

	pulmonary edema	ARDS	passive pulm HTN	regular pulm HTN	pulmonary embolism
S/S	hydro: same as CHF permeability: see ARDS	sudden onset resp insufficiency, hypoxemia refractory to O2 Tx	DOE, PND, orthopnea, crackles, gallops;	dyspnea, NO orthopnea or PND, RV lift, incr P2, widened or fixed splitting of P2, neck vein distention	sudden onset resp insuff, dyspnea, tachypnea, palpitation, (pleuritic chest pain, hemoptysis, syncope), focal wheezes, crackles, dullness or pleural rub, RV overload
pathogen	Starling imbalance (hydrostatic/oncotic) --> <b>transudate</b> ; A/C membrane injury --> <b>exudate</b>	diffuse alveolar damage, incr permeability, non-cardiogenic edema, infiltrate, decr surfactant	1. incr left atrial pressure (MS, LVF),	2. incr lung blood flow (CHD, VSD/ASD/PDA), 3. incr pulm vasc resistance (obstructive, obliterative, vasoconstrictive)	thrombi formed in deep veins (usually lower extremity) - hemostasis, BV abnormal, hypercoagulable - risk factors cumulative
pathology	hydro: fluid in alveoli/interst, alveolar wall thick, <b>NO</b> inflamm cells or hyaline memb perm: see ARDS	1. diffuse alveolar damage, hyaline membrane, exudative alveolitis, loss of Type I, 2. proliferation of Type II, infiltrate, 3. fibrosis	medial hypertrophy and intimal thickening of small pulmonary arteries		infarction, necrosis, hemorrhage, edema, etc.
CXR	<b>hydrostatic</b> (CHF): same as passive pulm HTN - <b>permeability</b> : see ARDS	bilateral interstitial edema, diffuse cloud-like shadows	prominent upper lobe pulm veins, azygous vein engorgement, incr density of central lung fields, Kerley B lines	RV enlargement, enlarged outflow tract, enlarged central pulm artery segments, attenuated pulm art branches	elev hemidiaphragm, hypoperfusion, unilateral enlarged pulm art, plate-like atelectasis, pleural effusion, pulm infiltrates
PFTs	lo D <sub>L</sub> CO, lo compli, restrictive, hypox	lo FRC, lo compliance, vascular shunting, V/Q	consistent w/ underlying disease, maybe normal, decr D <sub>L</sub> CO, severe hypoxemia w/ R-to-L shunt		hi V/Q, shunt
Dx	S/S, PFT, CXR	insult, tachypnea, exclude LVF/PCWP, PaO <sub>2</sub> /FiO <sub>2</sub> < 200, C <sub>L</sub> < 50	PAP, PCWP, pulm angiography, ECG, echo, MRI - elev mean <b>PAP</b> , normal <b>PCWP</b> , elev <b>PA-LA</b> gradient		<b>ABG</b> : wide A-a, resp alkalosis; <b>EKG</b> : non-specific, S1Q3T3; <b>radionuclide</b> : V/Q mismatch; <b>pulm angiogram, spiral CT</b>
Tx	hydro: CHF Rx	Tx underlying, O <sub>2</sub> , manage fluids, steroids	Tx underlying cause/disease, NO, prostacyclin, endothelin-R agonist, PD-5 inhibitor		most resolve, anti-coagulation to prevent future thrombus
other		prone position, PEEP: prevent biotrauma and barotrauma	<b>incr PVR</b> : alveolar hypoxia, acidemia; <b>decr PVR</b> : prostacyclin, bradykinin	cor pulmonale (RV hypertrophy) may result	may result in pulm HTN: major emboli, or acute vasoconstriction