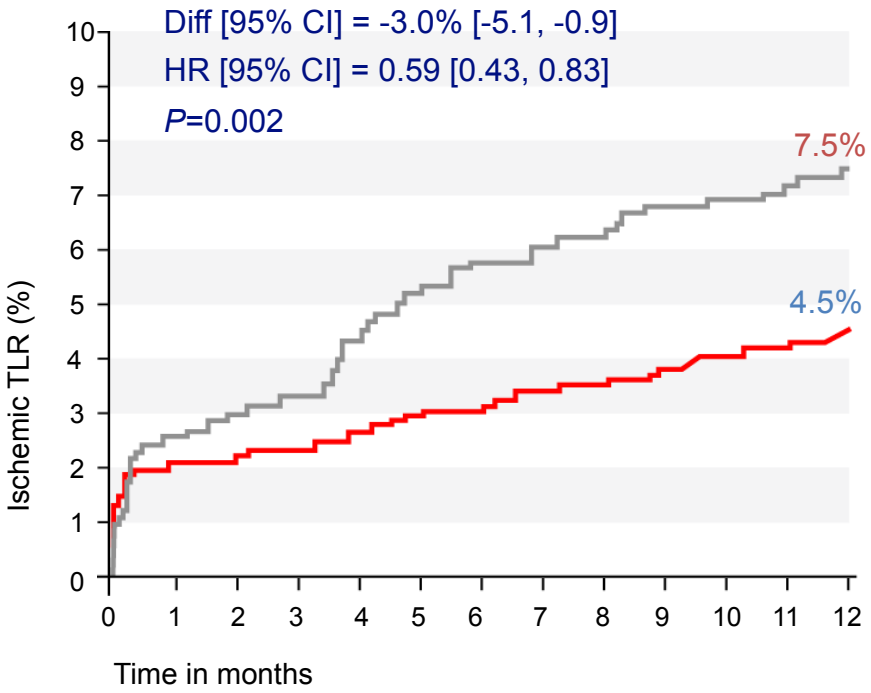


* Defined as ischaemia-driven TVR, recurrent MI, or target vessel-related cardiac death

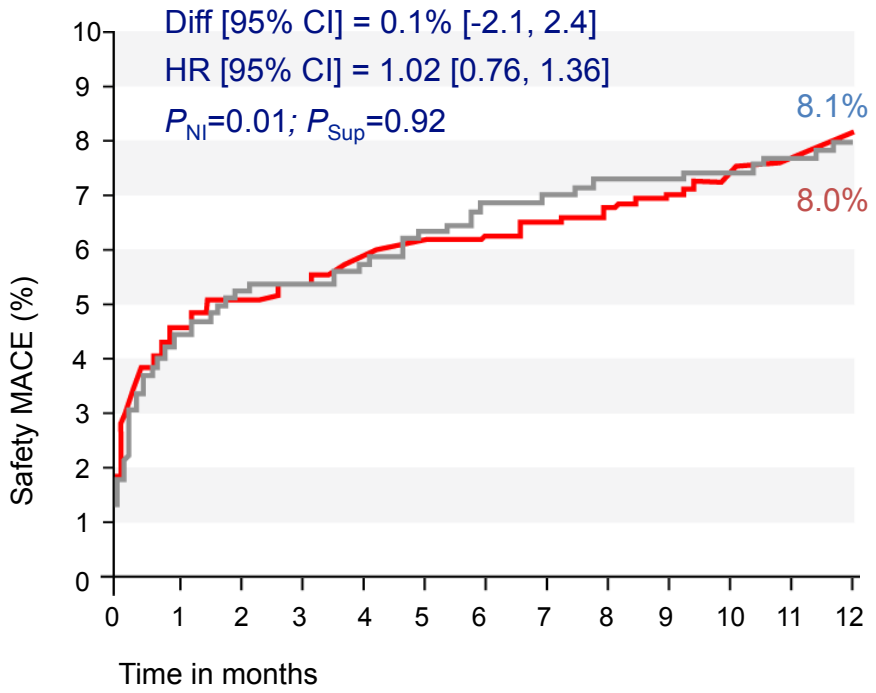
Spaulding C, et al. N Engl J Med. 2006.

TLR et MACE

Ischemic TLR



MACE



Taxus DES (n=2257)

Express BMS (n=749)

No. at risk

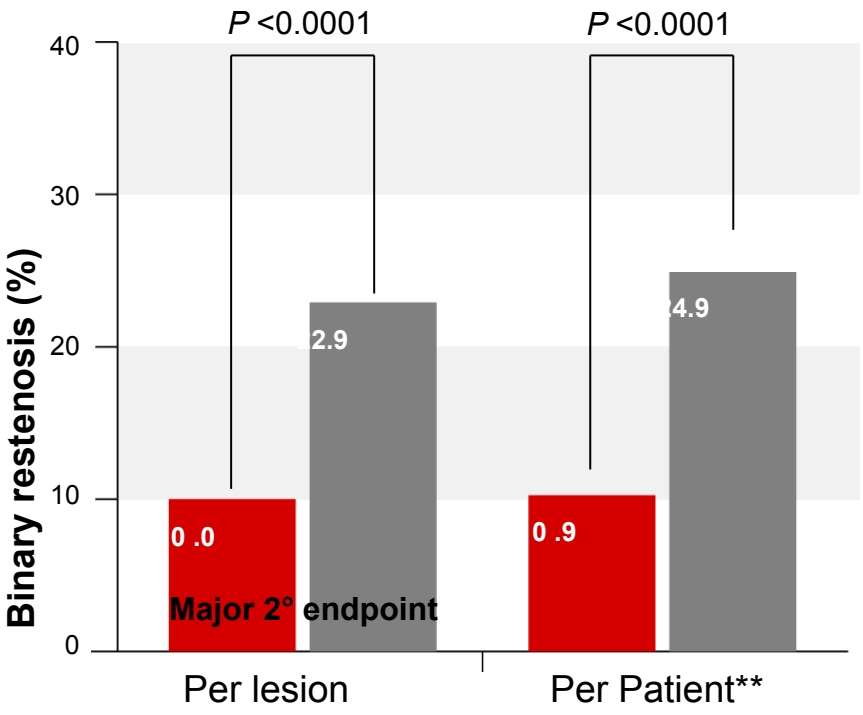
Taxus DES	2257	2132	2098	2069	1868	2257	2115	2086	2057	1856
Express BMS	749	697	675	658	603	749	697	683	627	619

Stone GW. Et al. NEJM 2009.

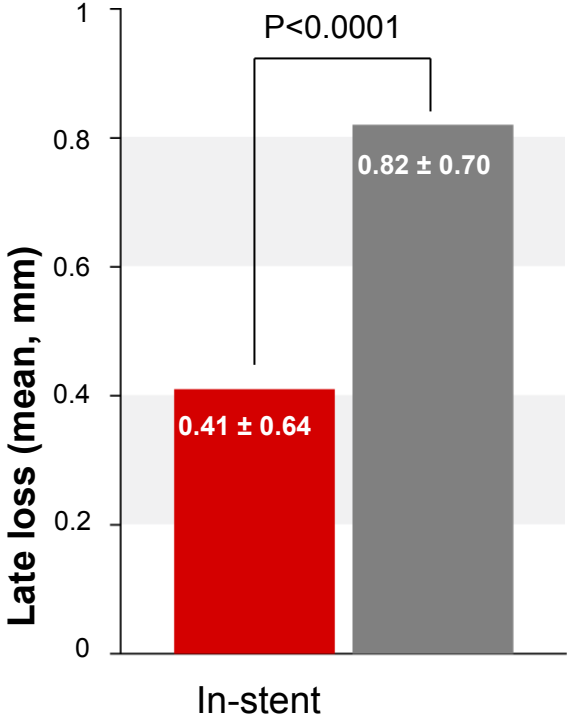
MACE = death, reinfarction, stroke, or stent thrombosis

Angiographie à 13 mois

Binary Analysis Segment Restenosis *



Angiographic Late Loss Lesions with Stents Implanted



Taxus DES

Express BMS

* ITT: Includes all stent randomized lesions, whether or not a stent was implanted, and whether or not non study stents were placed

