SALA CONCORDIA B

URGENZE CARDIOVASCOLARI

Moderatori: **Francesco Rocco Pugliese, Furio Colivicchi** (ANMCO)

Leonardo De Luca

La sindrome coronarica acuta: problemi non risolti

XII congresso nazionale
simeu
RICCIONE 13-15 MAGGIO 2022

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URGENZE CARDIOVASCOLARI

RICCIONE, 13-15 Maggio 2022

La sindrome coronarica acuta: problemi non risolti

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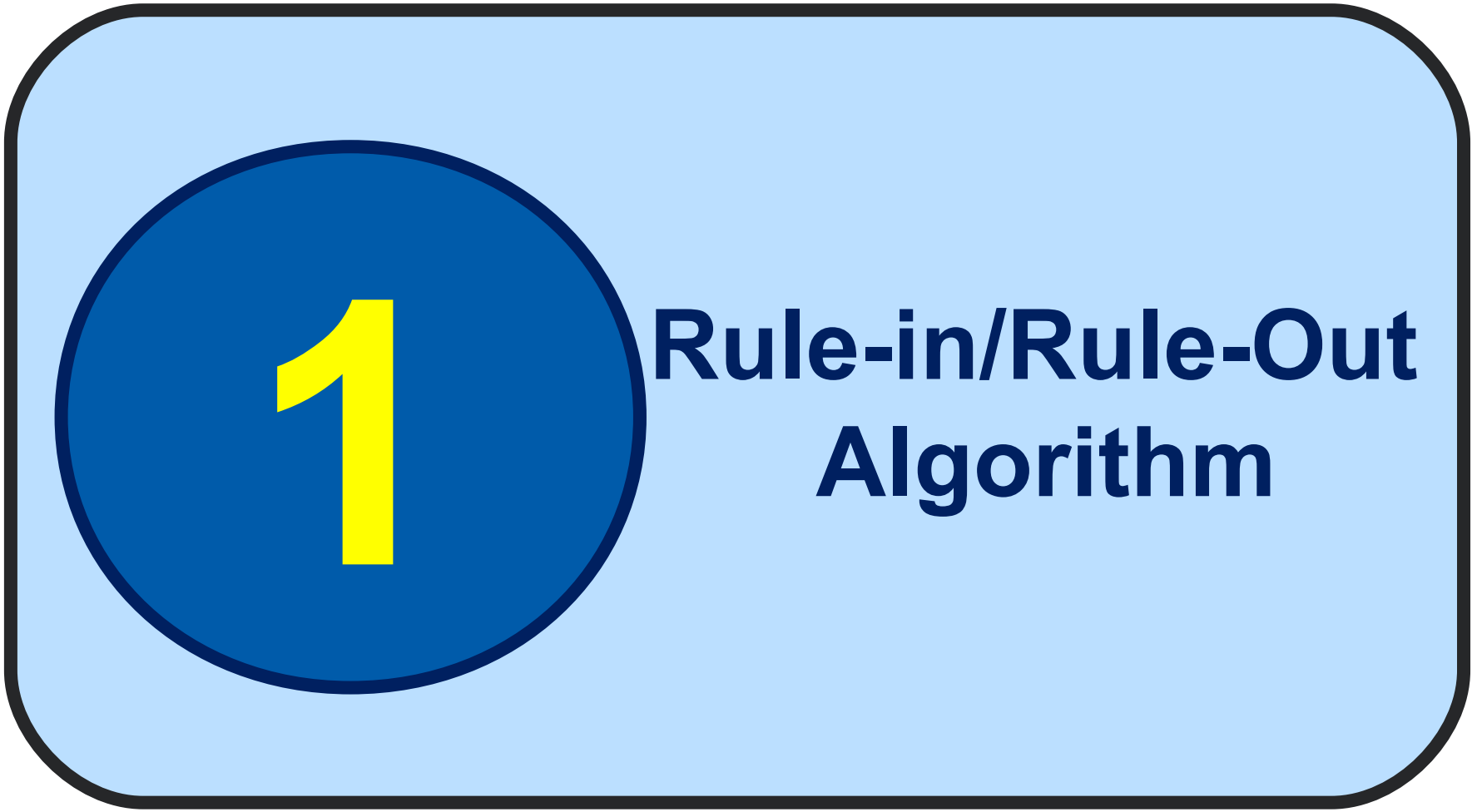
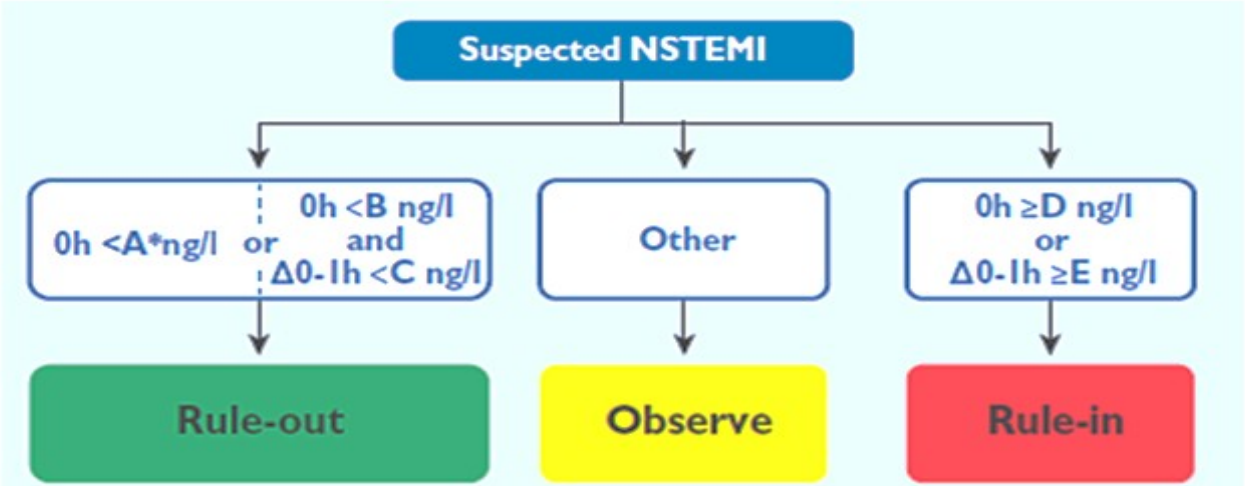

1
Rule-in/Rule-Out
Algorithm

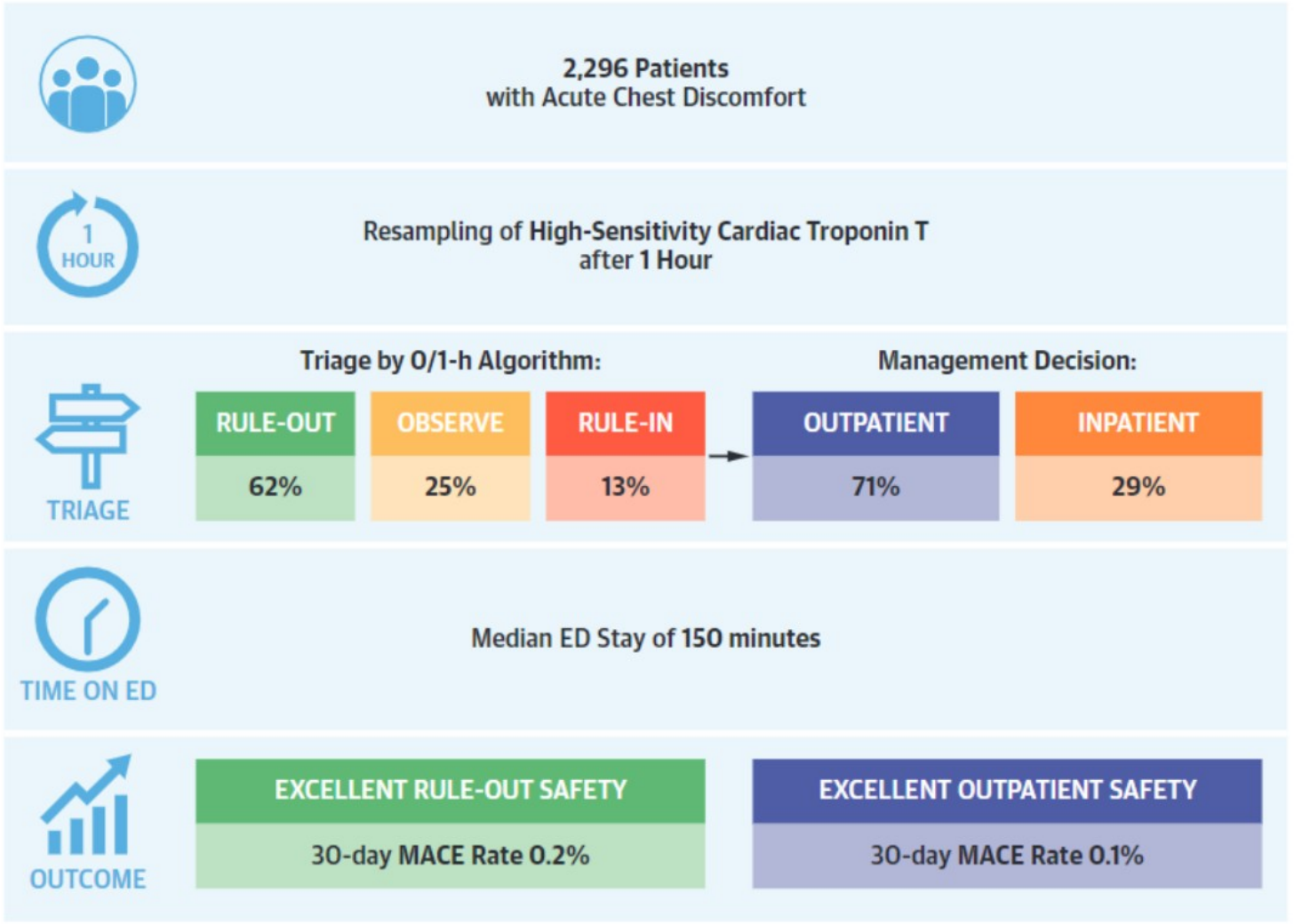
Rule-In Rule-Out in the ESC Guidelines for the Management of NSTE-ACS



	A	B	C	D	E
Hs-cTnT 5th gen. (Roche)	5	12	3	52	5
Hs-cTnI Architect (Abbott)	4	5	2	64	6
Hs-cTnI Centaur (Siemens)	3	6	3	120	12
Hs-cTnI Access (Beckman)	4	5	4	50	15

Collet JP et al. Eur Heart J 2020

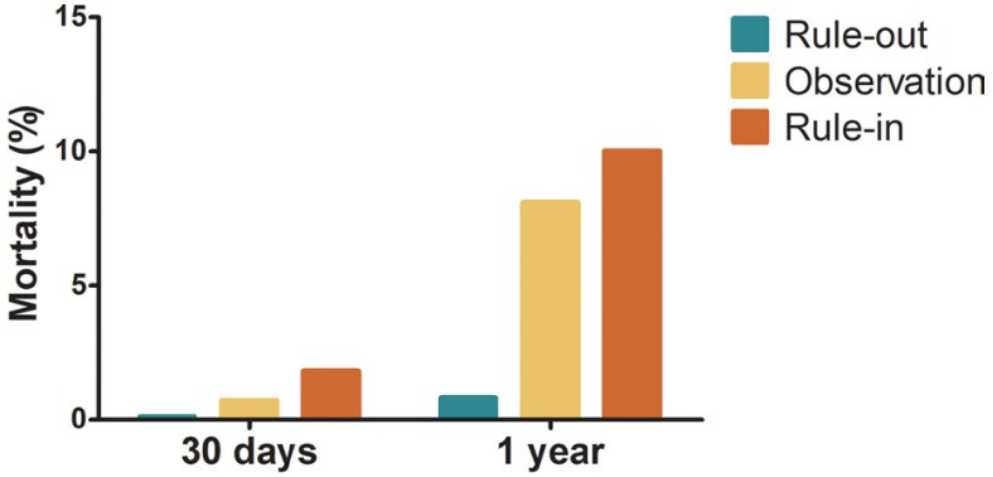
Outcome of Applying the ESC 0/1-hour Algorithm in Patients With Suspected Myocardial Infarction



Twerenbold, R. et al. J Am Coll Cardiol. 2019;74:483

Safety and efficacy of the ESC 0/1-hour algorithm for diagnosis of AMI: a meta-analysis

Meta-analysis on 11 014 patients from 15 studies and 10 individual cohorts across Europe, the USA, Japan, Thailand and China

