NSTE-ACS

An ESC 2020 Guideline update

ESC European Society of Cardiology

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ESC GUIDELINES

2020 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

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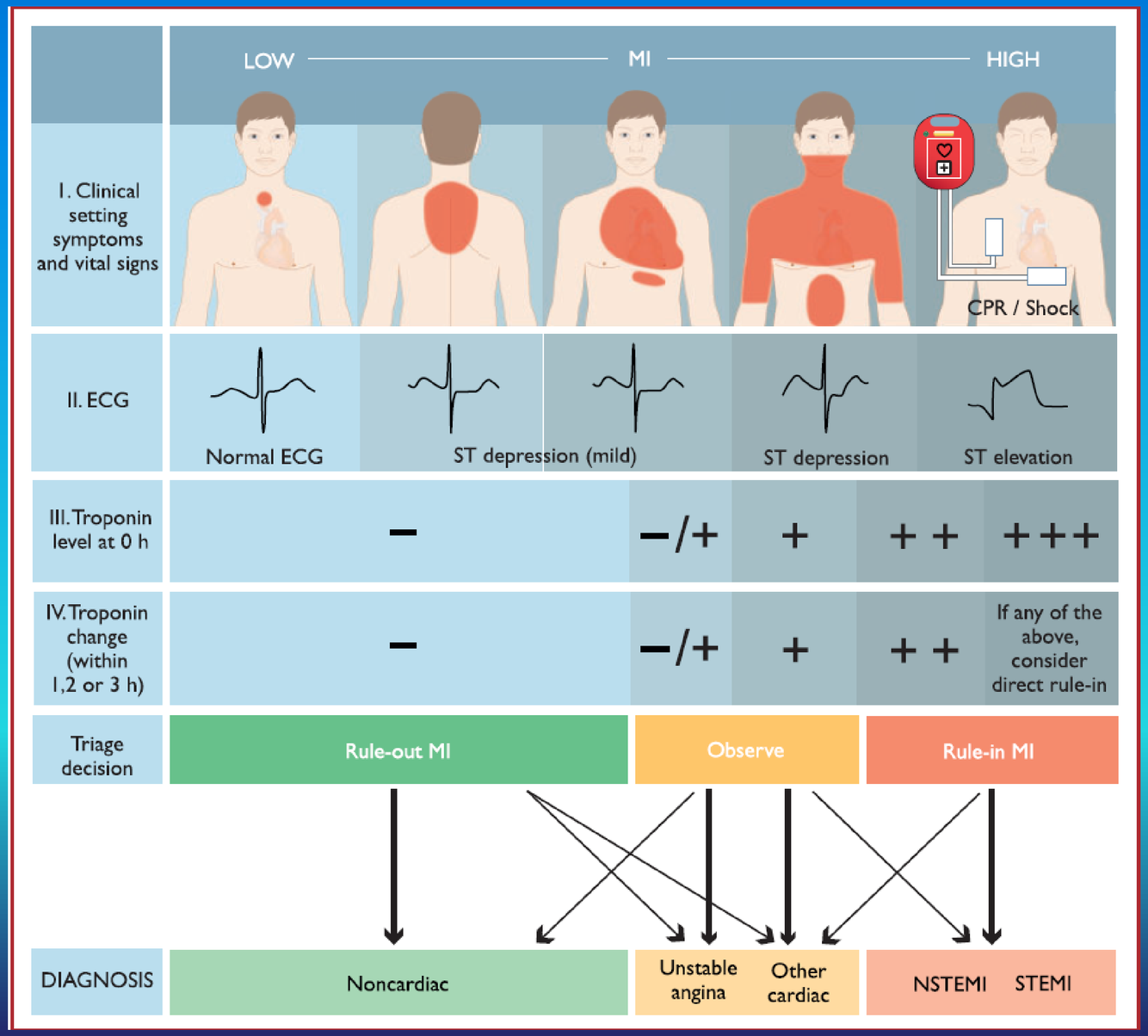
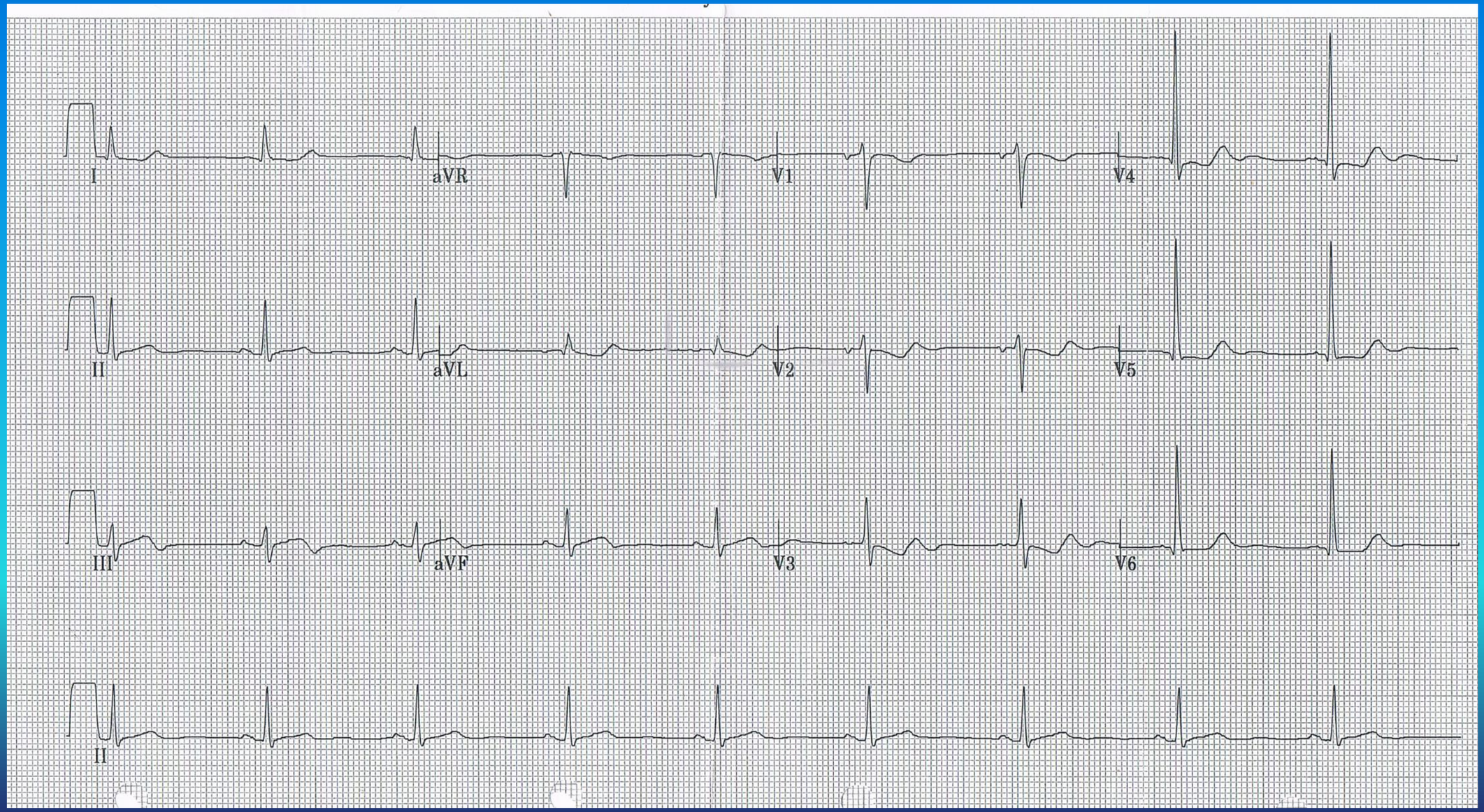
Diagnosis

