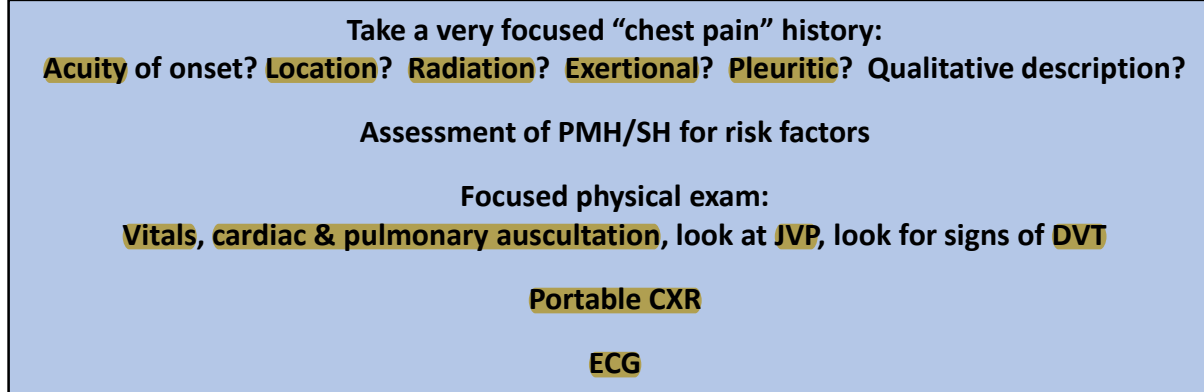


An Approach to Acute Chest Pain

Diagnostic Framework

| Cardiovascular | Pulmonary | GI | MSK | Miscellaneous |
|---|---|--|---|--|
| Pericardium Pericarditis Myocardium Myocarditis Heart failure exacerbation Hypertrophic cardiomyopathy Takotsubo cardiomyopathy Valves Aortic stenosis Conduction system Tachyarrhythmias Vessels Acute coronary syndrome Aortic dissection Hypertensive emergency Coronary vasospasm | Pleura Pleuritis (a.k.a. pleurisy) Pneumothorax Airways Asthma exacerbation Alveoli Pneumonia Vessels Pulmonary embolism Pulmonary hypertension Lung cancer | Esophagus GERD Esophagitis Esophageal spasm Stomach Gastritis Peptic ulcer disease | Rib fractures Costochondritis | Severe anemia Herpes zoster (a.k.a. shingles) Acute intoxication with cocaine or amphetamines Acute chest syndrome in sickle cell anemia Psychiatric Panic attack Somatization |

Diagnostic Algorithm for Hemodynamically Unstable Patients



Positional?



| | ACS | PE | Aortic Dissection | Pneumothorax |
|--------------------|---|--|---|---|
| HPI | Onset over mins Substernal / midline Radiation down either arm or to jaw Exertional Non-pleuritic “Pressure”, “tightness” | Onset over secs-mins Lateralizes to one side No specific radiation Non-exertional Pleuritic “Sharp” | Onset over secs-mins Substernal/midline Radiation to back Non-exertional Non-pleuritic “Tearing” | Onset over secs Lateralizes to one side No specific radiation Non-exertional Pleuritic “Sharp” |
| Major risk factors | Smoking, DM, HTN, hyperlipidemia | Recent hospitalization or immobilization Malignancy | Hypertension Smoking | COPD Cystic fibrosis |
| Exam | Often normal, but may have S3, high JVP , and crackles if HF has developed | May have evidence of a DVT Right sided S3 or RV heave if massive PE | Usually unremarkable aside from vitals, but brachial blood pressures may be unequal | Unilateral diminished/absent breath sounds Unilateral hyperresonance |
| CXR | Usually normal | Usually normal | Widened mediastinum | Pneumothorax |
| ECG | May have dynamic ST/T changes, or be surprisingly unremarkable | Classic S1Q3T3 pattern is much less common than plain sinus tachycardia | No specific findings | No specific findings |

Diagnostic Algorithm for Hemodynamically Stable Patients

