



# ANTARCTIC

## *The ANTARCTIC investigators*

**Assessment of a Normal versus Tailored dose of prasugrel after stenting in patients Aged  $\geq 75$  years to  
Reduce the Composite of bleeding, stent Thrombosis and Ischemic Complications**

ESC CONGRESS  
ROME 2016



**ANTARCTIC** a study by the ACTION Group



# Declaration of Interest

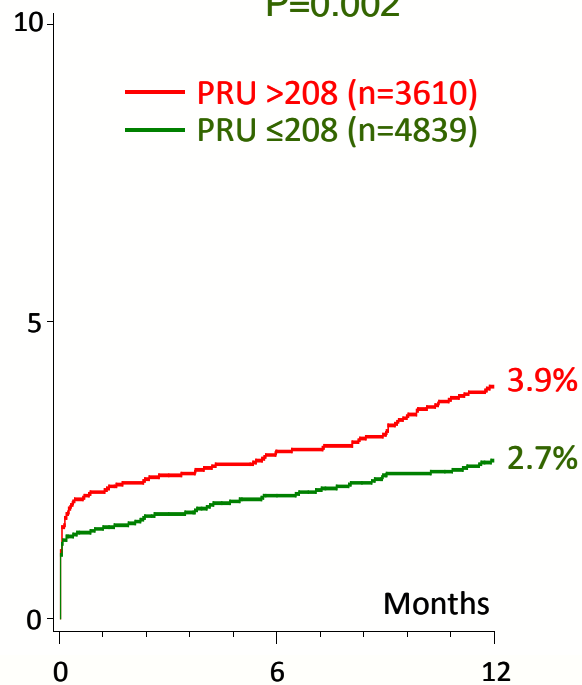
Dr. G. Montalescot reports research Grants to the Institution or Consulting/Lecture Fees from ADIR, Amgen, AstraZeneca, Bayer, Berlin Chimie AG, Boehringer Ingelheim, Bristol-Myers Squibb, Beth Israel Deaconess Medical, Brigham Women's Hospital, Cardiovascular Research Foundation, Celladon, CME Resources, Daiichi-Sankyo, Eli-Lilly, Europa, Elsevier, Fédération Française de Cardiologie, Fondazione Anna Maria Sechi per il Cuore, Gilead, ICAN, Janssen, Lead-Up, Menarini, Medtronic, MSD, Pfizer, Sanofi-Aventis, The Medicines Company, TIMI Study Group, WebMD.



