

Con il Patrocinio di



**Malattia coronarica cronica  
in paziente già sottoposto a PCI:  
dallo studio Compass alla pratica clinica**

Strategie vincenti nella gestione  
della terapia antitrombotica nel paziente  
con cardiopatia ischemica cronica

CASO CLINICO N1

# Paziente a 12 mesi di FU dalla SCA



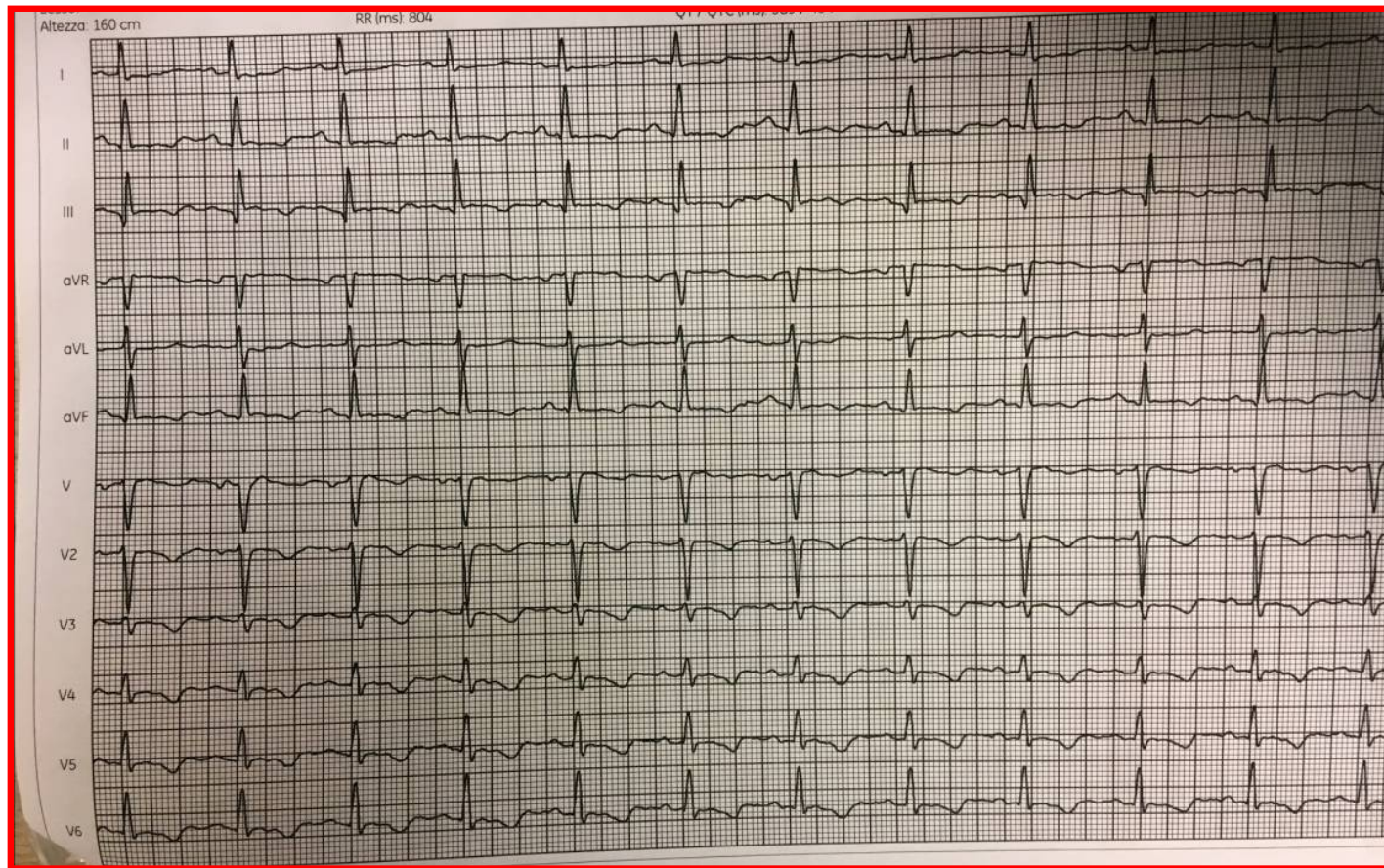
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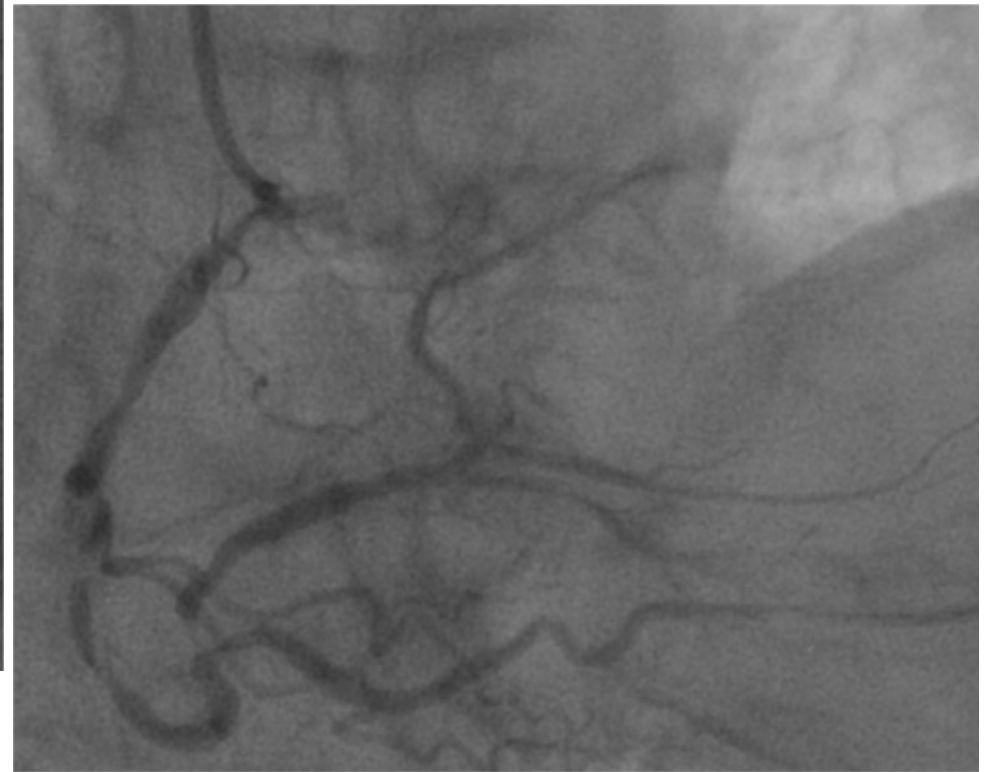


- Donna 72 anni
- Ipertensione
- Dislipidemia
- Diabete tipo 2
- Polivasculopatica (PTA BTK 2013)
  
- Accesso in PS per dolore epigastrico intermittente da 3 giorni
- modesto incremento Tnl, Cl Cr 89 ml/min. Hb 11.5 g/dl.
- Ctot 163 mg/dl, TG 149 mg/dl, HDL 39 mg/dl, LDL 107 mg/dl  
HbA1c 58 mmol/mol

