

## Chest Pain Work Up for the Emergency Department/Urgent Care Settings

Developed by Participating OPA Cardiologists in OPA's Chest Pain Management Variation Analysis Group

**CRITERIA:** Any patient admitted to the Emergency Department or Urgent Care Center with a complaint of chest pain that the physician deems appropriate for an ACS workup.

**ASSESSMENT:** NOTE: Obtain EKG and Troponin level on all patients at the time of the assessment

THE HEART SCORE <i>developed by the European Society of Cardiology</i>		
HISTORY	* <b>Highly suspicious</b> - substernal or exertional chest pain - <i>Constricting chest discomfort, pain, pressure, or tightness originating in and/or radiating to the sternum, neck, shoulders, jaw or arms which may be precipitated by physical exertion</i>	2 points
	* <b>Moderately suspicious</b> – <i>intermittent chest, jaw or arm discomfort which may or may not be related to activity in a patient with known CAD or with multiple risk factors for which no other etiology may be found</i>	1 point
	* <b>Slightly or Non-Suspicious</b> – <i>chest pain worse with palpation or movement of the torso or arms, worse when lying supine or relieved with antacids</i>	0 points
EKG	* Significant ST Depression	2 points
	* Nonspecific Repolarization	1 point
	* Normal	0 points
AGE	* ≥ 65 years	2 points
	* 46-64 years	1 point
	* ≤45 years	0 points
**RISK FACTORS	* ≥ 3 Risk Factors or History of CAD	2 points
	* 1 or 2 Risk Factors	1 point
	* No Risk Factors	0 points
TROPONIN	* ≥ 3x Normal Limit	2 points
	* >1 - <3x Normal Limit	1 point
	* Normal Limit	0 points
**RISK FACTORS: DM , smoker current or recent (<1 month) , HTN, Hypercholesterolemia, family history of CAD, obesity, history of significant atherosclerosis (MI, stroke, PVD)		

### INTERPRETATION - Risk of Major Adverse Cardiac Event (MACE)

RISK LEVEL	HEART SCORE	MACE RATE
LOW RISK	0-3	1.7%
INTERMEDIATE	4-6	16.6%
RISK HIGH RISK	7-10	50.1%

**APPLICATION:** Relied upon the OPA Cardiologists to create this application table using current dated research and most relevant relied upon sources

LOW RISK	<ul style="list-style-type: none"> <li>* Discharge to Home</li> <li>* Follow up with PCP or cardiologist in 24-48 hrs.</li> <li>* Consider cardiology referral</li> </ul>
<b>If score ≤ 4 AND Provider is concerned of possible cardiac etiology – CALL PCP or cardiologist on-call for formulation of care plan.</b>	
INTERMEDIATE RISK	<ul style="list-style-type: none"> <li>* Admit to Observation</li> <li>* Repeat Troponin levels</li> <li>* Stress Testing – be mindful of radiation exposure</li> <li>* Exercise Stress Test is first-line for most men and women if normal baseline EKG</li> <li>* Stress Imaging (Nuclear or ECHO) test if abnormal baseline EKG (ST segment abnormality, LBBB, paced rhythm, or atrial fib), prior revascularization, taking Digoxin, or h/o Diabetes Mellitus.</li> <li>If readily available consider CT angiography</li> <li>* Pharmacologic Stress Test if unable to exercise. If readily available consider CT angiography</li> <li>* Consider phone consult with a Cardiologist to help determine which of the above would be the most appropriate stress test for your patient</li> </ul>
HIGH RISK	<ul style="list-style-type: none"> <li>* In-Patient Admission</li> <li>* Call Cardiology to arrange consult ASAP; consider coronary angiogram</li> </ul>

Reference: A prospective validation of the HEART score for chest pain patients at the emergency department, *International Journal of Cardiology* •Volume 168, Issue 3, October 2013  
S.A. Mahler et al. / *International Journal of Cardiology* 168 (2013) Identifying patients for early discharge: Performance of decision rules among patients with acute chest pain.

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