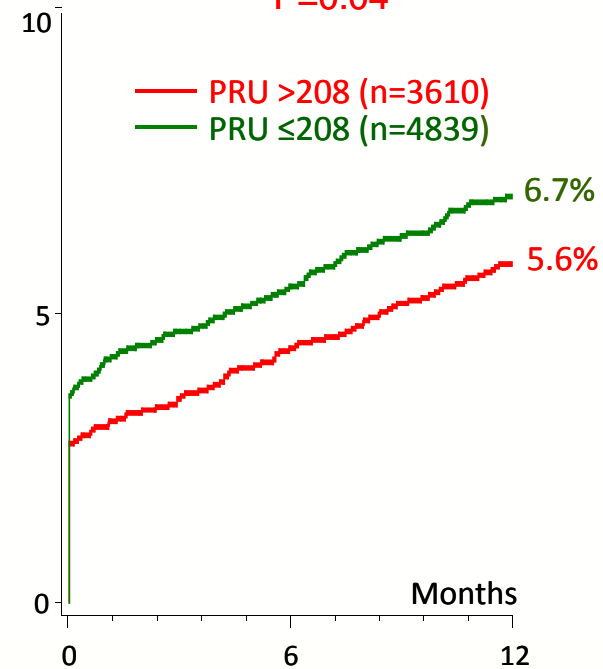


# Platelet reactivity → outcomes

**Myocardial infarction**  
HR [95%CI] = 1.47 [1.15, 1.87]  
P=0.002



**Major bleeding**  
HR [95%CI] = 0.83 [0.69, 0.99]  
P=0.04



Stone GW et al. Lancet 2013; 382(9892): 614-23

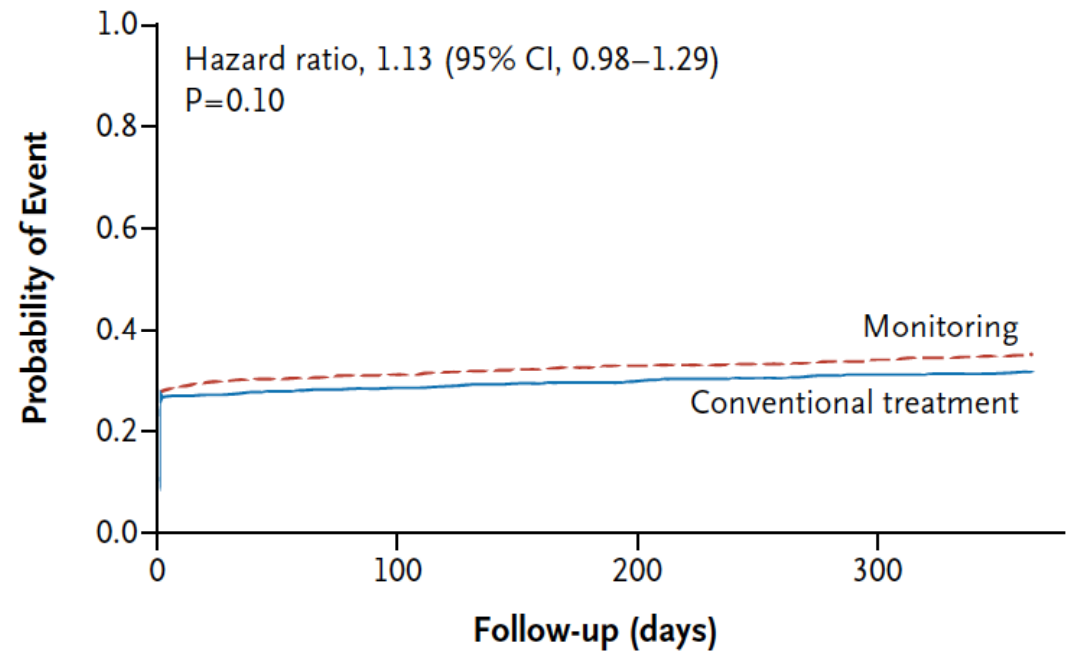
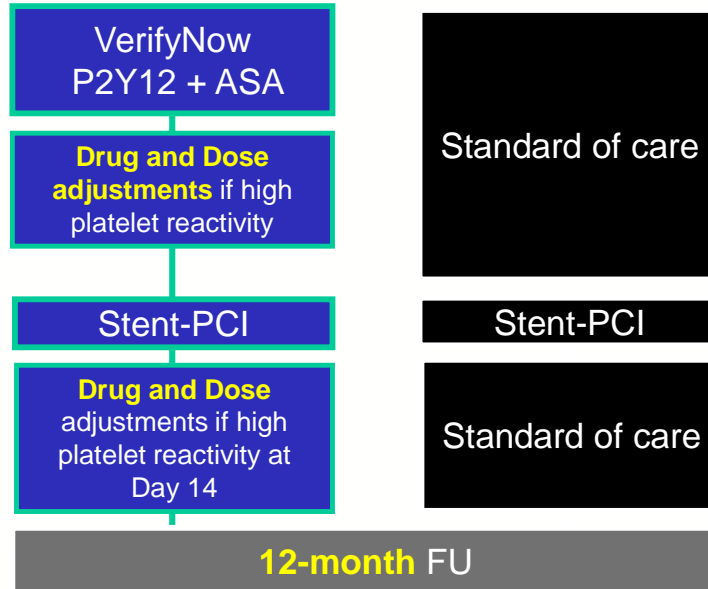




# ARCTIC

Coronary angiogram

**Rd**



Collet JP et al. *N Engl J Med.* 2012 Nov 29;367:2100-9.





## Criticism after ARCTIC → **ANTARCTIC**

- Low risk, stable patients → **Elderly, ACS patients**
- Elective PCI → **Urgent PCI**
- Predominant use of clopidogrel → **Predominant use of prasugrel**
- Old PRU thresholds → **New PRU thresholds**