** Any lesion with restenosis ⇨ per pt restenosis

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

ESC GUIDELINES 2012

Facteur de risque Thrombose

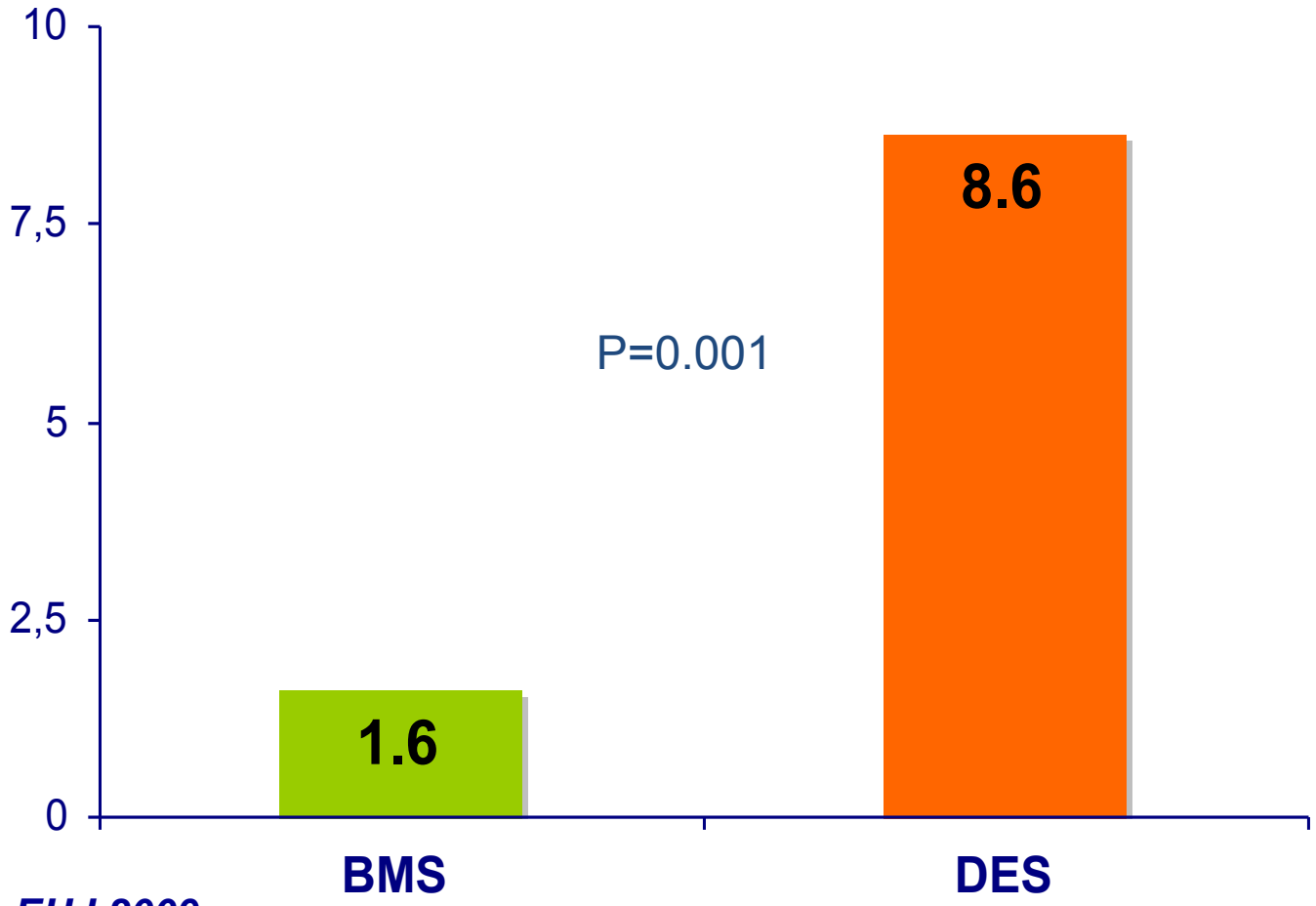
Variables	Hazard Ratio	95% CI
ACS at presentation	1.8	1.3–2.5
Diabetes	1.6	1.1–2.3
Number of stents/patient	1.2	0.95–1.4
Current smoking	1.1	0.78–1.5
Family history of CAD	1.0	0.73–1.4
Total stented length/patient	1.0	1.00–1.01
Age	0.98	0.96–0.99
Dyslipidemia	0.95	0.70–1.28
Female	0.89	0.63–1.25
Hypertension	0.85	0.62–1.16
Use of PES	1.67	1.08–2.56

Wenaweser et al. JACC 2008.

