

# Interventional Cardiology

B De Bruyne (Aalst, BE)

*ESC CONGRESS 2005*



# Non Coronary Interventions: PFO closure

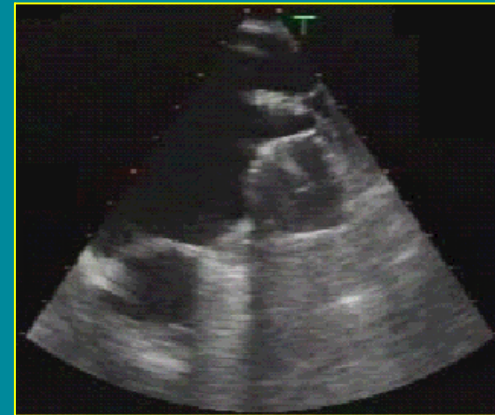
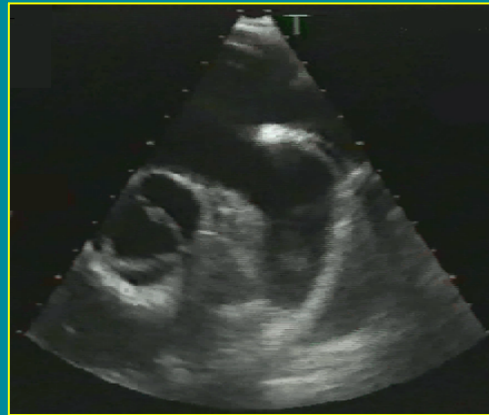
## PFO closure: safety data from registries

Author/ Abstr #	n	Indication	FU	Recurrence of event	Complications
Onorato/652	43 9	TIA/CVA/ (Migraine)	<5 y	<b>&lt;1%</b>	Death: <b>0.9%</b> (2PE, 1 Sudden death, 1 suicide) Transient A. Fib: <b>2.9%</b>
Balbi/3402	79	TIA/CVA	±2 y	<b>1.2%</b>	Residual shunt <b>1.5%</b>
Budts/3409	11 2	TIA/CVA	±2 y	<b>1.8%</b> (CVA) <b>2.8%</b> (TIA)	Transient arrhyth: <b>15%</b>
Maier/3409	11 2	TIA/CVA	6 mos	<b>0%</b>	Small thrombus in <b>1.6%</b> on device (transient)
Zbinden	26	Scuba Divers (DCI)	± 1y	<b>0%</b> major DCI, decrease in minor DCI	<b>0%</b>

- No randomized data on the benefit of PFO closure vs medical management
- Long-term clinical out-come of the procedure is very favorable

# Non Coronary Interventions: Plaato device

Preventing Stroke with the Plaato device:  
preliminary results of the multicentric registry



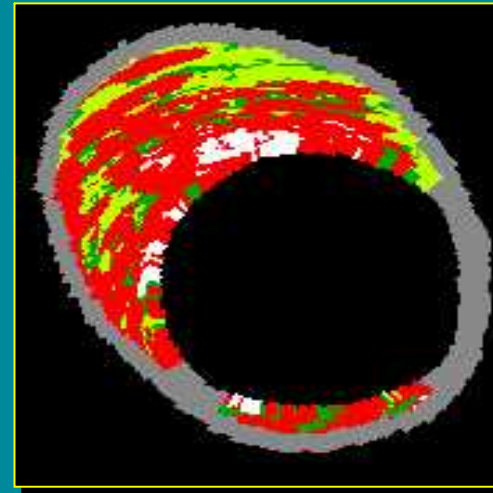
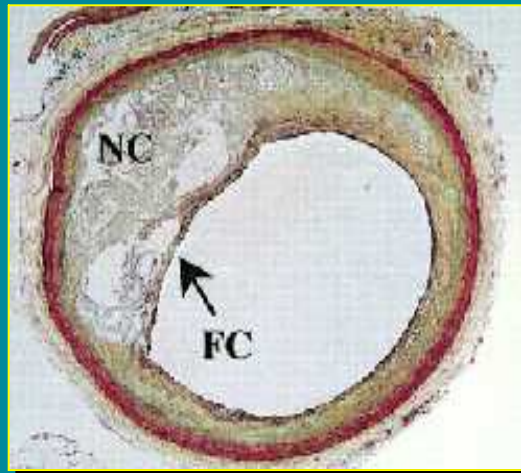
150 patients with AF and contra-indication for warfarin

