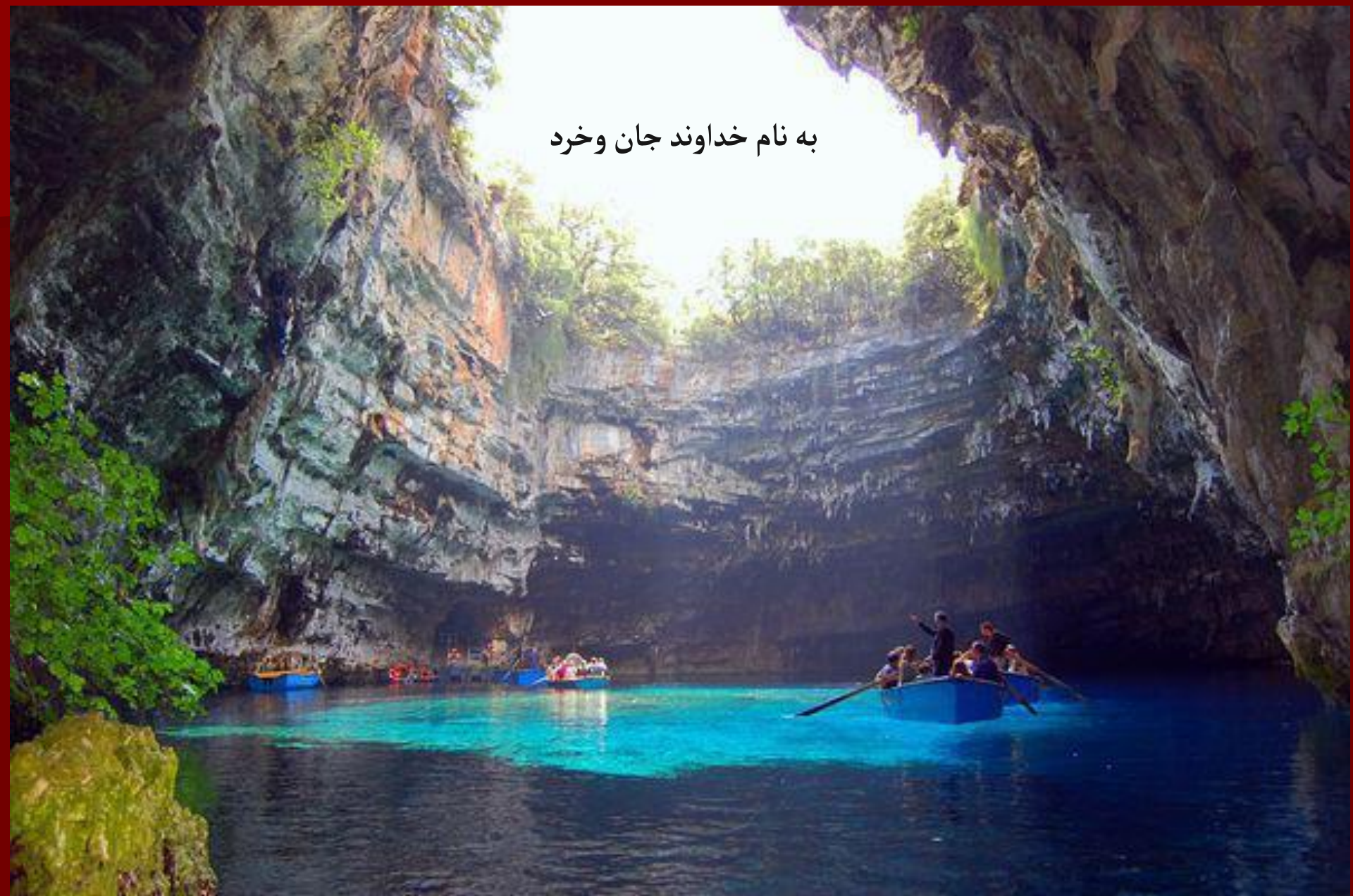
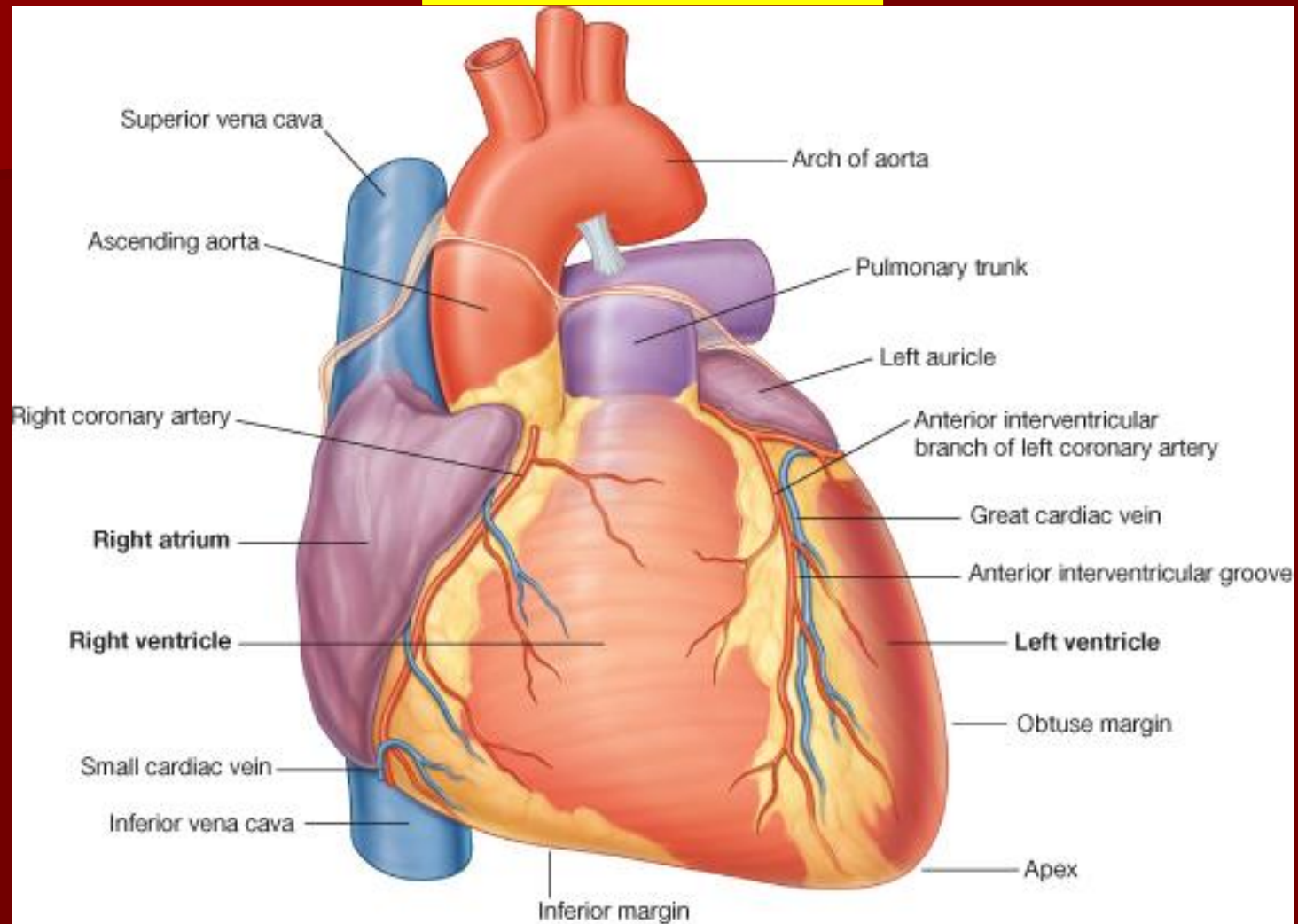