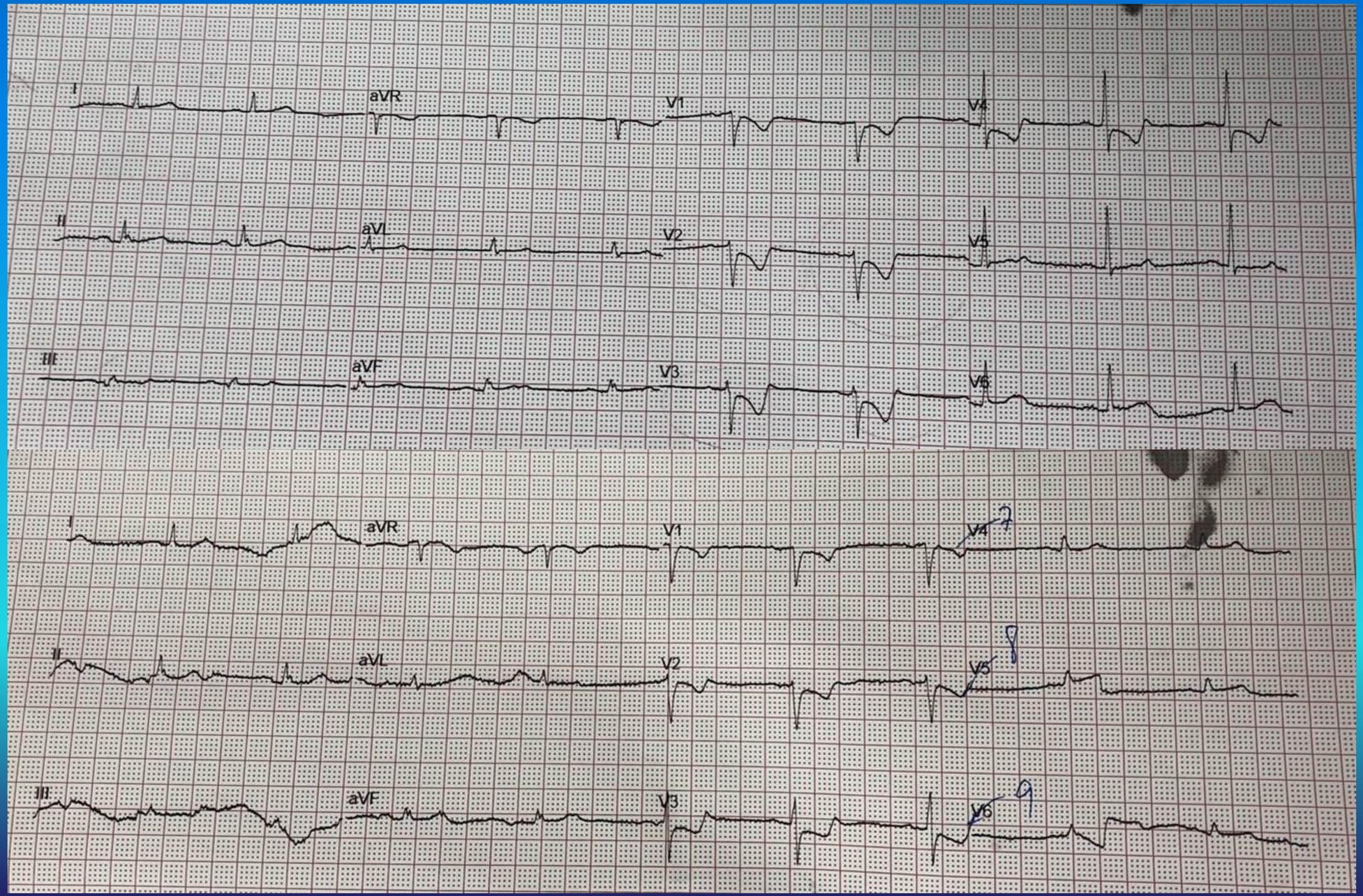


- Clinical chest pain
- ECG changes
- High sense Cardiac troponin I or T
  - High NPV for AMI
  - Faster Diagnosis
  - 4% absolute and 20% relative increases in the detection of type 1 MI
  - Associated with a 2-fold increase in the detection of type 2 MI.

Common missed EKG



EKG – V7-V9


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
I
aVR
V1
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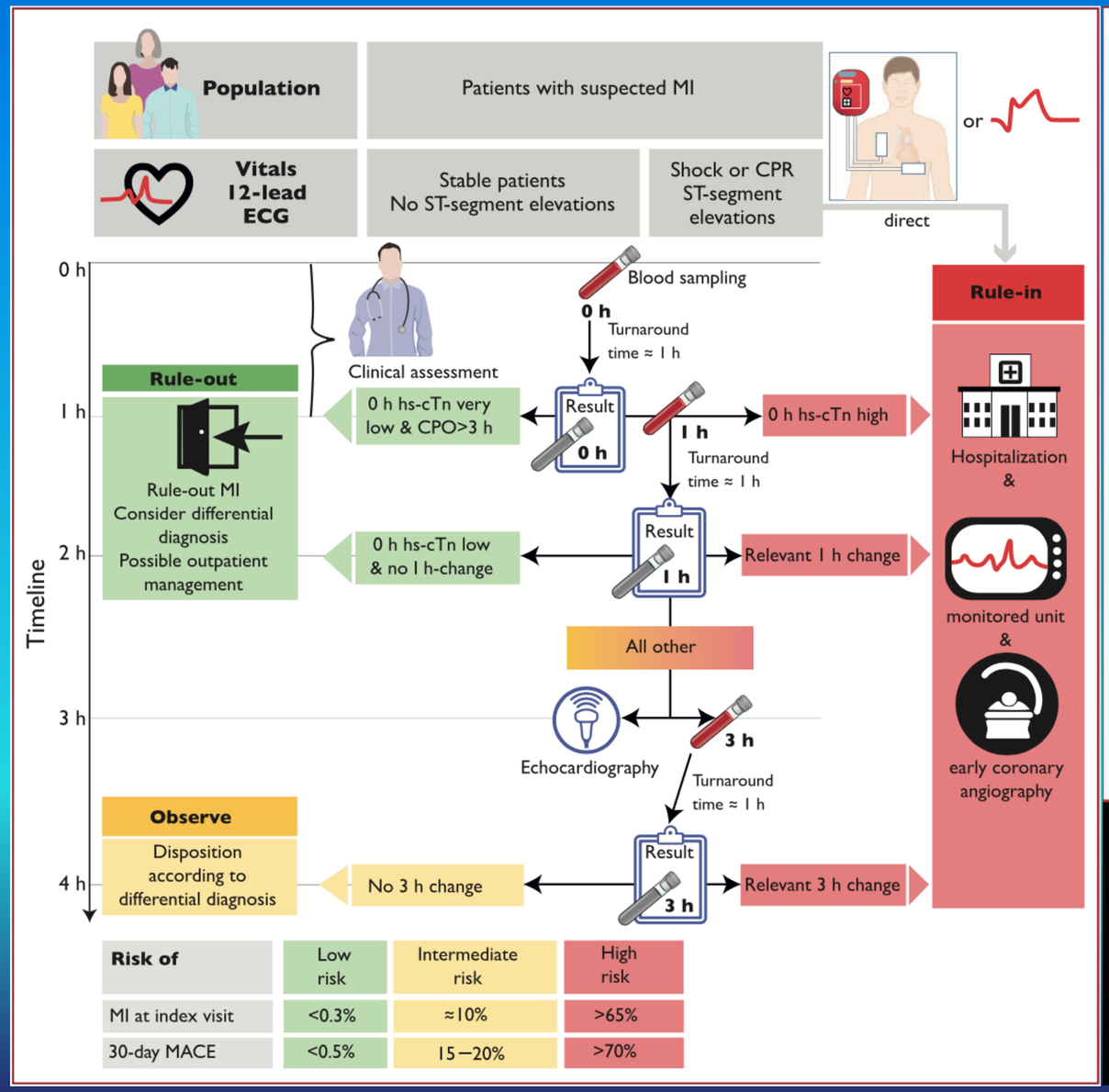
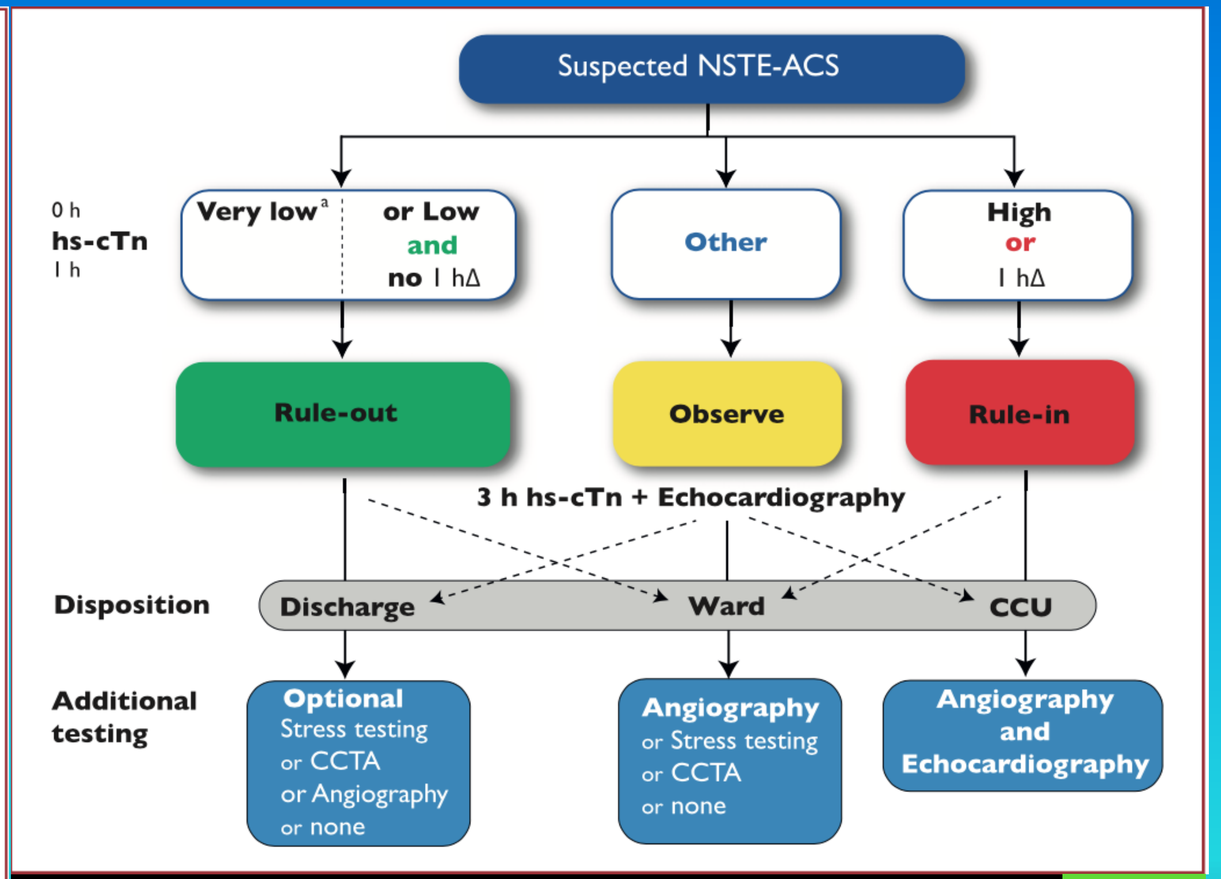
II
aVL
V2
V5
III
aVF
V3
V6

