



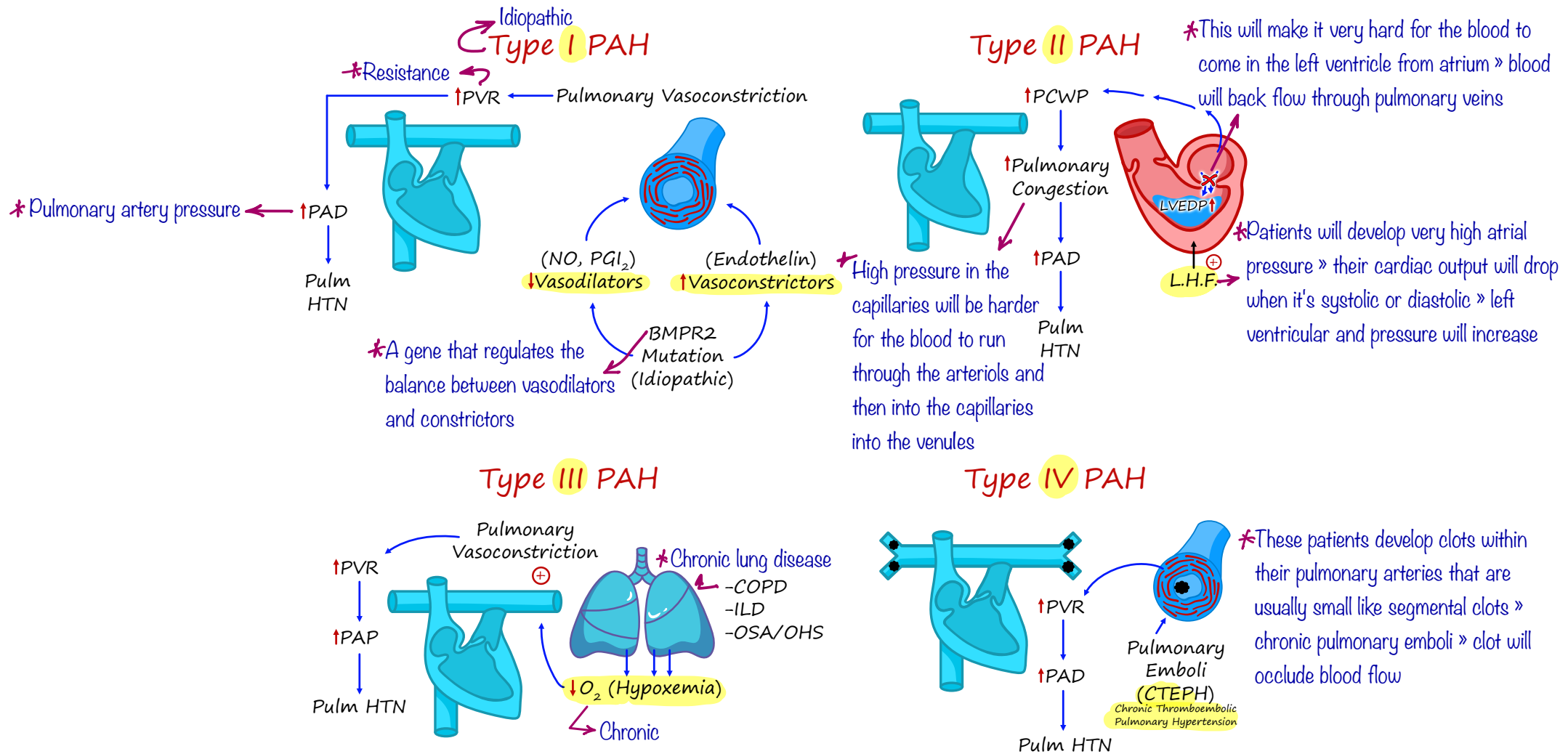
Round : Internal medicine

Group no : A4

Done By : Batool ALzubaidi

* High blood pressure within pulmonary circuit $> \text{ or } = 20 \text{ mmHg}$

Pulmonary HTN



* Type 5 pulmonary artery hypertension $\gg$ multiracial $\gg$ no specific cause

Right Heart Failure

* Jugular venous pressure increases

JVD

* When the patient develops pulmonary hypertension » mean arterial pressure will be 20 or more » this will transmit to the right ventricle » it cannot pump out the blood to the pulmonary arteries » blood will start to back up into the superior and inferior vena cava » high central venous pressure causing