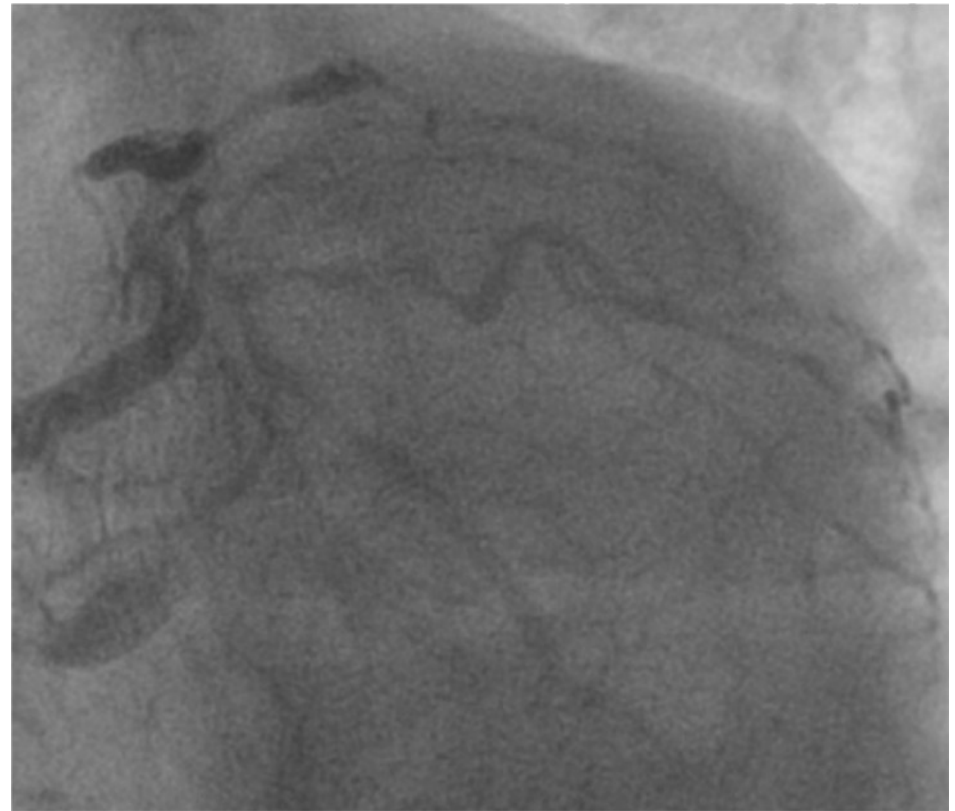
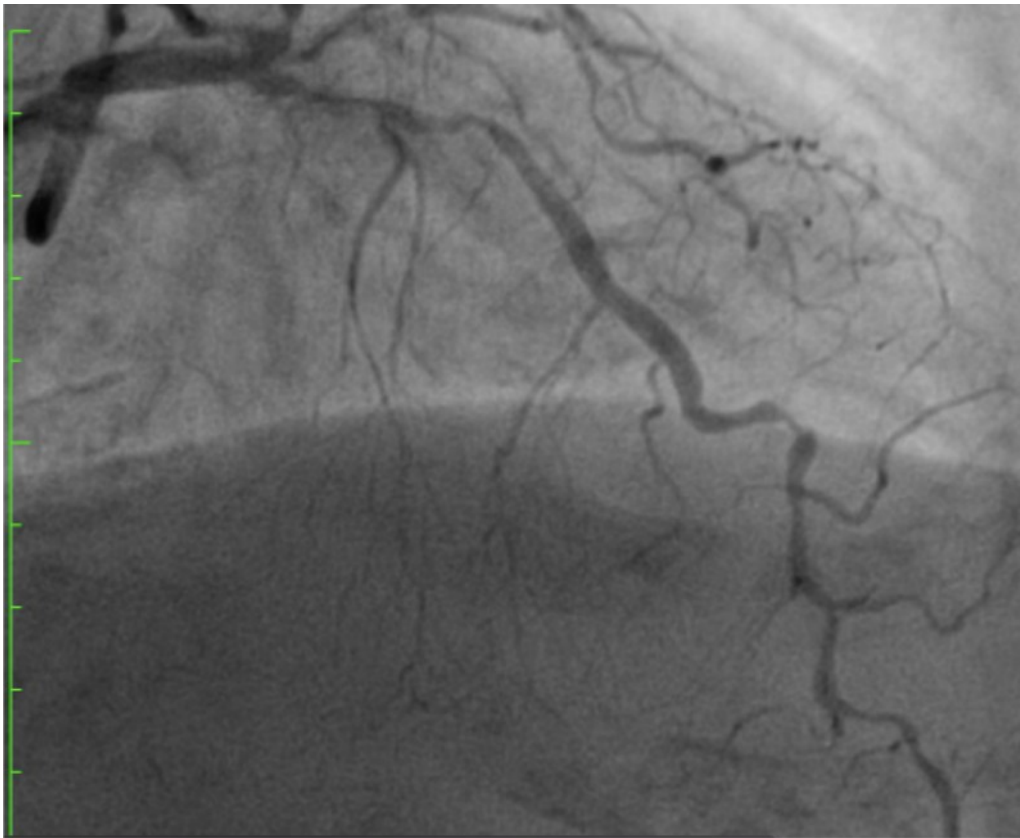


Eco : Vsin normali dimensioni, FE 39 %,  
ipocinesia diffusa, I.M. moderata

# Cdx



# CSin



# EPICRISI

- Paziente diabetica, polivasculopatica
- NSTEMI
- Moderata disfunzione sistolica  $V_{sin}$
- Coronaropatia critica trivasale con patologia diffusa coinvolgente l'IVA distale

## HEART TEAM



Indicazione a rivascularizzazione percutanea

## Step 1: PCI di Cdx

### Setup:

Accesso femorale dx 7F



JR 4 7F, Whisper ES



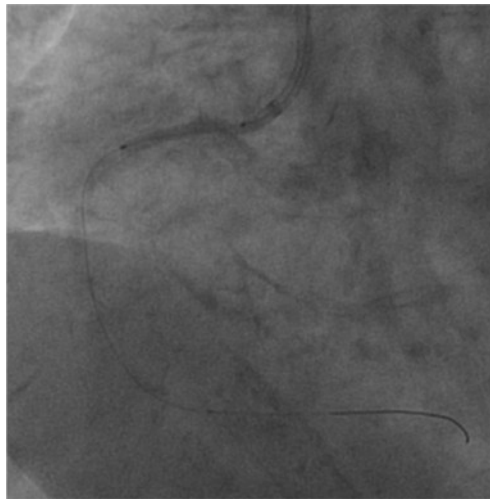
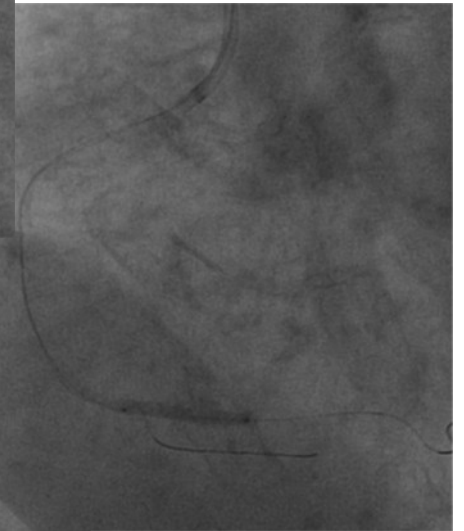
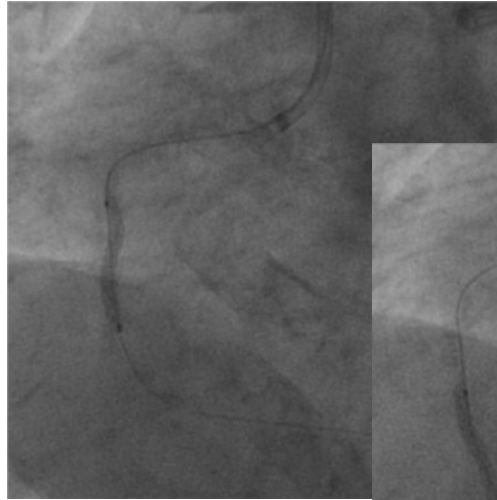


# Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica

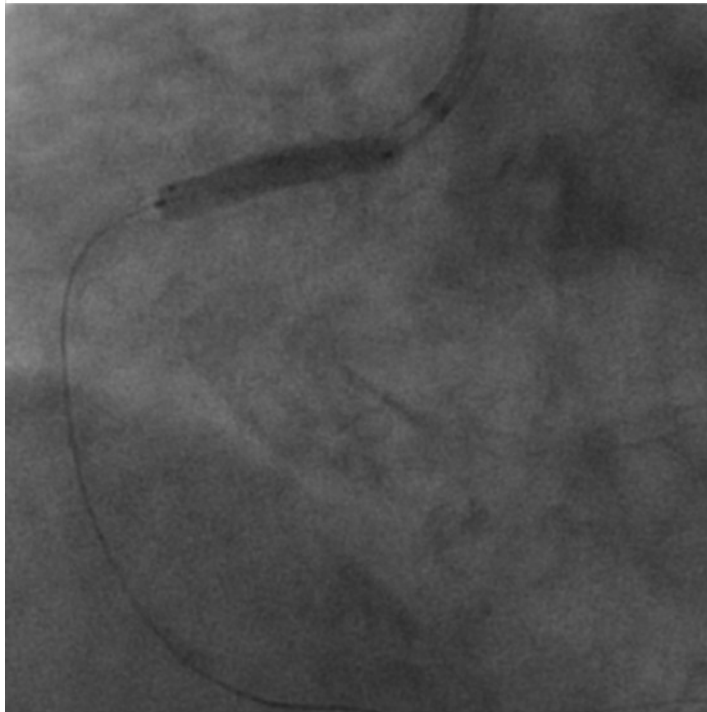
SCB 2.0 rottura a 14 atm



SCB 2.0, 2.5, 3 a 16 atm



Cre8EVO 3.5x20

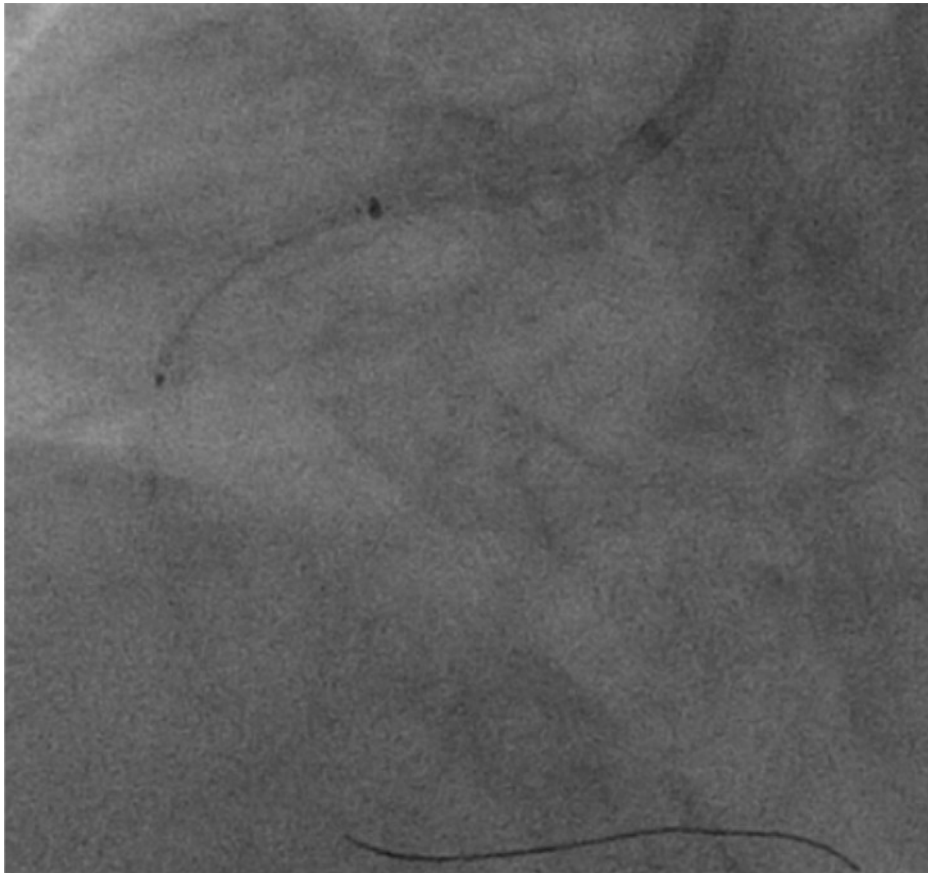


Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica

JR4



AL1



Whisper ES



Grand Slam

## Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica



Cre8EVO 3x16 , 3x46, 3x20 postdilatati con NC 3 e 3.5 @ 16 atm

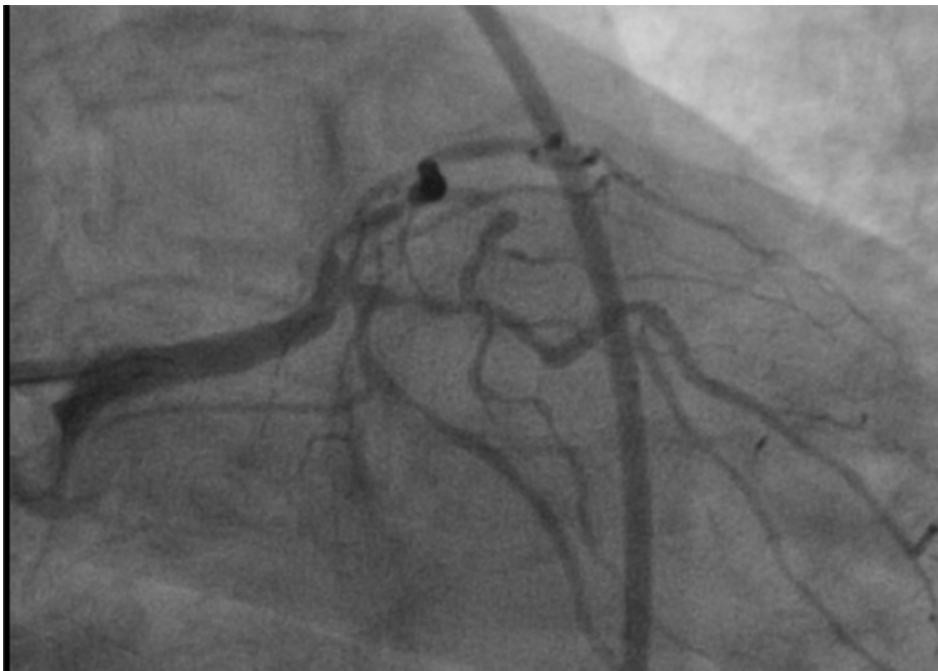
## Step 2: PCI di Csin

### Setup:

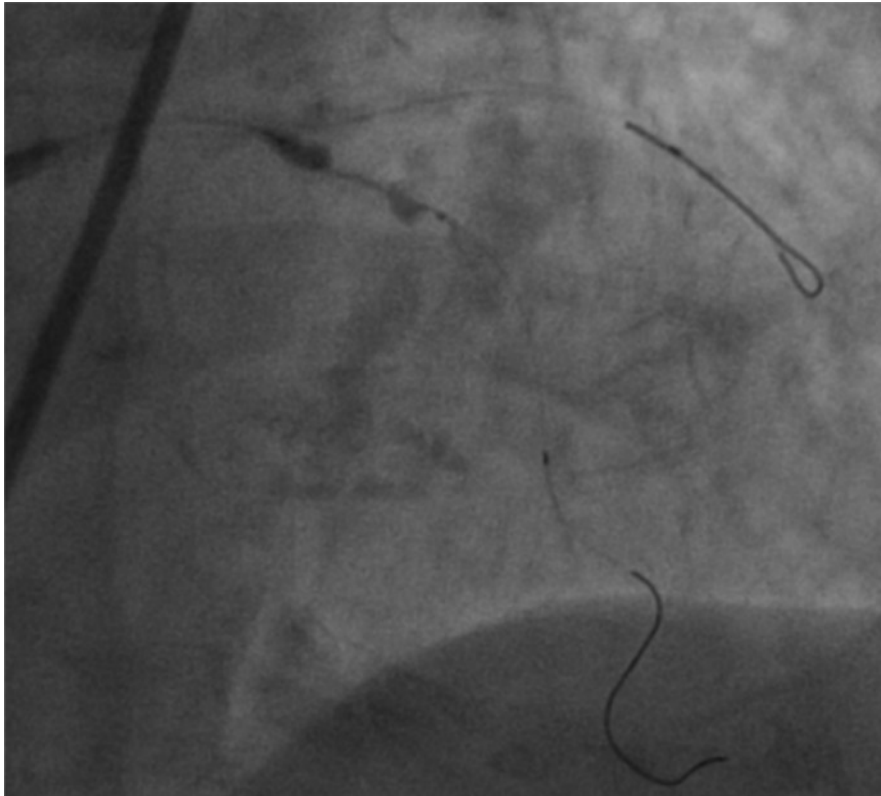
Accesso femorale sin 6 F

EBU 3.75 6F

BMW Universal



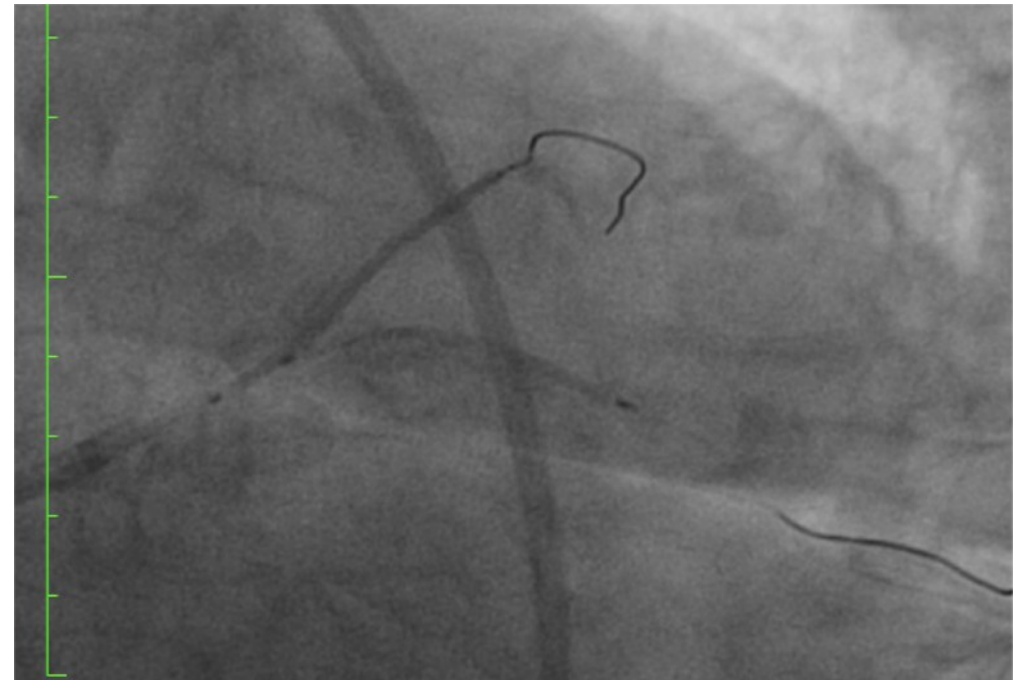
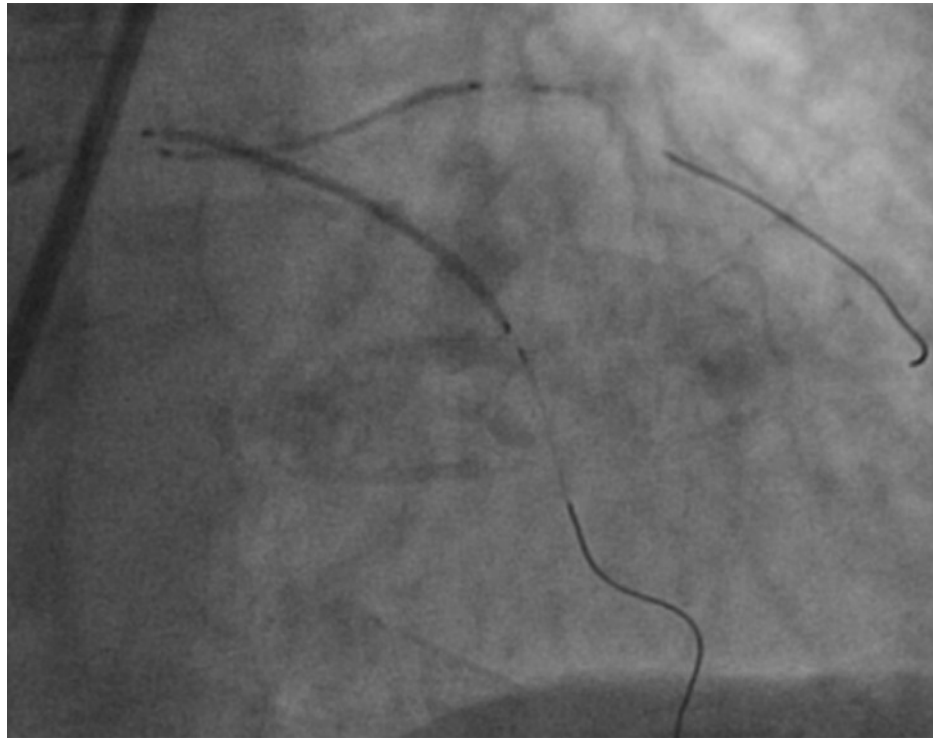
NC 2.5 @ 20 atm