Diagnosis





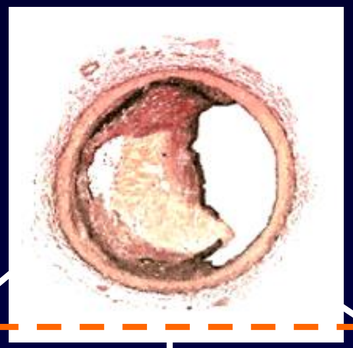
CCTA is recommended as an alternative to ICA to exclude ACS when there is a low-to-intermediate likelihood of CAD and when cardiac troponin and/or ECG are normal or inconclusive.	IA

Risk stratification and prognosis

Recommendations on biomarker measurements for prognostic stratification

Recommendations	Class[a]	Level[b]
Beyond its diagnostic role, it is recommended to measure hs-cTn serially for the estimation of prognosis.[12,13,119,120]	I	B
Measuring BNP or NT-proBNP plasma concentrations should be considered to gain prognostic information.[121,125,126]	IIa	B
The measurement of additional biomarkers, such as mid-regional pro-A-type natriuretic peptide, high-sensitivity C-reactive protein, mid-regional pro-adrenomedullin, GDF-15, copeptin, and h-FABP is not recommended for routine risk or prognosis assessment.[50,127,129]	III	B
Score to risk stratify in NSTE-ACS		
GRACE risk score models should be considered for estimating prognosis.[137–139]	IIa	B
The use of risk scores designed to evaluate the benefits and risks of different DAPT durations may be considered.[153,154]	IIb	A
To estimate bleeding risk, the use of scores may be considered in patients undergoing coronary angiography.[155,156]	IIb	B

Pathogenesis of ACS



Plaque rupture

Stable angina

Unstable angina

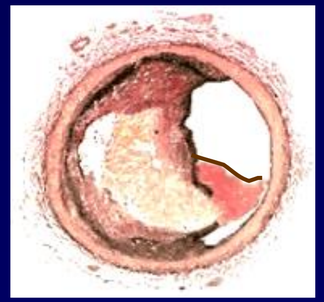
Non-Q wave MI

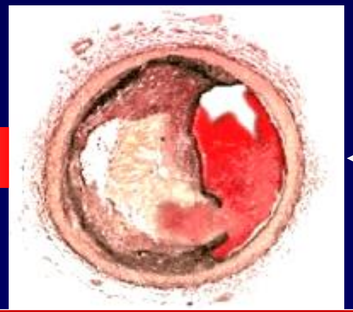
Q-wave MI

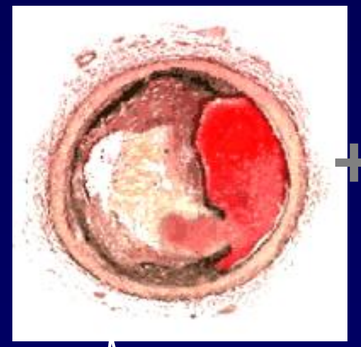
Degree of thrombosis

Non-ST elevation ACS

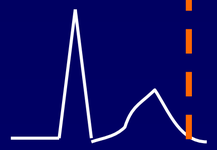
ST elevation ACS (MI)

