

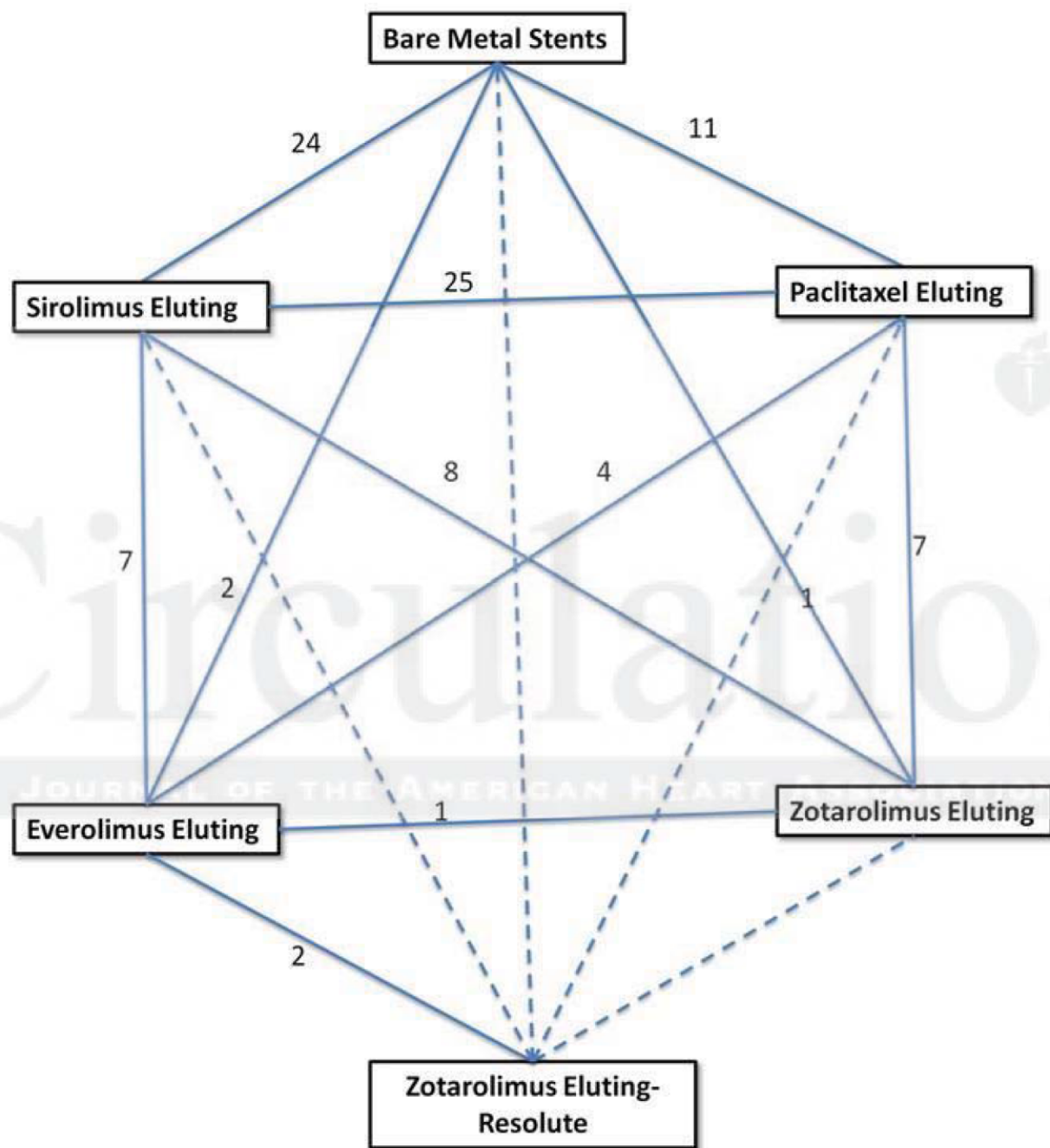
Quel stent pour quel patient? Résumé des études et recommandations.

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Paris, France

Conflits d'intérêt

Lectures rémunérées:

- Abbott
- Boston Scientific
- Hexacath
- Medtronic
- Astra Zeneca



Network analyse Bangalore

Trial	Year	Total Sample Size (N)	Stent Comparisons	Follow Up (Months)	Mean Age (Years)	Men (%)
BASKET ²⁸	2005	826	SES/PES/BMS	6	64	79
BASKET-PROVE ²⁹	2010	2314	EES/BMS/SES	24	67	76
COMPARE ^{30, 31}	2010/2011	1800	EES/PES	24	63	70
CORPAL ³²	2005	515	SES/PES	31	61	77
C-SIRIUS ³³	2004	100	SES/BMS	9	60	69
CREST MI ³⁴	2011	875	SES/ZES	6	60	82
DEBATER ³⁵	2009	870	SES/BMS	24	60	76
DES-Diabetes ^{36, 37}	2008/2011	400	SES/PES	48	61	58
DESSERT ³⁸	2008	150	SES/BMS	12	70	56
DiabeDES ³⁹	2009	153	SES/PES	8	65	79
DIABETES ^{40, 41}	2005/2011	160	SES/BMS	60	66	62
Diaz de la Herra ⁴²	2007	114	SES/BMS	12	64	79
Endeavor II ^{43, 44}	2006/2010	1197	ZES/BMS	60	62	76
Endeavor III ^{4, 45}	2006/2011	436	ZES/SES	60	61	69
Endeavor IV ^{45, 46}	2009/2010	1548	ZES/PES	36	63	68
Erglis et al ⁴⁷	2007	103	PES/BMS	9	62	83
E-SIRIUS ⁴⁸	2003	352	SES/BMS	9	62	71
ESSENCE-DIABETES ⁴⁹	2011	300	EES/SES	12	63	59
EXAMINATION ⁵⁰	2011	1498	EES/BMS	12	61	83
EXCELLENT ⁵¹	2010	1443	EES/SES	12	63	
Gao et al ⁵²	2007	156	SES/BMS	6	58	
Long-DES III ⁵⁶	2011	450	SES/EES	12	63	
MISSION ^{57, 68}	2008/2010	310	SES/BMS	36	59	
MULTISTRATEGY ^{69, 70}	2008/2011	744	SES/BMS	36	64	
Naples-Diabetes ⁷¹	2011	226	SES/ZES/PES	36	64	57
Ortolani et al ⁷²	2007	104	SES/BMS	12	65	76
Pache et al ⁷³	2005	500	SES/BMS	12	67	78
Pan et al ⁷⁴	2007	205	SES/PES	24	61	84
PASEO ^{75, 76}	2009	270	PES/BMS/SES	48	62	70
Passion ^{77, 78}	2006/2011	619	PES/BMS	60	61	78
Petronio et al ⁷⁹	2007	100	SES/PES	9	63	83
PRISON II ^{80, 81}	2006/2009	200	SES/BMS	36	59	79
PROSIT ^{82, 83}	2008/2011	308	SES/PES	36	60	76
RAVEL ^{84, 85}	2002/2007	238	SES/BMS	60	61	76
REALITY ⁸⁶	2006	1386	SES/PES	12	63	73
RESET ⁸⁷	2011	3197	EES/SES	12	69	77
RESOLUTE All Comers ¹¹	2010/2011	2292	ZES-R/EES	24	64	77
SCANDSTENT ^{88, 89}	2006/2008	322	SES/BMS	36	63	76
SCORPIUS ⁹⁰	2007	190	SES/BMS	12	66	64
SEA-SIDE ⁹¹	2011	150	SES/EES	18	65	80
SESAMI ^{92, 93}	2007/2010	320	SES/BMS	36	62	80
SES-SMART ^{94, 95}	2004/2009	257	SES/BMS	24	64	72
SIRIUS ^{96, 97}	2003/2009	1058	SES/BMS	60	62	71
SIRTAX ^{98, 99}	2005/2011	1012	SES/PES	60	62	77
SORT OUT II ¹⁰⁰	2008	2098	SES/PES	18	64	75
SORT OUT III ¹⁰¹	2010	2332	ZES/SES	18	64	73
SORT OUT IV ¹⁰²	2010	2774	EES/SES	9	64	75
Spirit II ^{103, 104}	2007/2011	300	EES/PES	48	62	73
Spirit III ^{6, 105}	2008/2009	1001	EES/PES	24	63	69
Spirit IV ^{7, 106}	2010/2011	3717	EES/PES	24	63	68
STRATEGY ^{107, 108}	2007	175	SES/BMS	24	62	73
TAXI-LATE ^{109, 110}	2005/2007	202	SES/PES	36	64	81
TAXUS II ^{111, 112}	2003/2009	536	PES/BMS	60	60	75
TAXUS IV ^{113, 114}	2004/2009	1314	PES/BMS	60	62	72
TAXUS V ¹¹⁵	2005	1156	PES/BMS	9	63	69
TAXUS VI ^{116, 117}	2005/2009	446	PES/BMS	60	63	76
TWENTE ¹¹⁸	2012	1391	ZES-R/EES	12	64	72
TYPHOON ^{119, 120}	2006/2011	712	SES/BMS	48	59	78