*Montalescot G et al. N Engl J Med 2013;368:871-2*

*Montalescot G et al. Circulation 2014;129:2136-43*

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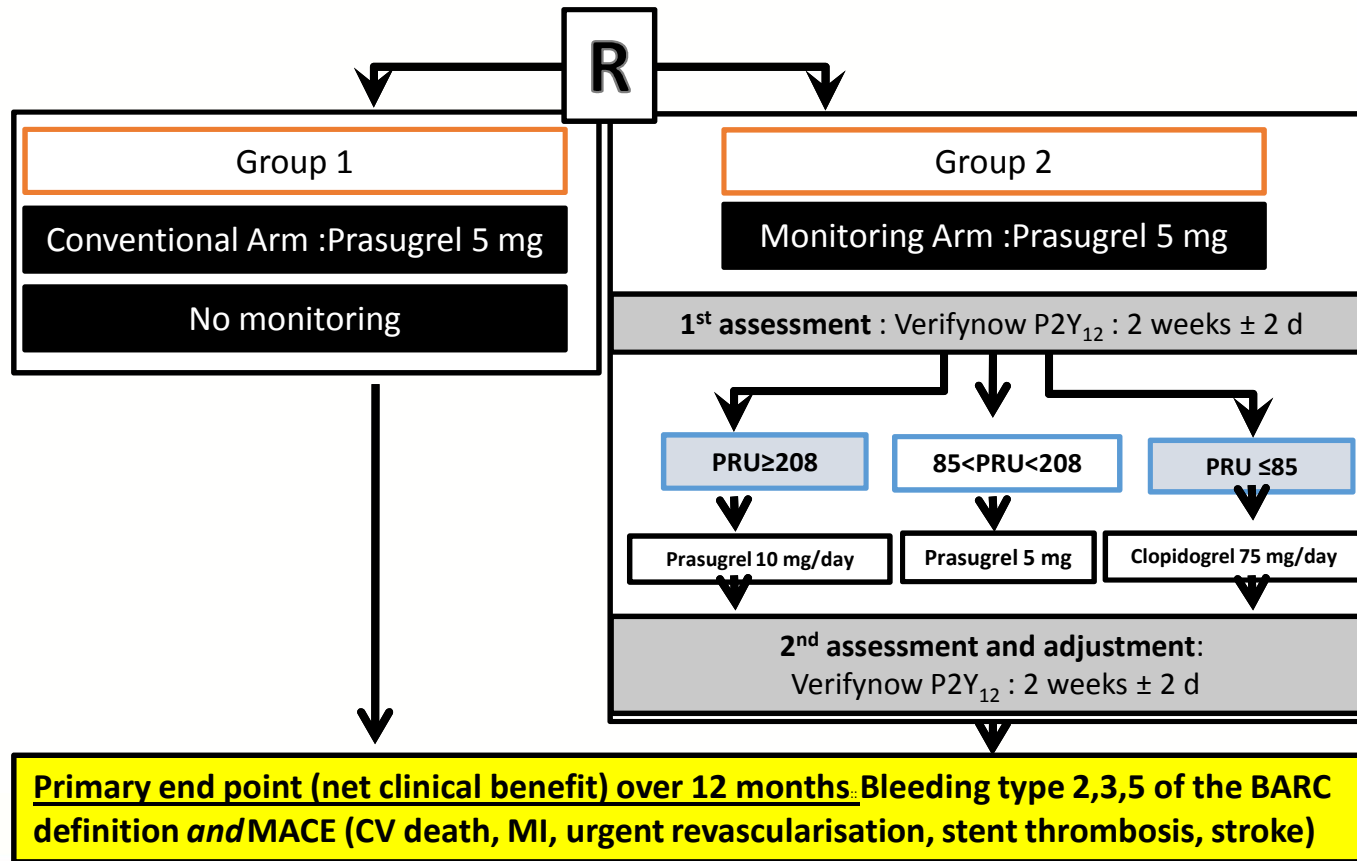


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# ANTARCTIC design





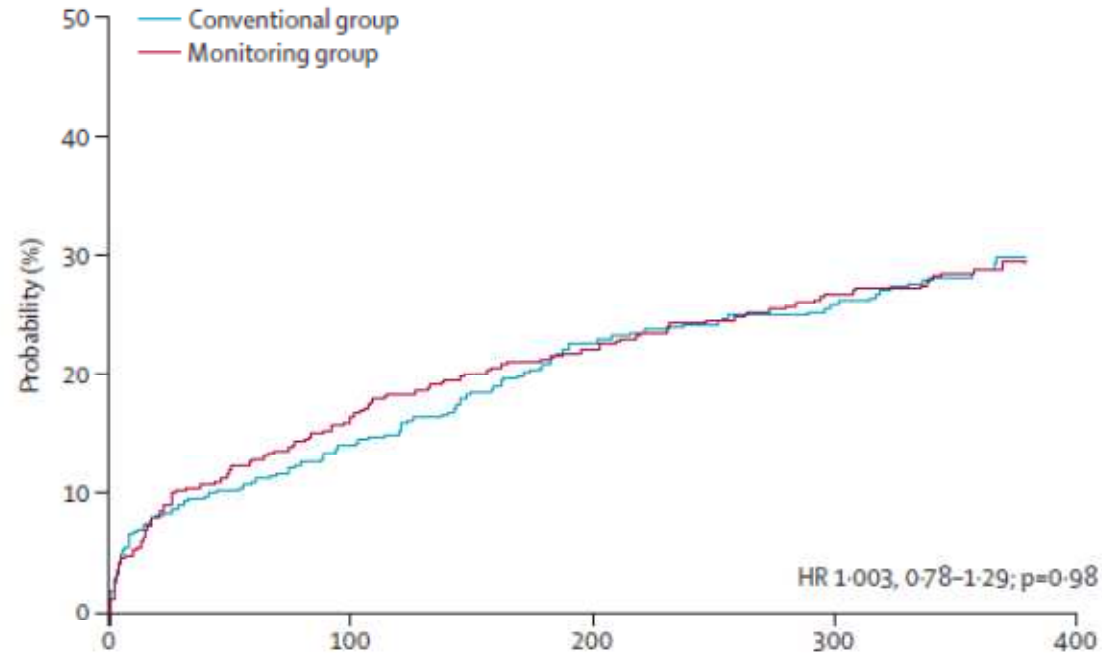
## Platelet reactivity and antiplatelet therapy