Registre GRACE

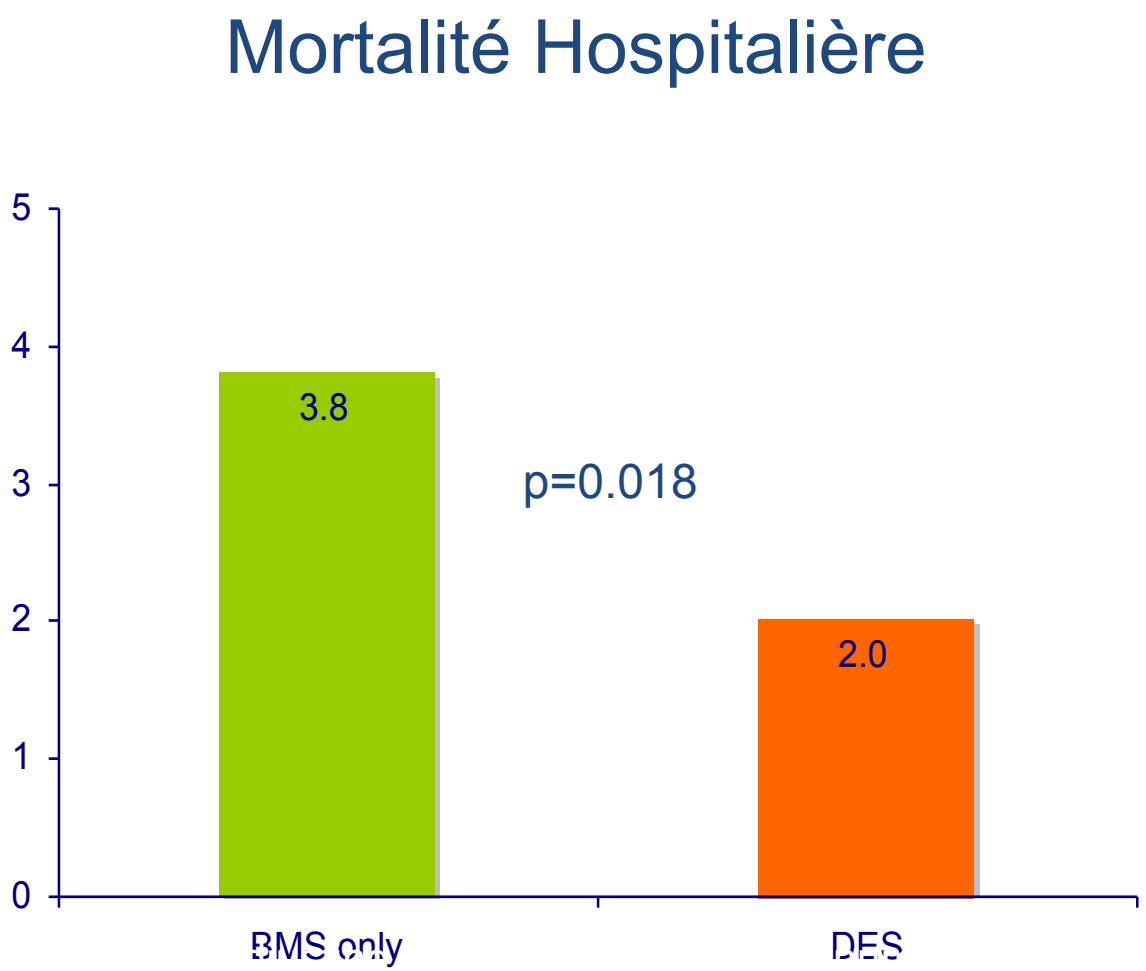
Mortalité: 6 mois – 2 ans

FU: 88,6% BMS and 84,2% DES



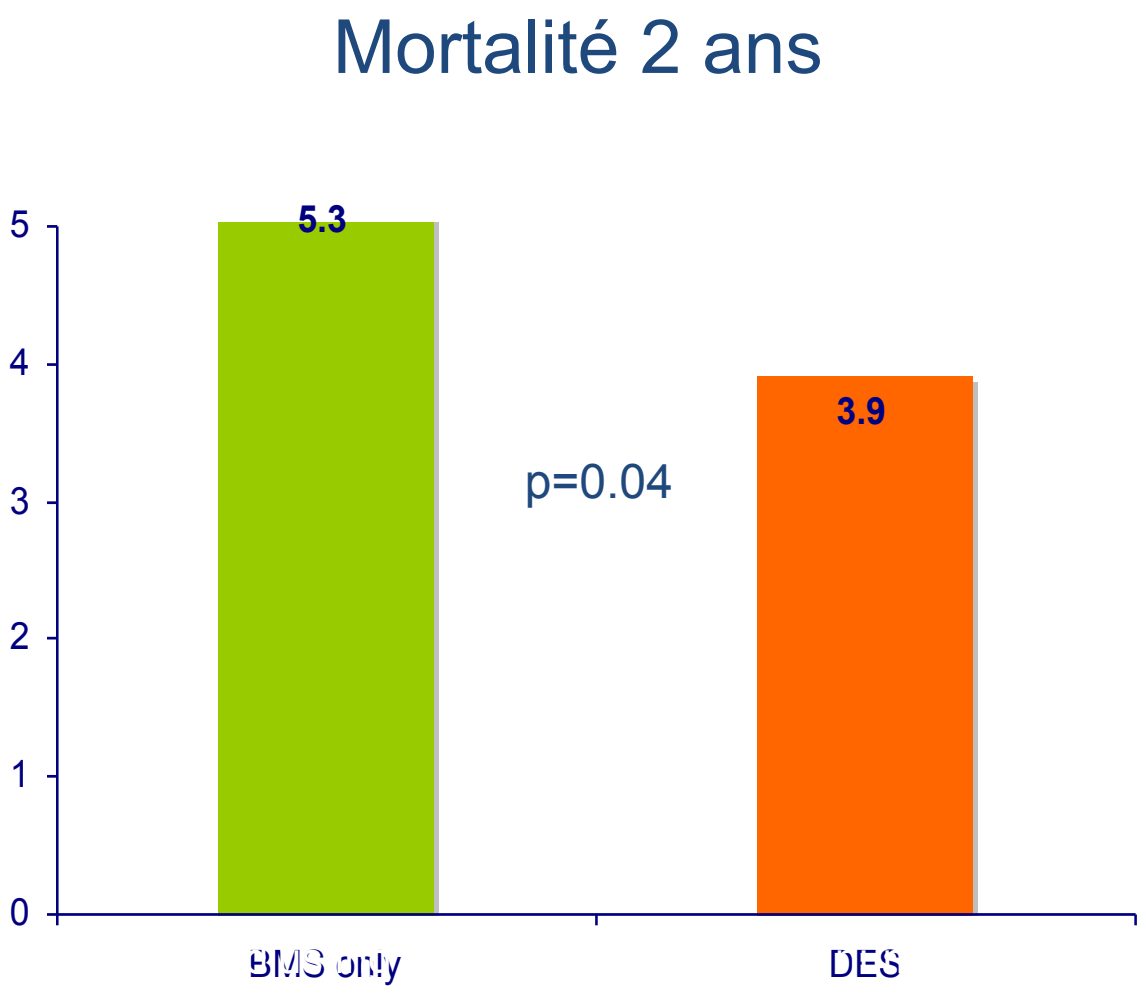
Steg PG et al. EHJ 2009.

Registre GRACE



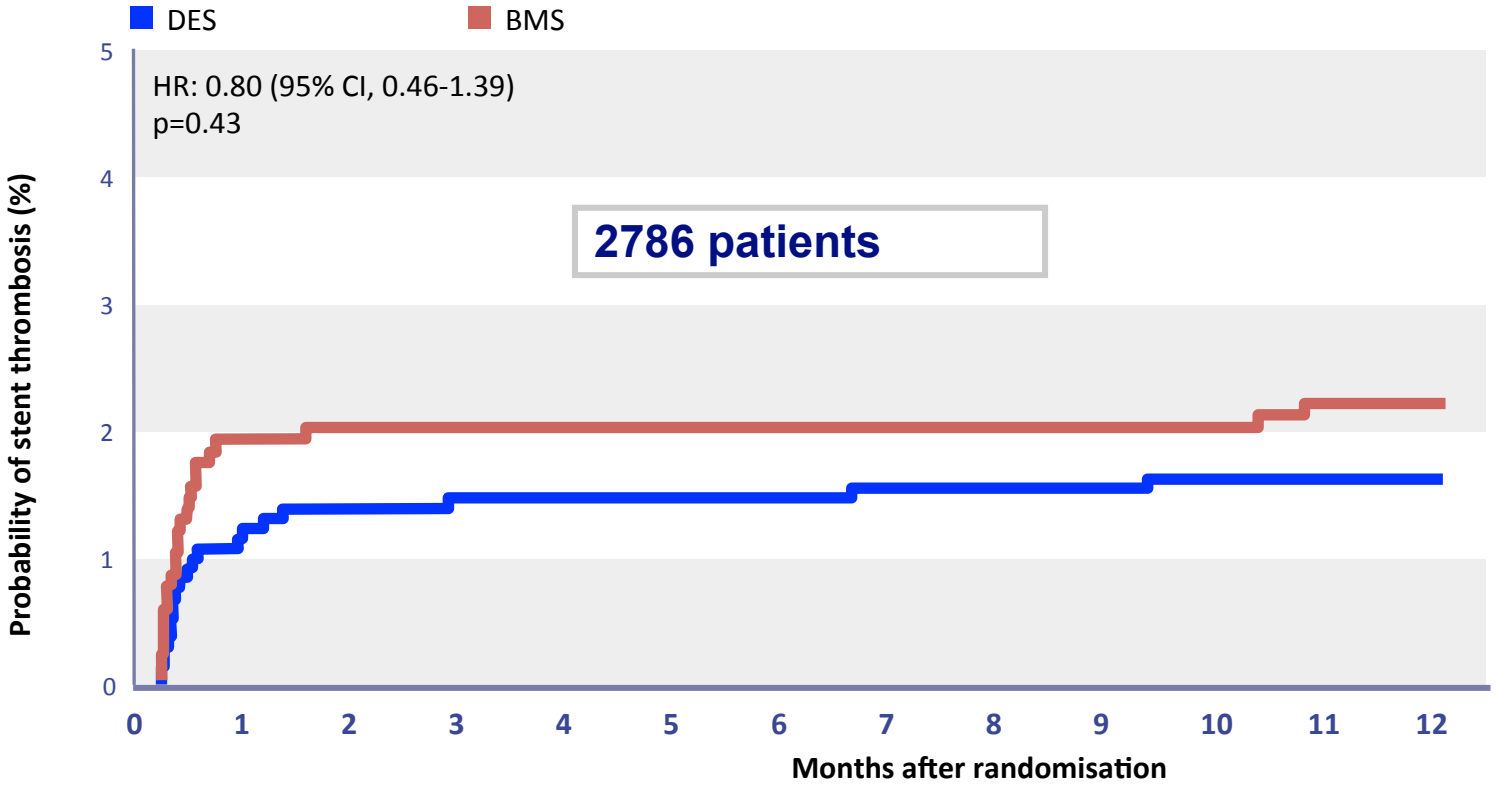
Steg PG et al. EHJ 2009.

Registre GRACE



Steg PG et al. EHJ 2009.