118.000 pts années

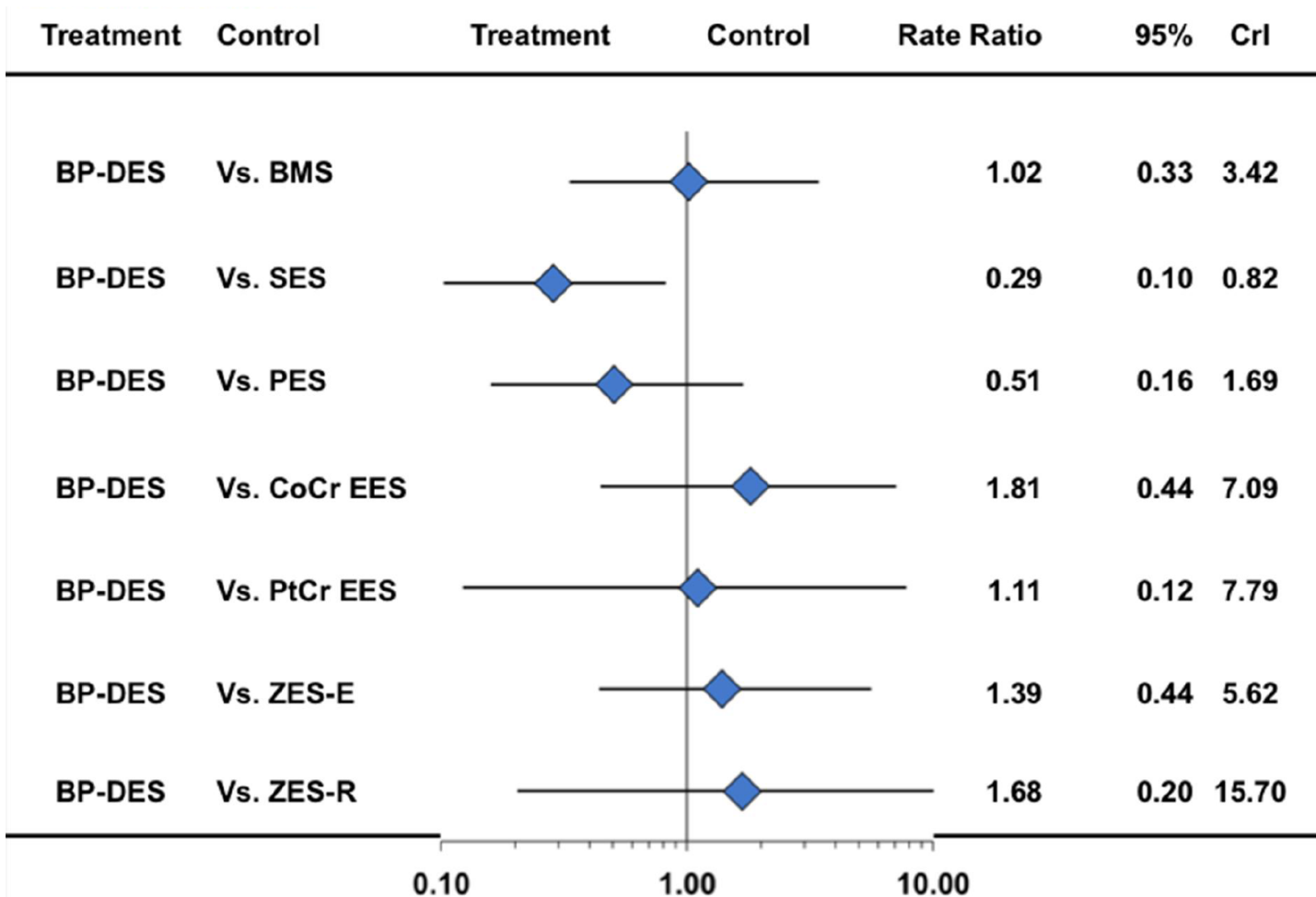
Efficacité des DES

Stent type	TVR Rate (95% CR I)	Probability Best	Death Rate (95% CR I)	Probability Best	MI Rate (95% CR I)	Probability Best	Any ST Rate (95% CR I)	Probability Best	Def/Prob ST Rate (95% CR I)	Probability Best
Bare Metal	15.76 (13.83, 17.46)	0.00%	0.23 (0.00, 1.55)	1.70%	4.23 (3.63, 4.89)	0.00%	0.18 (0.00, 1.35)	0.00%	0.12 (0.00, 1.19)	0.09%
Sirolimus	4.11 (3.38, 4.91)	58.21%	0.22 (0.00, 1.50)	7.07%	2.85 (2.35, 3.44)	0.96%	0.14 (0.00, 1.01)	0.53%	0.08 (0.00, 0.82)	2.72%
Paclitaxel	7.37 (5.99, 8.86)	0.00%	0.22 (0.00, 1.53)	2.03%	3.66 (3.06, 4.34)	0.00%	0.17 (0.00, 1.31)	0.00%	0.11 (0.00, 1.17)	0.02%
Everolimus	4.44 (3.28, 5.92)	17.65%	0.20 (0.00, 1.40)	5.97%	2.32 (1.79, 3.03)	41.99%	0.08 (0.00, 0.63)	80.39%	0.04 (0.00, 0.53)	78.31%
Zotarolimus	7.60 (5.54, 10.33)	0.00%	0.29 (0.00, 2.03)	0.42%	2.77 (2.06, 3.57)	10.89%	0.19 (0.00, 1.60)	0.24%	0.12 (0.00, 1.40)	0.72%
Zotarolimus-R	4.90 (2.65, 8.97)	24.14%	0.15 (0.00, 1.16)	82.81%	2.30 (1.63, 3.41)	46.16%	0.10 (0.00, 0.96)	18.84%	0.07 (0.00, 0.96)	18.14%

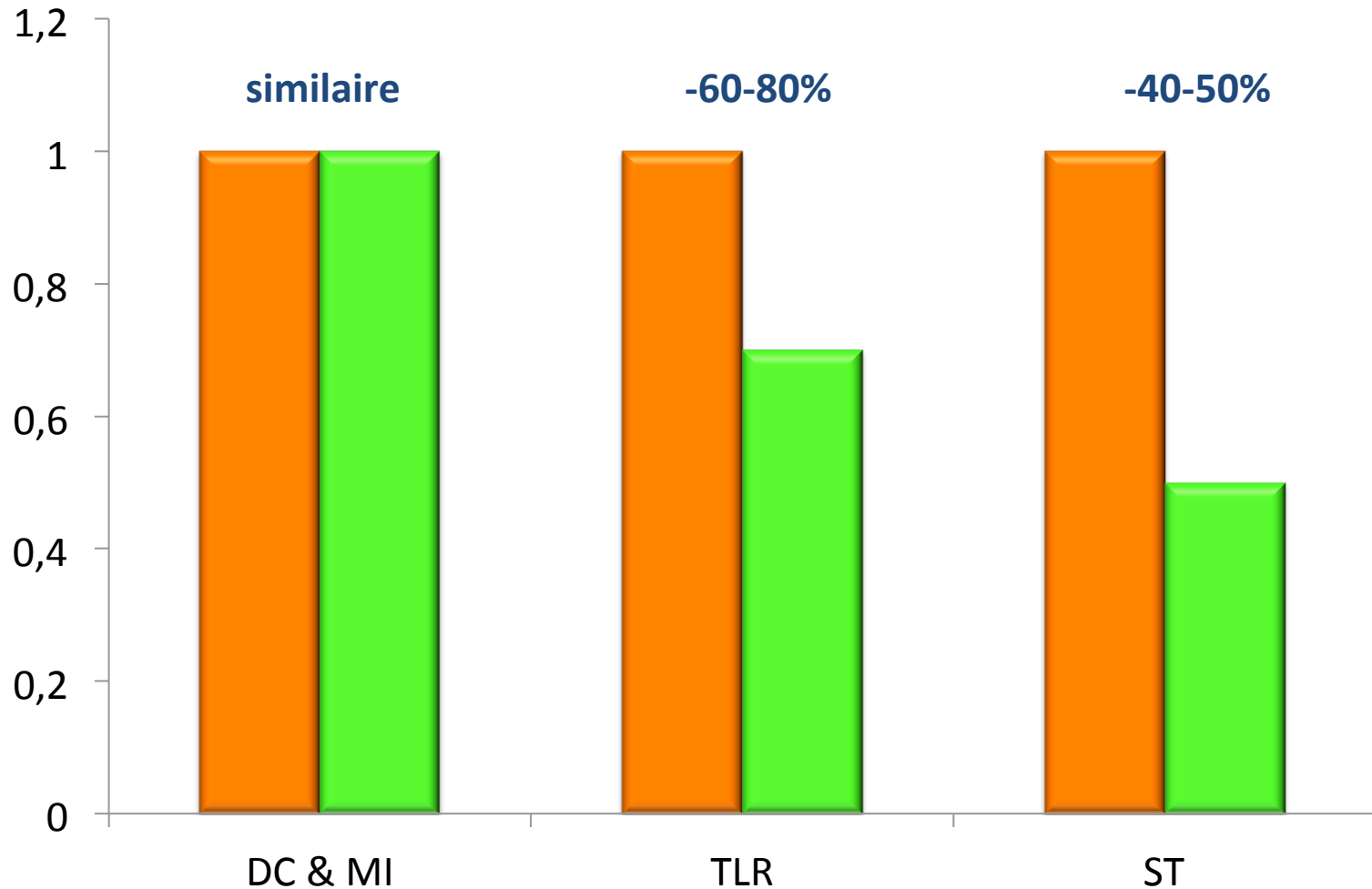
CR I = credibility interval; Def/Prob = ARC defined Definite or Probable; MI = myocardial infarction; ST = stent thrombosis; TVR= target vessel revascularization