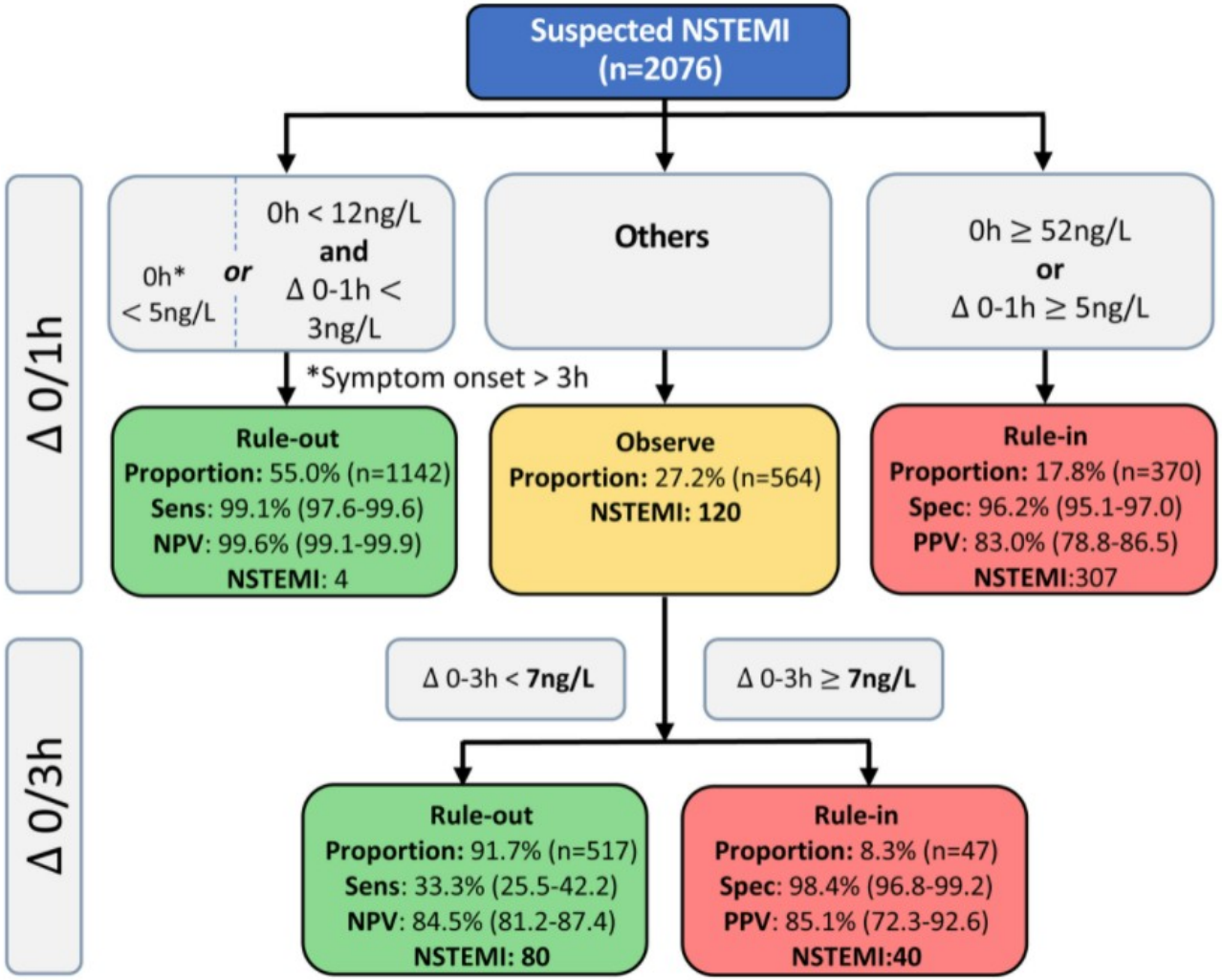


Number of mortality		
Rule-out	3	18
Observation	8	74
Rule-in	22	64
Number at risk		
Rule-out	2756	2312
Observation	1163	935
Rule-in	927	639

Chiang CH, et al. Heart 2020;106:985

Novel Criteria for the Observe-Zone of the ESC 0/1h-hs-cTnT Algorithm

2076 eligible patients from APACE and TRAPID-AMI studies

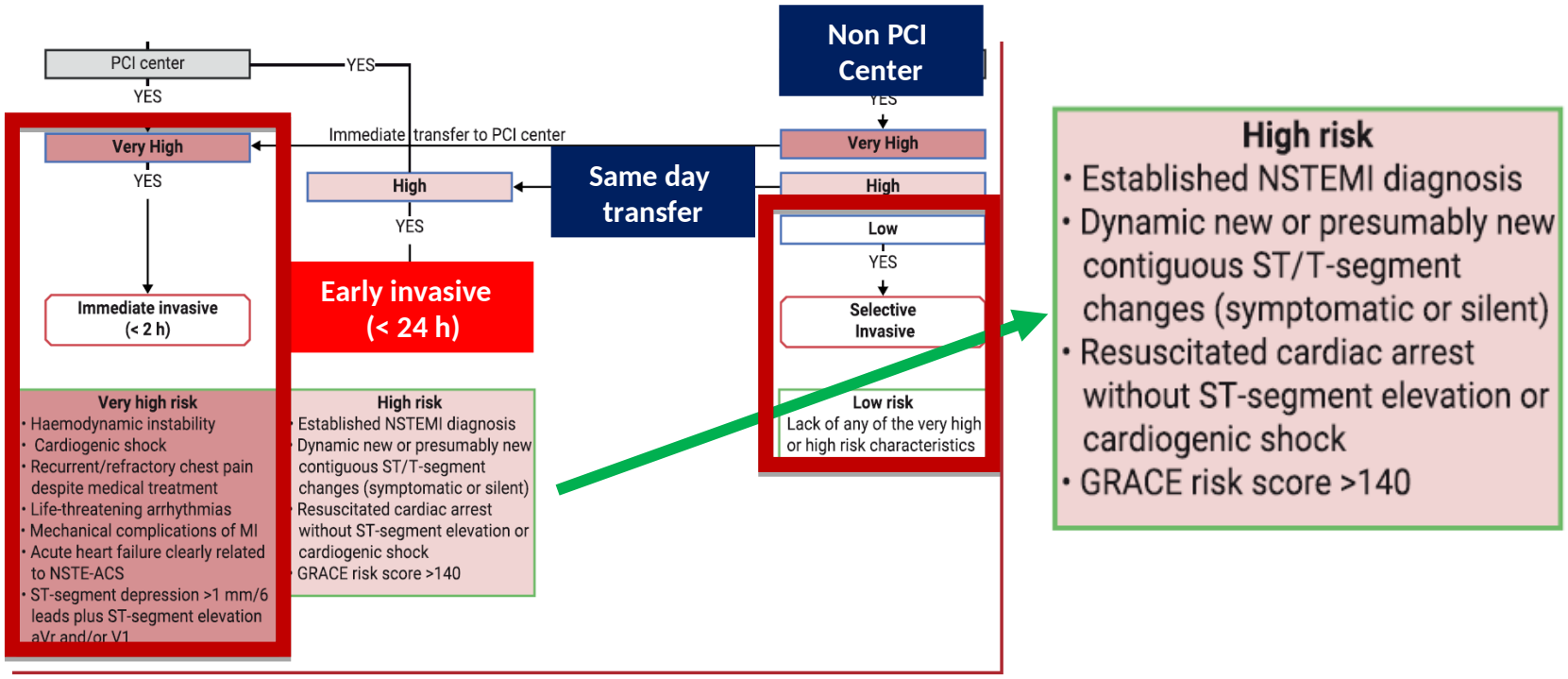


Lopez-Ayala P, et al. Circulation 2021;144:773

2

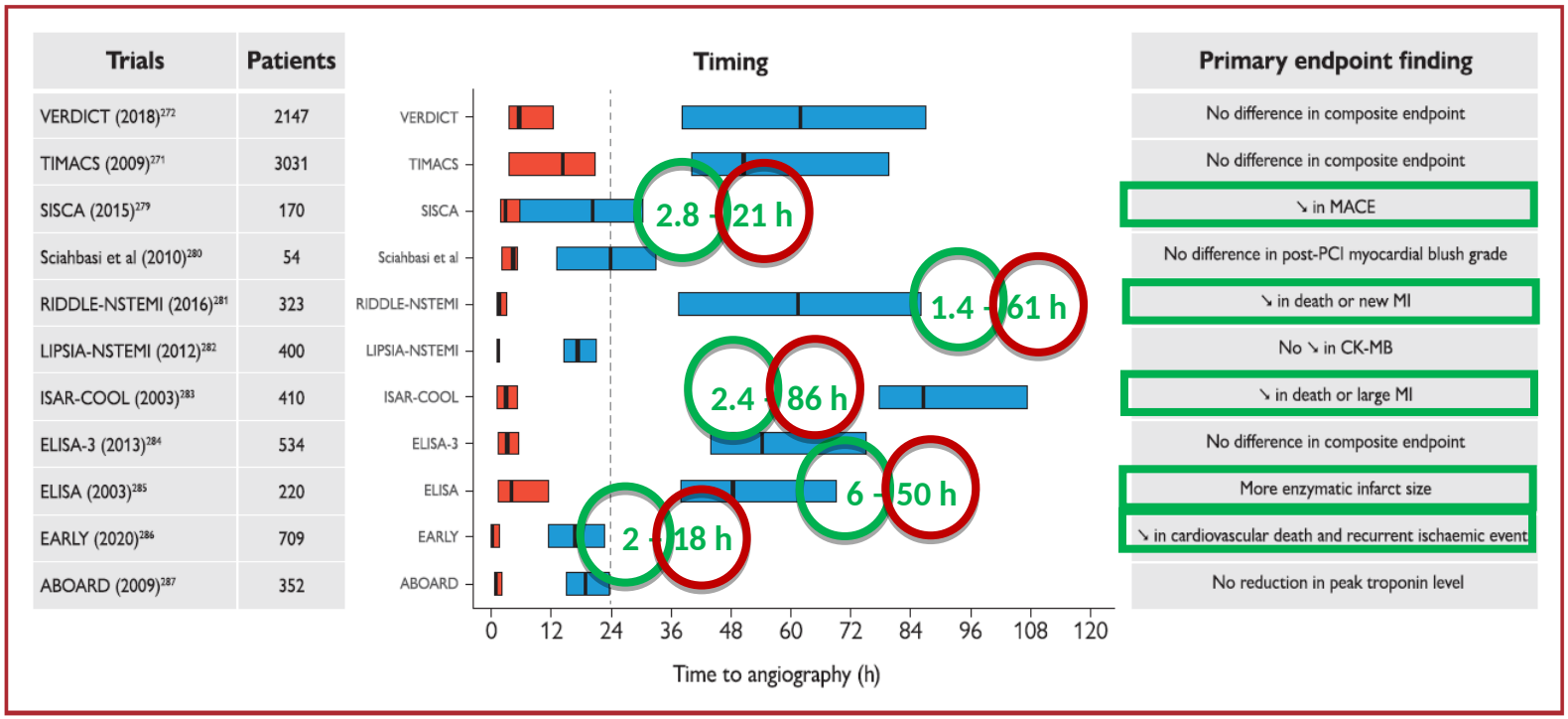
Timing to coronary Angio

Selection of NSTE-ACS treatment strategy and timing according to initial risk stratification



Mod from Collet JP et al. European Heart Journal 2020

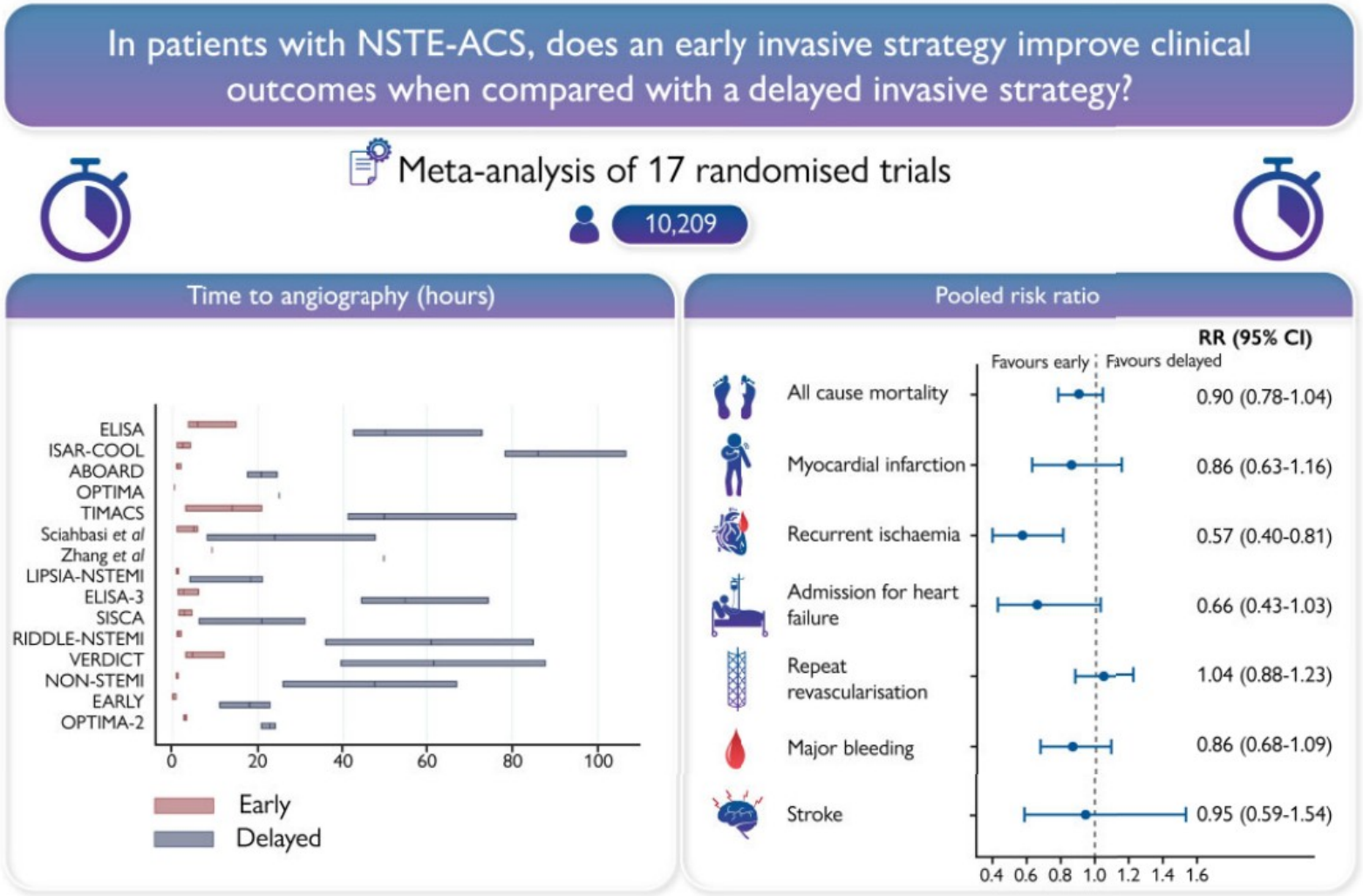
2020 ESC NSTE-ACS GL: Time to coronary angiography