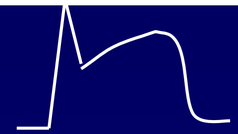






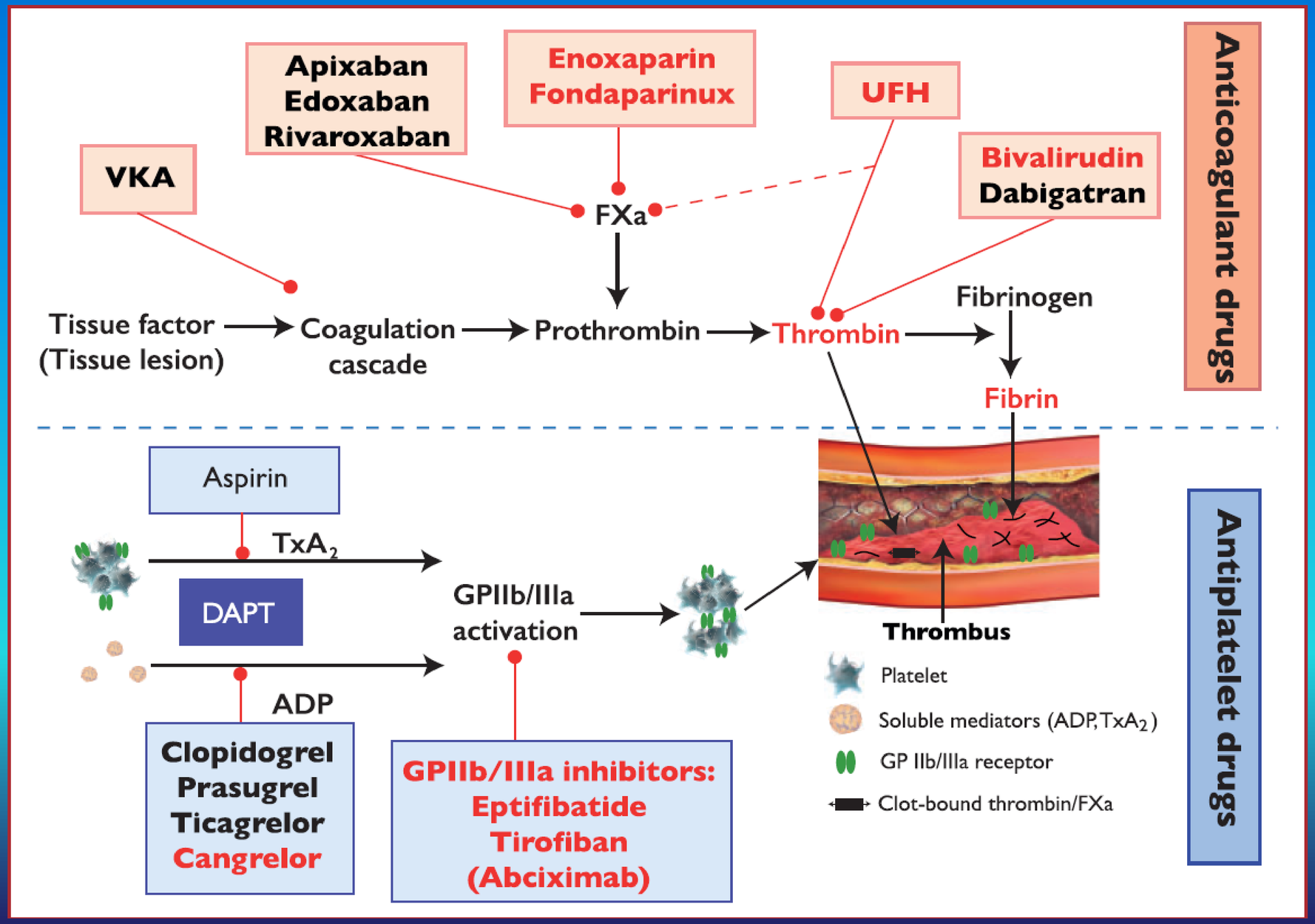
ECG



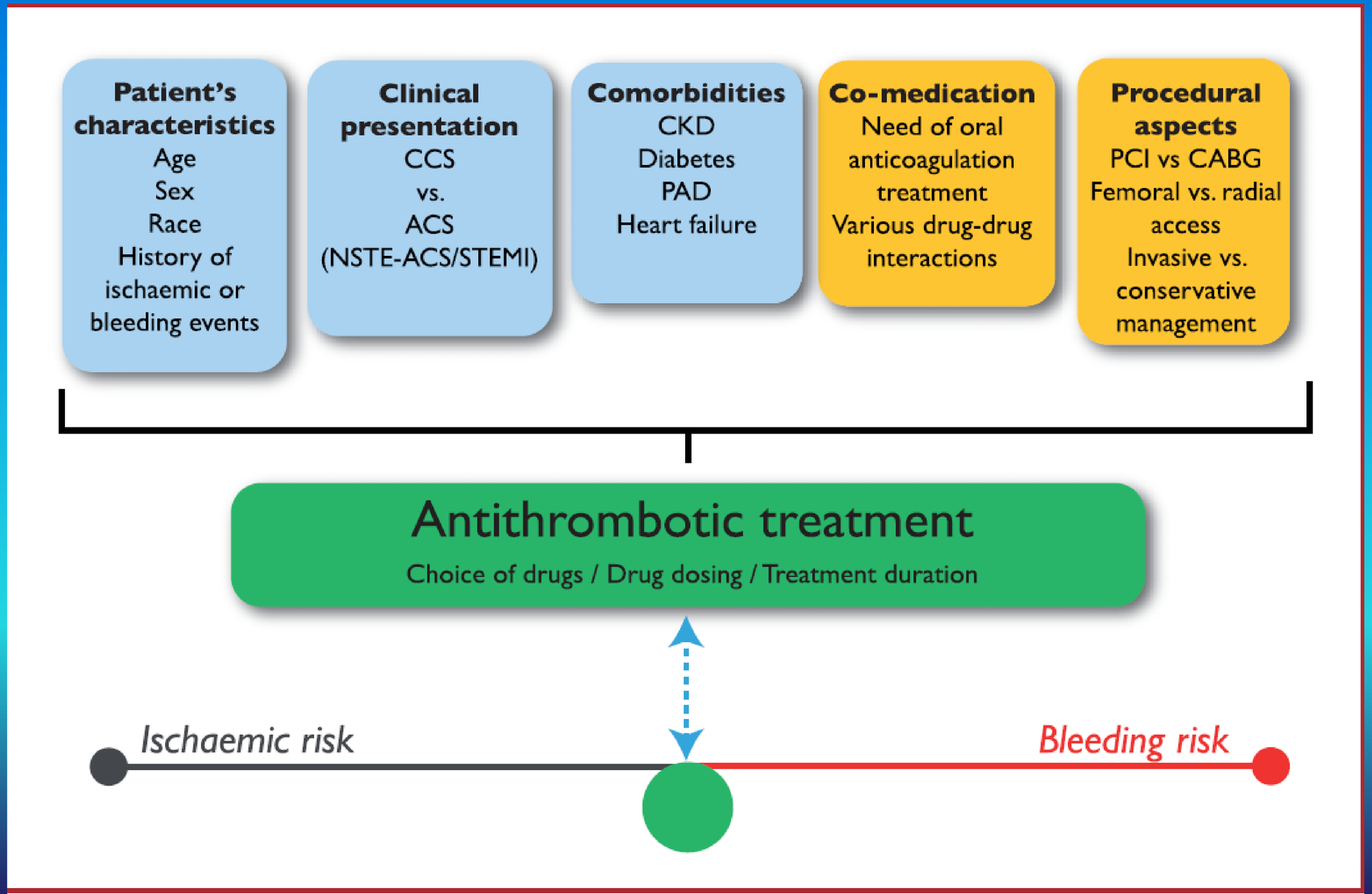


Antiplatelet(s)
Anticoagulant
intervention

Antithrombotic Rx



Antithrombotic Rx



Recommended for antithrombotic Rx for intervention

Recommendations	Class[a]	Level[b]
Antiplatelet treatment		
Aspirin is recommended for all patients without contraindications at an initial oral LD of 150–300 mg (or 75–250 mg i.v.), and at a MD of 75–100 mg o.d. for long-term treatment.[179–181]	I	A
A $P2Y_{12}$ receptor inhibitor is recommended in addition to aspirin, and maintained over 12 months unless there are contraindications or an excessive risk of bleeding.[170,171,182] Options are:	I	A
• Prasugrel in $P2Y_{12}$ receptor inhibitor-naïve patients proceeding to PCI (60 mg LD, 10 mg/d as standard dose, 5 mg/d for patients aged ≥75 years or with a body weight <60 kg).[171]	I	B
• Ticagrelor irrespective of the planned treatment strategy (invasive or conservative) (180 mg LD, 90 mg b.i.d.).[170]	I	B
• Clopidogrel (300–600 mg LD, 75 mg daily dose), only when prasugrel or ticagrelor are not available, cannot be tolerated, or are contraindicated.[182,183]	I	C
Prasugrel should be considered in preference to ticagrelor for NSTE-ACS patients who proceed to PCI.[174]	IIa	B
GP IIb/IIIa antagonists should be considered for bail-out if there is evidence of no-reflow or a thrombotic complication.	IIa	C
Cangrelor may be considered in $P2Y_{12}$ receptor inhibitor-naïve patients undergoing PCI.[184–187]	IIb	A
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
Treatment with GP IIb/IIIa antagonists in patients in whom coronary anatomy is not known is not recommended.[188,189]	III	A
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.[174,177,178,190,191]	III	A

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Ticagrelor or Prasugrel in Patients with Acute Coronary Syndromes

- 4018 pt with ACS (STEMI, NSTEMI, Unstable angina)
  - Ticagrelor (2012 pt) vs Prasugrel (2006 pt)
  - Primary end-point : death from any cause, myocardial infarction, or stroke at 1 year

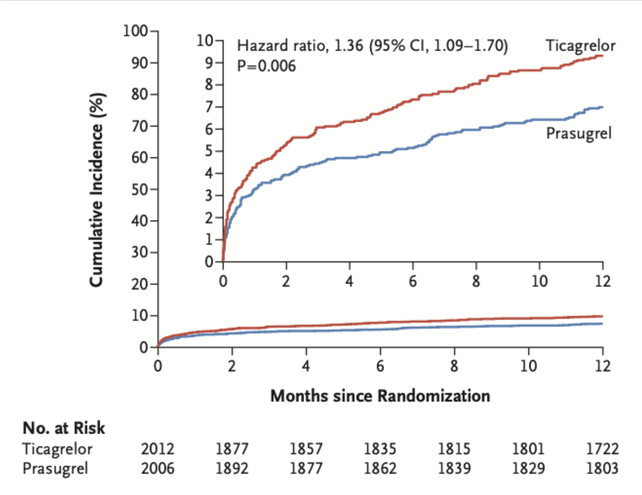


Figure 2. Cumulative Incidence of the Primary End Point at 1 Year.
The Kaplan–Meier curves show the cumulative incidence of the primary end point, which was a composite of death, myocardial infarction, or stroke at 1 year. The inset shows the same data on an enlarged y axis.