Annual stroke rate in PLAATO™ patients [%] @12 mos:	1.8%
Expected annual risk of stroke (CHADS <sub>2</sub> -score):	8.2%
Tamponade:	5.3 %
Pericardial effusion:	3.0%
Embolisation:	0.6%
Death	1.2%

*Y. Bayard, DE, 3416*

# Coronary Interventions: Intracoronary Diagnostic Techniques

Vulnerable plaque detection using  
ultrasound radio frequency data analysis



Virmani R. Arterioscler Thromb Vasc Biol. 2000;5:1262-75

**ACS:** **3** ThinCapFibroAtheroma / non-culprit artery  
**Stable angina:** **1** ThinCapFibroAtheroma/ non-culprit artery

*GA Rodriguez-Granillo, NL, 2138*

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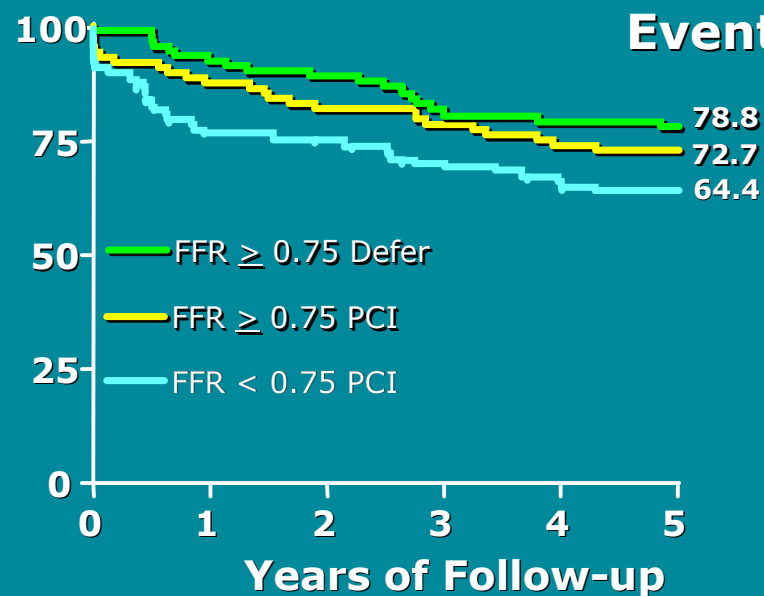


