

Dyspnea	Goroll	Porter	Abercrombie	Eisenberg	Gomella	Wasson	Davis	Seller	TOTAL	Collected Cases
Asthma	x	x	x	x	x	x	x	x	8	1
Congestive heart failure	x	x	x	x	x	x	x	x	8	20
COPD/emphysema	x	x		x	x	x	x	x	7	5
Pneumothorax		x	x		x	x	x	x	6	6
Pulmonary embolism		x	x	x	x	x		x	6	14
Anxiety/hyperventilation	x	x			x	x		x	5	
Pneumonia		x	x		x	x	x		5	11
Anemia	x	x			x	x			4	
Foreign body		x	x			x		x	4	
Interstitial lung disease	x	x		x	x				4	1
Acute MI		x	x		x				3	
Deconditioning	x	x		x					3	
Pleural effusion		x	x		x				3	1
Atelectasis			x		x				2	
Chemical pneumonitis		x	x						2	
Kyphoscoliosis	x			x					2	
Lung cancer					x	x			2	7
Mitral stenosis	x				x				2	
Obesity	x					x			2	
Pericardial tamponade		x			x				2	1
Pulmonary hypertension	x		x						2	1
ALS			x						1	
Aortic insufficiency					x				1	
Aortic stenosis					x				1	1
ARDS			x						1	
Arrhythmia					x				1	
Ascites	x								1	
Blast lung injury			x						1	
CO poisoning					x				1	
Diaphragmatic paralysis		x							1	1
Flail chest			x						1	
High altitude hypoxia				x					1	
Mitral regurgitation	x								1	
Myasthesia gravis			x						1	
Papillary muscle rupture		x							1	
Poliomyelitis (bulbar)			x						1	
SARS			x						1	
Shock			x						1	
Croup							x		1	
Metastatic cancer										5

Esophageal cancer										1
Lymphoma										2
Post-intubation stricture										1
Pulmonary hemorrhage										1
Drug use – amiodarone, nitrofurantoin										2
Goiter										1

## CAUSES OF DYSPNEA ORGANIZED BY SYSTEM

Cause	Clinical Features	Imaging Findings
<b>Pulmonary Structures</b>		
Asthma	Abnormal breath sounds (especially wheezing) activated by recognizable trigger (e.g. exercise, cold, animal dander); chest pain; cough; abnormal (reversible) PFTs, response to challenge test.	Usually normal and not done except for excluding pneumonia, pneumothorax, or pulmonary collapse. XR, CT: hyperinflation; increased peribronchial markings,
COPD/Emphysema	Smoking; cough; distant breath sounds; productive cough with chronic bronchitis; abnormal (fixed) PFTs.	XR, CT: hyperinflation, bullae, straightened pulmonary vasculature; associated pneumonia
Pulmonary edema	History of CHF; fatigue; peripheral edema	XR, CT: increased lung density, septal lines, pleural effusions.
Pneumonia – community acquired, aspiration, pneumocystis, and tuberculosis	All, including community acquired pneumonia (CAP): Fever (may be absent in elderly), SOB, crackles or dullness, productive cough, chills, HA, elevated WBC count (>10,400). Aspiration pneumonia: Obtundation from dementia, stroke, drugs, or alcohol. Pneumocystis: known HIV/AIDS or risk factors for HIV/AIDS. Pneumonia from tuberculosis: As pneumonia with night sweats and involuntary weight loss.	XR, CT: consolidation and/or pleural effusion (a normal XR does <i>not</i> rule out pneumonia if the pre-test probability is high); unilateral relatively dense lobar consolidation is more likely CAP; bilateral less dense consolidation is typical of pneumocystis; apical consolidation is more typical of pneumonia from tuberculosis. CT: “tree-in-bud” opacity.
Pulmonary hypertension	Prior pulmonary emboli; COPD/emphysema; connective tissue disease; pulmonary fibrosis	XR, CT: Large central and pruned peripheral pulmonary arteries; large right heart.
Lung cancer	Smoking.	Lung mass; lymphadenopathy; pleural effusion.
Metastatic cancer	History of primary tumor	Lung masses; lymphadenopathy; pleural effusion.
Pneumothorax	History of prior pneumothorax; smoker; young, thin patient;	XR, CT: air in the pleural space or mediastinum

	asthma; trauma.	
Pneumoconiosis and other diffuse infiltrative lung disease	Dry cough; exposure to inciting agent (Organic: hay, cotton, grain; Mineral: asbestosis, silicosis, coal; Idiopathic: sarcoid, connective tissue disease (e.g., scleroderma or systemic lupus erythematosis); Wegener's granulomatosis	XR, CT: ground glass lung opacity; honeycombing; small nodules; air trapping.
<b>Cardiovascular Structures</b>		
Congestive heart failure	Shortness of breath with pulmonary edema; chest pain with myocardial ischemia; dependent edema.	XR, CT: increased lung opacity in either a ground glass or consolidation pattern; septal lines; pleural effusions; cardiomegaly.
Pericardial effusion	Chest pain from pericarditis; fever; fatigue; cancer; renal failure; autoimmune disease (lupus, rheumatoid arthritis).	XR: enlarged heart with large effusions; CT: pericardial thickening and/or effusion fluid.
Pulmonary embolism	Chest pain and cough; history of lower deep venous thrombosis (usually lower extremity); hypercoagulable states; prolonged immobilization from surgery or travel.	XR, CT: peripheral wedge-shaped lung opacity ("Hampton's hump") with infarction; pleural effusion; CT: filling defects in the arterial tree; VQ scan: ventilation perfusion mismatches.
Atrial fibrillation, arrhythmia	Palpitations, irregular heart rate; abnormal EKG	EKG (may require Holter monitor for intermittent abnormality)
Aortic stenosis	Chest pain; syncope.	XR, CT: prominent ascending aorta; calcification of the aortic valve
Mitral valve stenosis	Cough; fatigue; dependent edema; heart palpitations.	XR, CT: cardiomegaly with left atrial enlargement; increased lung opacity in either a ground glass or consolidation pattern; septal lines; pleural effusions.
<b>ABBREVIATIONS</b>		
CT = computed tomography; MR = magnetic resonance imaging; US = ultrasound; WBC = white blood cell count; XR = plain film radiography;		

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