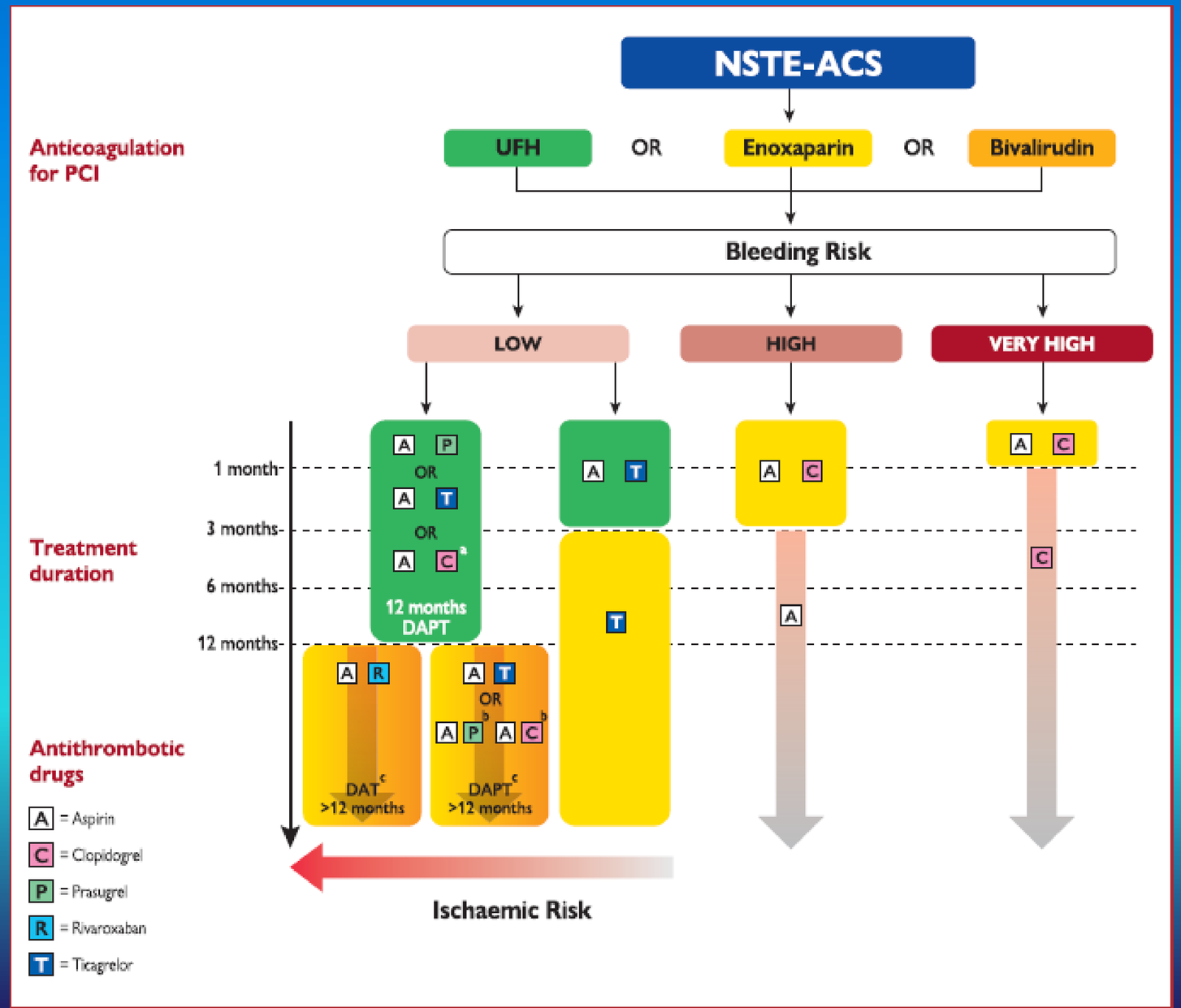
Table 2. Clinical End Points.*

End Point	Ticagrelor Group (N=2012)	Prasugrel Group (N=2006)	Hazard Ratio (95% CI)	P Value
Primary end point: death, myocardial infarction, or stroke — no. (%)	184 (9.3)	137 (6.9)	1.36 (1.09–1.70)	0.006
Death — no. (%)				
From any cause	90 (4.5)	73 (3.7)	1.23 (0.91–1.68)	
From cardiovascular cause	63 (3.2)	59 (3.0)		
From noncardiovascular cause	27 (1.4)	14 (0.7)		
Myocardial infarction — no. (%)†	96 (4.8)	60 (3.0)	1.63 (1.18–2.25)	
Type 1 — no.	52	35		
Type 2 — no.	4	3		
Type 4a — no.	19	11		
Type 4b — no.	20	11		
Type 5 — no.	1	0		
STEMI — no.	31	14		
Stroke				
Any — no. (%)	22 (1.1)	19 (1.0)	1.17 (0.63–2.15)	
Ischemic — no.	16	17		
Hemorrhagic — no.	6	2		
Definite or probable stent thrombosis — no. (%)	26 (1.3)	20 (1.0)	1.30 (0.72–2.33)	
Definite stent thrombosis — no. (%)	22 (1.1)	12 (0.6)		
Secondary safety end point: BARC type 3, 4, or 5 bleeding — no./total no. (%)‡	95/1989 (5.4)	80/1773 (4.8)	1.12 (0.83–1.51)	0.46
BARC 3a	47	41		
BARC 3b	32	31		
BARC 3c	4	2		
BARC 4	8	2		
BARC 5a	1	0		
BARC 5b	3	4		

Recommended for antithrombotic Rx for intervention

Recommendations	Class[a]	Level[b]
Peri-interventional anticoagulant treatment		
Parenteral anticoagulation is recommended for all patients, in addition to antiplatelet treatment, at the time of diagnosis and, especially, during revascularization procedures according to both ischaemic and bleeding risks.[192,193]	I	A
UFH (weight-adjusted i.v. bolus during PCI of 70–100 IU/kg, or 50–70 IU/kg in combination with a GP IIb/IIIa inhibitor; activated clotting time target range of 250–350 s, or 200–250 s if a GP IIb/IIIa inhibitor is given) is recommended in patients undergoing PCI.	I	A
In cases of medical treatment or logistical constraints for transferring the patient to PCI within the required time frame, fondaparinux is recommended and, in such cases, a single bolus of UFH is recommended at the time of PCI.[183]	I	B
It is recommended to select anticoagulation according to both ischaemic and bleeding risks, and according to the efficacy–safety profile of the chosen agent.	I	C
Enoxaparin (i.v.) should be considered in patients pre-treated with subcutaneous enoxaparin.[194–196]	IIa	B
Discontinuation of parenteral anticoagulation should be considered immediately after an invasive procedure.	IIa	C
Bivalirudin may be considered as an alternative to UFH.[189,197,198]	IIb	A
Crossover of UFH and LMWH is not recommended.[196]	III	B

Antithrombotic Rx and duration

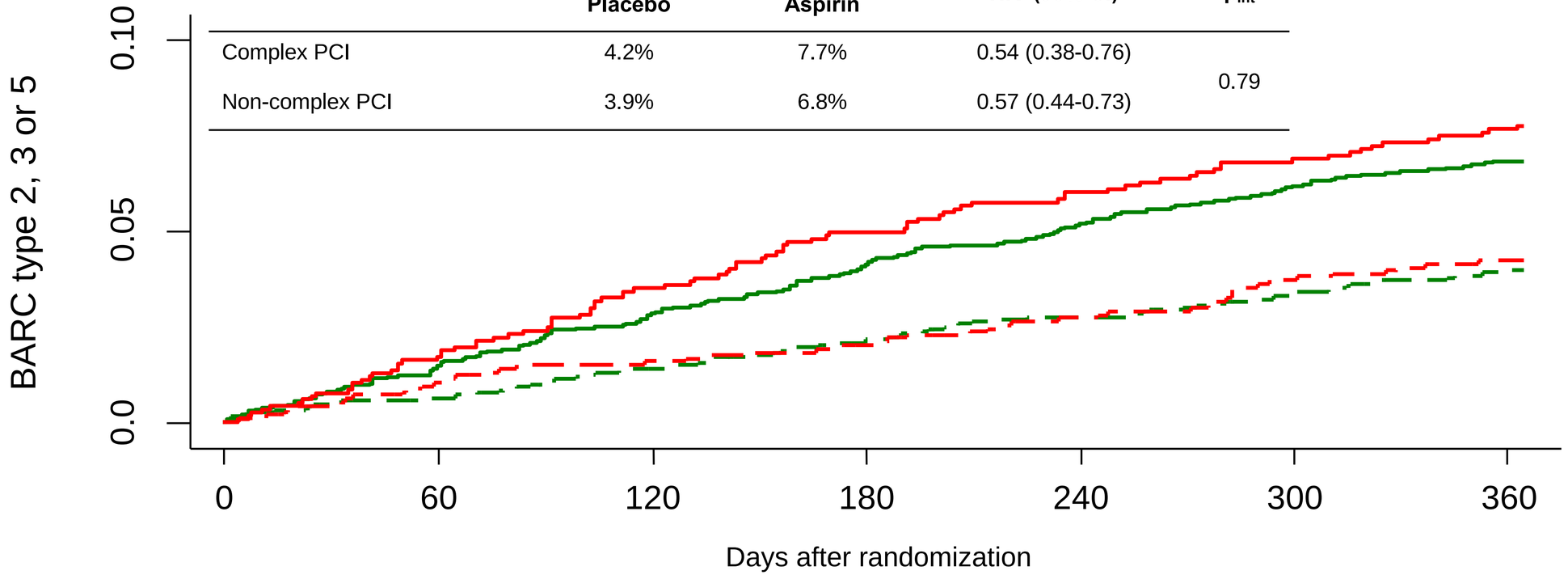


- Short DAPT in HBR (PRECISE DAPT ≥ 25, ARC met high risk) (IIa)
- De-escalation from potent P2Y12 to clopidogrel (IIb)
- Low dose rivaroxaban add on DAPT for low bleeding risk (IIb)