early delayed

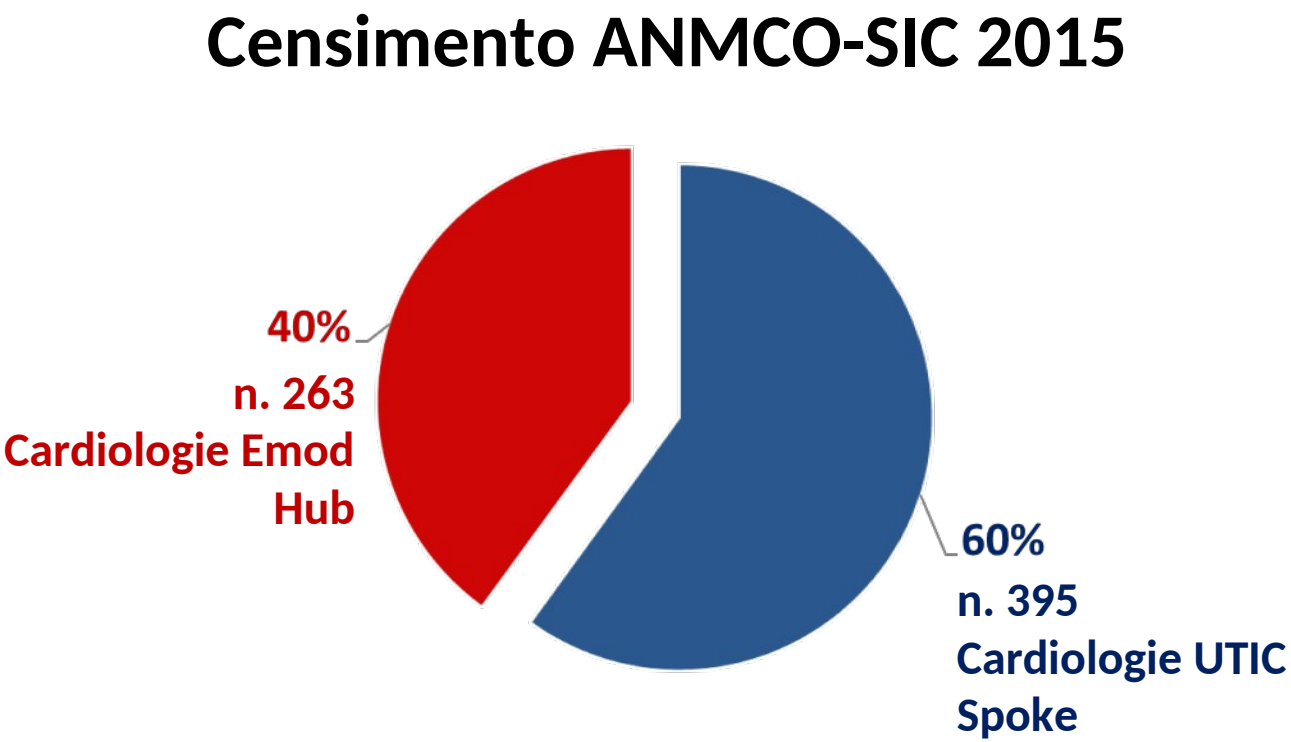
Mod from Collet JP et al. European Heart Journal 2020

Timing of invasive strategy in NSTE-ACS: a meta-analysis of randomized controlled trials



Kite TA, et al. Eur Heart J 2022, in press

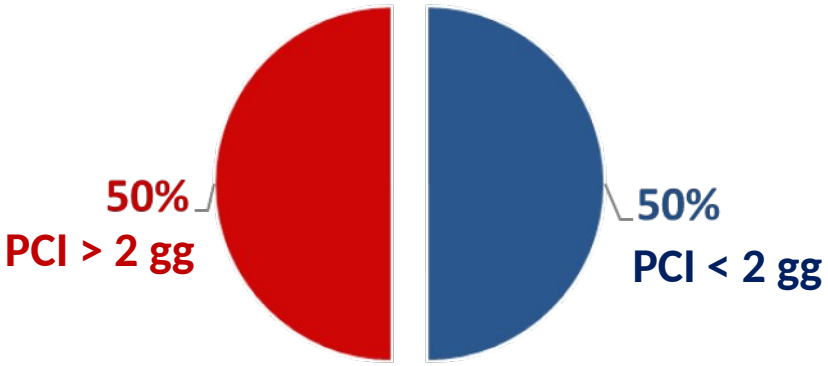
SCA-NSTE: coronarografia entro 24 h
Dati italiani e criticità - Centri Hub e Spoke



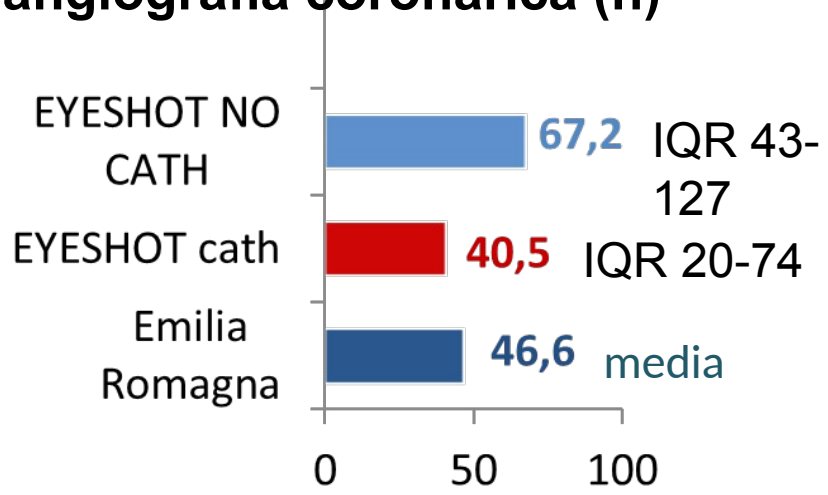
Modificata da Gulizia MM et al. G Ital Cardiol 2017;18(5):337-459

SCA-NSTE: coronarografia entro 24 h
Dati italiani e criticità - Tempo alla coronarografia

Timing PCI in IMA (PNE 2020)



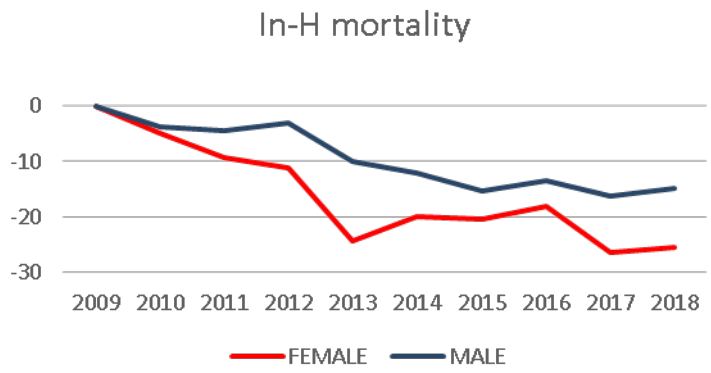
Mediana temporale tra ricovero e angiografia coronarica (h)

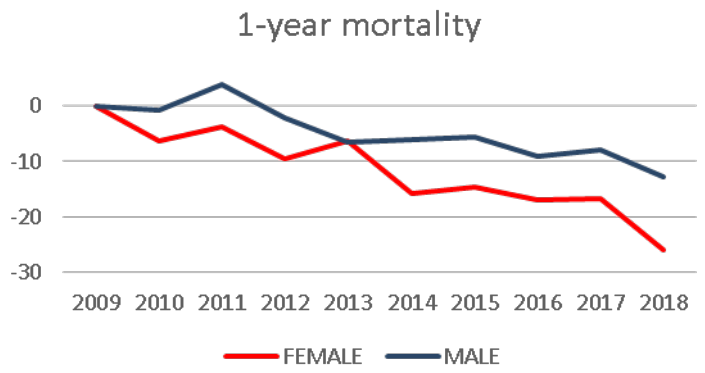


Programma Nazionale Esiti AGENAS 2020,
Mantovani F et al.G Ital Cardiol 2020;21:807,
De Luca L et al. Eur Heart J Cardiovasc Pharmacother 2015;1:168

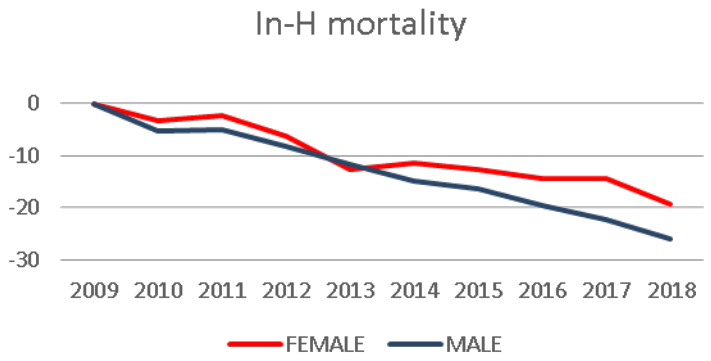
Impact of age, gender and heart failure on mortality trends after AMI in Italy

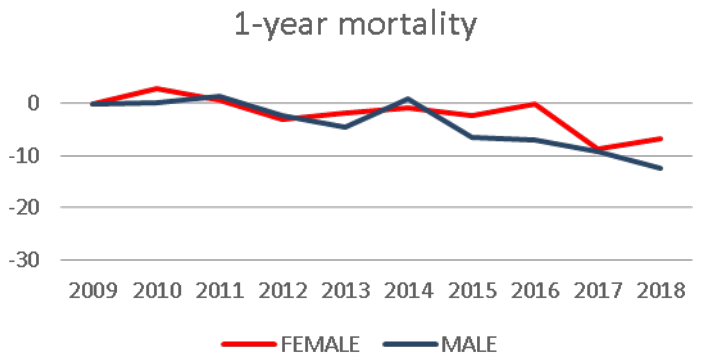
Patients aged < 75 years





Patients aged ≥ 75 years





De Luca L, et al. Int J Cardiol 2022;348:147

Pazienti con SCA-NSTE: proposta ANMCO per la stratificazione del rischio e il timing della coronarografia/rivascolarizzazione

POSITION PAPER

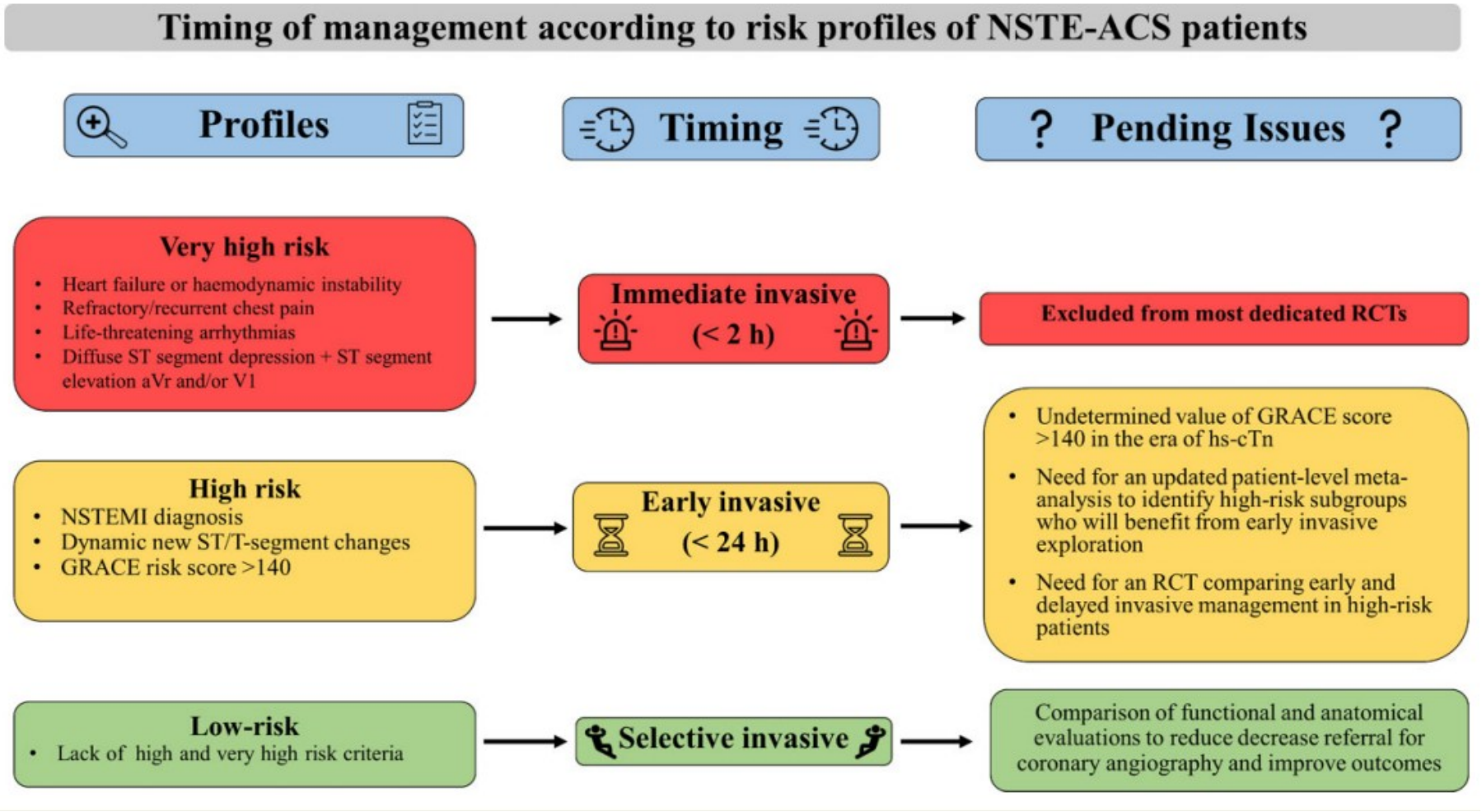
Position paper ANMCO: Timing di esecuzione della coronarografia in pazienti con sindrome coronarica acuta senza sopraslivellamento del tratto ST

