

**CONFRONTO tra
CARDIOLOGI
OSPEDALIERI
e MEDICI di
MEDICINA GENERALE:**
nuovi aggiornamenti
e percorsi intorno a casi clinici

Responsabili Scientifici:
Ferdinando Varbella
Maria Milano
Riccardo Riccardi

Sabato 13 ottobre 2018

Pianezza (TO)
Gallia Hotel
Via Torino 29/A



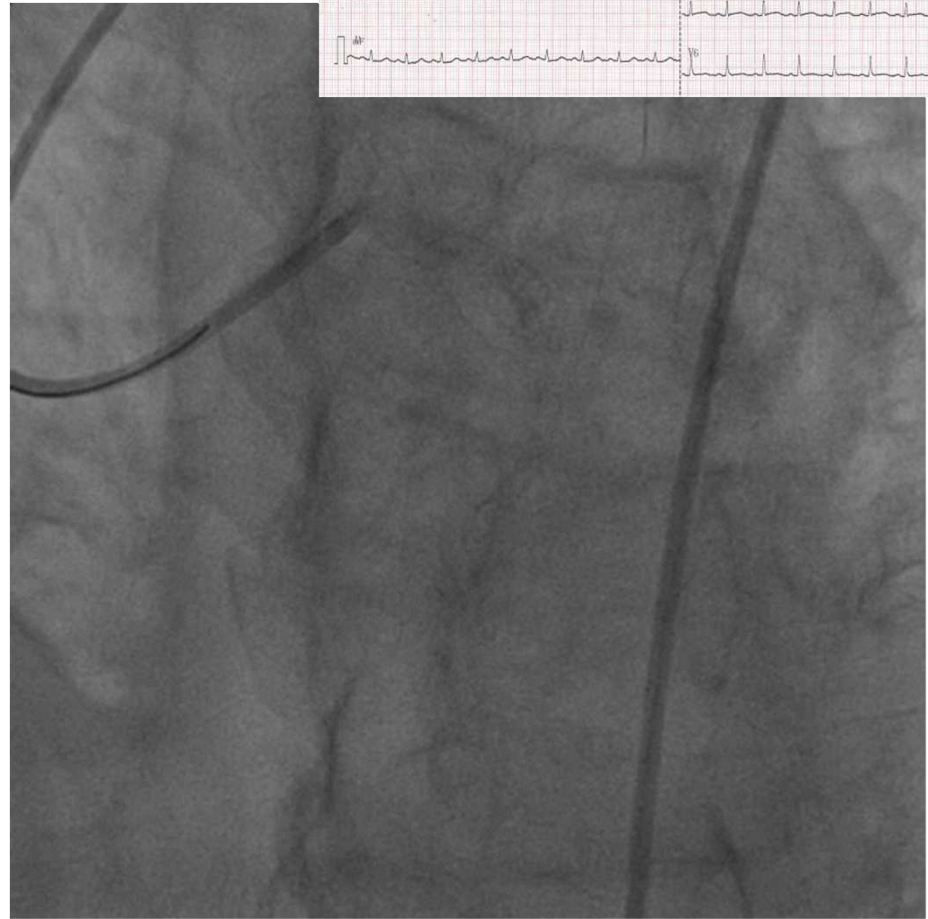
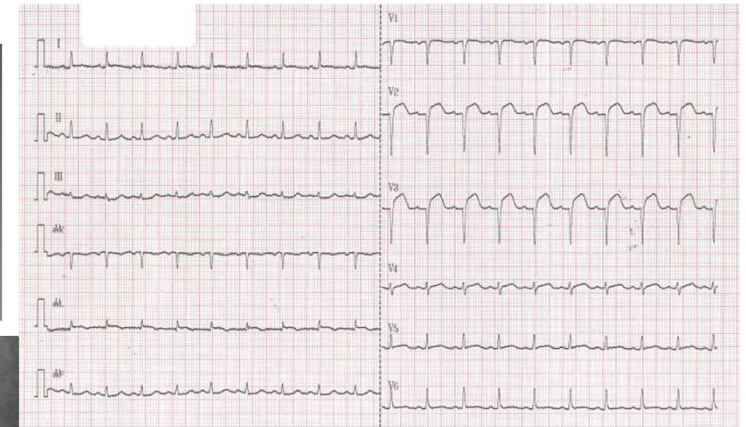
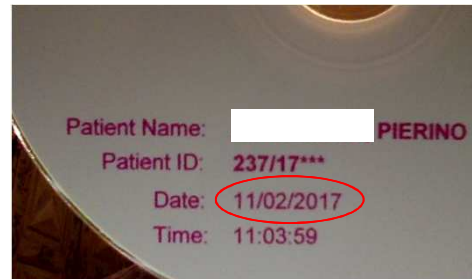
4.9 crediti ECM