DES avec polymère biorésorbable

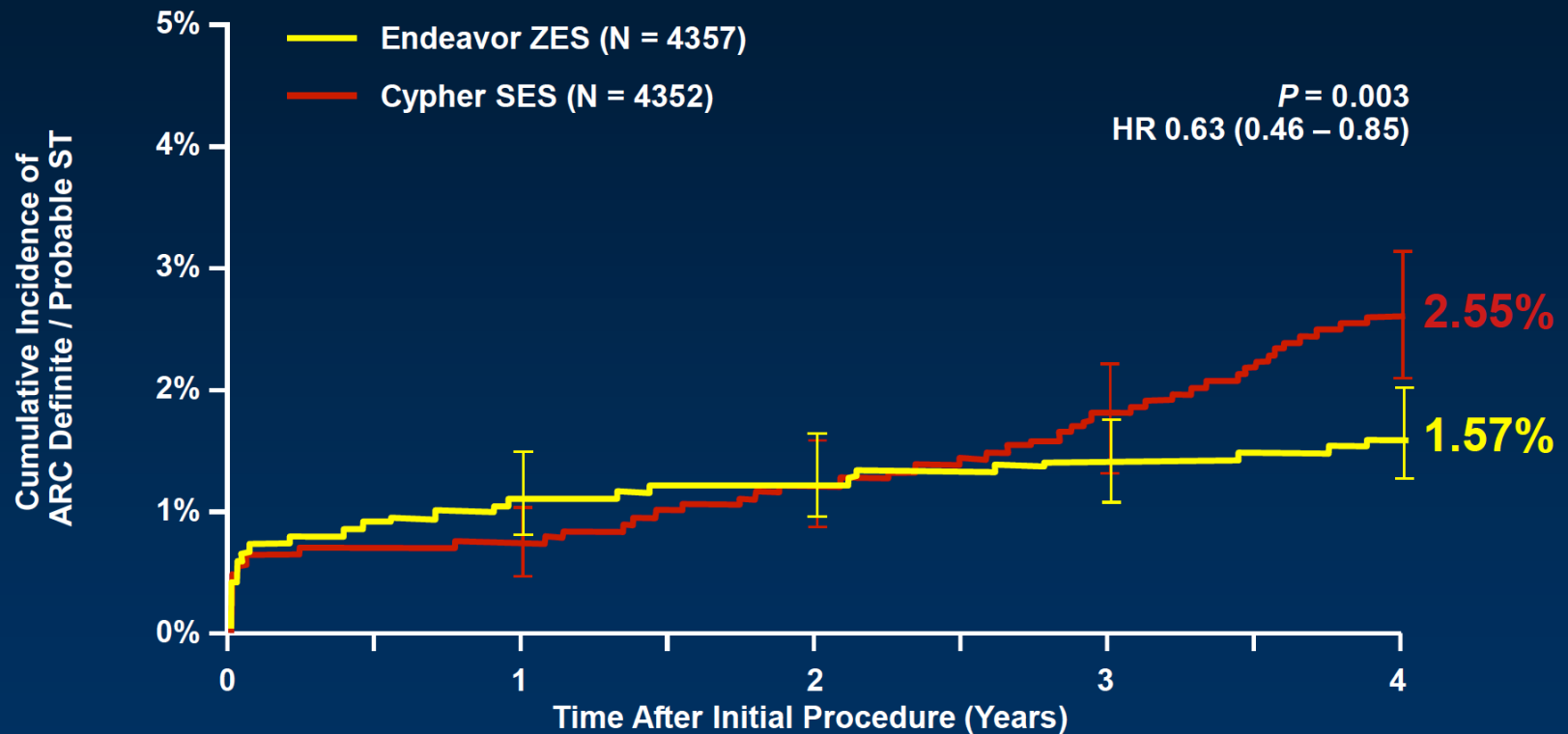
Definite stent thrombosis



EES vs. BMS



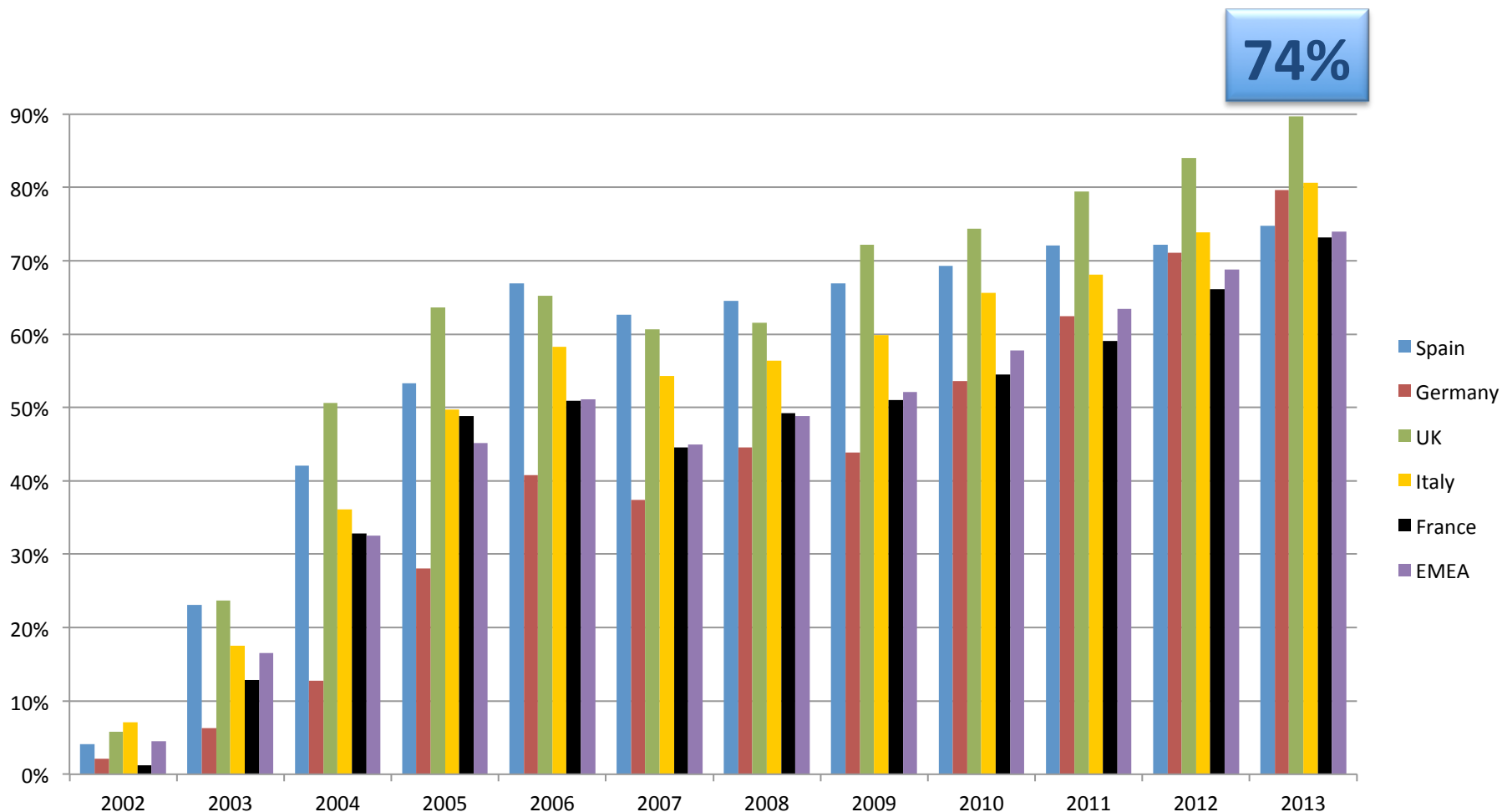
PROTECT



Patients at Risk

	0	1	2	3	4
E-ZES	4357	4347	4230	4140	4025
C-SES	4352	4344	4212	4108	3979

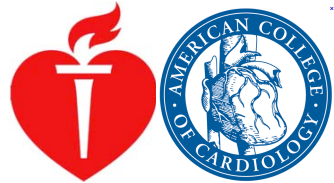
Pénétration DES France et EU



Patients Oubliés

- Patients âgés
- Patients avec autre pathologie
 - néoplasie,
 - syndrome inflammatoire,
 - comorbidités,
 - chirurgie programmée
- Patients en fibrillation auriculaire
- Patients peu adhérents
- Patients avec risque hémorragique élevé...

