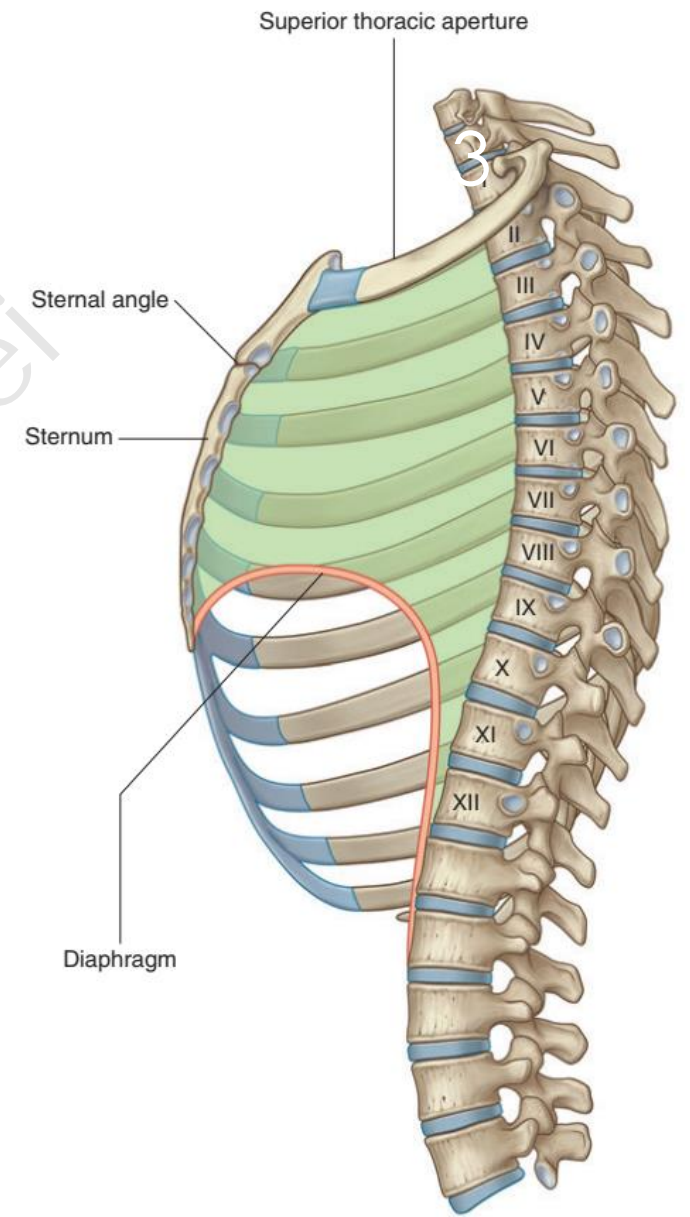
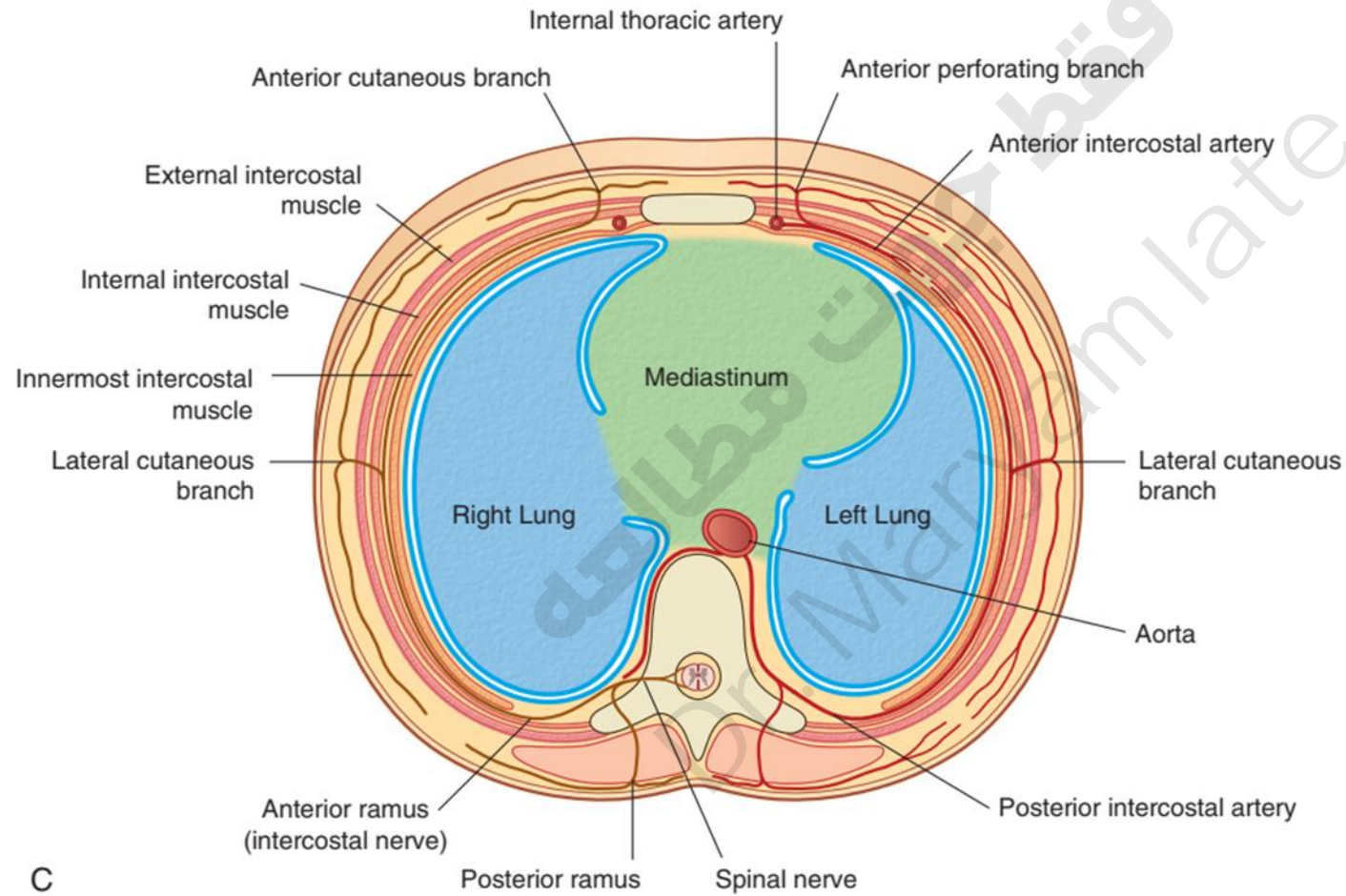
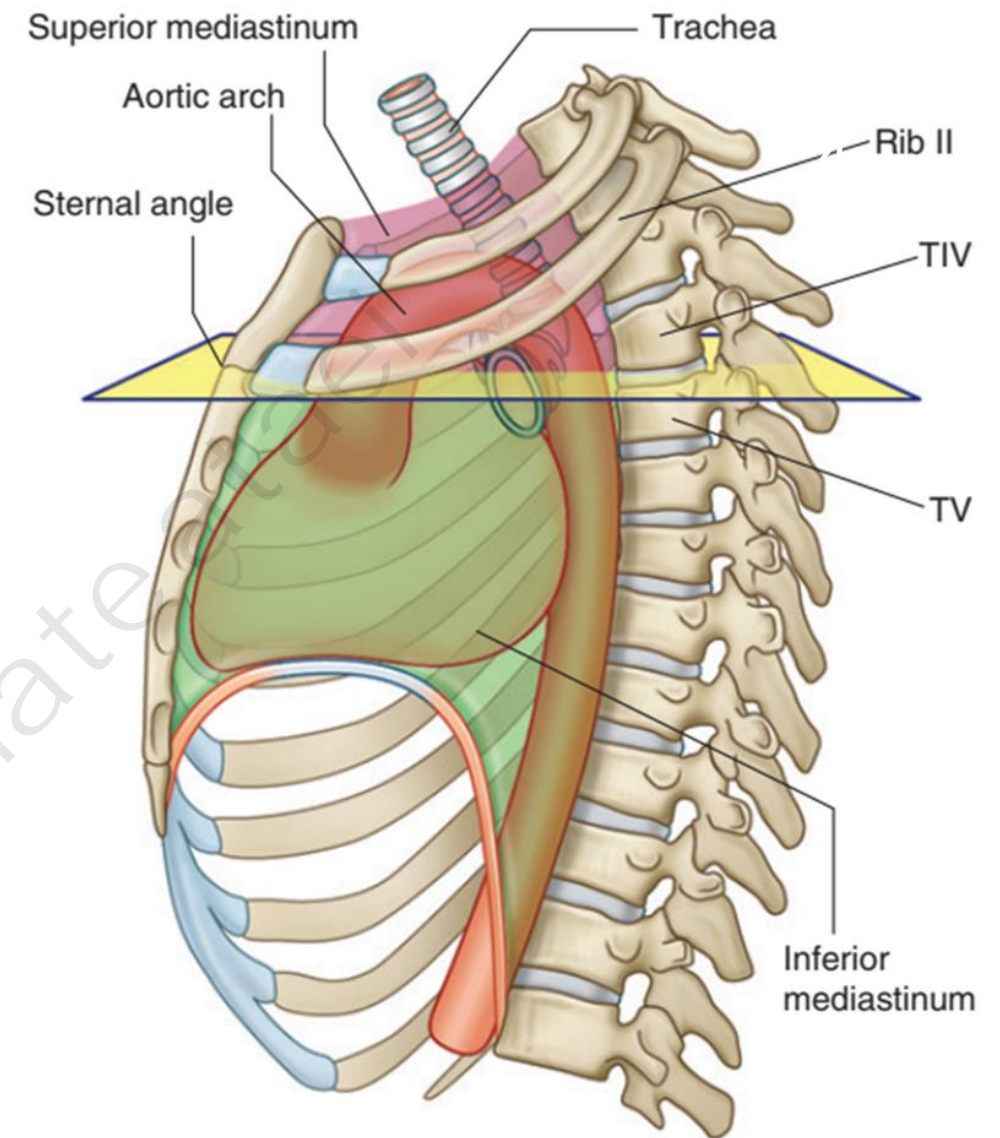
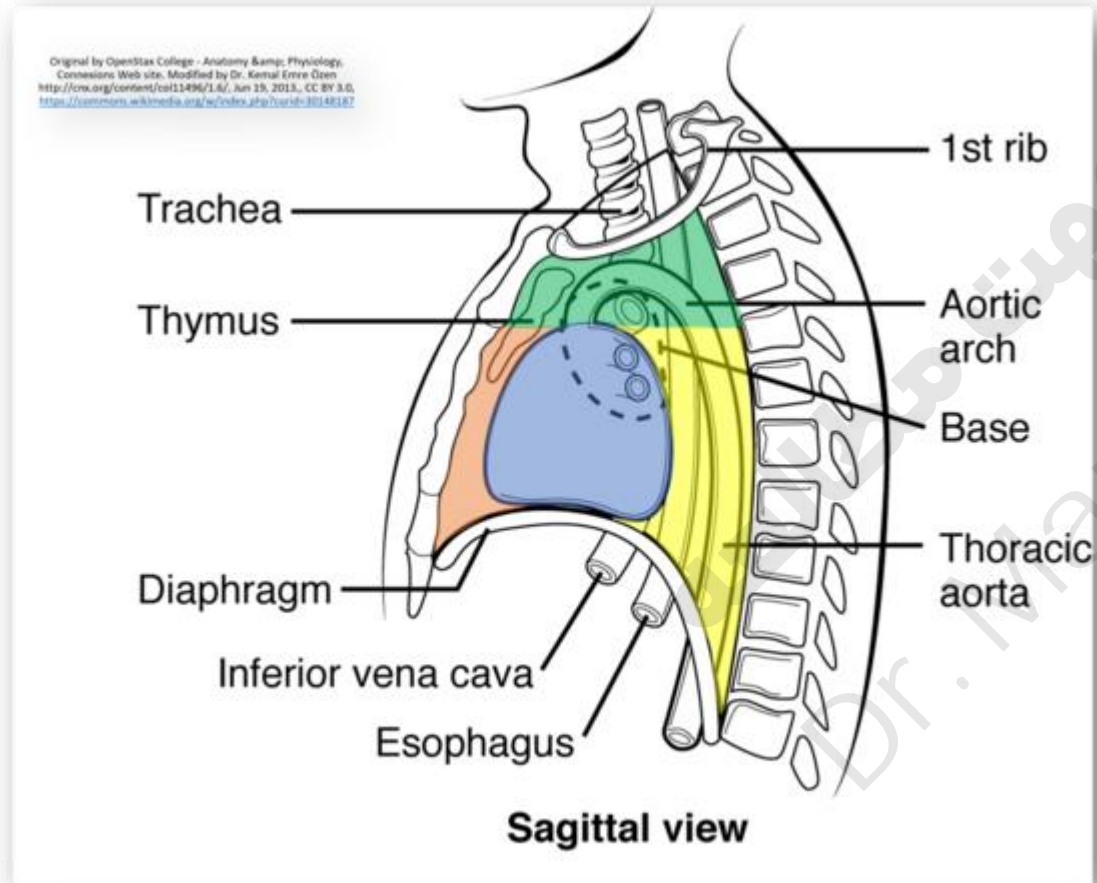


Mediastinum



Mediastinum



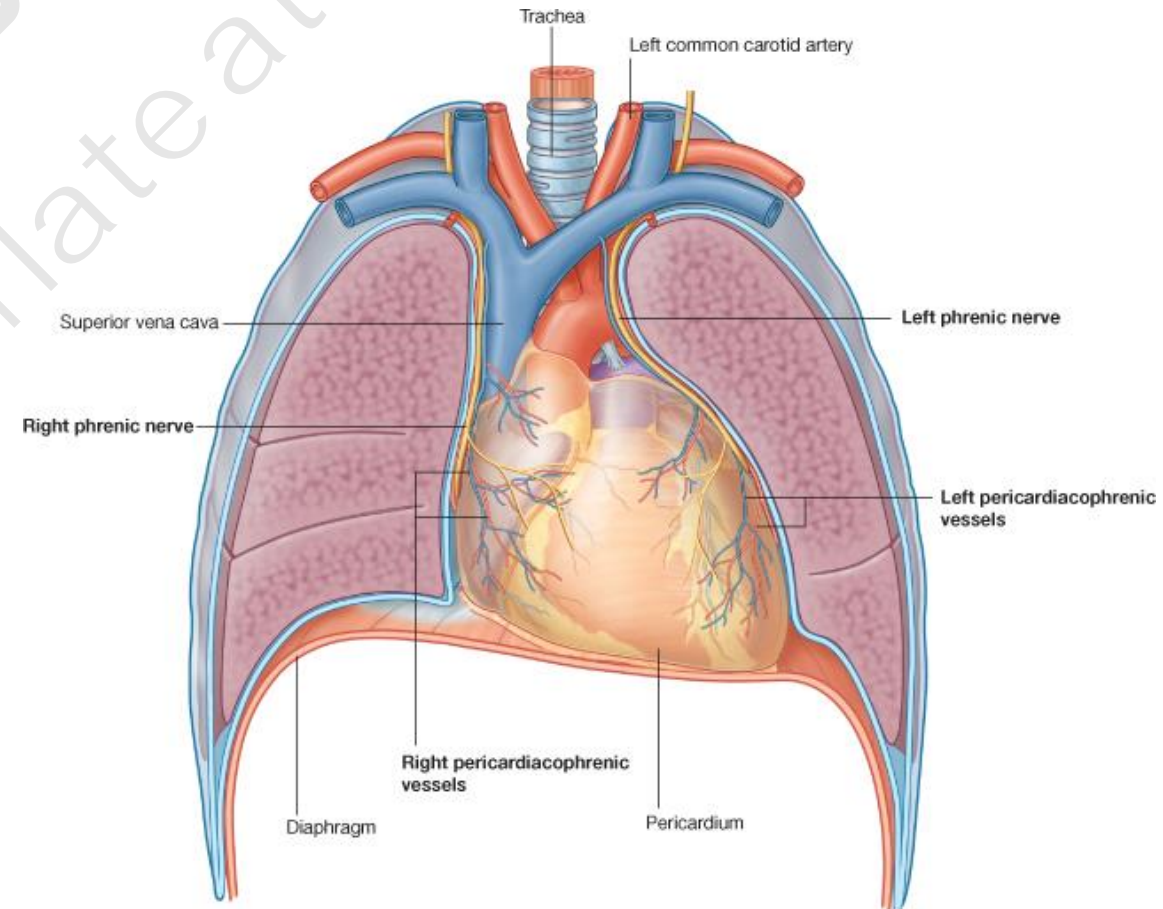
Heart Anatomy

► Approximately the size of your fist

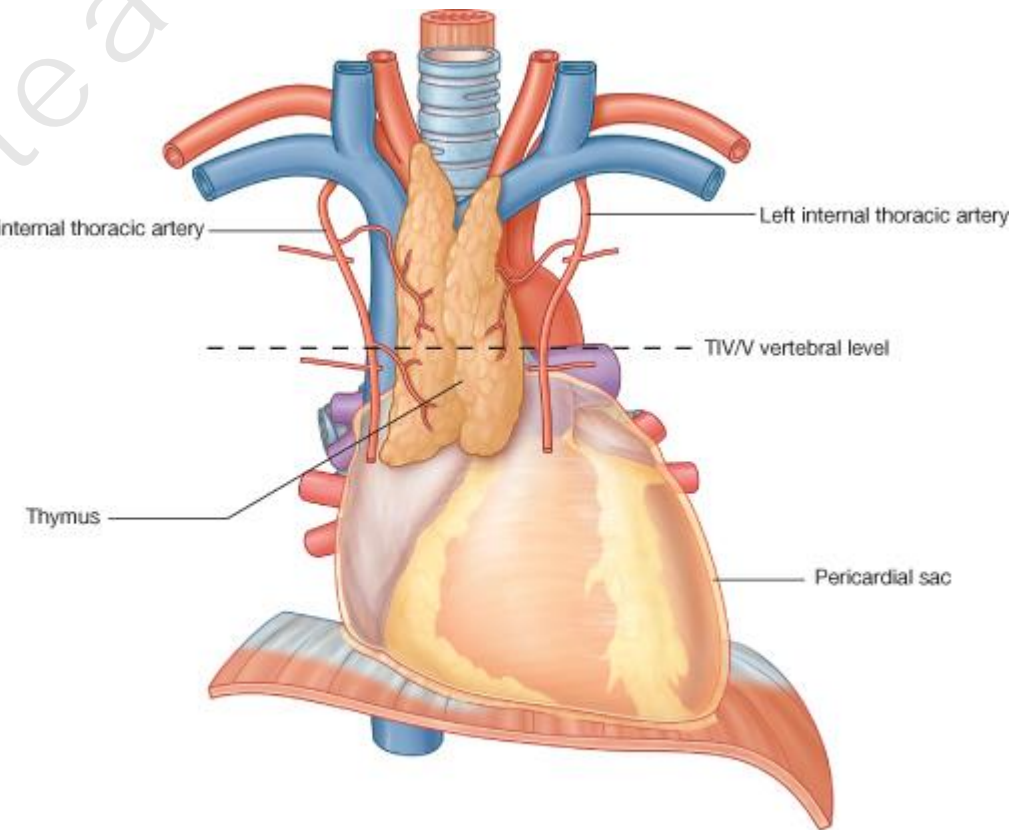
- Wt. = 250-300 grams

► Location

- In the mediastinum between the lungs
- Superior surface of diaphragm
- $\frac{2}{3}$'s of it lies to the left of the midsternal line
- Anterior to the vertebral column, posterior to the sternum

