LO MEJOR DEL CONGRESO ESC 2013 DE AMSTERDAM

Lo mejor sobre Cardiopatía Isquémica

Antonio Fernández-Ortiz
Hospital Clínico San Carlos. Madrid

SOCIEDAD ESPAÑOLA DE CARDIOLOGÍA

Casa del Corazón
Madrid, 5 de Septiembre de 2013


TOTAL ATTENDANCE
MUNICH 2012
27 407
AMSTERDAM 2013
29 990
Don't Miss
• 08:30
Clinical Trial Update Hot Line III: Risks and outcome
Amsterdam - Central Village


Study Outcomes
Study Outcomes
Study Outcomes

European Heart Journal Advance Access published August 30, 2013

European Heart Journal
doi:10.1093/eurheartj/eht296

ESC GUIDELINES

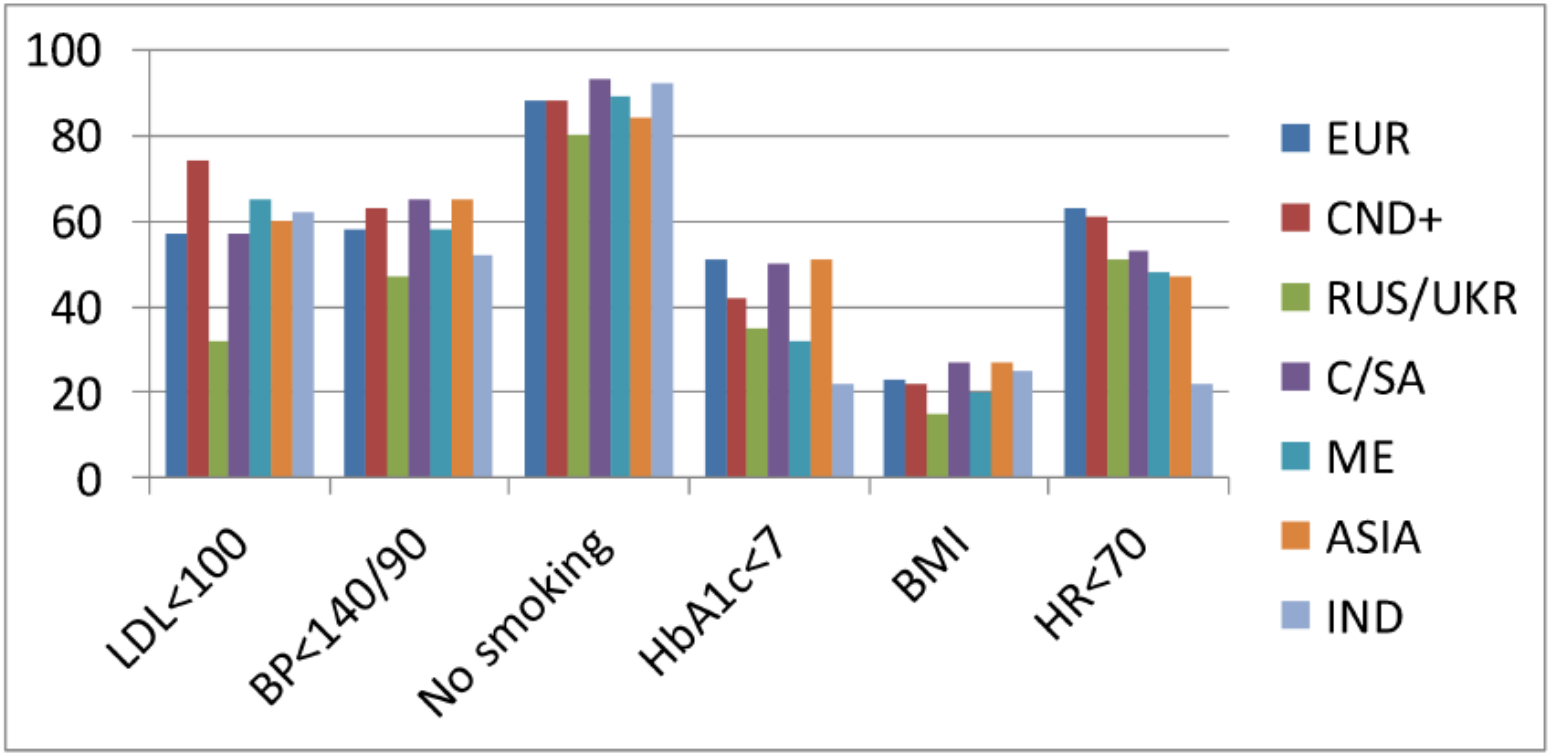
2013 ESC guidelines on the management of stable coronary artery disease

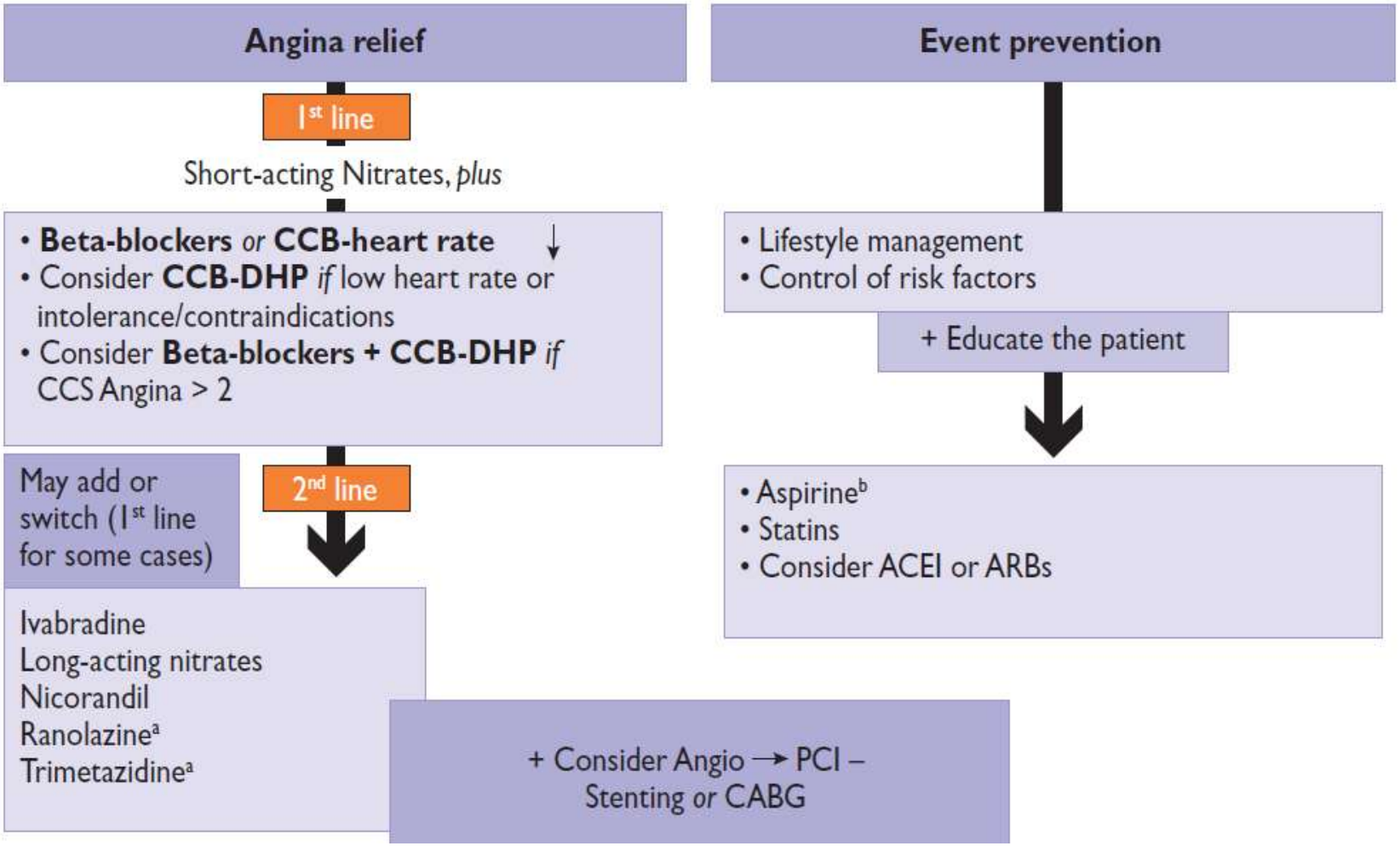
The Task Force on the management of stable coronary artery disease of the European Society of Cardiology

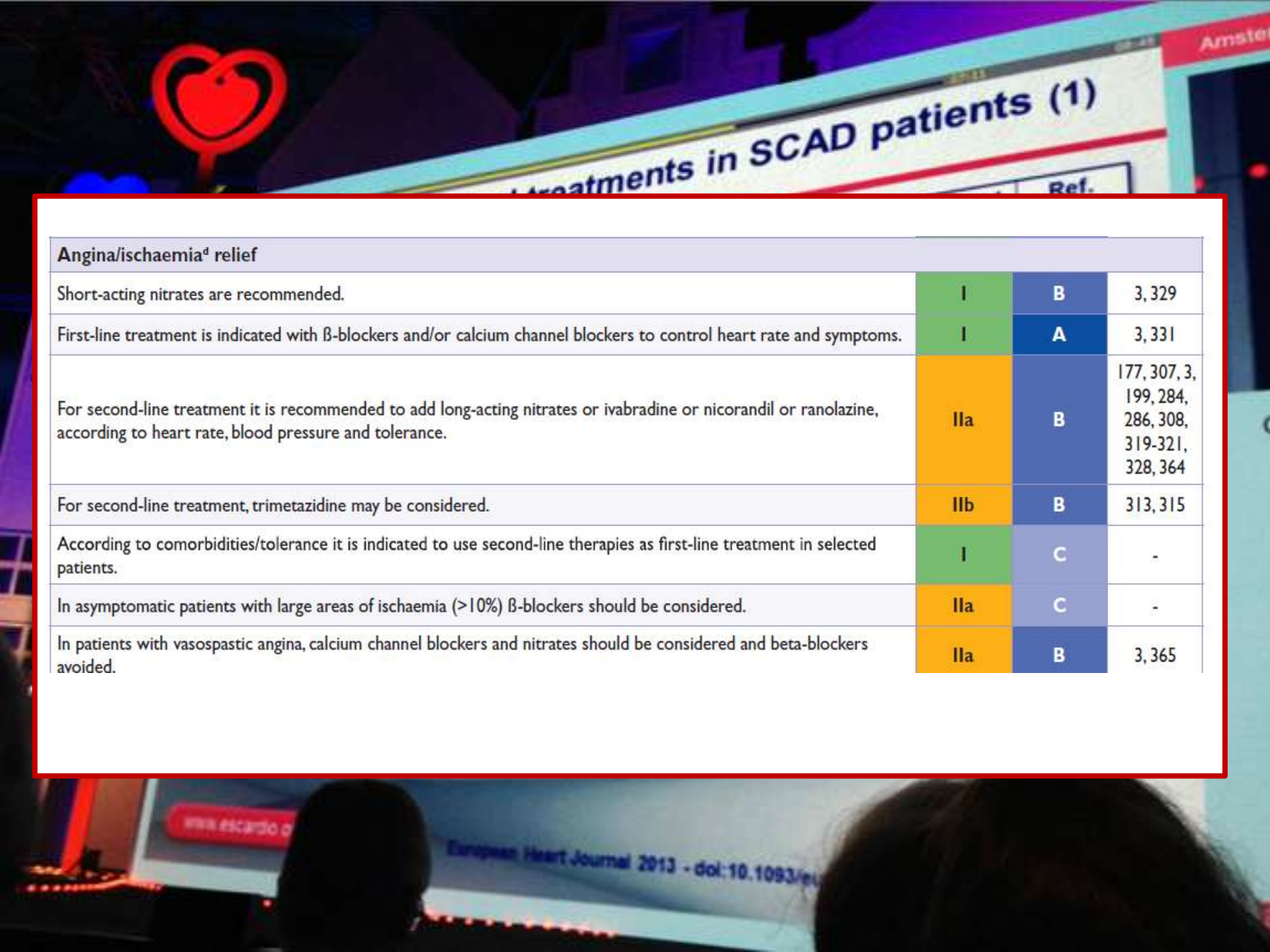
Task Force Members: Gilles Montalescot* (Chairperson) (France), Udo Sechtem* (Chairperson) (Germany), Stephan Achenbach (Germany), Felicita Andreotti (Italy), Chris Arden (UK), Andrzej Budaj (Poland), Raffaele Bugiardini (Italy), Filippo Crea (Italy), Thomas Cuisset (France), Carlo Di Mario (UK), J. Rafael Ferreira (Portugal), Bernard J. Gersh (USA), Anselm K. Gitt (Germany), Jean-Sebastien Hulot (France), Nikolaus Marx (Germany), Lionel H. Opie (South Africa), Matthias Pfisterer (Switzerland), Eva Prescott (Denmark), Frank Ruschitzka (Switzerland), Manel Sabaté (Spain), Roxy Senior (UK), David Paul Taggart (UK), Ernst E. van der Wall (Netherlands), Christiaan J.M. Vrints (Belgium).