Rotablator 1.25

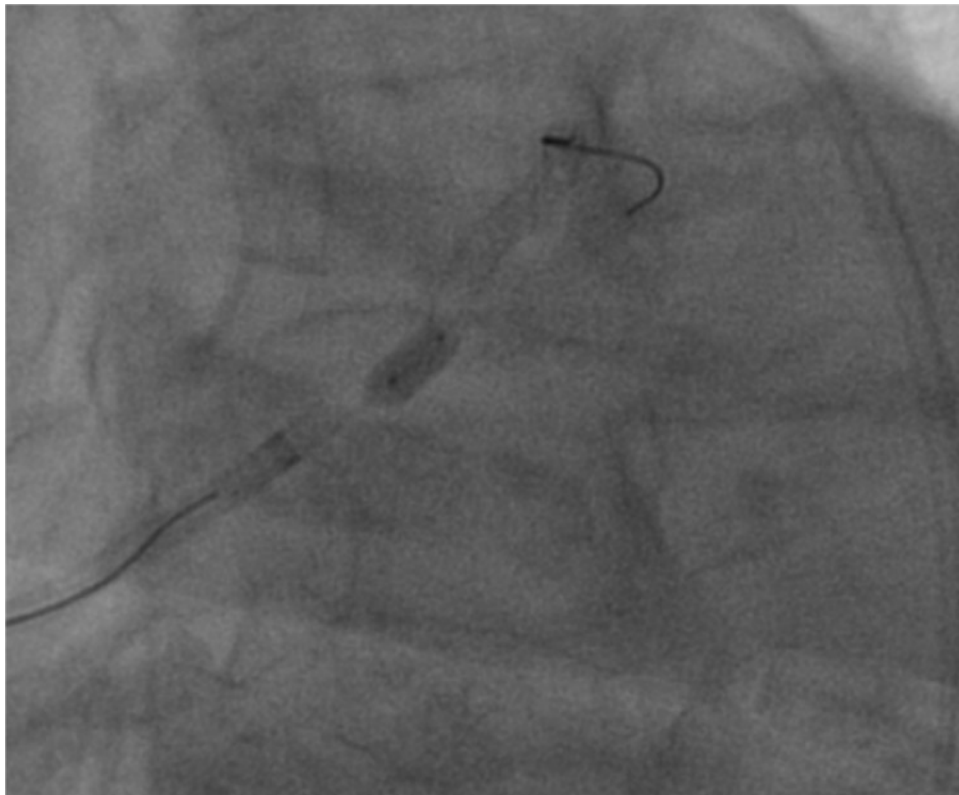


# Crush



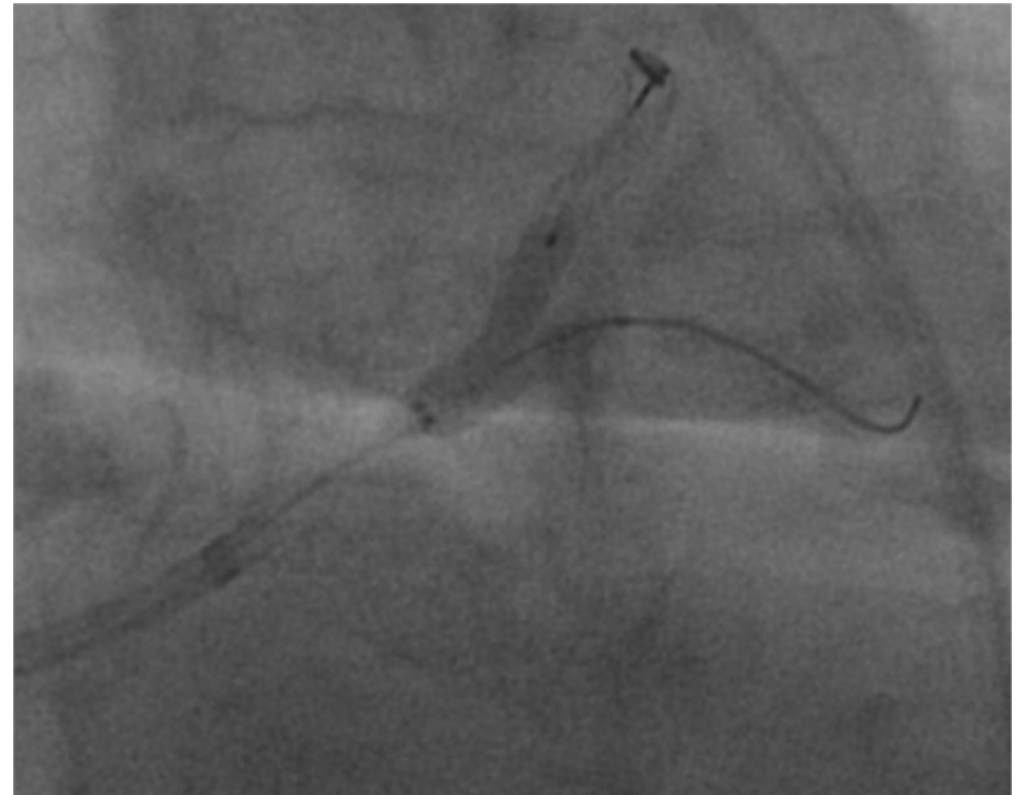
Onyx 3x38 e Onyx 2.5x26 @12 atm

# POT



NC 3.5 @16 atm

# Kissing



NC 3.5 e 2.5 @16 atm max  
Kissing @ 12 atm



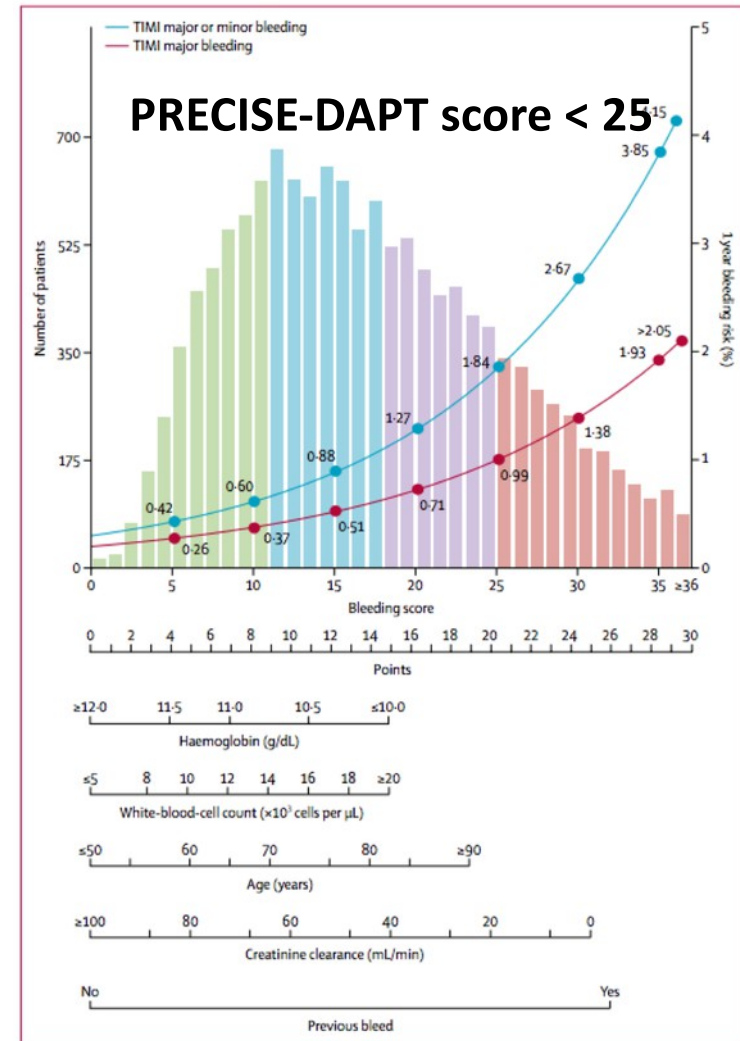
# Final Result



## TERAPIA ALLA DIMISSIONE

Class <sup>a</sup>	Level <sup>b</sup>
I	A

- Cardioaspirin 100 mg
- Ticagrelor 90 mg x2 - 12 mesi
- Lansoprazolo 30 mg
- Atorvastatina 80 mg
- Ramipril 5 mg
- Bisoprololo 1.25 mg
- Terapia antidiabetica orale.