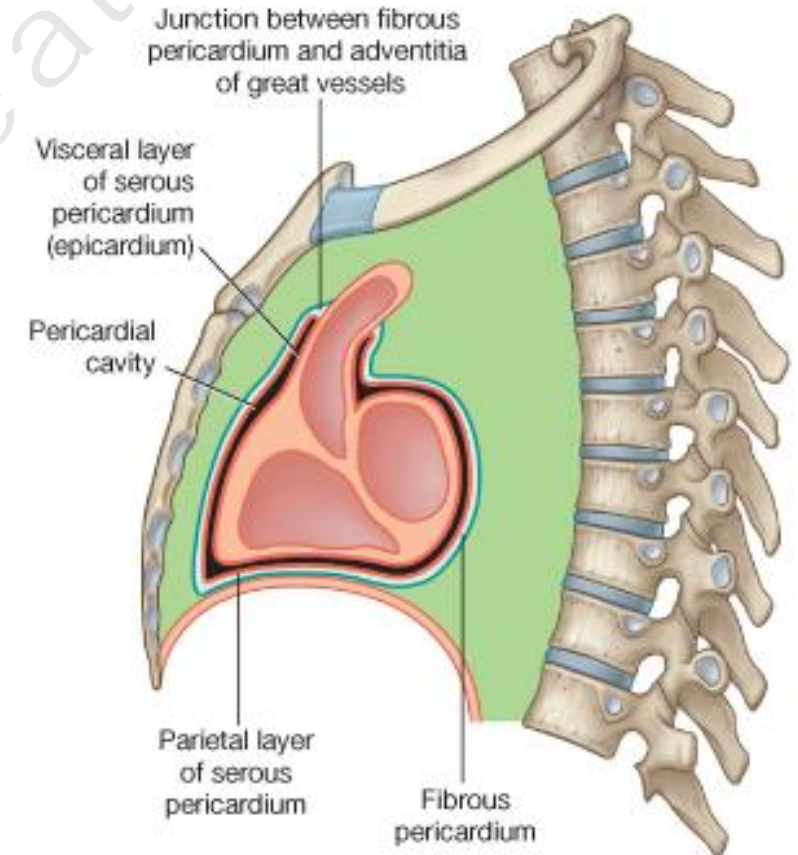


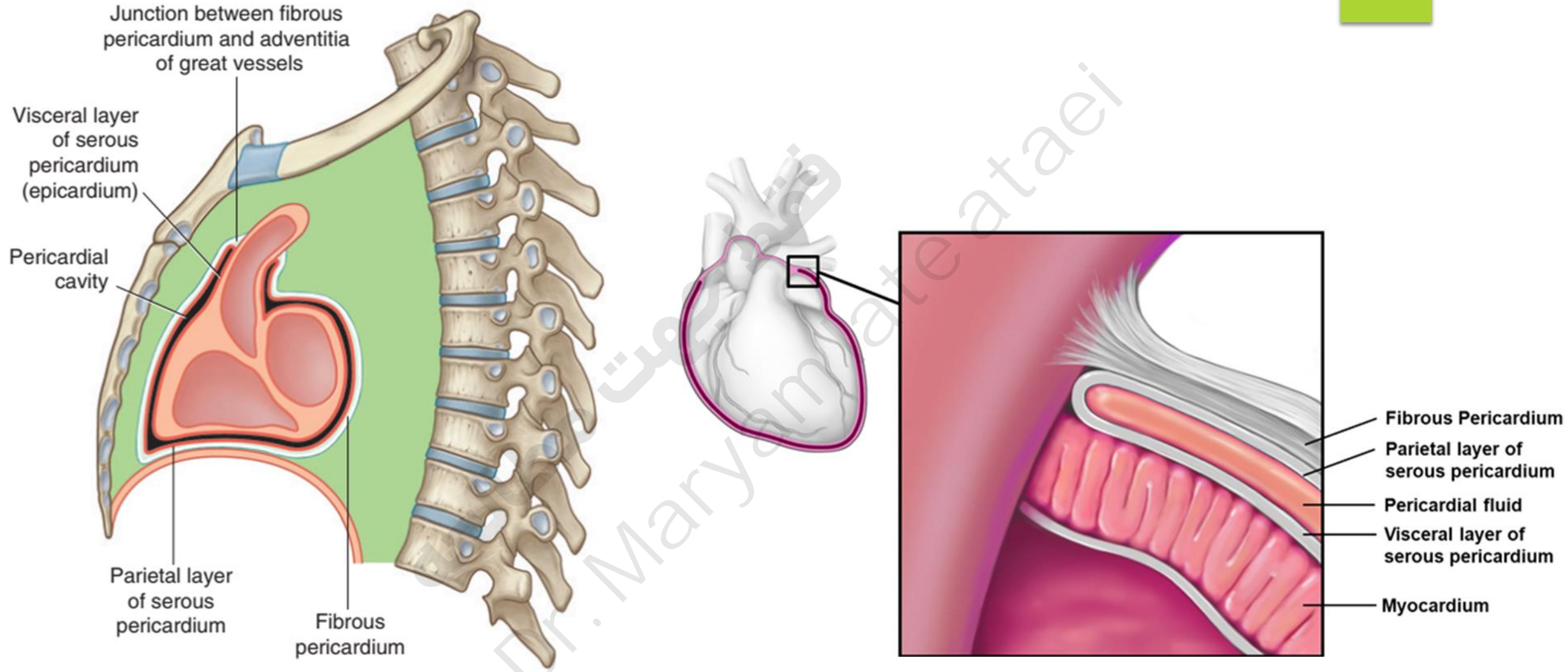
- ▶ External markings
 - ▶ Apex - pointed inferior region
 - ▶ Base - upper region
 - ▶ Coronary sulcus
 - ▶ Indentation that separates atria from ventricles
 - ▶ Anterior and posterior interventricular sulcus
 - ▶ Separates right and left ventricles
- ▶ Internal divisions
 - ▶ Atria (superior) and ventricles (inferior)
 - ▶ Interventricular and interatrial septa

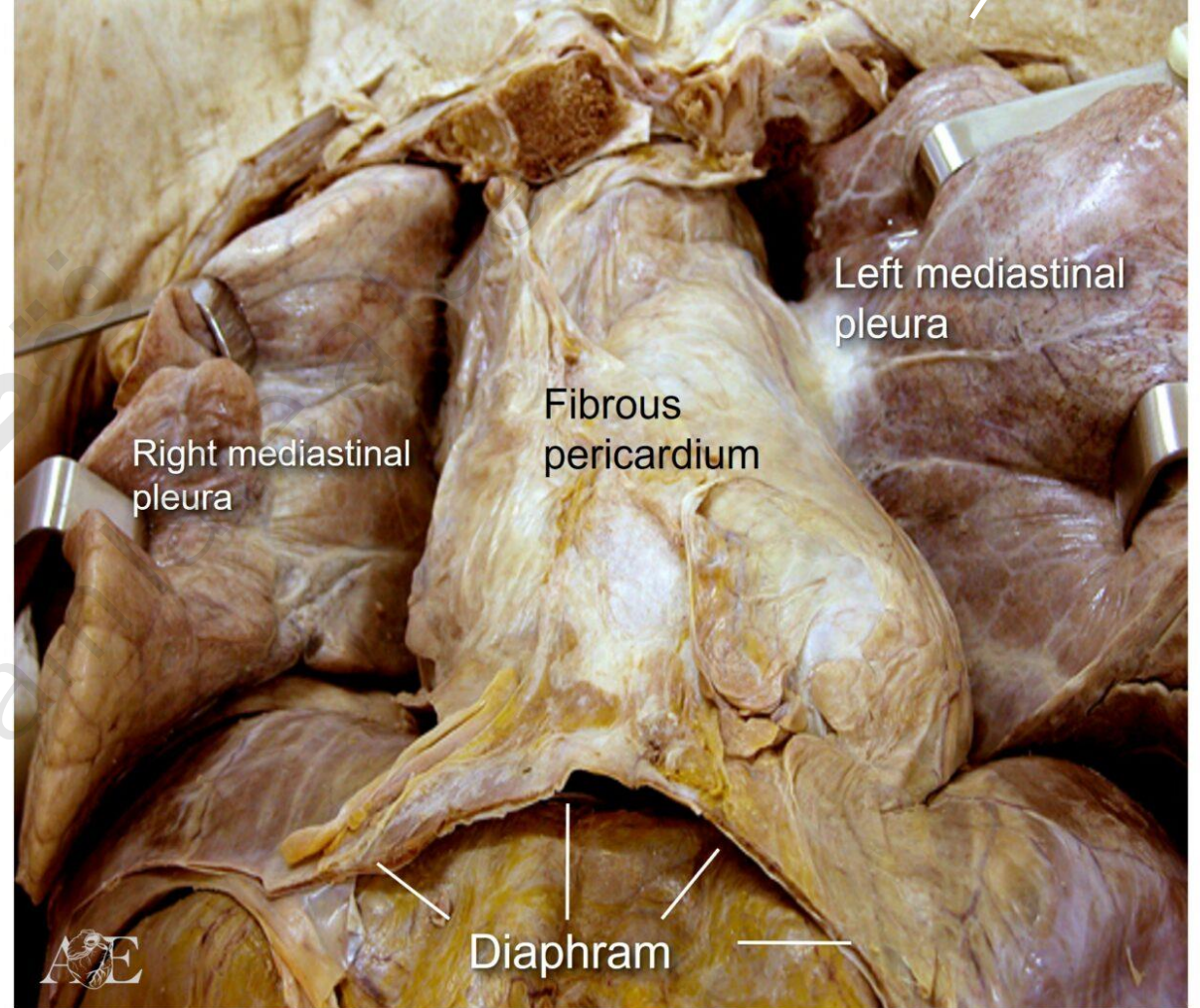
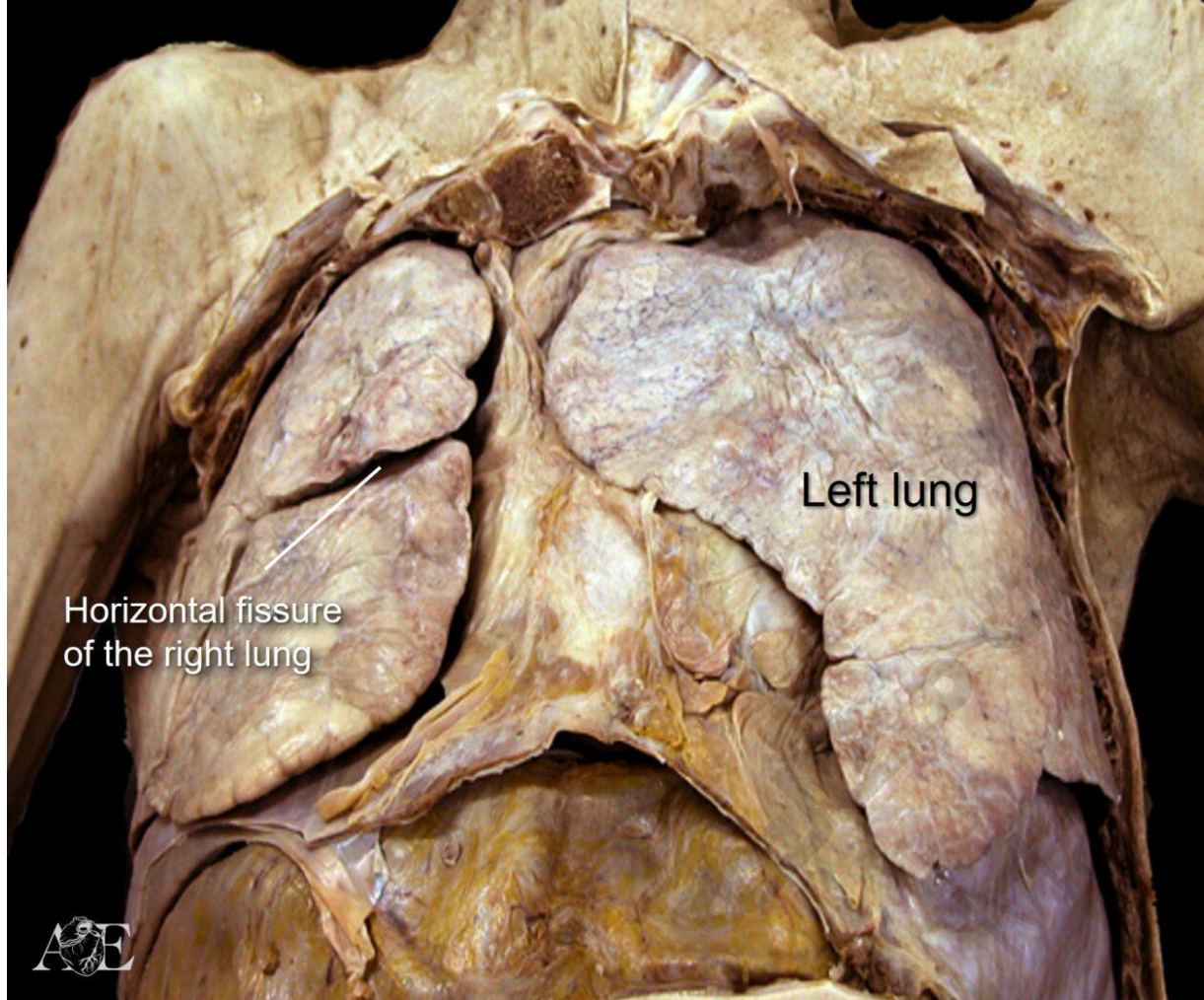


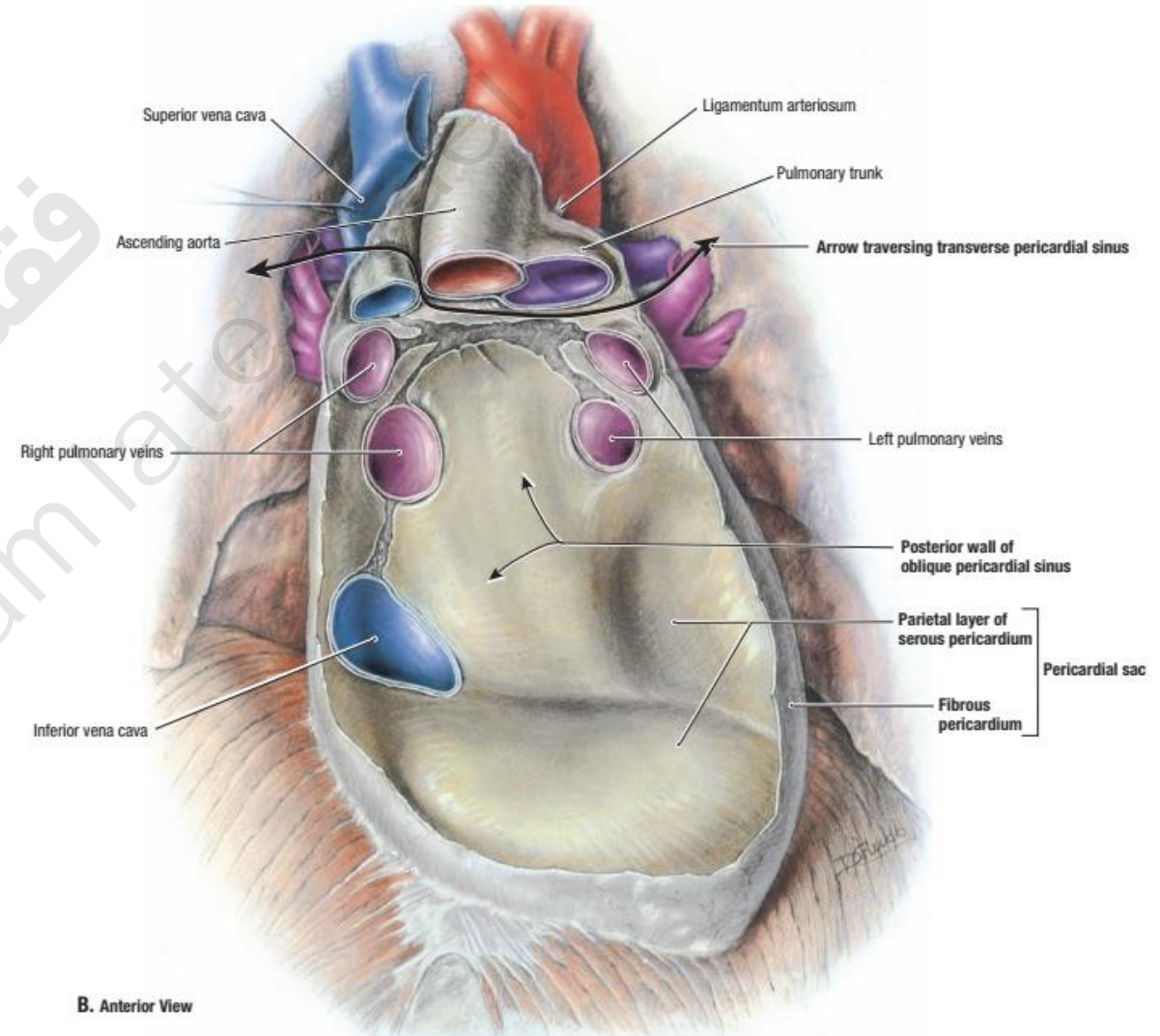
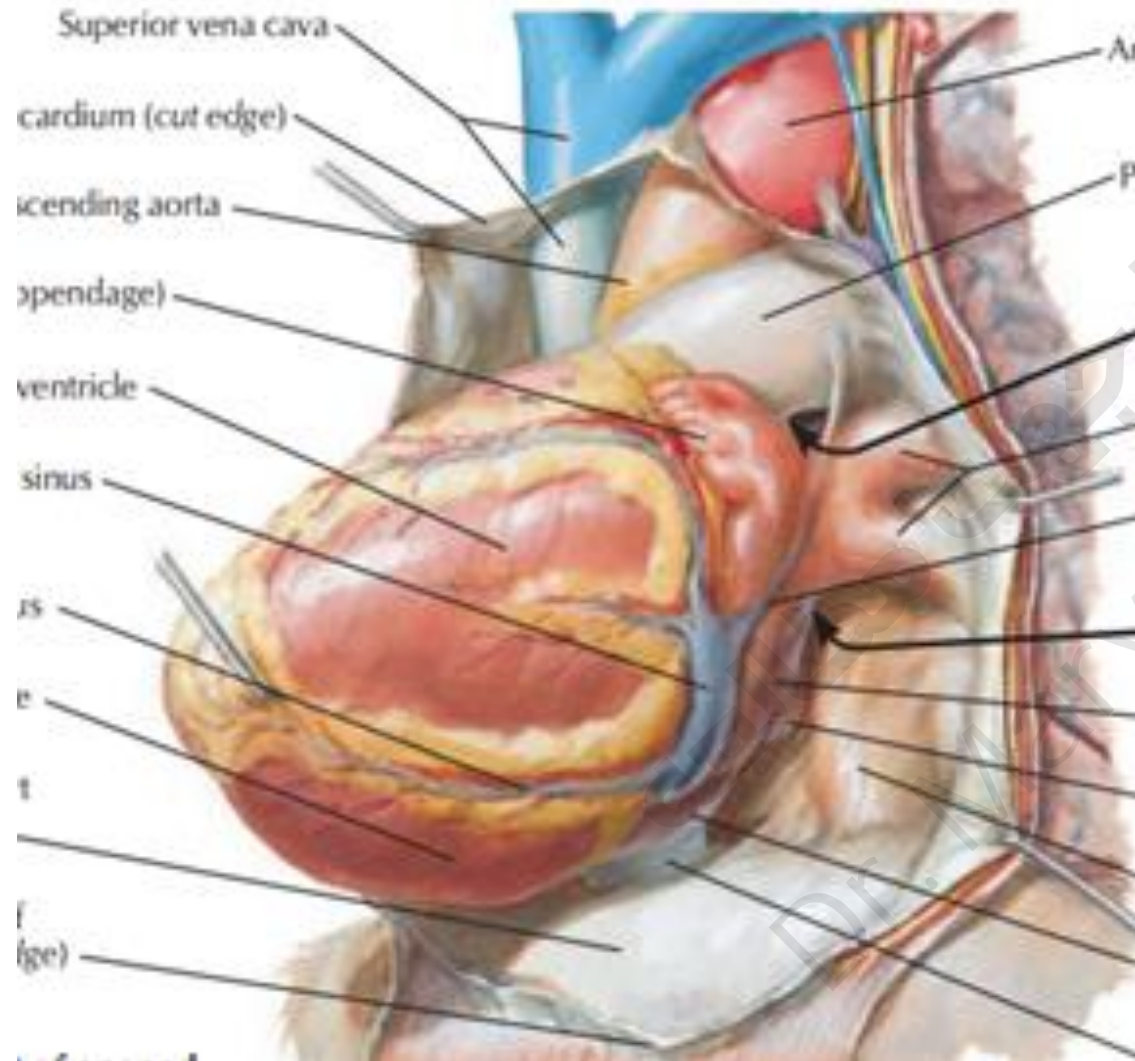
Coverings of the Heart