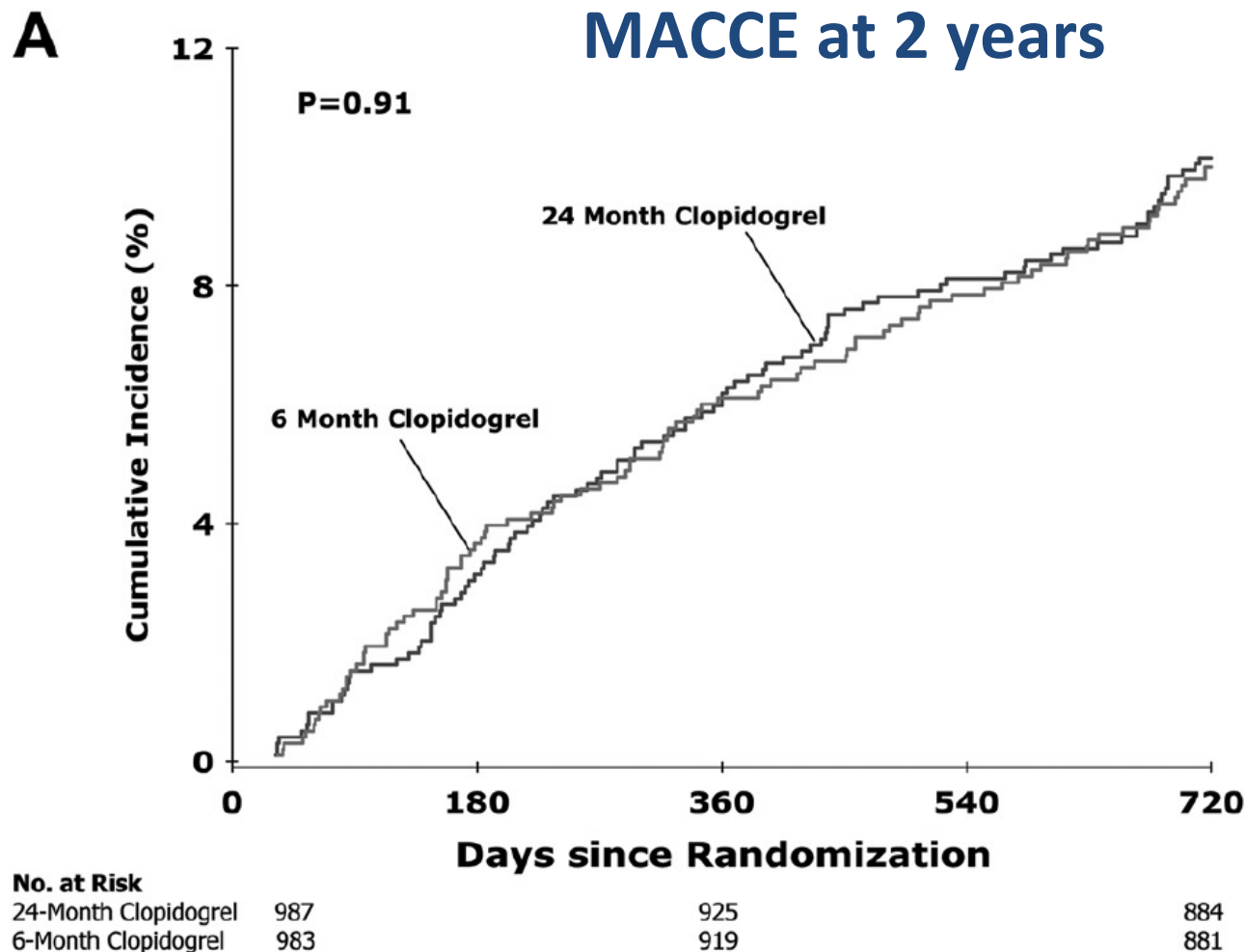
Durée de DAPT

	 EUROPEAN SOCIETY OF CARDIOLOGY®	
BMS patients stables	1 mois	1 mois (minimum)
BMS patients SCA	12 mois (1 mois)	12 mois
DES patients stables	6-12 mois	12 mois
DES patients SCA	12 mois (6 mois)	12 mois

