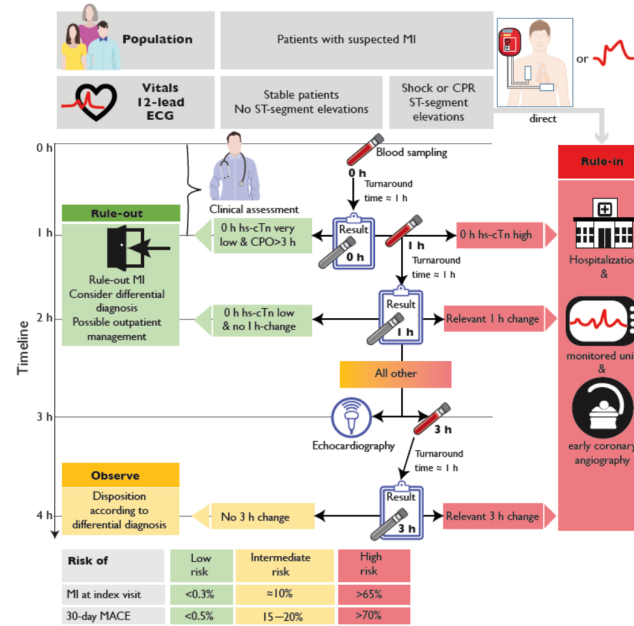


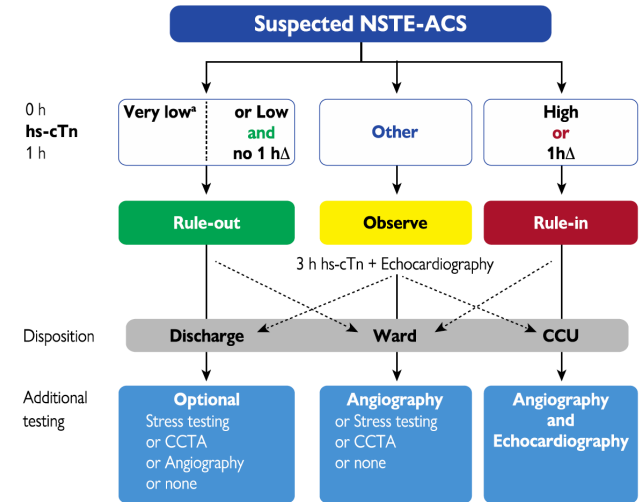
2020 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

	LOW	MI	HIGH
I. Clinical setting symptoms and vital signs			
II. ECG	Normal ECG	ST depression (mild)	ST depression, ST elevation
III. Troponin level at 0 h	-	-/+	+, ++, +++
IV. Troponin change (within 1, 2 or 3 h)	-	-/+	+, ++, +++
Triage decision	Rule-out MI	Observe	Rule-in MI
DIAGNOSIS	Noncardiac	Unstable angina, Other cardiac	NSTEMI, STEMI



Recommendations	Class	Level
Diagnosis and risk stratification		
It is recommended to base diagnosis and initial short-term risk stratification on a combination of clinical history, symptoms, vital signs, other physical findings, ECG, and laboratory results including hs-cTn.	I	B
It is recommended to measure cardiac troponins with high-sensitivity assays immediately after admission and obtain the results within 60 min of blood sampling.	I	B
It is recommended to obtain a 12-lead ECG within 10 min after first medical contact and to have it immediately interpreted by an experienced physician.	I	B
It is recommended to obtain an additional 12-lead ECG in case of recurrent symptoms or diagnostic uncertainty.	I	C
The ESC 0 h/1 h algorithm with blood sampling at 0 h and 1 h is recommended if an hs-cTn test with a validated 0 h/1 h algorithm is available.	I	B
Additional testing after 3 h is recommended if the first two cardiac troponin measurements of the 0 h/1 h algorithm are not conclusive and the clinical condition is still suggestive of ACS.	I	B