## FOLLOW UP a 11 mesi

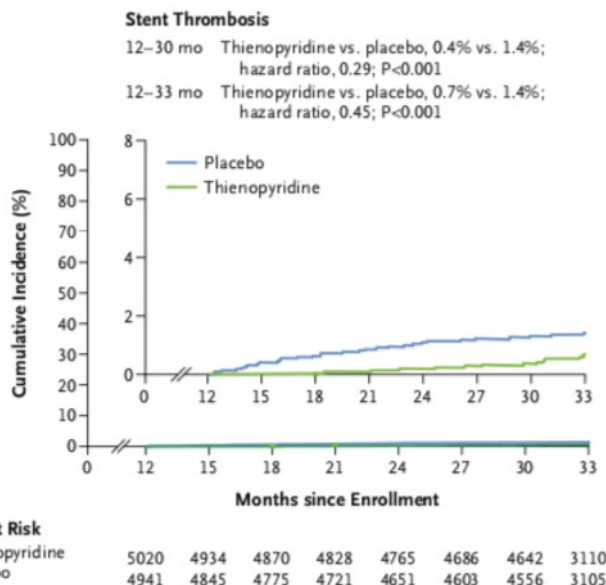
- Stazionaria dal punto di vista cardiologico
- Non accessi in PS, CCS 1
- LDL 92 mg/dl
- Scarso controllo glicemico HbA1c 77 mmol/mol
- Emocromo stabile. Funzione renale stabile
  
- ECO: FE 44%, IM lieve-moderata
- Test ergometrico: in terapia interrotto al 72% della FC max teorica prevista per esaurimento muscolare in assenza di significative alterazioni ECG e/o sintomi

## Cosa fare a 12 mesi

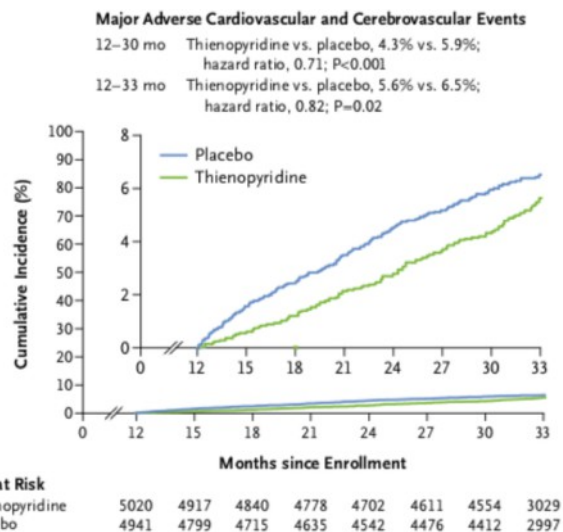
In patients with ACS who have tolerated DAPT without a bleeding complication, continuation of **DAPT** for longer than 12 months may be considered.



# Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica



**Figure 2.** Cumulative Incidence of Stent Thrombosis, According to Study Group.



**Figure 3.** Cumulative Incidence of Major Adverse Cardiovascular and Cerebrovascular Events, According to Study Group.

## The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

DECEMBER 4, 2014

VOL. 371 NO. 23

### Twelve or 30 Months of Dual Antiplatelet Therapy after Drug-Eluting Stents

Laura Mauri, M.D., Dean J. Kereiakes, M.D., Robert W. Yeh, M.D., Priscilla Driscoll-Shempp, M.B.A., Donald E. Cutlip, M.D., P. Gabriel Steg, M.D., Sharon-Lise T. Normand, Ph.D., Eugene Braunwald, M.D., Stephen D. Wiviott, M.D., David J. Cohen, M.D., David R. Holmes, Jr., M.D., Mitchell W. Krucoff, M.D., James Hermiller, M.D., Harold L. Dauerman, M.D., Daniel I. Simon, M.D., David E. Kandzari, M.D., Kirk N. Garratt, M.D., David P. Lee, M.D., Thomas K. Pow, M.D., Peter Ver Lee, M.D., Michael J. Rinaldi, M.D., and Joseph M. Massaro, Ph.D., for the DAPT Study Investigators\*

**Table 3.** Bleeding End Point during Month 12 to Month 30.\*

Bleeding Complications	Continued Thienopyridine (N = 4710)	Placebo (N = 4649)	Difference percentage points (95% CI)	Two-Sided P Value for Difference
	no. of patients (%)			
GUSTO severe or moderate†	119 (2.5)	73 (1.6)	1.0 (0.4 to 1.5)	0.001
Severe	38 (0.8)	26 (0.6)	0.2 (–0.1 to 0.6)	0.15
Moderate	81 (1.7)	48 (1.0)	0.7 (0.2 to 1.2)	0.004
BARC type 2, 3, or 5	263 (5.6)	137 (2.9)	2.6 (1.8 to 3.5)	<0.001
Type 2	145 (3.1)	72 (1.5)	1.5 (0.9 to 2.1)	<0.001
Type 3	122 (2.6)	68 (1.5)	1.1 (0.6 to 1.7)	<0.001
Type 5	7 (0.1)	4 (0.1)	0.1 (–0.1 to 0.2)	0.38

## PROLONGED DAPT

In patients with MI and high ischaemic risk, who have tolerated DAPT without a bleeding complication, **ticagrelor 60 mg b.i.d. for longer than 12 months on top of aspirin may be preferred over clopidogrel or prasugrel.**



ESC Guidelines 2018

# Malattia coronarica cronica in paziente già sottoposto a PCI: dallo studio Compass alla pratica clinica

## The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

MAY 7, 2015

VOL. 372 NO. 19

### Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction

Marc P. Bonaca, M.D., M.P.H., Deepak L. Bhatt, M.D., M.P.H., Marc Cohen, M.D., Philippe Gabriel Steg, M.D., Robert F. Storey, M.D., Eva C. Jensen, M.D., Ph.D., Giulia Magnani, M.D., Sameer Bansilal, M.D., M. Polly Fish, B.A., Kyungah Im, Ph.D., Olof Bengtsson, Ph.Lic., Ton Oude Ophuis, M.D., Ph.D., Andrzej Budaj, M.D., Ph.D., Pierre Theroux, M.D., Mikhail Ruda, M.D., Christian Hamm, M.D., Shinya Goto, M.D., Jindrich Spinar, M.D., José Carlos Nicolau, M.D., Ph.D., Robert G. Kiss, M.D., Ph.D., Sabina A. Murphy, M.P.H., Stephen D. Wiviott, M.D., Peter Held, M.D., Ph.D., Eugene Braunwald, M.D., and Marc S. Sabatine, M.D., M.P.H., for the PEGASUS-TIMI 54 Steering Committee and Investigators\*

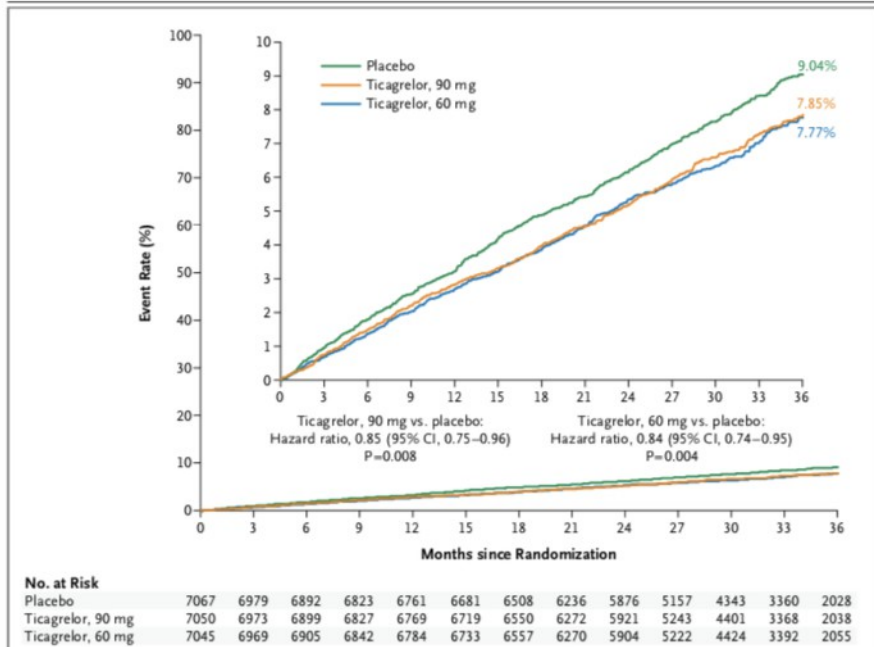


Figure 1. Kaplan-Meier Rates of Cardiovascular Death, Myocardial Infarction, and Stroke through 3 Years, According to Study Group.

