

Chest Pain

Life-Threatening Causes

1. Acute Myocardial Infarction
2. Unstable Angina
3. Pulmonary Embolism
4. Pneumonia
5. Aortic Dissection
6. Tension Pneumothorax
7. Esophageal Rupture
8. Cardiac Tamponade

AMI/UA

1. Pressure, ache, tightness
2. Exertional
3. Radiation -neck, teeth, shoulder, arm
4. SOB, diaphoresis, nausea, light-headed
5. Syncope
6. Resolves with rest, NTG
7. Heartburn
8. Poorly localized
9. Risk Factors - Major
 - a. Family history of CAD (CABG, MI, stents prior to age 60)
 - b. Smoking
 - c. Hypertension
 - d. Diabetes Mellitus
 - e. Hypercholesterolemia/Hyperlipidemia
10. Atypical presentations
 - a. Shortness of breath
 - b. Weakness
 - c. Altered mental status

Pulmonary Embolism

1. Sudden onset
2. Sharp
3. Pleuritic (worse w/ breathing)
4. Short of Breath
5. Hemoptysis
6. Syncope
7. Anxious
8. Light-headed
9. Palpitations
10. Risk Factors
 - a. Previous PE/DVT
 - b. Clotting disorders
 - c. Cancer
 - d. Pregnancy
 - e. Recent delivery
 - f. Recent surgery
 - g. Prolonged immobilization
 - h. Recent trauma
 - i. Exogenous Estrogen

Pneumonia

1. Fever
2. Cough
3. Short of breath
4. Pleuritic chest pain
5. Hypoxia
6. Tachypnea

Aortic Dissection

1. Ascending Aorta
 - a. AMI

- b. Tamponade
- c. Hemothorax
- d. >20mmHg variation of BP
- e. Neuro deficits - stroke/AMS

2. Descending Aorta

- a. Tearing
- b. Radiation to back
- c. Migrating pain
- d. HTN
- e. Abdominal pain
- f. Spinal cord ischemia
- g. Mediastinal widening
- h. Connective tissue disease

Tension Pneumothorax

1. Trauma
2. Shortness of breath
3. Unilateral absent breath sounds
4. Tracheal deviation

Esophageal Rupture

1. Intense writhing/vomiting
2. Alcohol dependence
3. Recent instrumentation
4. Peptic ulcer disease
5. Hemoptysis

Cardiac Tamponade

1. Shortness of breath
2. Thoracic malignancy
3. Renal failure
4. Distended neck veins
5. Distant heart sounds
6. Collapsed RV on bedside US
7. Trauma

Evaluation

1. 12-lead ECG
2. Chest radiograph (AP, PA, Lat)
3. Troponin-I
4. BNP
5. BMP
6. CK and CK-MB
7. D-dimer
8. VQ Scan
9. CT-A Chest (PE protocol)
10. Pulmonary Angiogram
11. LE dopplers
12. Exercise stress Test
13. Stress Echocardiogram
14. Pain MIBI
15. Stress/Rest MIBI
16. Coronary CT-angiography
17. Esophagram
18. Bedside ultrasound
19. UE/LE Blood pressures
20. Blood cultures
21. Pulsus paradoxus

Other causes of chest pain

1. Musculoskeletal chest pain
2. Zoster
3. Gastroesophageal reflux
4. Pericarditis
5. Simple pneumothorax
6. Rib fracture
7. Chest wall contusion
8. Endocarditis

9. Mediastinal emphysema
10. Congestive heart failure
11. COPD exacerbation
12. Cartilage inflammation
13. Esophageal foreign body
14. Food impaction
15. Cholecystitis
16. Pleurisy
17. Panic Attack
18. Diaphragmatic hernia
19. Pleural effusion

TIMI Score

1. Age \geq 65
2. \geq 3 CAD RF
3. Know CAD \geq 50% stenosis
4. ASA use in past 7 days
5. \geq 2 episodes of angina in 24H
6. ST changes \geq 0.5mm
7. + cardiac markers

5% 8% 13% 20% 26% 41%

PERC Rule for PE

1. Age < 50 years
2. HR < 100
3. RA Sat >94%
4. No HX PE/DVT
5. No recent trauma/surgery
6. No hemoptysis
7. No exogenous estrogen
8. No signs suggesting DVT

All 8 need to be negative

WELLS Criteria for PE

1. Clinical signs & SX of DVT +3
2. PE is #1 Dx or likely +3
3. HR >100 +1.5
4. Im 3d or surg in 4 weeks +1.5
5. Previous PE/DVT +1.5
6. Hemoptysis +1
7. Malignancy w/ Rx in 6mos +1

PORT Score - Pneumonia Severity

- Age 1 point per year
1. Female -10
 2. Nursing home +10
 3. Neoplastic disease +30
 4. Liver disease +20
 5. CHF +10
 6. Renal disease +10
 7. AMS +20
 8. RR >29 +20
 9. SBP < 90 +20
 10. Temp <95 or >103.8 +15
 11. Pulse >124 +10
 12. pH < 7.35 +30
 13. BUN >29 +20
 14. Na < 130 +20
 15. Glu > 249 +10
 16. HCT <30 +10
 17. Pa O2 <60 +10
 18. Pleural effusion on CXR +10