Adriano Murrone[1], Fortunato Scotto di Uccio[2], Vincenzo Amodeo[3], Nadia Aspromonte[4], Pasquale Caldarola[5], Gianni Casella[6], Manlio Cipriani[7], Leonardo De Luca[8], Andrea Di Lenarda[9], Stefano Domenicucci[10], Giuseppina Maura Francese[11], Massimo Imazio[12], Loris Roncon[13], Stefano Urbinati[14], Serafina Valente[15], Giuseppe Di Pasquale[16], Michele Massimo Gulizia[11,17], Furio Colivicchi[18], Domenico Gabrielli[8]

Stratificazione del rischio	Tipologia	Timing strategia invasiva
Rischio molto alto	Instabilità emodinamica, shock cardiogeno, angor ricorrente/refrattario al trattamento medico, aritmie potenzialmente fatali, complicanze meccaniche, insufficienza cardiaca acuta chiaramente correlata a SCA-NSTE, sottoslivellamento del tratto ST >1 mm in 6 o più derivazioni + sopraslivellamento del tratto ST in aVR e/o V1	Immediata (<2 h)
Rischio alto	GRACE risk score >140 Arresto cardiaco resuscitato in assenza di STEMI o shock cardiogeno	Entro 72 h
Rischio medio	Diagnosi stabilita di NSTEMI Nuove o presunte nuove variazioni dinamiche di ST/T (silenti o con sintomi all'ingresso ma responsivi al trattamento)	Preferibilmente entro 72 h, comunque sempre durante il ricovero indice
Rischio basso	Assenza di caratteristiche di rischio medio, alto o molto alto	Strategia invasiva selettiva; se indicata da eseguire durante il ricovero indice

*G Ital Cardiol 2021;22(7):*585-591

Timing of invasive management of NSTE-ACS: is the time up for early management?



Guedeney P and Collet JP. Eur Heart J 2022, in press


3
Utility
of
Pretreatment

2020 ESC Guidelines for the Management of NSTE-ACS

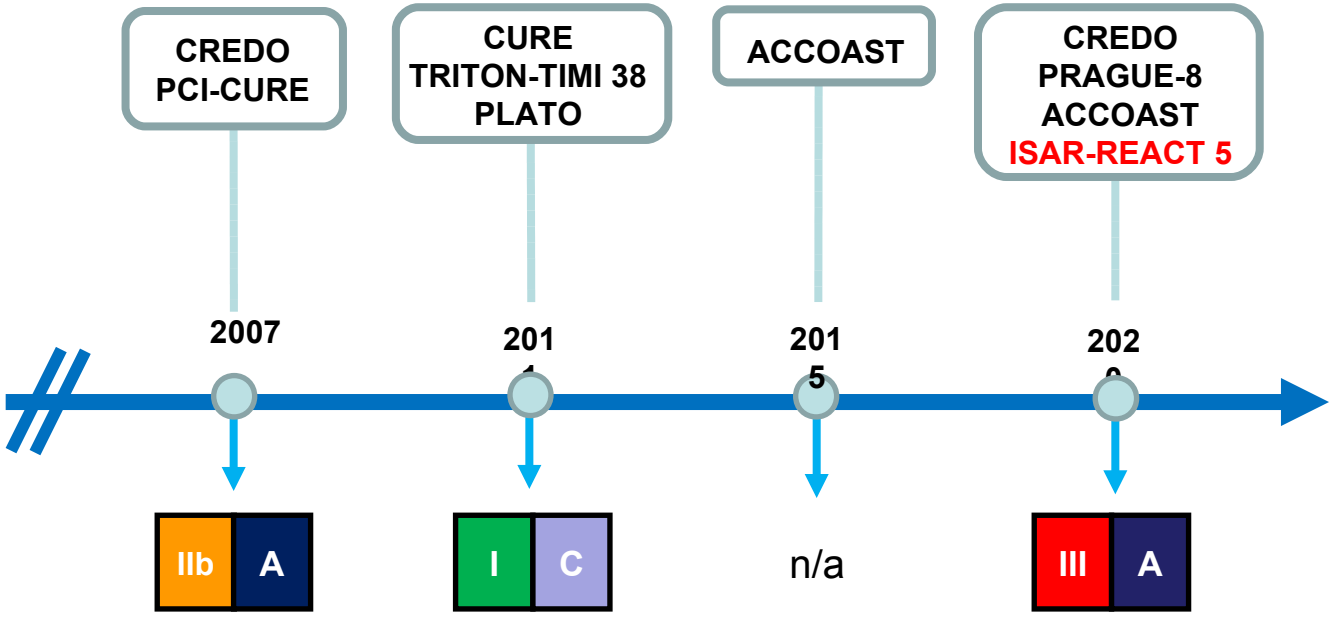
ESC European Society of Cardiology

Recommendations	Class	Level
Antiplatelet treatment (continued)		
Pre-treatment with a $P2Y_{12}$ receptor inhibitor may be considered in patients with NSTE-ACS who are not planned to undergo an early invasive strategy and do not have an HBR.	IIb	C
It is not recommended to administer routine pre-treatment with a $P2Y_{12}$ receptor inhibitor in patients in whom coronary anatomy is not known and an early invasive management is planned.	III	A

Collet JP, et al. Eur Heart J 2021; 42:1289

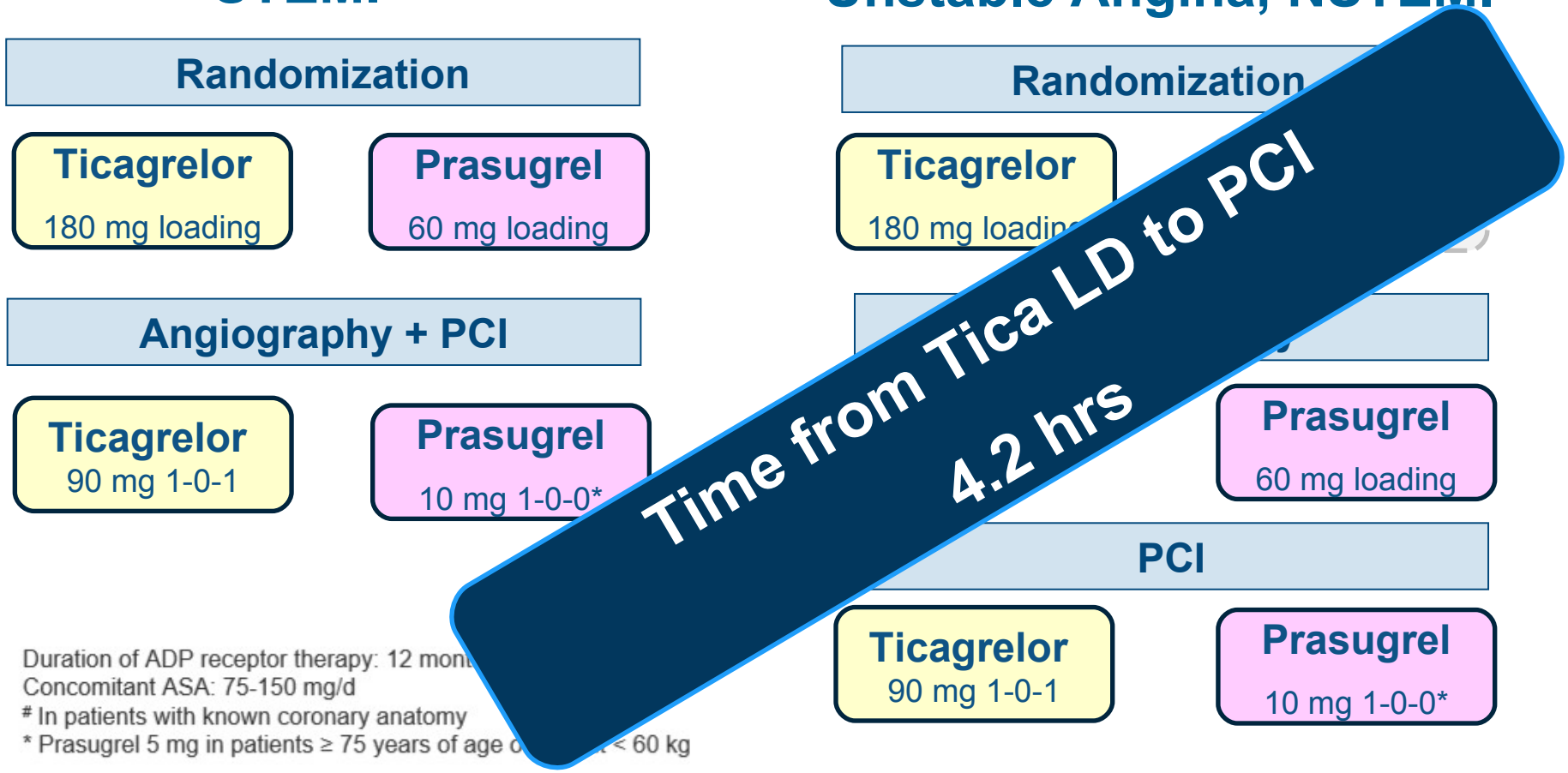
ESC Guidelines for the Management of NSTE-ACS

Recommendations on Pre-Treatment



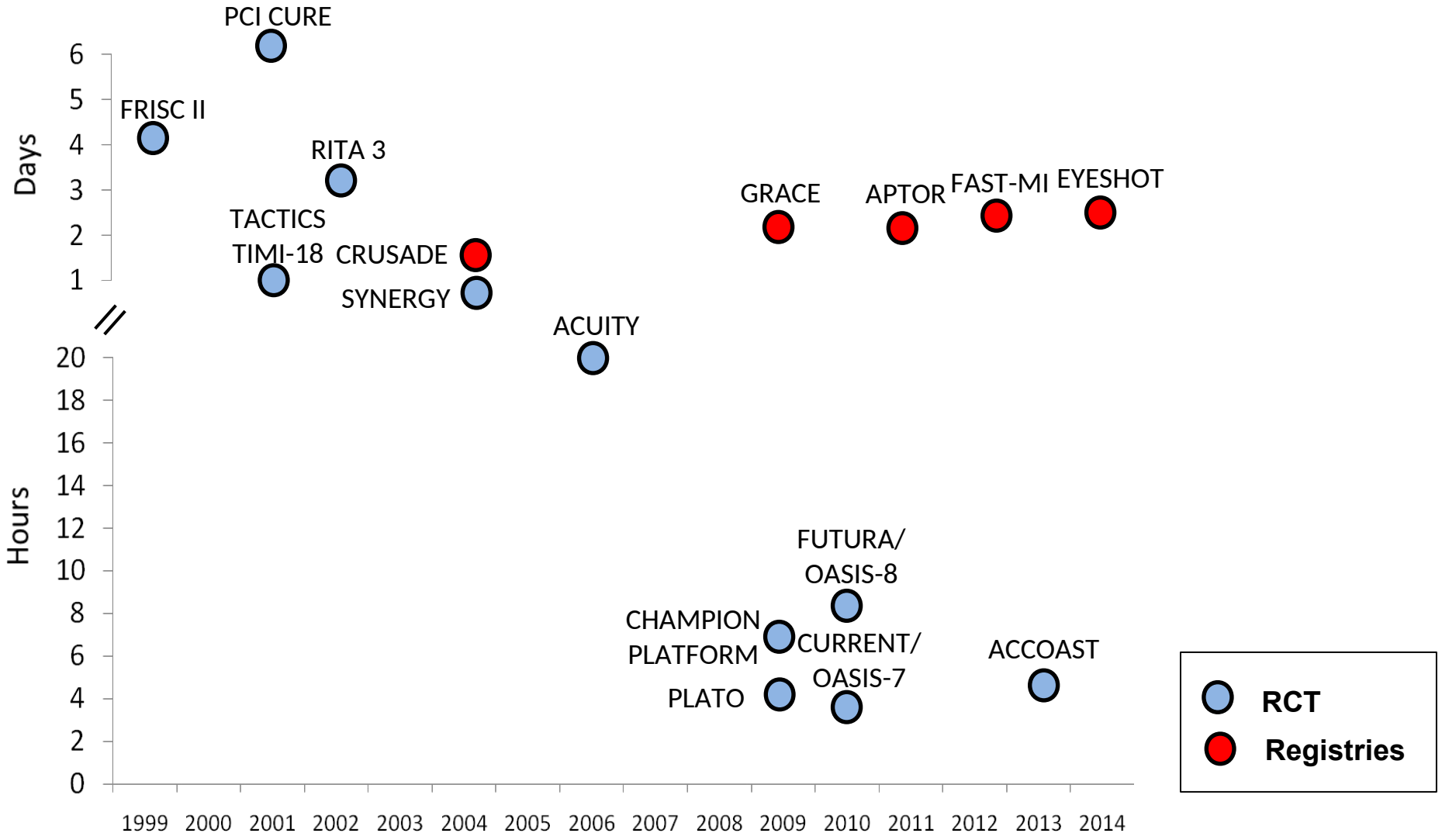
De Luca L. EHJ: Cardiovasc Pharmacother 2021;7:442