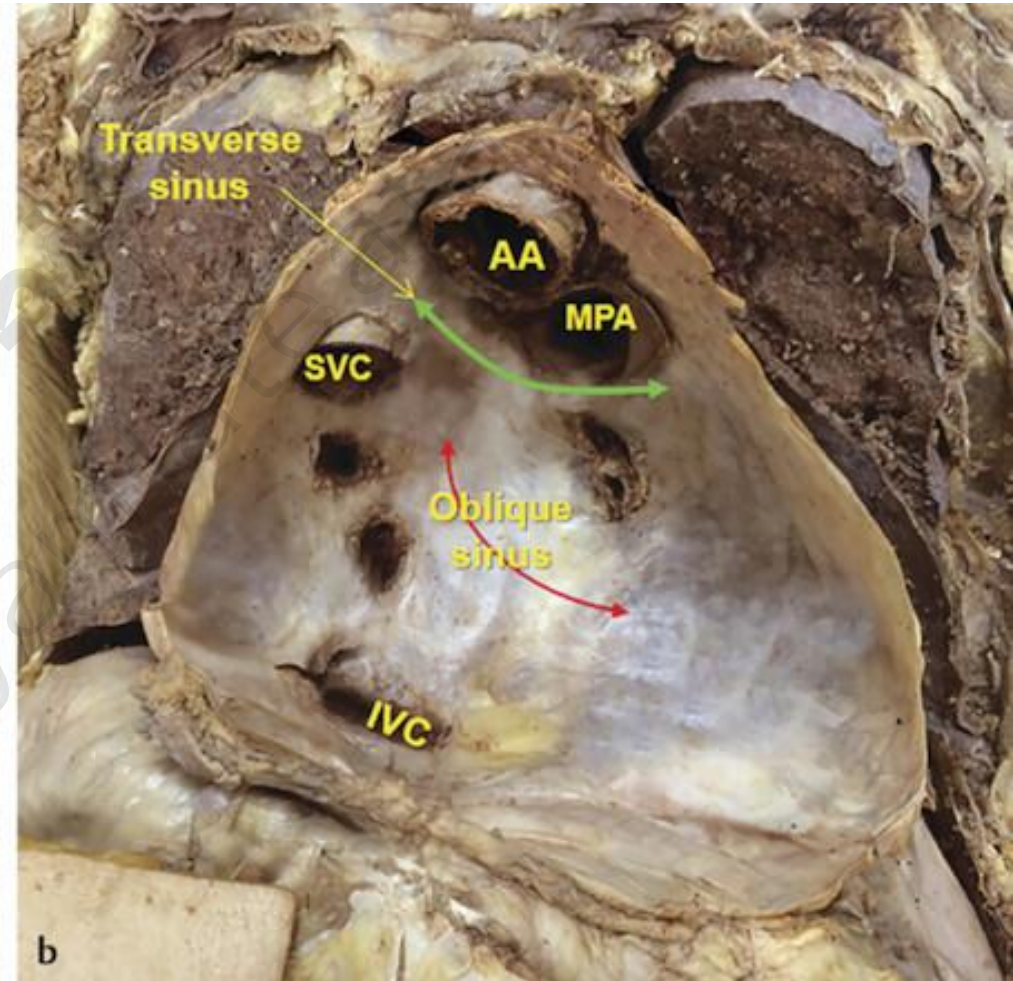
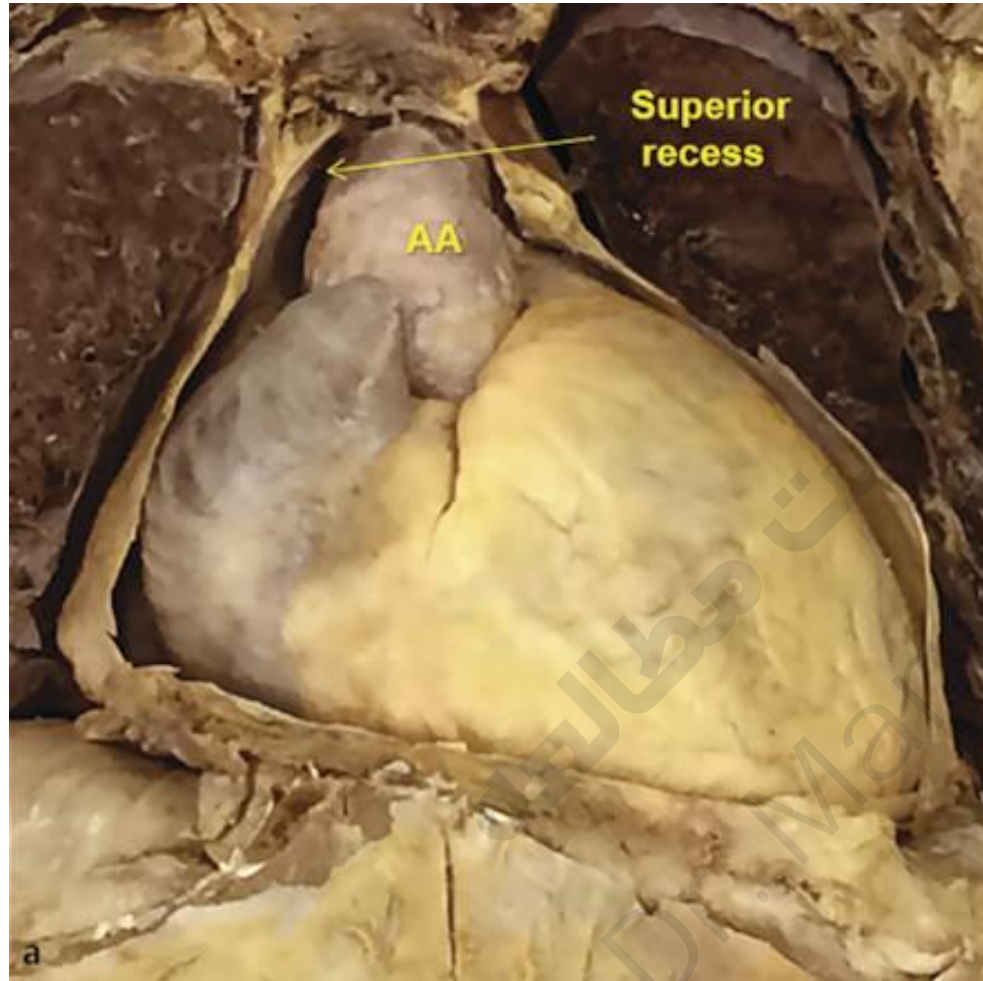
- ▶ Pericardium – a double-walled sac around the heart
 - ▶ Composed of:
 - ▶ A superficial *fibrous pericardium*
 - ▶ A deep two-layer *serous pericardium*
 - ▶ The parietal layer lines the internal surface of the fibrous pericardium
 - ▶ The visceral layer or *epicardium* lines the surface of the heart
 - ▶ They are separated by the fluid-filled pericardial cavity called the pericardial cavity
 - ▶ Protects and anchors the heart
 - ▶ Prevents overfilling of the heart with blood
 - ▶ Allows for the heart to work in a relatively friction-free environment

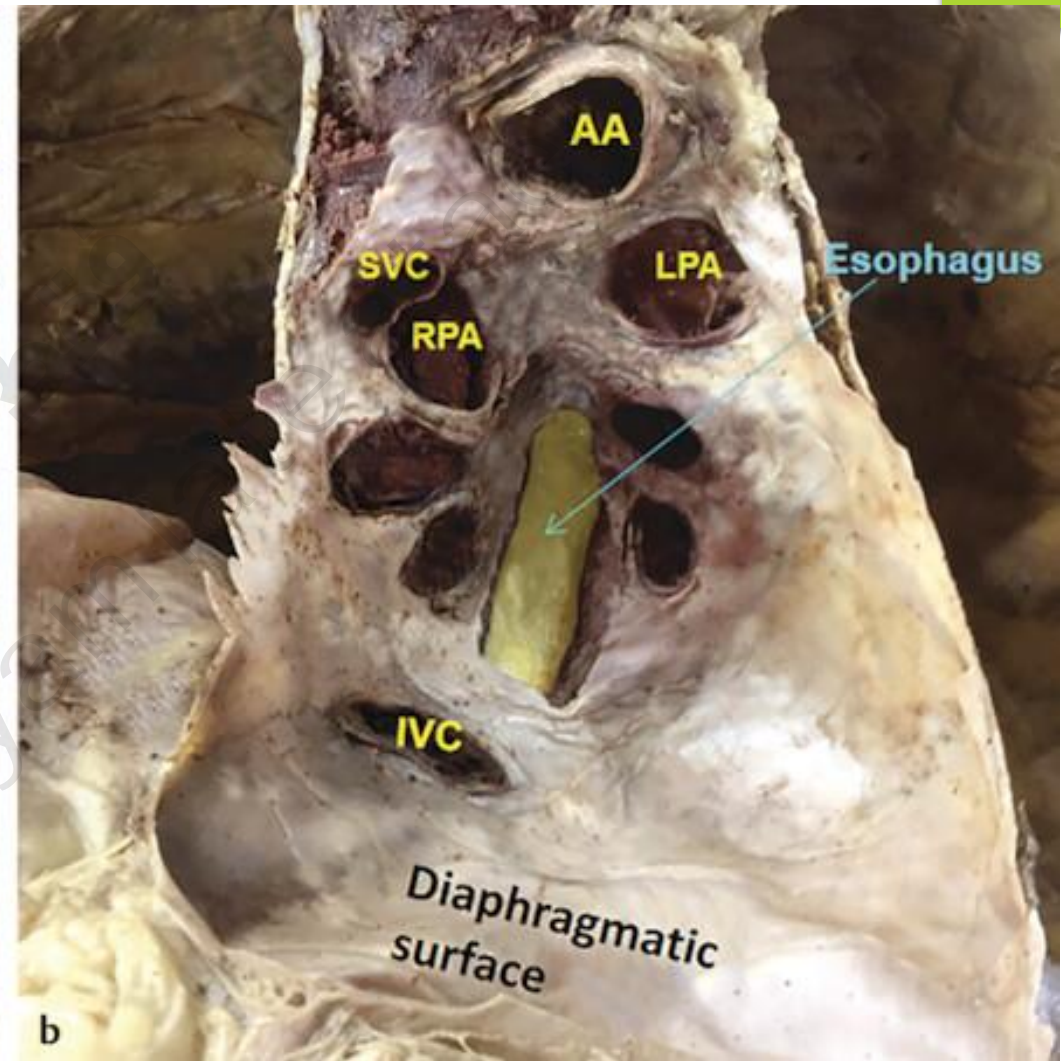
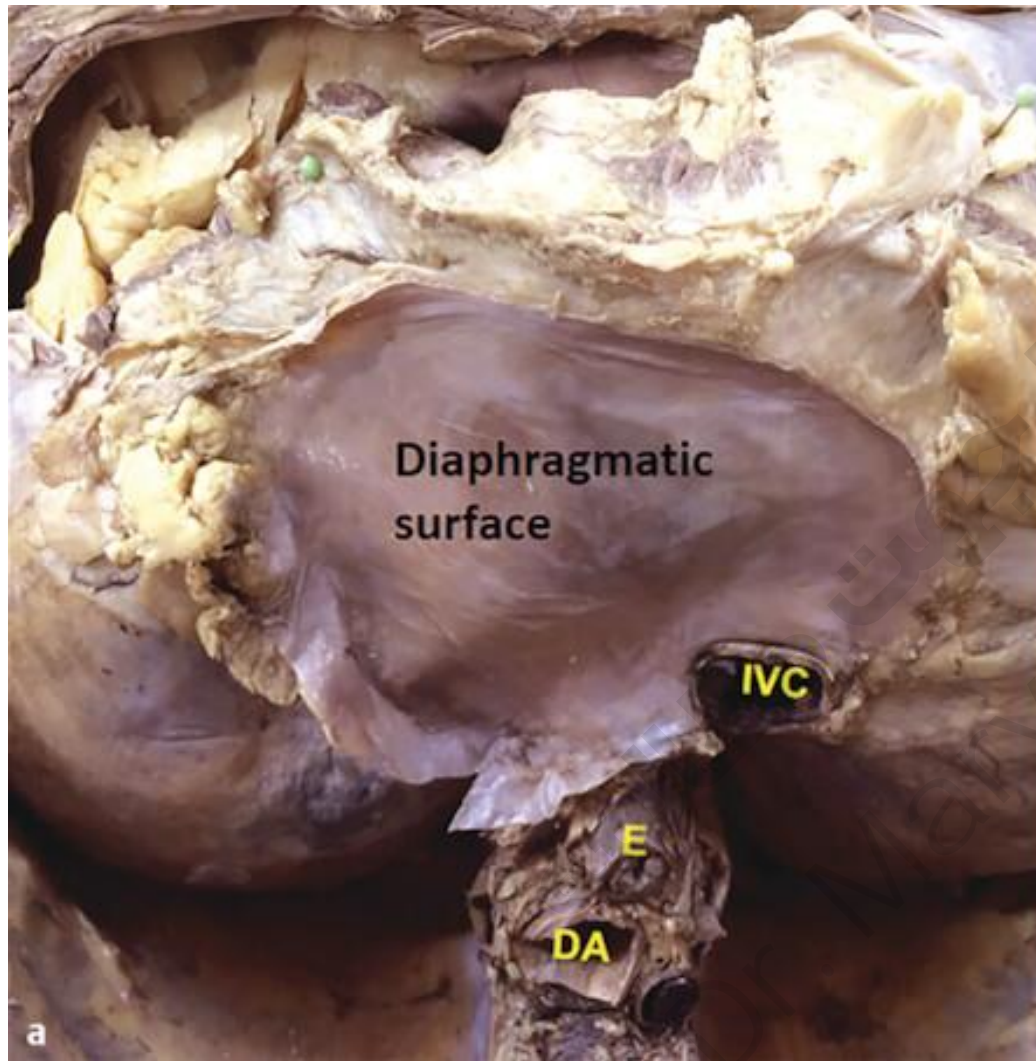