به نام خداوند جان و خرد



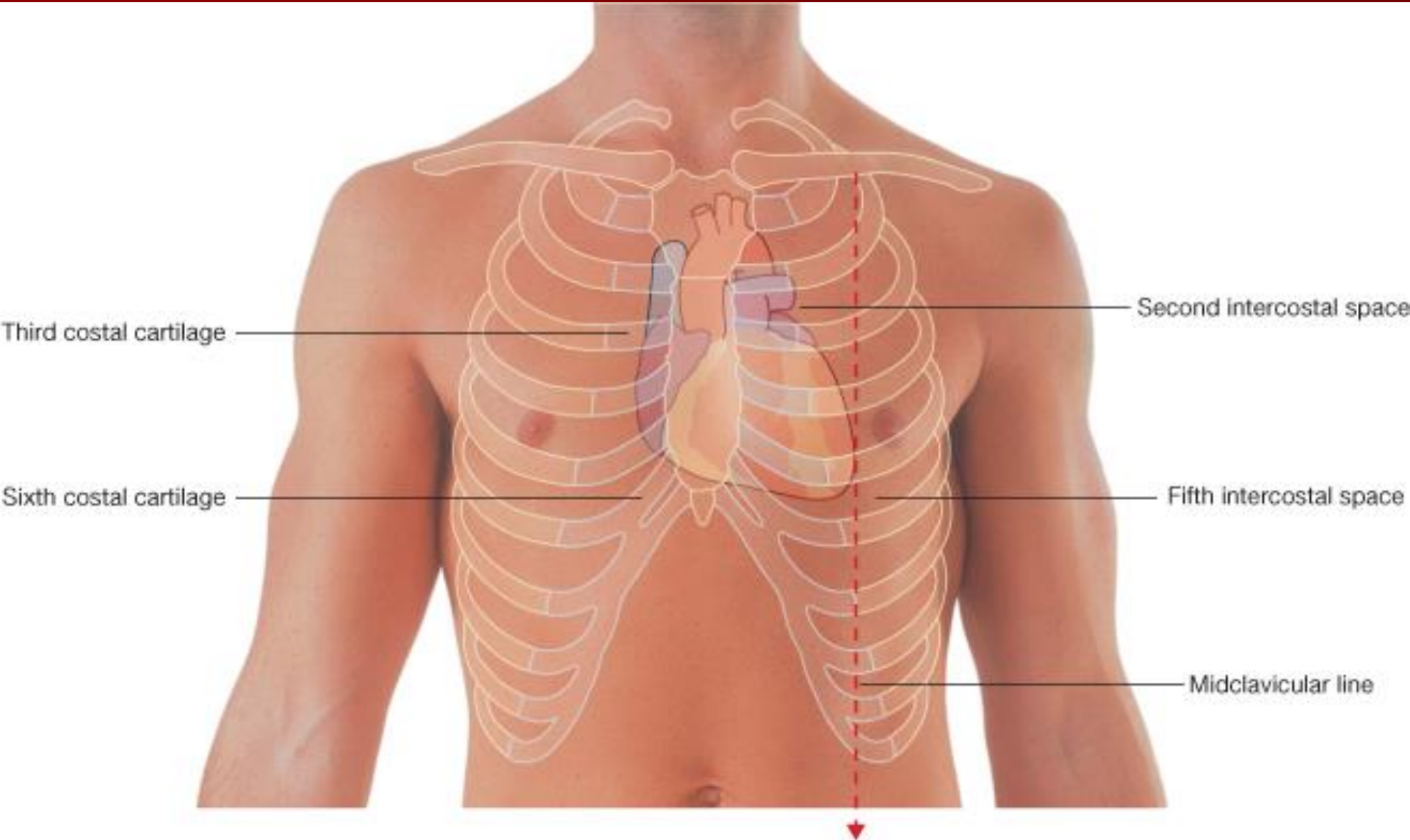
Heart



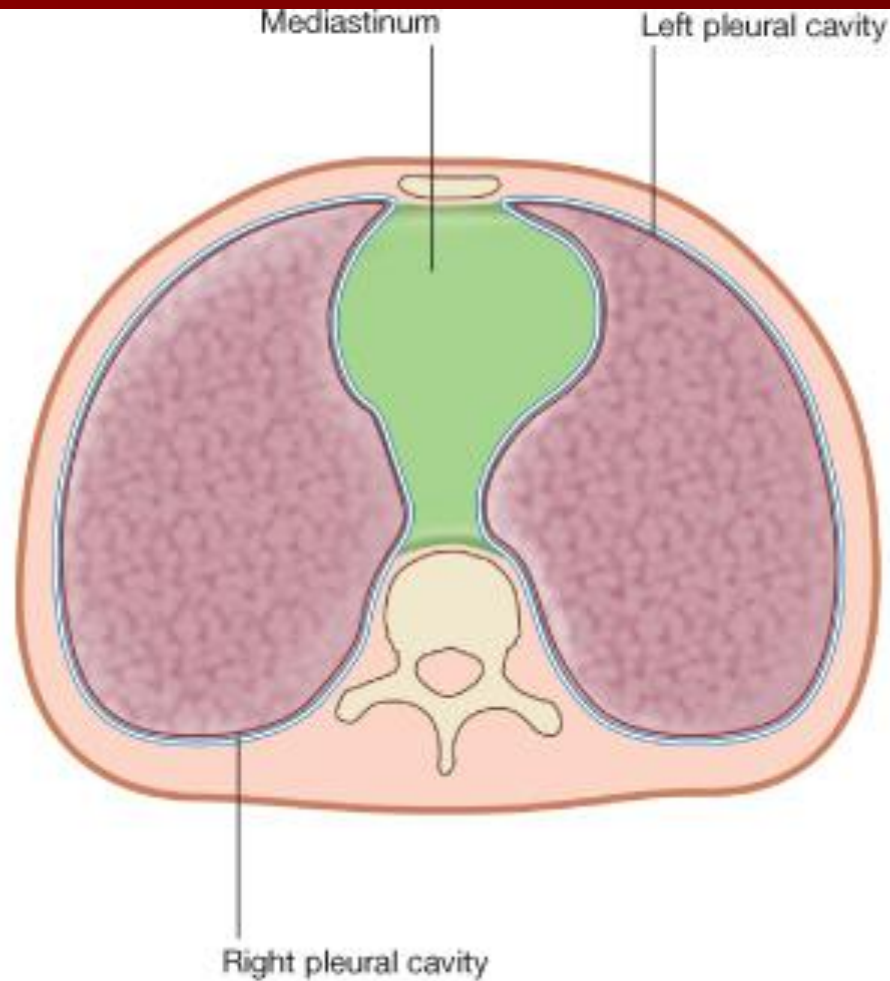
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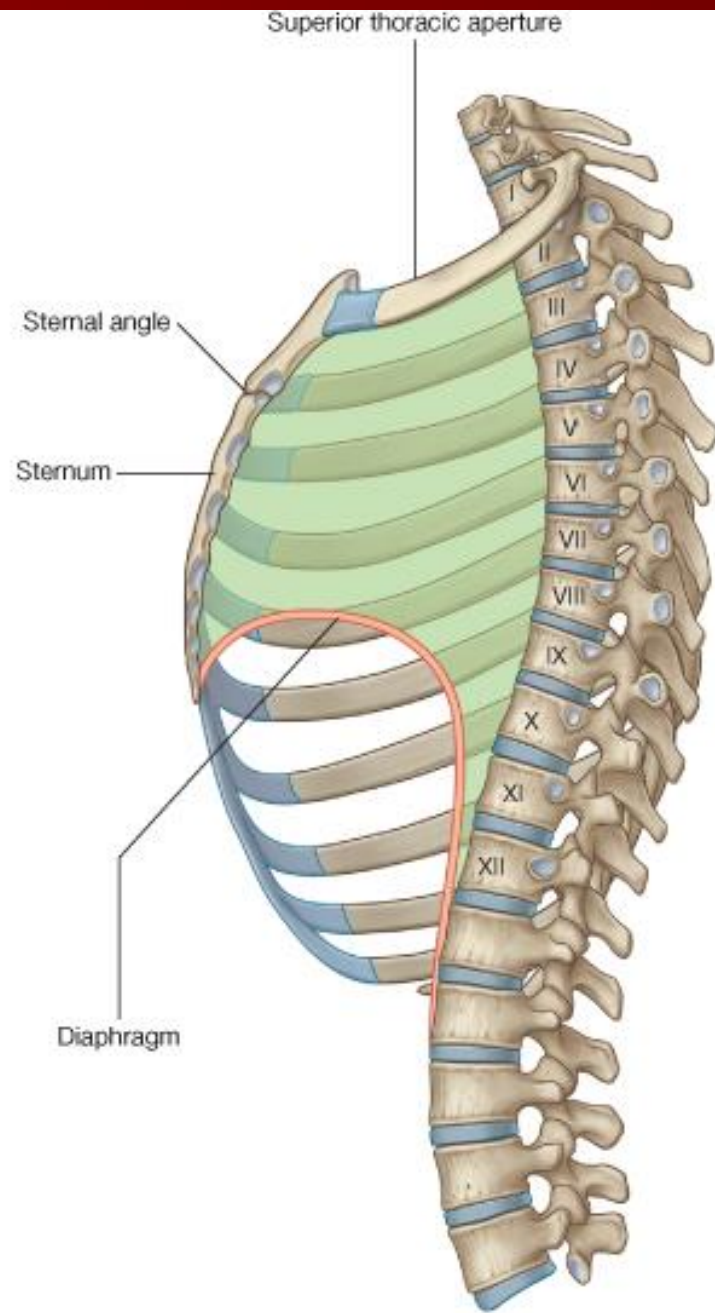
Dr M.Homayoun