CLARIFY

Proportion of patients reaching target values




Angina relief
1st line
Short-acting Nitrates, plus
• Beta-blockers or CCB-heart rate ↓
• Consider CCB-DHP if low heart rate or intolerance/contraindications
• Consider Beta-blockers + CCB-DHP if CCS Angina > 2
May add or switch (1st line for some cases)
2nd line
Ivabradine
Long-acting nitrates
Nicorandil
Ranolazine[a]
Trimetazidine[a]
+ Consider Angio → PCI – Stenting or CABG
Event prevention
• Lifestyle management
• Control of risk factors
+ Educate the patient
• Aspirine[b]
• Statins
• Consider ACEI or ARBs



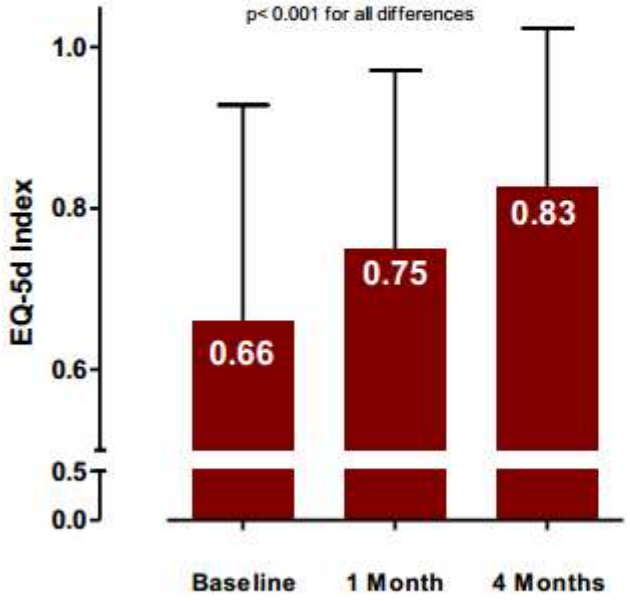
Angina/ischaemia[d] relief			
Short-acting nitrates are recommended.	I	B	3, 329
First-line treatment is indicated with ß-blockers and/or calcium channel blockers to control heart rate and symptoms.	I	A	3, 331
For second-line treatment it is recommended to add long-acting nitrates or ivabradine or nicorandil or ranolazine, according to heart rate, blood pressure and tolerance.	IIa	B	177, 307, 3, 199, 284, 286, 308, 319-321, 328, 364
For second-line treatment, trimetazidine may be considered.	IIb	B	313, 315
According to comorbidities/tolerance it is indicated to use second-line therapies as first-line treatment in selected patients.	I	C	-
In asymptomatic patients with large areas of ischaemia (>10%) ß-blockers should be considered.	IIa	C	-
In patients with vasospastic angina, calcium channel blockers and nitrates should be considered and beta-blockers avoided.	IIa	B	3, 365

Second line treatments (1)

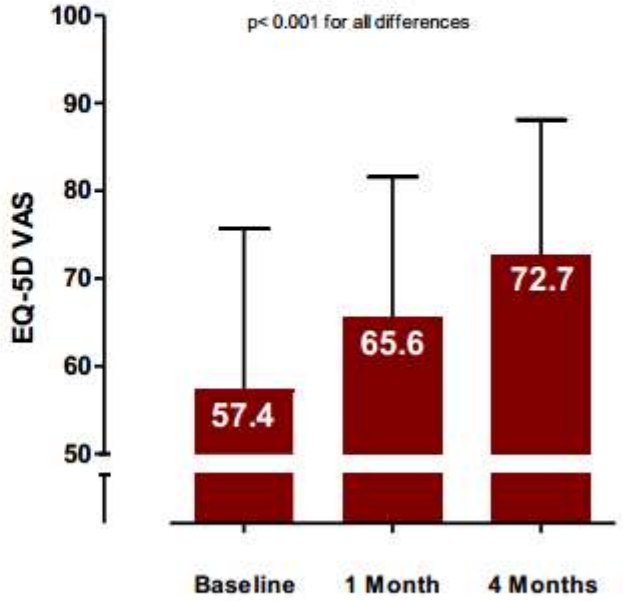
ADDITIONS

Quality of life

EQ-5D index



EQ-5D VAS



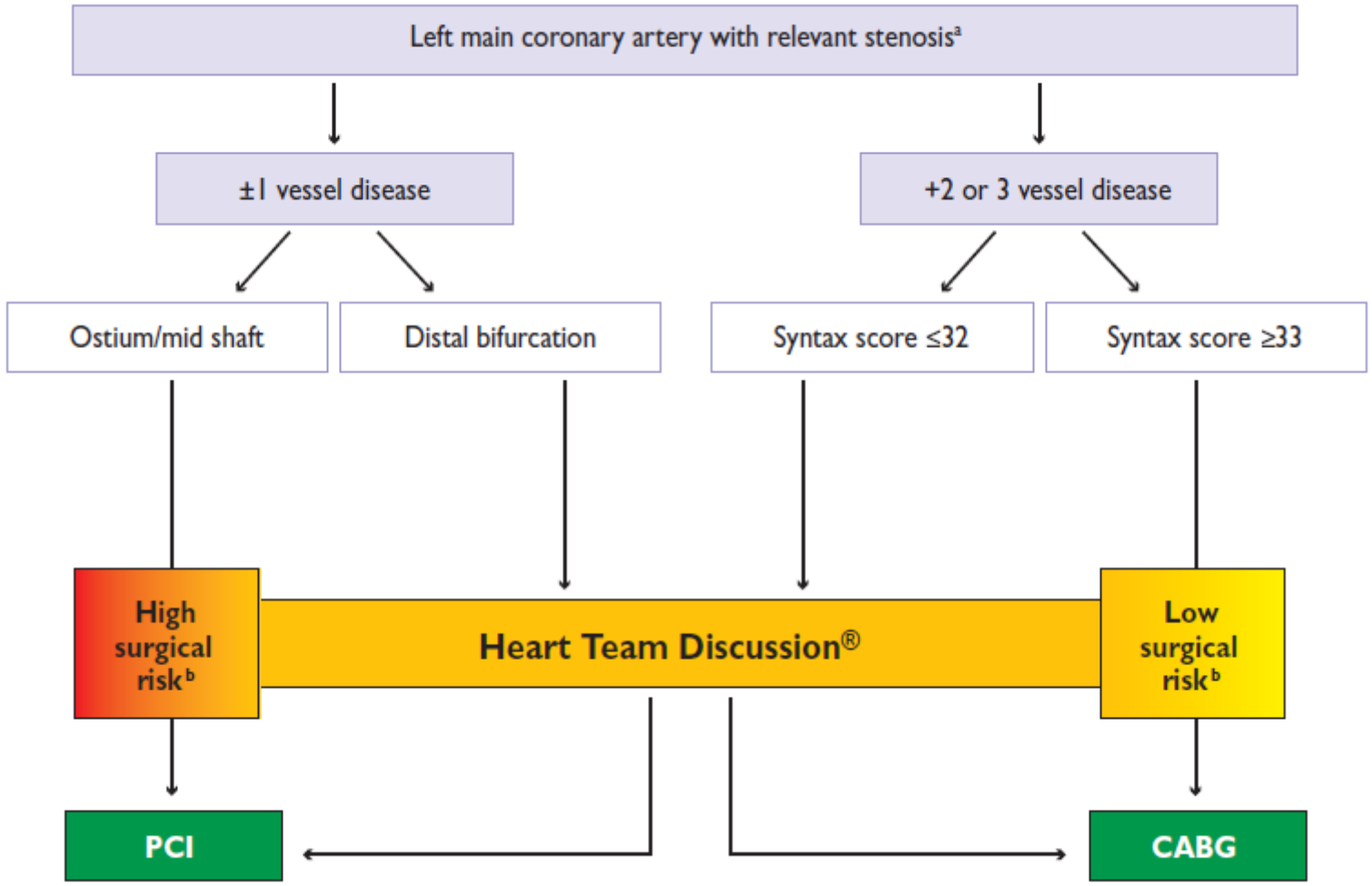
Survey of swedish population : Angina pectoris EQ-5D index: 0.70

UKH


ESC CONGR
ESC Congress 365

Table 29 Treatment in patients with microvascular angina

Recommendations	Class [a]	Level [b]	Ref. [c]
It is recommended that all patients receive secondary prevention medications including aspirin and statins.	I	B	371
ß-blockers are recommended as a first line treatment.	I	B	372
Calcium antagonists are recommended if ß-blockers do not achieve sufficient symptomatic benefit or are not tolerated.	I	B	367
ACE inhibitors or nicorandil may be considered in patients with refractory symptoms.	IIb	B	368
Xanthine derivatives or non-pharmacological treatments such as neurostimulatory techniques may be considered in patients with symptoms refractory to the above listed drugs.	IIb	B	373–375


Left main coronary artery with relevant stenosis[a]
±1 vessel disease
+2 or 3 vessel disease
Ostium/mid shaft
Distal bifurcation
Syntax score ≤32
Syntax score ≥33
High surgical risk[b]
Heart Team Discussion®
Low surgical risk[b]
PCI
CABG


Structural Heart
ECG

UCR

Uppsala Clinical Research Center

SWEDE HEART

Thrombus Aspiration in ST-Elevation myocardial infarction in Scandinavia (*TASTE* trial)

Main results at 30 days

Ole Frobert, MD, PhD - on behalf of the TASTE investigators

Department of Cardiology
Örebro University Hospital
Sweden

Amsterdam 11:25

Ole FROBERT
(Orebro - SE)

ESC CONGRES

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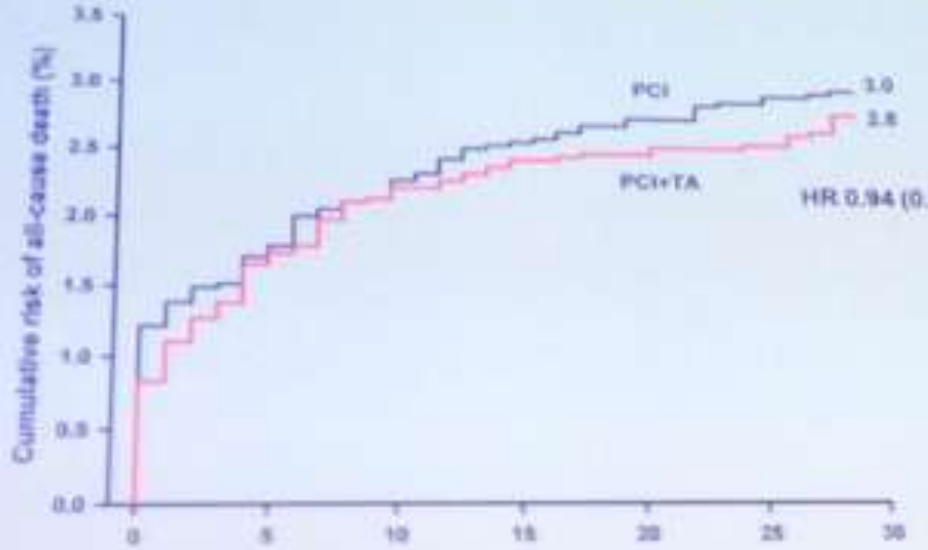
All-cause mortality at 30 days