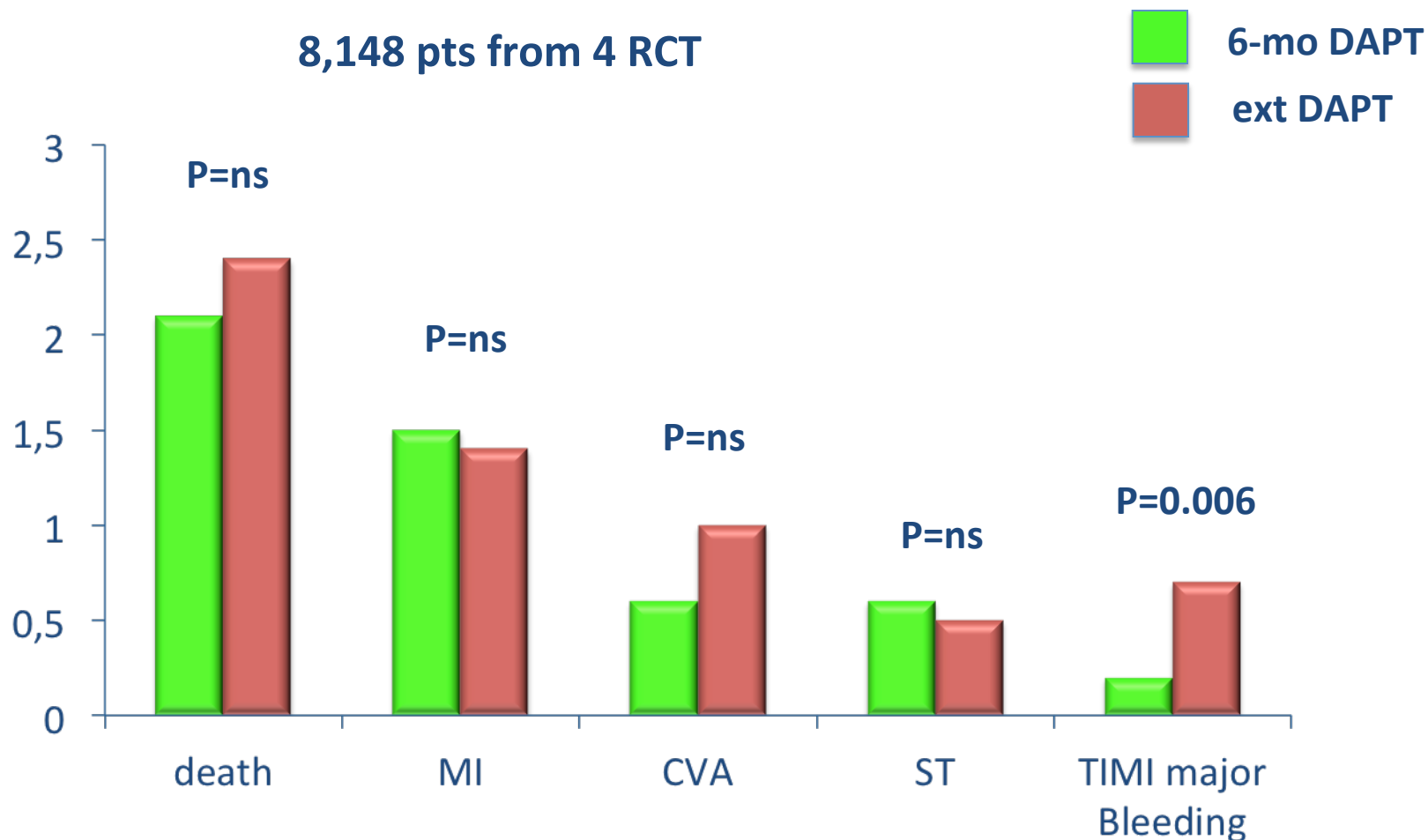
Durée de DAPT

Definition	Stent no. of events (%)	Stent no. of events (%)	(95% CI) %	P Value	Stent no. of events (%)	Stent no. of events (%)	(95% CI) %	P Value
Overall								
Protocol	10 (1.2)	5 (0.6)	0.6 (−0.4 to 1.5)	0.20	16 (1.3)	10 (0.8)	0.5 (−0.3 to 1.4)	0.24
Any ARC criterion	30 (3.6)	28 (3.3)	0.3 (−1.5 to 2.0)	0.80	39 (3.2)	41 (3.5)	−0.3 (−1.8 to 1.2)	0.84
ARC definite or probable	13 (1.5)	15 (1.7)	−0.2 (−1.5 to 1.0)	0.70	22 (1.8)	18 (1.4)	0.4 (−0.7 to 1.4)	0.52
ARC definite	10 (1.2)	7 (0.8)	0.4 (−0.7 to 1.4)	0.47	16 (1.3)	14 (1.1)	0.2 (−0.7 to 1.0)	0.71
Early (0 to 30 days)								
Protocol	4 (0.5)	1 (0.1)			7 (0.5)	7 (0.5)		
Any ARC criterion	4 (0.5)	3 (0.3)			7 (0.5)	7 (0.5)		
ARC definite or probable	4 (0.5)	3 (0.3)			7 (0.5)	7 (0.5)		
ARC definite	3 (0.3)	0			5 (0.4)	6 (0.4)		
Late (31 to 360 days)								
Protocol	1 (0.1)	4 (0.5)			3 (0.2)	2 (0.1)		
Any ARC criterion	2 (0.2)	11 (1.3)			12 (0.9)	13 (0.9)		
ARC definite or probable	1 (0.1)	8 (1.0)			5 (0.4)	4 (0.3)		
ARC definite	1 (0.2)	4 (0.5)			5 (0.3)	3 (0.2)		
Very late (>360 days)								
Protocol	5 (0.6)	0			6 (0.6)	1 (0.2)		
Any ARC criterion	24 (2.9)	14 (1.7)			20 (1.8)	21 (2.1)		
ARC definite or probable	8 (0.9)	4 (0.4)			10 (0.9)	7 (0.6)		
ARC definite	6 (0.7)	3 (0.3)			6 (0.6)	5 (0.5)		