Recommendations	Class	Level
Imaging		
In patients presenting with cardiac arrest or haemodynamic instability of presumed cardiovascular origin, echocardiography is recommended and should be performed by trained physicians immediately following a 12-lead ECG.	I	C
In patients with no recurrence of chest pain, normal ECG findings, and normal levels of cardiac troponin (preferably high sensitivity), but still with a suspected ACS, a non-invasive stress test (preferably with imaging) for inducible ischaemia or CCTA is recommended before deciding on an invasive approach.	I	B
Echocardiography is recommended to evaluate regional and global LV function and to rule in or rule out differential diagnoses. ³	I	C
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.	I	A



Recommendations for anti-ischaemic drugs in the acute phase of non-ST-segment elevation acute coronary syndrome

Recommendations	Class	Level
Sublingual or i.v. nitrates and early initiation of beta-blocker treatment are recommended in patients with ongoing ischaemic symptoms and without contraindications.	I	C
It is recommended to continue chronic beta-blocker therapy, unless the patient is in overt heart failure.	I	C
i.v. nitrates are recommended in patients with uncontrolled hypertension or signs of heart failure.	I	C
In patients with suspected/confirmed vasospastic angina, calcium channel blockers and nitrates should be considered and beta-blockers avoided.	IIa	B

New key recommendations

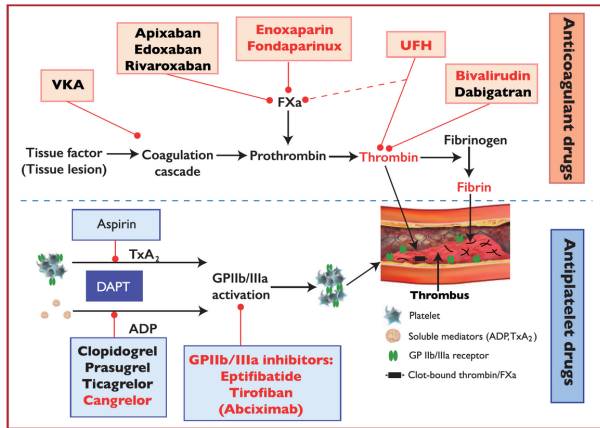
Diagnosis

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.



Recommendations for antithrombotic treatment in non-ST-segment elevation acute coronary syndrome patients undergoing percutaneous coronary intervention (1)

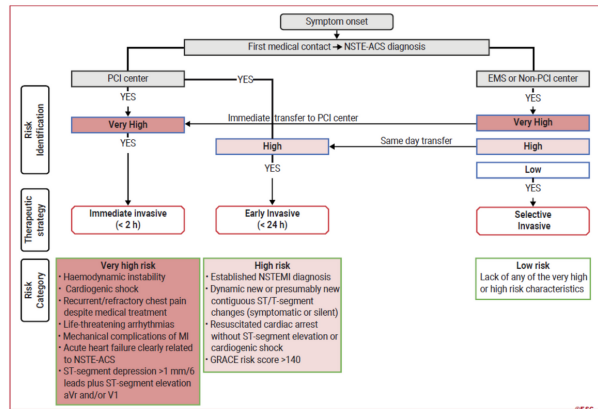


Recommendations	Class	Level
Antiplatelet treatment		
Aspirin is recommended for all patients without contraindications at an initial oral LD of 150–300 mg (or 75–250 mg i.v.), and at a MD of 75–100 mg o.d. for long-term treatment.	I	A
A P2 ₁₂ receptor inhibitor is recommended in addition to aspirin, and maintained over 12 months unless there are contraindications or an excessive risk of bleeding. Options are:	I	A
• Prasugrel in P2 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).	I	B
• Ticagrelor irrespective of the planned treatment strategy (invasive or conservative) (180 mg LD, 90 mg b.i.d.).	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.	I	C
Prasugrel should be considered in preference to ticagrelor for NSTEMI-ACS patients who proceed to PCI.	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

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

It is not recommended to administer routine pre-treatment with a P2₁₂ receptor inhibitor to patients in whom the coronary anatomy is not known and early invasive management is planned.

In patients with NSTEMI-ACS who cannot undergo an early invasive strategy, pre-treatment with a P2₁₂ receptor inhibitor may be considered depending on bleeding risk.



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.