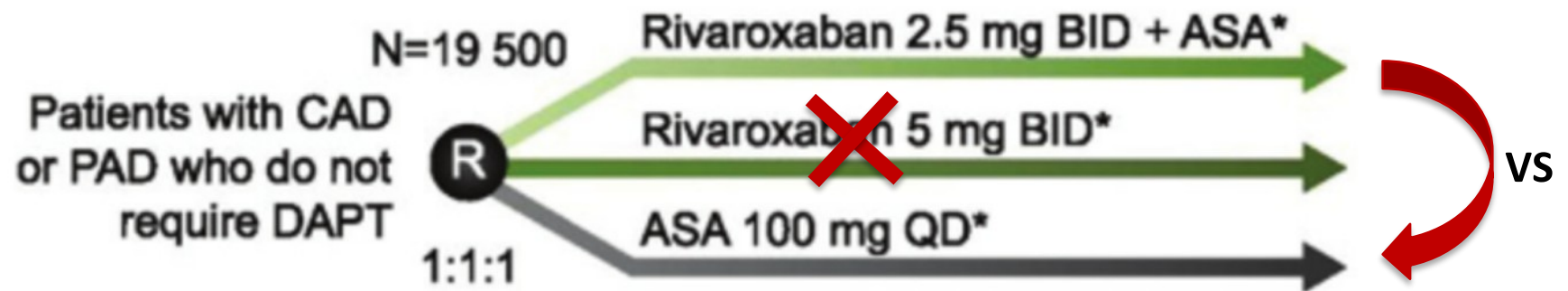
Study drugs were administered twice daily. The inset shows the same data on an enlarged y axis.

Table 3. Safety End Points as 3-Year Kaplan-Meier Estimates.\*

End Point	Ticagrelor, 90 mg (N = 6988)	Ticagrelor, 60 mg (N = 6958)	Placebo (N = 6996)	Ticagrelor, 90 mg vs. Placebo		Ticagrelor, 60 mg vs. Placebo	
				Hazard Ratio (95% CI)	P Value	Hazard Ratio (95% CI)	P Value
	number (percent)						
<b>Bleeding</b>							
TIMI major bleeding	127 (2.60)	115 (2.30)	54 (1.06)	2.69 (1.96–3.70)	<0.001	2.32 (1.68–3.21)	<0.001
TIMI minor bleeding	66 (1.31)	55 (1.18)	18 (0.36)	4.15 (2.47–7.00)	<0.001	3.31 (1.94–5.63)	<0.001
Bleeding requiring transfusion	122 (2.43)	105 (2.09)	37 (0.72)	3.75 (2.59–5.42)	<0.001	3.08 (2.12–4.48)	<0.001
Bleeding leading to study-drug discontinuation	453 (7.81)	354 (6.15)	86 (1.50)	5.79 (4.60–7.29)	<0.001	4.40 (3.48–5.57)	<0.001
Fatal bleeding or nonfatal intracranial hemorrhage	32 (0.63)	33 (0.71)	30 (0.60)	1.22 (0.74–2.01)	0.43	1.20 (0.73–1.97)	0.47
Intracranial hemorrhage	29 (0.56)	28 (0.61)	23 (0.47)	1.44 (0.83–2.49)	0.19	1.33 (0.77–2.31)	0.31
Hemorrhagic stroke	4 (0.07)	8 (0.19)	9 (0.19)	0.51 (0.16–1.64)	0.26	0.97 (0.37–2.51)	0.94
Fatal bleeding	6 (0.11)	11 (0.25)	12 (0.26)	0.58 (0.22–1.54)	0.27	1.00 (0.44–2.27)	1.00
<b>Other adverse event</b>							
Dyspnea	1205 (18.93)	987 (15.84)	383 (6.38)	3.55 (3.16–3.98)	<0.001	2.81 (2.50–3.17)	<0.001
Event leading to study-drug discontinuation	430 (6.50)	297 (4.55)	51 (0.79)	8.89 (6.65–11.88)	<0.001	6.06 (4.50–8.15)	<0.001
Serious adverse event	22 (0.41)	23 (0.45)	9 (0.15)	2.68 (1.24–5.83)	0.01	2.70 (1.25–5.84)	0.01
Renal event	166 (3.30)	173 (3.43)	161 (2.89)	1.17 (0.94–1.46)	0.15	1.17 (0.94–1.45)	0.15
Bradycardia	107 (2.04)	121 (2.32)	106 (1.98)	1.15 (0.88–1.50)	0.31	1.24 (0.96–1.61)	0.10
Gout	115 (2.28)	101 (1.97)	74 (1.51)	1.77 (1.32–2.37)	<0.001	1.48 (1.10–2.00)	0.01

# PROLONGED DATT

(dual antithrombotic therapy)

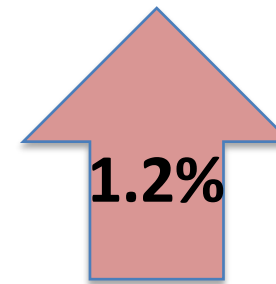


Absolute risk reduction



Composite primary outcome  
Morte, stroke, IMA

**NNT 76**



Major bleeding  
Non IC  
Non fatal

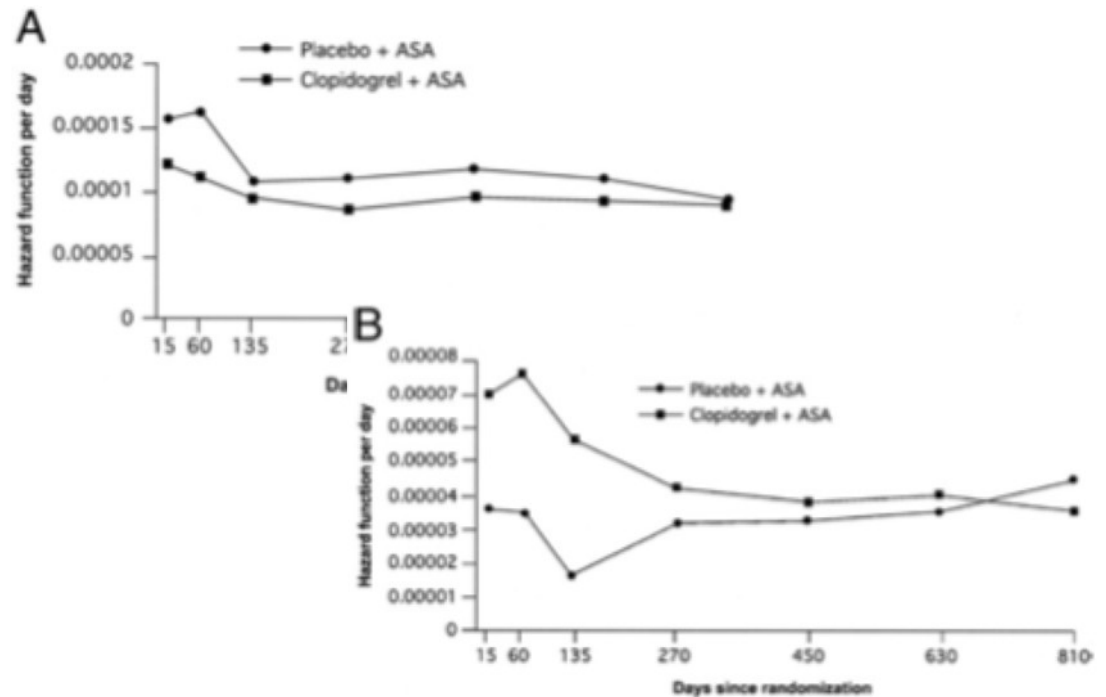
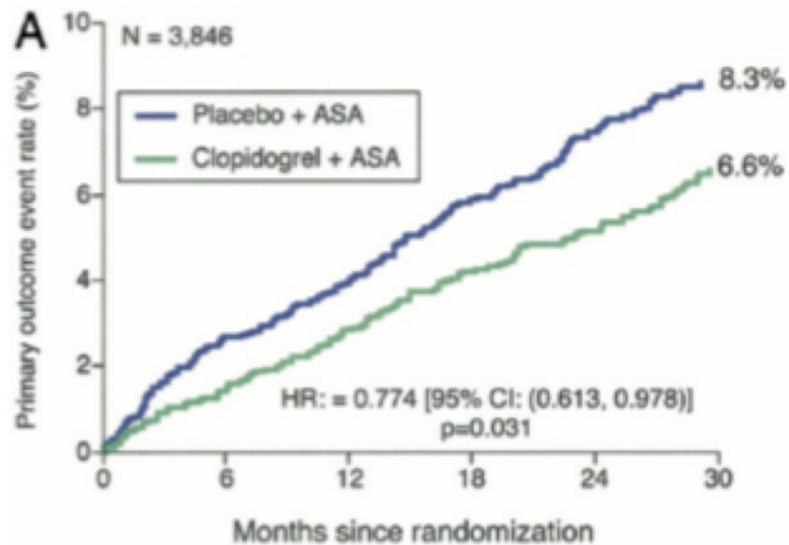