No. at Risk

PCI+TA	3821	3568	3540	3532	3528	3524	3519
PCI	3823	3567	3545	3530	3523	3517	3513

TASTE

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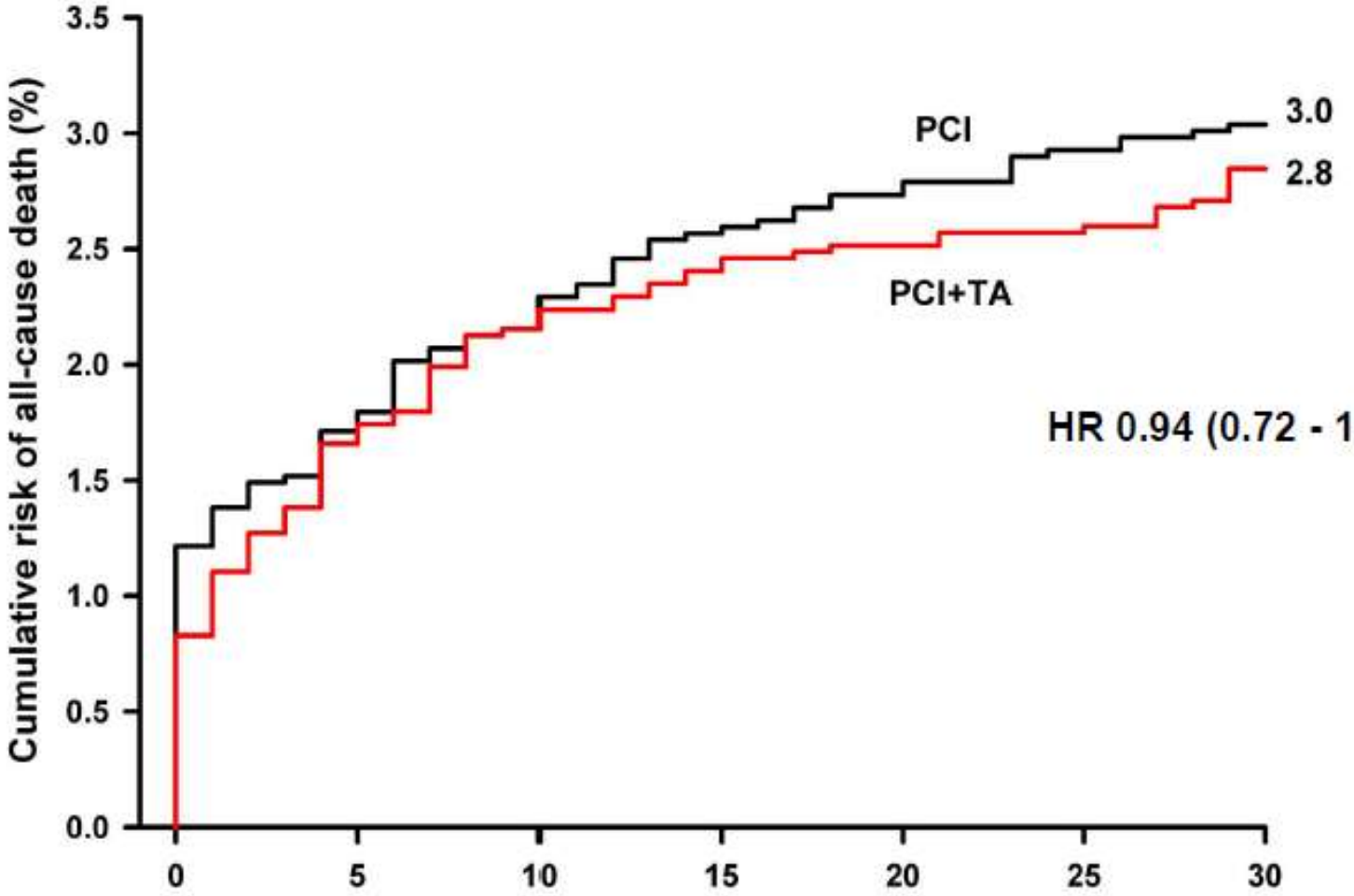
All-cause mortality at 30 days



No. at Risk

PCI+TA	3621	3568	3540	3532	3526	3524	3519
PCI	3623	3567	3545	3530	3523	3517	3513

TASTE

TAO : Treatment of Acute Coronary Syndromes with Otamixaban

Philippe Gabriel Steg* on behalf of the TAO investigators

*DHU-FIRE, Hôpital Bichat, Assistance Publique – Hôpitaux de Paris, Université Paris – Diderot, INSERM U-698, Paris, France

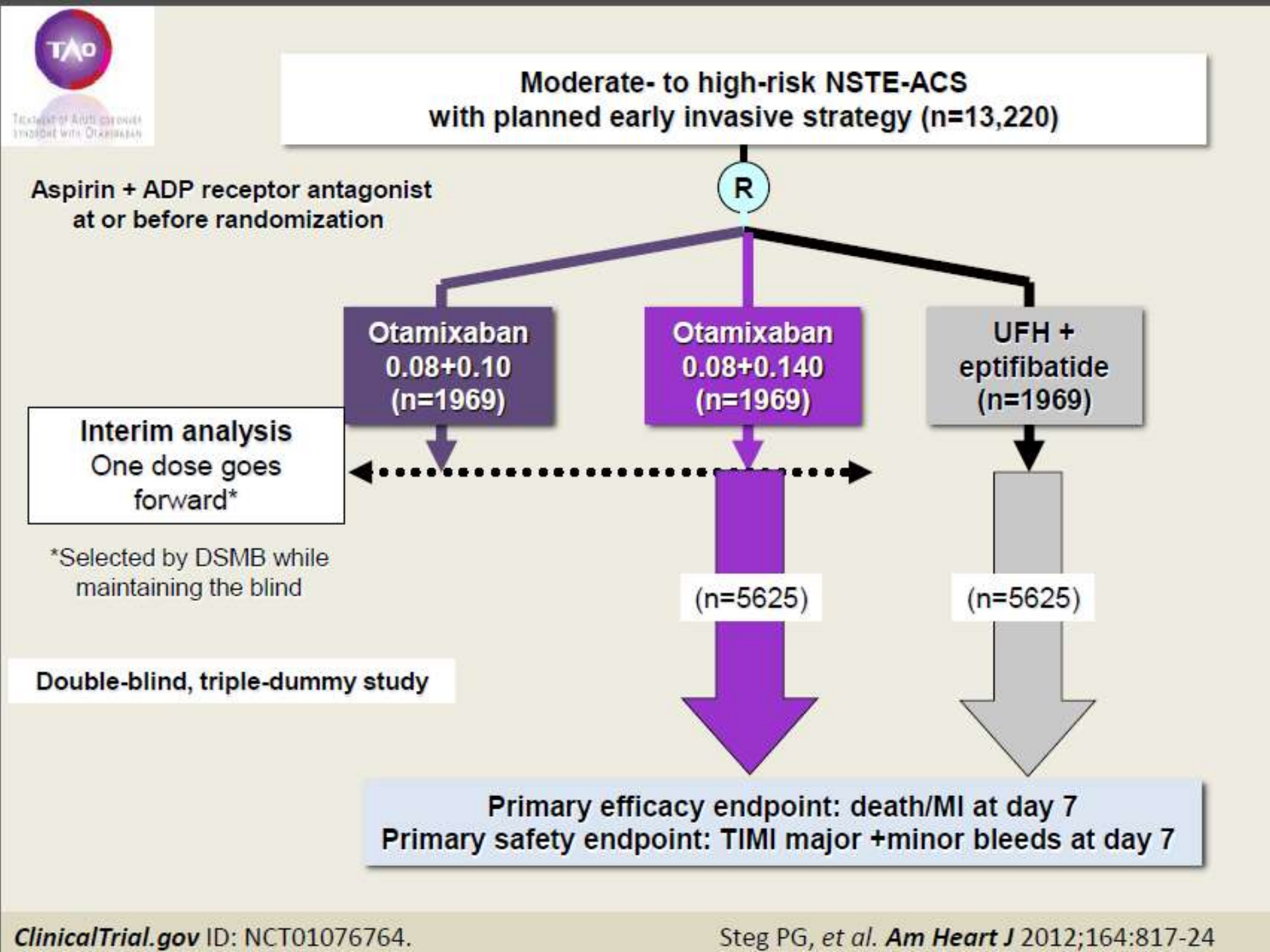
*Disclosures: **Research grants (to INSERM U698)**: NYU school of Medicine, Sanofi, Servier. **Speaking or consulting**: Amarin, AstraZeneca, Bayer, Boehringer Ingelheim, Bristol-Myers Squibb, Daiichi-Sankyo-Lilly, GlaxoSmithKline, Medtronic, Novartis, Otsuka, Pfizer, Sanofi, Servier, The Medicines Company, Vivus. **Stockholding**: Aterovax.

The TAO trial was supported by SANOFI

clinicaltrials.gov : NCT01076764

Philippe Gabriel STEG
(Paris Cedex 18 - FR)

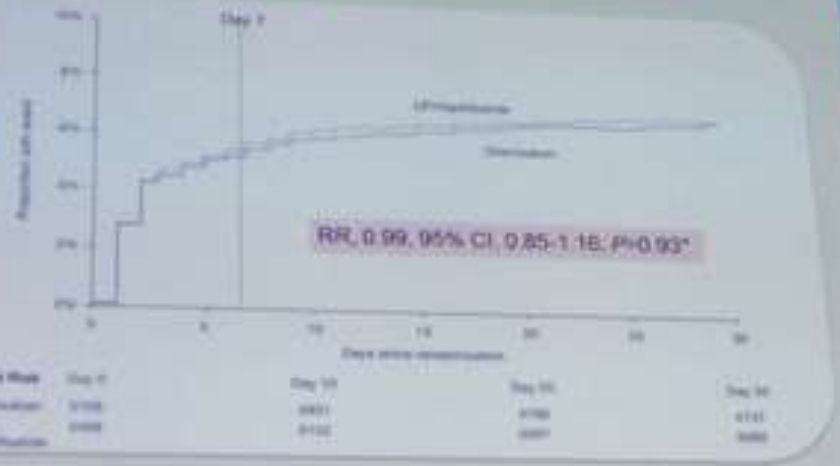
ESC CONGRESS 2013



ClinicalTrial.gov ID: NCT01076764.

Steg PG, *et al.* ***Am Heart J*** 2012;164:817-24

Primary efficacy outcome for otamixaban 0.140 mg/kg per hour vs control



Philippe Gabriel STEG
(Paris Cedex 18 - FR)

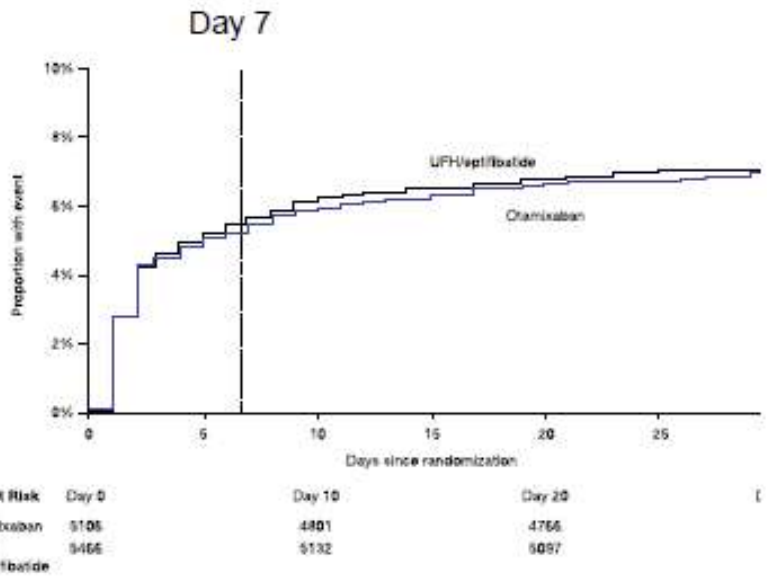
ESC CONGRESS 2013

*Fisher's exact test

Primary efficacy and safety outcomes for otamixaban 0.140 mg/kg/hr vs control

Efficacy

Death or MI

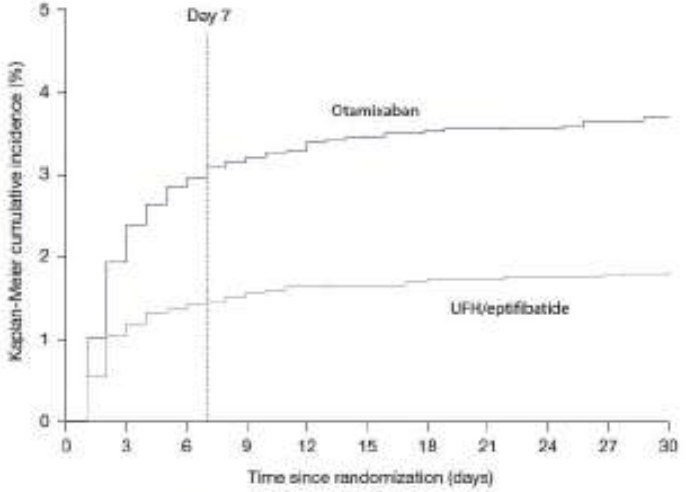


No. at Risk	Day 0	Day 10	Day 20
Otamixaban	5105	4801	4756
UFH + eptifibatide	5466	5132	5097