TWILIGHT-Complex: BARC 2, 3 or 5 Bleeding

Intention-To-Treat Cohort

	Ticagrelor + Placebo	Ticagrelor + Aspirin	HR (95% CI)	p_{int}
Complex PCI	4.2%	7.7%	0.54 (0.38-0.76)	0.79
Non-complex PCI	3.9%	6.8%	0.57 (0.44-0.73)	



Number at risk

Ticagrelor + Aspirin - Non-Complex	2380	2331	2291	2256	2216	2184	2154
Ticagrelor + Placebo - Non-Complex	2397	2365	2340	2314	2282	2263	2244
Ticagrelor + Aspirin - Complex	1184	1157	1130	1107	1090	1077	1061
Ticagrelor + Placebo - Complex	1158	1133	1123	1115	1098	1086	1077

Ticagrelor + Aspirin – Complex PCI

Ticagrelor + Placebo – Complex PCI

Ticagrelor + Aspirin – Non-complex PCI

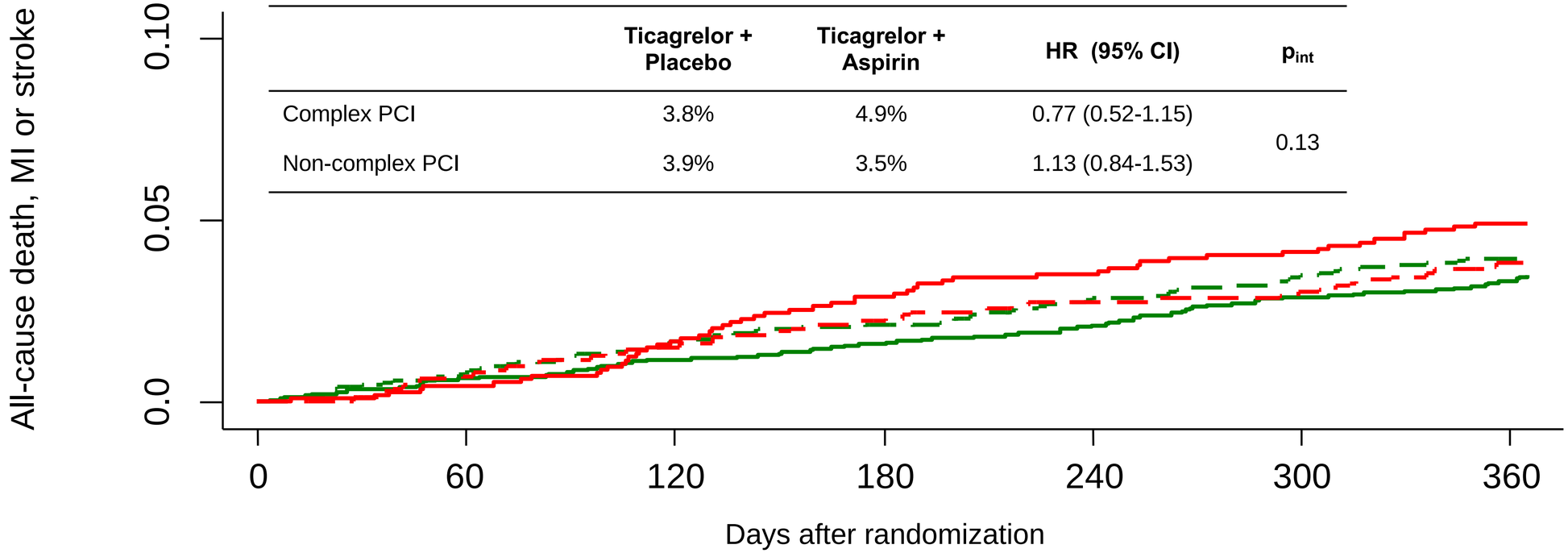
Ticagrelor + Placebo – Non-complex PCI

Dangas et al, JACC 2020

TWILIGHT-Complex: Death, MI or Stroke

Per-Protocol Cohort

	Ticagrelor + Placebo	Ticagrelor + Aspirin	HR (95% CI)	p_{int}
Complex PCI	3.8%	4.9%	0.77 (0.52-1.15)	0.13
Non-complex PCI	3.9%	3.5%	1.13 (0.84-1.53)	



Number at risk

Ticagrelor + Aspirin - Non-Complex	2356	2327	2314	2300	2275	2256	2238
Ticagrelor + Placebo - Non-Complex	2372	2342	2321	2302	2276	2260	2246
Ticagrelor + Aspirin - Complex	1159	1147	1132	1118	1107	1099	1085
Ticagrelor + Placebo - Complex	1152	1133	1123	1114	1099	1096	1084

Ticagrelor + Aspirin – Complex PCI

Ticagrelor + Aspirin – Non-complex PCI

Ticagrelor + Placebo – Complex PCI

Ticagrelor + Placebo – Non-complex PCI

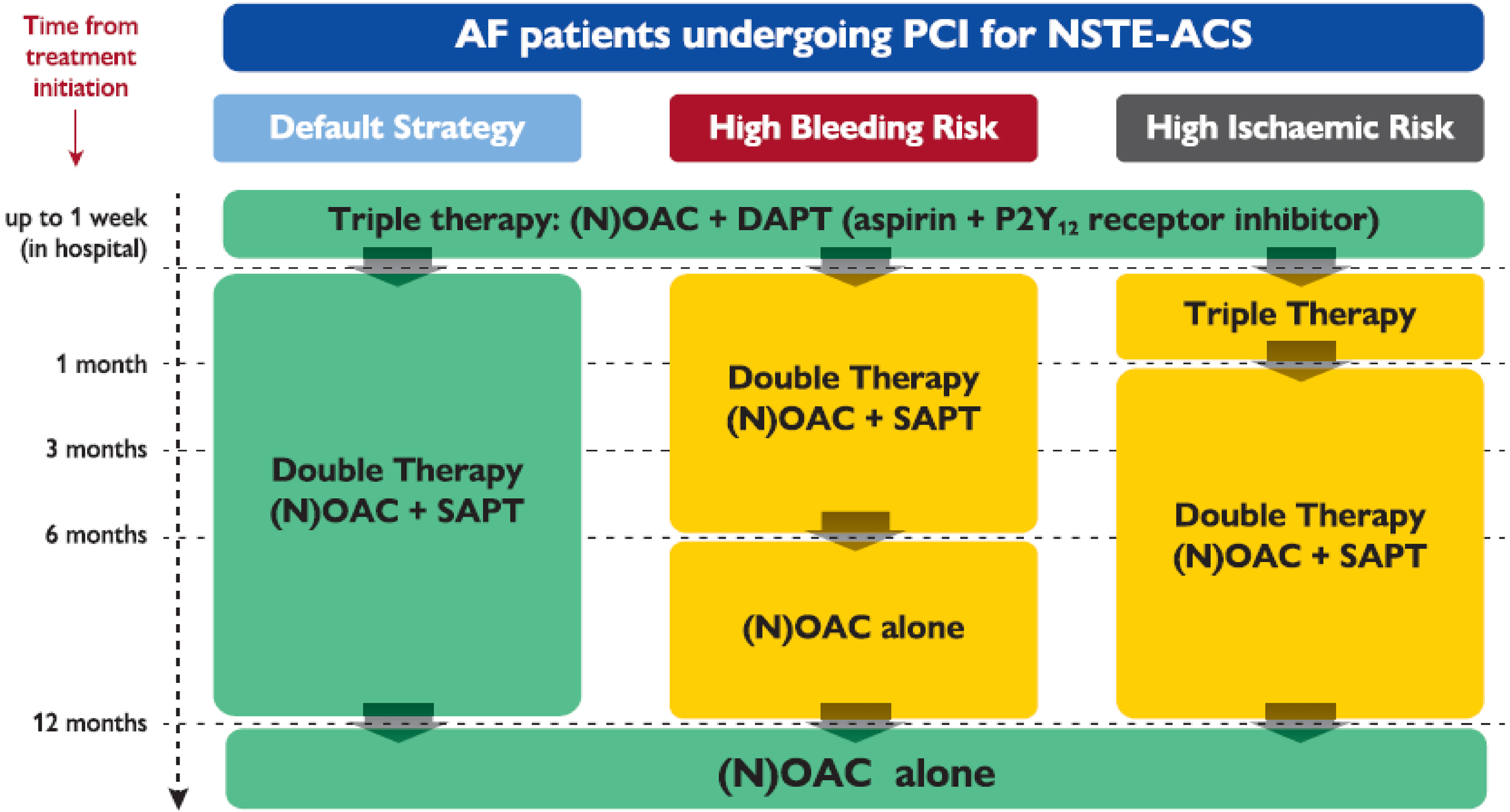
Dangas et al, JACC 2020

Bleeding risk according to academics research consortium (ARC) at the time of PCI