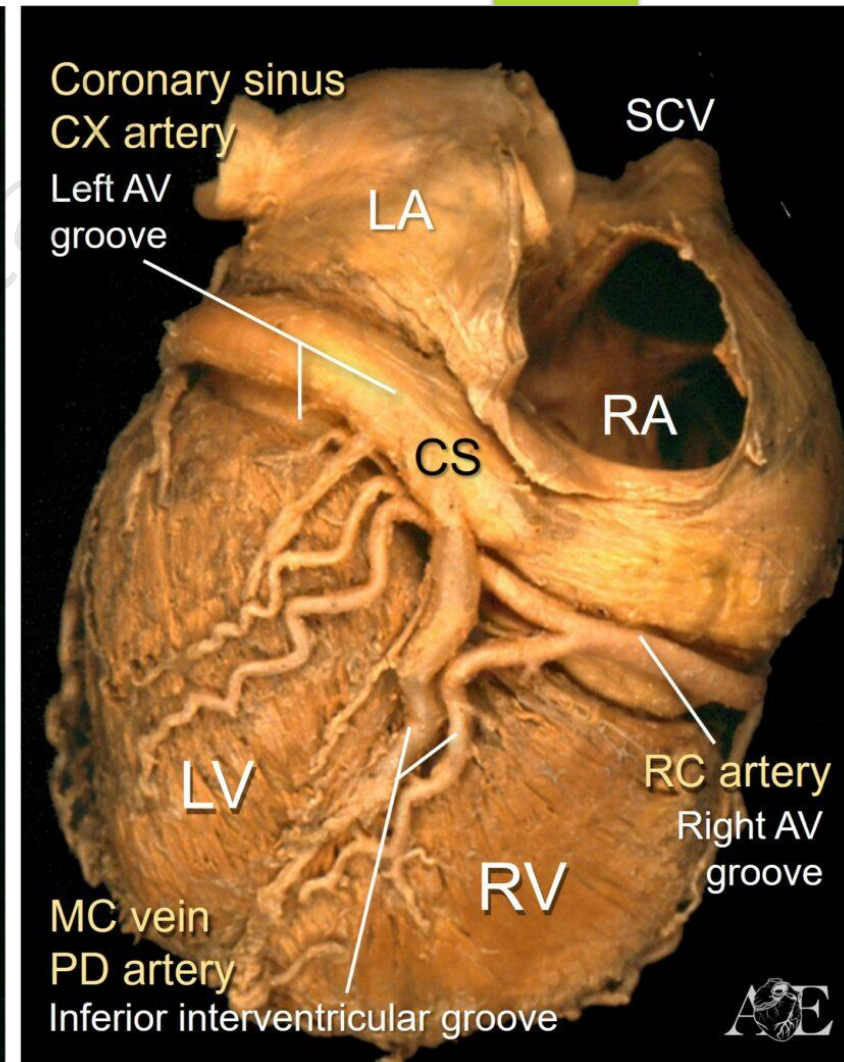
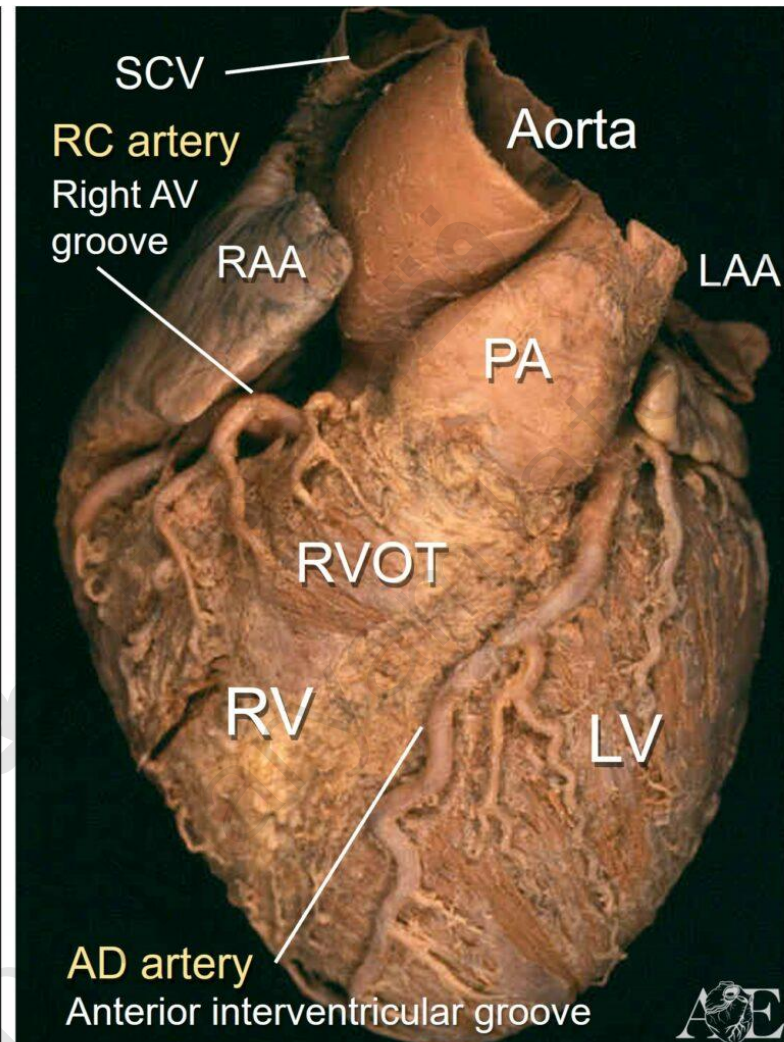
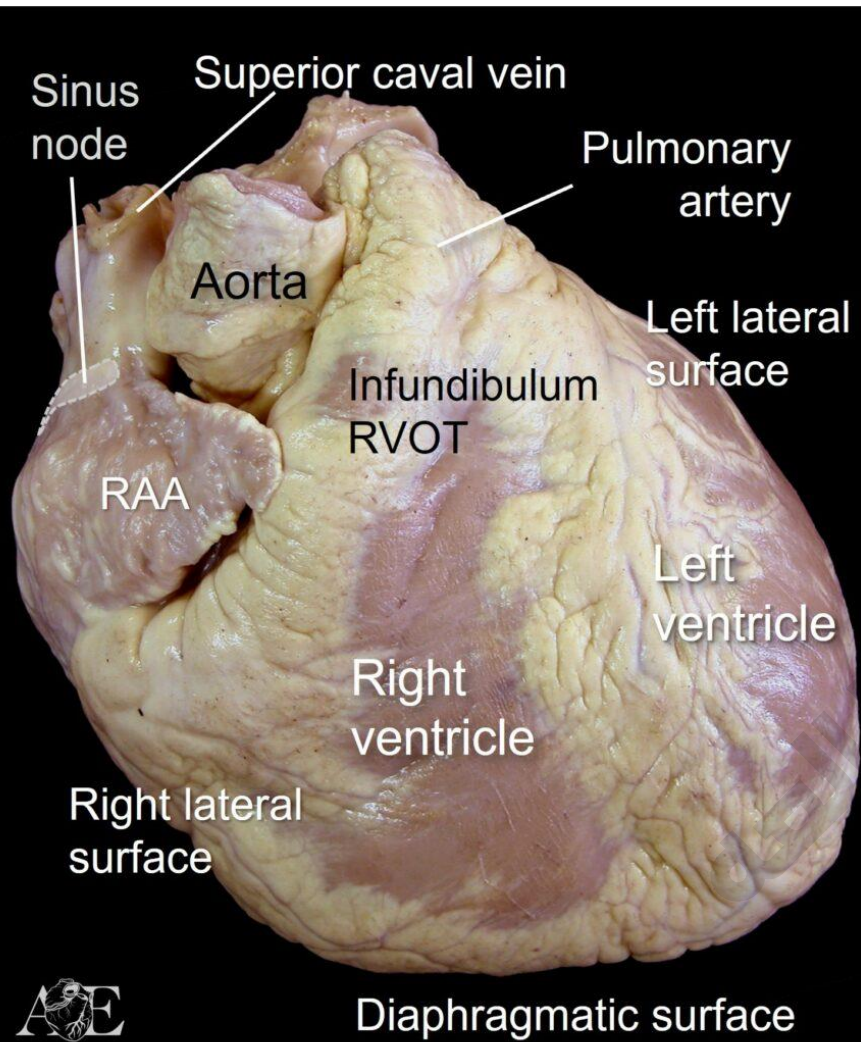


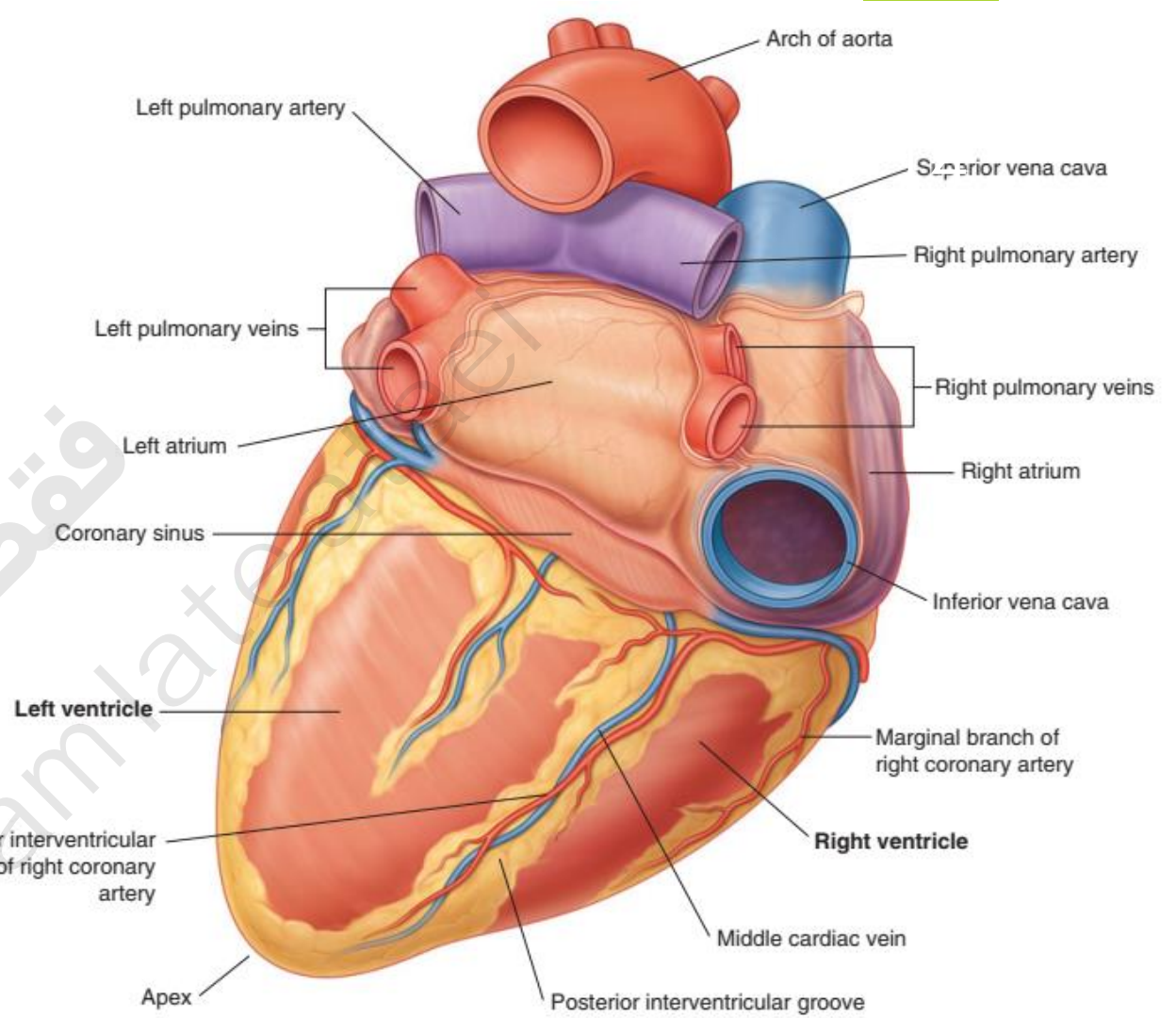
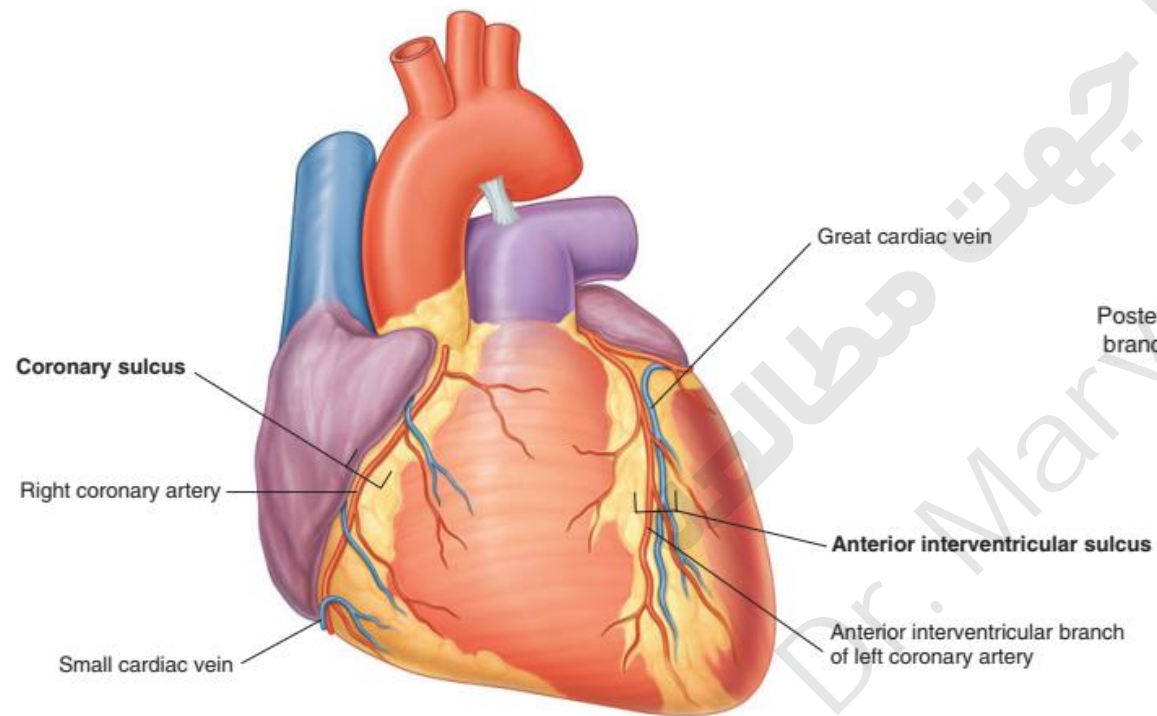






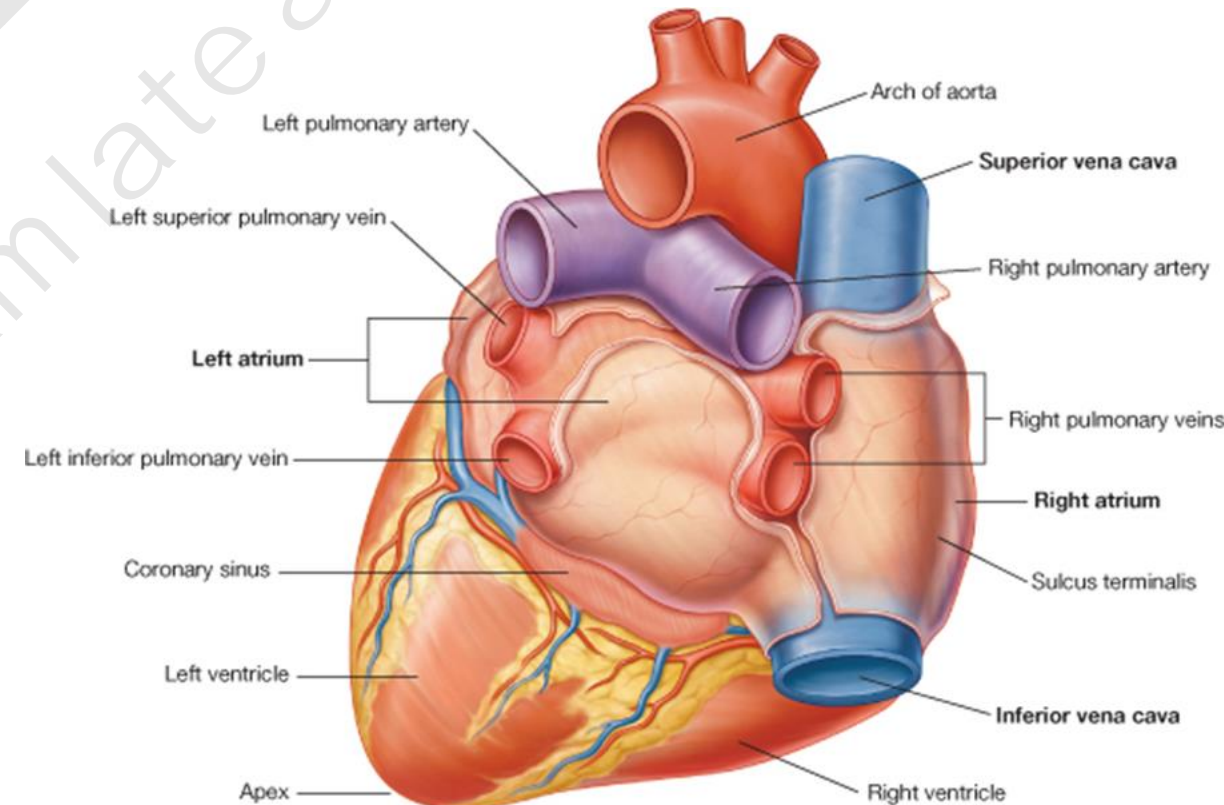






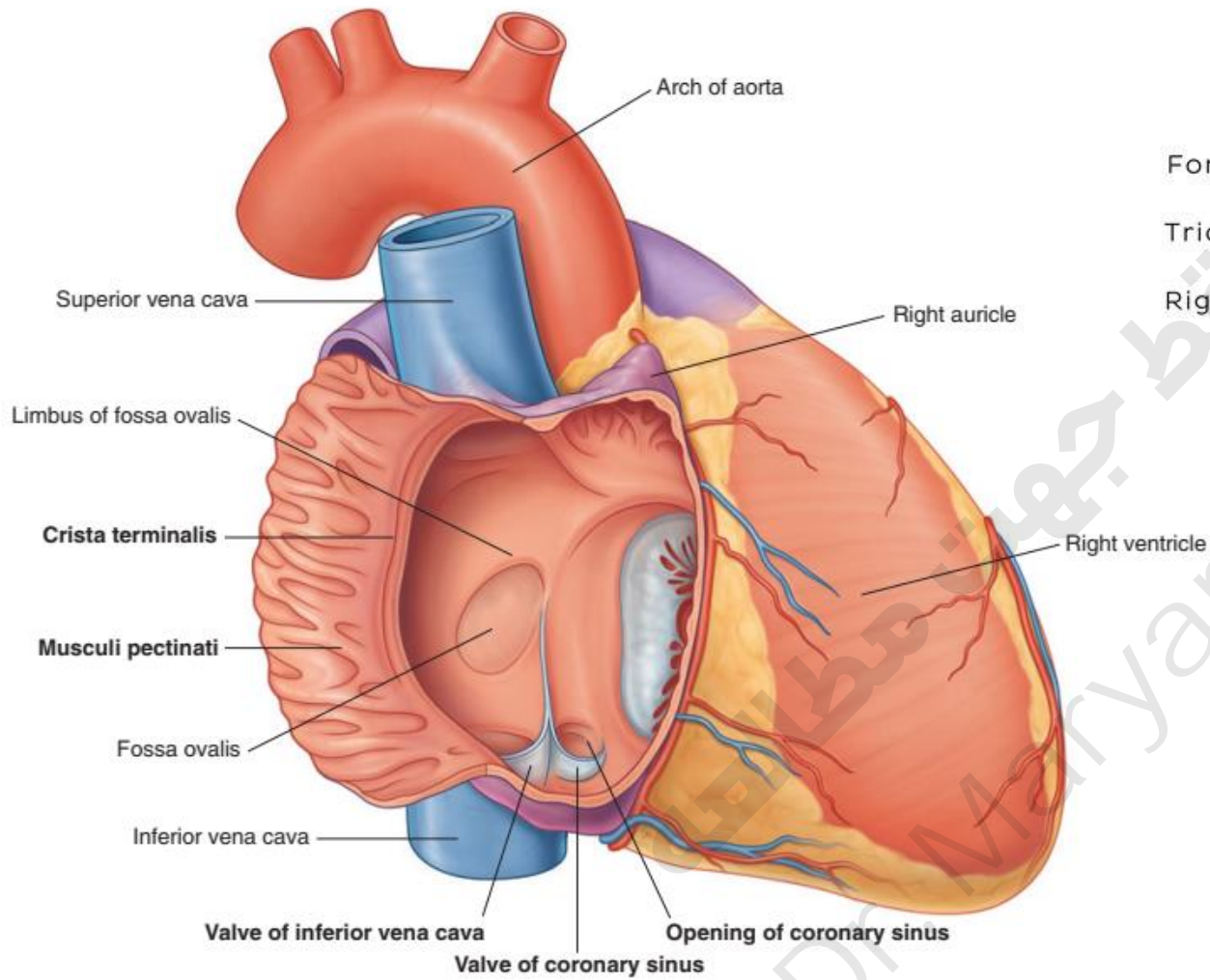
Atria of the Heart

- ▶ Atria - receiving chambers of the heart
 - ▶ Receive venous blood returning to heart
 - ▶ Separated by an interatrial septum (wall)
 - ▶ Foramen ovale - opening in interatrial septum in fetus
 - ▶ Fossa ovalis - remnant of foramen ovale
- ▶ Each atrium has a protruding auricle
- ▶ Pectinate muscles mark atrial walls
- ▶ Pump blood into ventricles
- ▶ Blood enters right atria from superior and inferior venae cavae and coronary sinus
- ▶ Blood enters left atria from pulmonary veins