TERAPIA ANTIAGGREGANTE ORALE (DAPT) POST ANGIOPLASTICA

Dott.ssa Cristina Rolfo
S.C. Cardiologia
Ospedale di Rivoli (TO)
ASLTO3

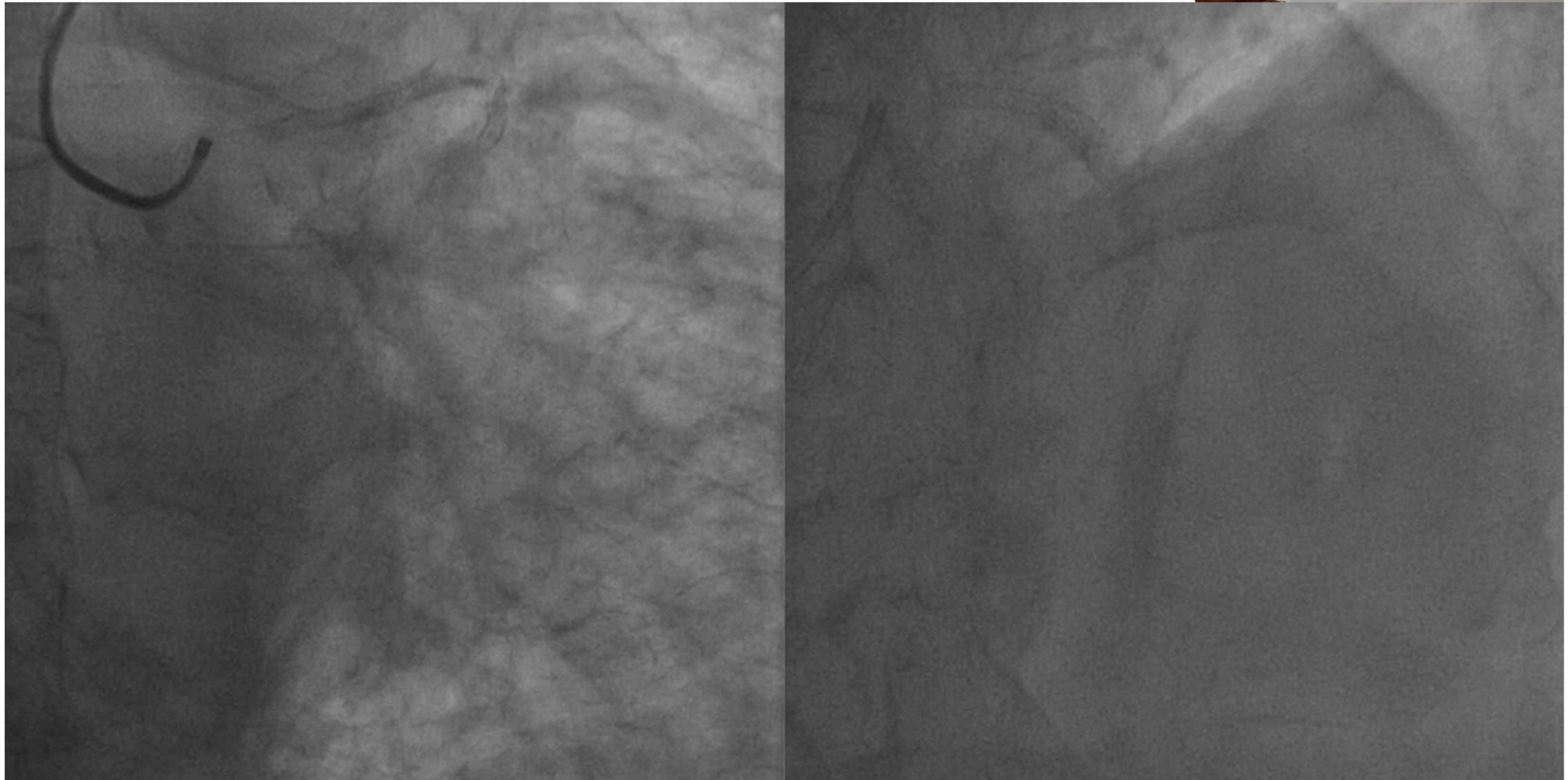


**Pierino 75 anni, diabetico,
angor da circa 2 ore
PCI primaria 70 minuti D2B**

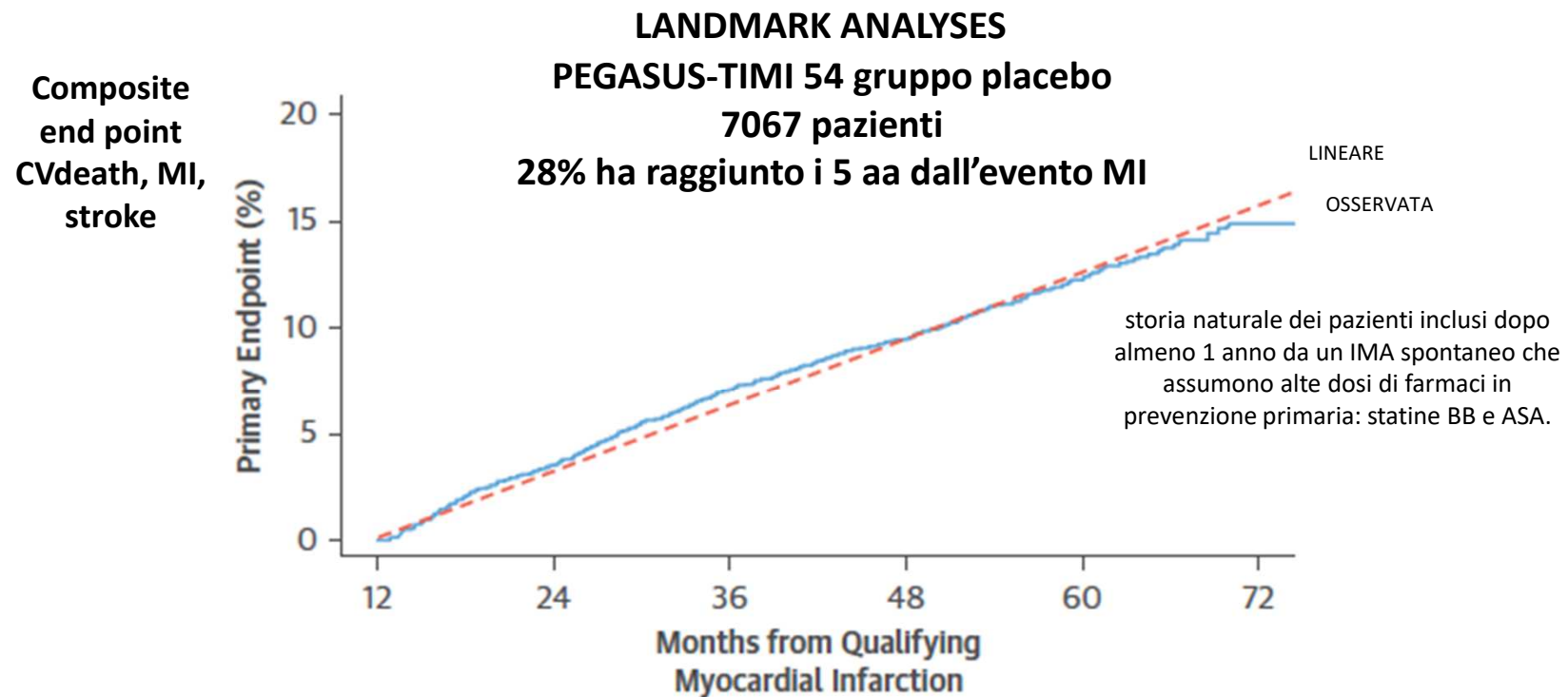


**Pierino 76 anni, diabetico
re IMA anteriore
7 gg dopo sospensione Ticagrelor**

Patient Name: [REDACTED] PIERINO
Patient ID: 324/18***
Date: 01/03/2018
Time: 06:38:32



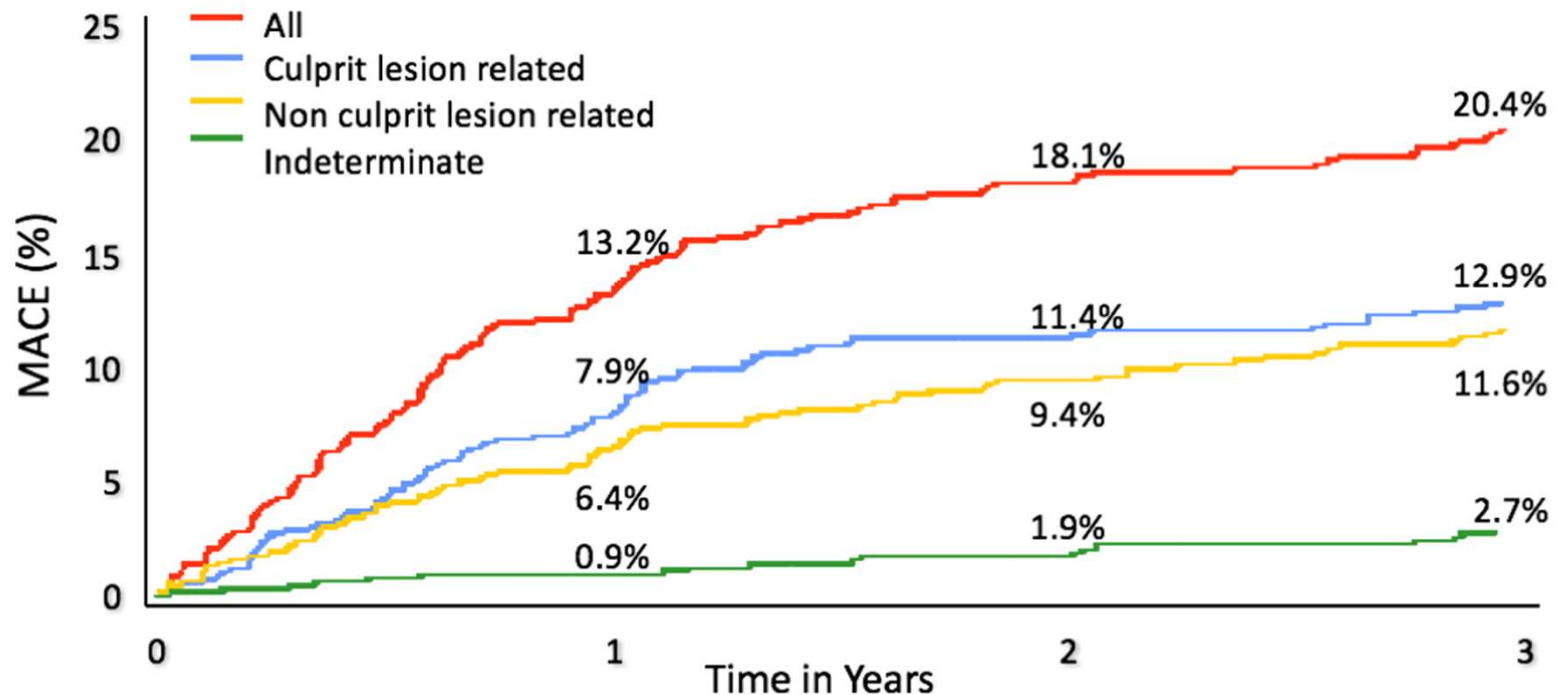
Il rischio di eventi ischemici nei pazienti che hanno avuto un infarto miocardico continua per parecchi anni senza evidenza di riduzione entro i 5 anni



Bonaca MP, Storey RF, Theroux P et al. JACC 2017 sept

META' DEGLI EVENTI NON SONO LEGATI ALLA LESIONE COLPEVOLE

PROSPECT: prospective study of 697 ACS patients undergoing three-vessel angiography and gray-scale and radiofrequency intravascular ultrasonographic imaging after PCI



Stone GW et al. New Engl J Med 2011

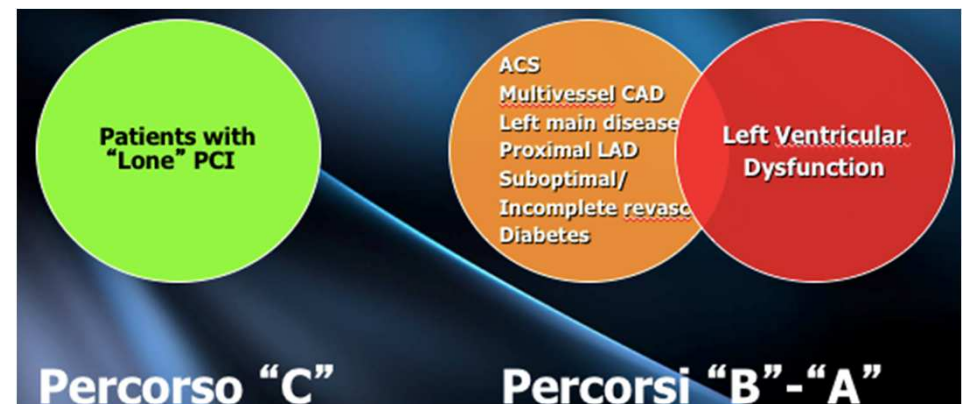
Fattori che influenzano il FOLLOW UP POST INFARTO e/o post PCI

1. Condivisione della gestione clinica del paziente (specialista-MMG)
2. Pianificazione del percorso di follow-up Pianificazione «sartoriale»
3. Razionalizzazione delle prestazioni specialistiche di follow-up (creazione di ambulatori dedicati con accorpamento prestazioni)
4. **ASPETTI FARMACOLOGICI**

**DAPT LONG TERM POST PCI
IN STEMI E NSTEMI**

ACCORCIARE O ALLUNGARE ?

