

Patient presents to ED with suspected Acute Coronary Syndrome

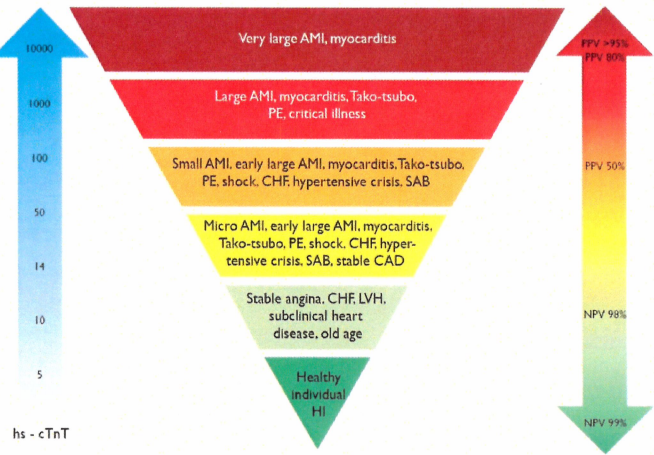
High-sensitivity cardiac troponin as a quantitative marker.

AMI acute myocardial infarction
 CAD coronary artery disease
 CHF congestive heart failure
 HI healthy individual
 LVH left ventricular hypertrophy
 PE pulmonary embolus
 SAB Staphylococcus aureus bacteremia

The lower the level of hs-cTn, the higher the negative predictive value (NPV) for the presence of AMI.

The higher the level of hs-cTn, the higher the positive predictive value (PPV) for the presence of AMI.

Levels just above the 99th percentile have a low PPV for AMI



ST elevation MI on EKG?

Activate Cardiac Alert Code STEMI

High Sensitivity Cardiac Troponin T (hs-cTnT) is ordered

hs-cTnT

hs-cTnT < 12ng/L (Normal)

hs-cTnT = 12-99ng/L (Elevated)

hs-cTnT ≥ 100ng/L (Critically High)

Repeat hs-cTnT at 2h ordered

Repeat hs-cTnT at 2h ordered

2h repeat hs-cTnT change

2h repeat hs-cTnT change

Repeat hs-cTnT at 4h ordered

Repeat hs-cTnT at 4h ordered

4h repeat hs-cTnT change

4h repeat hs-cTnT change

Highest value obtained: F < 14ng/L, M < 22ng/L

Evaluate for non ACS causes of high troponin, late presentation MI, consider noninvasive evaluation for CAD. (May require Observation, Admission or Outpatient follow up)

Pt has MI or other significant cardiac insult

Admit or Place in Obs, Document severity, additional cardiac evaluation indicated

PCP/Ambulatory follow up

- Evaluation must include consideration of clinical history, PE, and EKG findings.
- The 2h and 4h apply in reference to INITIAL DRAW
- Delta is the difference from the initial troponin, at 2h and/or 4h

(derivative of Garg et al, Cardiac biomarkers of acute coronary syndrome: from history to high-sensitivity cardiac troponin, Intern Emerg Med. (2017) 12:147-155). This work is licensed under Creative Commons Attribution 2.0 Generic License)