ISAR REACT 5: Study Schedule



Schüpke S et al. N Engl J Med 2019;381:1524

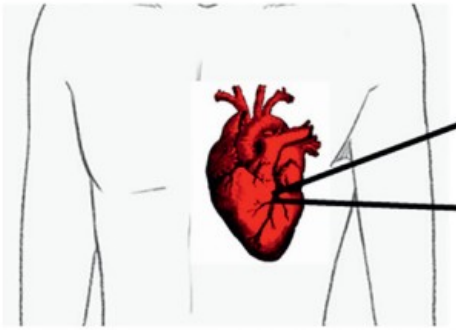
Time to Coronary Angiography



De Luca L, et al. Am J Cardiol 2015;116:660

Optimal Timing of Intervention in NSTE-ACS Without Pre-Treatment. The EARLY Trial

Patients with high-or intermediate-risk NSTE-ACS *without* $P2Y_{12}$-ADP-receptor antagonist pretreatment



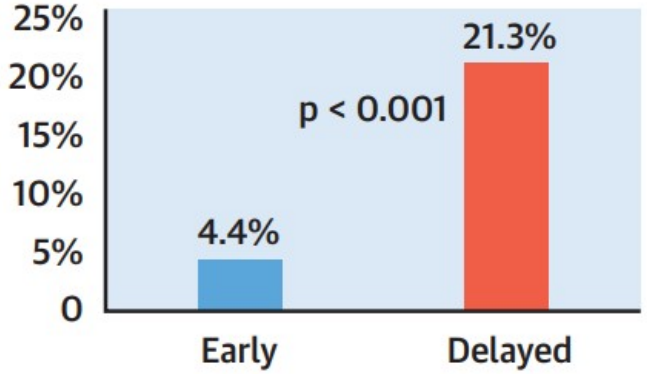
(n = 709)

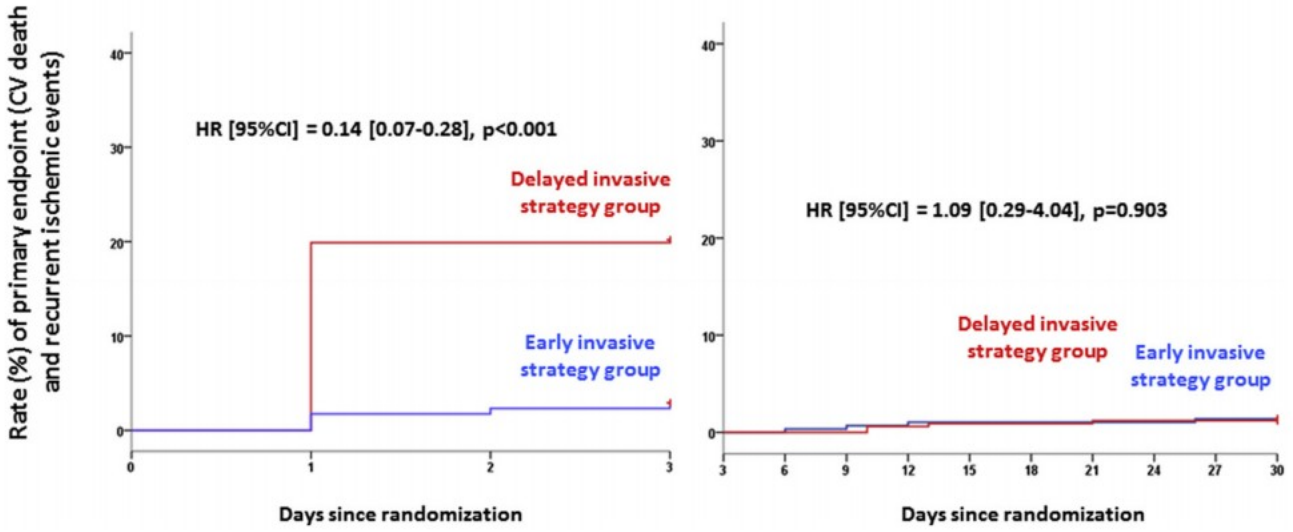
1:1 ratio

Early invasive strategy: <2 h

Delayed invasive strategy: 12-72 h

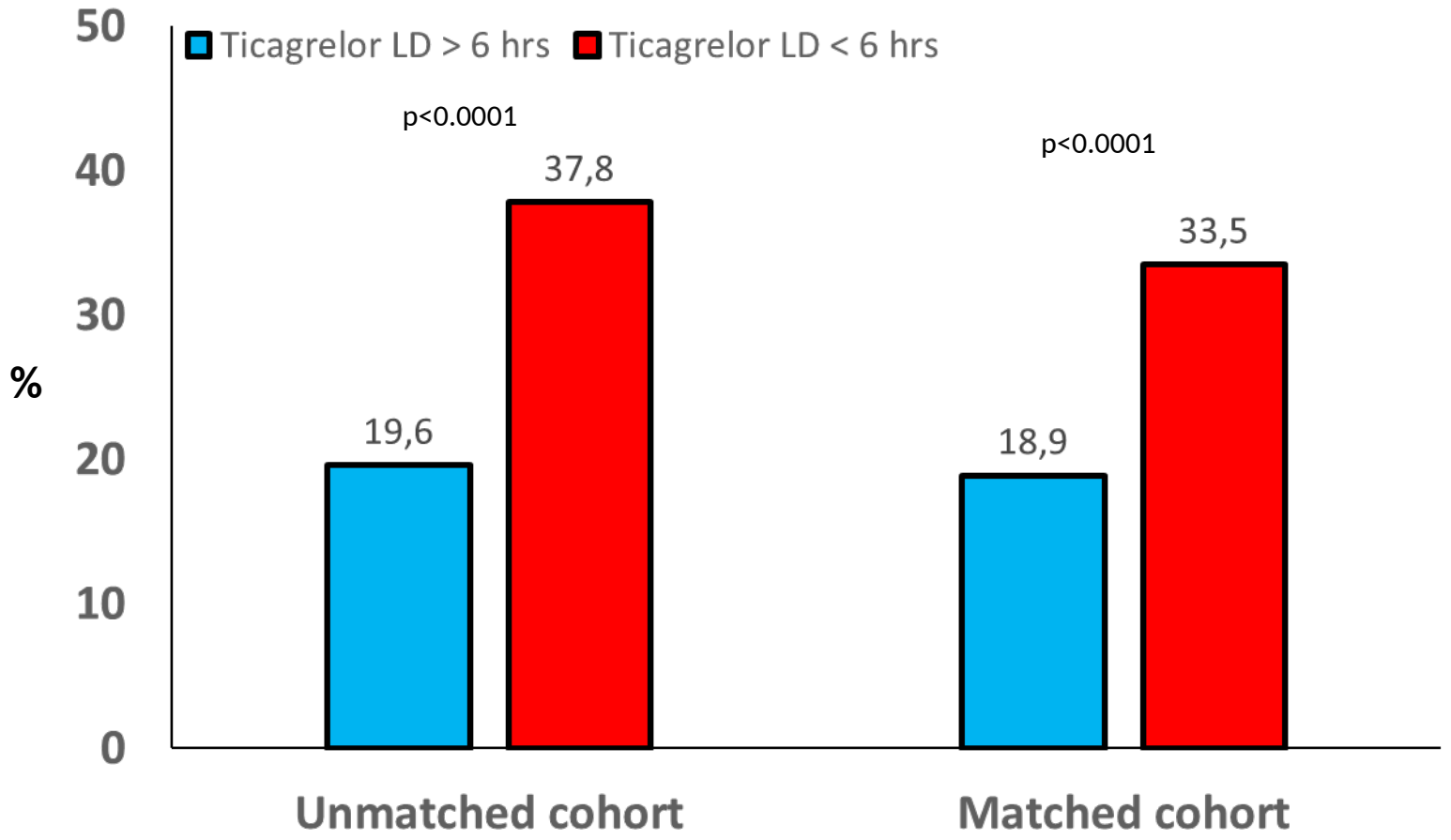
Primary Endpoint: CV Death and Recurrent Ischemic Events at 1 Month





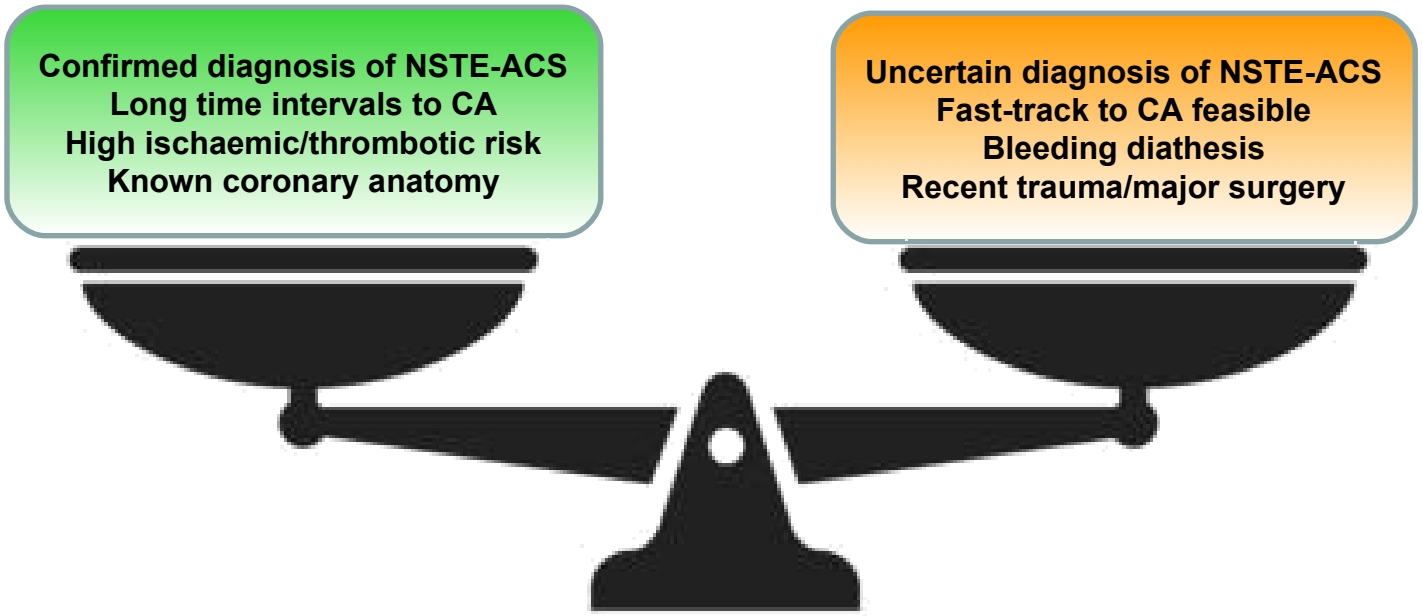
Lemesle G, et al. J Am Coll Cardiol Intv 2020;13:907

Periprocedural Myocardial Injury in High-Risk Patients with NSTEMI Pre-Treated with Ticagrelor for Less or More than 6 Hours Before PCI