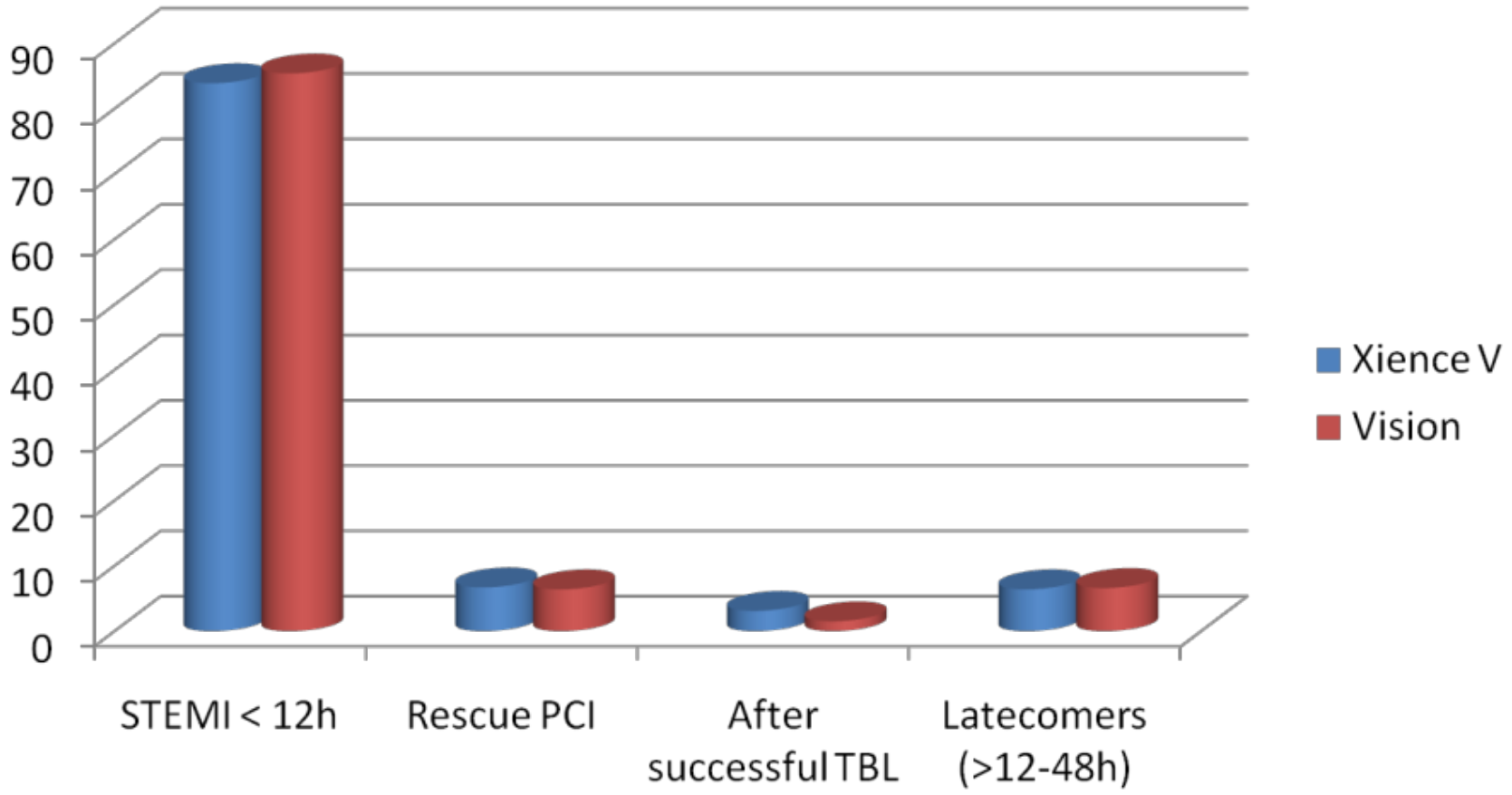
Méta analyse STEMI



Kastrati A, et al. Eur Heart J 2007;28:2706-2713.

*Trials included were:
BASKET; di Lorenzo; HAAMU-STENT; MISSION; PASSION;
SESAMI; STRATEGY; TYPHOON

Présentation Clinique

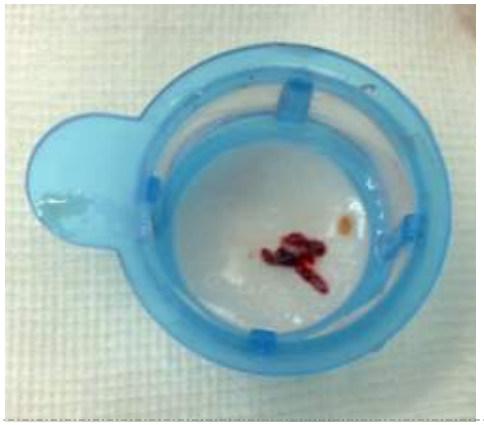


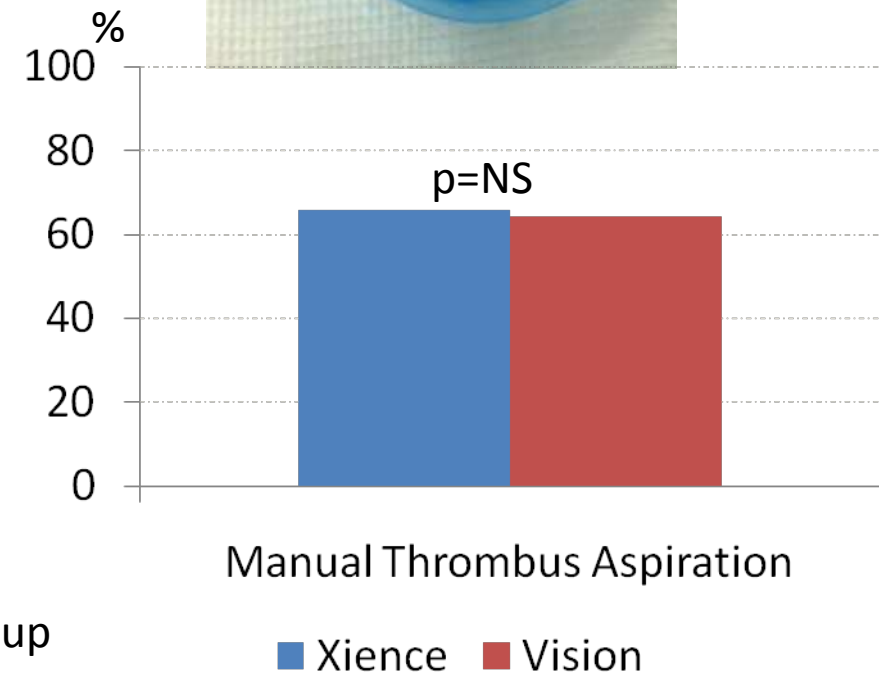
Cardiogenic shock: 1.3 % Xience V vs. 1.1% Vision; p=NS

Sabate M et al. Lancet 2012 Oct 27;380(9852):1482-90.

Présentation Clinique

Antithrombotic Therapy	Xience V n=751	Vision n=747
Unfractioned heparin, n (%)	597 (79.5)	587 (78.7)
LMWH, n (%)	62 (8.3)	71 (9.5)
Bivalirudin, n (%)	49 (6.5)	56 (7.5)
IIb/IIIa inh.* (99% reopro), n (%)	400 (53.3)	385 (51.5)
Aspirin, n (%)	692 (92.1)	691 (92.6)
Clopidogrel (pre with 600 mg), n (%)	712 (94.8)	706 (94.5)

