

# 5<sup>th</sup> Generation Troponin Algorithm

Baseline troponin  $\geq 100$  ng/L

**Higher risk for acute MI**

Prompt cardiac evaluation

**Exclusion Criteria:** Any patient that meets exclusion criteria requires prompt cardiac evaluation.

1. Patient Meets STEMI criteria
2. Definite ACS / Unstable Angina
3.  $\leq 18$  yrs old

Patient with symptoms suggestive of ACS

Initial Troponin

Initial Troponin  $\leq 6$  ng/L

Is patient low risk?  
Chest pain onset  $> 3$  hrs AND normal or no acute ECG changes? (ensure patient doesn't meet exclusion criteria above)

Consider patient discharge with Primary Care Provider follow-up\*  
(\*if no other indications for admission)

Initial Troponin 7-18 ng/L

Repeat Troponin 2 hrs after initial troponin

Troponin  $< 19$  AND delta  $< 4$  ng/L

Is patient low risk?  
Chest pain onset  $> 3$  hrs AND normal or no acute ECG changes? (ensure patient doesn't meet exclusion criteria above)

Troponin  $\geq 19$  OR delta  $\geq 4$  ng/L

Initial Troponin  $\geq 19$  ng/L

Is there an alternative diagnosis that may be a contributing factor? (ex: PE/sepsis, CHF, CKD, Arrhythmia, etc)

Is there evidence of ongoing myocardial ischemia (i.e. persistent chest pain at rest)?

Repeat Troponin 2 hrs after previous troponin

Is there a  $\geq 20\%$  rise from the previous Troponin

Manage alternative diagnosis AND repeat troponin per clinician discretion

Consult Cardiology Consider ACS treatment

Chronic myocardial injury potentially present; inpatient vs outpatient workup at provider discretion

\*Troponin order set will create serial troponin orders to be drawn at 0 and 2 hours. Physicians can manually add the third troponin at 4 hours as needed. The 2 hour troponin can be discontinued where appropriate according to algorithm guidelines.