Pianificazione «sartoriale»



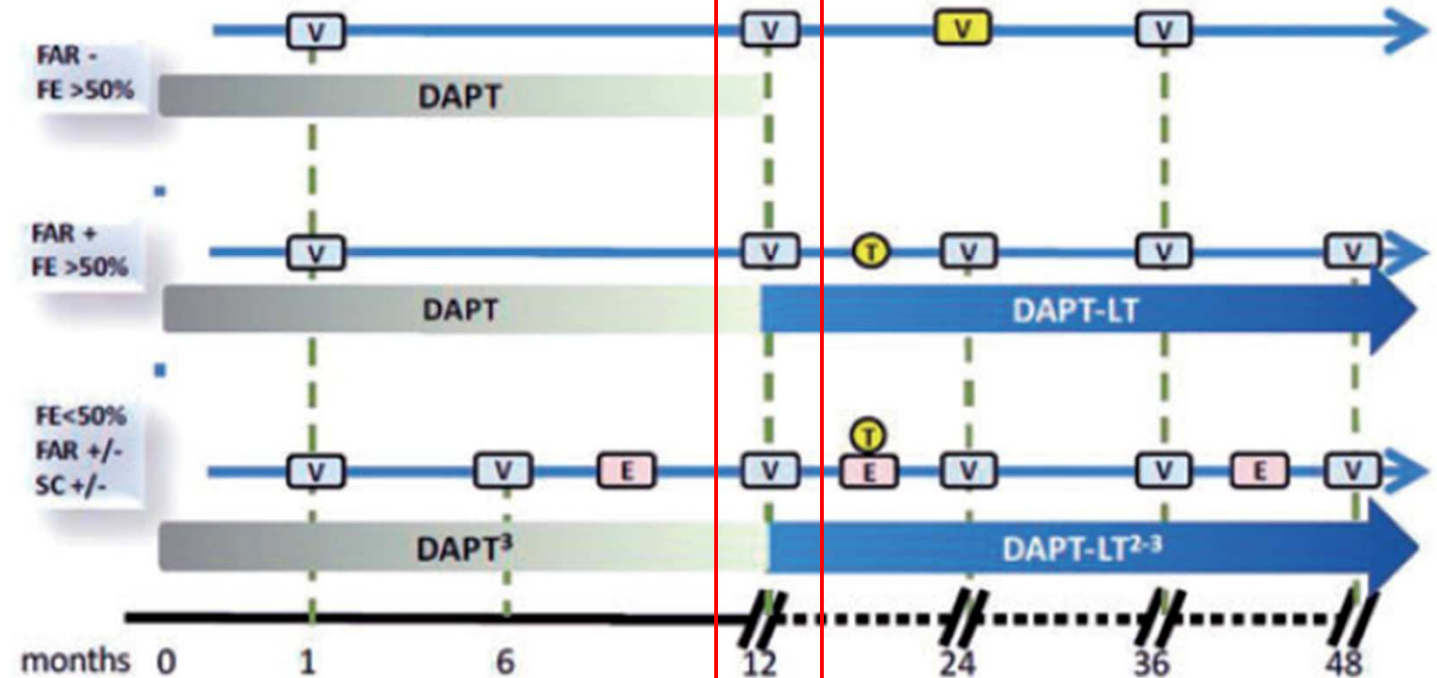
GISE, ANMCO, LombardIMA, SIMG, GICR

FAR (fattori di rischio
aggiuntivo):

- Et   ≥ 65 anni
- Diabete mellito
- Insuff. renale (clearance creatinina 60 ml/min)
- Coronaropatia multivasale
- Eventi ischemici ricorrenti

SC= scompenso cardiaco

Care pathways in the post-acute phase of STEMI and NSTEMI patients¹



- V** Cardiological visit (evaluation annual goals²)
- V** Cardiological visit (optional evaluation)
- E** Transthoracic echo-cardiogram
- T** Evaluation test for inducible ischemia (especially to take into consideration in multivessel, diabetic patients and/or with incomplete revascularization).

2015 ESC guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

The administration of P2Y₁₂ receptor inhibitors in addition to ASA is recommended for 12 months unless there are contraindications such as an excessive haemorrhage risk. I A

NSTEMI: SHORT

massima evidenza con massima incertezza

P2Y ₁₂ inhibitor administration for a <u>shorter duration of 3–6 months</u> after DES implantation <u>may be considered</u> in patients deemed at <u>high bleeding risk</u> .	IIb	A	187–189, 192
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Kim BK RESET trial J Am Coll Cardiol 2012
Gwon HC EXCELLENT trial Circulation 2012
Schulz-Schupke S ISAR SAFE trial Eur Heart J 2015

NSTEMI: LONG

massima evidenza con massima incertezza

Long-term P2Y ₁₂ inhibition			
P2Y ₁₂ inhibitor administration in addition to aspirin <u>beyond 1 year</u> may be considered after careful assessment of the ischaemic and bleeding risks of the patient.	IIb	A	184, 186

Mauri L DAPT trial N Engl J Med 2014
Bonaca MP PEGASUS trial N Engl J Med 2015

Roffi M, Patrono C, Collet JP et al. Eur Heart J 2015

2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

STEMI: SHORT/LONG

discreta evidenza con massima incertezza

	Class ^a	Level ^b
The administration of a potent P2Y ₁₂ receptor inhibitor (prasugrel or ticagrelor), or clopidogrel if the former are contraindicated or not available, is recommended before (or at most during) PCI and should be <u>continued for 12 months</u> , unless there are contraindications such as an excessive risk of bleeding.	I	A

In patients who are at high risk of severe bleeding complications, discontinuation of P2Y₁₂ inhibitor therapy after 6 months should be considered.^{332,339,340}

SHORT

IIa	B
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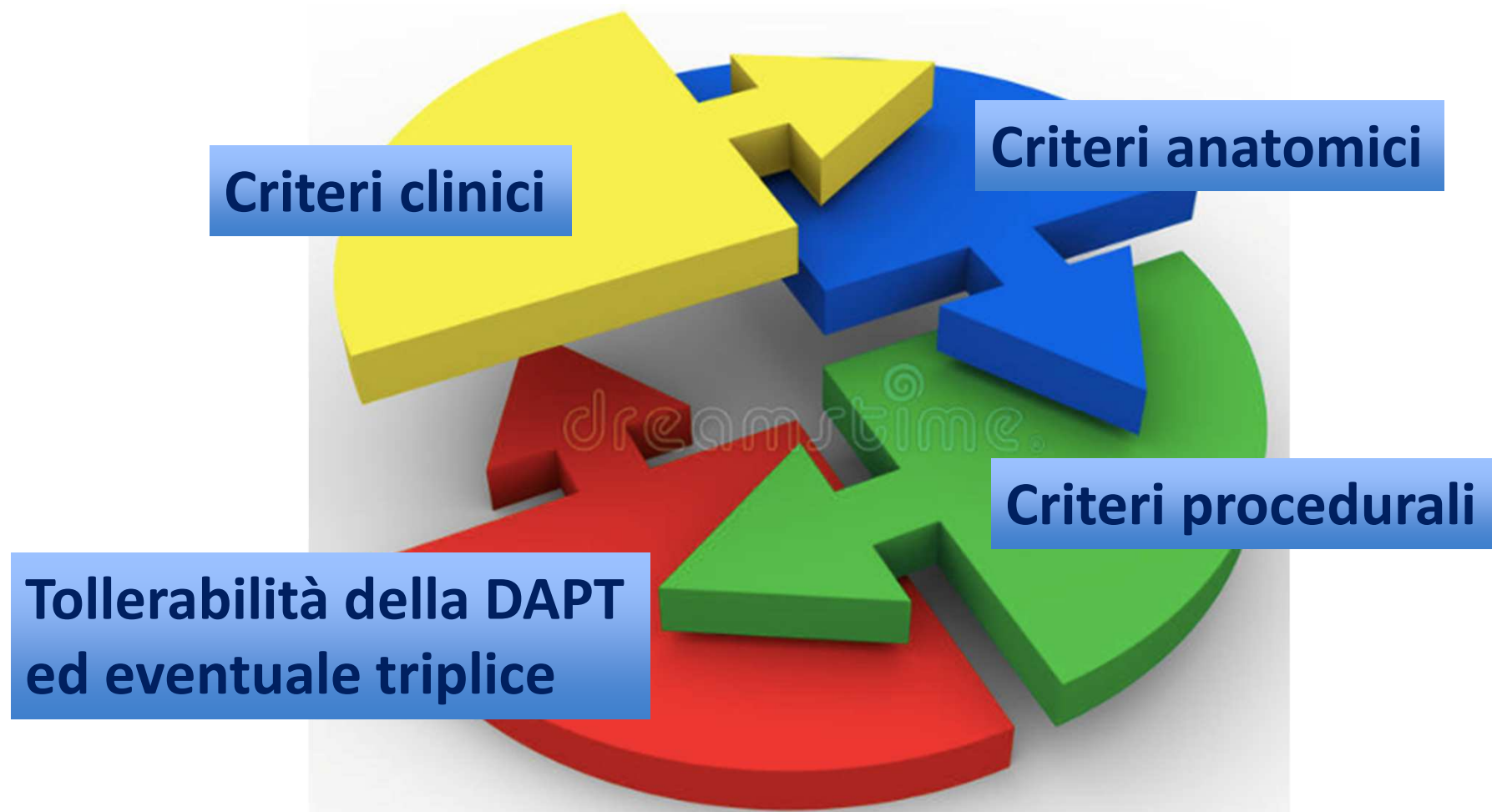
In high ischaemic-risk patients^e who have tolerated DAPT without a bleeding complication, treatment with DAPT in the form of ticagrelor 60 mg twice a day on top of aspirin for longer than 12 months may be considered for up to 3 years.³³³