RR, 0.99, 95% CI, 0.85-1.16; *P*=0.93*

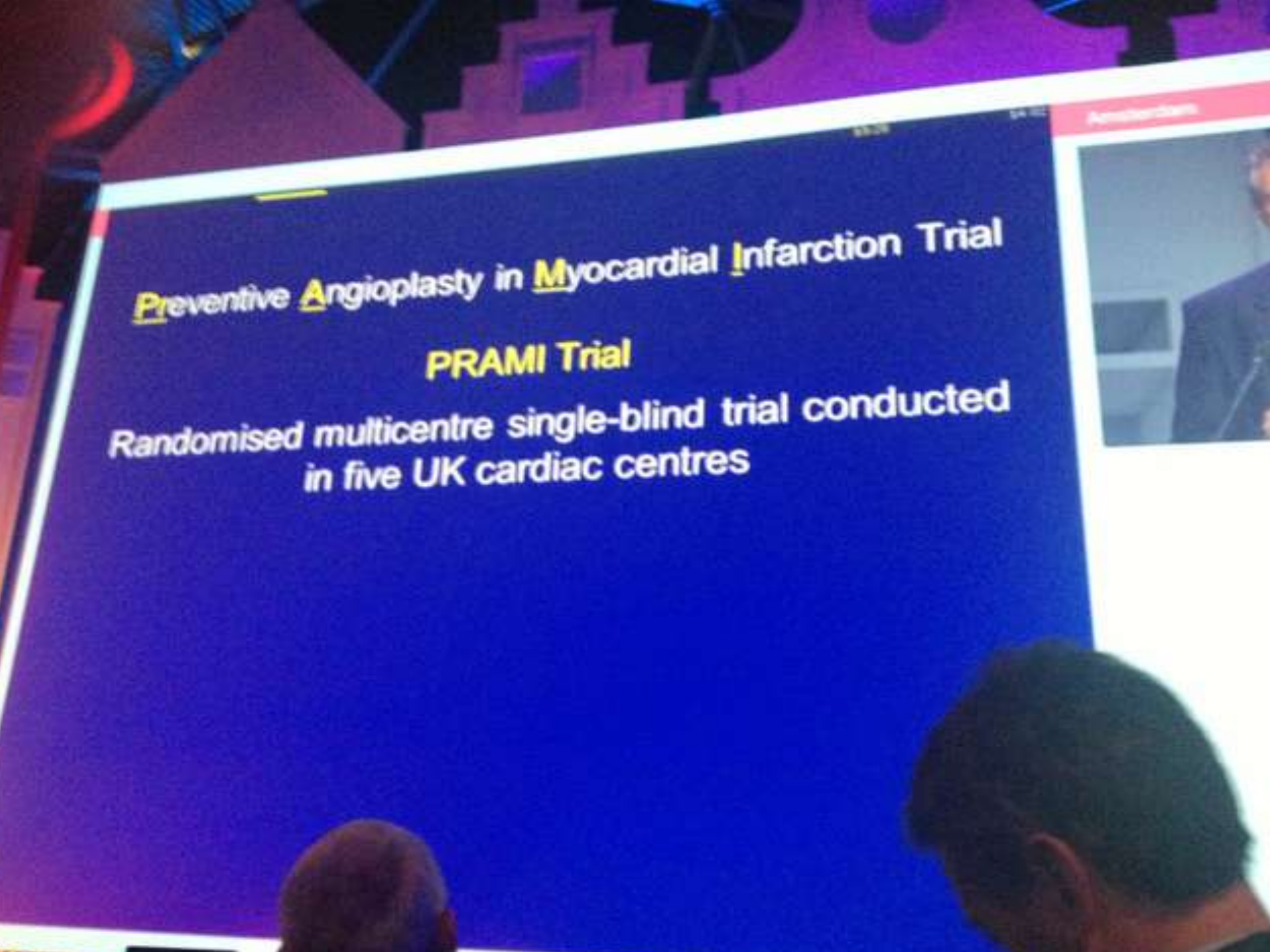
Safety

TIMI major or minor bleed



No. at Risk	Day 0	Day 7	Day 15	Day 30
Otamixaban	2657	2552	2533	2431
UFH + eptifibatide	5466	5293	5257	5086

RR, 2.13, 95% CI, 1.63-2.78


Preventive Angioplasty in Myocardial Infarction Trial
PRAMI Trial
Randomised multicentre single-blind trial conducted in five UK cardiac centres

Preventive Angioplasty in Myocardial Infarction Trial

PRAMI Trial

Randomised multicentre single-blind trial conducted in five UK cardiac centres

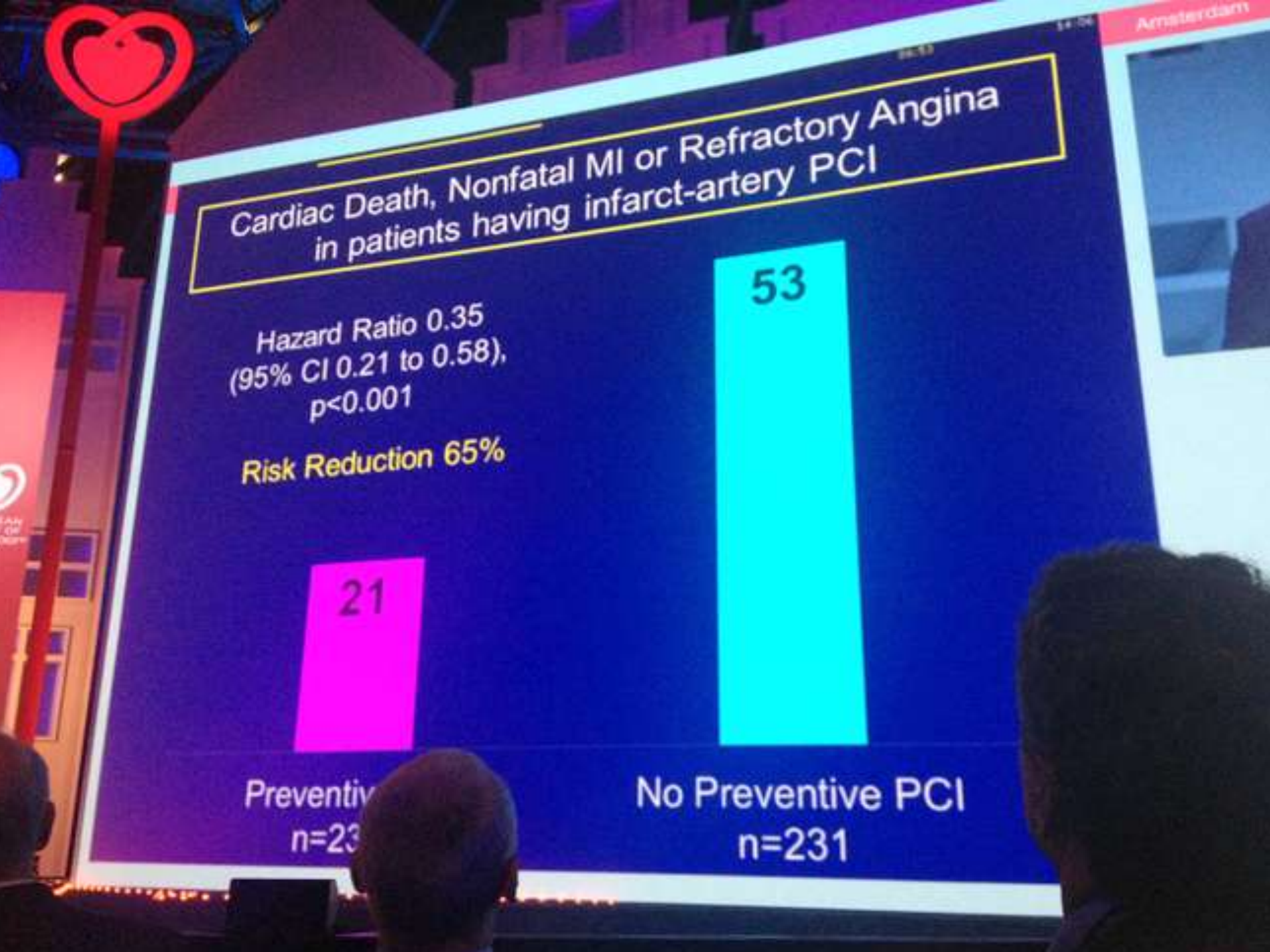
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

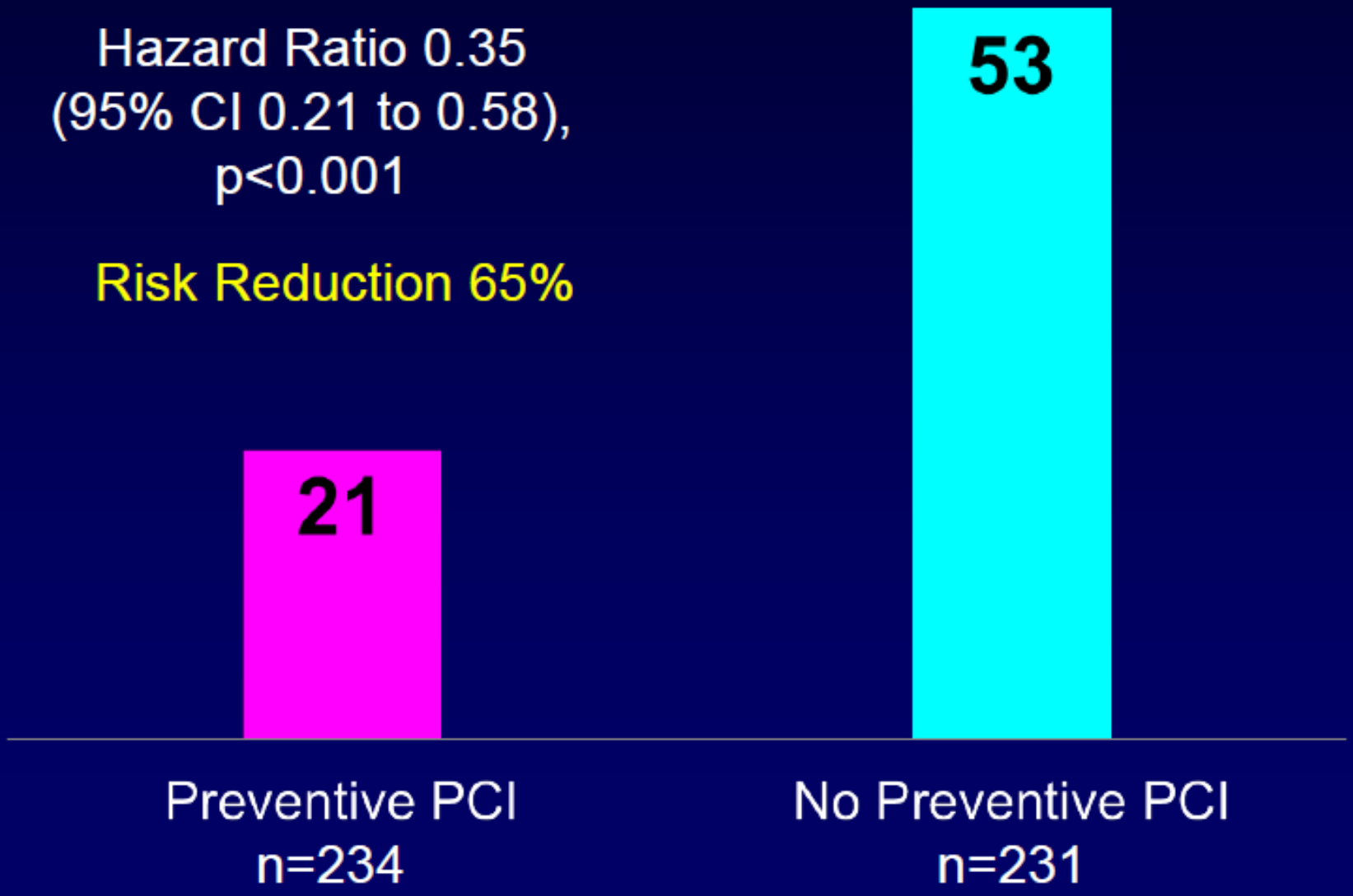
Randomized Trial of Preventive Angioplasty in Myocardial Infarction