Ventricles of the Heart

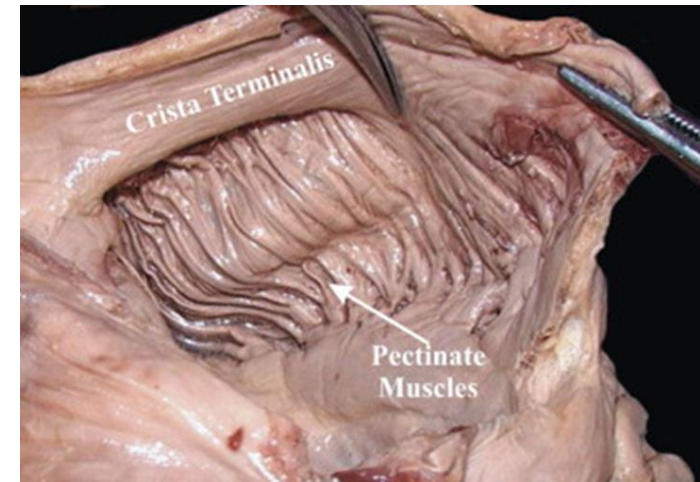
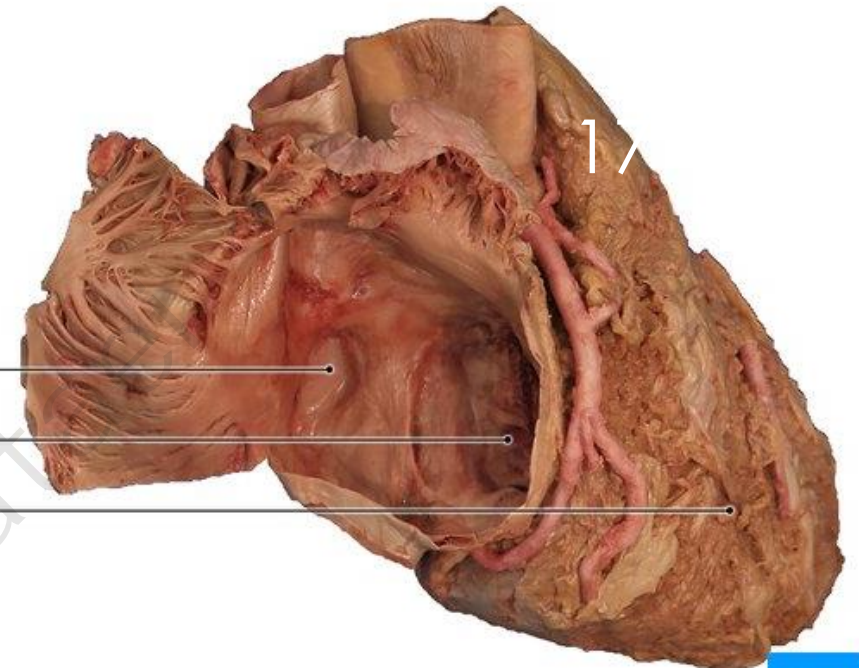
- ▶ Ventricles are the discharging chambers of the heart
- ▶ Papillary muscles and trabeculae carneae muscles mark ventricular walls
- ▶ Separated by an interventricular septum
 - ▶ Contains components of the *conduction system*
- ▶ Right ventricle pumps blood into the pulmonary trunk
- ▶ Left ventricle pumps blood into the aorta
 - ▶ Thicker myocardium due to greater work load
 - ▶ Pulmonary circulation supplied by right ventricle is a much low pressure system requiring less energy output by ventricle
 - ▶ Systemic circulation supplied by left ventricle is a higher pressure system and thus requires more forceful contractions