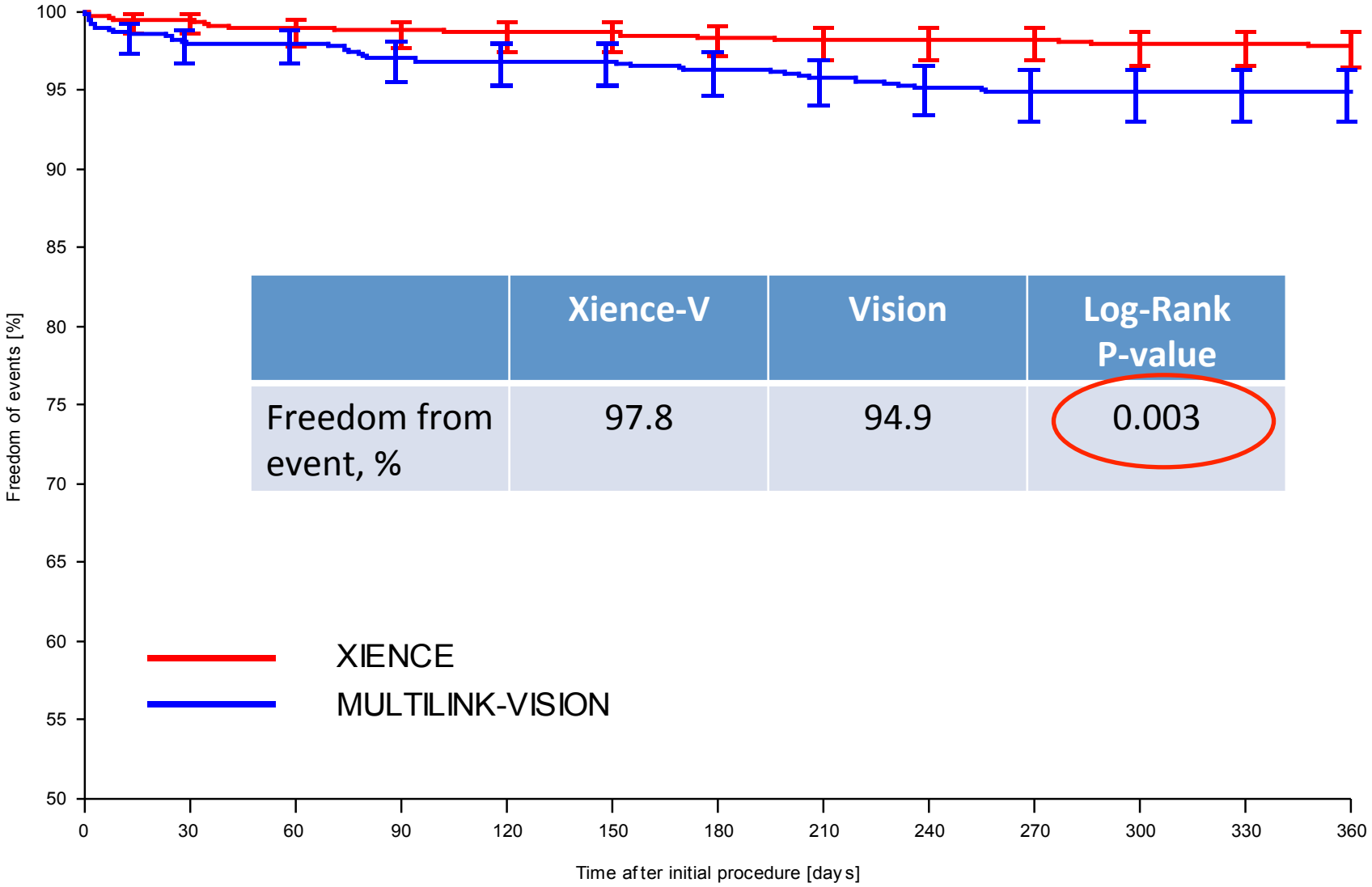




* 63% vs 60% when analysed within STEMI <12h group

Sabate M et al. Lancet 2012 Oct 27;380(9852):1482-90.

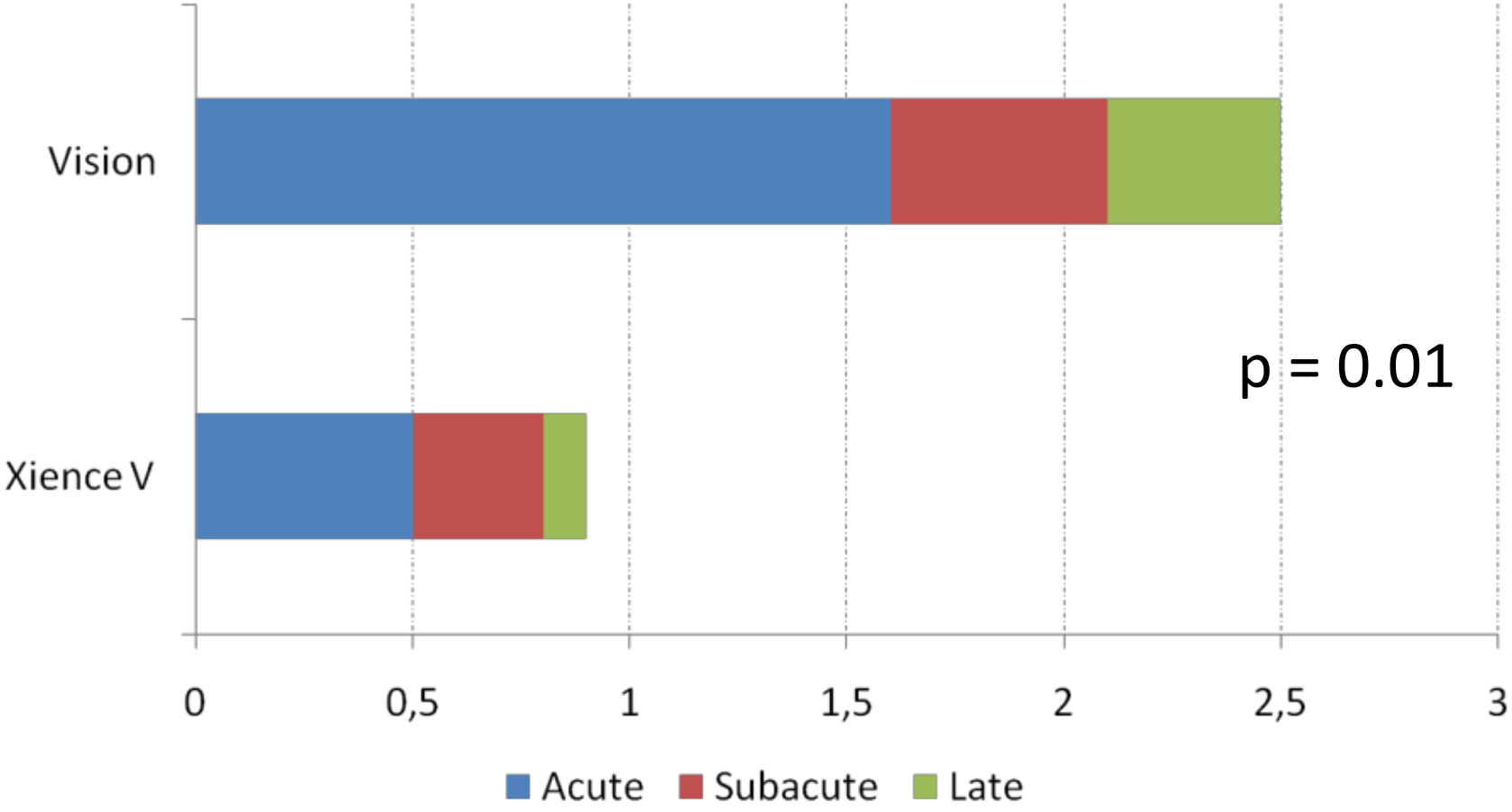
TLR



	Xience-V	Vision	Log-Rank P-value
Freedom from event, %	97.8	94.9	0.003

Sabate M et al. Lancet 2012 Oct 27;380(9852):1482-90.