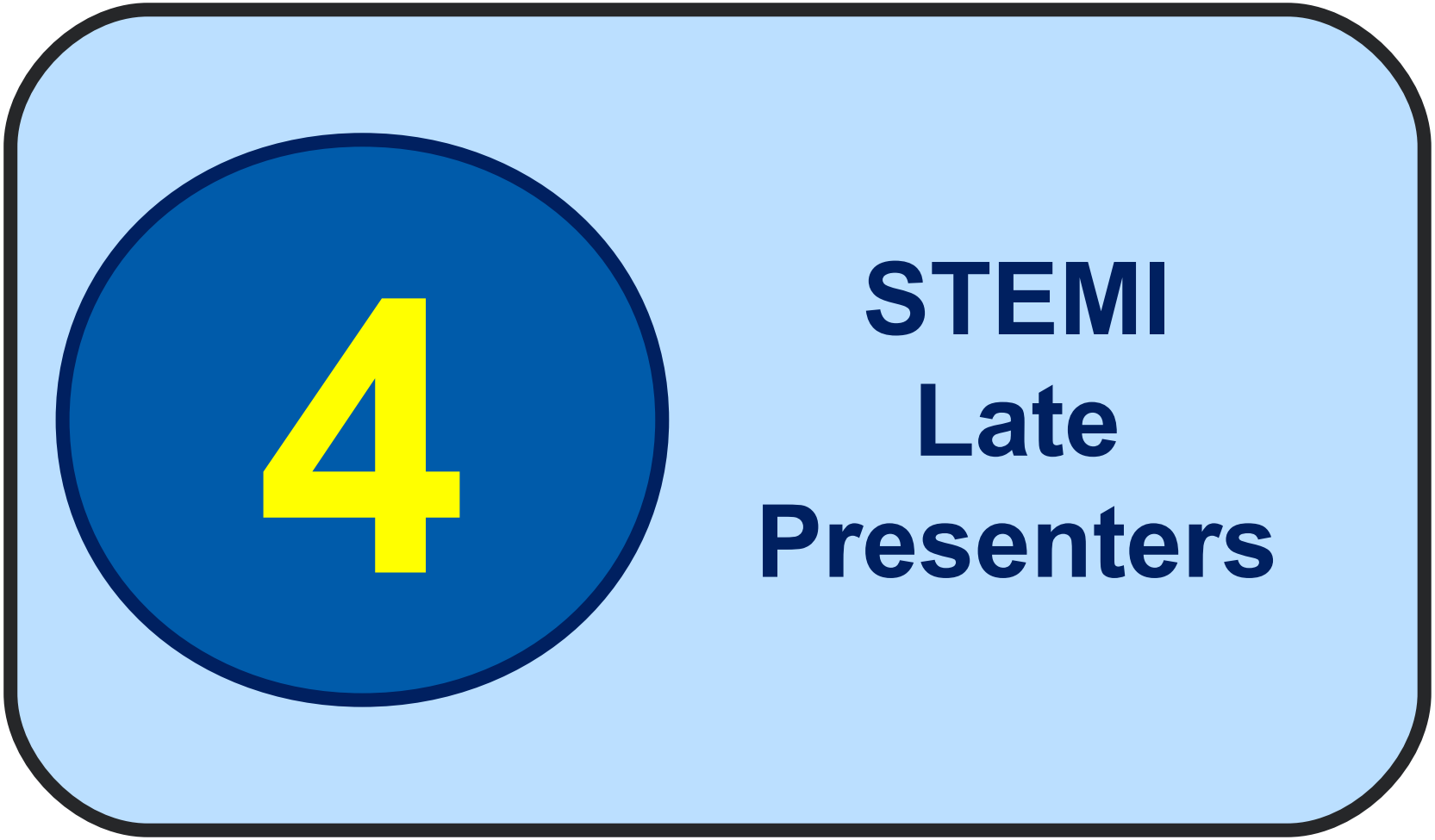


De Luca L, et al. J Clin Pharmacol. 2021

Indications and Possible Contraindications for Pre-Treatment in 2021



De Luca L. EHJ: Cardiovasc Pharmacother 2021;7:442


4
STEMI
Late
Presenters

Late Presenters in International Guidelines

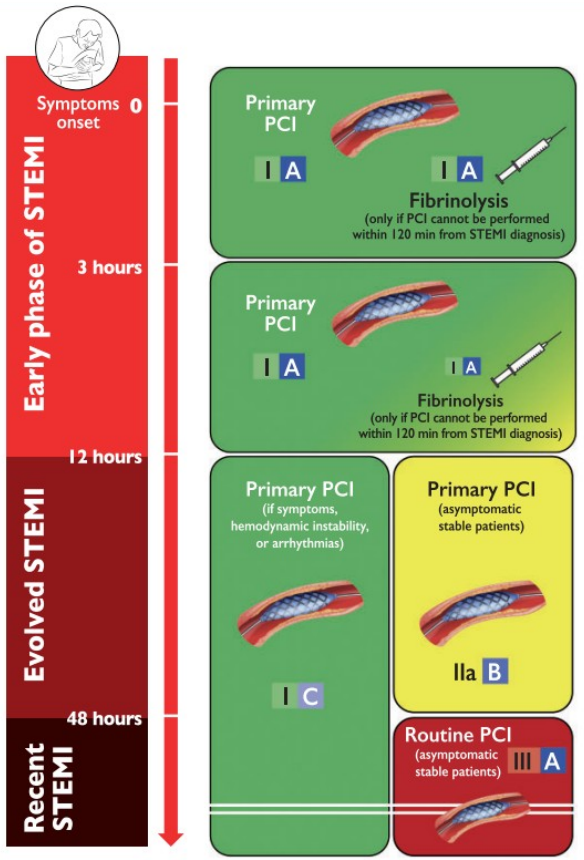
It is reasonable to perform primary PCI for patients with onset of symptoms within the prior 12 to 24 hours and 1 or more of the following:

I IIa IIb III

C

a. Severe CHF (*LoE: C*)
b. Hemodynamic/electrical instability (*LoE: C*)
c. Persistent ischemic symptoms. (*LoE: C*)

Levine GN, et al. J Am Coll Cardiol 2016;1235

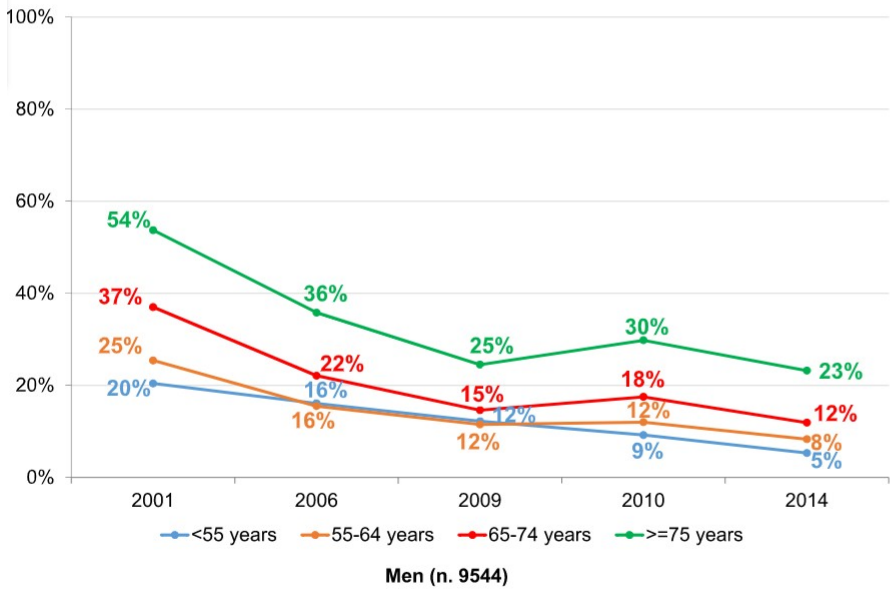


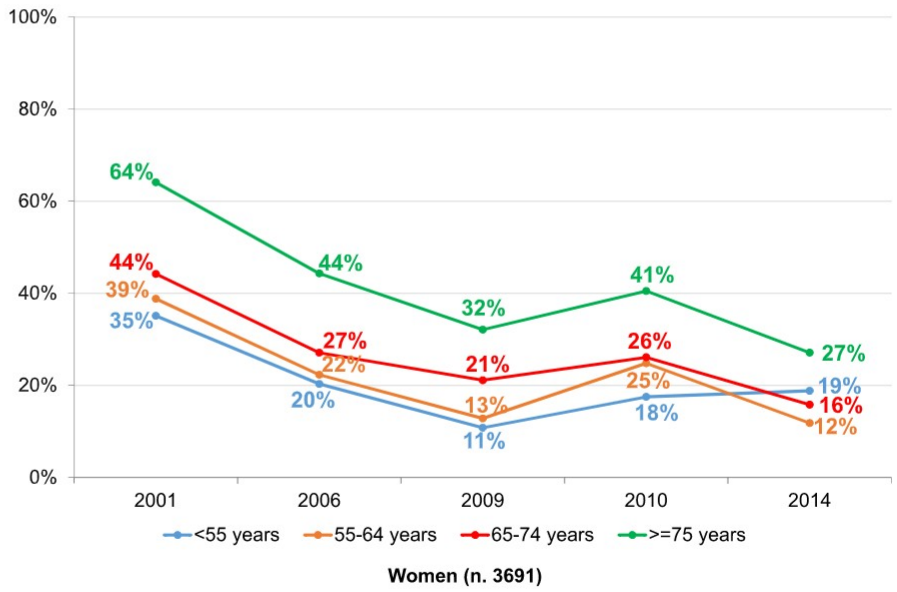
ESC European Society of Cardiology

Ibanez B, et al. Eur Heart J 2018;39:119

Contemporary Trends and Age-Specific Sex Differences in Management and Outcome for Patients With STEMI

No Reperfusion/Late Presenters

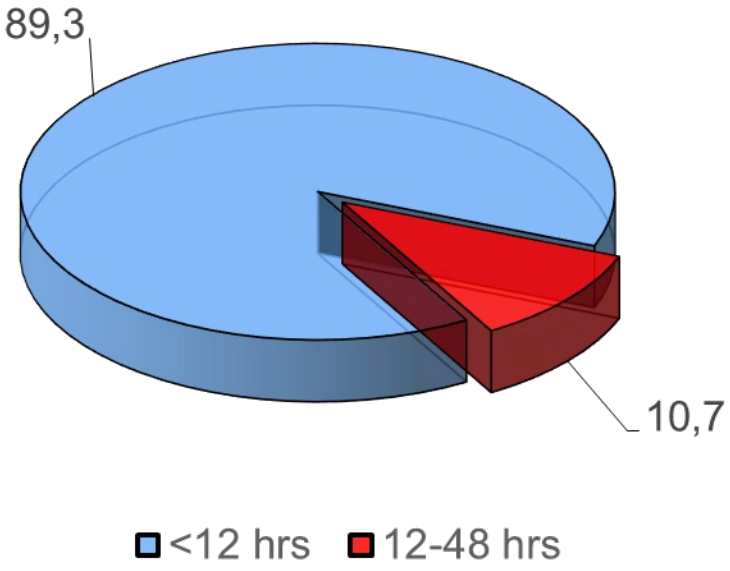


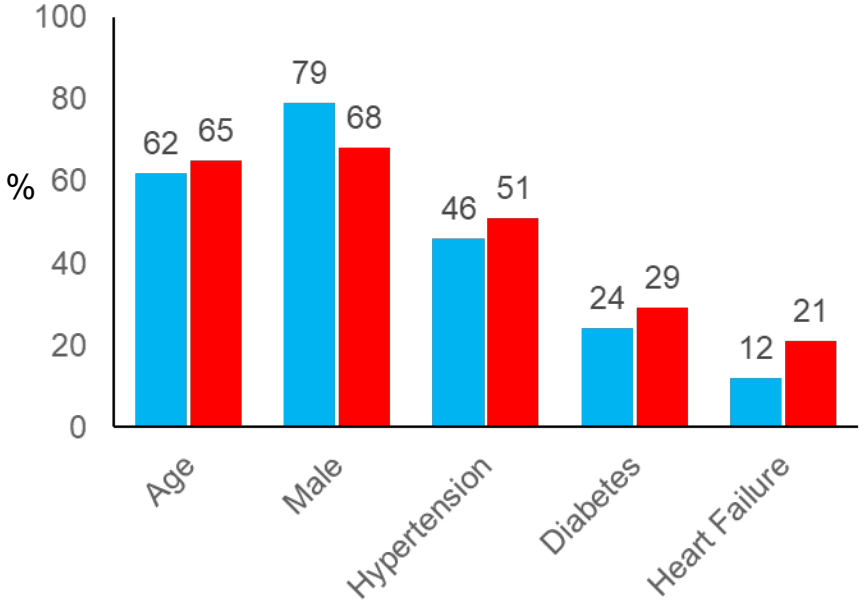


De Luca L, et al. J Am Heart Assoc. 2016;5:e004202

Long-Term Outcomes of Patients With Late Presentation of STEMI

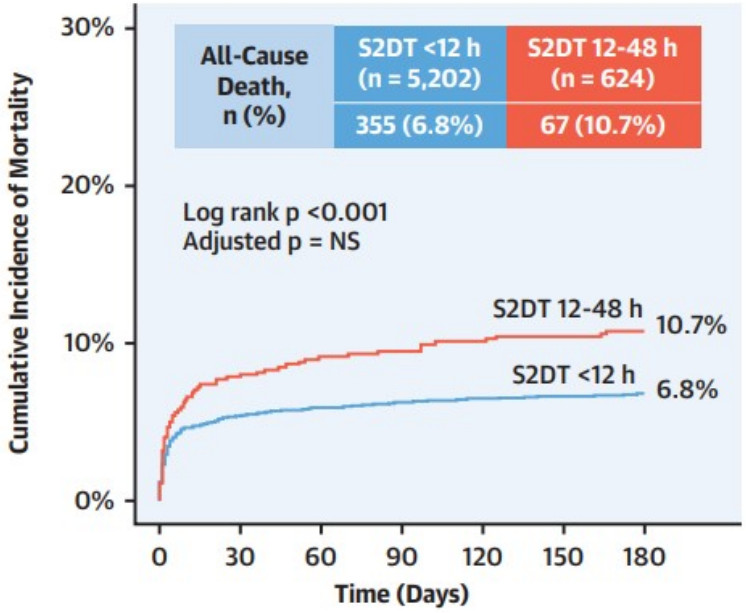
KAMIR-NIH, 20 tertiary PCI centers
(Nov 2011-Dec 2015)
5,826 STEMI ≤48 hrs from symptom onset