	Control (n=442)	Monitoring (n=435)	P-value
Within platelet inhibition target (85<PRU< 208) at day 14 – %	N.D.	41.8%	<0.0001
Within platelet inhibition target (85<PRU< 208) after the last test performed (at day 14 or 28) - % patients	N.D.	66.0%	
Final P2Y <sub>12</sub> antagonist treatment			
prasugrel 5 mg – %	92.8%	55.2%	
prasugrel 10 mg – %	1.1%	3.7%	
clopidogrel 75 mg – %	4.1%	39.3%	
No P2Y <sub>12</sub> antagonist – %	2.0%	1.8%	





# Primary Endpoint



CV death, MI, stroke,  
stent thrombosis, urgent  
revascularization *or*  
BARC 2, 3 or 5

	0	100	200	300	400
Conventional group	442	364	320	302	..
Monitoring group	435	346	315	292	..

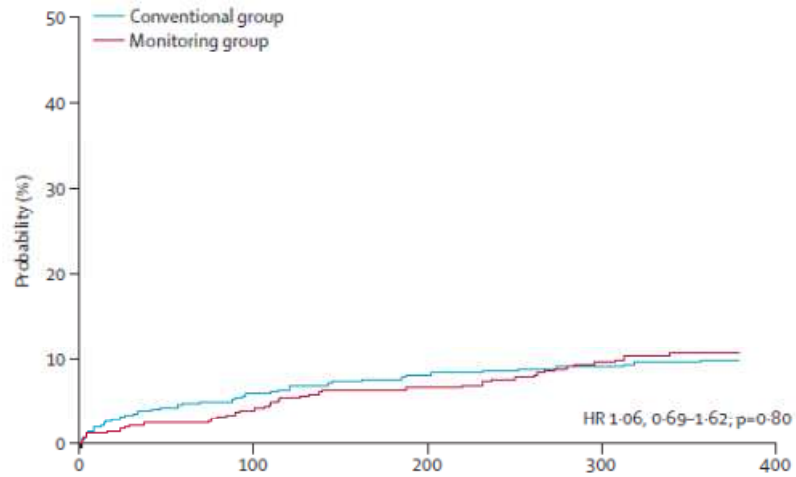






## Ischemic Endpoint

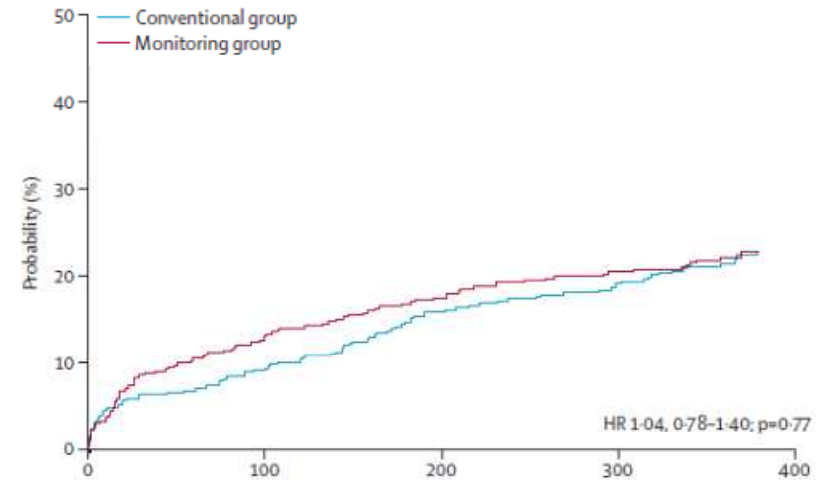
CV death, MI, stroke, stent thrombosis, urgent revascularization



Number at risk		0	100	200	300	400
Conventional group	442	395	375	364	..	..
Monitoring group	435	394	376	358	..	..

## Bleeding Endpoint

BARC 2,3,5



Number at risk		0	100	200	300	400
Conventional group	442	378	340	322	..	..
Monitoring group	435	358	329	311	..	..





# Conclusions

- Largest randomized PCI study in the elderly
- Platelet function monitoring to adjust antiplatelet therapy in elderly patients stented for an ACS does not improve their clinical outcomes
- ANTARCTIC after ARCTIC, confirms failure to improve the prognosis of patients by monitoring platelet function to individualize antiplatelet therapy. Failure is not related to the risk level of the population *or* type of P2Y<sub>12</sub> antagonist