Major	Minor
• Anticipated use of long-term OAC[a]	• Age ≥ 75 years
• Severe or end-stage CKD (eGFR <30 mL/min)	• Moderate CKD (eGFR 30–59 mL/min)
• Haemoglobin <11 g/dL	• Haemoglobin 11–12.9 g/dL for men or 11–11.9 g/dL for women
• Spontaneous bleeding requiring hospitalization and/or transfusion in the past 6 months or at any time, if recurrent	• Spontaneous bleeding requiring hospitalization and/or transfusion within the past 12 months not meeting the major criterion
• Moderate or severe baseline thrombocytopenia[b] (platelet count <100 × 10^9/L)	• Chronic use of oral non-steroidal anti-inflammatory drugs or steroids
• Chronic bleeding diathesis	• Any ischaemic stroke at any time not meeting the major criterion
• Liver cirrhosis with portal hypertension	
• Active malignancy[c] (excluding non-melanoma skin cancer) within the past 12 months	**High bleeding risk = at least 1 major or 2 minor**
• Previous spontaneous intracranial haemorrhage (at any time) • Previous traumatic intracranial haemorrhage within the past 12 months • Presence of a brain arteriovenous malformation • Moderate or severe ischaemic stroke[d] within the past 6 months	
• Recent major surgery or major trauma within 30 days prior to PCI • Non-deferrable major surgery on DAPT	

Criteria for extended antithrombotic

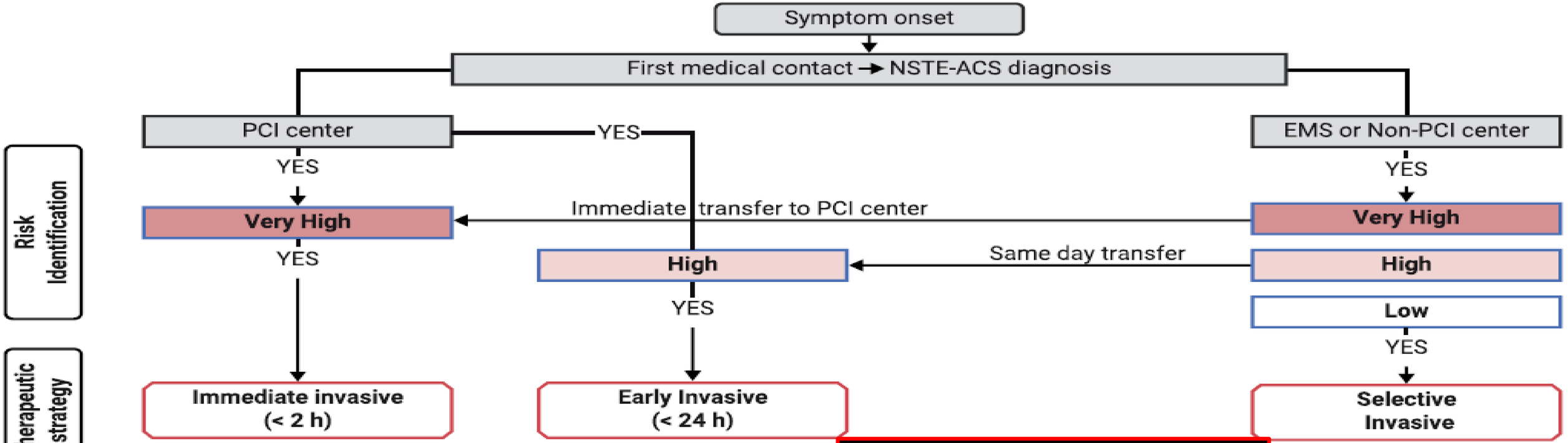
High thrombotic risk (Class IIa)	Moderate thrombotic risk (Class IIb)
Complex CAD and at least 1 criterion	**Non-complex CAD and at least 1 criterion**
Risk enhancers	
Diabetes mellitus requiring medication	Diabetes mellitus requiring medication
History of recurrent MI	History of recurrent MI
Any multivessel CAD	Polyvascular disease (CAD plus PAD)
Polyvascular disease (CAD plus PAD)	CKD with eGFR 15–59 mL/min/1.73 m^2
Premature (<45 years) or accelerated (new lesion within a 2-year time frame) CAD	
Concomitant systemic inflammatory disease (e.g. human immunodeficiency virus, systemic lupus erythematosus, chronic arthritis)	
CKD with eGFR 15–59 mL/min/1.73 m^2	
Technical aspects	
At least 3 stents implanted	
At least 3 lesions treated	
Total stent length >60 mm	
History of complex revascularization (left main, bifurcation stenting with ≥2 stents implanted, chronic total occlusion, stenting of last patent vessel)	
History of stent thrombosis on antiplatelet treatment	


Time from treatment initiation
AF patients undergoing PCI for NSTE-ACS
Default Strategy
High Bleeding Risk
High Ischaemic Risk
up to 1 week (in hospital)
1 month
3 months
6 months
12 months
Triple therapy: (N)OAC + DAPT (aspirin + P2Y12 receptor inhibitor)
Double Therapy (N)OAC + SAPT
Double Therapy (N)OAC + SAPT
(N)OAC alone
Triple Therapy
Double Therapy (N)OAC + SAPT
(N)OAC alone

In NSTE-ACS with AF patient required combine APT + OAC

RCT	n	Comparison	Primary Endpoint	Secondary endpoints
WOEST[239]	573	DAT (VKA + C) for 12 months vs. TAT (VKA + A + C) for 12 months	TIMI bleeding lower with DAT vs. TAT at 1 year (HR 0.36, 95% CI 0.26—0.50)	MI + stroke + target vessel revascularization + stent thrombosis: no difference.
				All-cause mortality lower with DAT vs. TAT at 1 year (HR 0.39, 95% CI 0.16—0.93)
ISAR-TRIPLE[250]	614	6 weeks TAT (VKA + A + C) followed by DAT (VKA + A) vs. 6 months TAT (VKA + A + C)	Death + MI + stent thrombosis + stroke or TIMI major bleeds at 9 months: no difference	Cardiac death + MI+ stent thrombosis + stroke: no difference. TIMI major bleeding: no difference
PIONEER AF-PCI[240]	2124	DAT (rivaroxaban 15 mg/day + C) for 12 months) vs. modified TAT (rivaroxaban 2.5 mg b.i.d. + A + C for 1, 6, or 12 months) vs. TAT (VKA + A + C for 1, 6, or 12 months)	Clinically significant bleeding lower with DAT (HR 0.59, 95% CI 0.47—0.76) or modified TAT (HR 0.63, 95% CI 0.50—0.80) vs. TAT	Cardiovascular death + MI + stroke: no difference. All-cause death + rehospitalization lower with DAT (HR 0.79, CI 0.69—0.94) or modified TAT (HR 0.75, CI 0.62—0.90) vs. TAT
RE-DUAL PCI[238]	2725	TAT (VKA + A + C) up to 3 months vs. DAT (dabigatran 110 or 150 mg b.i.d. + C or T)	Major or clinically relevant non-major bleeding lower in DAT 110 mg (HR 0.52, 95% CI 0.42—0.63) or DAT 150 mg (HR 0.72, 95% CI 0.58—0.88) vs. TAT	MI + stroke + systemic embolism, death, unplanned revascularization: no difference
AUGUSTUS[241]	4614	DAT1 (apixaban 5 mg b.i.d. + C or T or P) vs. DAT2 (VKA + C or T or P) vs. TAT1 (apixaban 5 mg b.i.d. + A + C or T or P) vs. TAT2 (VKA + A + C or T or P)	Major or clinically relevant non-major bleeds lower with DAT1 (HR 0.69, 95% CI 0.58—0.81) vs. other regimens	Death + hospitalization lower with apixaban (HR 0.83, 95% CI 0.74—0.93)
				No difference with aspirin
ENTRUST-AF PCI[251]	1506	DAT (edoxaban 60 mg + C or T or P) vs. TAT (VKA + A + C or T or P)	Major or clinically relevant non-major bleeds non-inferior between DAT or TAT (HR 0.83, 95% CI 0.65—1.05, *P*=0.0010 for non-inferiority)	Cardiovascular death + stroke + systemic embolism + MI + stent thrombosis not different between DAT and TAT