LONG

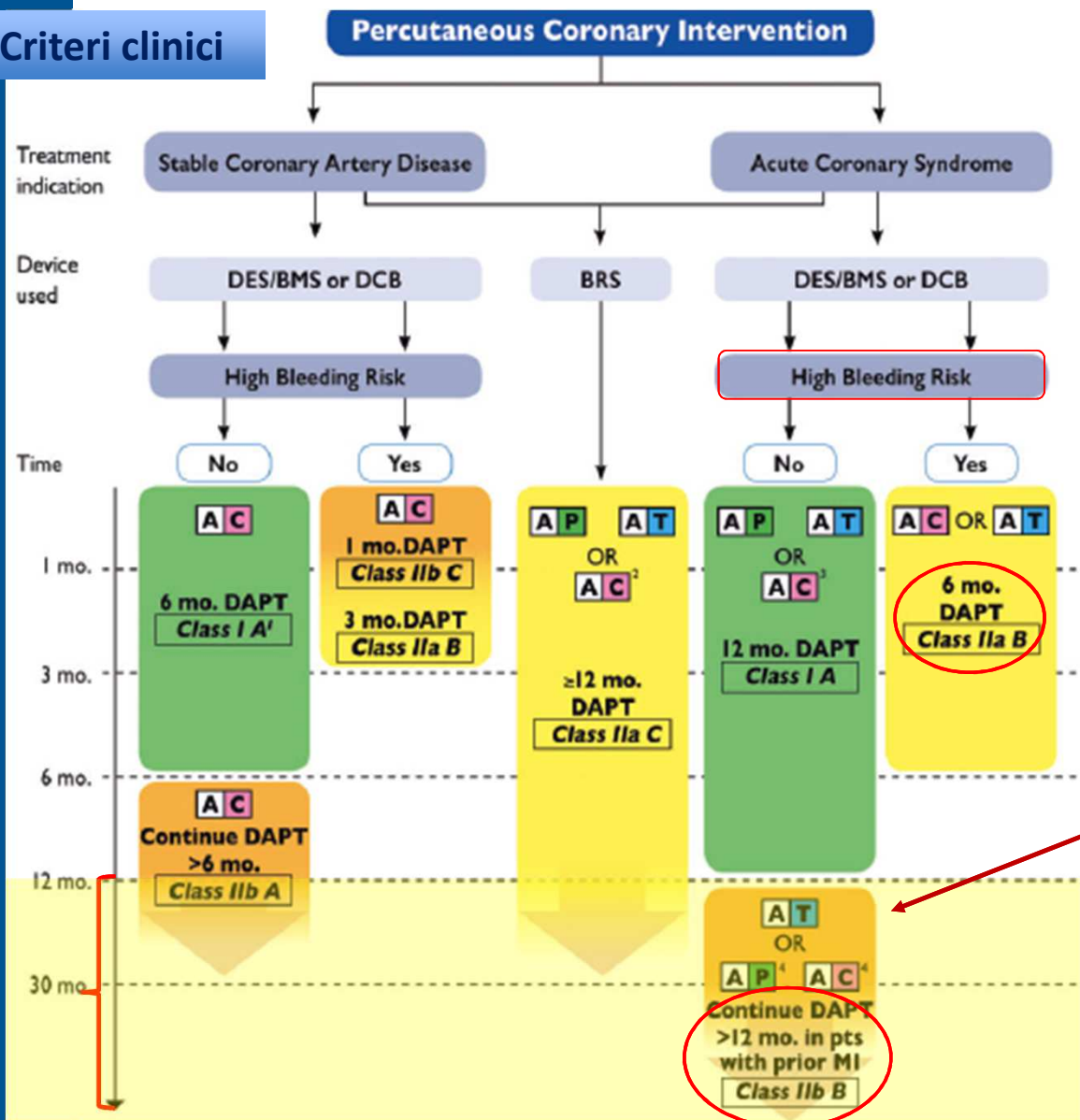
IIb	B
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Ibanez B, James S, Agewall S et al. Eur Heart J 2018

Come scegliere la durata della DAPT post angioplastica?



Criteri clinici



2017 ESC focused update on dual antiplatelet therapy in coronary artery disease developed in collaboration with EACTS

DAPT VALGIMIGLI

dubbia evidenza con massima incertezza

In patients with ACS and stent implantation who are at high risk of bleeding (e.g. PRECISE-DAPT ≥ 25), discontinuation of P2Y₁₂ inhibitor therapy after 6 months should be considered.^{13,18,143}

IIa B

In patients with ACS who have tolerated DAPT without a bleeding complication, continuation of DAPT for longer than 12 months may be considered.^{26,139}

IIb A

In patients with MI and high ischaemic risk^c 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.^{29,115,142}

IIb B



A = Aspirin **C** = Clopidogrel **P** = Prasugrel **T** = Ticagrelor

Valgimigli M, Bueno H, Byrne RA et al. Eur Heart J 2017

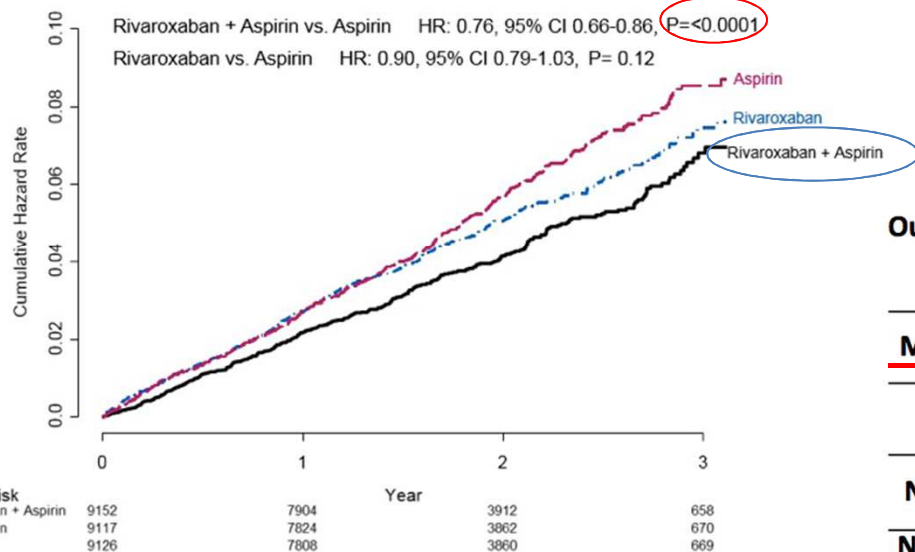


Rivaroxaban with or without Aspirin in Stable Cardiovascular Disease

John W. Eikelboom, M.B., B.S., Stuart J. Connolly, M.D., Jackie Bosch, Ph.D., Gilles R. Dagenais, M.D., Robert G. Hart, M.D., Olga Shestakovska, M.Sc., Rafael Diaz, M.D., Marco Alings, Ph.D., Eva M. Lonn, M.D., Sonia S. Anand, M.D., Petr Widimsky, M.D., Masatsugu Hori, M.D., et al., for the COMPASS Investigators*

The study was stopped for superiority of the rivaroxaban-plus-aspirin group after a mean follow-up of 23 months

Primary: CV death, stroke, MI



COMPASS design

Stable cardiovascular disease (CAD or PAD)



2,200 with a primary outcome event (CV death, stroke or myocardial infarction)
602 centres, 33 countries

Major bleeding



Outcome	R + A N=9,152	R N=9,117	A N=9,126	Rivaroxaban + Aspirin vs. Aspirin		Rivaroxaban vs. Aspirin	
	N (%)	N (%)	N (%)	HR (95% CI)	P	HR (95% CI)	P
Major bleeding	288 (3.1%)	255 (2.8%)	170 (1.9%)	1.70 (1.40-2.05)	<0.0001	1.51 (1.25-1.84)	<0.0001
Fatal	15 (0.2%)	14 (0.2%)	10 (0.1%)	1.49 (0.67-3.33)	0.32	1.40 (0.62-3.15)	0.41
Non fatal ICH*	21 (0.2%)	32 (0.4%)	19 (0.2%)	1.10 (0.59-2.04)	0.77	1.69 (0.96-2.98)	0.07
Non-fatal other critical organ*	42 (0.5%)	45 (0.5%)	29 (0.3%)	1.43 (0.89-2.29)	0.14	1.57 (0.98-2.50)	0.06

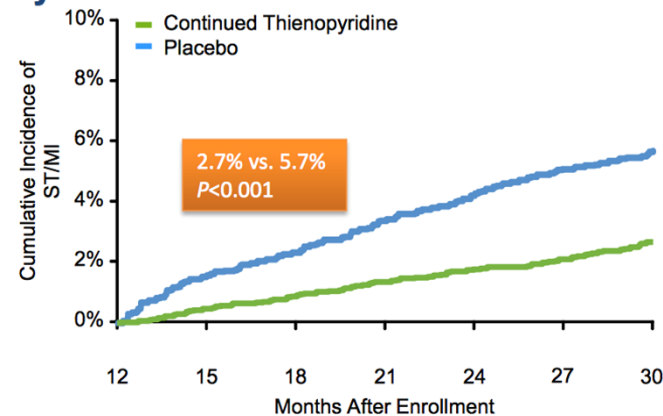
Criteria clinici + anatomici

CRITERI YEH: DAPT SCORE

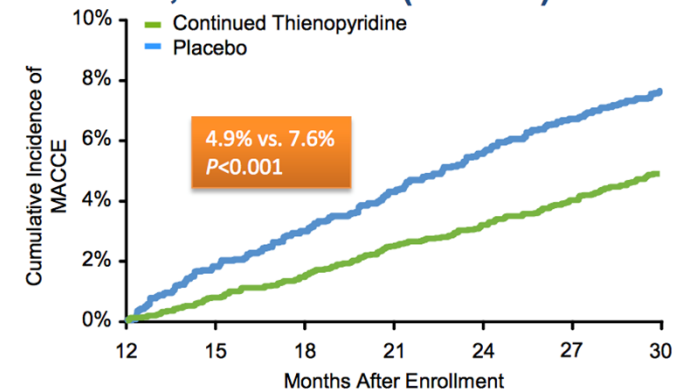
5900 pz con score > 2

Variable	Points
Patient Characteristic	
Age	
≥ 75	-2
65 - <75	-1
< 65	0
Diabetes Mellitus	1
Current Cigarette Smoker	1
Prior PCI or Prior MI	1
CHF or LVEF < 30%	2
Index Procedure Characteristic	
MI at Presentation	1
Vein Graft PCI	2
Stent Diameter < 3mm	1