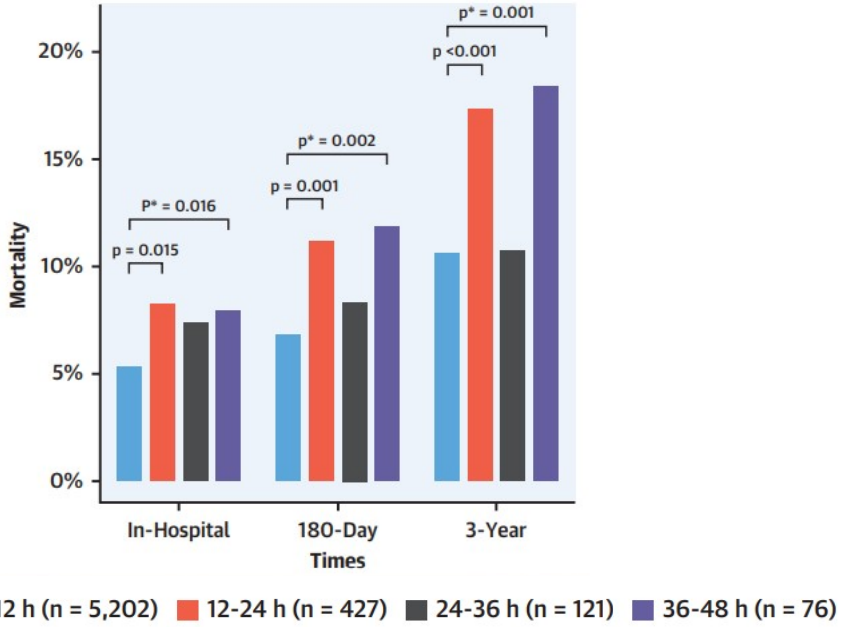




Cho KH, et al. J Am Coll Cardiol 2021;77:1859

Long-Term Outcomes of Patients With Late Presentation of STEMI

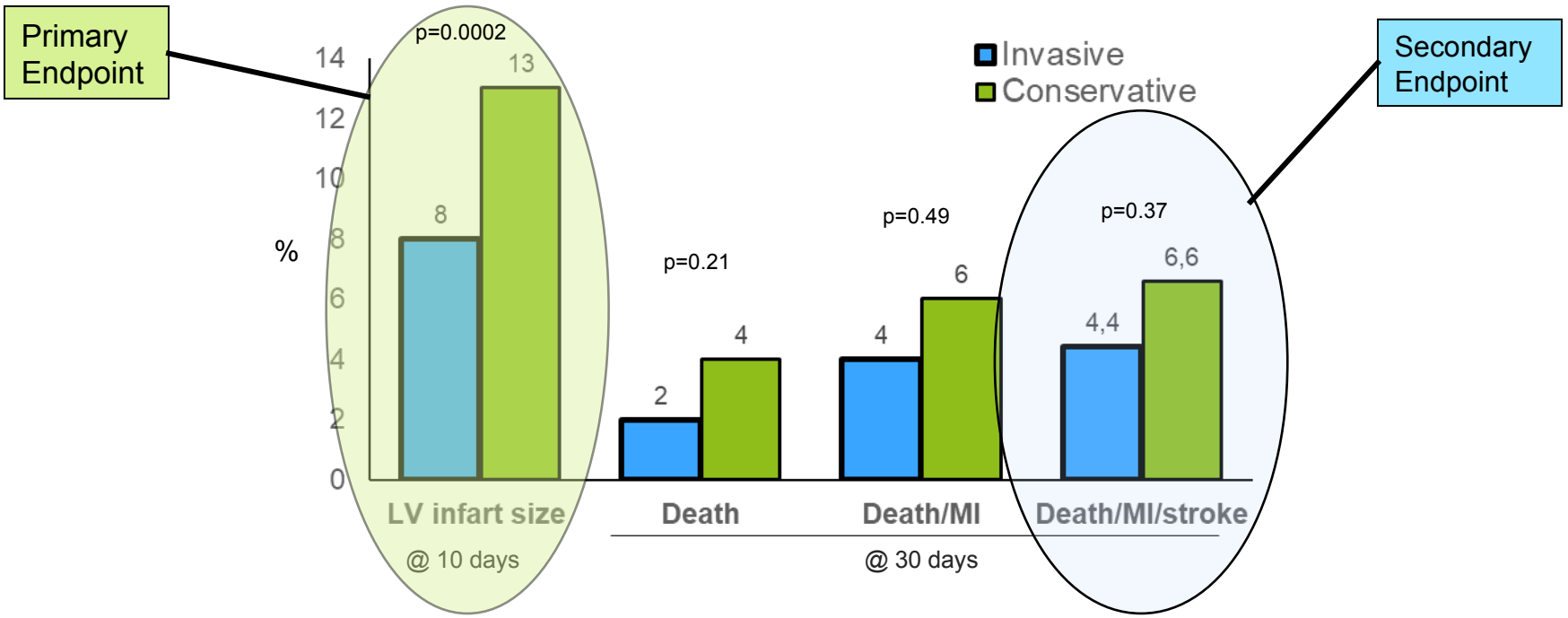




Cho KH, et al. J Am Coll Cardiol 2021;77:1859

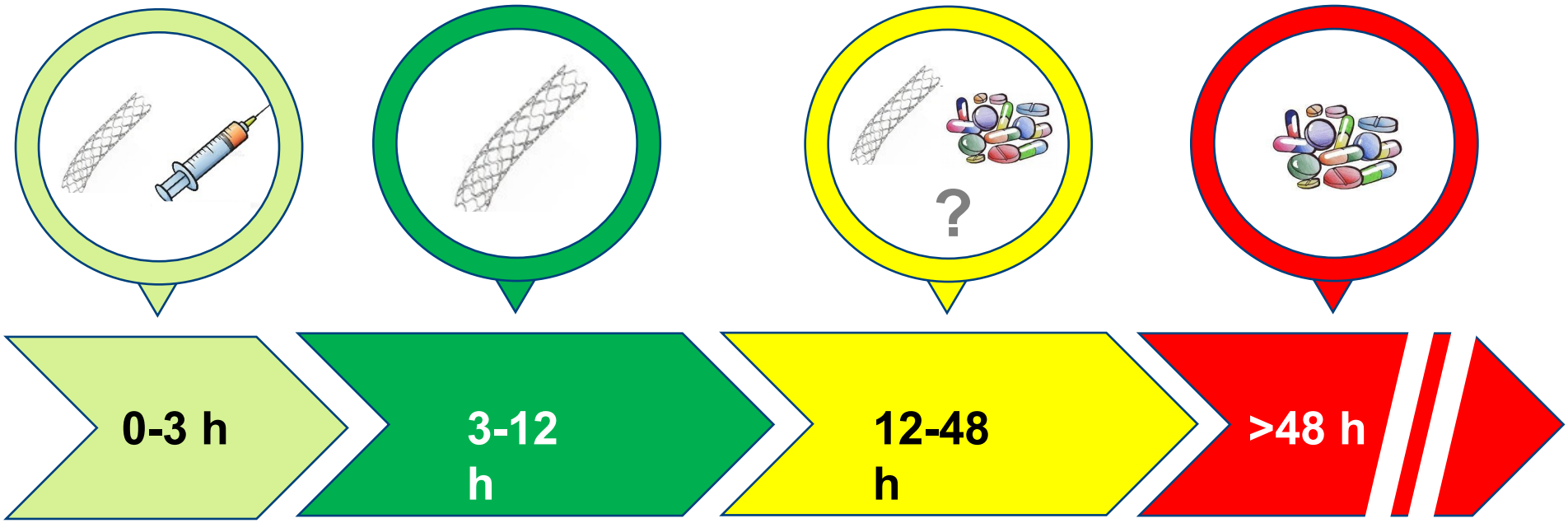
Mechanical Reperfusion in Patients With Acute Myocardial Infarction Presenting More Than 12 Hours From Symptom Onset

BRAVE 2: international, multicenter, open-label, randomized controlled trial conducted on 365 patients without persistent symptoms admitted with the diagnosis of STEMI between 12 and 48 hrs after symptom onset



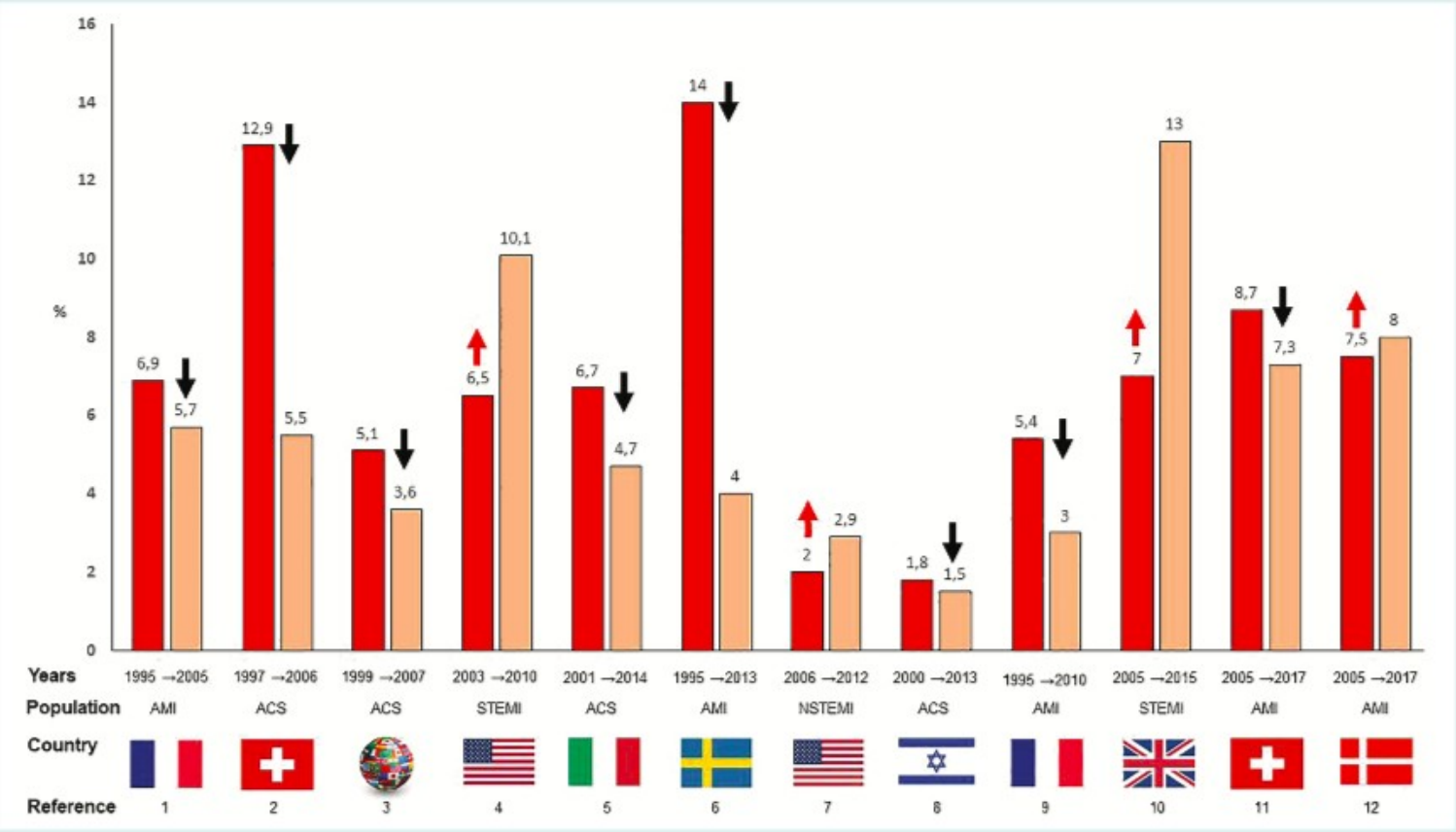
Schomig A, et al. JAMA 2005;293:2865

Optimal Management for STEMI Patients According to Symptoms Onset




5
Cardiogenic
Shock

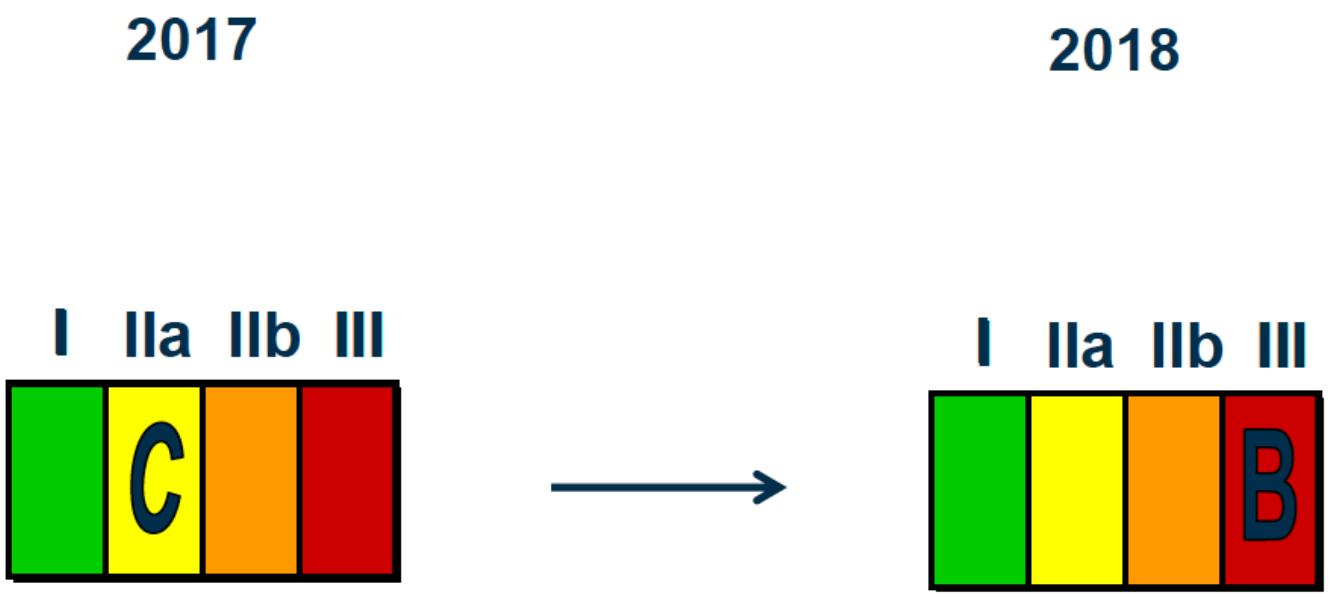
Composite trends of cardiogenic shock complicating acute myocardial infarction