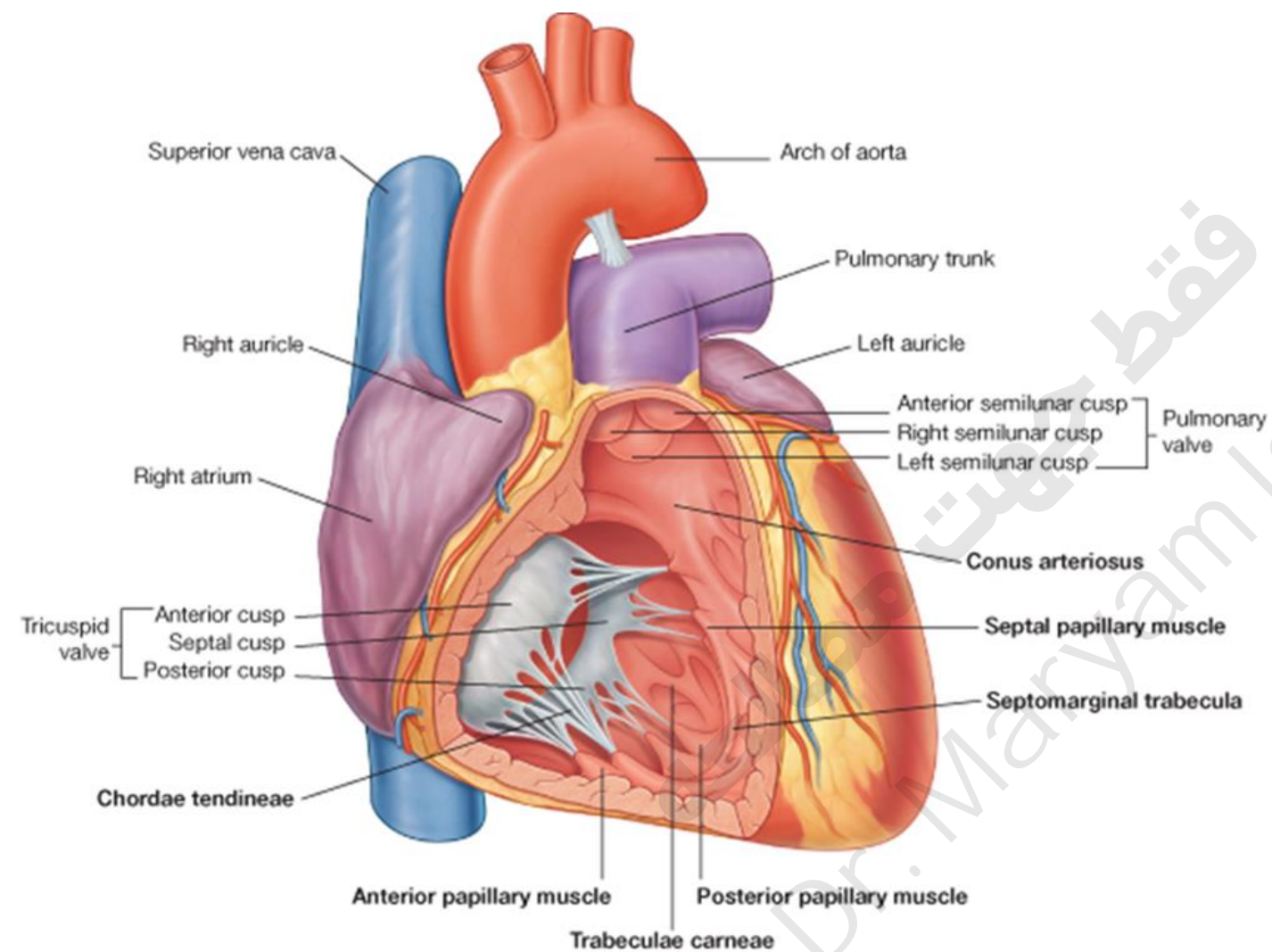


Foramen ovale

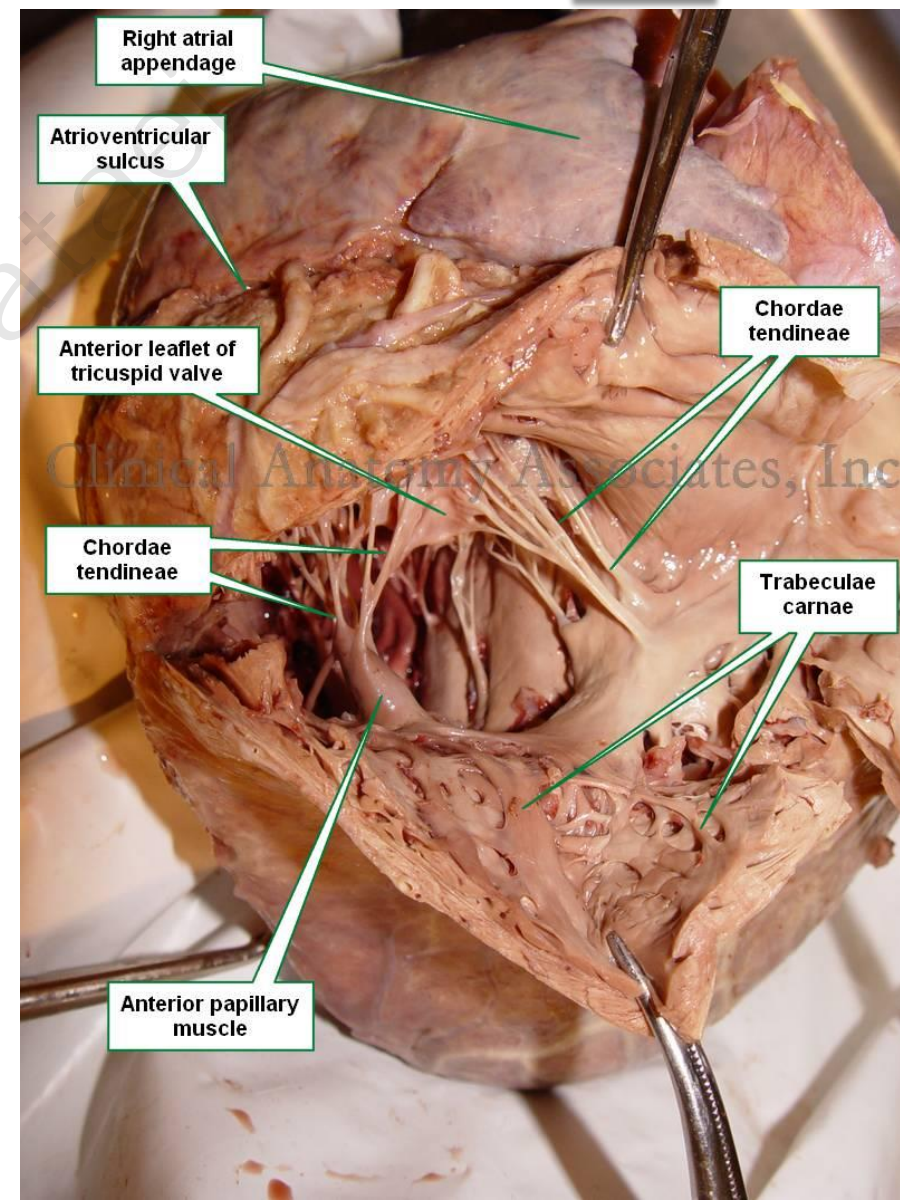
Tricuspid valve

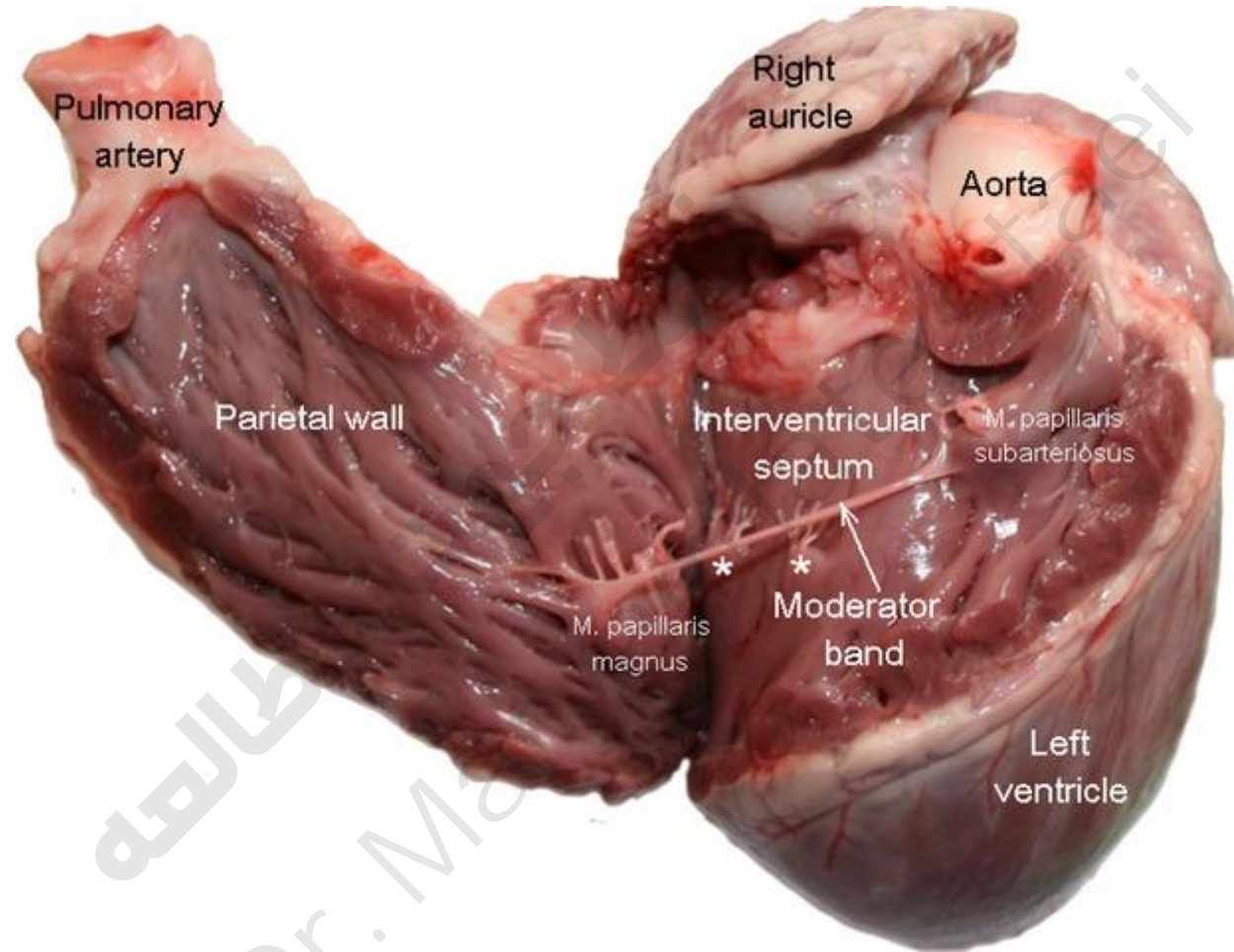
Right ventricle

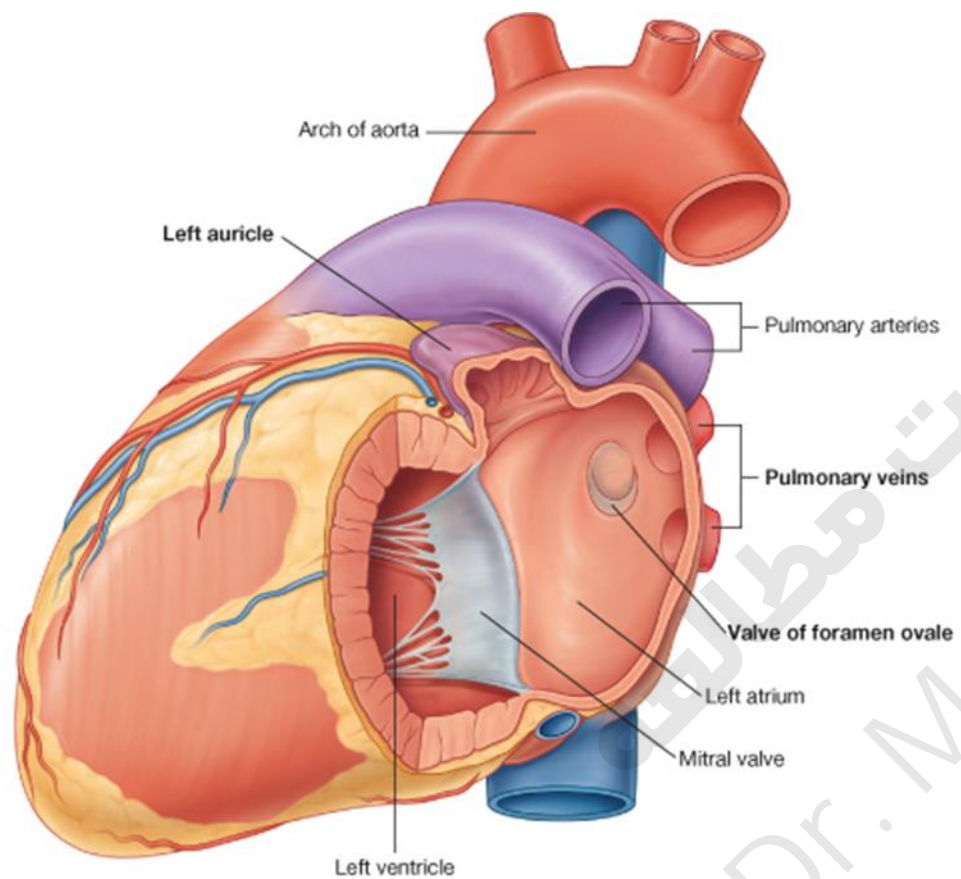




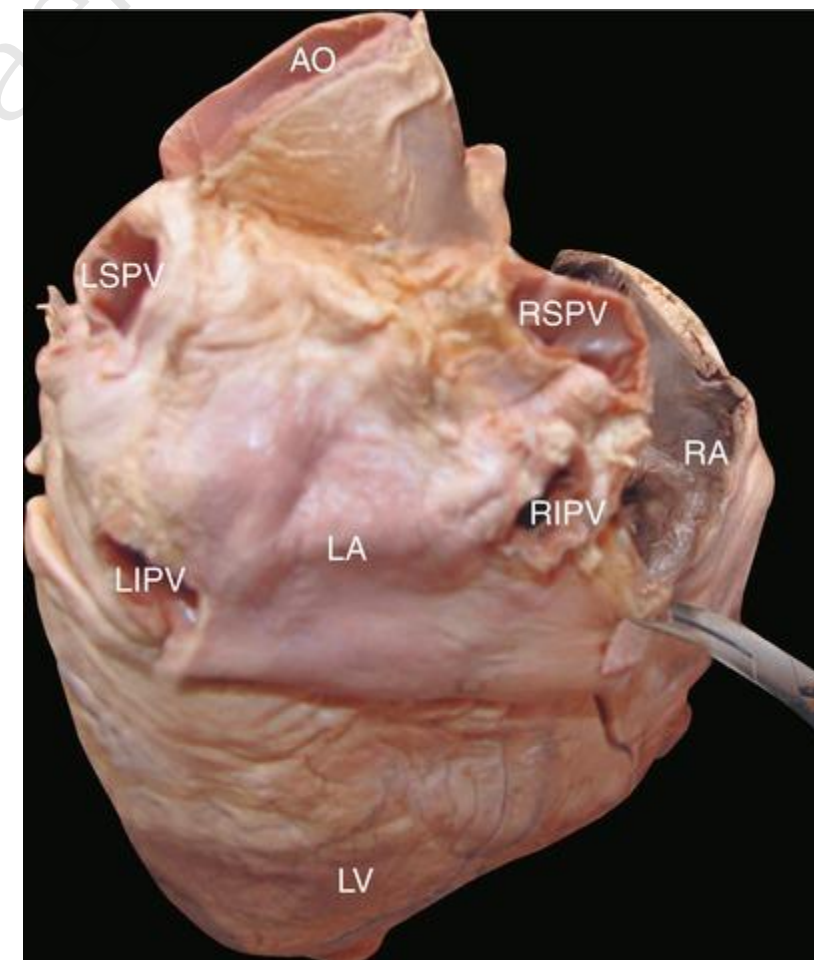
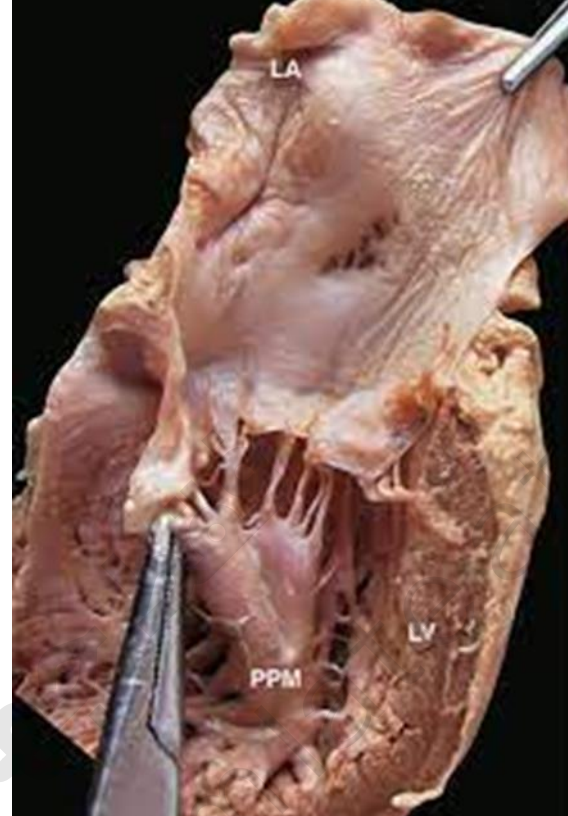
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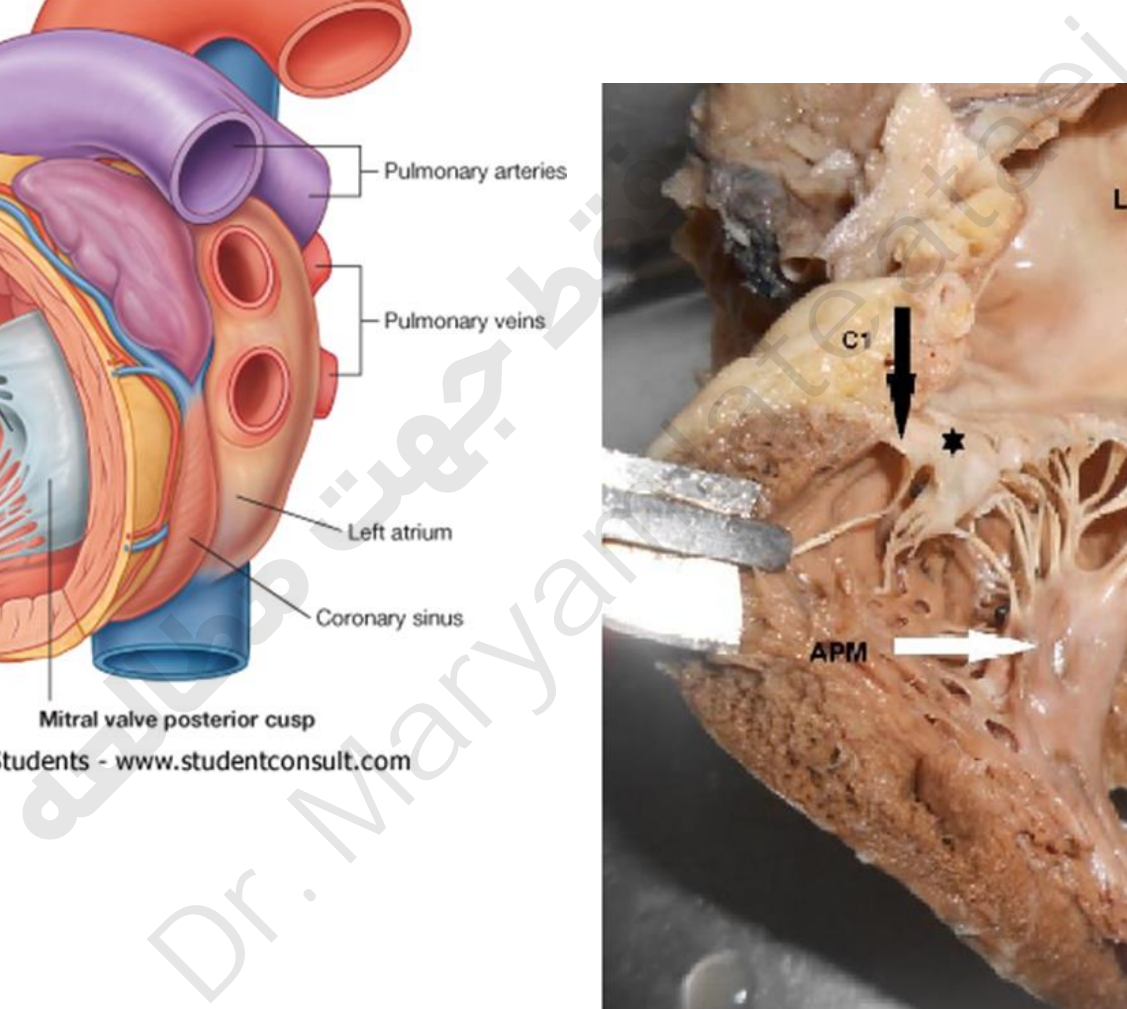






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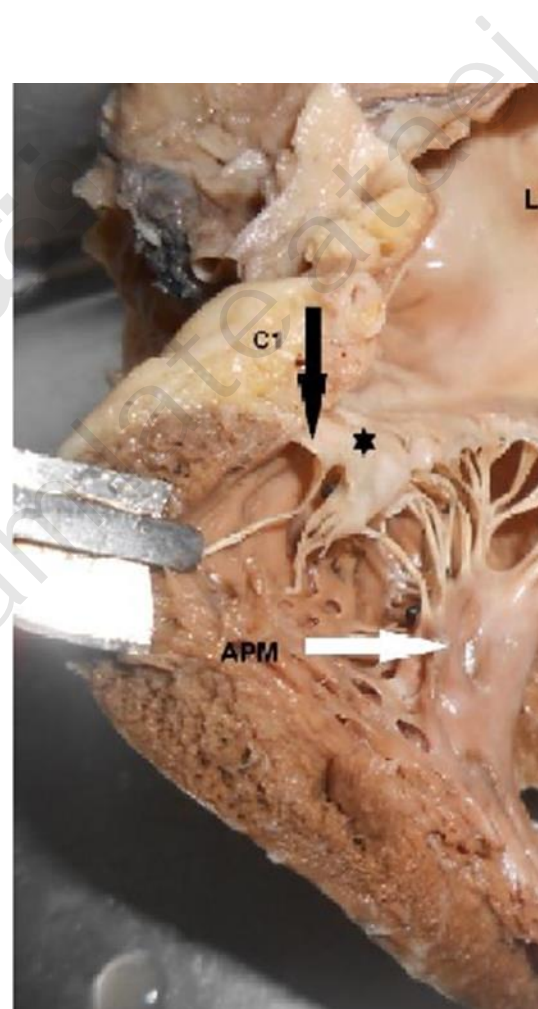


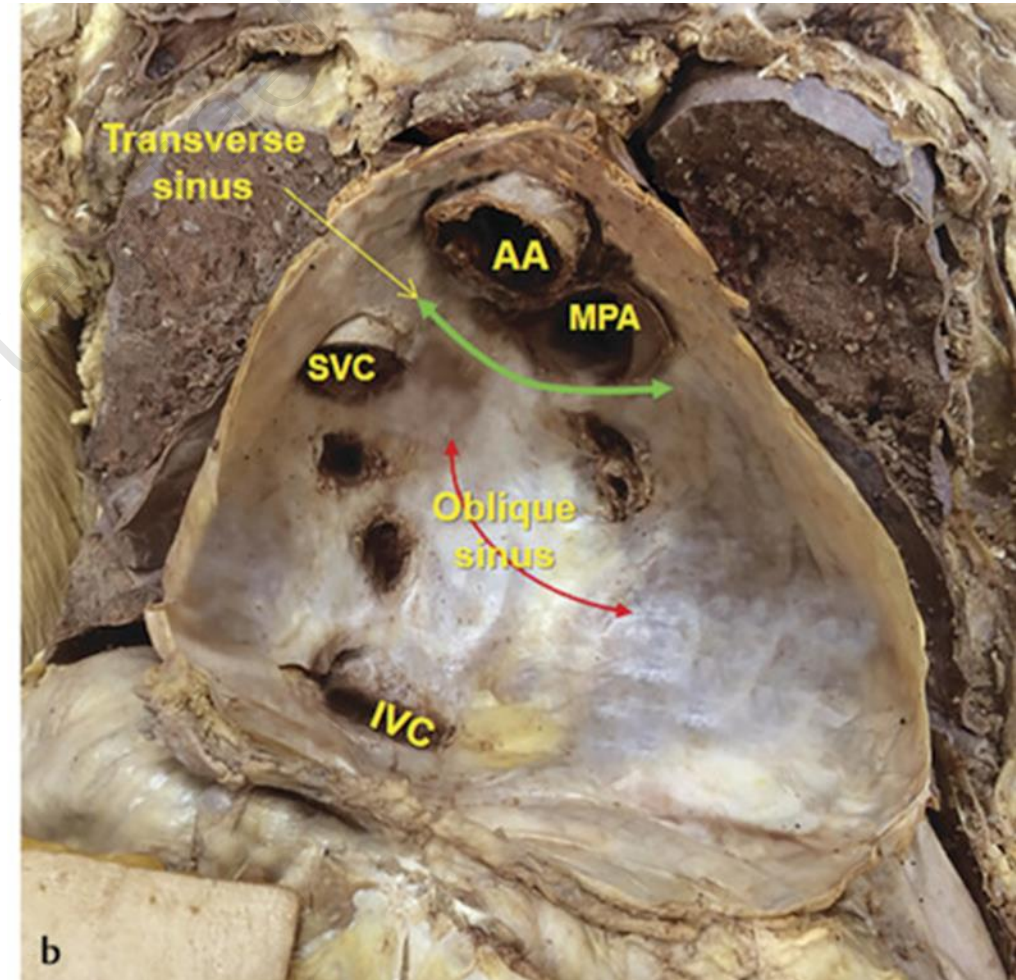
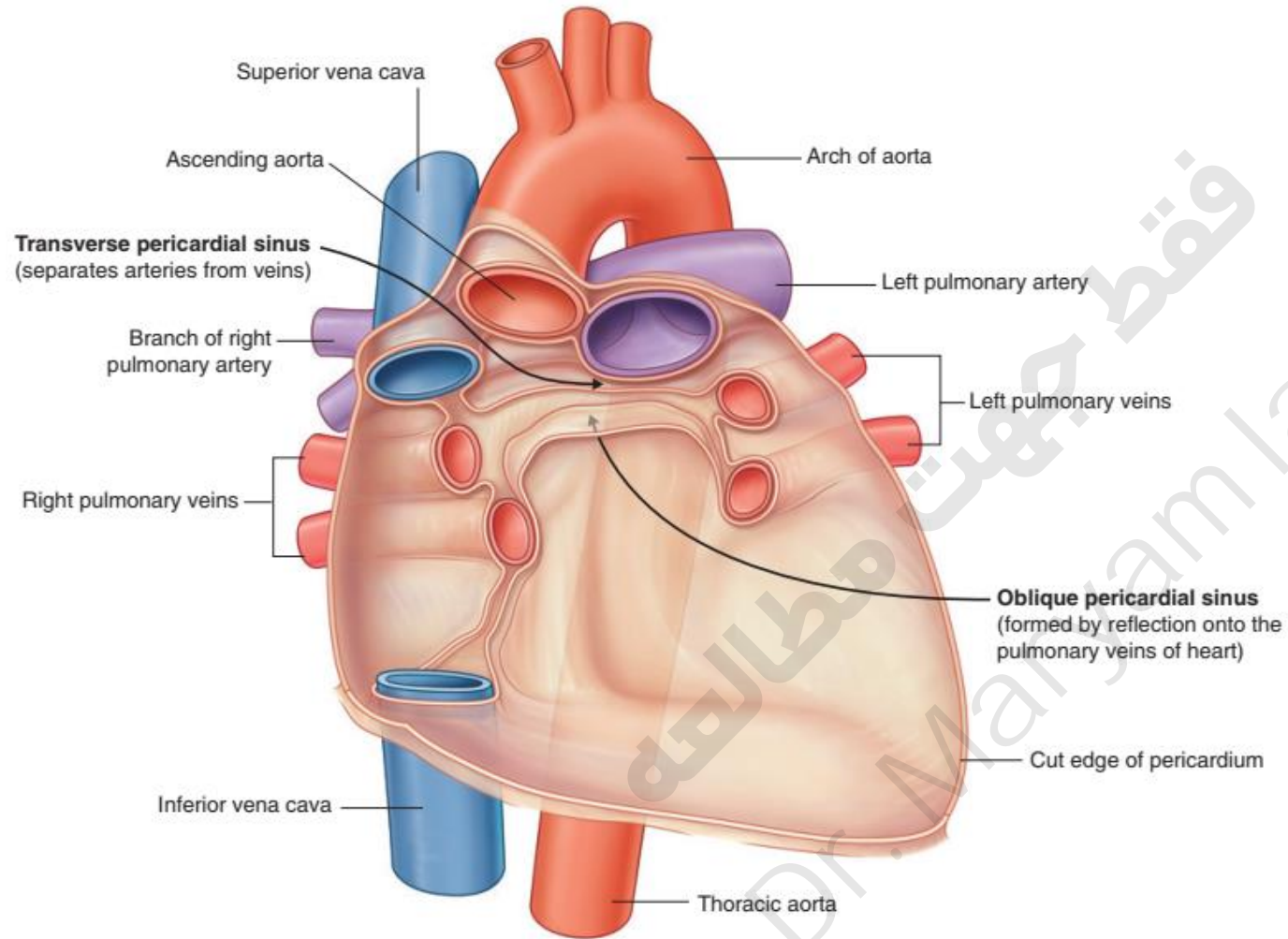
Left atrium