David S. Wald, M.D., Joan K. Morris, Ph.D., Nicholas J. Wald, F.R.S., Alexander J. Chase, M.B., B.S., Ph.D., Richard J. Edwards, M.D., Liam O. Hughes, M.D., Colin Berry, M.B.,Ch.B.,Ph.D., and Keith G. Oldroyd, M.D., for the PRAMI Investigators*

N Engl J Med September 1st 2013;369. DOI: 10.1056/NEJMoa1305520


Cardiac Death, Nonfatal MI or Refractory Angina in patients having infarct-artery PCI
Hazard Ratio 0.35
(95% CI 0.21 to 0.58),
p<0.001
Risk Reduction 65%
21
53
Preventiv
n=23
No Preventive PCI
n=231

Cardiac Death, Nonfatal MI or Refractory Angina in patients having infarct-artery PCI

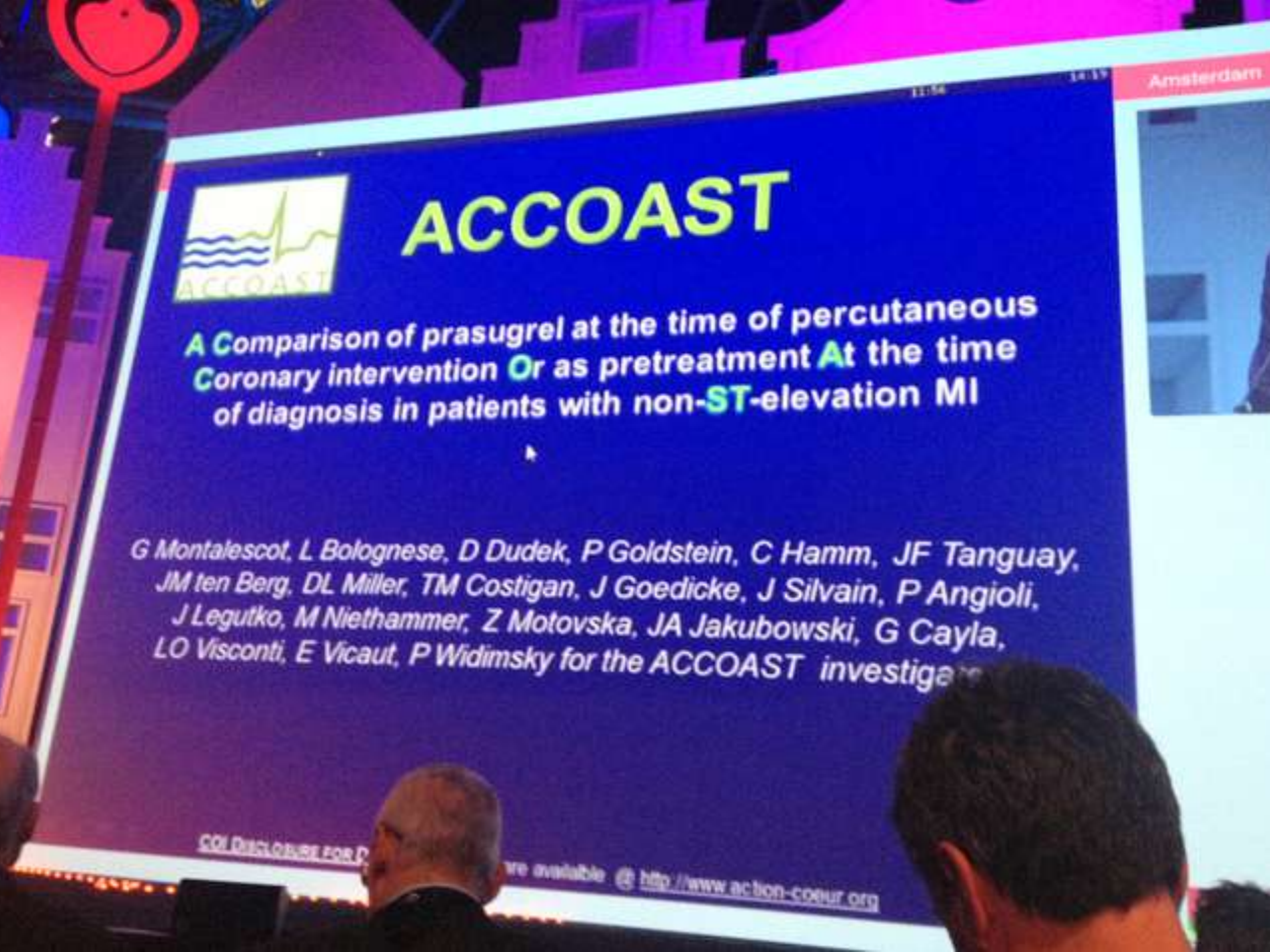


Conclusion

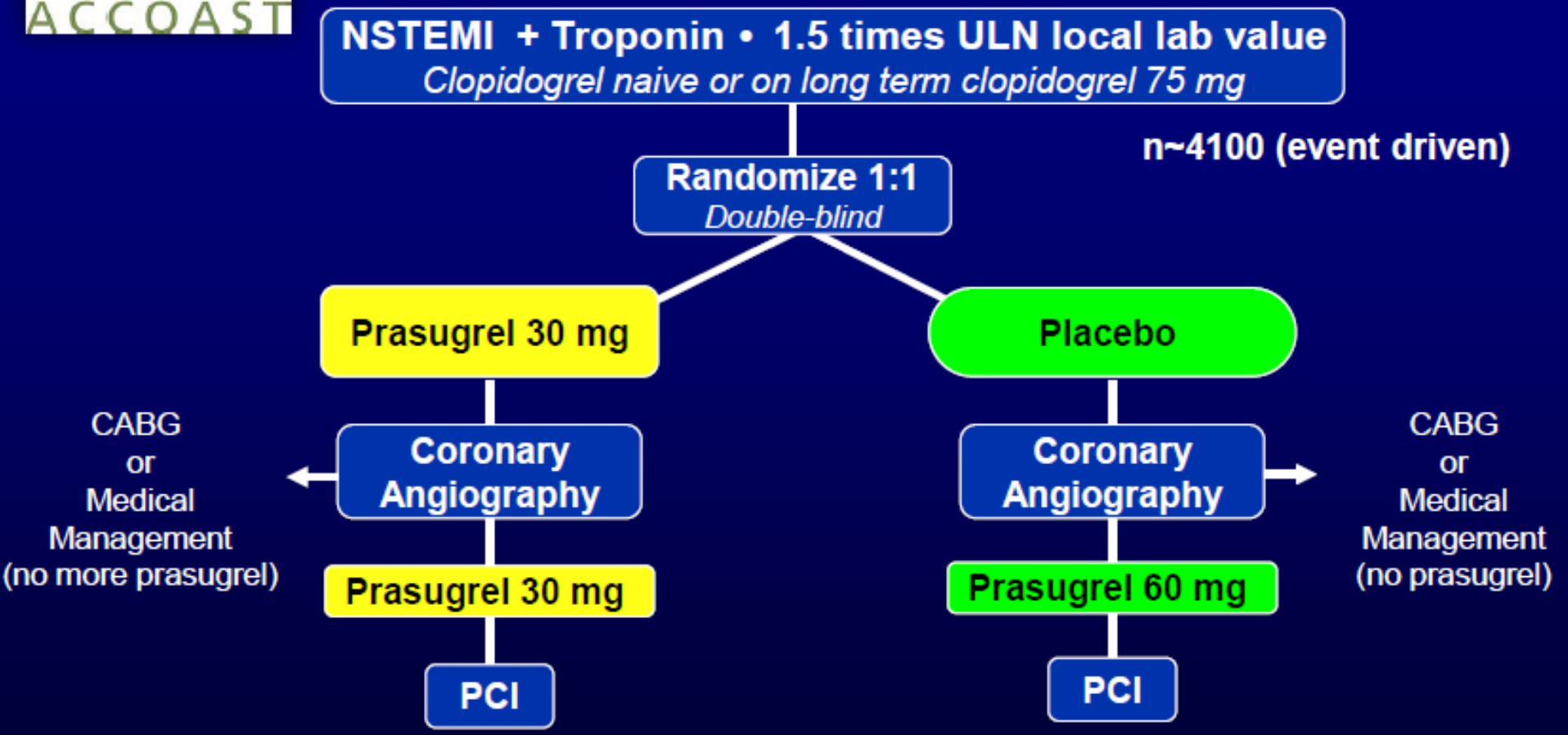
Substantial benefit of Preventive PCI in patients with ST elevation myocardial infarction

65% ↓ cardiac death / nonfatal MI / refractory angina

64% ↓ cardiac death / nonfatal MI


ACCOAST
A Comparison of prasugrel at the time of percutaneous Coronary intervention Or as pretreatment At the time of diagnosis in patients with non-ST-elevation MI
G Montalescot, L Bolognese, D Dudek, P Goldstein, C Hamm, JF Tanguay, JM ten Berg, DL Miller, TM Costigan, J Goedicke, J Silvain, P Angioli, J Legutko, M Niethammer, Z Motovska, JA Jakubowski, G Cayla, LO Visconti, E Vicaut, P Widimsky for the ACCOAST investiga
Amsterdam

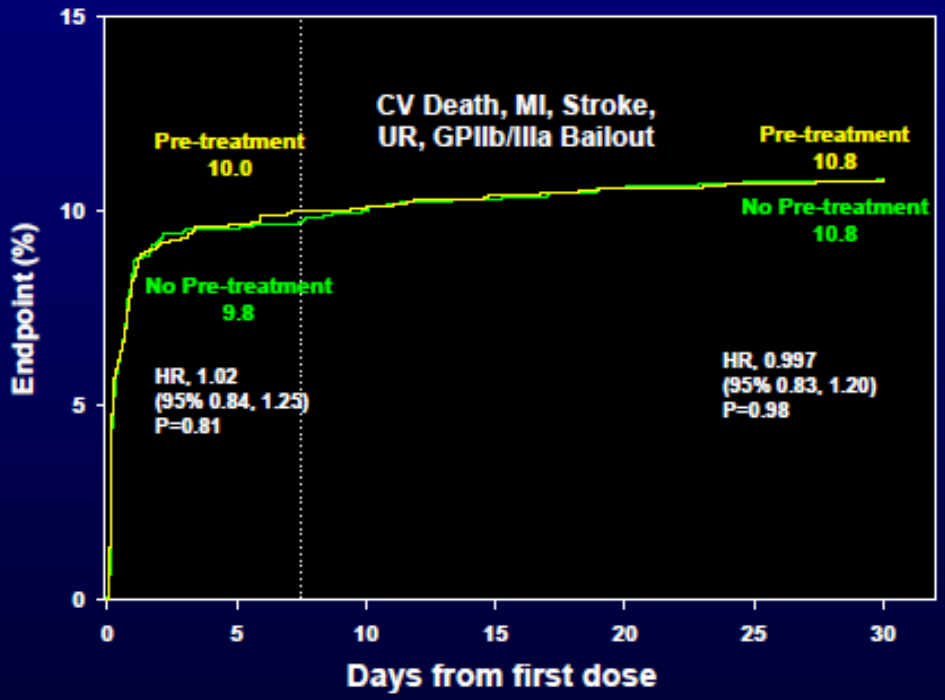
ACCOAST design

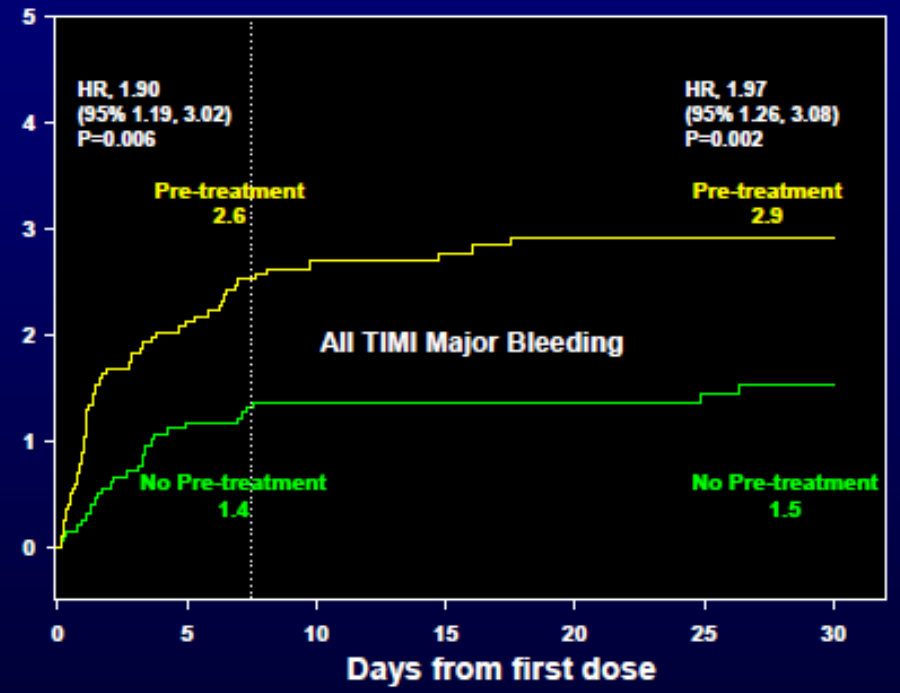


1° Endpoint: CV Death, MI, Stroke, Urg Revasc, GP IIb/IIIa inh. Bailout, at 7 days

Montalescot G et al. *Am Heart J* 2011;161:650-656

Primary Efficacy and Safety Endpoints (All Patients)





What is LINC?