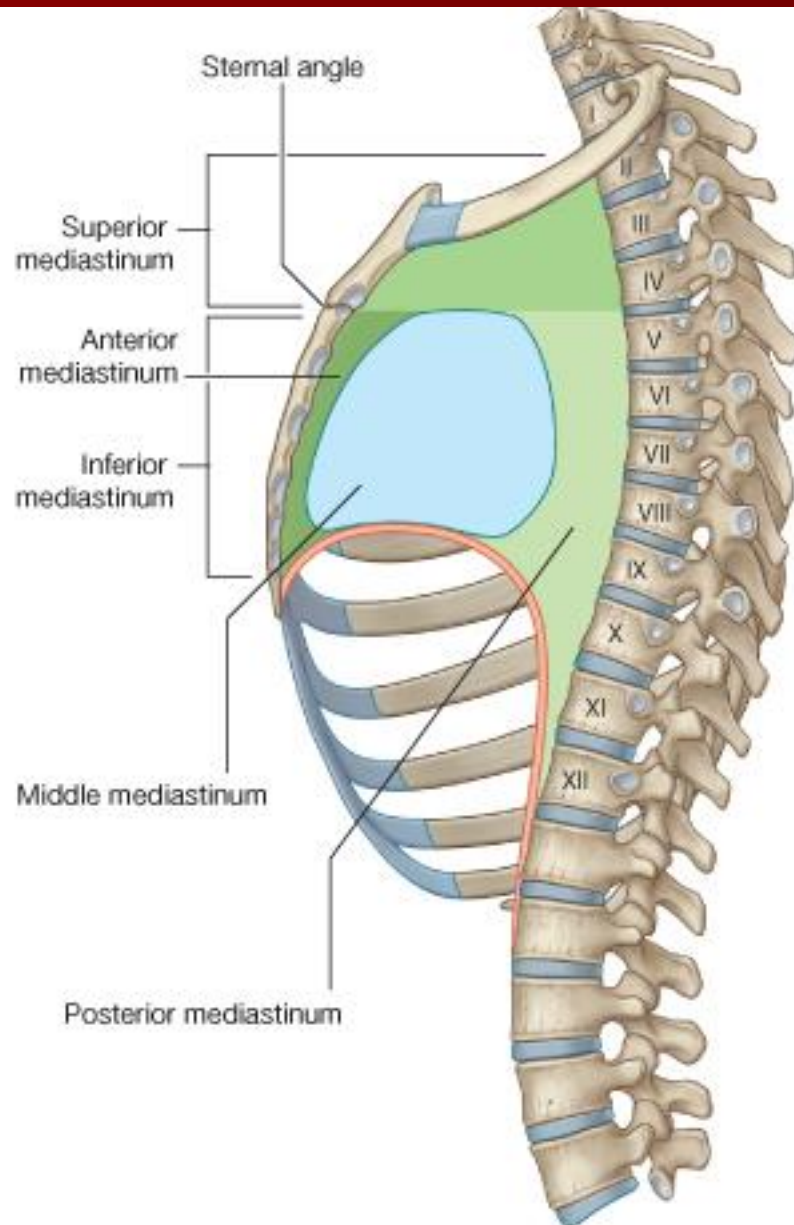
Surface Anatomy of the Heart

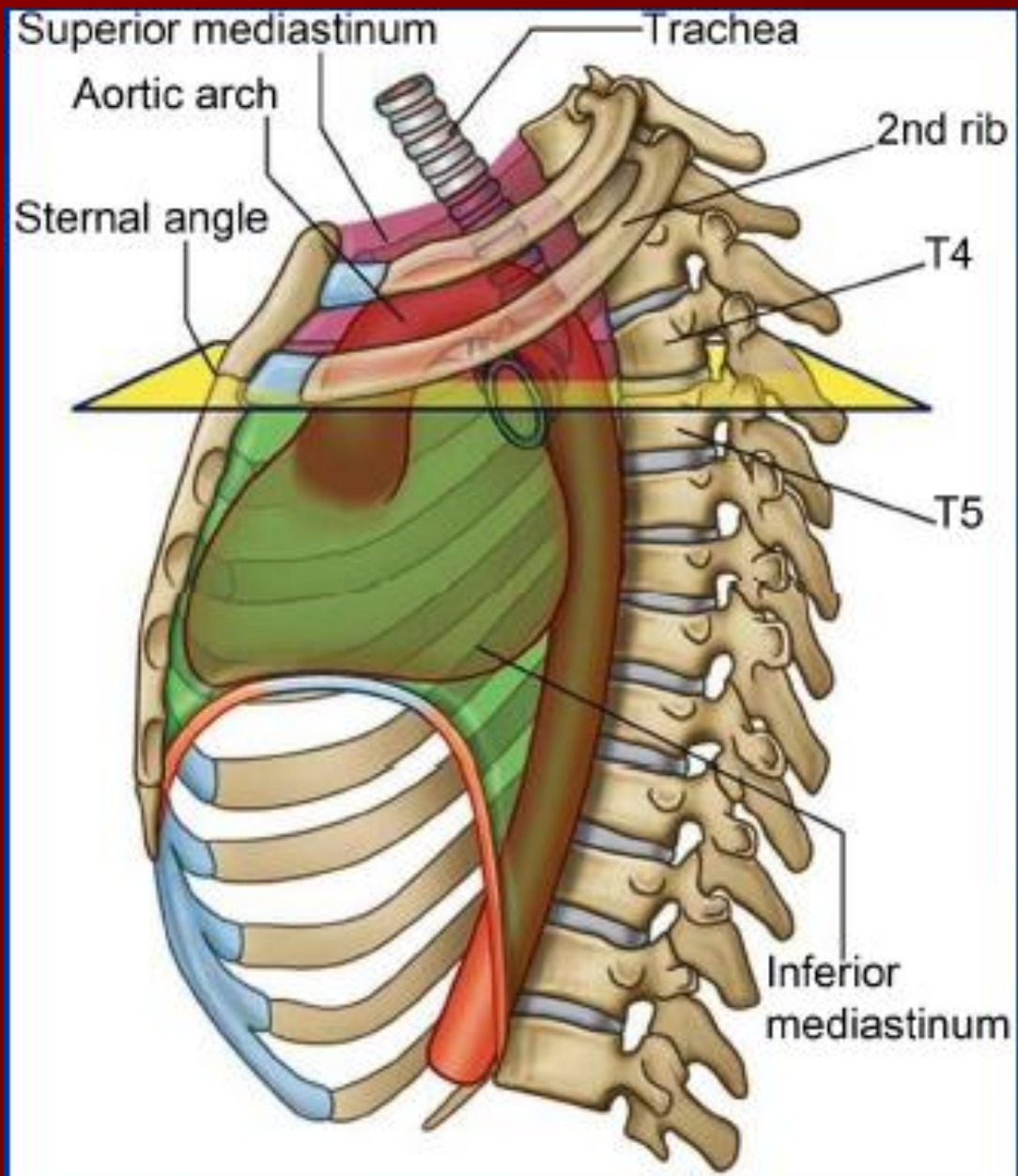


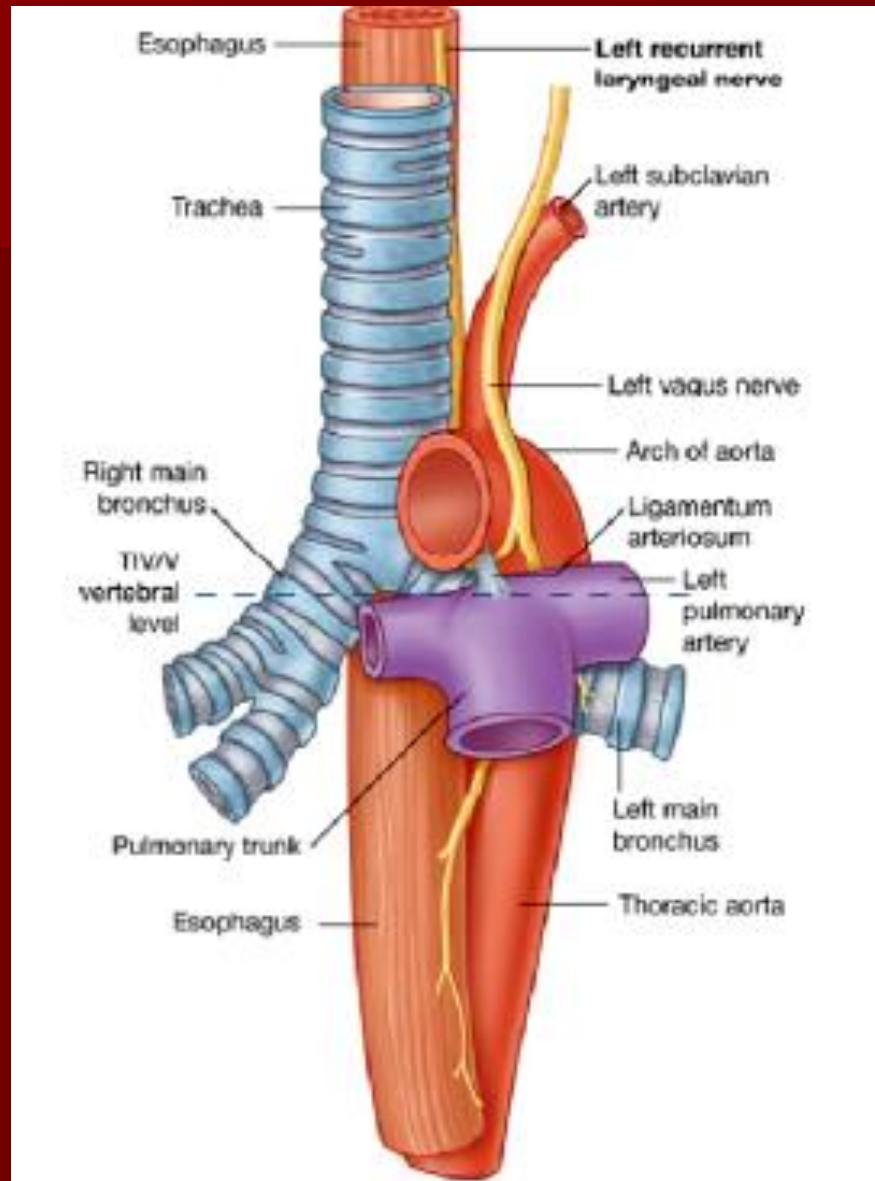
Mediastinum

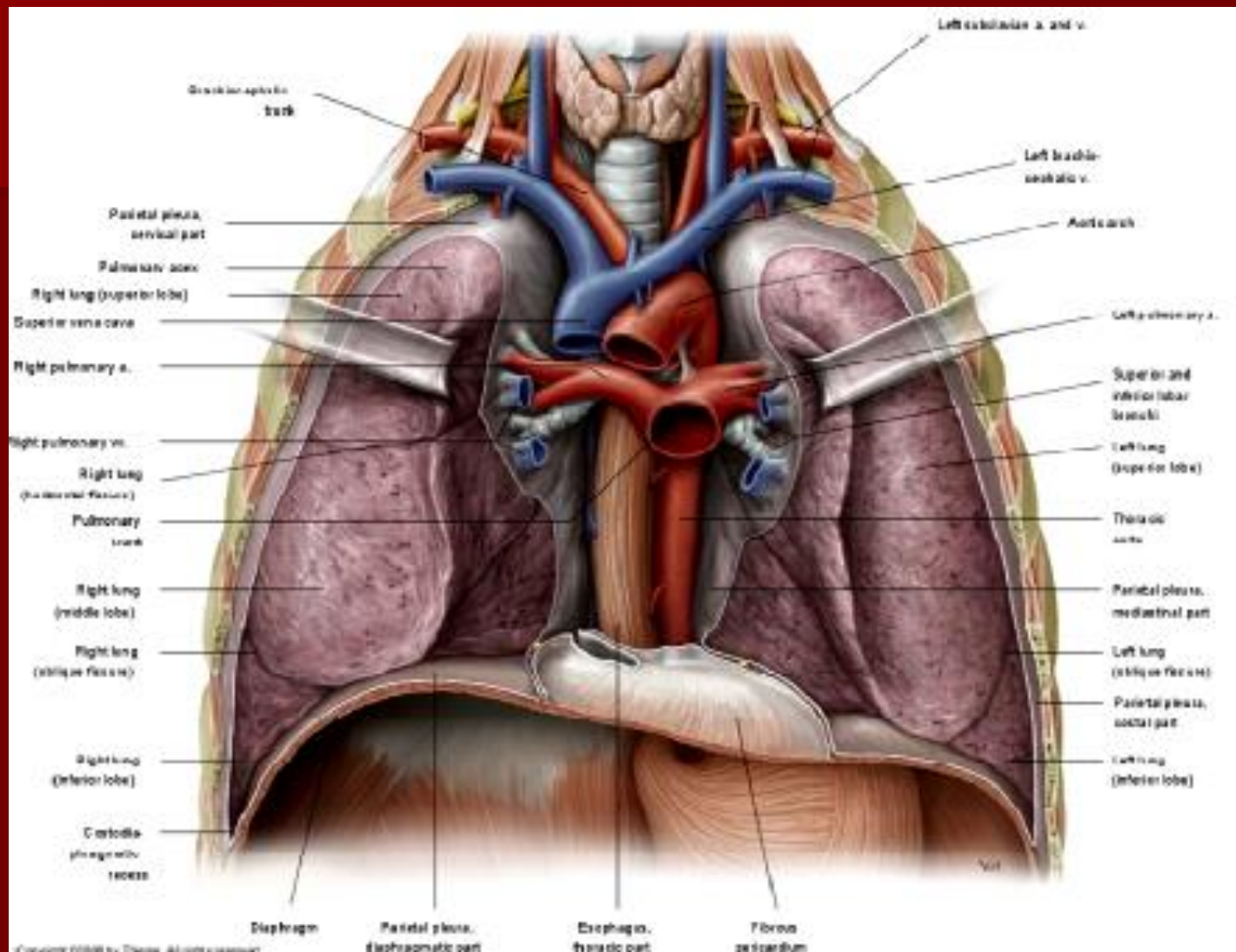




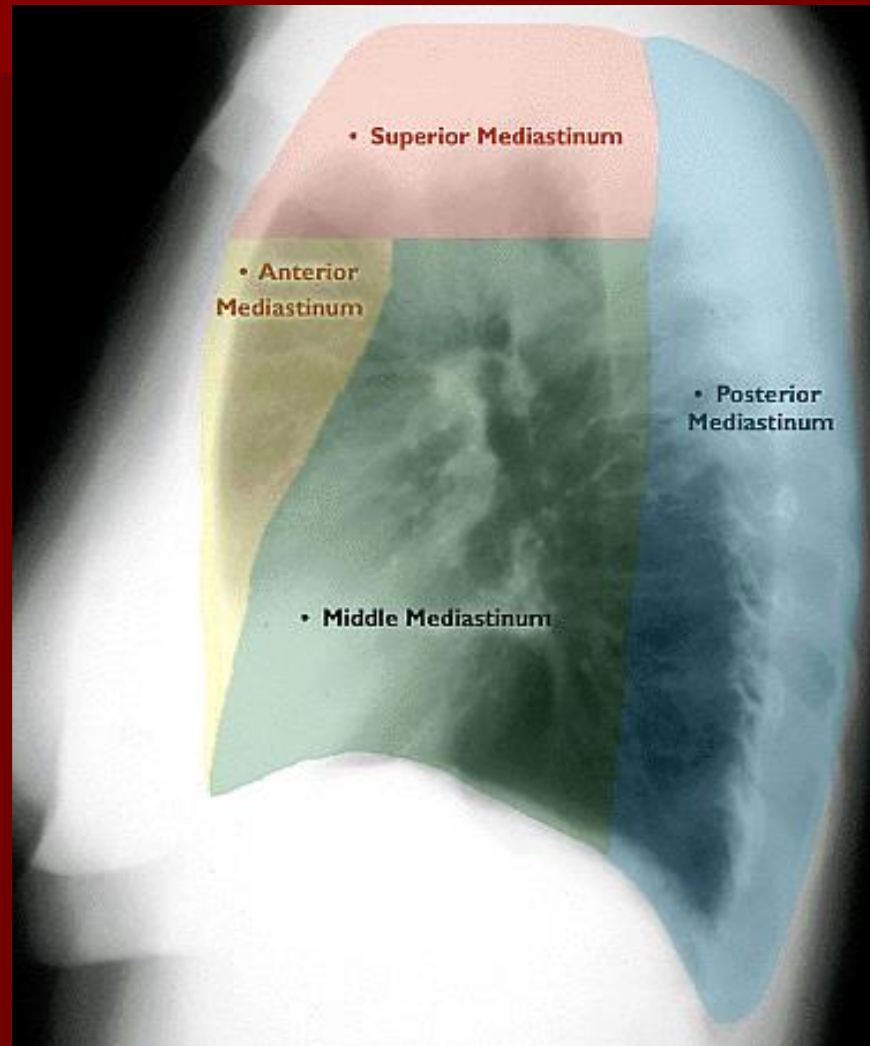




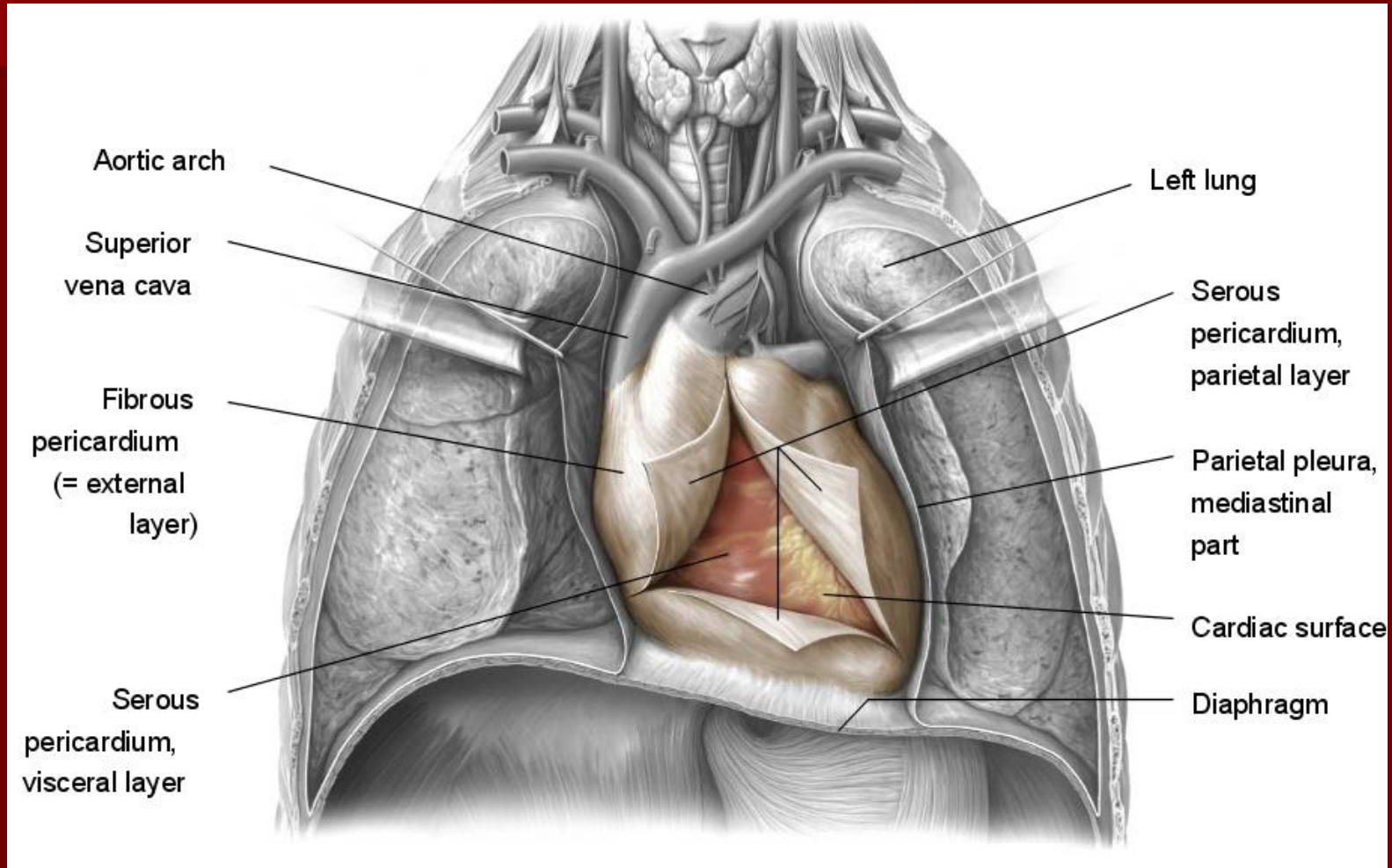




Divisions of Mediastinum In a Left Lateral Chest X-Ray



Fibrous Pericardium



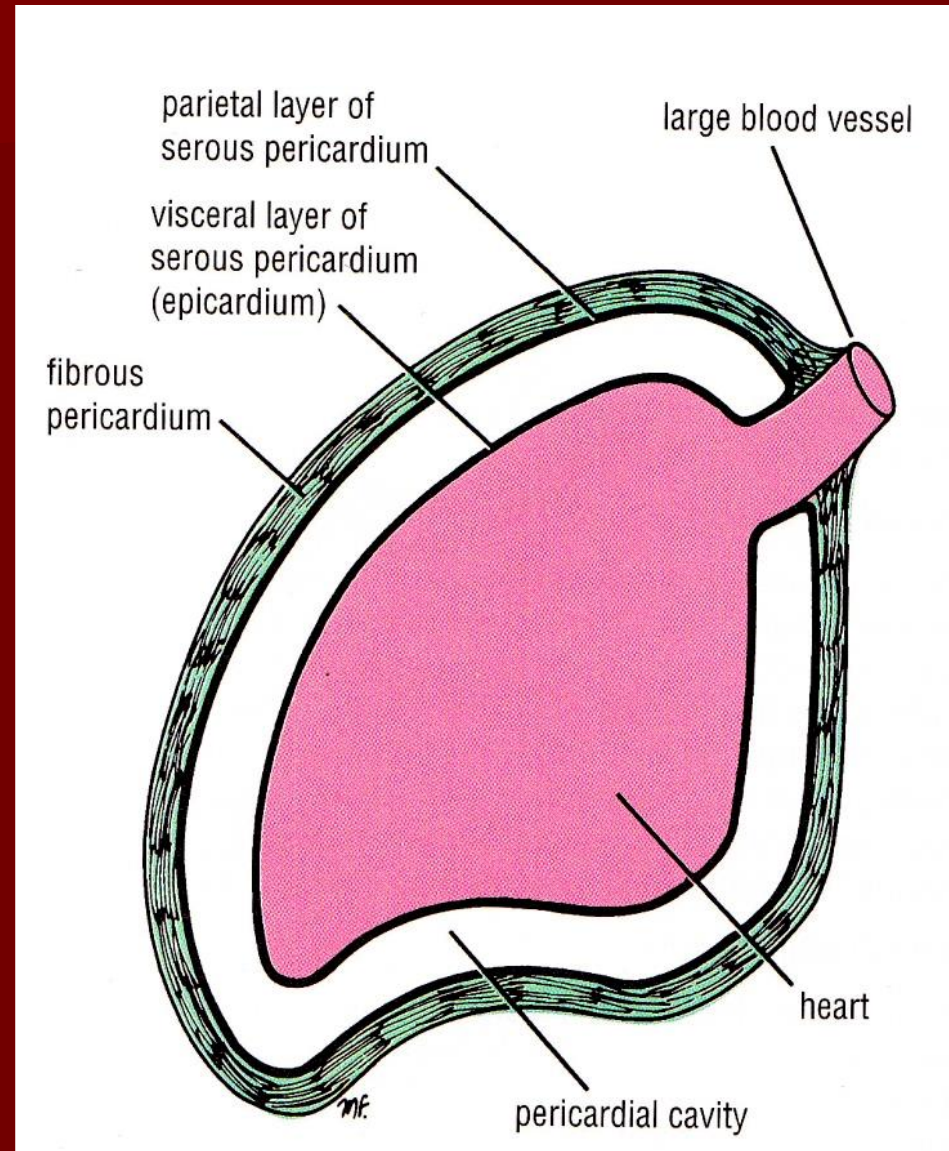
Pericardium

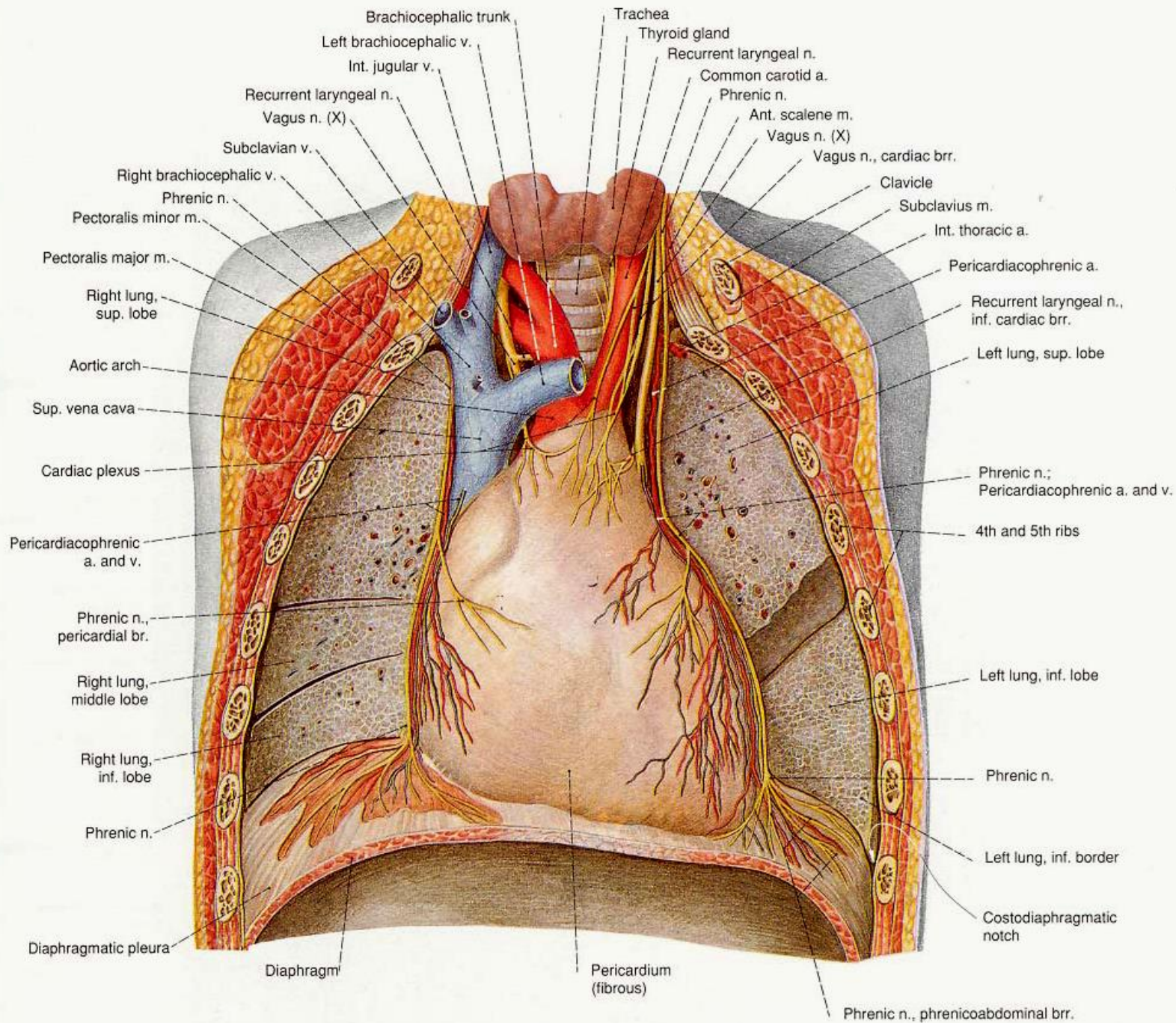
1- **Fibrous P.**

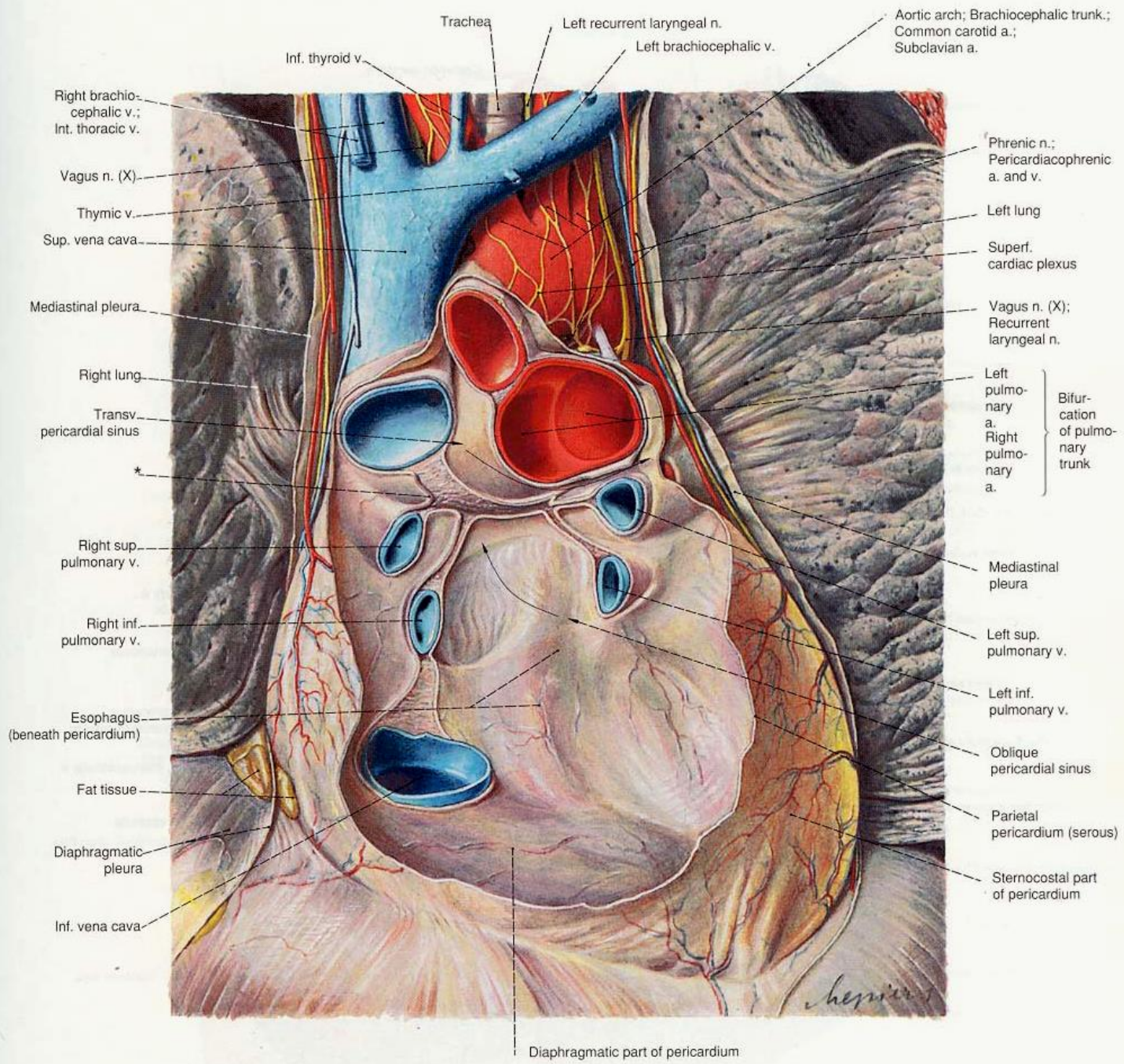
2- **Serous P.**