# Coronary Interventions: Intracoronary Diagnostic Techniques

*5-year follow-up of the DEFER trial*

**325 Patients scheduled for PCI without proof of ischemia**

- **FFR < 0.75: PCI**
- **FFR > 0.75: randomisation DEFER or PCI**



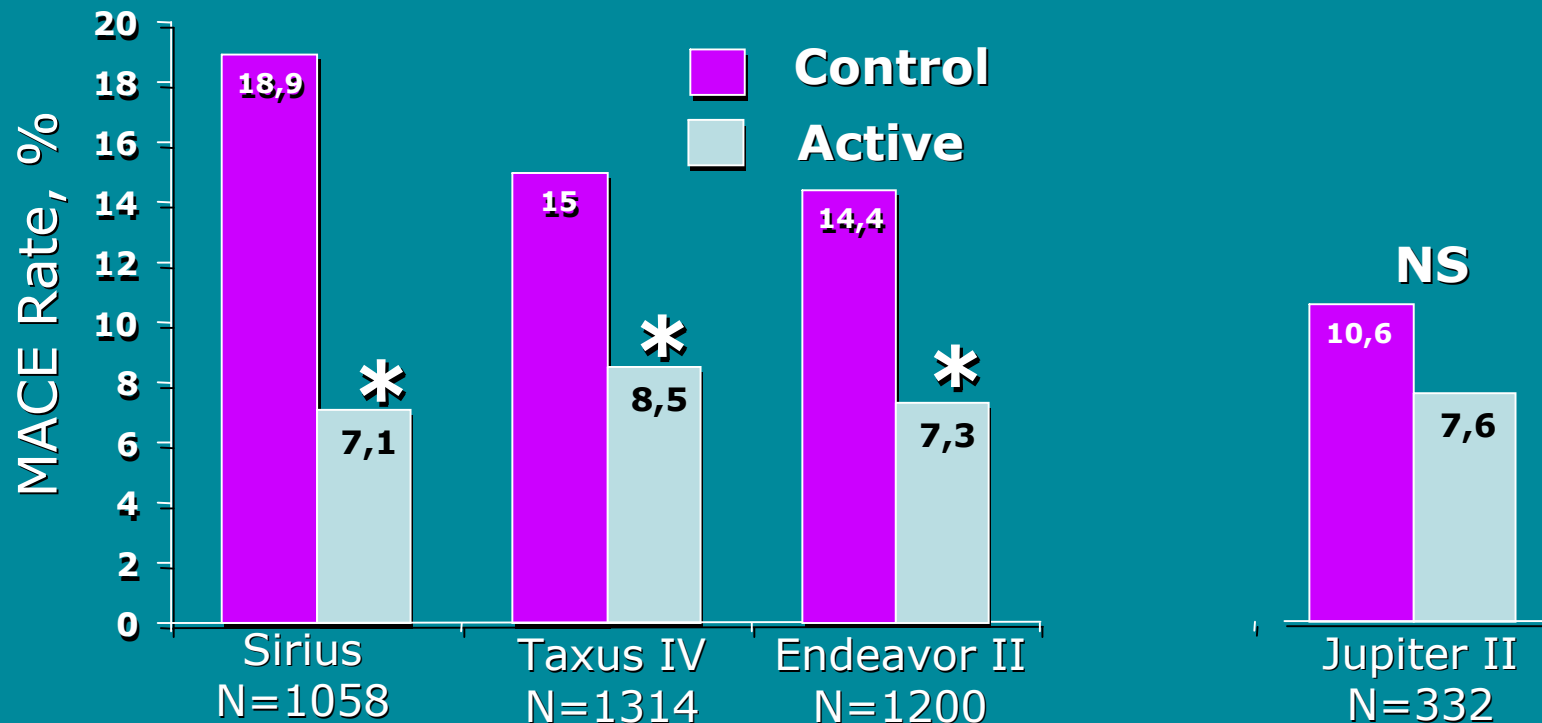
The risk of “non-significant” stenoses to cause death or AMI is < 1 % per year

*P. Van Schaardenburgh, NL, 3747*

# Coronary Interventions: DES newcomers

- Endeavor II Study:**
- Multicenter, randomized, double-blind
  - Zotarolimus eluting stents (n=598) versus Driver stents (n=599)
  - 9-months clinical end points
- W. Wijns, B, 759*

- Jupiter II Study:**
- Multicenter, randomized, double-blind
  - Tacrolimus eluting stents (n=166) versus Technic stents (n=166)
  - 6-months clinical (secondary) end points
- MC Morice, F, 2572*



# Coronary Interventions: DES in different lesions subset DES for left main stem stenosis

## Preliminary Results of the Left Main Taxus Registry

- 216 pts treated with a PES for a de-novo stenosis in the LM
- 4 experienced centers
- Associated 3-vessel disease in 27%
- Euro-score estimated mortality 6.4±10.6%
- Clinical follow-up in 98% at 6 months

	In-hospital	6-month FU
Death Total	0.9%	4.3% (5 cardiac / 4 non-cardiac)
Non-Q-wave MI	3.2%	3.4%
Q-wave MI	0.0%	0.0%
TLR Total	0.5%	3.9% (7 PCI / 1 CABG)
Non-target LR	0.0%	13.9%
Stroke	2.0%	0.9%