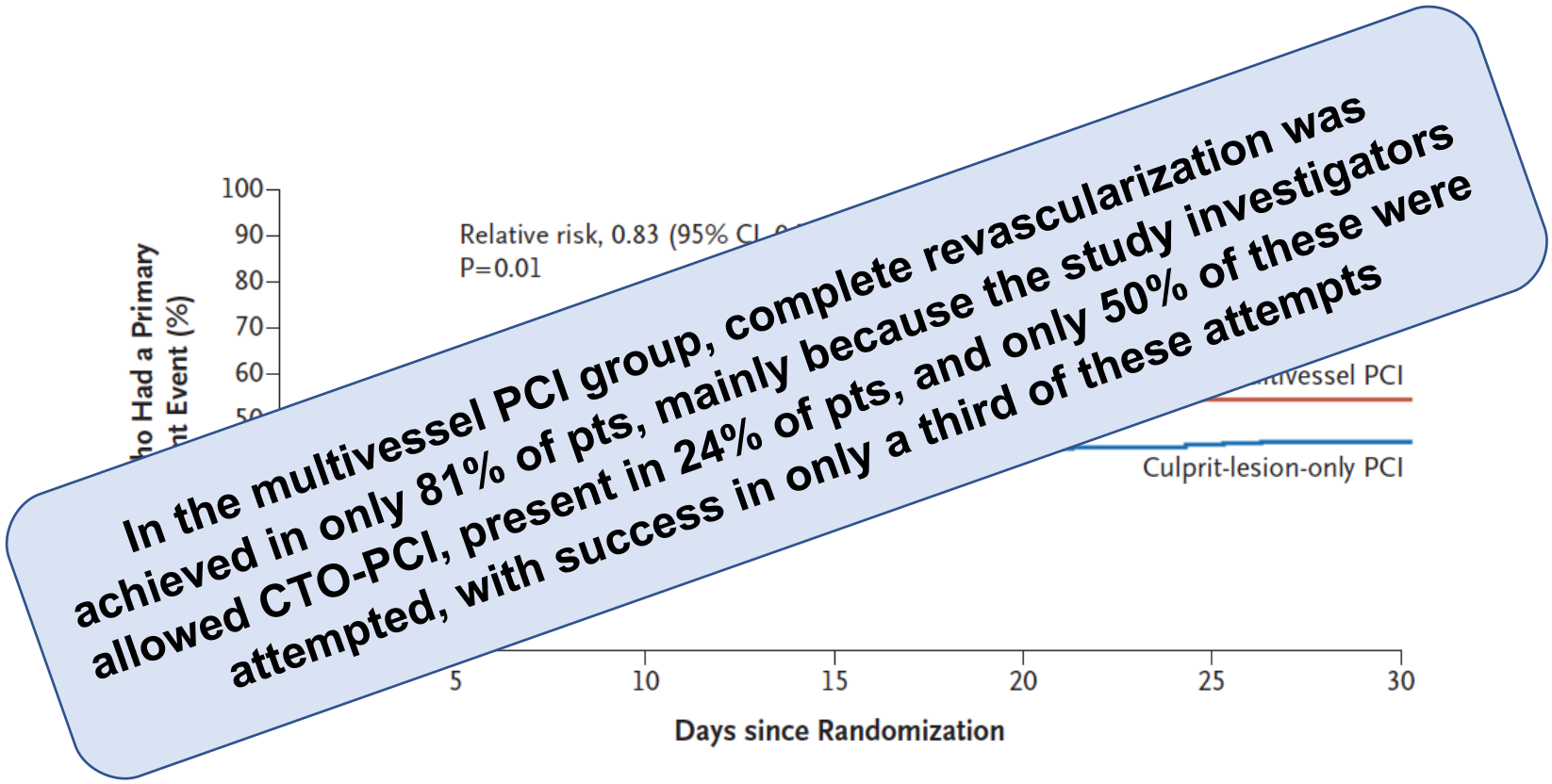
De Luca L, Eur J Heart Fail. 2020;22

Multivessel PCI in Shock
Guideline Evolution

ESC STEMI Guidelines 2017 → **Revascularization Guidelines 2018**



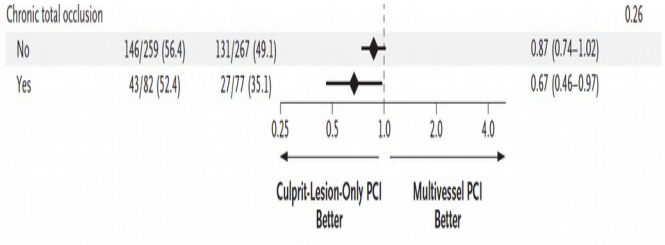
PCI Strategies in Patients with AMI and Cardiogenic Shock: the CULPRIT-SHOCK Trial



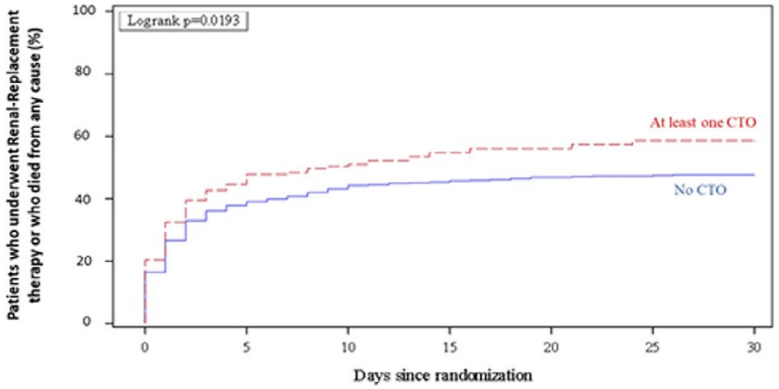
In the multivessel PCI group, complete revascularization was achieved in only 81% of pts, mainly because the study investigators allowed CTO-PCI, present in 24% of pts, and only 50% of these were attempted, with success in only a third of these attempts

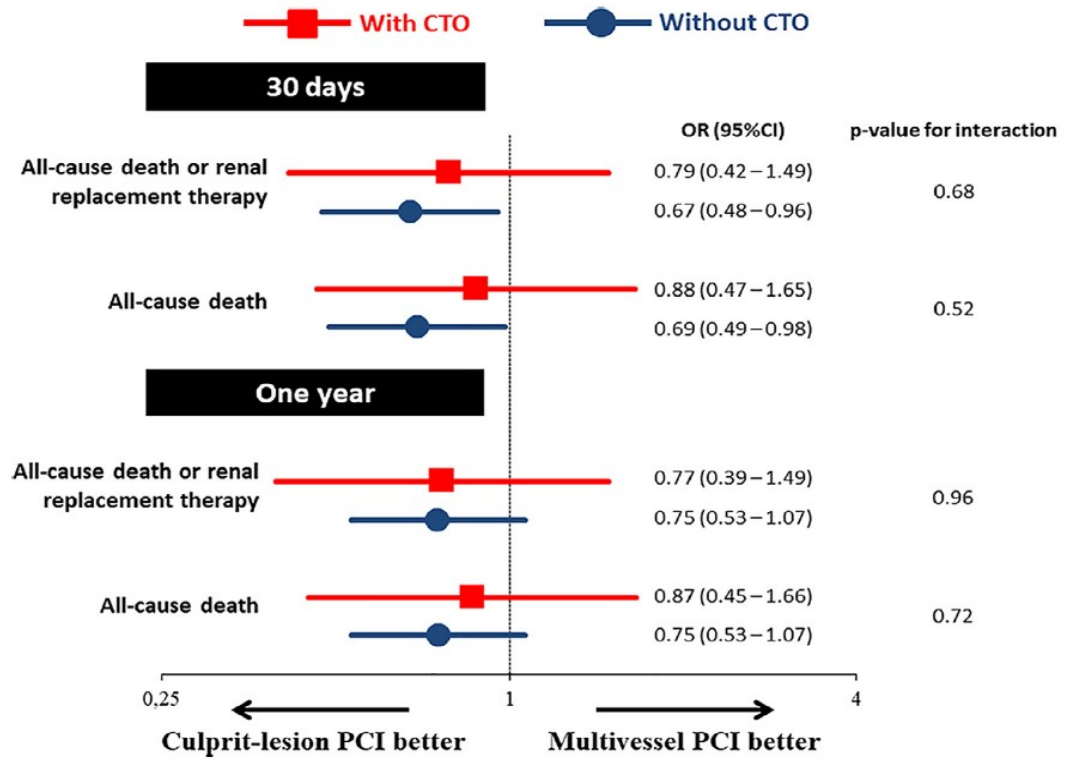
Thiele H et al. N Engl J Med 2017;377:2419-32

Impact of CTO and rev strategy in pts CS: A subanalysis of the Culprit-shock trial



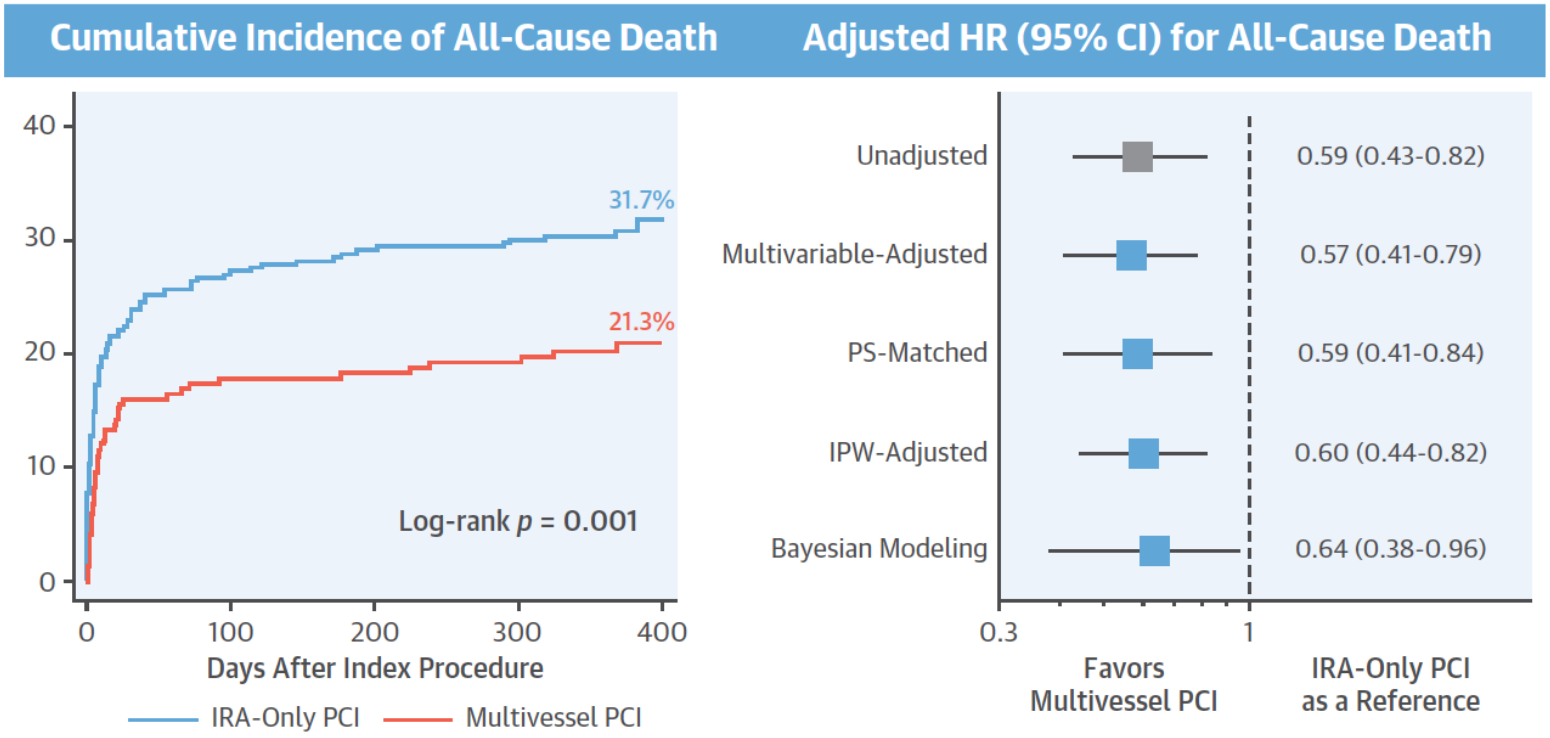
All cause death or renal replacement therapy rate at 30 days according to CTO





Braik N et al. Am Heart J 2021;232:185

MV PCI in Patients With STEMI and Cardiogenic Shock: The KAMIR Study



Lee, J.M. et al. J Am Coll Cardiol. 2018;71(8):844–56