a- Parietal layer

b- Visceral layer
(Epicardium)







Right brachiocephalic v.;
 Int. thoracic v.
 Vagus n. (X)
 Thymic v.
 Sup. vena cava
 Mediastinal pleura
 Right lung
 Transv. pericardial sinus
 *
 Right sup. pulmonary v.
 Right inf. pulmonary v.
 Esophagus (beneath pericardium)
 Fat tissue
 Diaphragmatic pleura
 Inf. vena cava

Trachea
 Left recurrent laryngeal n.
 Left brachiocephalic v.

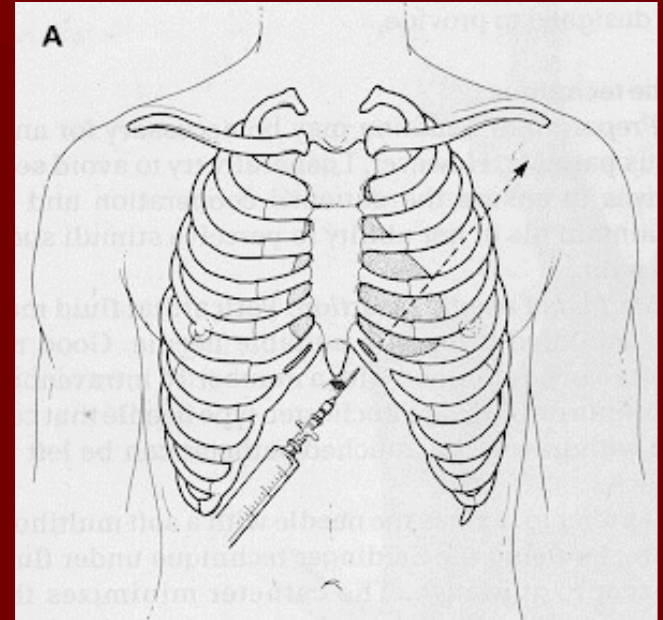
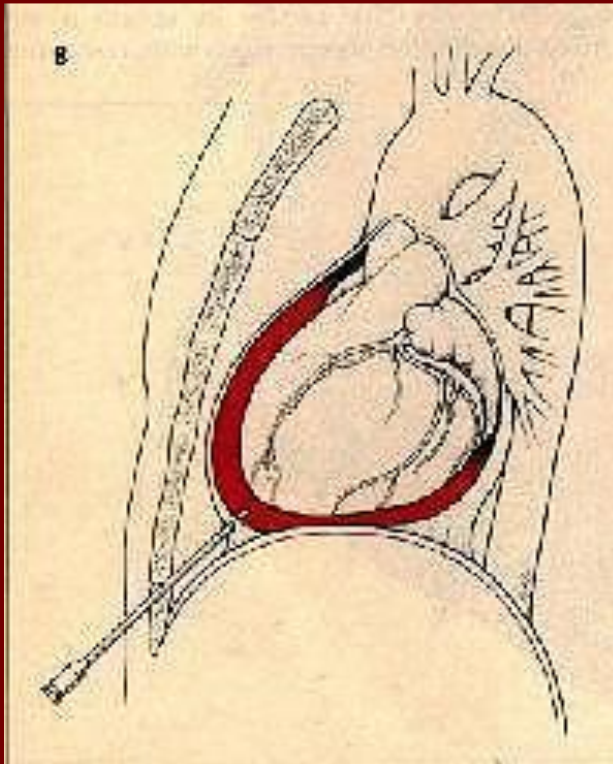
Aortic arch; Brachiocephalic trunk;
 Common carotid a.;
 Subclavian a.