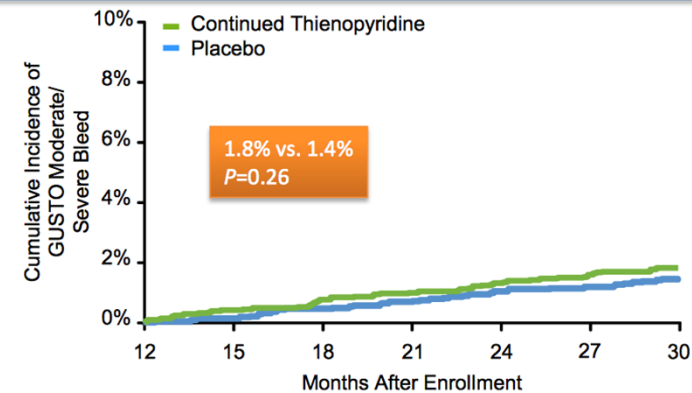
Myocardial Infarction or Stent Thrombosis



Death, MI or Stroke (MACCE)



GUSTO Moderate/ Severe Bleeding



Yeh RW et al. JAMA 2016

PRECISE-DAPT: SCORE RISCHIO EMORRAGICO in pazienti in DAPT

5 variabili

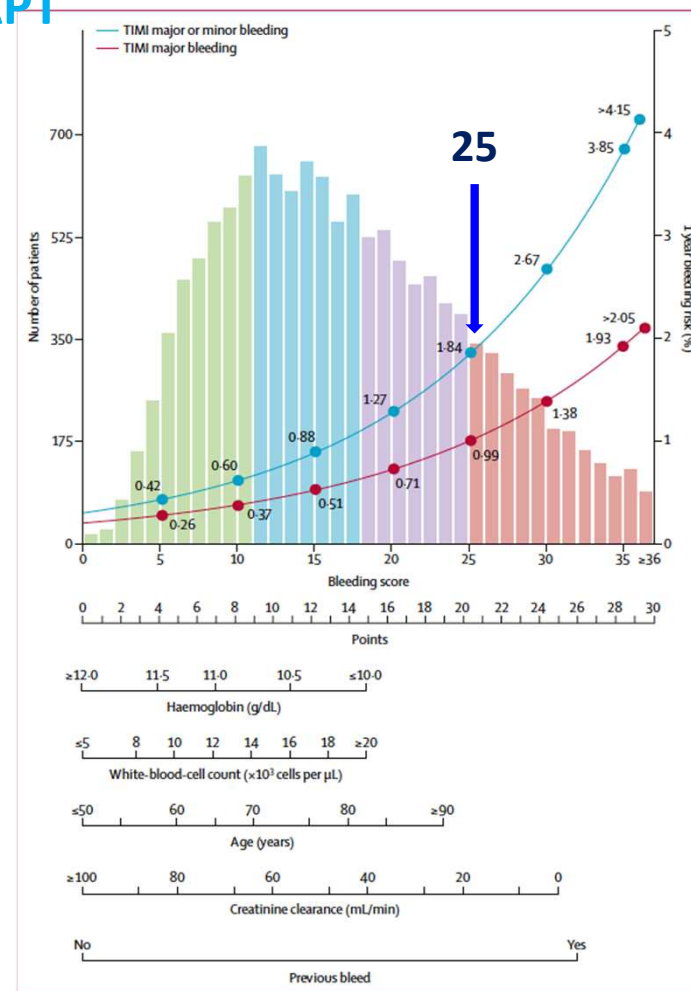
	Hazard ratio (95% CI)	p value
1 Age (for each increase of 10 years)	1.34 (1.11-1.48)	0.005
2 Previous bleeding	4.14 (1.22-14.02)	0.023
3 White-blood-cell count (for each increase of 10^3 cells per μL)	1.06 (0.99-1.13)	0.078
4 Haemoglobin at baseline (for each increase of 1 g/dL)	0.67 (0.53-0.84)	0.001
5 Creatinine clearance (for each increase of 10 mL/min)	0.90 (0.82-0.99)	0.004

Age was truncated above 90 years and below 50 years. Haemoglobin at baseline was truncated above 12 g/dL and below 10 g/dL. Creatinine clearance was truncated above 100 mL/min. White-blood-cell count was truncated above 20×10^3 cells per μL and below 5×10^3 cells per μL .

Table 1: Multivariable analysis for out-of-hospital Thrombosis in Myocardial Infarction major or minor bleeding, study stratified with backward selection at an α level of 0.1

by score quartiles (very low risk: score ≤ 10 ; low risk: score 11–17; moderate risk: score 18–24; and high risk risk: score ≥ 25 ; figure 2).

(<http://precisedaptscore.com/predapt>)



Costa F, Valgimigli M et al. Lancet 2017

Criteria clinici

CRITERI PEGASUS DI ALTO RISCHIO TROMBOTICO E BASSO EMORRAGICO

KEY INCLUSION

- Age ≥ 50 years
- At least 1 of the following:
 - Age ≥ 65 years
 - Diabetes requiring medication
 - 2nd prior MI (>1 year ago)
 - Multivessel CAD
 - CrCl <60 mL/min
- Tolerating ASA and able to be dosed at 75-150 mg/d

KEY EXCLUSION

- Planned use of P2Y₁₂ antagonist, dipyridamole, cilostazol, or anticoag
- Bleeding disorder
- History of ischemic stroke, ICH, CNS tumor or vascular abnormality
- Recent GI bleed or major surgery
- At risk for bradycardia
- Dialysis or severe liver disease

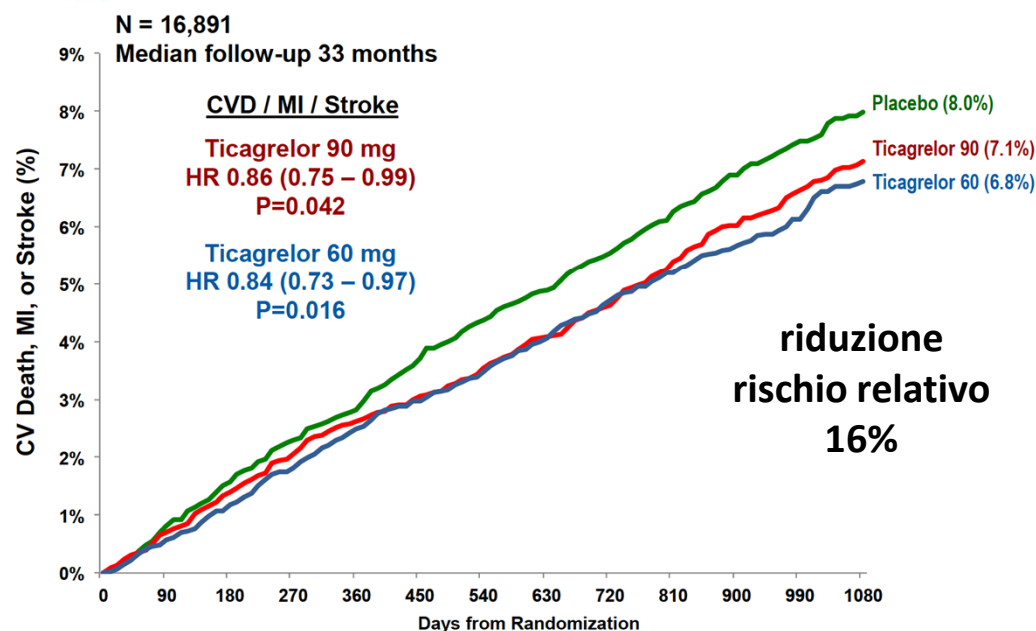
21.162 patients (post PCI e post ACS (STEMI e NSTEMI))