PRODIGY: DAPT 6 vs. 24 mois

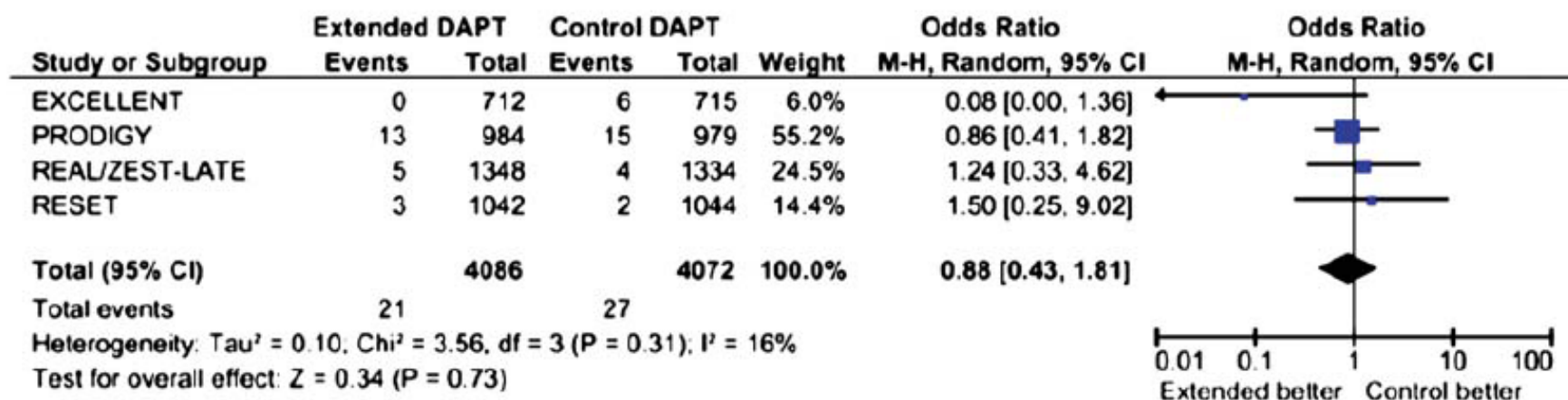


Metanalyse: DAPT longue vs. courte



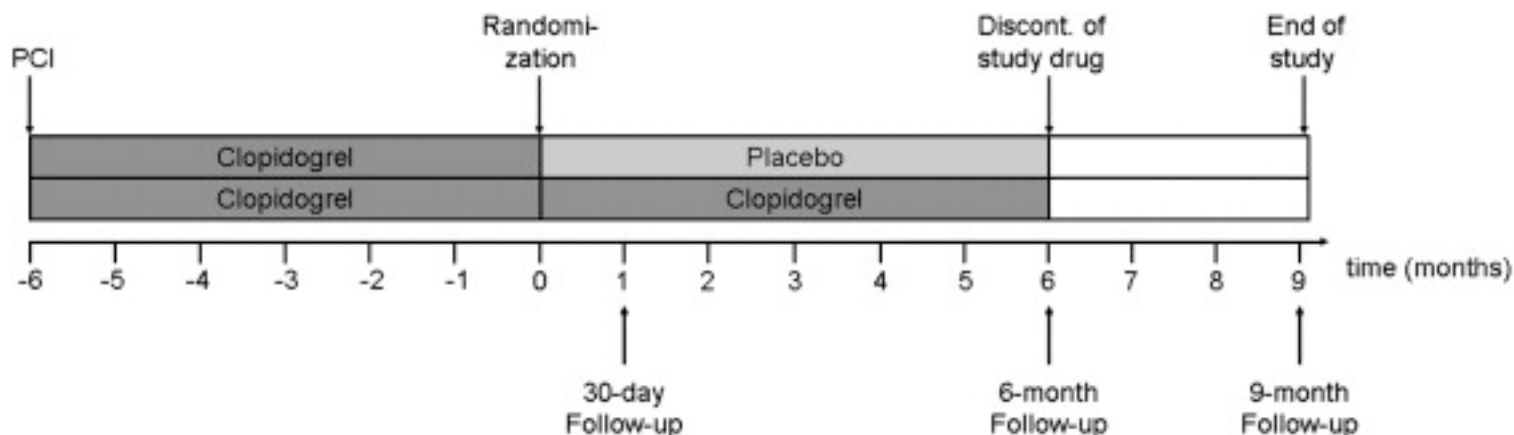
Metanalyse: DAPT longue vs. courte

B Stent thrombosis



ISAR SAFE: DAPT 6 vs. 12 mois

N=6,000 pts



GLOBAL LEADERS: DAPT 1 mois

**16,000 All-comer
Patients With PCI**

N=16,000 pts

PCI With BioMatrix Flex Stent*

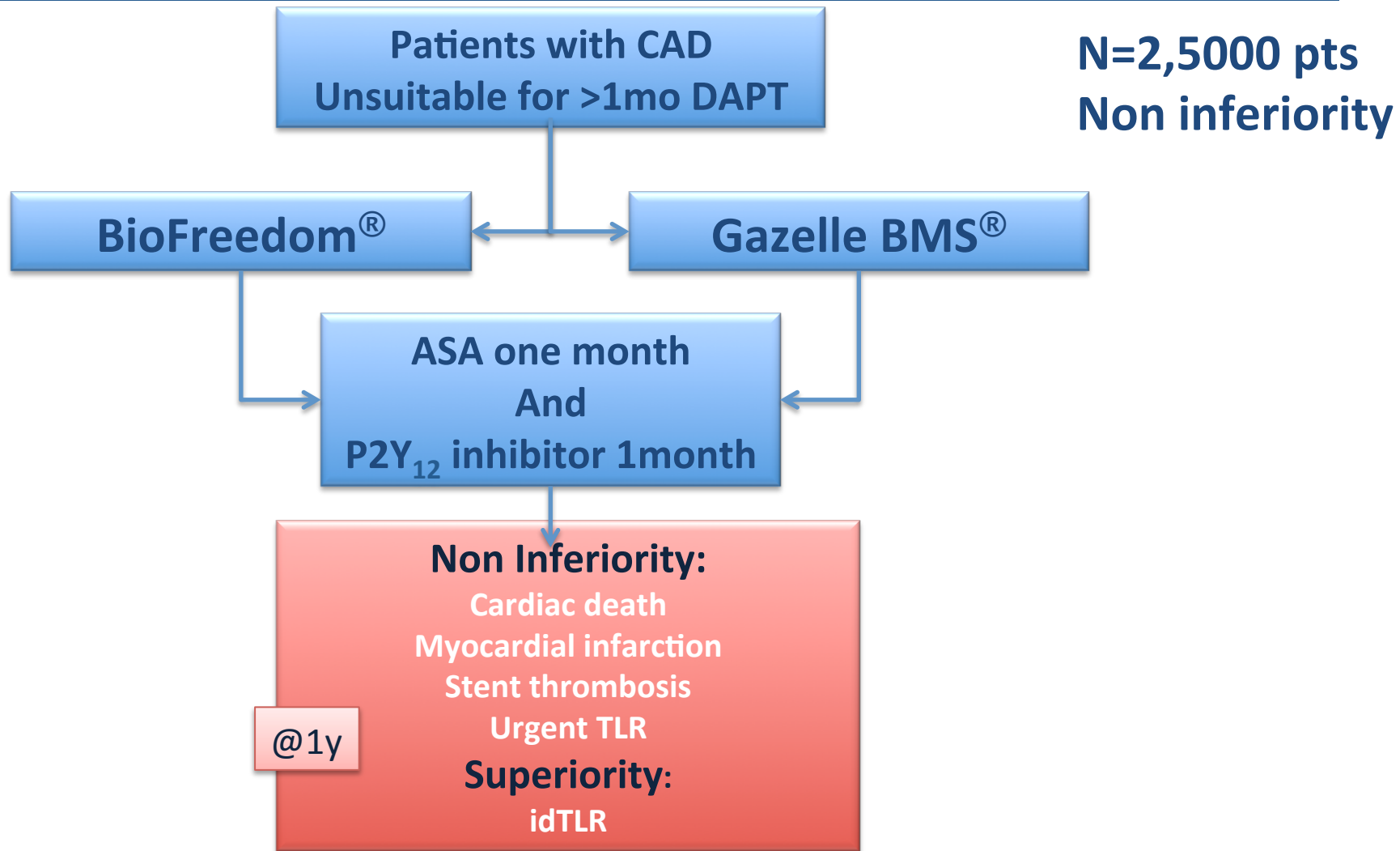
**ASA/ticagrelor for 1 month
followed by 23 months ticagrelor
monotherapy**

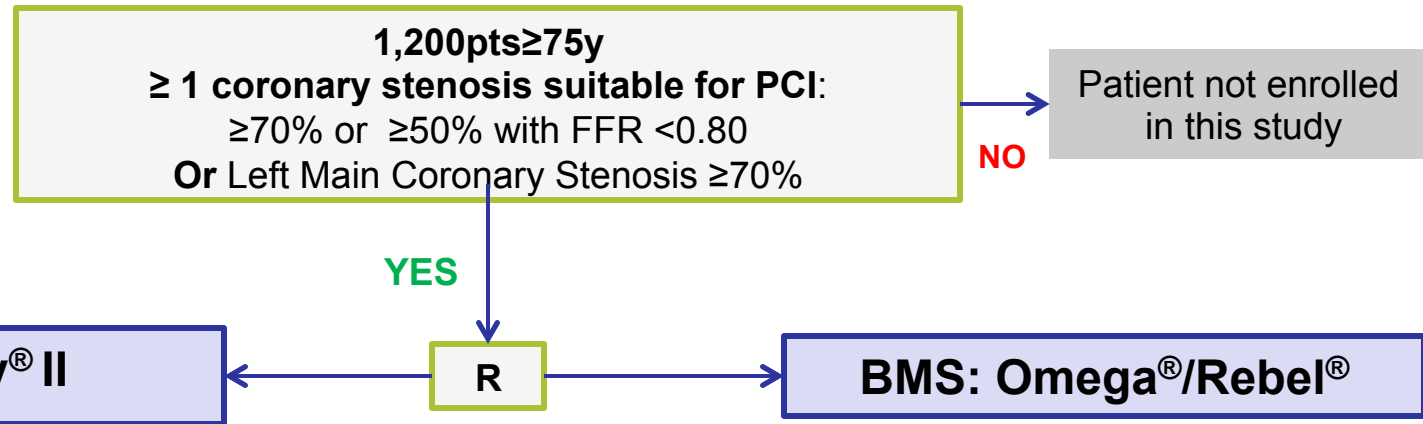
**ASA/ticagrelor (ACS) or
ASA/clopidogrel (non-ACS) for
12 months followed by 12 months
ASA monotherapy**

**1° EP: All-cause mortality/MI
2° EP: Bleeding 5**

**Not approved for use in
the United States.*

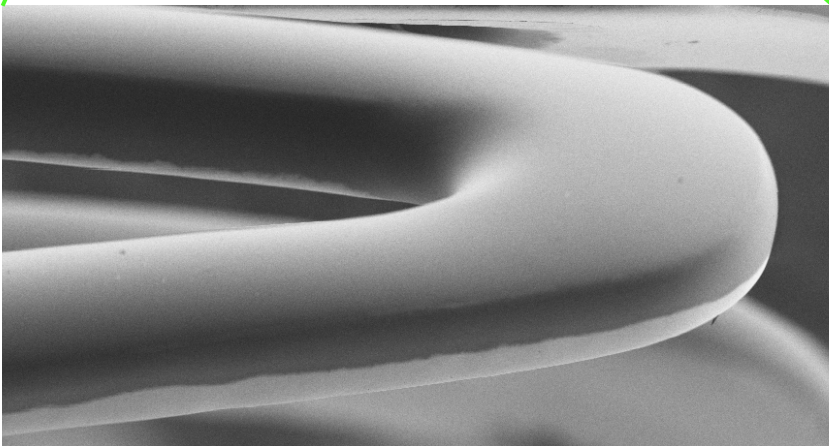
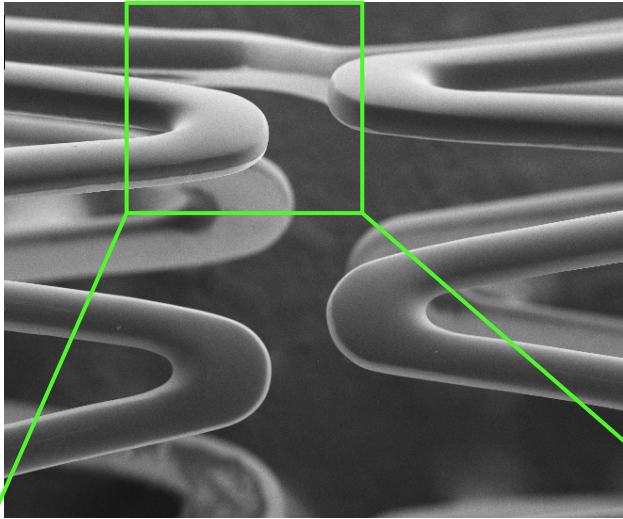
LEADERS FREE





Stent SYNERGY II®

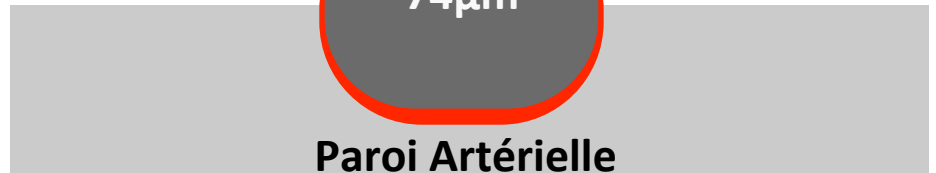
- Stent à libération d'éverolimus
- Mailles ultra fines PtCr 74µm
- Polymère bioabsorbable (PLGA)
- Everolimus sur surface abluminale