Phrenic n.;
 Pericardiophrenic a. and v.
 Left lung
 Superf. cardiac plexus
 Vagus n. (X);
 Recurrent laryngeal n.
 Left pulmonary a.
 Right pulmonary a. }
 Bifurcation of pulmonary trunk
 Mediastinal pleura
 Left sup. pulmonary v.
 Left inf. pulmonary v.
 Oblique pericardial sinus
 Parietal pericardium (serous)
 Sternocostal part of pericardium

Diaphragmatic part of pericardium

Pericardiocentesis

- Pericardial effusion
- Cardiac tamponade

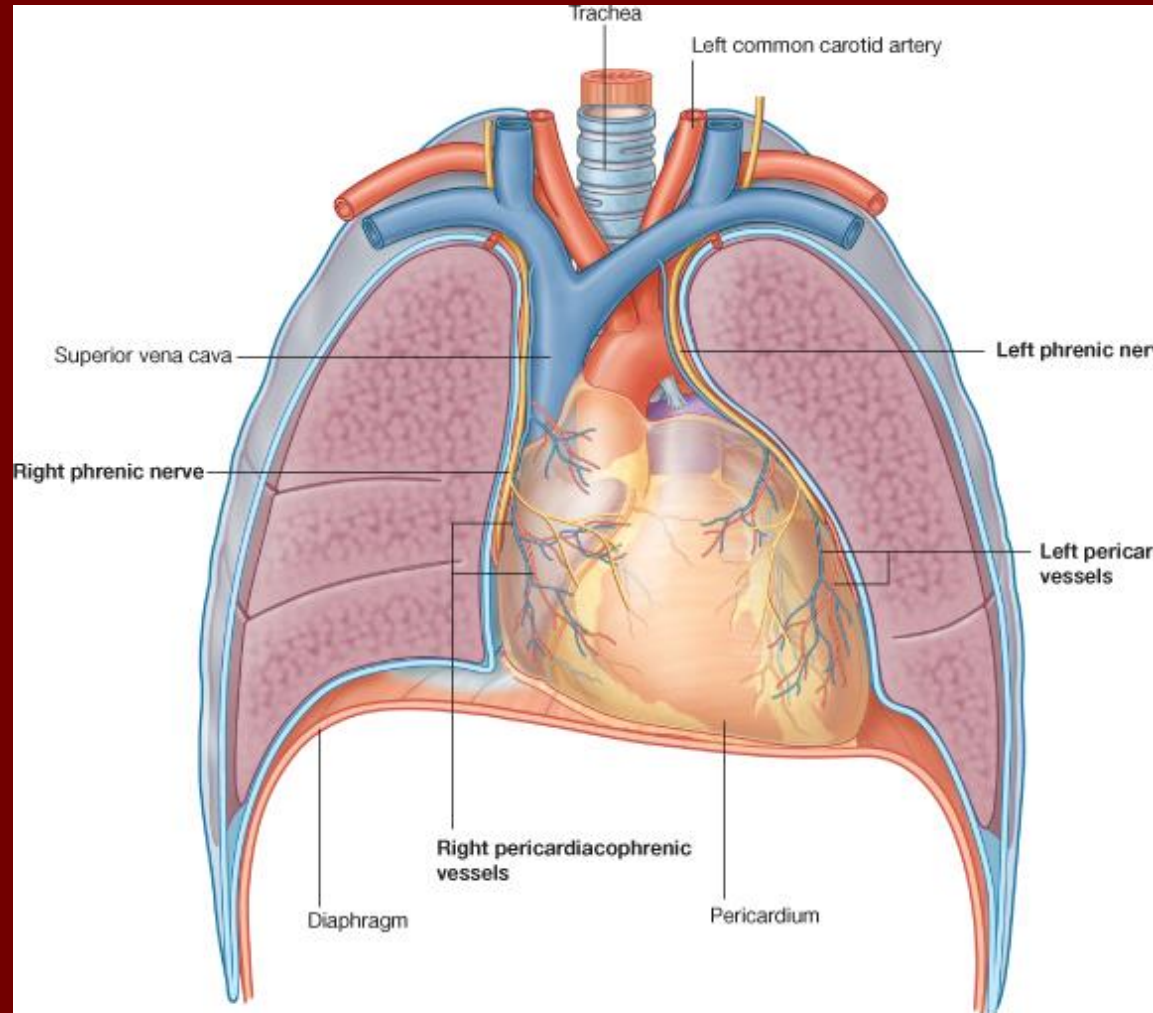


Surfaces:

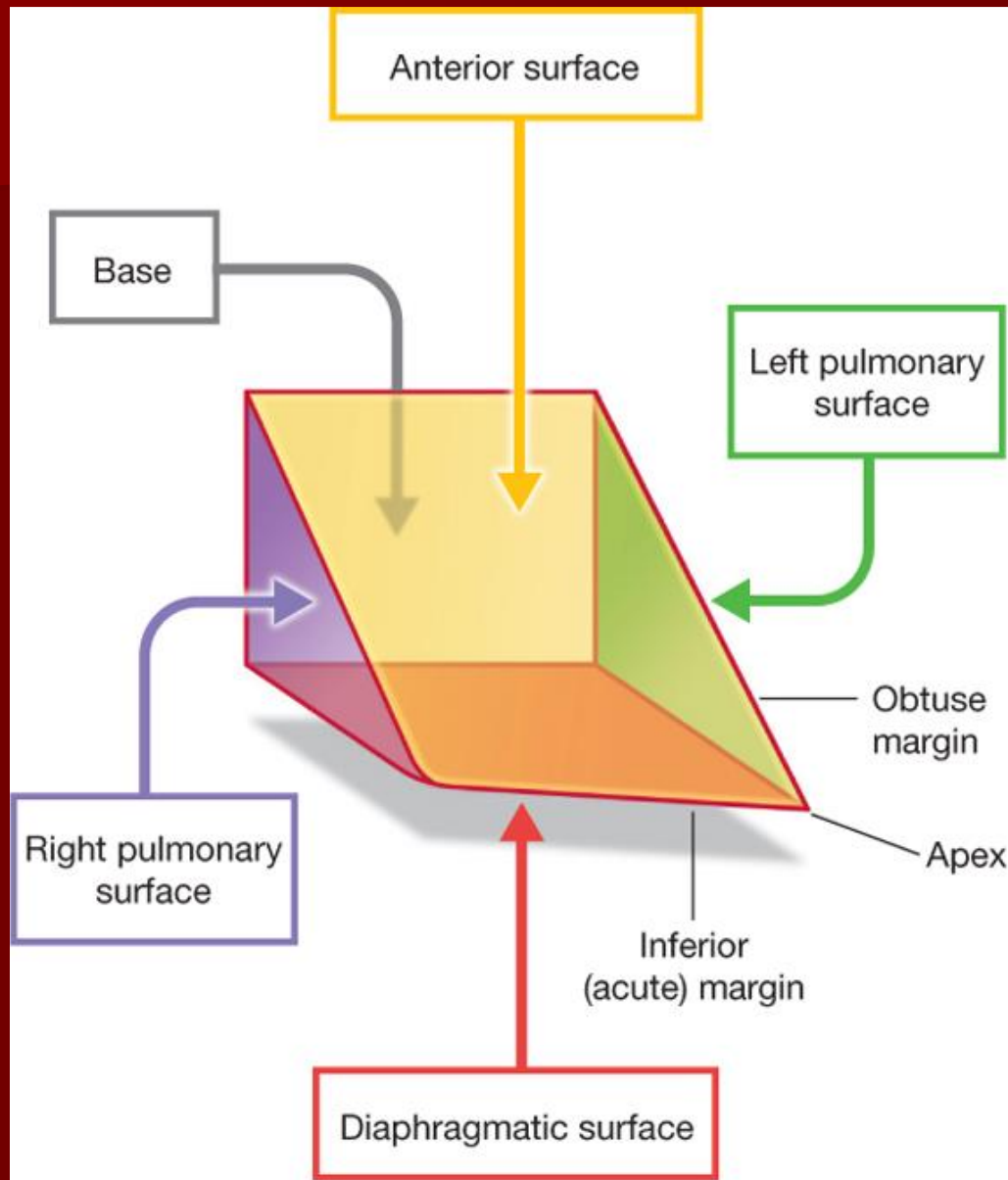
- 1-Ant. (Sternocostal)
- 2-Inf. (Diaphragmatic)
- 3-Left pulmonary
- 4-Post. (Base)

Borders:

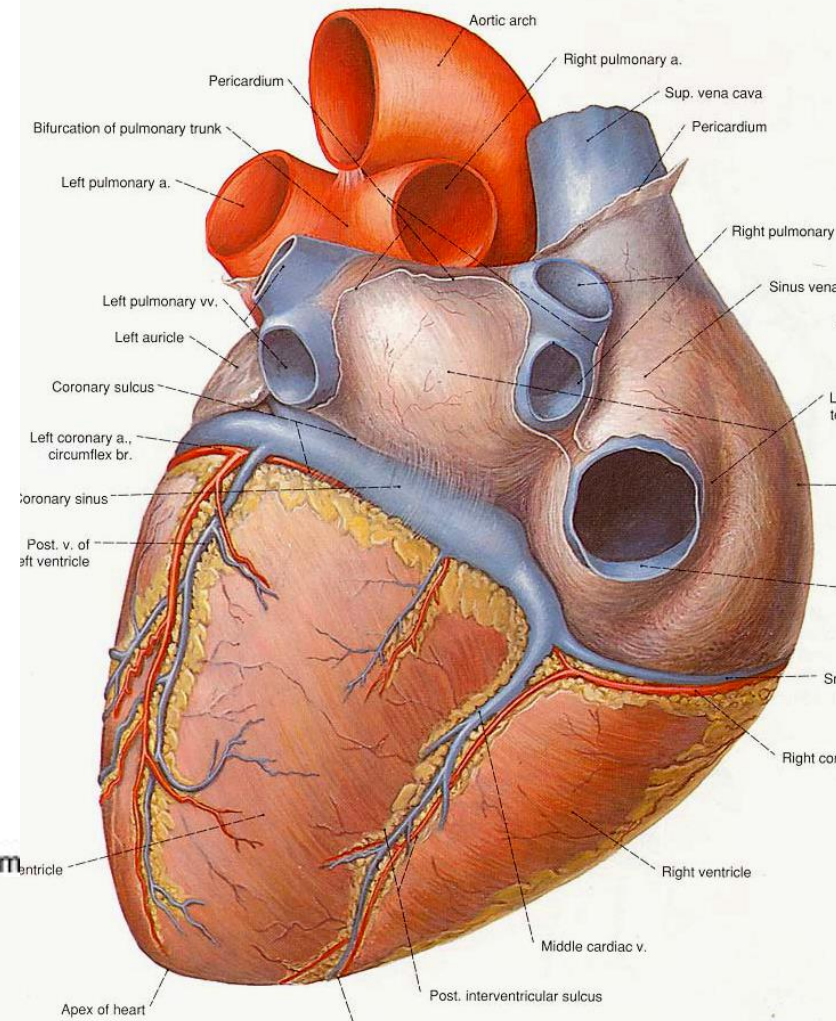
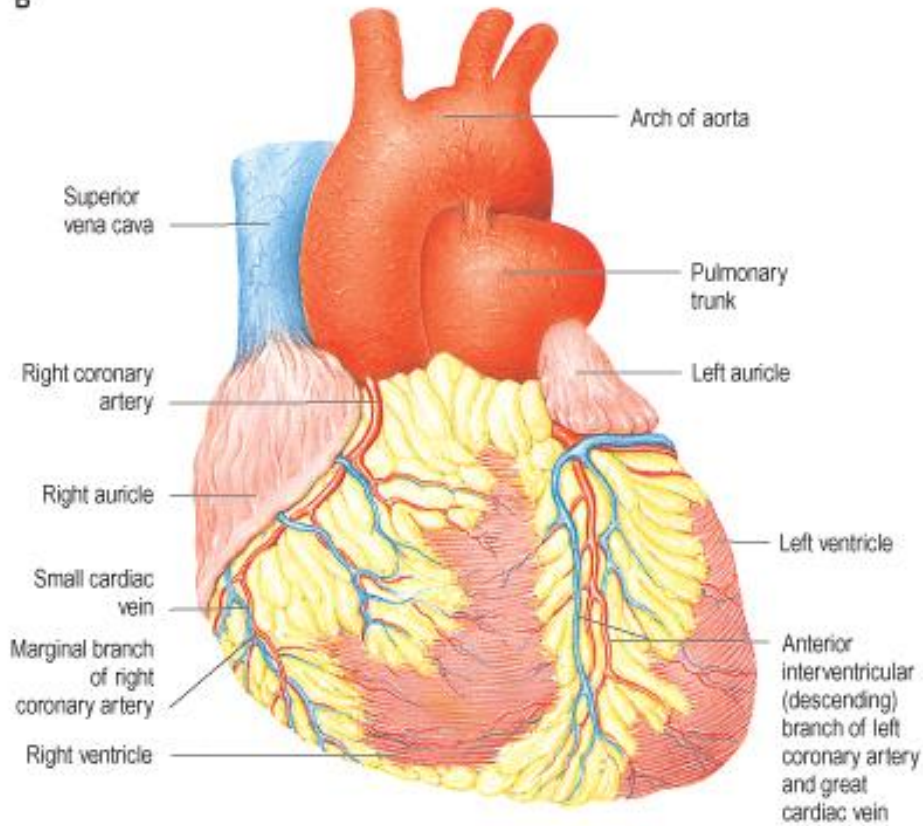
- 1-Right
- 2-Left
- 3-Inf.
- 4-Sup.