Bonaca MP, Bhatt DL, Cohen M et al. N Engl J Med 2015

RISULTATI PEGASUS PREGRESSO INFARTO E PCI CON STENT



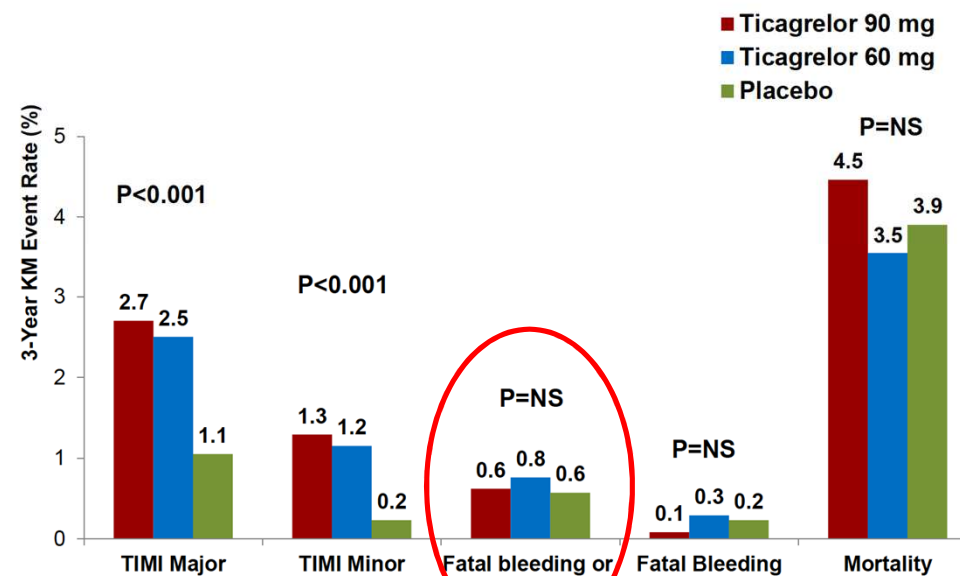
MACE in Patients with Prior PCI/Stent



RISULTATI PEGASUS PREGRESSO INFARTO E PCI CON STENT



Safety in Patients with Prior PCI



Bonaca MP, Bhatt DL, Cohen M et al. N Engl J Med 2015

PEGASUS LANDMARK ANALYSES

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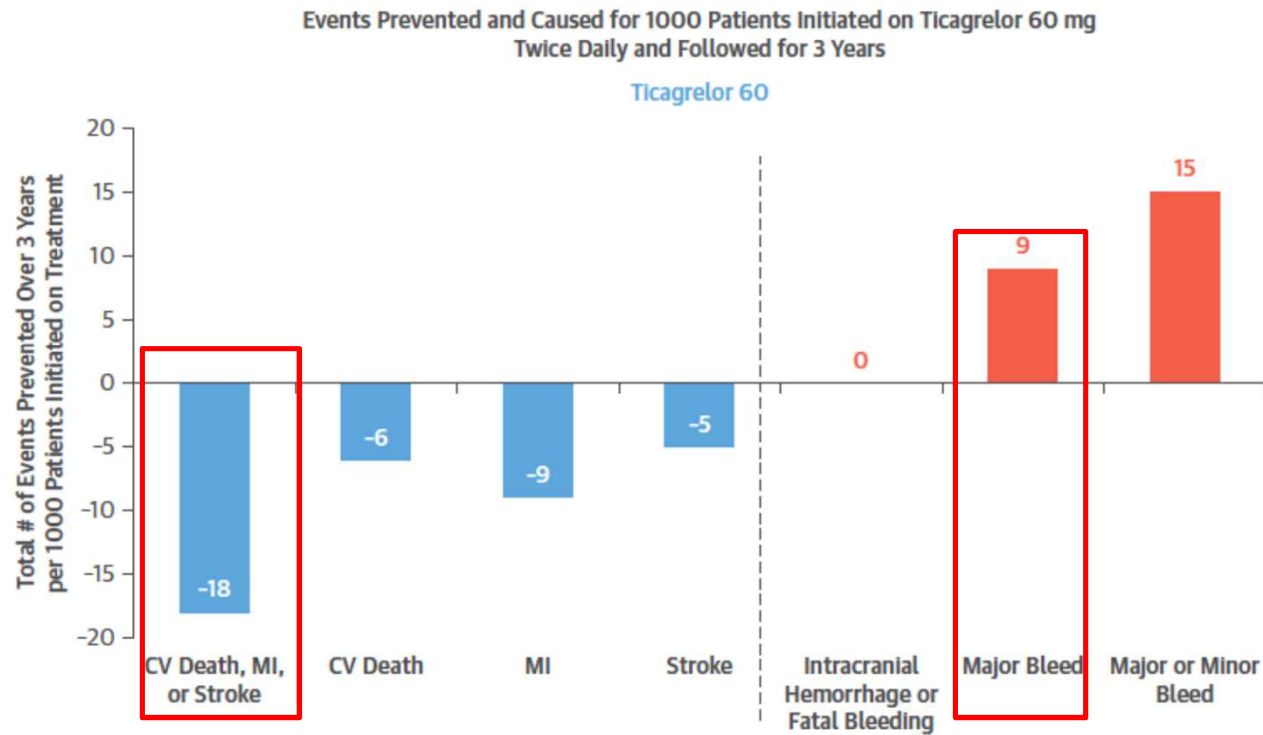
VOL. 70, NO. 11, 2017
ISSN 0735-1097/\$36.00
<http://dx.doi.org/10.1016/j.jacc.2017.07.768>

Efficacy and Safety of Ticagrelor
Over Time in Patients With Prior MI
in PEGASUS-TIMI 54



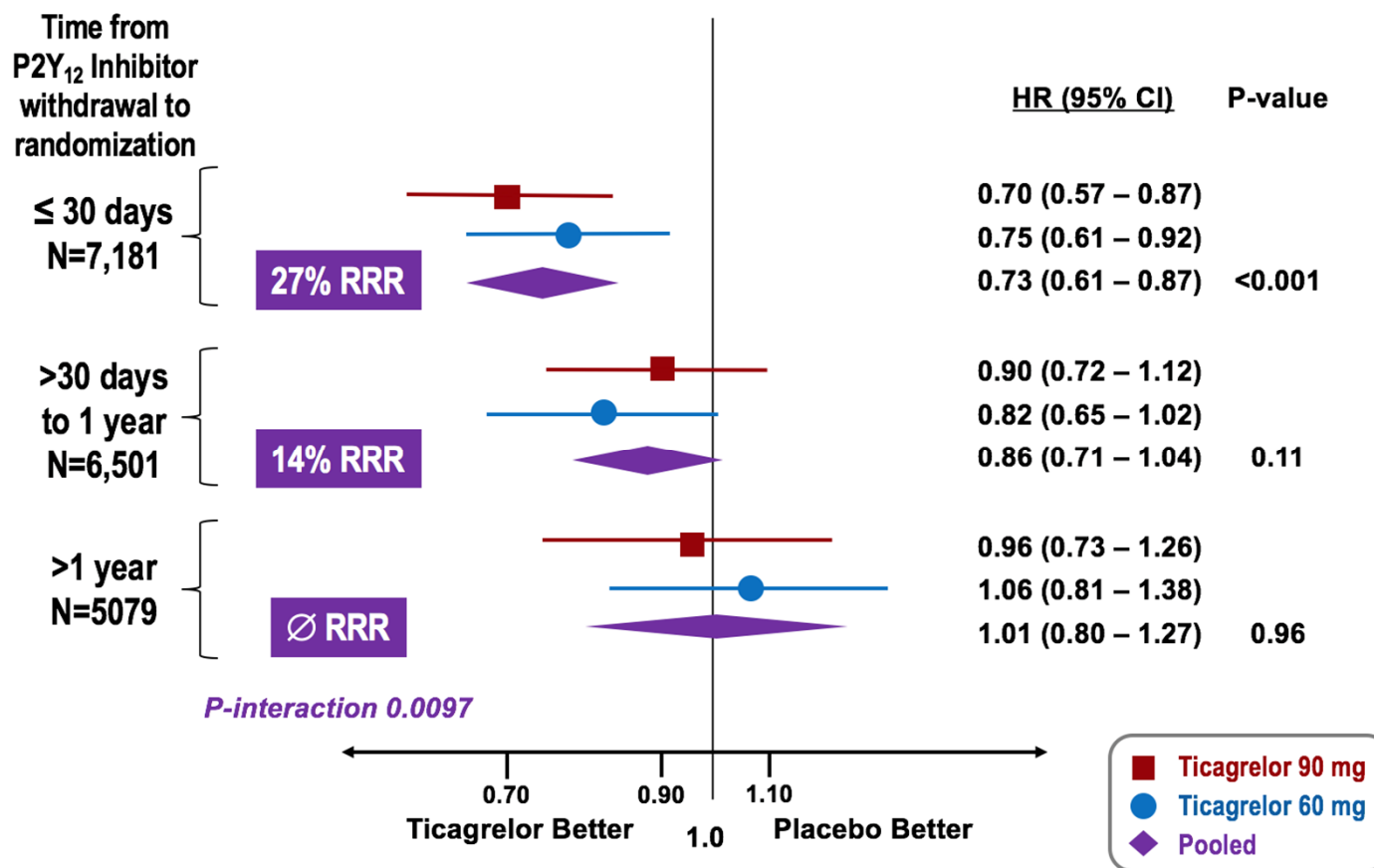
**PER OGNI 1000 PAZIENTI TRATTATI CON TICA 60 X 2 SI
PREVENGONO 18 EVENTI ISCHEMICI AL PREZZO DI 9
EVENTI EMORRAGICI NON FATALI NE' INTRACRANICI**

FIGURE 2 Total Events Prevented and Caused



Bonaca MP, Storey RF, Theroux P et al. JACC 2017 sept

MEGLIO NON INTERROMPERE LA DAPT



Bonaca MP, Bhatt DL, Cohen M et al. N Engl J Med 2015

Bonaca MP, Storey RF, Theroux P et al. JACC 2017 sept

Criteri anatomici



<http://www.accessdata.fda.gov>

	Ticagrelor 60 mg N=3676		Placebo N=3586				
Type of risk factors	n/N	ER ^a	n/N	ER ^a	HR	95CI	p_value
Age≥65	69 / 1341	1.99	82 / 1353	2.33	0.85	(0.62, 1.17)	0.3215
CRCL<60	1 / 26	1.49	1 / 29	1.29	1.09	(0.07, 17.49)	0.9493
Diabetes requiring Tx	35 / 581	2.32	36 / 523	2.70	0.86	(0.54, 1.36)	0.5150
>1 MI	12 / 157	3.06	19 / 170	4.40	0.69	(0.33, 1.42)	0.3088
Multivessel CAD	63 / 1571	1.57	86 / 1511	2.26	0.70	(0.50, 0.96)	0.0286