Section maille

74µm

Paroi Artérielle



Stent SYNERGY II®

Durable Polymer Coated Stents

Bioabsorbable Polymer Coated Stents

Bioabsorbable Stent

Xience CoCr-EES
Promus PtCr-EES

Resolute
CoNi-ZES

Biomatrix
316L-BES

Nobori
316L-BES

SYNERGY
PtCr-EES

BVS
PLLA-EES



Strut Thickness

81µm

89µm

120µm

125µm

74µm

150µm

Polymer Coating

Conformable
7-8µm / side

Conformable
6µm / side

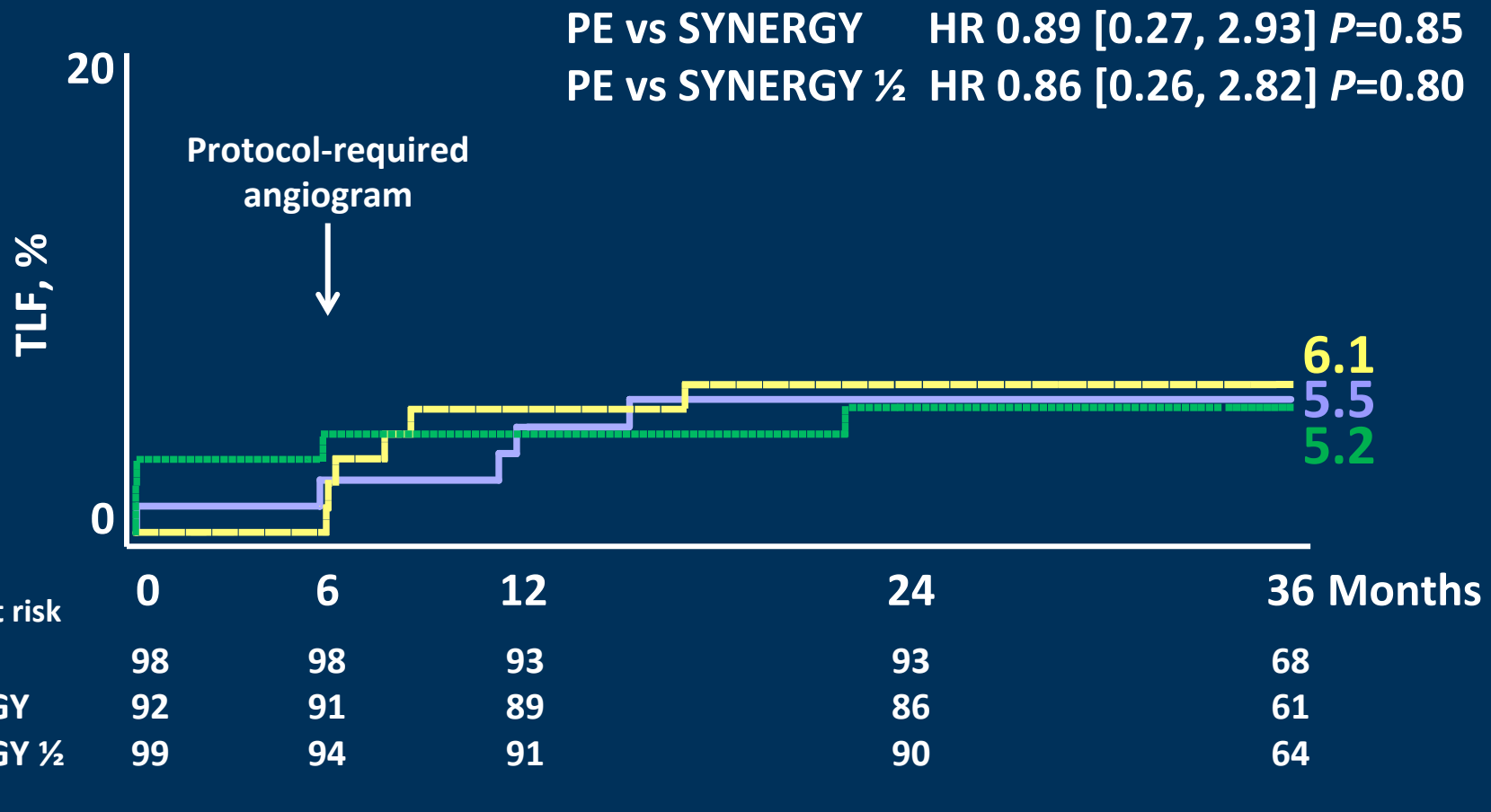
Abluminal
11µm

Abluminal
20µm

Abluminal
4µm

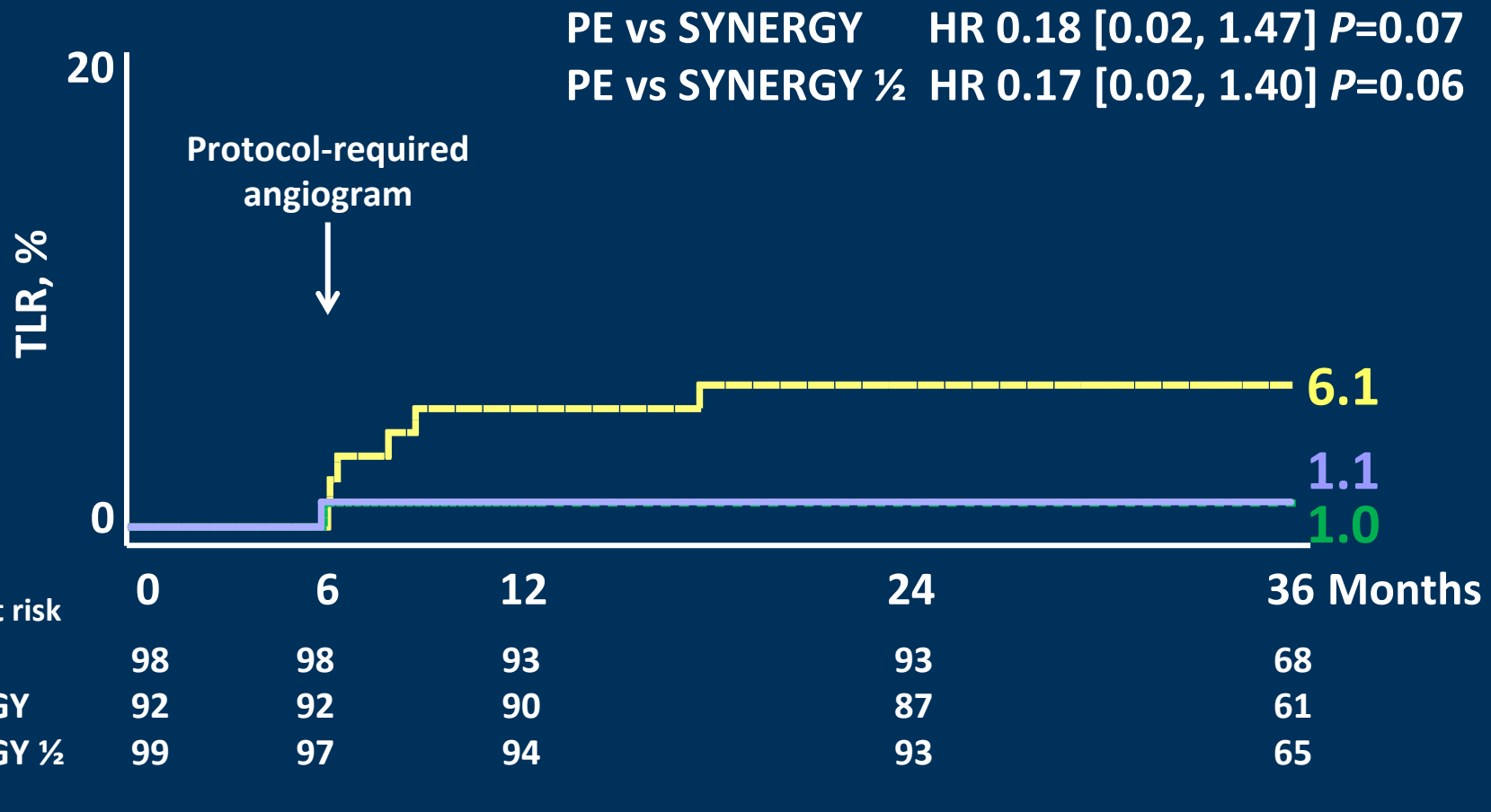
Conformable
3µm / side

EVOLVE: TLF à 3 ans



Safety Population; KM Event Rate; log-rank P values

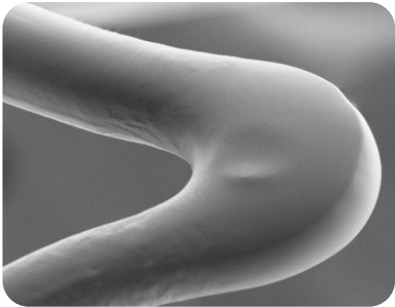
EVOLVE: TLR à 3 ans



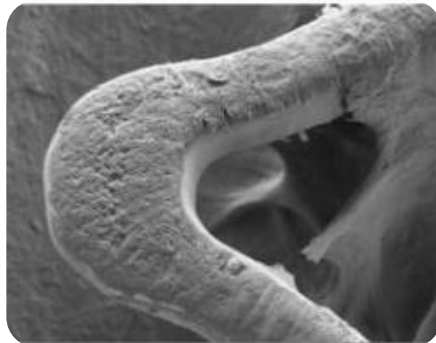
Safety Population; KM Event Rate; log-rank P values