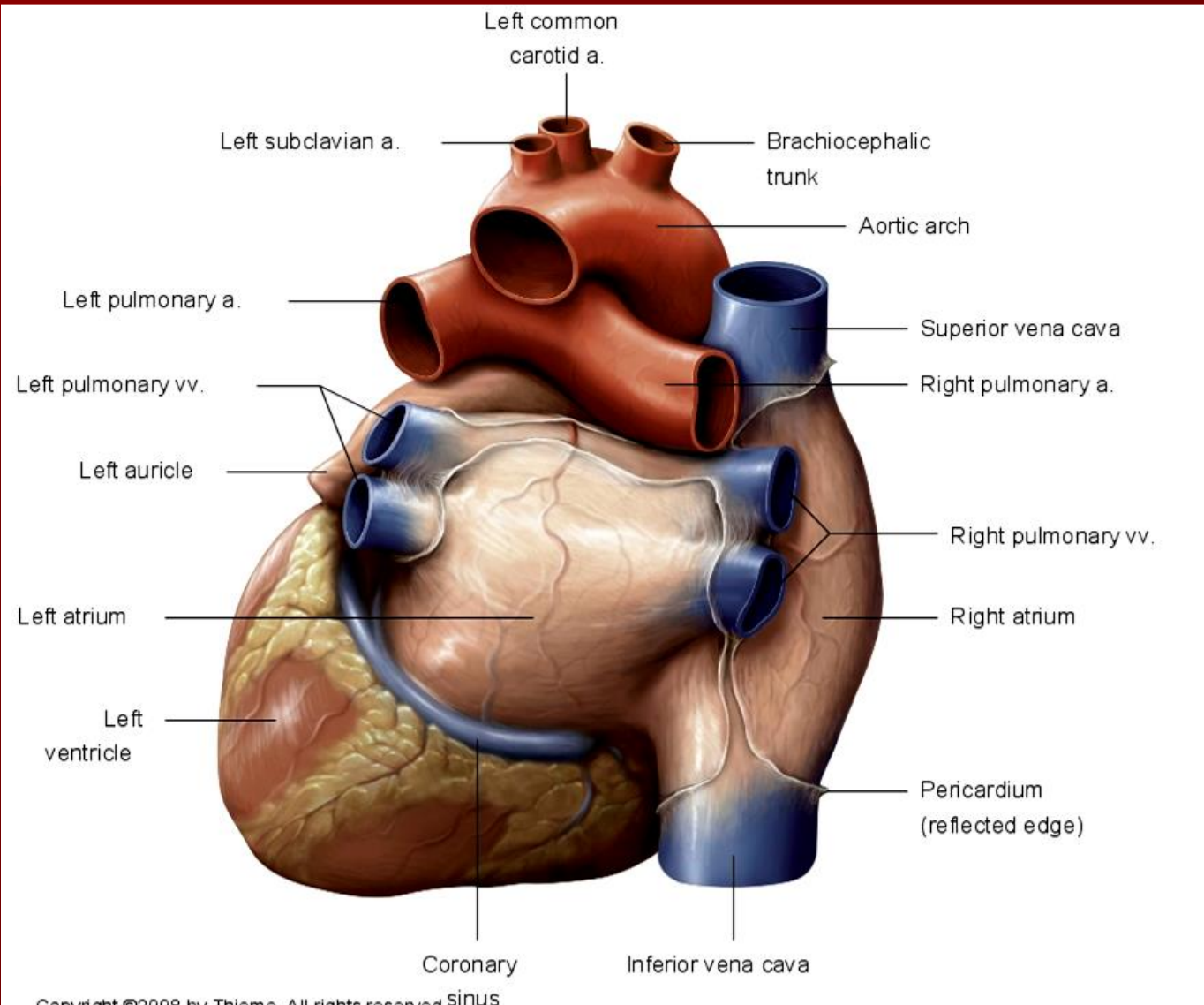


Cardiac Orientation

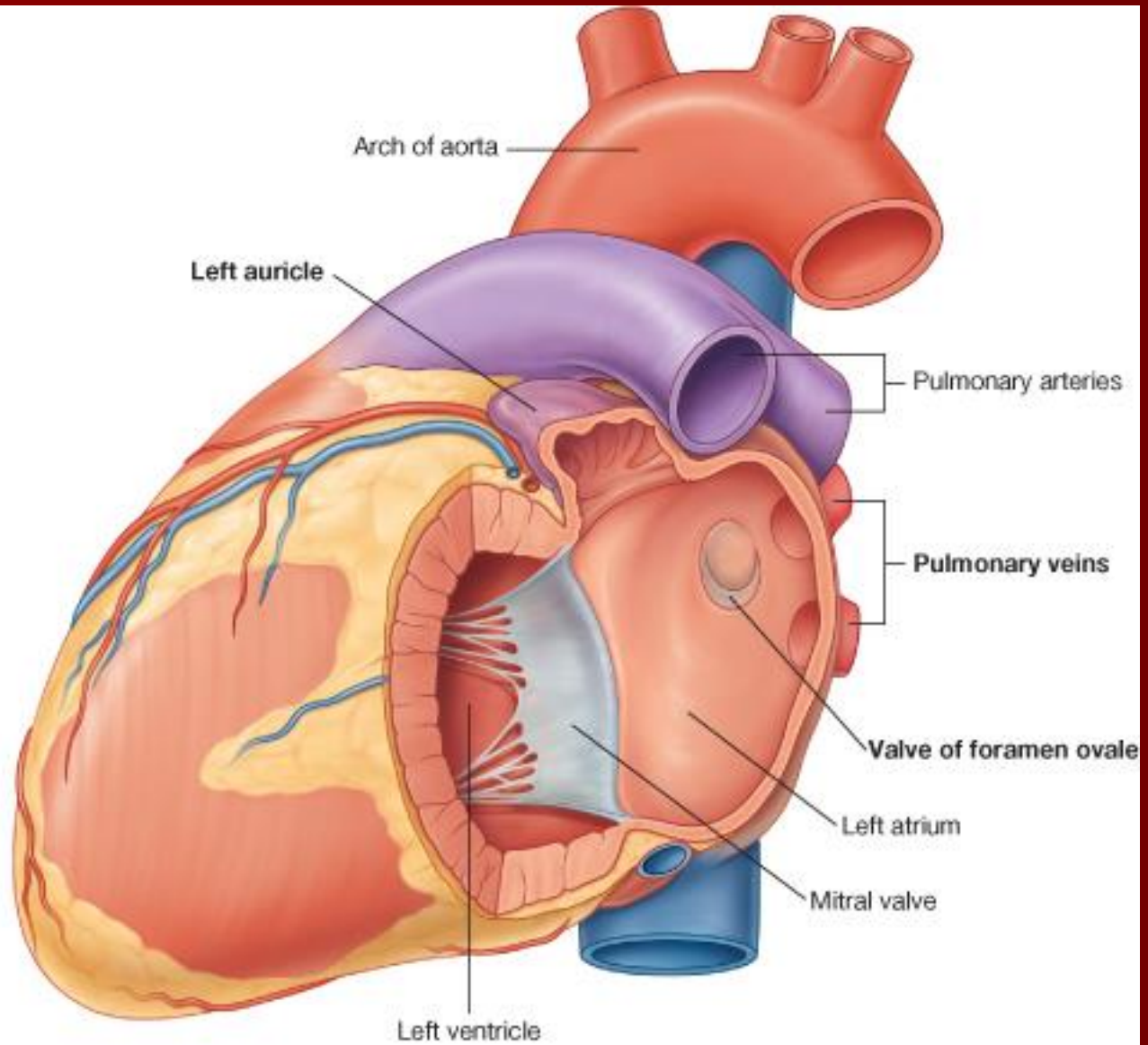


B

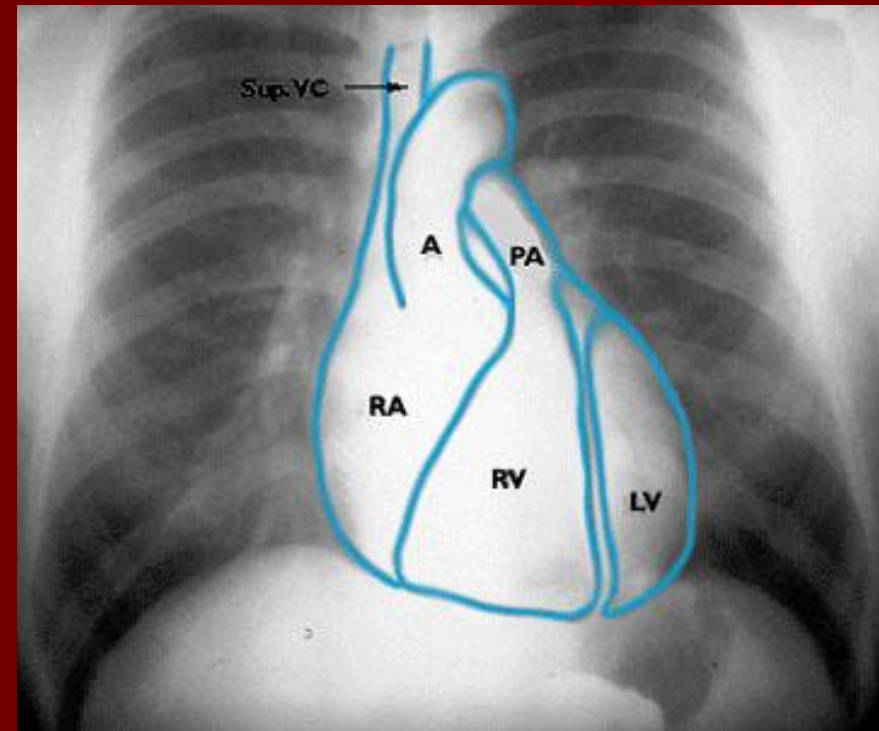
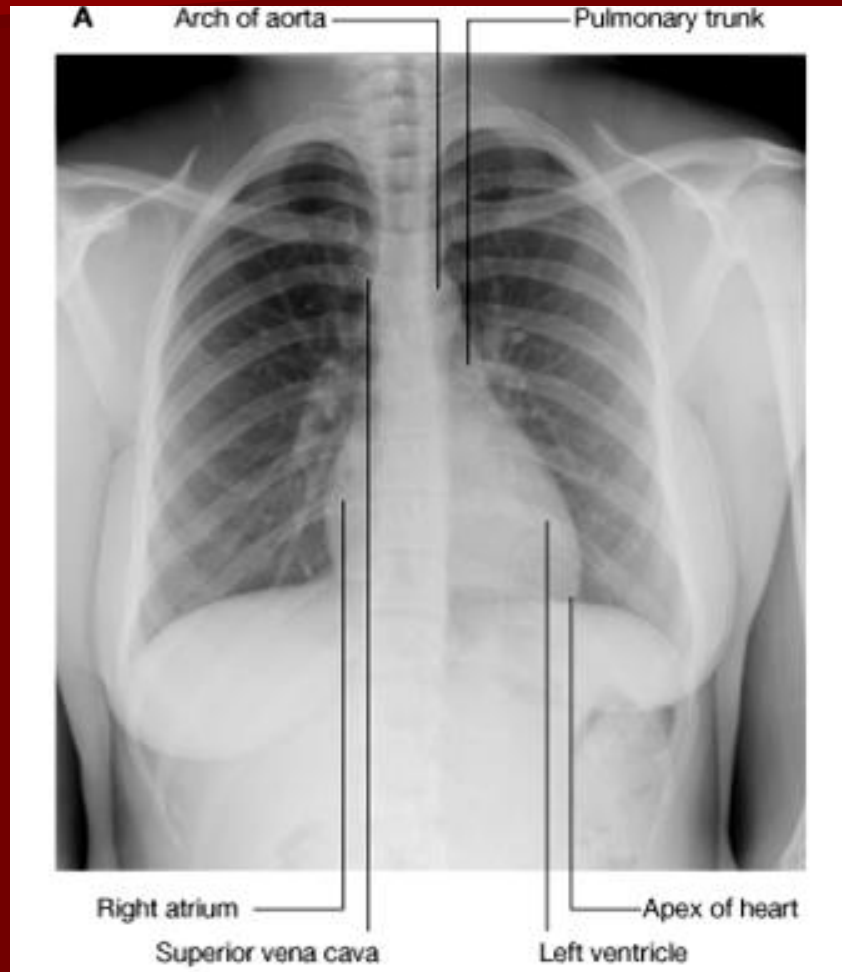