Bonaca MP, Bhatt DL, Cohen M et al. N Engl J Med 2015

Left main or proximal left anterior descending coronary artery disease location identifies high-risk patients deriving potentially greater benefit from prolonged dual antiplatelet therapy duration

Francesco Costa¹, MD; Marianna Adamo¹, MD; Sara Ariotti¹, MD; Giuseppe Ferrante², MD, PhD; Eliano Pio Navarese³, MD, PhD; Sergio Leonardi⁴, MD; Hector Garcia-Garcia⁵, MD, PhD; Pascal Vranckx⁶, MD, PhD; Marco Valgimigli^{1*}, MD, PhD

Costa F, Adamo M, Ariotti S et al. Eurointervention 2016

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VOL. 68, NO. 17, 2016
ISSN 0735-1097/\$36.00
<http://dx.doi.org/10.1016/j.jacc.2016.07.760>

Efficacy and Safety of Dual Antiplatelet Therapy After Complex PCI



Gennaro Giustino, MD,^{a,b,c} Alaide Chieffo, MD,^c Tullio Palmerini, MD,^d Marco Valgimigli, MD, PhD,^e Fausto Feres, MD,^f Alexandre Abizaid, MD,^f Ricardo A. Costa, MD,^f Myeong-Ki Hong, MD, PhD,^g Byeong-Keuk Kim, MD, PhD,^g Yangsoo Jang, MD, PhD,^g Hyo-Soo Kim, MD, PhD,^h Kyung Woo Park, MD,^h Martine Gilard, MD,ⁱ Marie-Claude Morice, MD,^j Fadi Sawaya, MD,^j Gennaro Sardella, MD,^k Philippe Genereux, MD,^{b,l} Bjorn Redfors, MD, PhD,^b Martin B. Leon, MD,^{c,l} Deepak L. Bhatt, MD, MPH,^m Gregg W. Stone, MD,^{b,l} Antonio Colombo, MD^c

Giustino G, Chieffo A, Palmerini T et al. JACC 2016

Criteria anatomici

CRITERI "COSTA" (LM/pLAD)

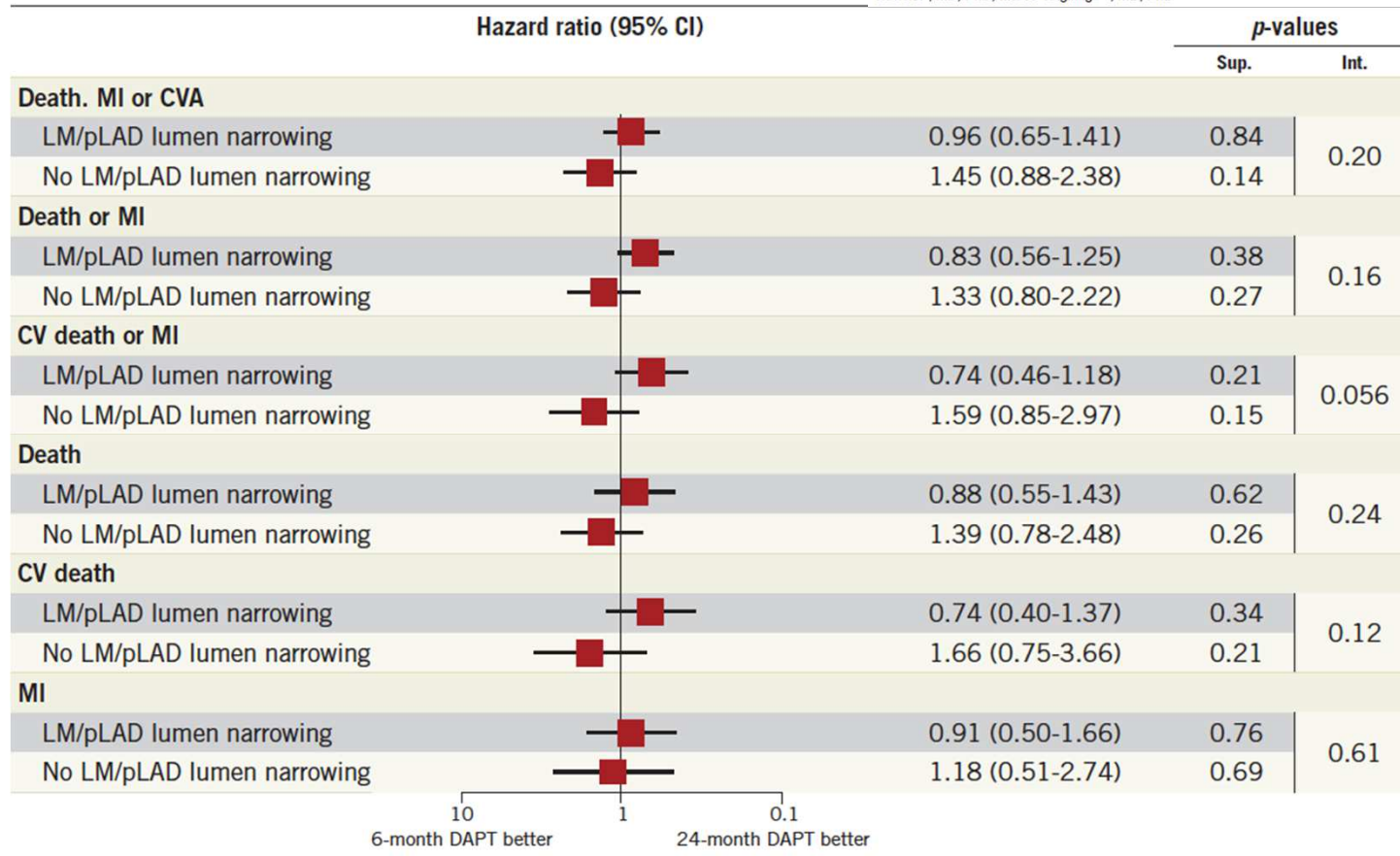
Left main or proximal left anterior descending coronary artery disease location identifies high-risk patients deriving potentially greater benefit from prolonged dual antiplatelet therapy duration

Published on 12 February 2016

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Francesco Costa¹, MD; Marianna Adamo¹, MD; Sara Ariotti¹, MD; Giuseppe Ferrante², MD, PhD; Eliano Pio Navarese³, MD, PhD; Sergio Leonardi⁴, MD; Hector Garcia-Garcia⁵, MD, PhD; Pascal Vranckx⁶, MD, PhD; Marco Valgimigli^{1*}, MD, PhD

EuroIntervention
Official Journal of EuroPCR and the European Association
of Percutaneous Cardiovascular Interventions (EAPCI)



Valgimigli M, Campo G, Monti M et al. Circulation 2012
Costa F, Adamo M, Ariotti S et al. Eurointervention 2016

Criteri anatomici e procedurali

CRITERI "GIUSTINO"

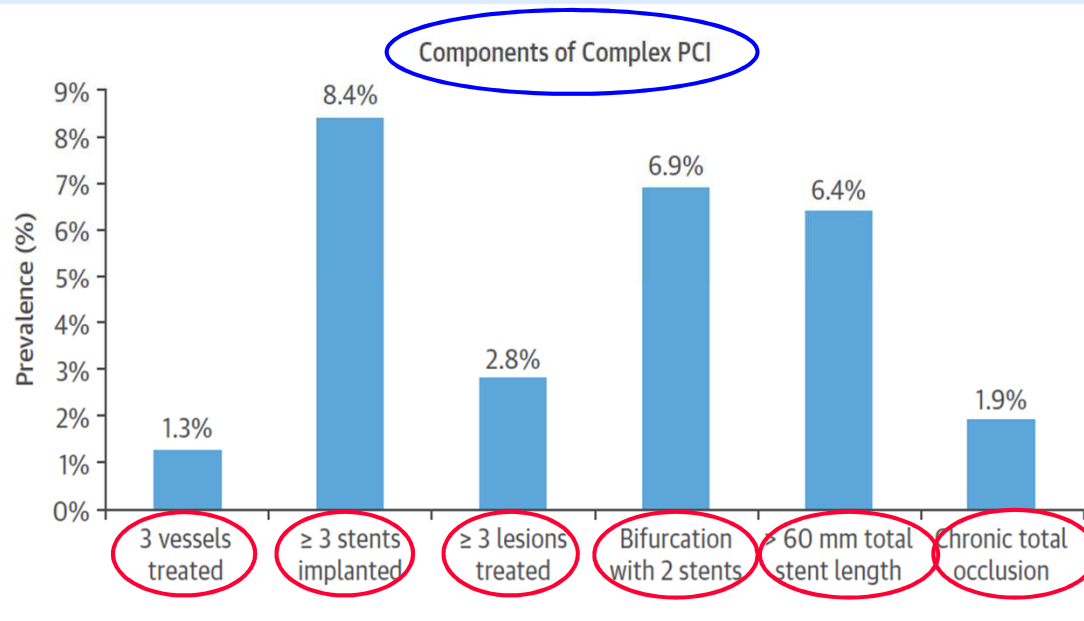
post hoc patient-level pooled analysis > 9.000 of 6 randomized controlled trials (RCTs)

SHORT (3-6m) VS LONG (>12m)