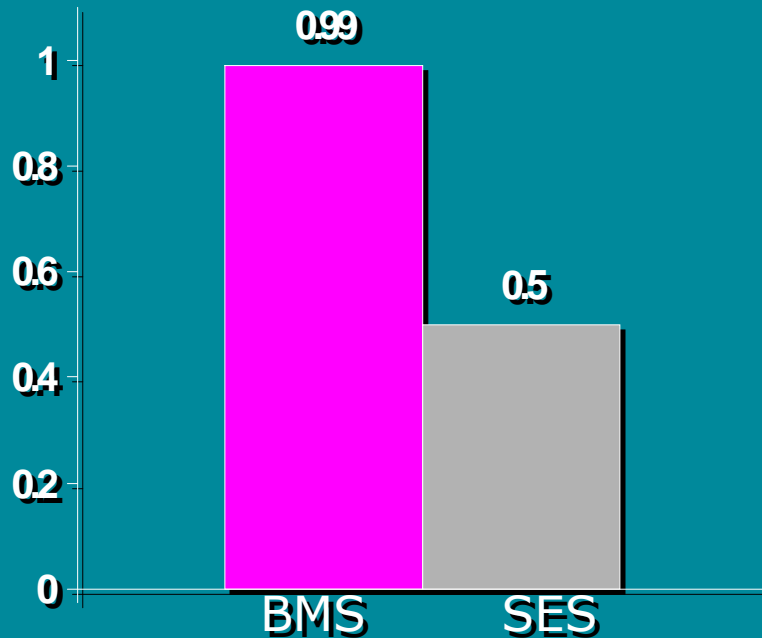
*T. Lefevre, F, 2614*

# Coronary Interventions: DES in different lesions subset

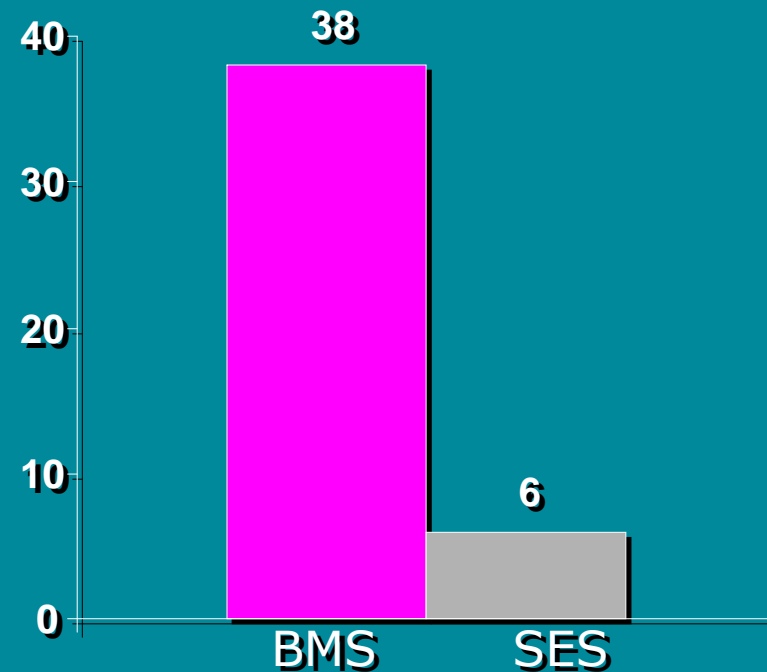
## Sirolimus eluting stents for saphenous vein grafts

- 96 stenoses in 82 grafts in 75 patients
- Angiographic follow up at 6 months

**In-stent late loss, mm**



**Binary restenosis rate, %**



*P. Vermeersch, B, 2000*

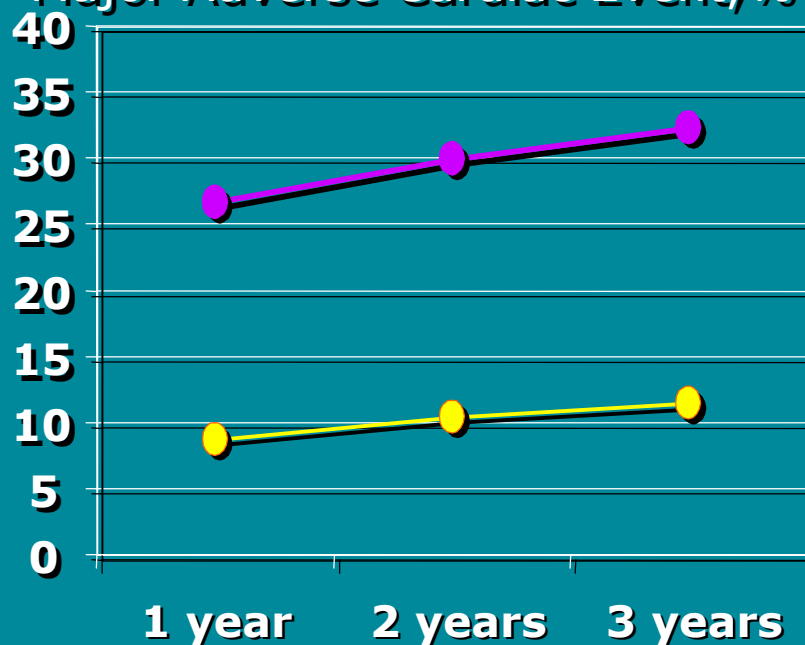
# Coronary Interventions: Long-term outcome after DES