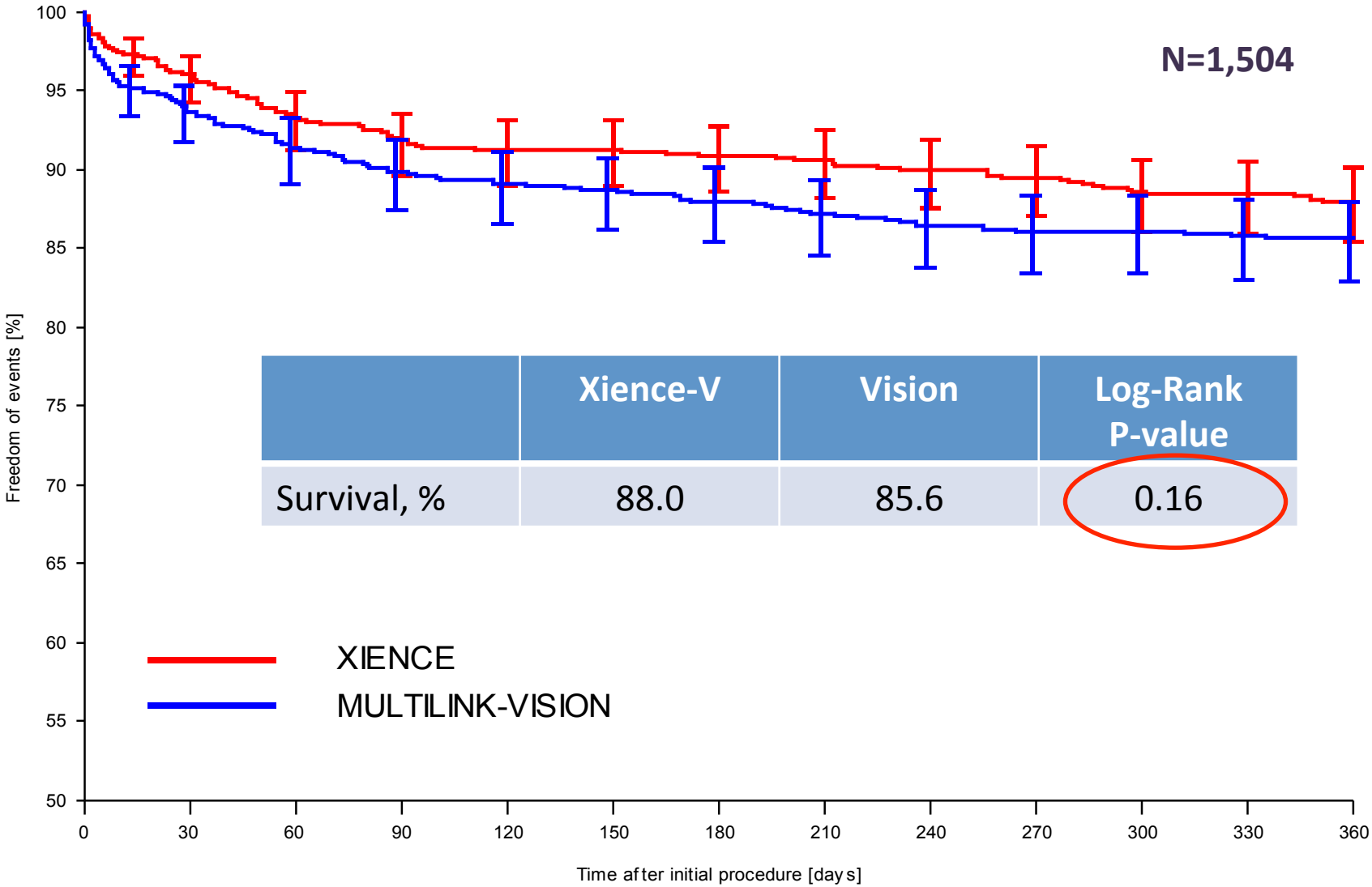
SAT définitive ou probable



Sabate M. et al. Lancet. 2012 Oct 27;380(9852):1482-90.

EXAMINATION trial

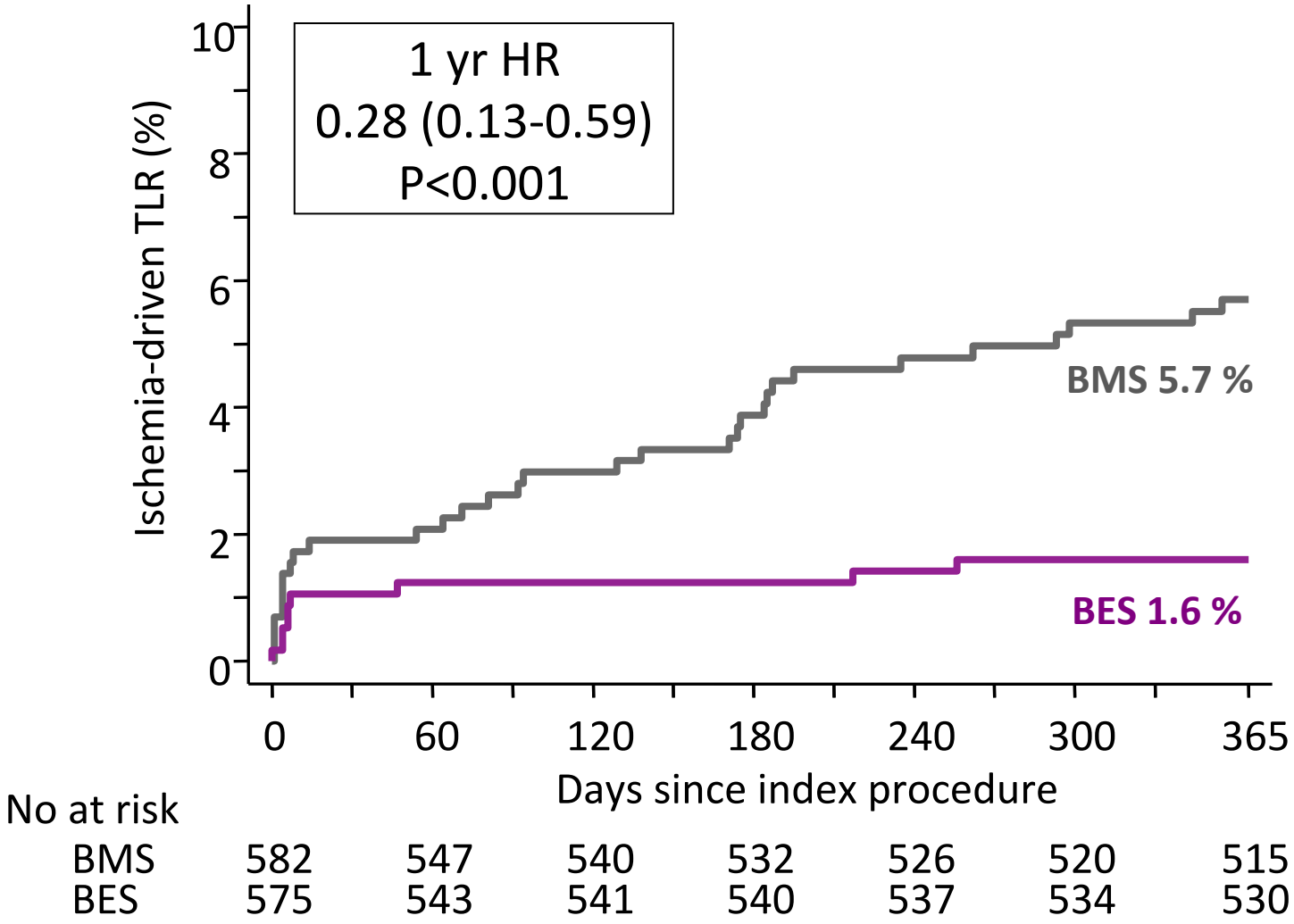
MACE décès, IDM, revasc



	Xience-V	Vision	Log-Rank P-value
Survival, %	88.0	85.6	0.16

Sabate M. et al. Lancet. 2012 Oct 27;380(9852):1482-90.