A multicenter, randomized, controlled trial designed to evaluate the efficacy and safety of:

LUCAS concept for resuscitation of OHCA including defibrillation during ongoing compressions

vs.

manual CPR according to 2005 guidel

INC study

UPPSALA UNIVERSITET

LUCAS 2™

Mechanical Compression-Decompression

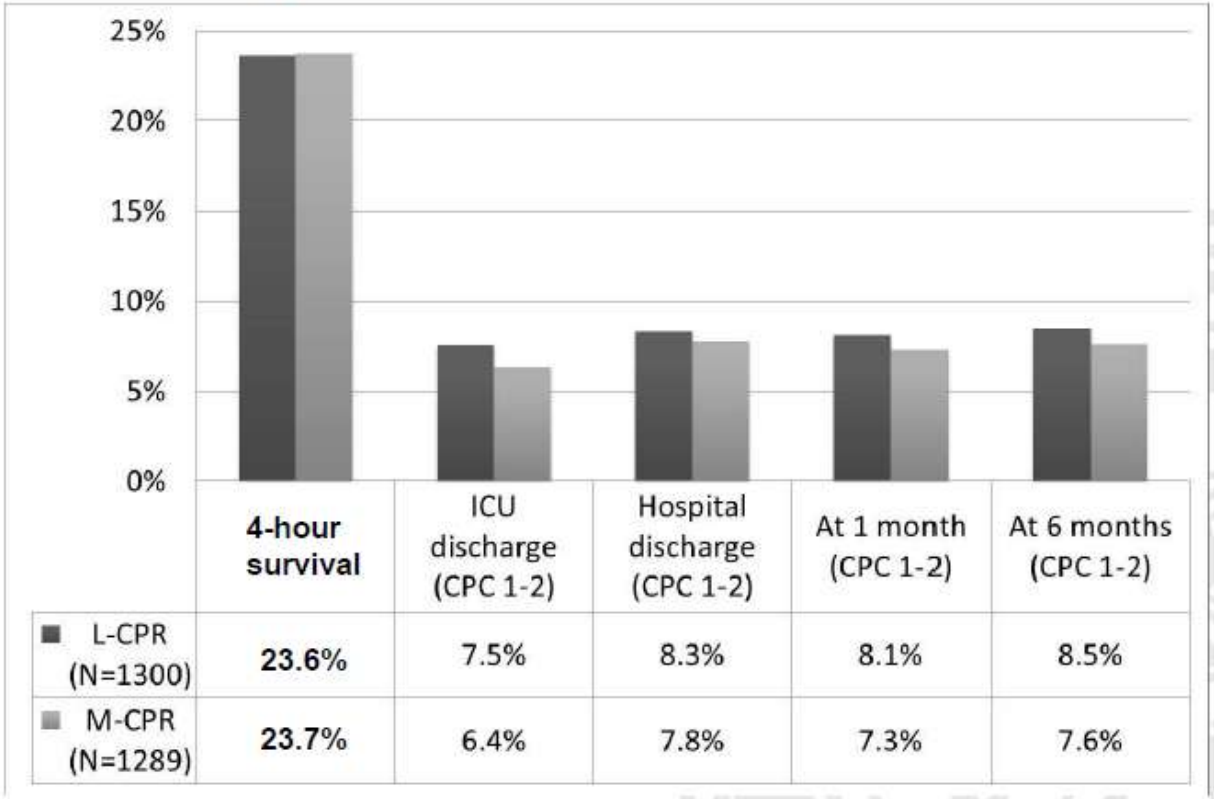
- Electricity-battery
- 100 compressions/min
- 4-5 cm compression depth
- Complete chest recoil
- 50/50 duty cycle
- Allows defibrillation running

LINC study

UPPSALA UNIVERSITET

Outcome

4-hour survival:
Risk difference -0.05%
95% C.I. -3.32 – 3.23, p=1.00



	4-hour survival	ICU discharge (CPC 1-2)	Hospital discharge (CPC 1-2)	At 1 month (CPC 1-2)	At 6 months (CPC 1-2)
L-CPR (N=1300)	**23.6%**	7.5%	8.3%	8.1%	8.5%
M-CPR (N=1289)	**23.7%**	6.4%	7.8%	7.3%	7.6%

LINC study


ACCA
A new association in the ESC family
Peter Clemmensen MD, DMSC, FESC
ACCA President

Current management of ACS: An international perspective from the EPICOR study

Hèctor Bueno, MD, PhD, FESC, FAHA
Associate Professor of Medicine
Universidad Complutense de Madrid

Head, Clinical Cardiology & CCU
Department of Cardiology
Hospital General Universitario Gregorio Marañón
Madrid (SPAIN)

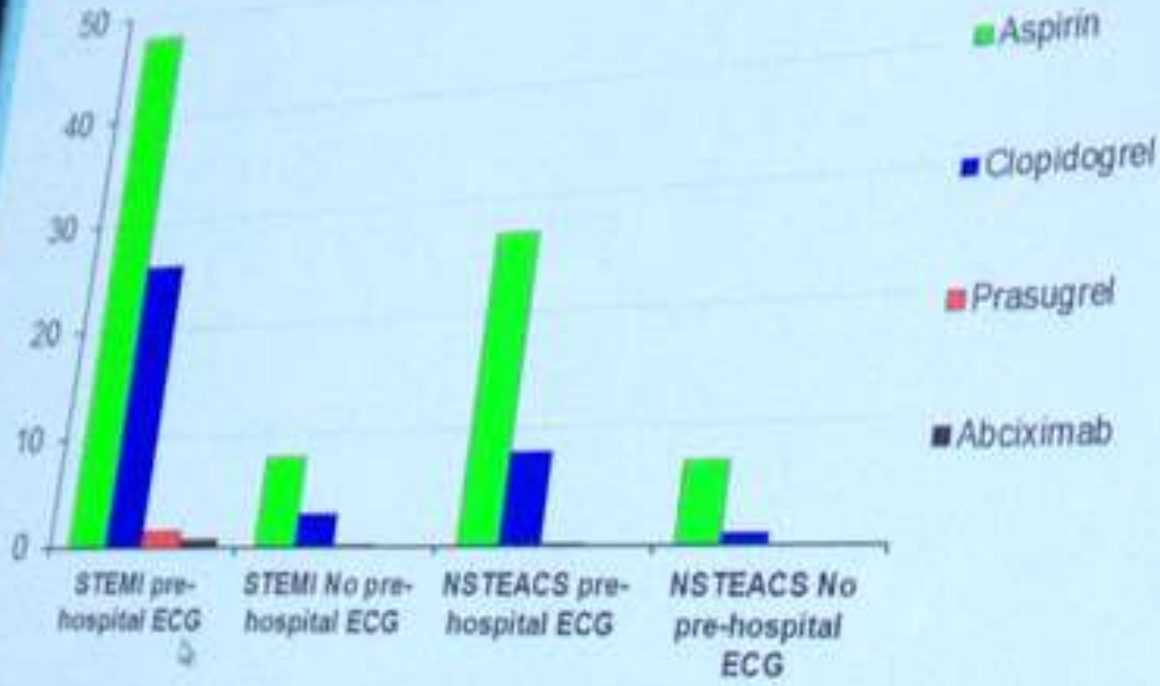
Hospital General Universitario Gregorio Marañón

Hector BUENO
(Madrid - ES)

ESC CONGRESS 2013

ESC Congress 365

EPICOR: Pre-hospital use of antithrombotic drugs



Hector BUENO
(Madrid - ES)

ESC CONGRES

ESC Congress 365


SERVIER
IN
R RESEARCH

Primary results of the PROMISE trial: myocardial protection with intracoronary adenosine given before reperfusion in patients with STEMI. *(Clin Trial gov NCT 00781404)*

D. Garcia-Dorado, I. Otaegui, JF. Rodriguez Palomares, A. Evangelista, V. Pineda, R. Ruiz Salmeron, F. Gimeno, F. Fernandez Aviles, A. San Roman, B. Garcia Del Blanco
On behalf of the PROMISE investigators

Hospital Universitari Vall d'Hebron, Cardiology Department, Barcelona, Spain, University Hospital of Virgen Macarena, Seville, Spain, Clinic University Hospital of Valladolid, ICICOR, Valladolid, Spain, University Hospital Gregorio Maranon, Department of Cardiology, Madrid, Spain

No conflict of interest

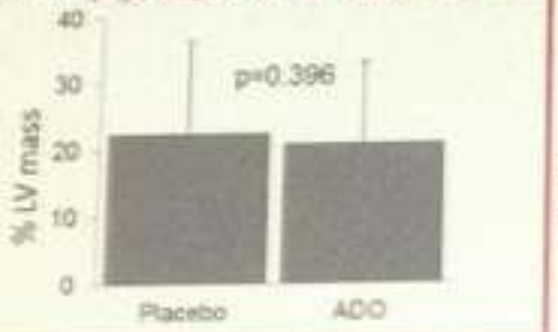
Funded by Carlos III Health Institute, Ministry of Science of Spain, EC07/90511

Tirana 17:09

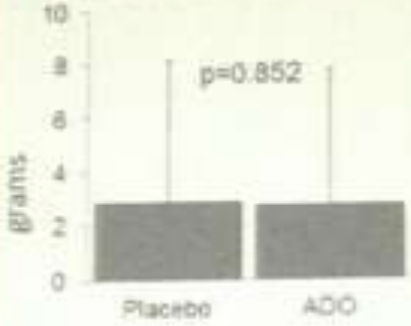
David GARCIA-DORADO
(Barcelona - ES)