E-SIRIUS 3 Years

**BMS**  
n=177

**SES**  
n=175

Major Adverse Cardiac Event, %

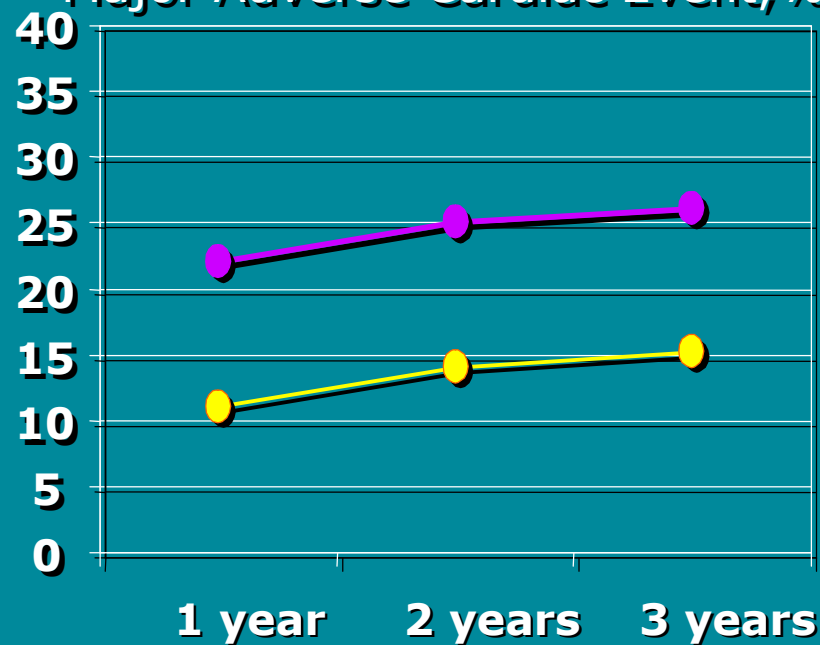


TAXUS II 3 Years

**BMS**  
n=266

**PES**  
n=270

Major Adverse Cardiac Event, %



Sustained clinical benefit of DES: no catch-up phenomenon !

*V. Legrand, B, 2002*

*A. Colombo, I, 2898*

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# Coronary Interventions: DES in different lesions/patients subset DES in Multivessel Disease

1-Year Follow-up	ARTS II	ARTS I <i>Randomization</i>	
	CYPHER <sup>®</sup> N= 607	CABG N= 605	CROWN <sup>™</sup> & CrossFlex LC <sup>™</sup> N=600
Death	1.0%	2.7%	2.7%
CVA	0.8%	1.8%	1.8%
MI	1.2%	3.5%	5.0%
(re) CABG	2.0%	0.7%	4.7%
(re) PCI	5.4%	3.0%	12.3%
<b>Any MACCE</b>	<b>10.4%</b>	<b>11.6%</b>	<b>26.5%</b>