Hepatomegaly

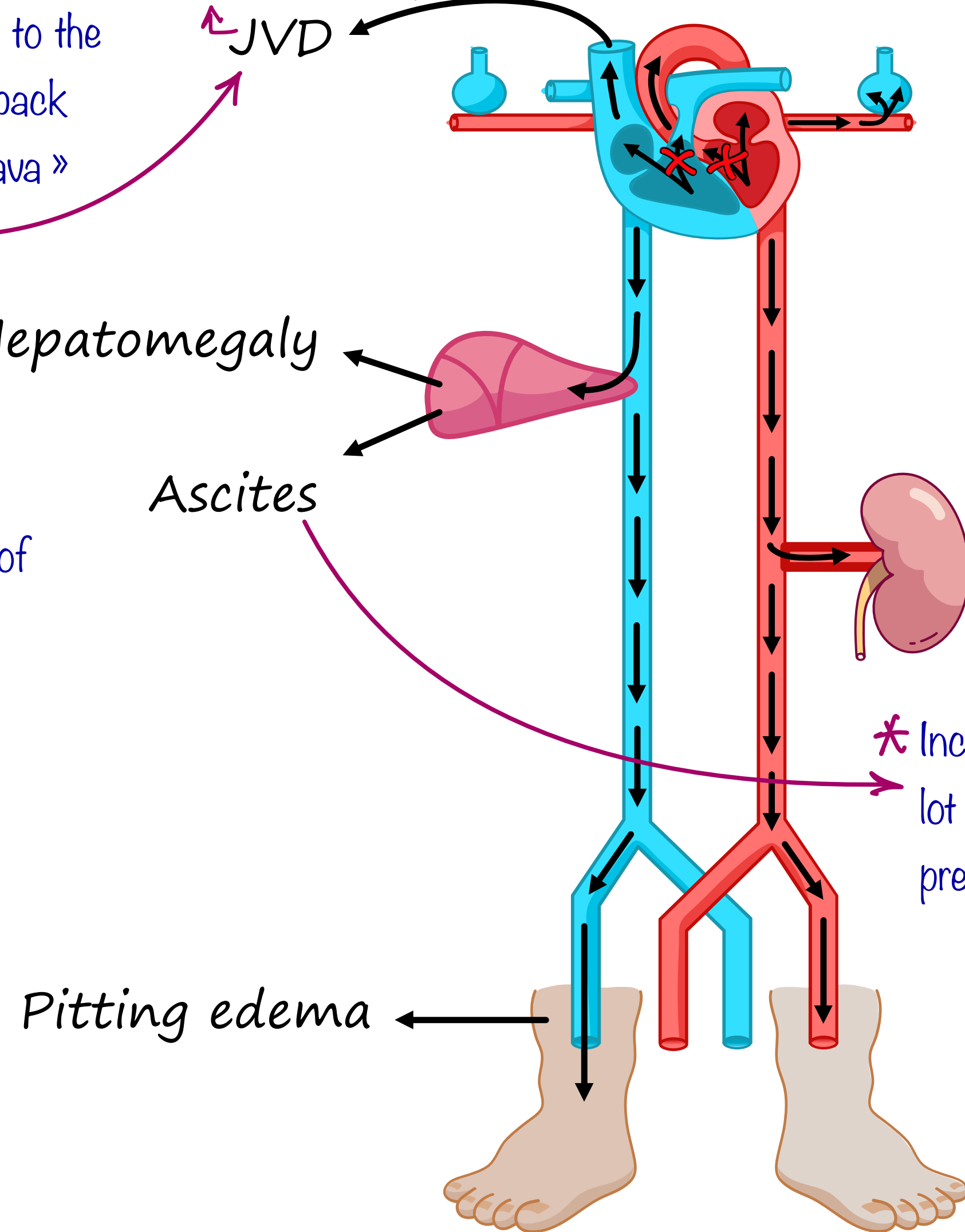
Ascites

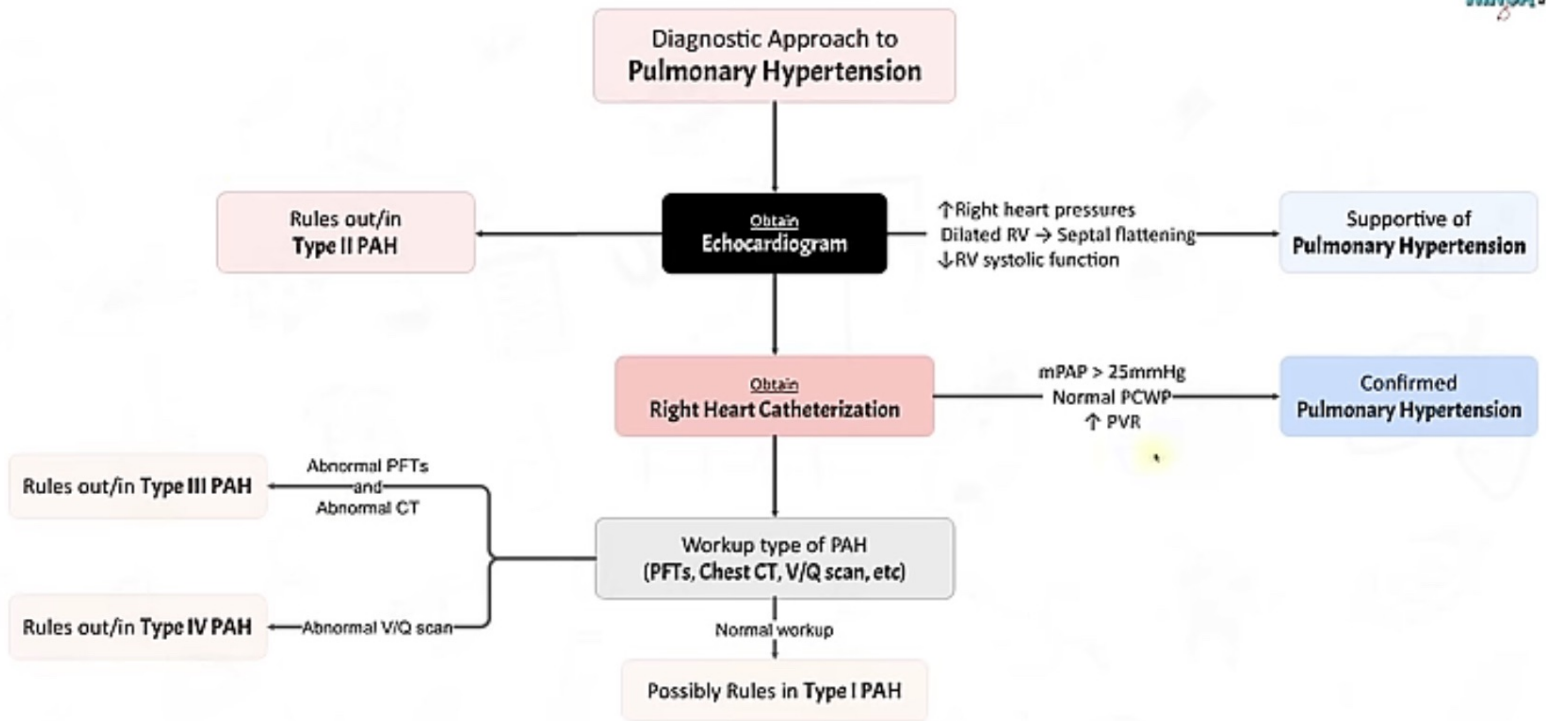
Pitting edema

* Patients with pulmonary hypertension they have a really difficult time getting blood from the right heart into the left heart » the left heart filling will drop » cardiac output of the left heart will drop (left ventricular cardiac output) » when it drops especially during exertion » you can't perfuse the brain or the coronaries » patient will develop dyspnea (most common presentation 80%) and syncope

* Backing up of blood in the inferior vena cava causes backing up and congestion of the hepatic vein » it's very hard for the blood to leave the liver » liver cells will be congested » they become injured and swollen » hepatomegaly which with time can develop cirrhosis or liver failure

* Increase in inferior vena cava pressure » high portal venous pressure » a lot of fluids leaks out of the peritoneal capillaries because of high capillary pressure » accumulation in the spaces of peritoneum





Treatment of Pulmonary Hypertension

Type of Pulmonary Hypertension	Causes	Treatment
Class 1	Idiopathic (BMPR2 mutation)	- Vasodilator therapy - Heart-Lung transplant (refractory PAH)
Class 2	Left Heart Failure	Treat the underlying cause
Class 3	Lung Disease (COPD)	
Class 4	Chronic thromboemboli (PE)	
Class 5	Multifactorial causes (sarcoidosis)	

Vasodilator Therapy

Vasoreactivity test (+)	Calcium Channel Blocker → Nifedipine
Vasoreactivity test (-)	Endothelin antagonists → Bosentan Prostacyclin agonists → Selexipag PDE-I → Sildenafil
Severe / Refractory PAH	IV Prostacyclin agonists → Epoprostenol

Vasodilator therapy