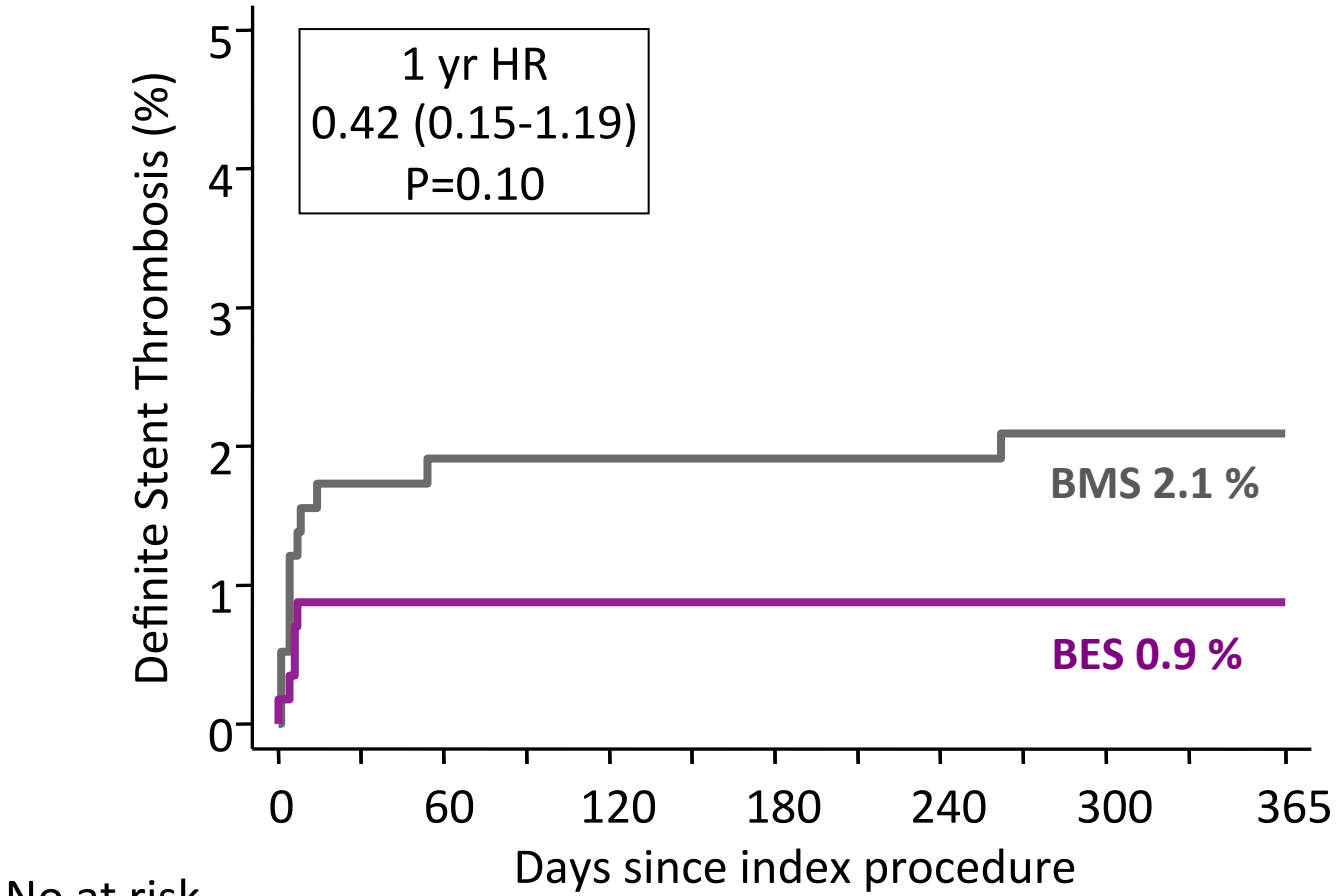
Biolimus: TLR 1 an



Clinical outcomes were adjudicated by an independent and blinded CEC

Räber. L. et al., JAMA 2012; 308:777-787.

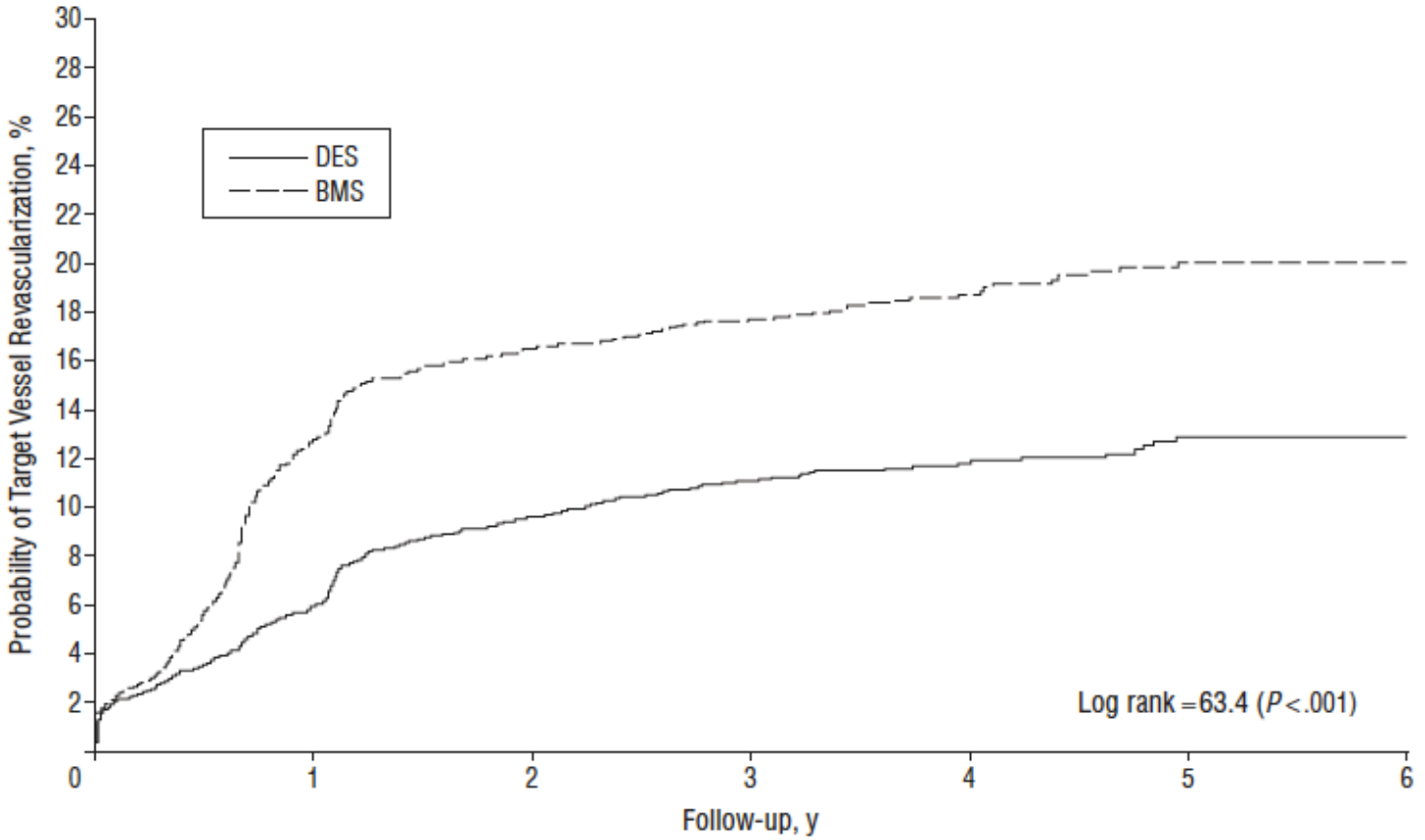
Biolimus: SAT 1 an



Clinical outcomes were adjudicated by an independent and blinded CEC

Räber. L. et al., JAMA 2012; 308:777-787.