Results-3: total study population

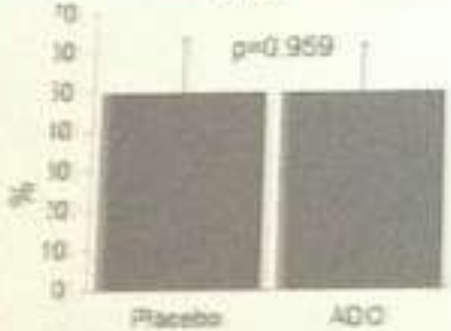
Primary end-point: Infarct mass



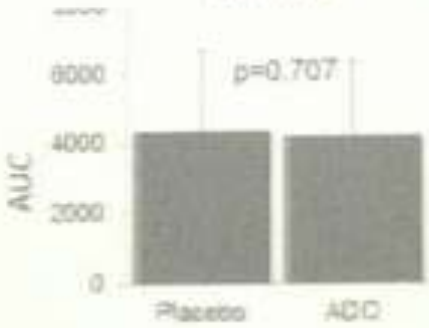
Microvascular obstruction mass



LVEF



CK-MB



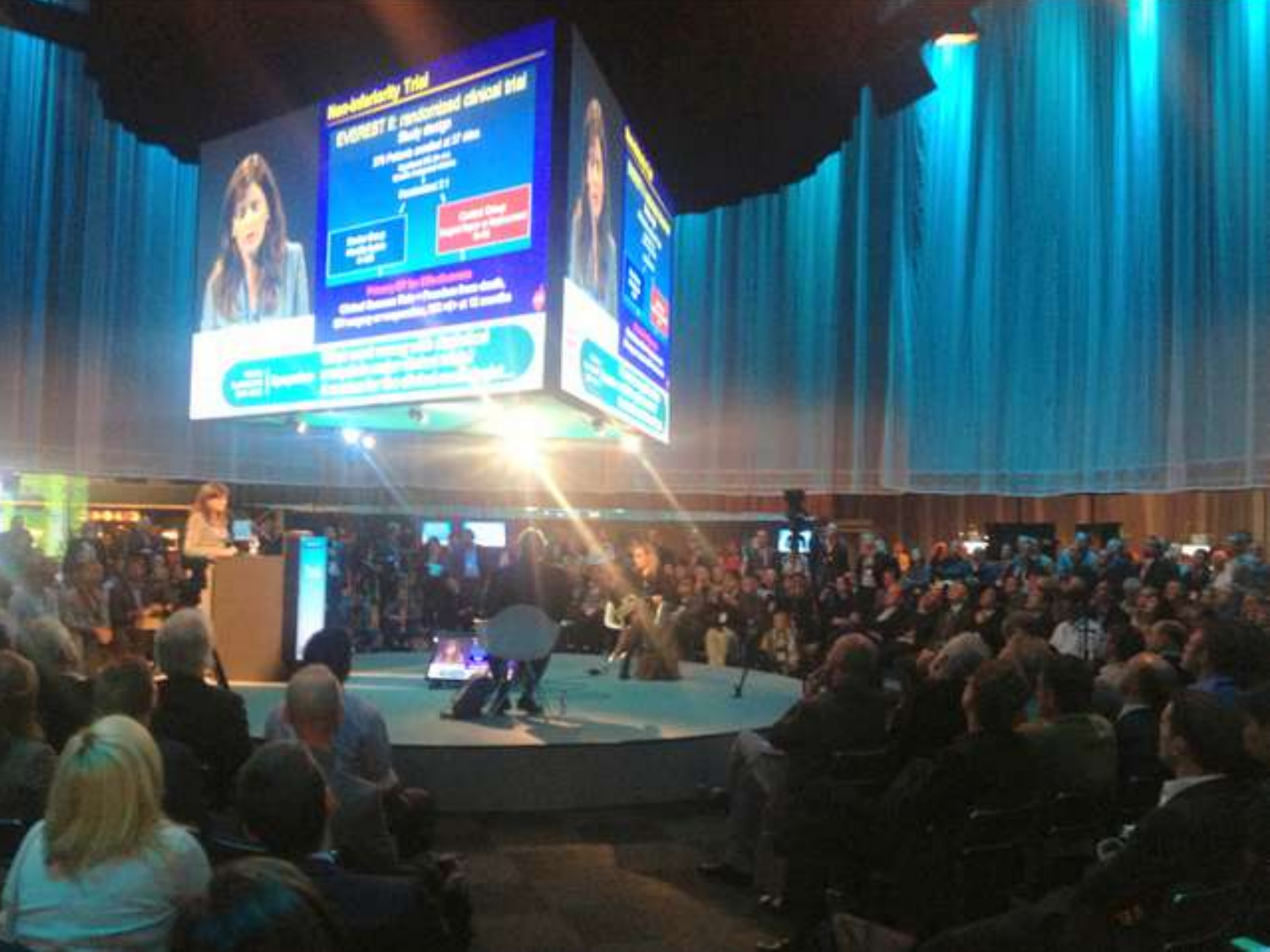
Tirana 17:20

David GARCIA-DORADO
(Barcelona - ES)

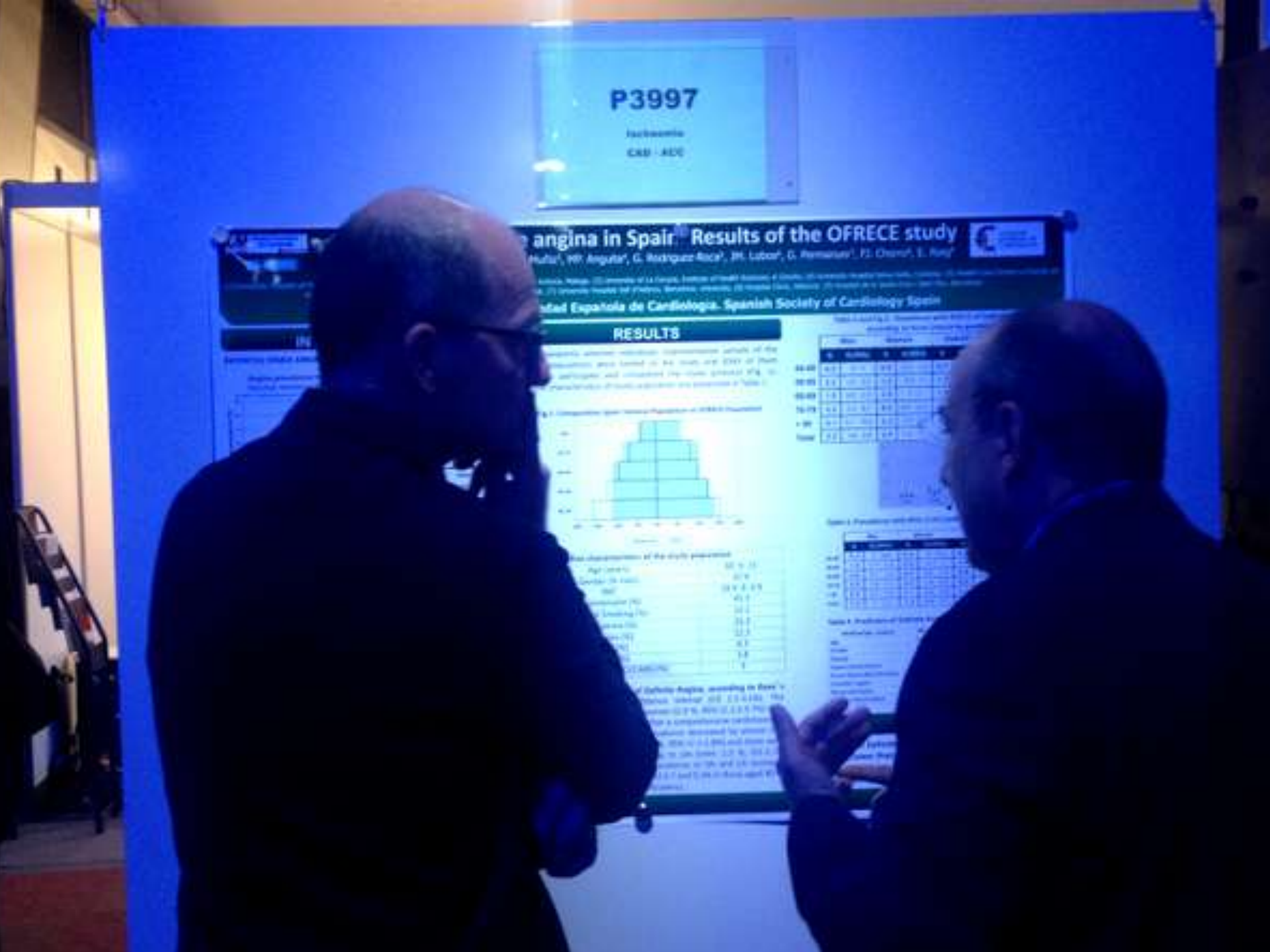
ESC CONGRESS 2013

ESC Congress 365


EXHIBITION
BLOCK C
BAYER


Non-inferiority Trial
EVEREST II: randomized clinical trial


Poster Area
The Poster area is supported by SERVIER in the form of an unrestricted Educational Grant
SERVIER
ESC CONGRESS 2013


P3997
angina in Spain Results of the OFRECE study
RESULTS

Effect of ischemic postconditioning on microvascular obstruction in reperfused myocardial infarction. Results of a randomized multicenter study in patients and data of an experimental model.

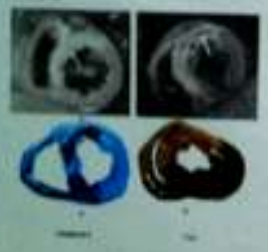
C. Bonanad[1], JM. Ruiz-Nodar[1], E. Fellu[1], J. Nunez[1], J. Sanchis[1], JM. Martinez-Elvira[2], G. Minana[1], JV. Monmeneu[1], FJ. Chorro[1], V. Bodi Perris[1]
(1) Hospital Clinico Universitario, INCLIVA, Universidad de Valencia, Valencia, Spain (2) General University Hospital of Alicante. Alicante, Spain

PURPOSE

Ischemic Postconditioning (PCON) appears as a potentially beneficial tool to complement primary angioplasty in ST-segment elevation myocardial infarction (STEMI).
We evaluated the impact of PCON on Microvascular Obstruction (MVO) both in patients and in a highly controlled swine model.

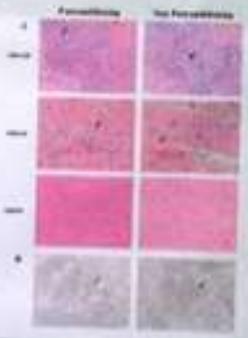
METHODS

In a multicenter study, 101 patients with a first STEMI were randomized to undergo primary angioplasty followed by PCON or primary angioplasty alone (non-PCON). MVO was quantified in late enhancement cardiac magnetic resonance imaging.
In an anterior STEMI swine model based on a 90-min angioplasty balloon coronary occlusion and 5-day reperfusion, MVO was defined as a lack of thioflavin-S staining in the core of the infarcted area (with triphenyltetrazolium-chloride staining).
The extent of MVI (% of left ventricular mass) was quantified in a core laboratory.



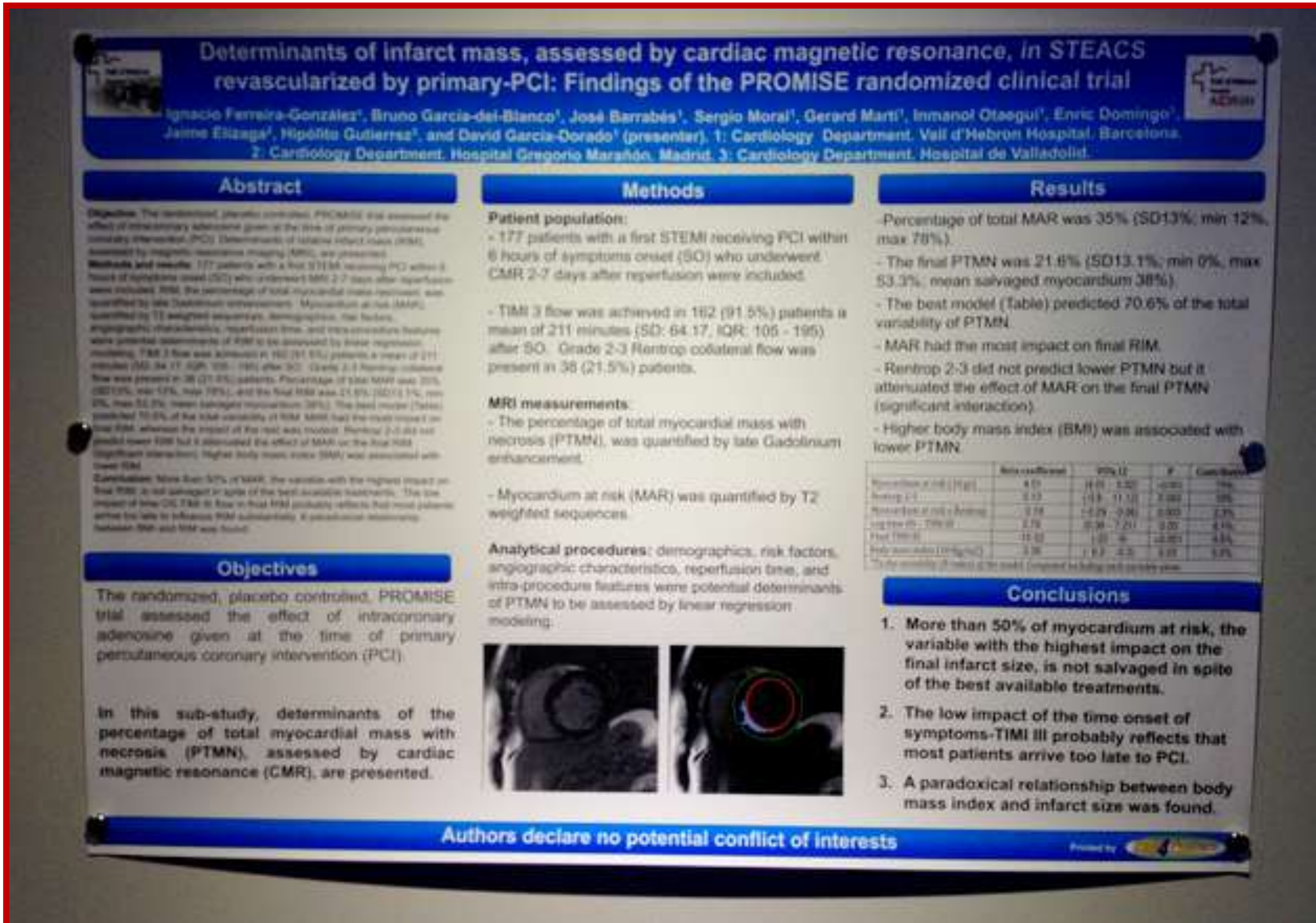
RESULTS

Patients treated with (n=49) and without PCON (n=52) were well matched in terms of baseline characteristics and time to revascularization.
MVO (> 1 segment in the 17 segments model) occurred in 12 (24%) PCON and in 18 (35%) non-PCON patients, p=0.3. PCON did not significantly reduce MVO (1.4±2.9% vs. 1.9±3.6% of LV mass, p=0.3). IS was similar in PCON and non-PCON patients (18±13 vs. 21±14% of LV mass, p=0.2).
No significant differences were observed between PCON and non-PCON patients in LV volumes, ejection fraction or the extent of hemorrhage. In the swine model, MVO occurred in 4/6 (67%) PCON and in 4/6 (67%) non-PCON pigs, p=1.
The extent of MVO (7.8±5.5% vs. 5.6±5.4% of LV mass, p=0.5) and IS (22±14 vs. 24±10% of LV mass, p=0.8) were not reduced in PCON compared with non-PCON pigs.