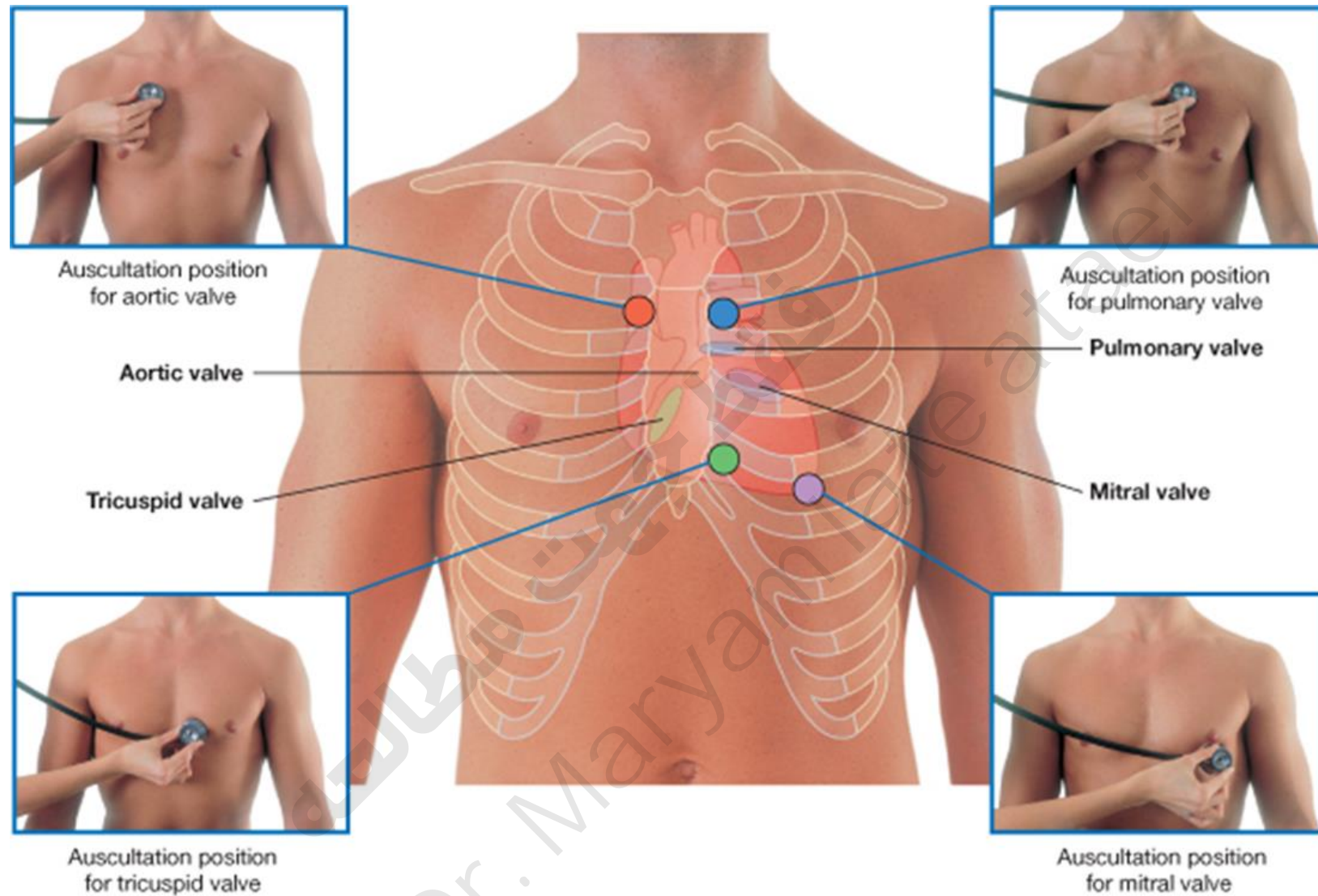
Coronary sinus

ive posterior cusp

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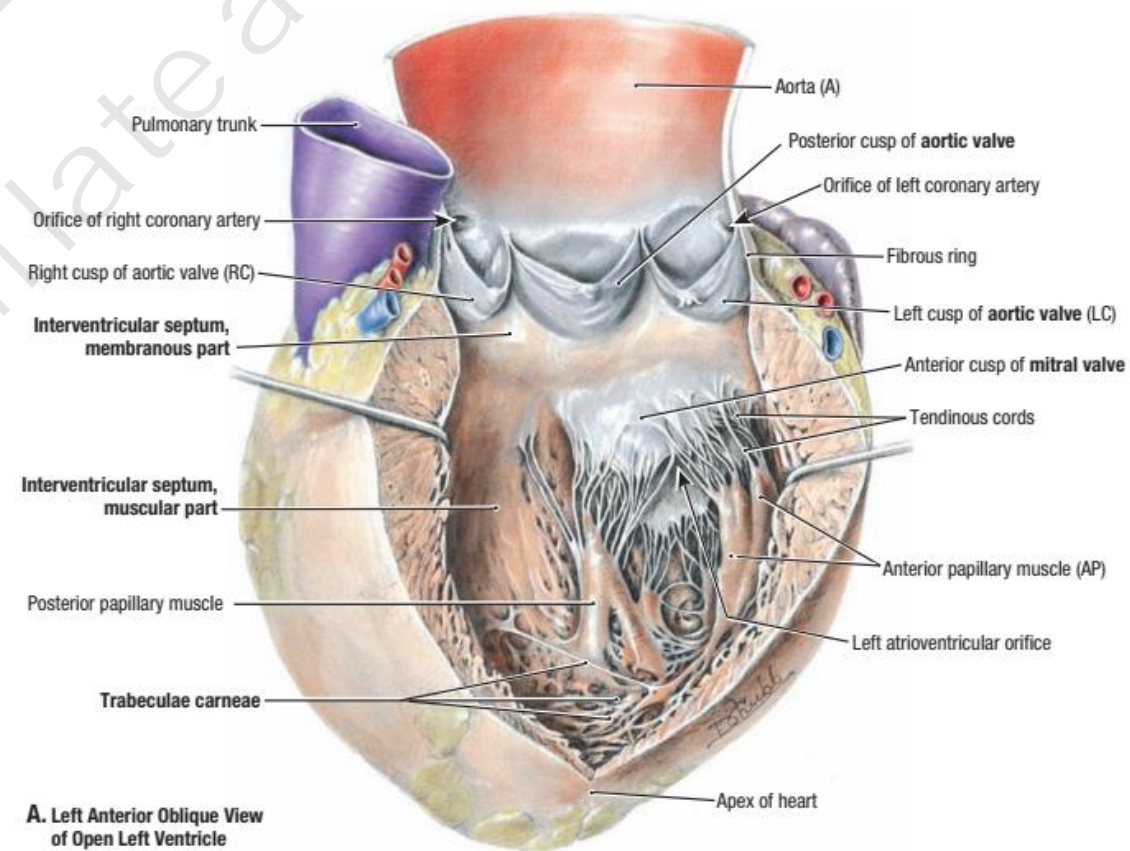
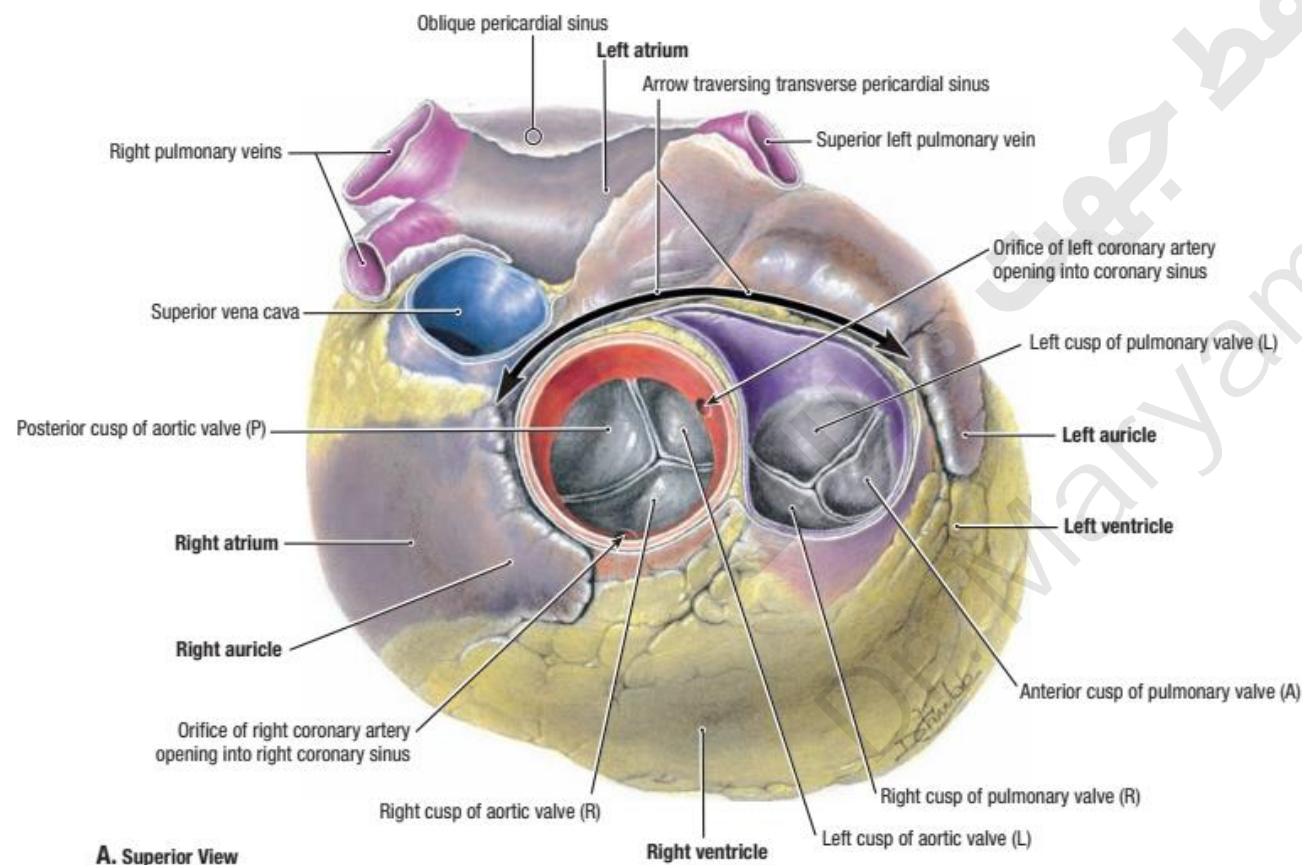




Heart Valves

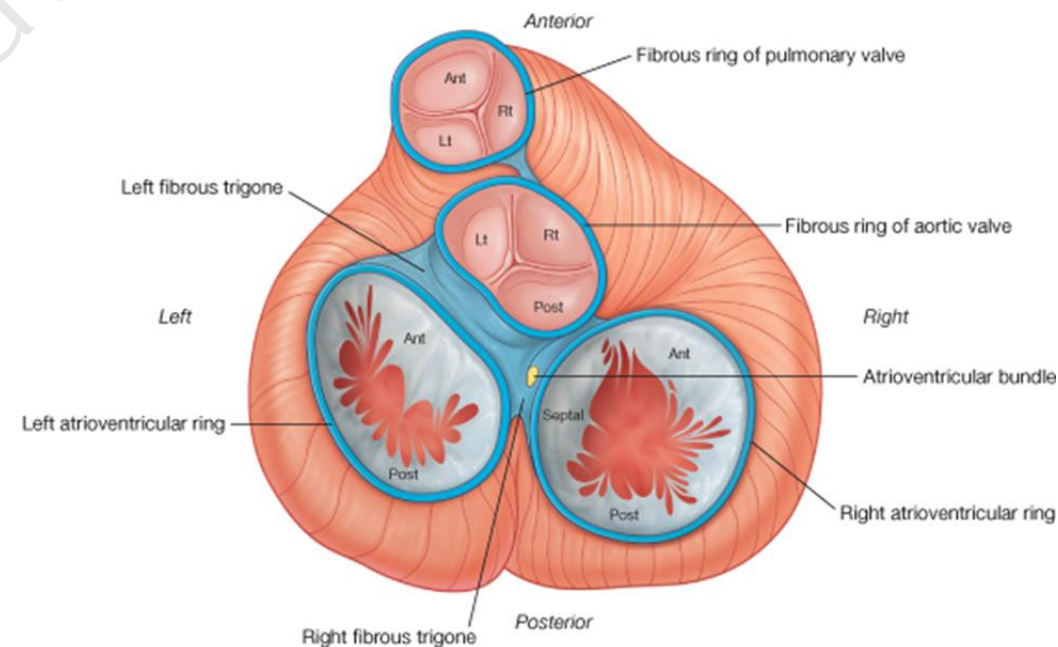
- ▶ Heart valves ensure unidirectional blood flow through the heart
 - ▶ Composed of an endocardium with a connective tissue core
- ▶ Two major types
 - ▶ Atrioventricular valves
 - ▶ Semilunar valves
- ▶ Atrioventricular (AV) valves lie between the atria and the ventricles
 - ▶ R-AV valve = tricuspid valve
 - ▶ L-AV valve = bicuspid or mitral valve
- ▶ AV valves prevent backflow of blood into the atria when ventricles contract
- ▶ Chordae tendineae anchor AV valves to papillary muscles of ventricle wall
 - ▶ Prevent *prolapse* of valve back into atrium

Continuation

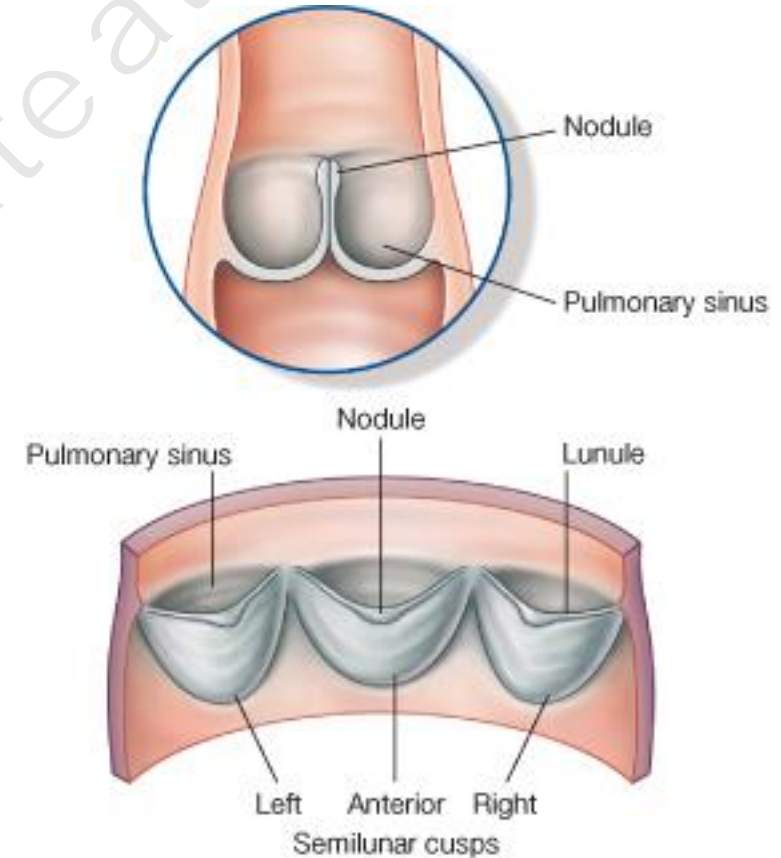
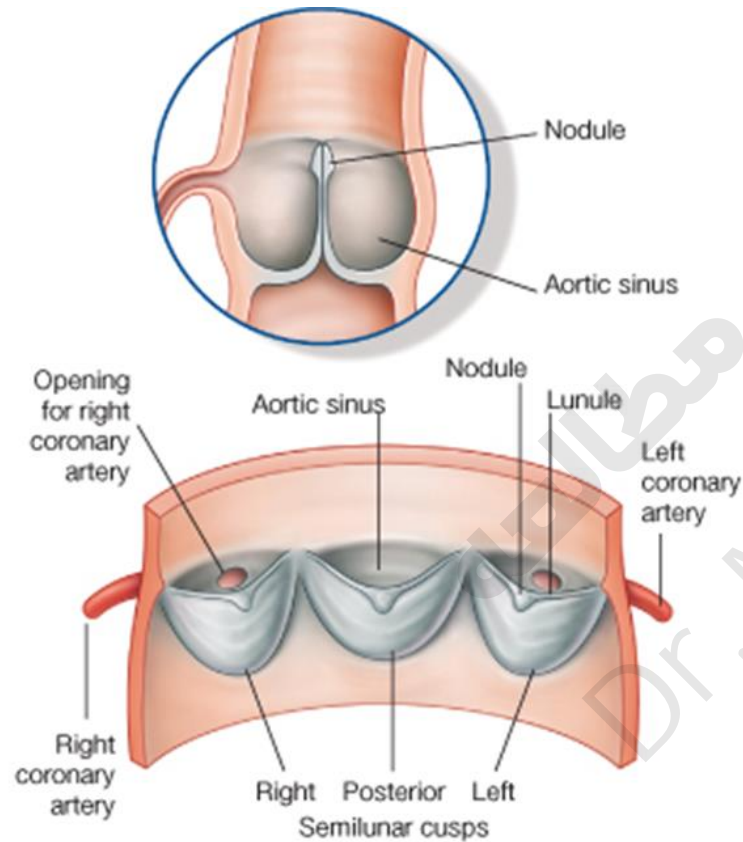


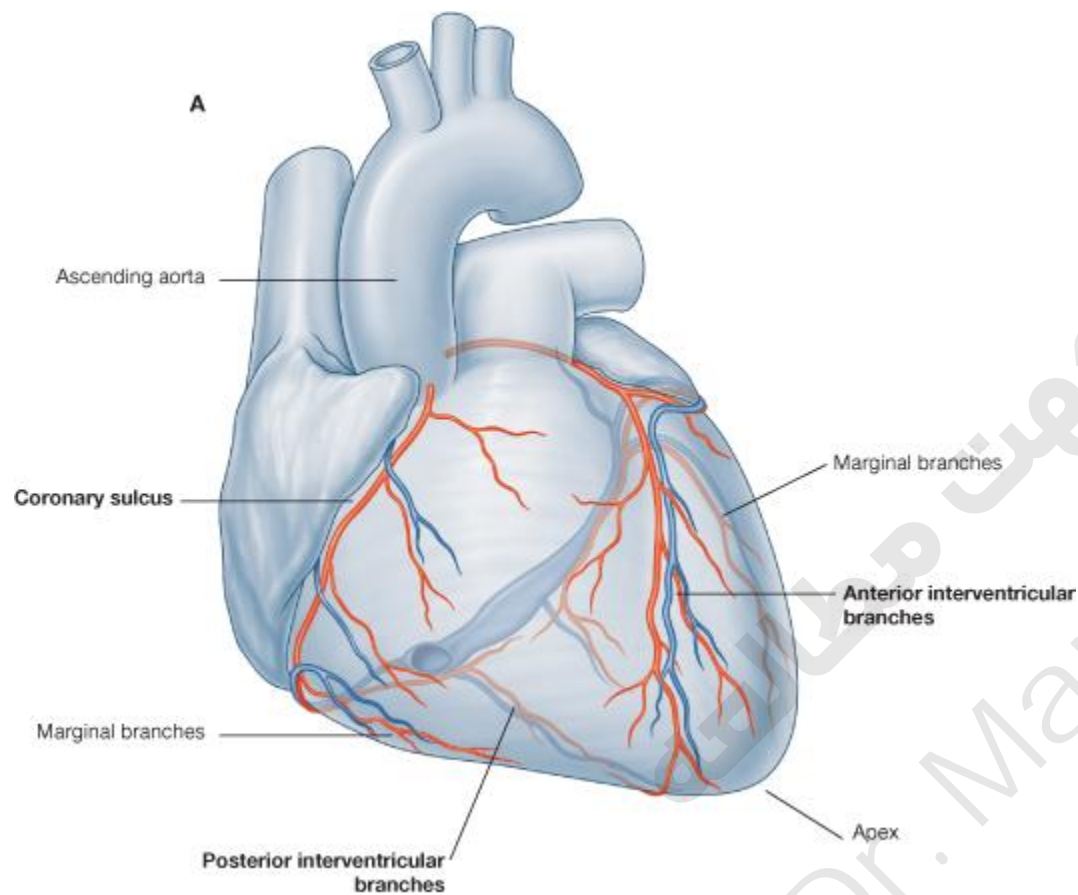
Semilunar Heart Valves

- ▶ Semilunar valves prevent backflow of blood into the ventricles
- ▶ Have no chordae tendinae attachments
- ▶ Aortic semilunar valve lies between the left ventricle and the aorta
- ▶ Pulmonary semilunar valve lies between the right ventricle and pulmonary trunk
- ▶ Heart sounds (“lub-dup”) due to valves closing
 - ▶ “Lub” - closing of atrioventricular valves
 - ▶ “Dub”- closing of semilunar valves