Invasive management for NSTE-ACS and timing



CCTA is recommended as an alternative to ICA to exclude ACS when there is a low-to-intermediate likelihood of CAD and when cardiac troponin and/or ECG are normal or inconclusive.	IA

คำแนะนำในการฉีดสีหลอดเลือดหัวใจ

คำแนะนำ	น้ำหนักคำแนะนำ	คุณภาพหลักฐาน
ผู้ป่วยที่มีลักษณะข้อใดข้อหนึ่งต่อไปนี้ ควรได้รับการฉีดสีหลอดเลือดหัวใจโดยเร็วที่สุด - ความดันไม่คงที่ หรืออยู่ในภาวะช็อก - อาการเจ็บหน้าอกไม่ดีขึ้นหลังจากได้รับการรักษาด้วยยาแล้ว - หัวใจเต้นผิดจังหวะชนิดที่อาจนำไปสู่การเสียชีวิตได้ หรือมีภาวะหัวใจหยุดเต้น - ภาวะแทรกซ้อนชนิด mechanical complication - ภาวะหัวใจล้มเหลวเฉียบพลัน ร่วมกับมีอาการเจ็บหน้าอก หรือพบว่ามี ST deviation จากการตรวจคลื่นไฟฟ้าหัวใจ - มี intermittent ST elevation	I	C
ผู้ป่วยที่มีลักษณะข้อใดข้อหนึ่งต่อไปนี้ ควรได้รับการฉีดสีหลอดเลือดหัวใจในระหว่างอยู่ในโรงพยาบาล** ได้แก่ - ระดับ cardiac troponin สูงกว่าค่าปกติ - มีการเปลี่ยนแปลงของ ST segment หรือ T wave - GRACE risk score >140	I	C

**** ภายใน 72 ชั่วโมง ในสถานพยาบาลมีความพร้อม**

คำแนะนำในการฉีดสีหลอดเลือดหัวใจ (ต่อ)

คำแนะนำ	น้ำหนักคำแนะนำ	คุณภาพหลักฐาน
ผู้ป่วยที่มีลักษณะข้อใดข้อหนึ่งต่อไปนี้ ควรได้รับการฉีดสีหลอดเลือดหัวใจ*** ได้แก่ - เบาหวาน - ไตวาย - LVEF <40% หรือมีภาวะหัวใจล้มเหลว - มีอาการเจ็บหน้าอกหลังจากมีภาวะกล้ามเนื้อหัวใจตาย - เคยได้รับการรักษาด้วยการขยายหลอดเลือดหัวใจ หรือผ่าตัดบายพาส - GRACE risk score >109 และ <140 - ผลการตรวจ non-invasive test ผิดปกติ	I	C
ในกรณีที่ผู้ป่วยไม่เข้าเกณฑ์ดังข้างต้นเลย แนะนำให้ตรวจด้วย non-invasive stress test ก่อนจะตัดสินใจให้ตรวจด้วยวิธีการฉีดสีหลอดเลือดหัวใจ	IIa	A

***** โดยเร็ว ในสถานพยาบาลที่มีความพร้อม**

Technical aspect during PCI

- **Radial access: IA**
- **Always use DES: IA**
- **Revascularization strategy on pt status and disease severity: IB**
- **Complete revascularization in pt with MVD without CS: IIa-C**
- **Complete revascularization during index PCI: IIb-B**
- **FFR guide in non-culprit lesion: IIb-B**

Major changes in recommendations

2015	2020

Diagnosis

2015	2020
A rapid rule-out protocol at 0 h and 3 h is recommended if hs-cTn tests are available.	A rapid rule-out and rule-in protocol with blood sampling at 0 h and 3 h should be considered if an hs-cTn test with a validated 0 h/3 h algorithm is available.
MDCT coronary angiography should be considered as an alternative to invasive angiography to exclude ACS when there is a low-to-intermediate likelihood of CAD and when cardiac troponin and/or ECG are inconclusive.	CCTA is recommended as an alternative to invasive angiography to exclude ACS when there is a low-to-intermediate likelihood of CAD and when cardiac troponin and/or ECG are normal or inconclusive.
Rhythm monitoring up to 24 h or PCI (whichever comes first) should be considered in NSTEMI patients at low risk for cardiac arrhythmias.	Rhythm monitoring up to 24 h or to PCI (whichever comes first) is recommended in NSTEMI patients at low risk for cardiac arrhythmias.
Rhythm monitoring for >24 h should be considered in NSTEMI patients at intermediate-to-high risk for cardiac arrhythmias.	Rhythm monitoring for >24 h is recommended in NSTEMI patients at increased risk for cardiac arrhythmias.

Risk assessment

2015	2020
It is recommended to use established risk scores for prognosis estimation.	GRACE risk score models should be considered for estimating prognosis.

Pharmacological treatments

2015	2020
Bivalirudin (0.75 mg/kg i.v. bolus, followed by 1.75 mg/kg/h for up to 4 h after the procedure) is recommended as an alternative to UFH plus GP IIb/IIIa inhibitors during PCI.	Bivalirudin may be considered as an alternative to UFH.
$P2Y_{12}$ inhibitor administration in addition to aspirin beyond 1 year may be considered after careful assessment of the ischaemic and bleeding risks of the patient.	Adding a second antithrombotic agent to aspirin for extended long-term secondary prevention should be considered in patients at high risk of ischaemic events and without increased risk of major or life-threatening bleeding.

Class I	Class IIa	Class IIb

New key recommendations

Diagnosis

As an alternative to the ESC 0 h/1 h algorithm, it is recommended to use the ESC 0 h/2 h algorithm with blood sampling at 0 h and 2 h, if an hs-cTn test with a validated 0 h/2 h algorithm is available.

For diagnostic purposes, it is not recommended to routinely measure additional biomarkers such as CK, CK-MB, h-FABP, or copeptin, in addition to hs-cTn.

Risk stratification

Measuring BNP or NT-proBNP plasma concentrations should be considered to gain prognostic information.

Antithrombotic treatment

Prasugrel should be considered in preference to ticagrelor for NSTE-ACS patients who proceed to PCI.

It is not recommended to administer routine pre-treatment with a $P2Y_{12}$ receptor inhibitor to patients in whom the coronary anatomy is not known and early invasive management is planned.

In patients with NSTE-ACS who cannot undergo an early invasive strategy, pre-treatment with a $P2Y_{12}$ receptor inhibitor may be considered depending on bleeding risk.

De-escalation of $P2Y_{12}$ inhibitor treatment (e.g. with a switch from prasugrel or ticagrelor to clopidogrel) may be considered as an alternative DAPT strategy, especially for ACS patients deemed unsuitable for potent platelet inhibition. De-escalation may be done unguided based on clinical judgment, or guided by platelet function testing, or CYP2C19 genotyping depending on the patient's risk profile and availability of respective assays.

In patients with AF (CHA_2DS_2-VASc score ≥1 in men and ≥2 in women), after a short period of TAT (up to 1 week from the acute event), DAT is recommended as the default strategy using a NOAC at the recommended dose for stroke prevention and single oral antiplatelet agent (preferably clopidogrel).

Discontinuation of antiplatelet treatment in patients treated with OACs is recommended after 12 months.

DAT with an OAC and either ticagrelor or prasugrel may be considered as an alternative to TAT with an OAC, aspirin, and clopidogrel in patients with a moderate or high risk of stent thrombosis, irrespective of the type of stent used.

Invasive treatment

An early invasive strategy within 24 h is recommended in patients with any of the following high-risk criteria:

- Diagnosis of NSTEMI.
- Dynamic or presumably new contiguous ST/T-segment changes suggesting ongoing ischaemia.
- Transient ST-segment elevation.
- GRACE risk score >140.

A selective invasive strategy after appropriate ischaemia testing or detection of obstructive CAD by CCTA is recommended in patients considered at low risk.

Delayed, as opposed to immediate, angiography should be considered in haemodynamically stable patients without ST-segment elevation successfully resuscitated after an out-of-hospital cardiac arrest.

Complete revascularization should be considered in NSTE-ACS patients without cardiogenic shock and with multivessel CAD.

Complete revascularization during index PCI may be considered in NSTE-ACS patients with multivessel disease.

FFR-guided revascularization of non-culprit NSTE-ACS lesions may be used during index PCI.


Thank you for your attention