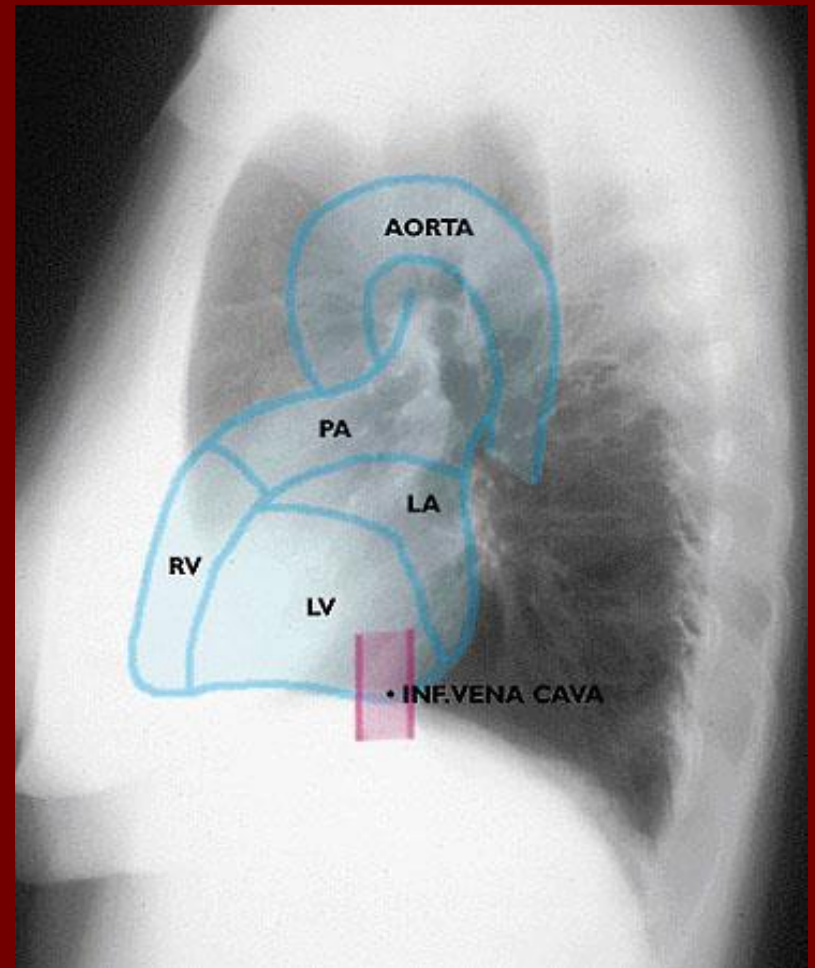
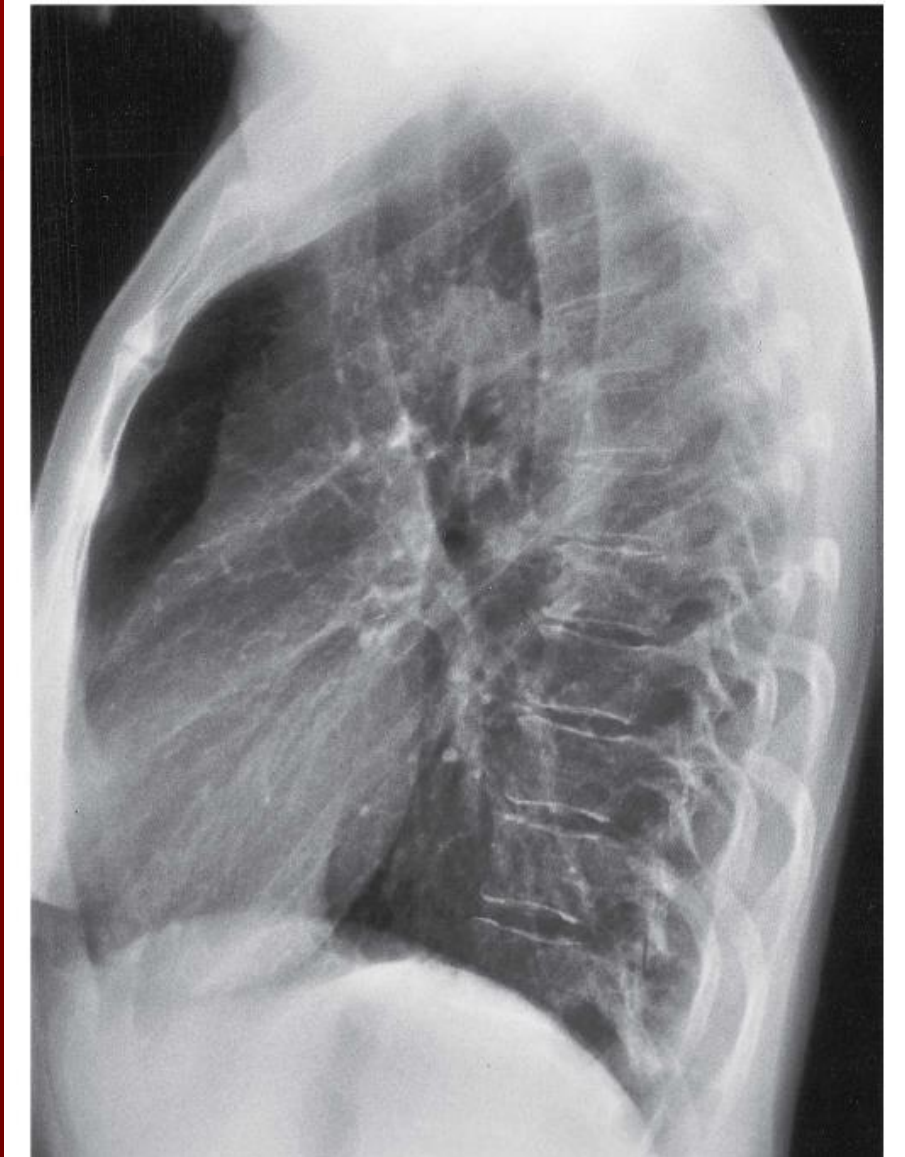
A