COMPLEX VS NON COMPLEX PCI

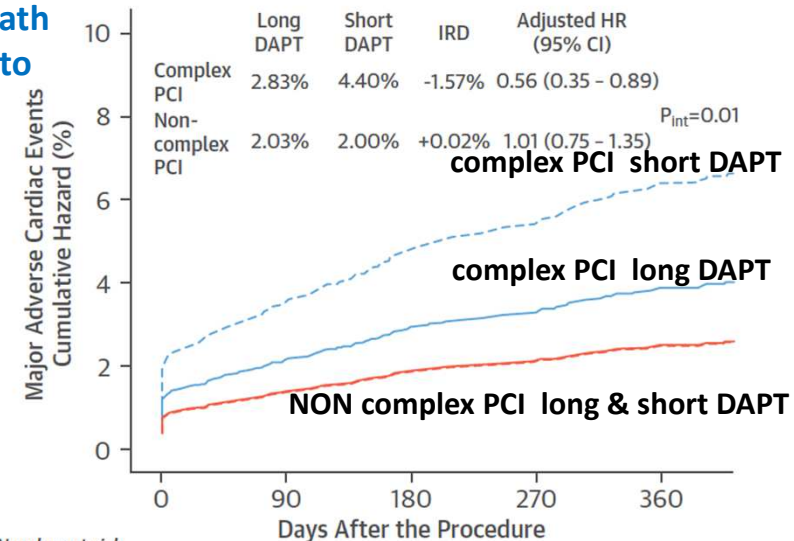
18% sono complex PCI ; 45% ACS POST IM

FIGURE 1 Prevalence and Overlap of Complex PCI Components



A

CV death
infarto
ST

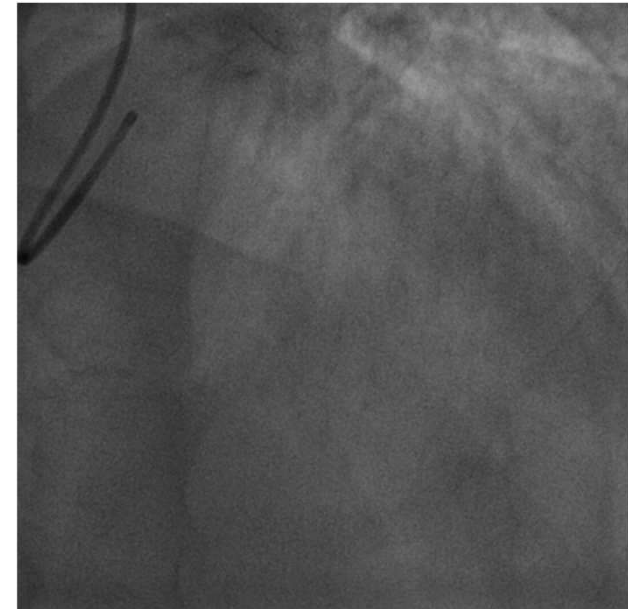


Number at risk					
Non-complex PCI - Short DAPT	3938	3875	3816	3782	3511
Non-complex PCI - Long DAPT	3932	3874	3824	3794	3520
Complex PCI - Short DAPT	802	777	768	759	668
Complex PCI - Long DAPT	840	816	805	796	693

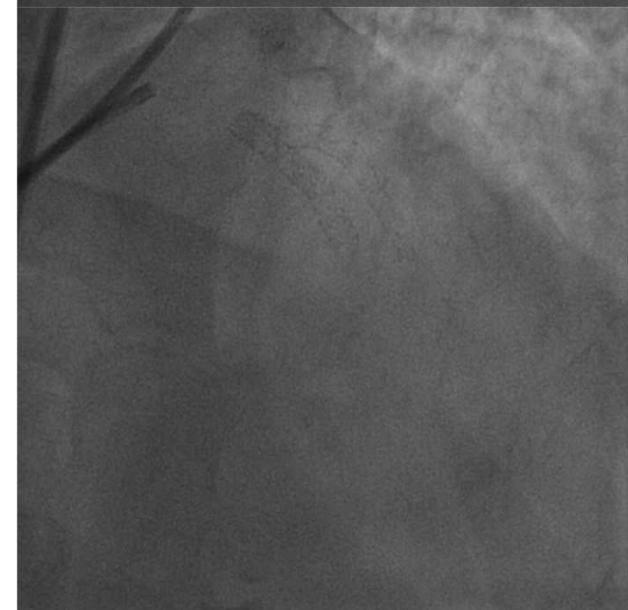
Giustino G, Chieffo A, Palmerini T et al. JACC 2016

Criteri anatomici

Pre PTCA



Post PTCA stenting



CONCLUSIONI

INTUITIVE PHYSICIAN SCORE:

“how to act when you have a patient in front of you”



CONCLUSIONI

INTUITIVE PHYSICIAN SCORE:

“how to act when you have a patient in front of you”

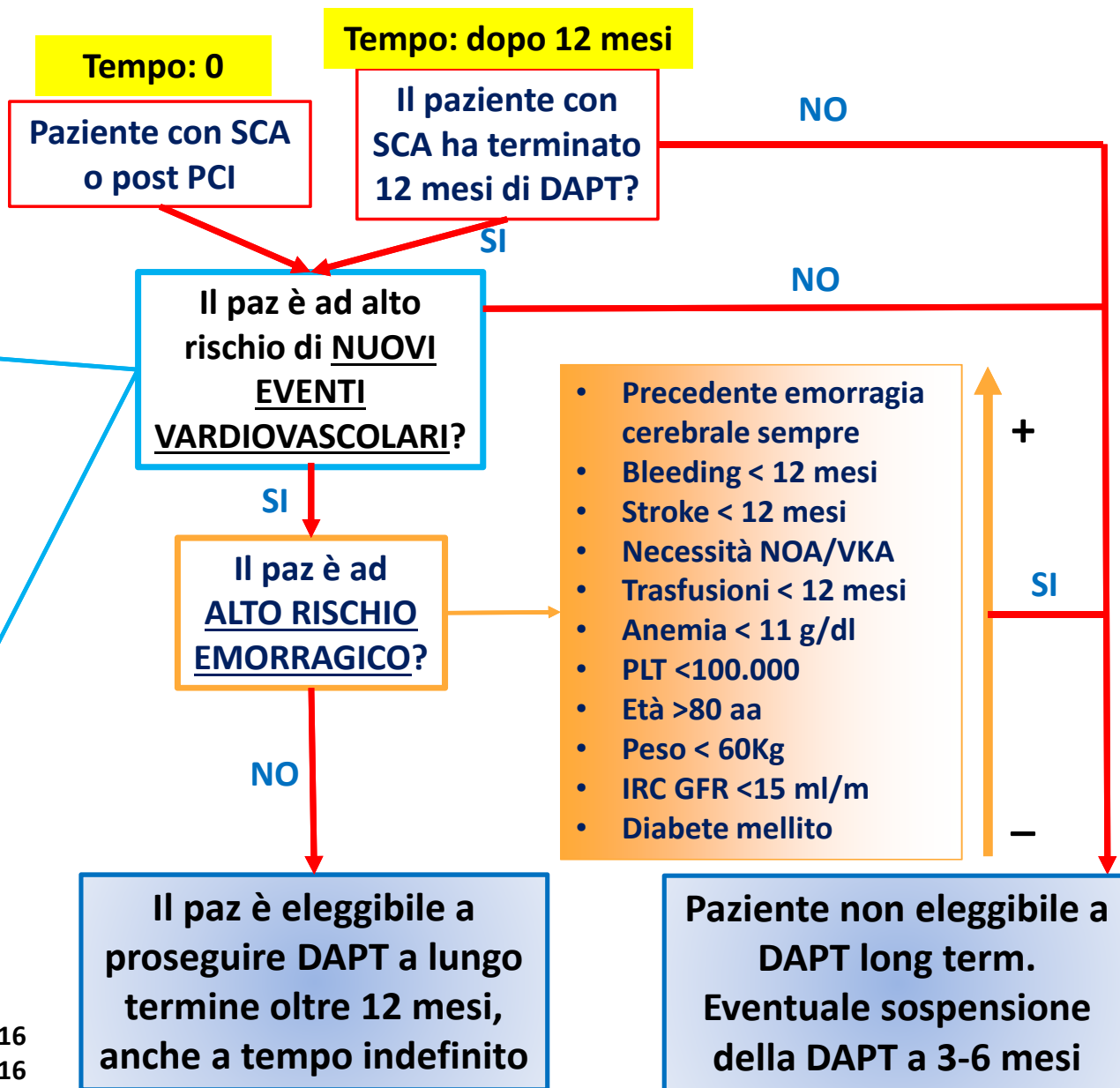
RISCHIO TROMBOTICO CLINICO

- Età > 65 anni
- Diabete
- Eventi MI multipli/trombosi stent
- GFR < 50 ml/min
- PCI eseguita per ACS (STEMI/NSTEMI)
- EF < 30 %
- Cancro < 3 anni

RISCHIO TROMBOTICO ANATOMICO

- Pregressa PCI
- Stent sotto-espansi, piccoli <3 calibro, biforcazioni, lunghezza, SVG
- Prima generazione DES
- **COSTA PRODIGY:**
Tronco Comune o DA prox
- **GIUSTINO:**
3 Vasi, 3 stent, 3 lesioni, biforcazioni
2 DES, > 60 mm totali DES, CTO

Collet JP, Montalescot G et al Editorial PARIS JACC 2016
Fuster V audio summary JACC 2016





GRAZIE PER L'ATTENZIONE