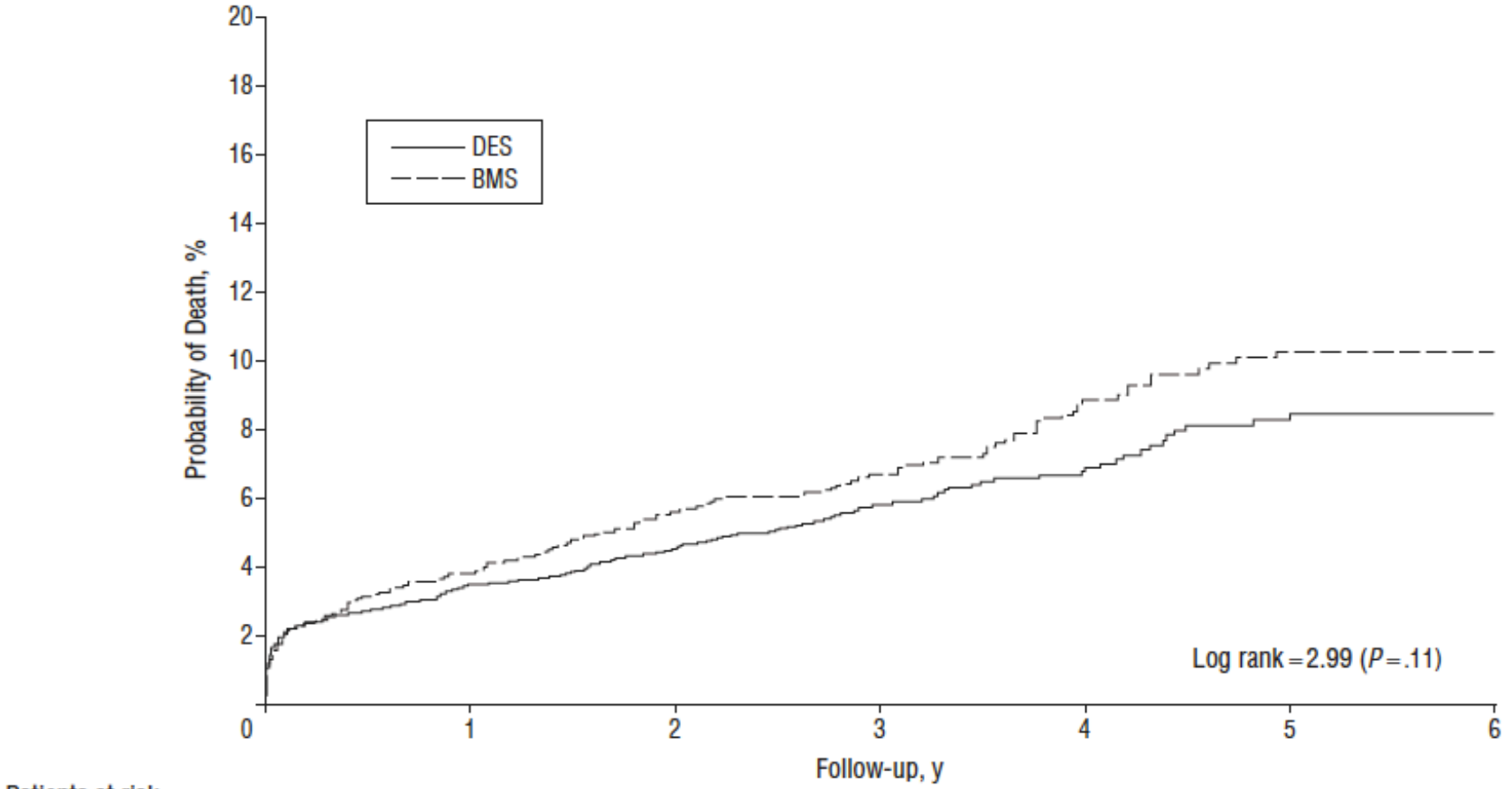
Revascularisations



Patients at risk							
BMS	2318	1897	1695	919	628	80	22
DES	3980	3517	3216	1108	771	122	26

De Luca G. et al. Arch Intern Med. 2012;172(8):611-621

Décès



Patients at risk							
BMS	2318	2168	2044	1133	772	110	38
DES	3980	3757	3602	1225	861	135	32

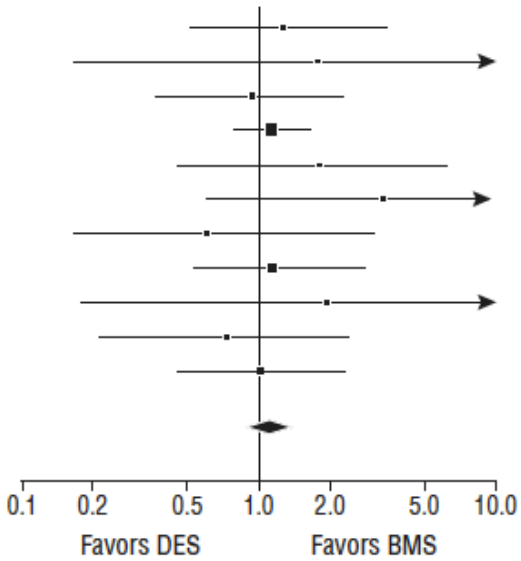
De Luca G. et al. Arch Intern Med. 2012;172(8):611-621

Thrombose de Stents

A

Source	Stent Thrombosis DES	Stent Thrombosis BMS	Weight, %	Hazard Ratio (95% CI)
BASKET-AMI[27]	12/115	5/61	6.33	1.16 (0.40-3.32)
Díaz de la Llera et al[32]	2/60	1/54	1.23	1.78 (0.16-19.65)
DEDICATION[36]	9/313	10/313	8.73	0.91 (0.37-2.25)
HORIZONS-AMI[6]	110/2238	32/744	45.53	1.14 (0.77-1.69)
MISSION[37]	6/158	3/152	3.68	1.91 (0.48-7.64)
Pasceri et al[26]	6/32	2/33	2.76	3.26 (0.66-16.19)
PASEO[33]	4/180	3/90	3.15	0.66 (0.15-2.95)
PASSION[38]	12/310	10/309	10.04	1.19 (0.51-2.74)
SELECTION[30]	2/40	1/40	1.23	1.96 (0.18-21.67)
SESAMI[35]	5/160	7/160	5.36	0.71 (0.22-2.22)
TYPHOON[39]	13/355	13/357	11.97	1.00 (0.46-2.15)
Total (95% CI)	180/3961	87/2313	100.00	1.13 (0.86-1.47)

Test for heterogeneity: $\chi^2=4.06$; $P=.94$
Test for overall effect: $z=0.87$; $P=.38$



De Luca G. et al. Arch Intern Med. 2012;172(8):611-621

MACE

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

De Luca G. et al. Arch Intern Med. 2012;172(8):611-621

TABLE 4. CLINICAL EVENTS AT ONE AND SIX MONTHS.

EVENT	Treatment A N=452	Treatment B N=448	P VALUE
	% of patients		
One month			
Death	3.5	1.8	0.15
Reinfarction	0.4	1.1	0.29
Disabling stroke	0.2	0.2	1.00
Target-vessel revascularization for ischemia	1.3	3.8	0.02
Combined end point	4.6	5.8	0.46
Six months			
Death	4.2	2.7	0.27
Reinfarction	2.4	2.2	1.00
Disabling stroke	0.2	0.2	1.00
Target-vessel revascularization for ischemia	7.7	17.0	<0.001
Combined end point	12.6	20.1	<0.01

TABLE 4. CLINICAL EVENTS AT ONE AND SIX MONTHS.

EVENT	STENT GROUP (N=452)	ANGIOPLASTY GROUP (N=448)	P VALUE
	% of patients		
One month			
Death	3.5	1.8	0.15
Reinfarction	0.4	1.1	0.29
Disabling stroke	0.2	0.2	1.00
Target-vessel revascularization for ischemia	1.3	3.8	0.02
Combined end point	4.6	5.8	0.46
Six months			
Death	4.2	2.7	0.27
Reinfarction	2.4	2.2	1.00
Disabling stroke	0.2	0.2	1.00
Target-vessel revascularization for ischemia	7.7	17.0	<0.001
Combined end point	12.6	20.1	<0.01

Grines et al. NEJM. 1999

En conclusion…..

"A BMS should never be Implanted during PCI for AMI"
Renu Virmani 1996

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

DES n'influent pas DC, IDM, Thromboses de stents.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

DES n'influent pas DC, IDM, Thromboses de stents.

DES semblent être associés à plus SAT tardives.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

DES n'influent pas DC, IDM, Thromboses de stents.

DES semblent être associés à plus SAT tardives.

Nouveaux DES pourraient être plus surs.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

DES n'influent pas DC, IDM, Thromboses de stents.

DES semblent être associés à plus SAT tardives.

Nouveaux DES pourraient être plus surs.

Le facteur limitant DES est la durée de DAPT.

CONCLUSIONS

Les DES doivent être utilisés vs. BMS dans STEMI.

DES réduisent le taux de revascularisations.

DES n'influent pas DC, IDM, Thromboses de stents.

DES semblent être associés à plus SAT tardives.

Nouveaux DES pourraient être plus surs.

Le facteur limitant DES est la durée de DAPT.

Idéal serait efficacité DES, sécurité BMS…