SYNERGY®: modèle porcin

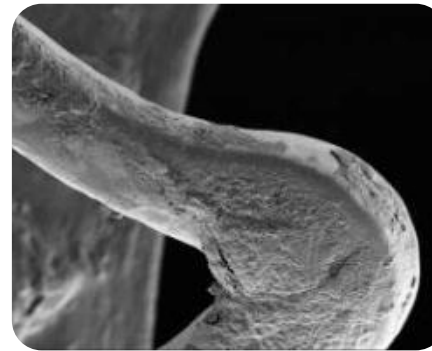
J0



J28



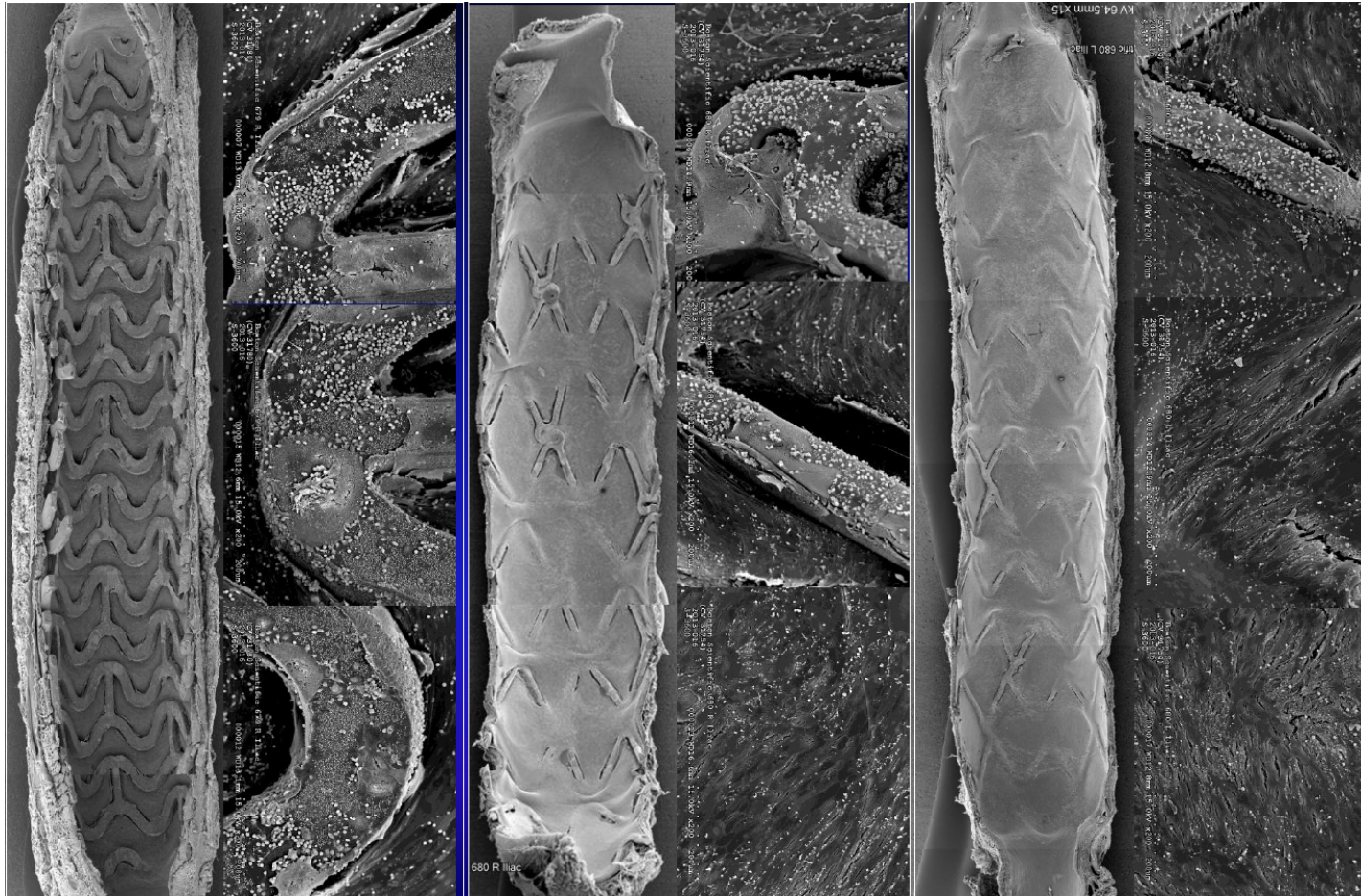
J60



J90



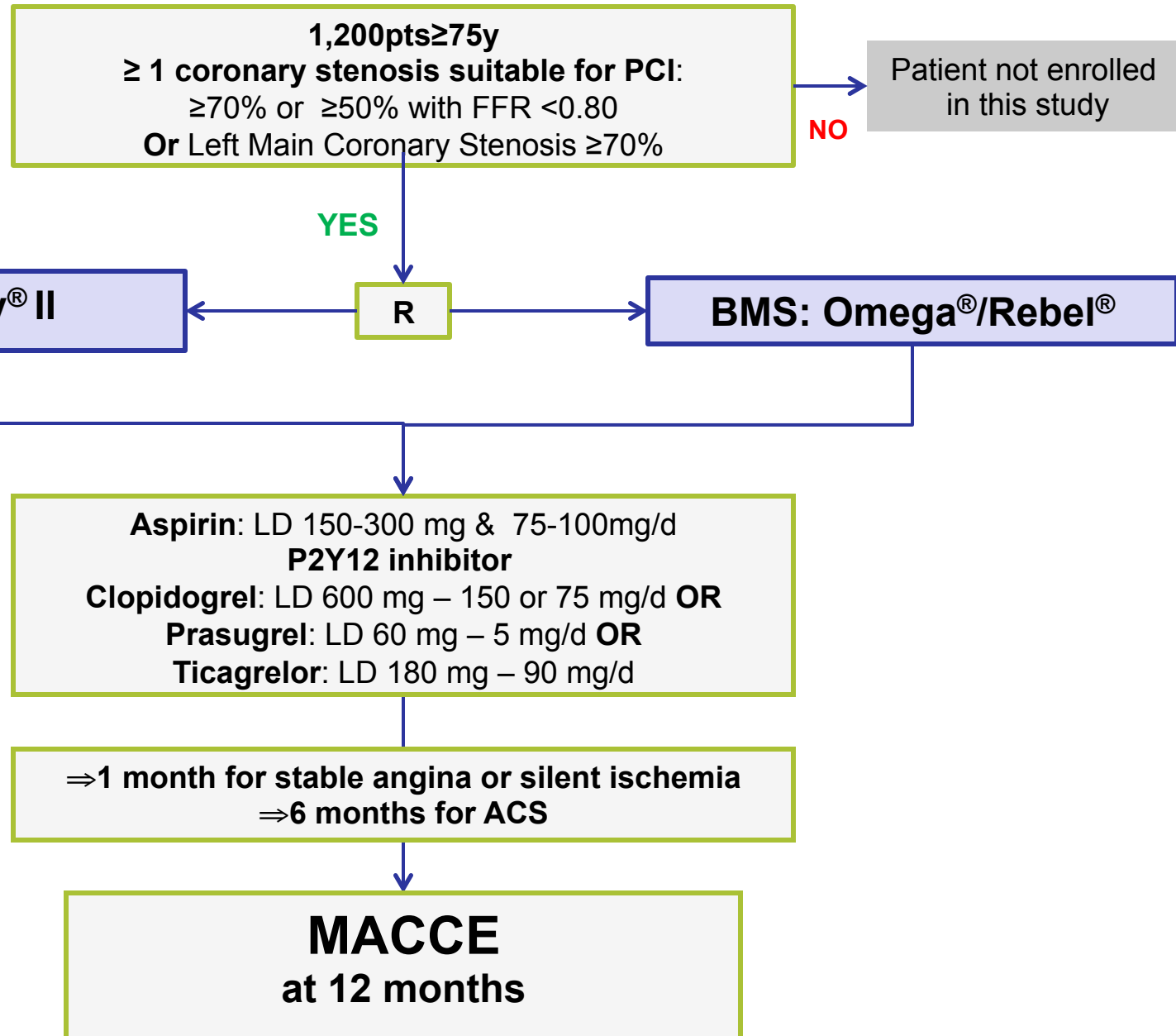
SYNERGY®: modèle lapin



BVS

Biomatrix

SYNERGY



Conclusions

- DES chez la **plupart des patients**

Conclusions

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- Le vrai challenge reste la **durée de la double AAP**

Conclusions

- DES chez la plupart des patients
- Le vrai challenge reste la durée de la double AAP
- Stents de dernière génération
 - **Efficacité** au moins similaire
 - **Qualités** biomécaniques
 - Meilleure **sécurité**
 - Permettraient **réduction DAPT (SENIOR)**