CONCLUSION

Ischemic postconditioning does not reduce microvascular obstruction in STEMI.



Determinants of infarct mass, assessed by cardiac magnetic resonance, in STEACS revascularized by primary-PCI: Findings of the PROMISE randomized clinical trial
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Abstract
Objectives
The randomized, placebo controlled, PROMISE trial assessed the effect of intracoronary adenosine given at the time of primary percutaneous coronary intervention (PCI).
In this sub-study, determinants of the percentage of total myocardial mass with necrosis (PTMN), assessed by cardiac magnetic resonance (CMR), are presented.
Methods
Patient population:
- 177 patients with a first STEMI receiving PCI within 6 hours of symptoms onset (SO) who underwent CMR 2-7 days after reperfusion were included.
- TIMI 3 flow was achieved in 162 (91.5%) patients a mean of 211 minutes (SD: 64.17, IQR: 105 - 195) after SO. Grade 2-3 Rentrop collateral flow was present in 38 (21.5%) patients.
MRI measurements
- The percentage of total myocardial mass with necrosis (PTMN), was quantified by late Gadolinium enhancement.
- Myocardium at risk (MAR) was quantified by T2 weighted sequences.
Analytical procedures: demographics, risk factors, angiographic characteristics, reperfusion time, and intra-procedure features were potential determinants of PTMN to be assessed by linear regression modeling.
Results
-Percentage of total MAR was 35% (SD13%; min 12%, max 78%).
- The final PTMN was 21.6% (SD13.1%; min 0%, max 53.3%; mean salvaged myocardium 38%).
- The best model (Table) predicted 70.6% of the total variability of PTMN.
- MAR had the most impact on final RIM.
- Rentrop 2-3 did not predict lower PTMN but it attenuated the effect of MAR on the final PTMN (significant interaction).
- Higher body mass index (BMI) was associated with lower PTMN.
Conclusions
1. More than 50% of myocardium at risk, the variable with the highest impact on the final infarct size, is not salvaged in spite of the best available treatments.
2. The low impact of the time onset of symptoms-TIMI III probably reflects that most patients arrive too late to PCI.
3. A paradoxical relationship between body mass index and infarct size was found.
Authors declare no potential conflict of interests

Functional mitral regurgitation after a first non-ST elevation acute coronary syndrome: very long term follow-up, prognosis, and contribution to left ventricular enlargement and atrial fibrillation

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PURPOSE:

Functional mitral regurgitation (MR) is frequent after a myocardial infarction. Our aim was to assess the relationship between onset functional MR after a non-ST segment elevation acute myocardial syndrome (NSTSEACS) and long-term prognosis, ventricular remodeling and further development of atrial fibrillation.

METHODS:

We prospectively studied 237 patients consecutively discharged in NYHA class I-II (74% men; mean age 66.1) after a first NSTSEACS.

All underwent an echocardiogram the first week after admission and were echocardiographically and clinically followed up (median: 6.95 years).

RESULTS:

MR was detected in 95 cases (40.1%), and became an independent risk factor for the development of heart failure and MACE (Per MR degree: HR_{uv}: 1.71, CI 95%: 1.138-2.588, p=0.01; HR_{multiv}: 1.49, CI 95%: 1.156-1.921, p=0.002), see figure 1. LV diastolic (grade I: 12.7±40.7; grade II: 26.8±12.4; grade III: 46.3±50.9 cc, p=0.01) and systolic (grade I: 10.4±37.3; grade II: 10.12±12.7; grade III: 36.8±40.0 cc, p=0.02) mean volumes were higher after follow-up in patients with MR, proportionally to the initial MR degree.

In the rhythm analysis (126 patients, previously excluding those with any history of atrial fibrillation) after follow-up, 11.4% degree I MR patients developed AF, 14.3% degree II and 75% degree III, while only 5.1% degree 0 patients developed AF, p<0.001.

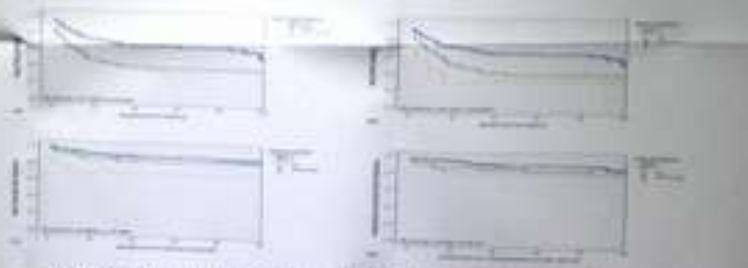


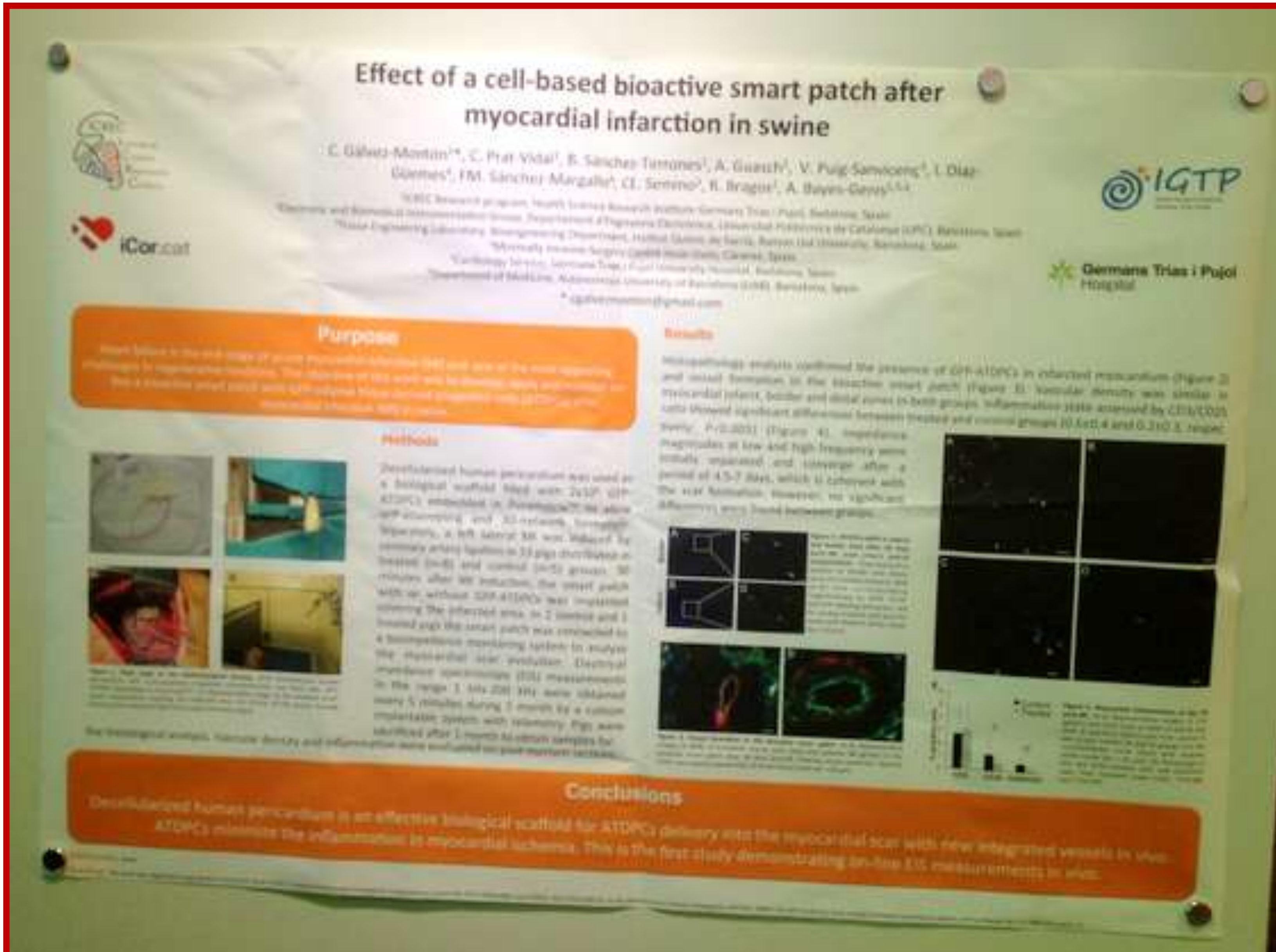
Figure 1: Event free Survival probability (Kaplan Meier) after an STEMI regarding the presence (A-B) degree (C-D) of MR on admission echocardiogram.

CONCLUSION:

MR is frequent after a NSTSEACS. The presence and degree of MR confers a worse long-term prognosis after a first NSTSEACS.

In part, this can be explained by an increased negative remodeling and increased occurrence of atrial fibrillation.

Declaration of interest: *None*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Purpose
Methods
Results
Conclusions

Clinical impact of a chronic total occlusion in a non-infarct-related coronary artery in patients with ST-segment elevation myocardial infarction treated with primary percutaneous coronary intervention

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BACKGROUND

In spite of recent advances in the treatment of ST-segment elevation acute myocardial infarction (STEMI), some groups of patients still experience considerable morbidity and mortality after a STEMI. Previous reports showed conflicting results regarding the prognostic impact of a chronic total occlusion (CTO) in a non-infarct-related coronary artery.

PURPOSES

To analyze the prevalence and the clinical impact of a CTO in a non-infarct-related artery in patients with STEMI treated with primary percutaneous coronary intervention (PCI).

METHODS

We prospectively included all patients with STEMI that underwent primary PCI at our institution from October 2009 to April 2012.

RESULTS

1176 patients were included in the study. 125 (10.6%) had at least one CTO in a non-infarct-related artery. Mean follow up was 339 days.

1. BASELINE CARACHTERISTICS

	CTO (n=125)	No CTO (n=1051)	p
Age			
Diabetes			
Hypertension			
Creatinine clearance (ml/min)			
Previous stroke			
Peripheral vascular disease			
Previous myocardial infarction			
Previous PCI			
Previous CABG			

2. SEVERITY OF INDEX HOSPITALIZATION

	CTO (n=125)	No CTO (n=1051)	p
Killip class at admission			
I			
II			
III			
IV			
LVEF at discharge (%)			
IABP			
Mechanical ventilation			
Swan-Ganz catheter			
In hospital mortality			

3. MORTALITY DURING FOLLOW UP: Patients with a CTO had a significantly higher mortality, specially due to non-cardiac causes. We did not find a significant association between CTO and cardiac mortality in our patients. In the multivariate analysis, including Killip class at admission and left ventricular ejection fraction, the presence of a CTO was not associated with increased total mortality.

Kaplan-Meier analysis of survival

Multivariate predictors of six months mortality

Predictor	HR (95%-CI)	p
CTO	1.54 (0.64-2.82)	0.198
Age		
Anterior STEMI	1.54 (0.98-2.71)	0.138
Number of diseased coronary arteries		
LVEF (%)		
Creatinine Clearance (ml/min)		

CONCLUSIONS

1) In non-selected patients with STEMI treated with primary PCI, the presence of a CTO in a non-infarct-related artery identifies a group of patients at higher risk, with more co-morbidities and worse clinical outcome.
2) The higher mortality observed in patients with CTO was mainly due to non-cardiac causes.
3) The presence of a CTO was not an independent predictor of mortality in our series.

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