# PROLONGED DAPT or DATT



# Alcune considerazioni

- A 12 mesi dalla SCA rischio ischemico > rischio emorragico



*“it is biologically plausible that the greatest degree of benefit would be in those whose ischemic event was most recent”*

# Alcune considerazioni

- Rivascolarizzazione complessa nei trial

## PEGASUS

Hypercholesterolemia — no. (%)	3410 (70.7)	3380 (70.4)	3421 (77.1)
Current smoker — no. (%)	1187 (16.8)	1206 (17.1)	1143 (16.2)
Diabetes mellitus — no. (%)	2241 (31.8)	2308 (32.8)	2257 (31.9)
Multivessel coronary artery disease — no./total no. (%)	4155/7049 (58.9)	4190/7042 (59.5)	4213/7067 (59.6)
History of PCI — no./total no. (%) <sup>‡</sup>	5852/7049 (83.0)	5879/7044 (83.5)	5837/7066 (82.6)
>1 Prior myocardial infarction — no. (%)	1143 (16.2)	1168 (16.6)	1188 (16.8)

## COMPASS

≥5 years	2824 (34%)	2847 (35%)	2849 (35%)
Percutaneous coronary intervention	4971 (60%)	4986 (60%)	4905 (59%)
Previous CABG	2704 (33%)	2555 (31%)	2586 (31%)
Multivessel coronary artery disease	5252 (63%)	5174 (63%)	5043 (61%)
Heart failure	1909 (23%)	1893 (23%)	1912 (23%)
Stroke	279 (3%)	250 (3%)	268 (3%)
Previous treatment			

# Alcune considerazioni

- Sesso femminile

## PEGASUS

Characteristic	(N = 7050)	(N = 7045)	(N = 7067)
Age — yr	65.4 ± 8.4	65.2 ± 8.4	65.4 ± 8.3
Female sex — no. (%)	1682 (23.9)	1661 (23.6)	1717 (24.3)
White race — no. (%)†	6126 (86.9)	6077 (86.3)	6124 (86.7)
Weight — kg	82.0 ± 16.7	82.0 ± 17.0	81.8 ± 16.6

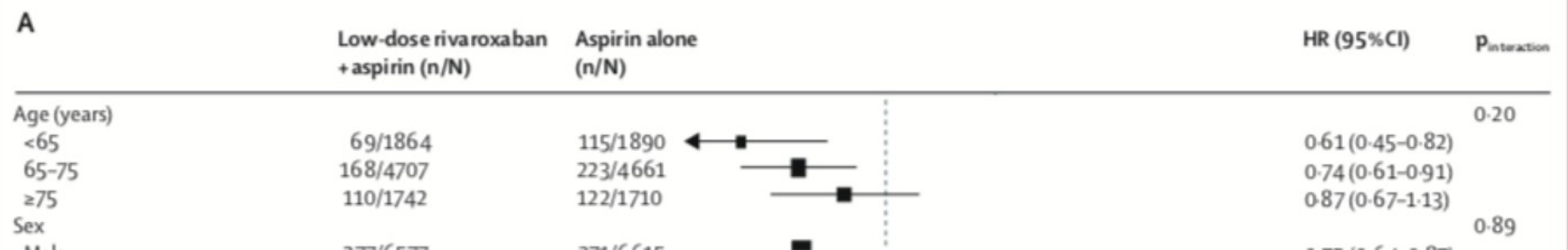
## COMPASS

Characteristic	(N = 1736)	(N = 1650)	(N = 1646)
Sex			
Female	1736 (21%)	1650 (20%)	1646 (20%)
Male	6577 (79%)	6600 (80%)	6615 (80%)
Body-mass index, kg/m <sup>2</sup>	28.4 (4.7)	28.4 (4.6)	28.5 (4.7)

# Alcune considerazioni

- Età ....NB sopra i 75 anni
  - perdita del beneficio su eventi ischemici
  - Aumento eventi emorragici

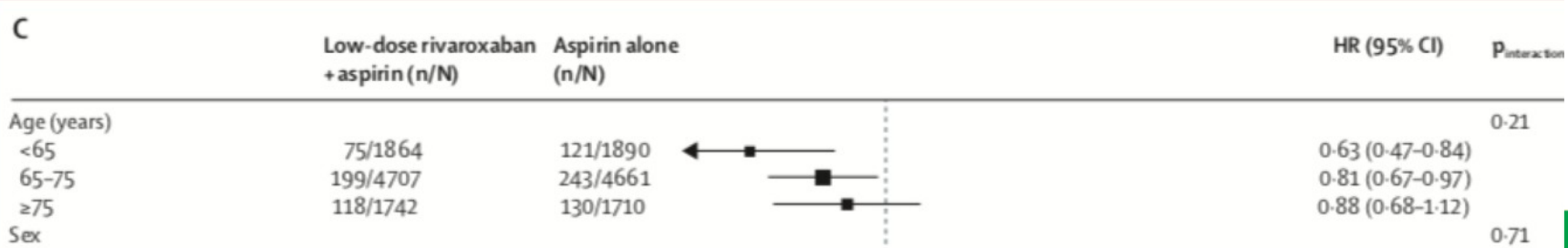
Primary outcome

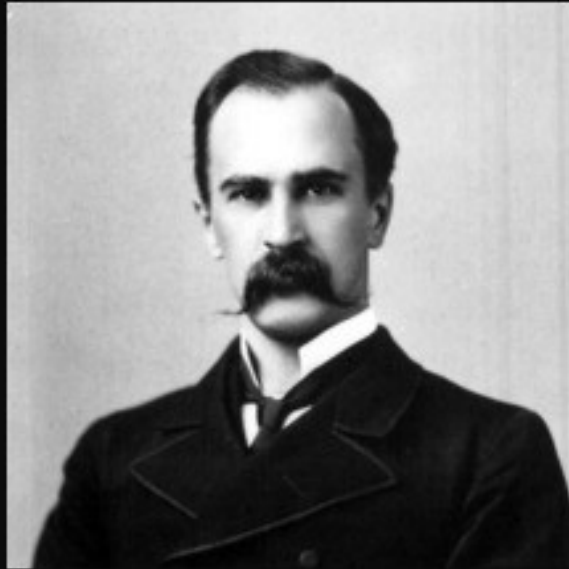


Bleeding



Net clinical benefit





Medicine is a science of  
uncertainty and an art of  
probability.

~ William Osler