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ESC GUIDELINES

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

The Task Force for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation of the European Society of Cardiology (ESC)

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These algorithms should always be integrated with a detailed clinical assessment and 12-lead ECG, and repeat blood sampling is mandatory in case of ongoing or recurrent chest pain.

The same concept applies to the 0 h/2 h algorithm. Cut-off levels are assay-specific and shown in *Table 5*. Cut-off levels for other hs-cTn assays are in development.

3.3.4 Observe

Patients who do not qualify for 'rule-out' or 'rule-in', are assigned to observe. They represent a heterogeneous group that usually requires a third measurement of cardiac troponin at 3 h and echocardiography as the next steps.[85] ICA should be considered in patients for whom there is a high degree of clinical suspicion of NSTE-ACS (e.g. relevant increase in cardiac troponin from presentation to 3 h), while in patients with low-to-intermediate likelihood for this condition according to clinical judgment, non-invasive imaging using CCTA or stress testing [stress echocardiography, positron emission tomography, single-photon-emission tomography (SPECT), or CMR for the detection of ACS features (oedema, late gadolinium enhancement, perfusion defect, etc.)] should be considered after discharge from the emergency department to the ward. No further diagnostic testing is indicated when alternative conditions, such as rapid ventricular rate response to

ii. The ESC 0 h/1h and 0 h/2 h algorithms apply to all patients irrespective of chest pain onset. The safety (as quantified by the NPV) and sensitivity are very high (>99%), including in the subgroup of patients presenting very early (e.g. <2 h).[69] However, due to the time dependency of troponin release and the only moderate number of patients presenting <1 h after chest pain onset in previous studies, obtaining an additional cardiac troponin concentration at 3 h in patients presenting <1 h and triaged towards rule-out should be considered.

iii. As late increases in cardiac troponin have been described in ~1% of patients, serial cardiac troponin testing should be pursued if the clinical suspicion remains high or whenever the patient develops recurrent chest pain.[35,36,39,68,69,75,76,86]

3.3.4.2 Confounders of cardiac troponin concentration. In patients presenting with suspected NSTE-ACS, beyond the presence or absence of MI, four clinical variables affect hs-cTn concentrations:[35,36,39,69,79,87–93]

i. Age (to a large extent as a surrogate for pre-existing cardiac disease).
ii. Renal dysfunction (to a large extent as a surrogate for pre-existing cardiac disease).
iii. Time from chest pain onset.
iv. Sex.