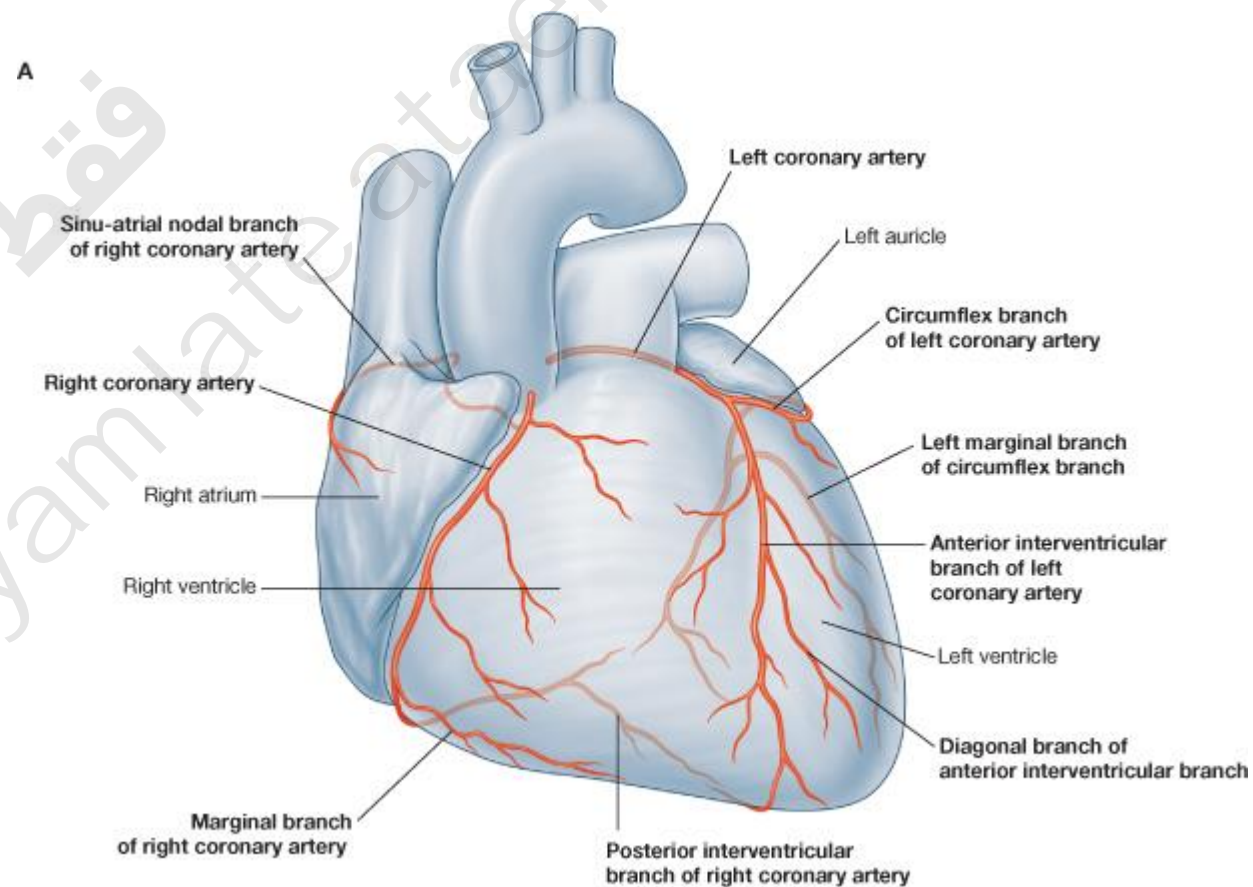


Continuation

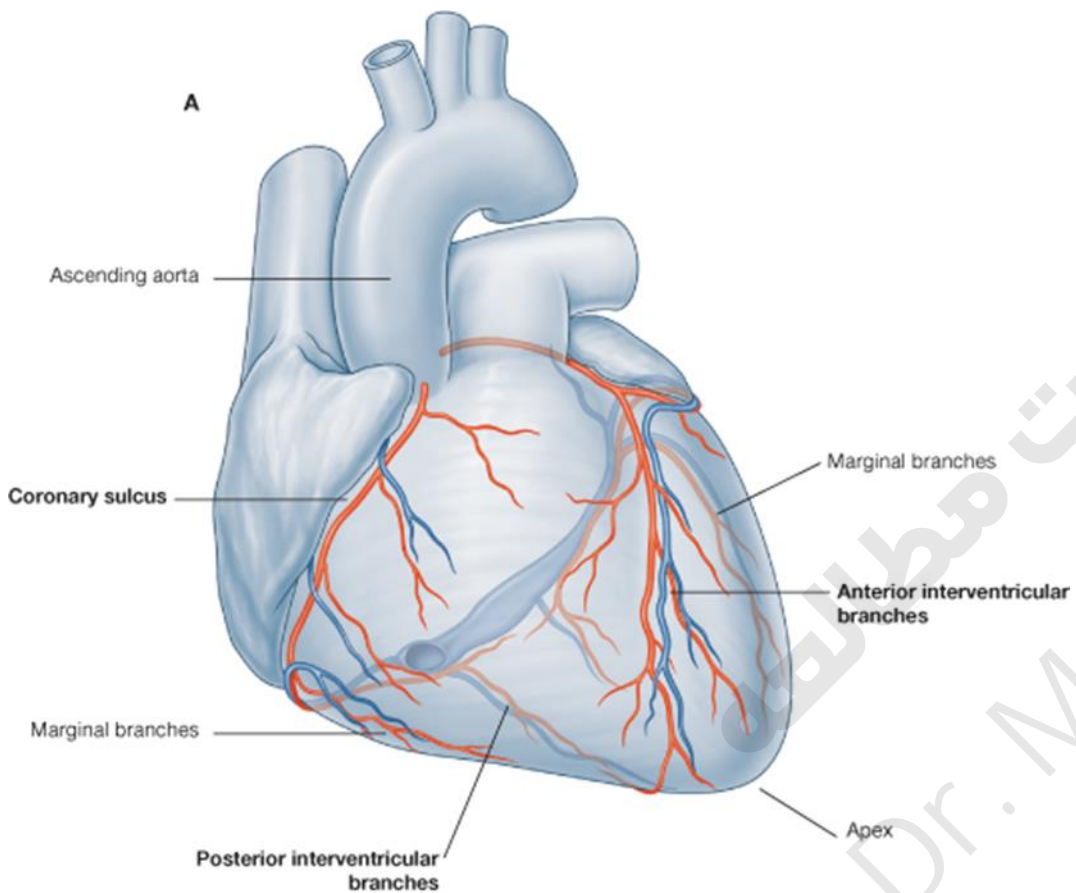




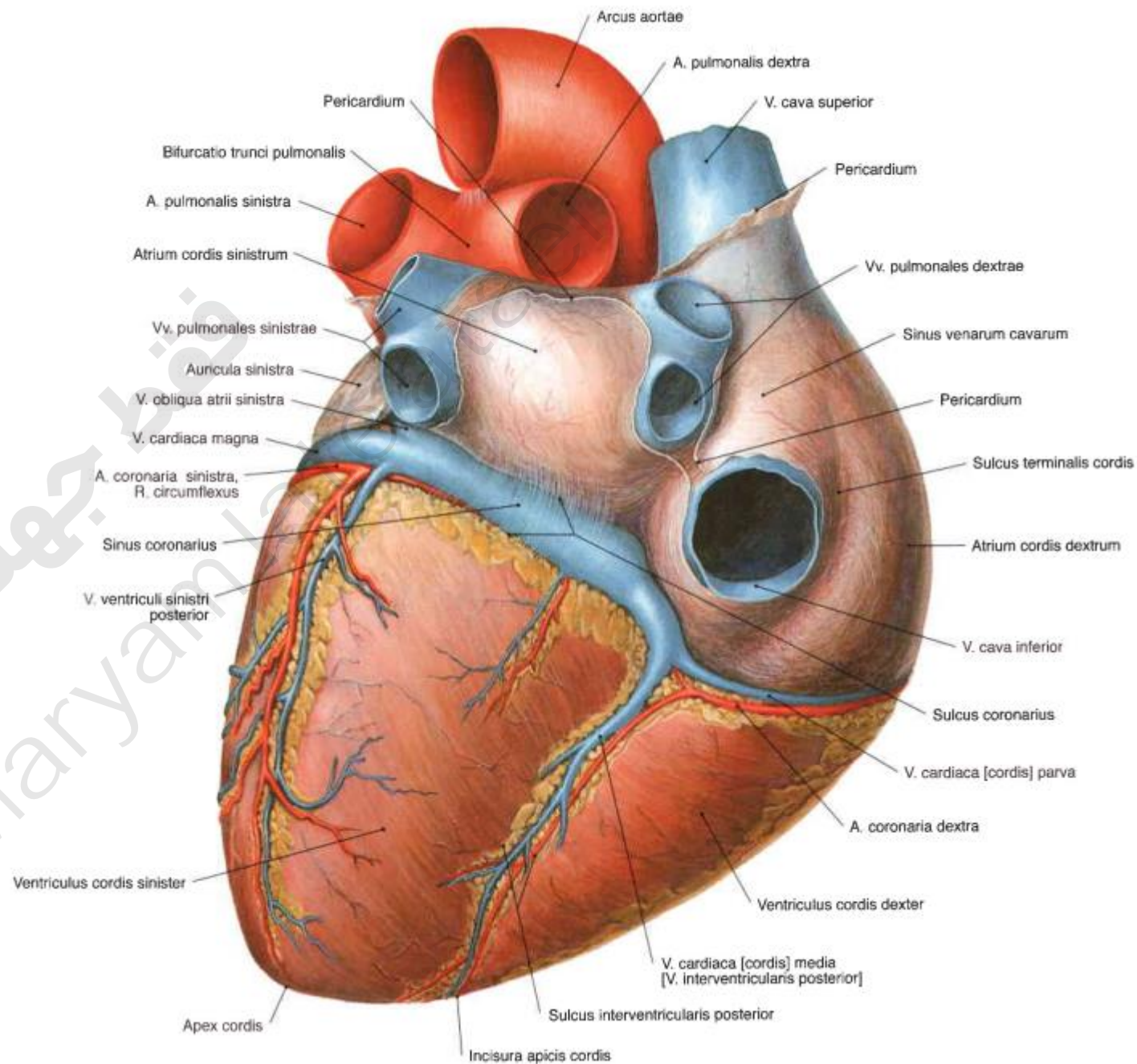
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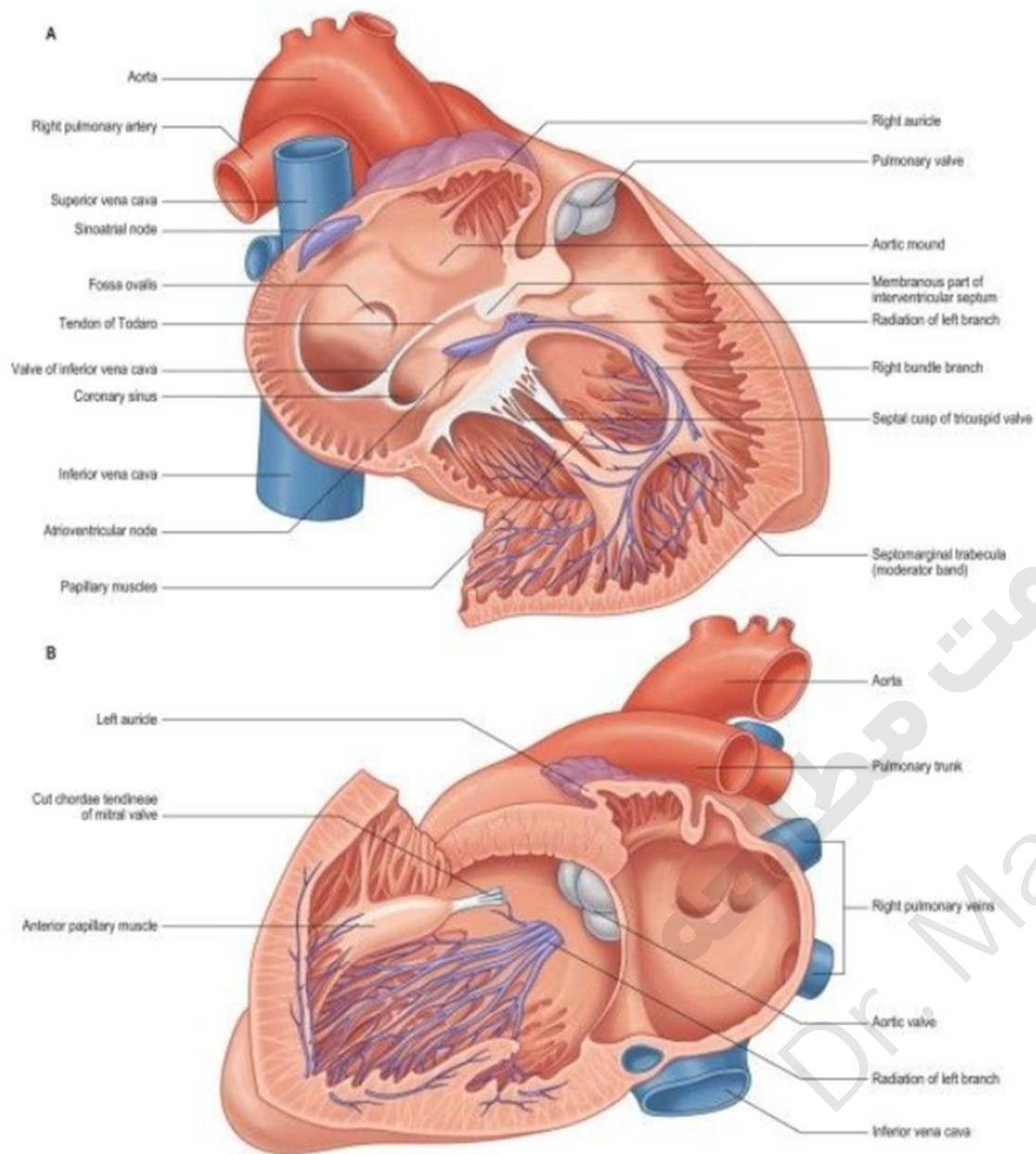


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Sinoatrial (SA) node (pacemaker)

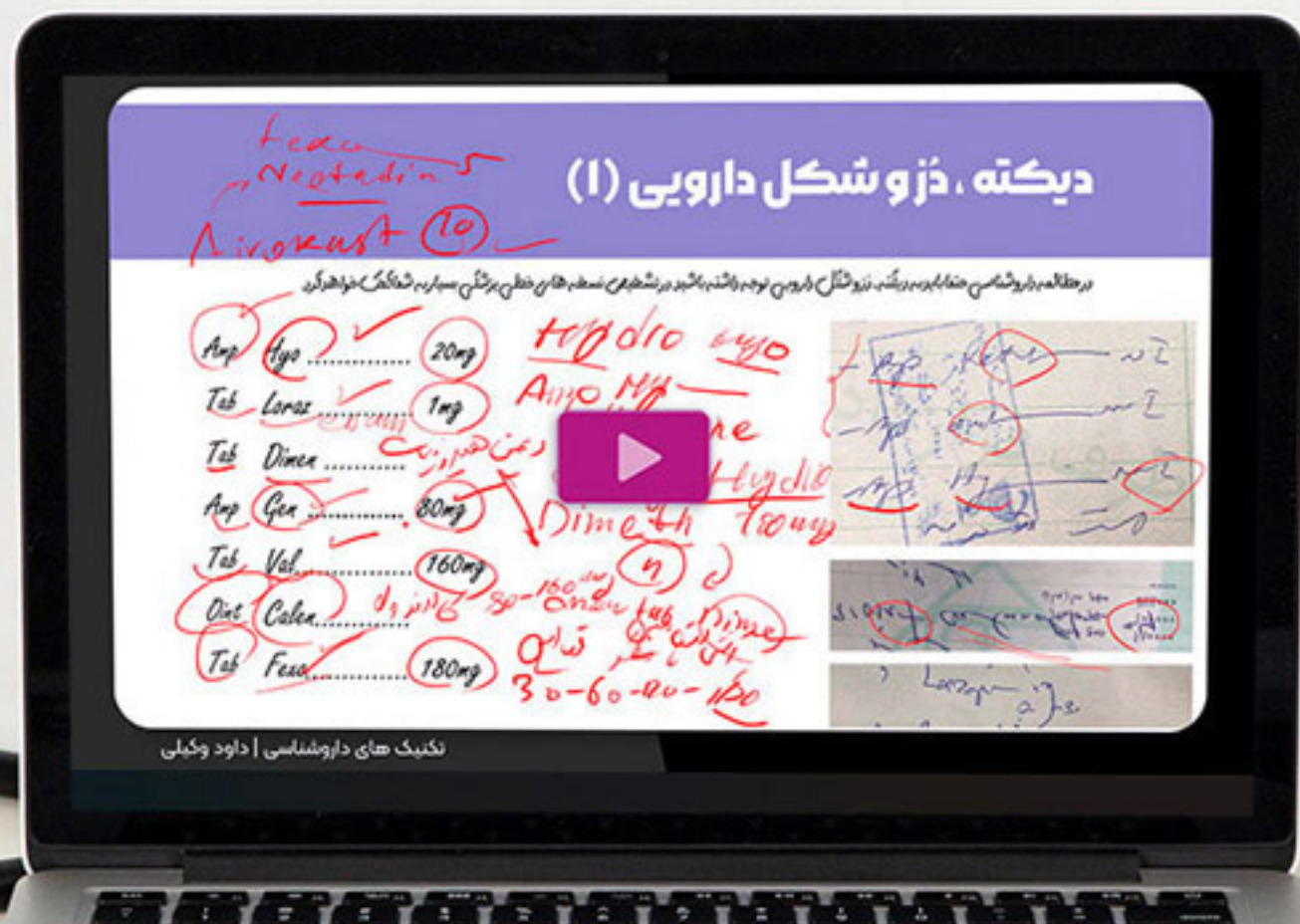
Atrioventricular (AV) node

Bundle branches

Purkinje fibers

Atrioventricular (AV) bundle (bundle of His)

Purkinje fibers



کد را
اسکن
کنید



<https://iehe.ir/1091>

نسخه پیج برتر

بیش از ۸ ساعت ویدئوی آموزشی شامل مقدمات و تکنیک ها
جزوه های داروشناسی به همراه تکنیک های پیشرفته
جزوه ویژه و اختصاصی داروشناسی پلاس
بیش از ۲۰۰۰ نمونه نسخه داروخانه دارای راهنما و ...

کد بالا را اسکن و وارد سایت شوید و یا در واتساپ / تلگرام به ۰۹۲۱۱۰۵۴۲۴۵ پیام ارسال نمایید.