

Cardiovascular

Chest Discomfort/Pain

Other (30%)

Pulmonary/ Mediastinal

Vascular

→ **Pulmonary**

Embolus (pleuritic pain if infarction reaches pleura, dyspnea, DVT likely)

→ **Blunt aortic injury**

→ **Pulmonary HTN**

Parenchymal

→ **Pneumonia** (pleuritic chest pain, cough/sputum, auscultation+percussion indicate consolidation, infiltrate on CXR)

→ Tuberculosis

→ Sarcoidosis

→ Neoplasm

Chest wall/ Pleural

(pleuritic pain)

Pleuritis

(aka. pleurisy)

Hemothorax

Pleural effusion

Transudative

(low [protein] fluid)
→ CHF
→ hypoproteinemia
→ Fluid leakage from other body cavities

Exudative

→ Pulmonary infection, malignancy, connective tissue disease, etc

Secondary to COPD, Pulmonary fibrosis, HIV
→ i.e. rupture of bullae

Pneumothorax

- Sudden, pleuritic, unilateral chest pain

- On affected side: ↓ breath sounds, tympany to percussion, & ↓ pulmonary markings on CXR

Gastrointestinal

(pain often associated w/ foods, unrelated to exertion)

→ GERD

→ PUD (esp if **perforated**)
→ Esophageal spasm (hx of dysphagia + dinophagia w/ retrosternal pain)

→ **Perforated esophagus**
→ Biliary disease (i.e. acute cholecystitis)

→ **Pancreatitis**

Neurologic/ Psychiatric

→ Anxiety/panic
→ Herpes simplex virus (post-herpetic neuralgia)
→ Somatoform disorder
→ Spinal radiculopathy

Muskuloskeletal

(pain usually localized, superficial, changing with position)

→ Trauma

→ **Chest Wall Injury** (fall chest, open chest wound)

→ **Diaphragm Injury**

→ Costochondral syndrome (sternal pain, worse w/ movement, tender costochondral joints, NOT relieved by NTG)
→ Cervical radiculitis (ache/shooting pain in neck, worse w/ motion)

Tension pneumothorax

→ Due to trauma, ruptured lung bullae (smokers), or iatrogenic (line/pacemaker wire insertion, mechanical ventilation)
→ **Hx/PE**: sudden dyspnea, ↓↓↓ BP! Distended neck veins, ↓ breath sounds + hyper-resonance on affected side
→ **Tx**: 14G needle decompression, chest tube after stable; give O2 + IV fluids.

Valvular

→ Aortic Stenosis + Mitral Regurg (**systolic murmur**)

→ Mitral Stenosis + Aortic Regurg (**diastolic murmur**)

Myocardial

→ **Dilating aneurysm**

→ Myocarditis

→ Cardiomyopathies

→ Systolic + diastolic Dysfunction

Myocardial Ischemia

(retrosternal tightness/pressure, radiates to neck/jaw/left upper limb)

**Hypoperfusion
Dysrhythmia**

Variant/ Prinzmetal angina

(Vasospastic; no atherosclerosis)
→ Tx w/ NTG

ACS

→ May be asymptomatic
→ Angina at rest, or ↑ severity
→ Tests: ECG, cardiac markers!

Stable angina

(predictable, transient (2-20 min), diffuse chest pressure/tightness)
→ Tx w/ NTG

Unstable angina

(No ST-segment changes, Negative TnT/TnI)
→ NO fibrinolytics

Myocardial infarction (MI)

Cardiac markers positive!

Non-STEMI

(acute, subendocardial MI)
(ST-depression, + TnT/TnI)
→ NO fibrinolytics

STEMI

(acute, transmural MI)
(ST-elevation, + TnT/TnI)
→ Tx w/ fibrinolytics, PCI

Pericardial

→ **Pericarditis** (pleuritic pain, friction rub)

→ **Constrictive Pericarditis** (high JVP w/ Kussmaul's sign, pulsus paradoxus)

→ **Effusion** (may **tamponade**)

Q-waves seen w/ permanent myocyte death