→ Syntax study

*C. Macaya, ES, 2620*

# Coronary Interventions: late subacute thrombosis after DES

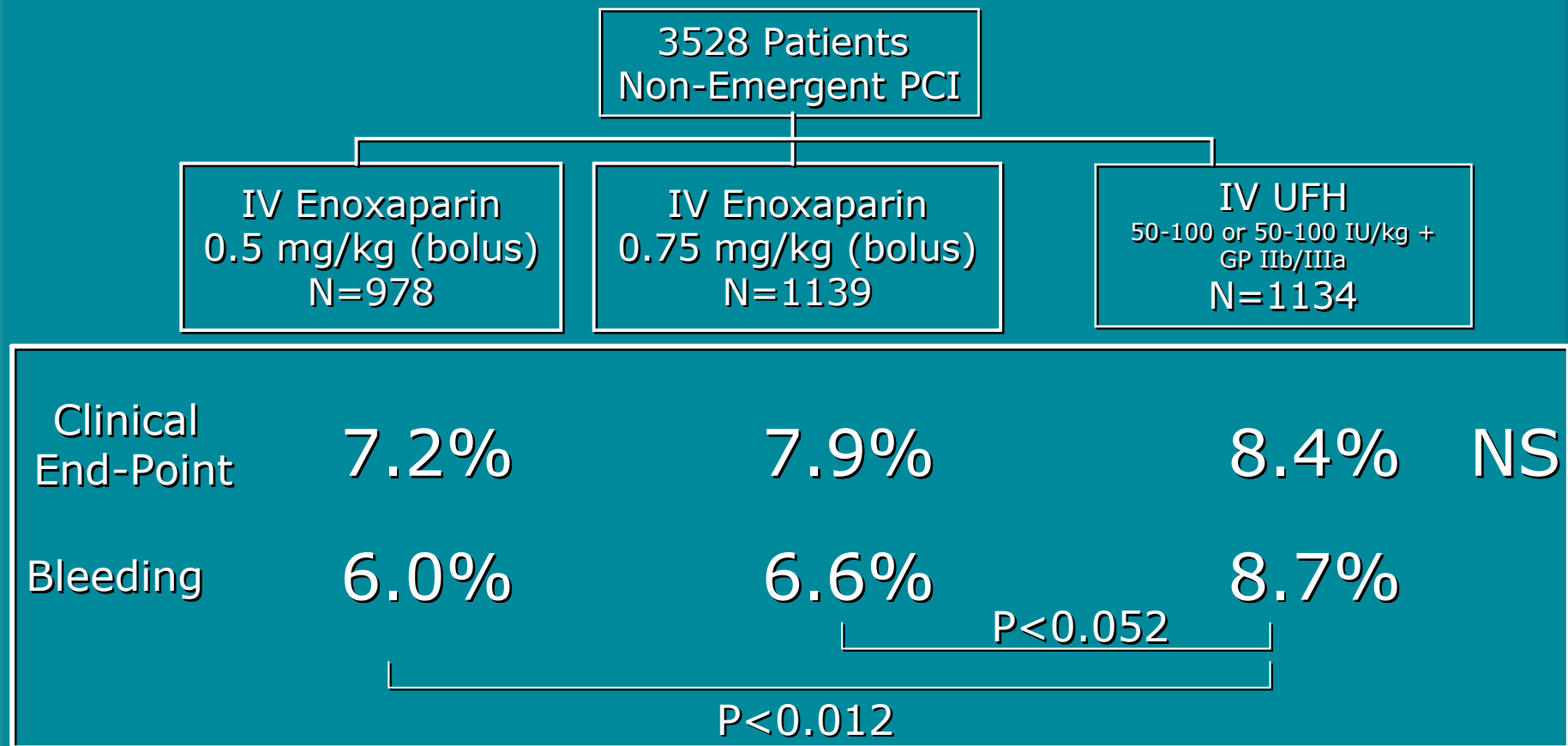
Author/ #	Number of pts	Late Subacute Thrombosis	Follow-up
Lablanche/3748	1727	1.2% (proven) 2.32% (likely)	1 year
Iakovou/3749	2229 SES 1167 PES	1.3%	9 months
Ong/3753	2006	0.35	1 year
Rodriguez/2619 ERACI II and III (MVD)	225 BMS	0	3 years
	225 DES	3%	

- Heterogeneous figures
- Different definitions and in different means of "capturing" these events
- Diabetes, length, bifurcation, dissection = risk factors

**Remains a matter of concern...**

# Coronary Interventions: anticoagulation regimen

Safety and efficacy of Enoxaparin in PCI (STEEPLE study)



*G. Montalescot, F, 2574*

# Coronary Interventions: European guidelines

European Heart Journal (2005) 26, 804–847



## Guidelines for Percutaneous Coronary Interventions

The Task Force for Percutaneous Coronary Interventions  
of the European Society of Cardiology

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**CONSENSUS BETWEEN  
44 INTERNATIONAL  
EXPERTS**

<http://www.escardio.org/knowledge/guidelines/>

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