Chest X-Ray, PA View

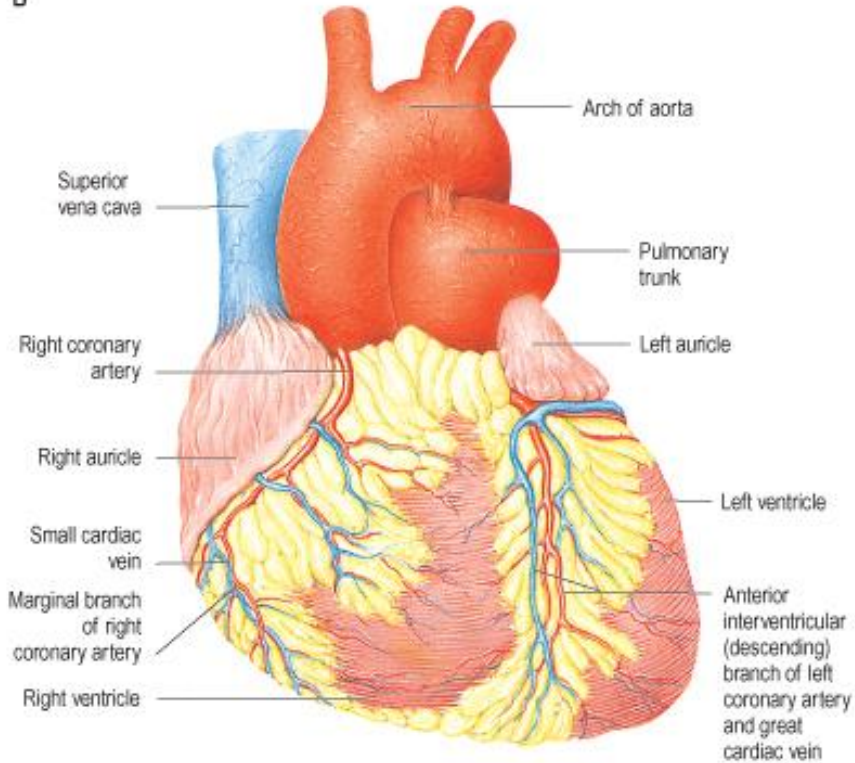


Chest X-Ray, Left Lateral View



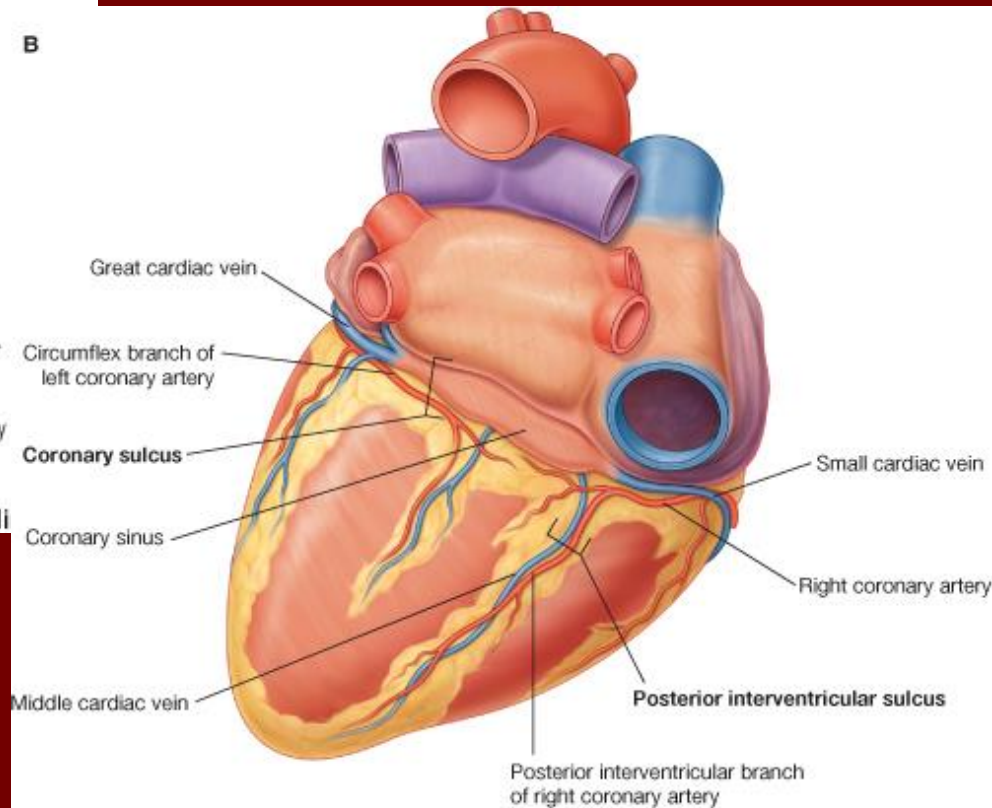
External Sulci

B



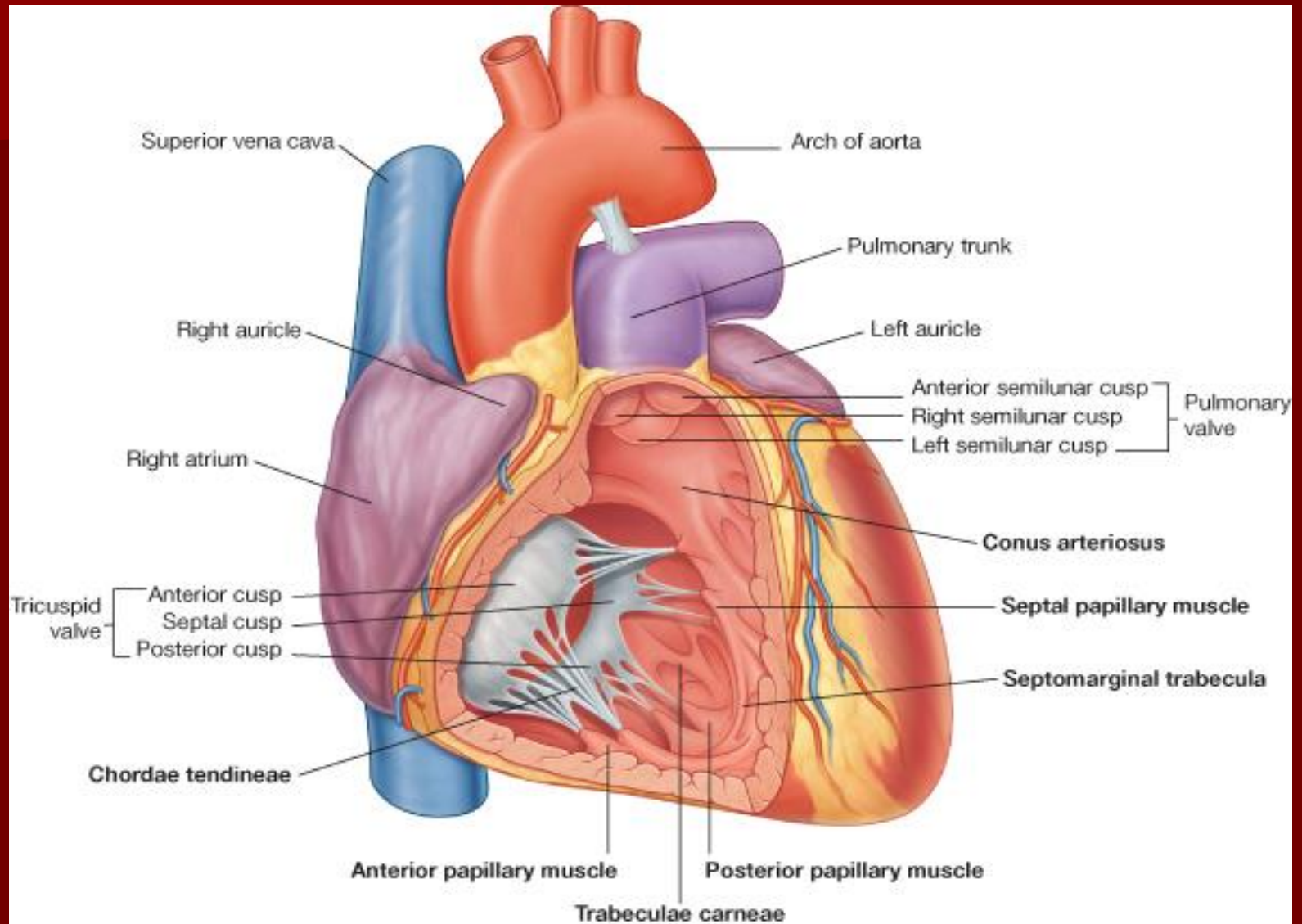
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B

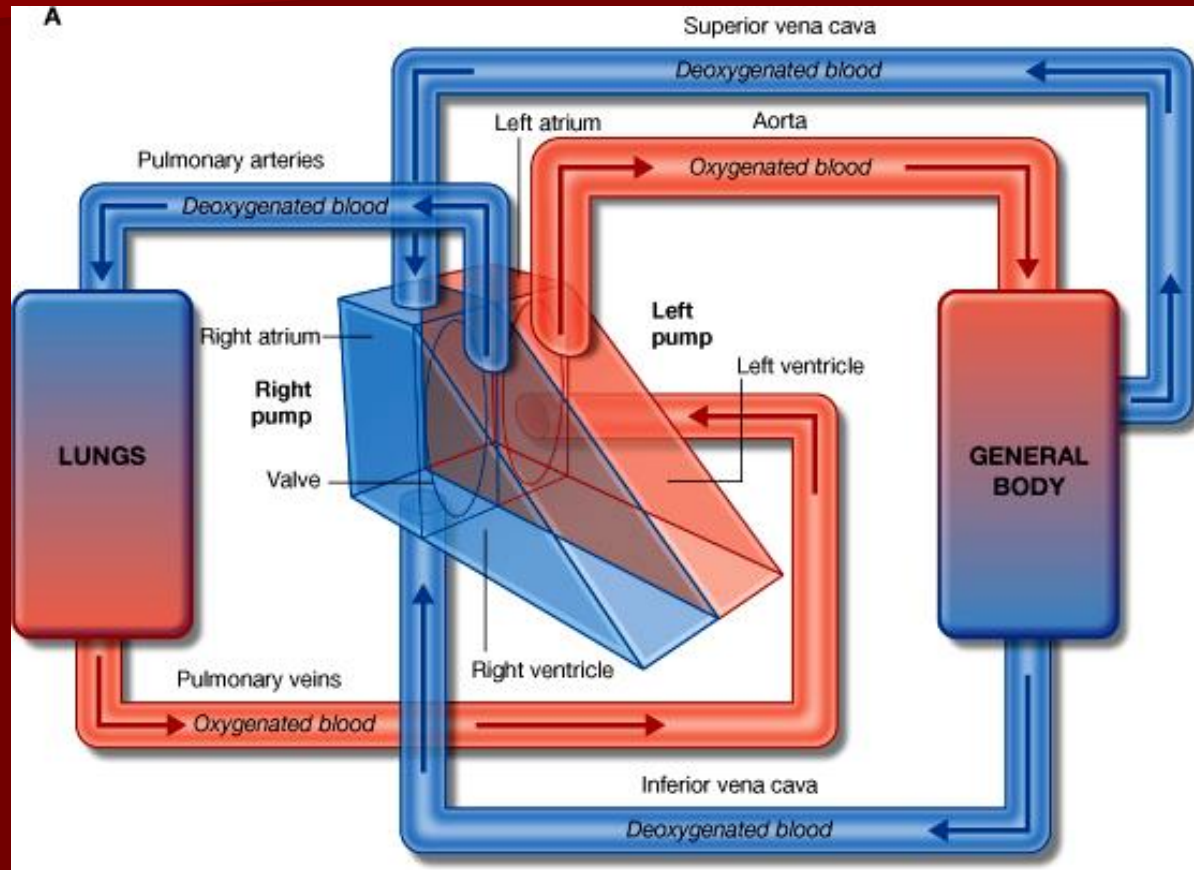


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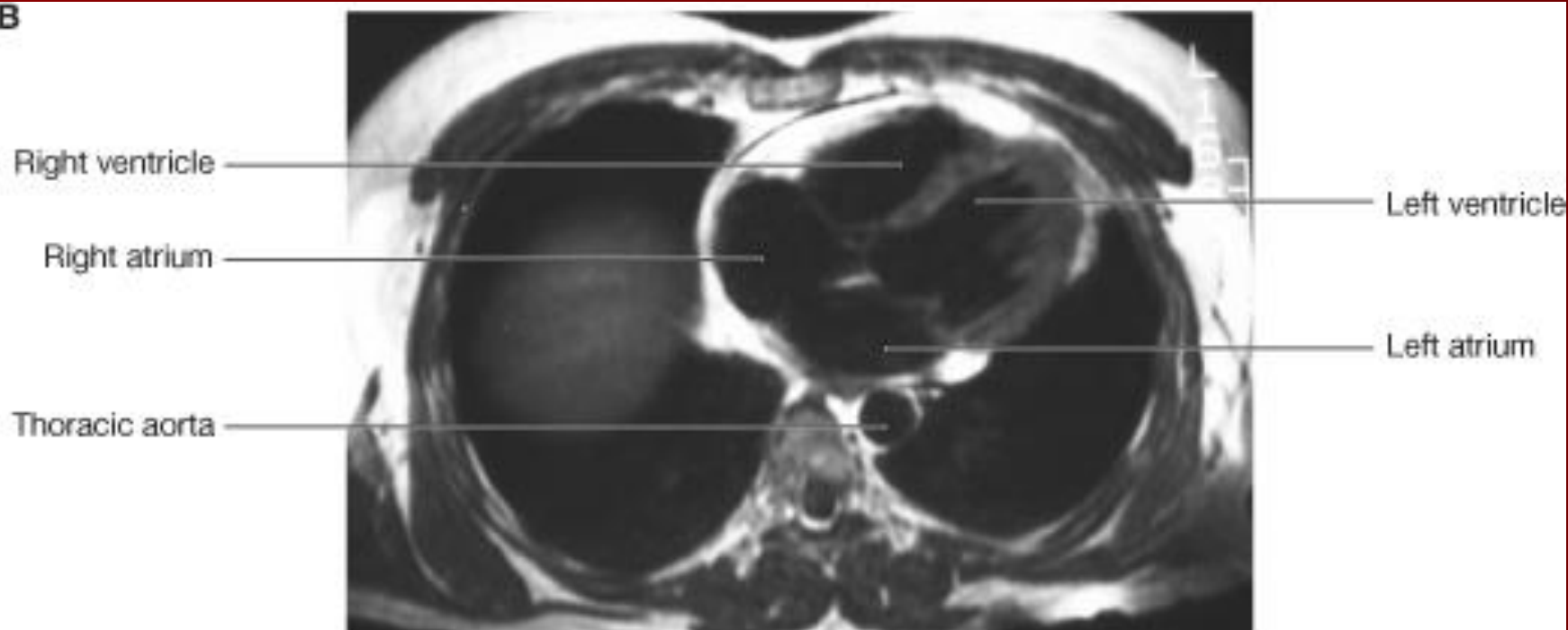
Cardiac Chambers



Two Cardiac Pumps

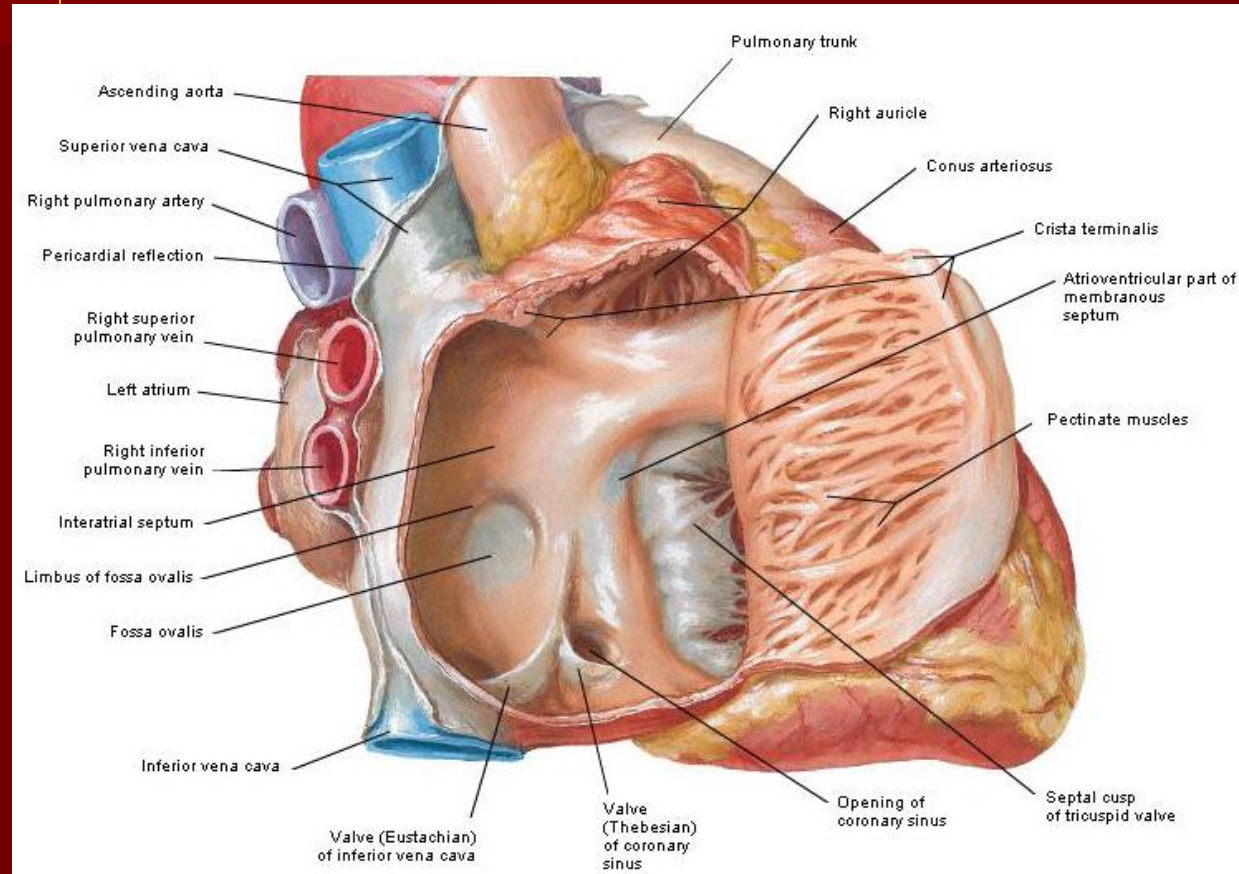


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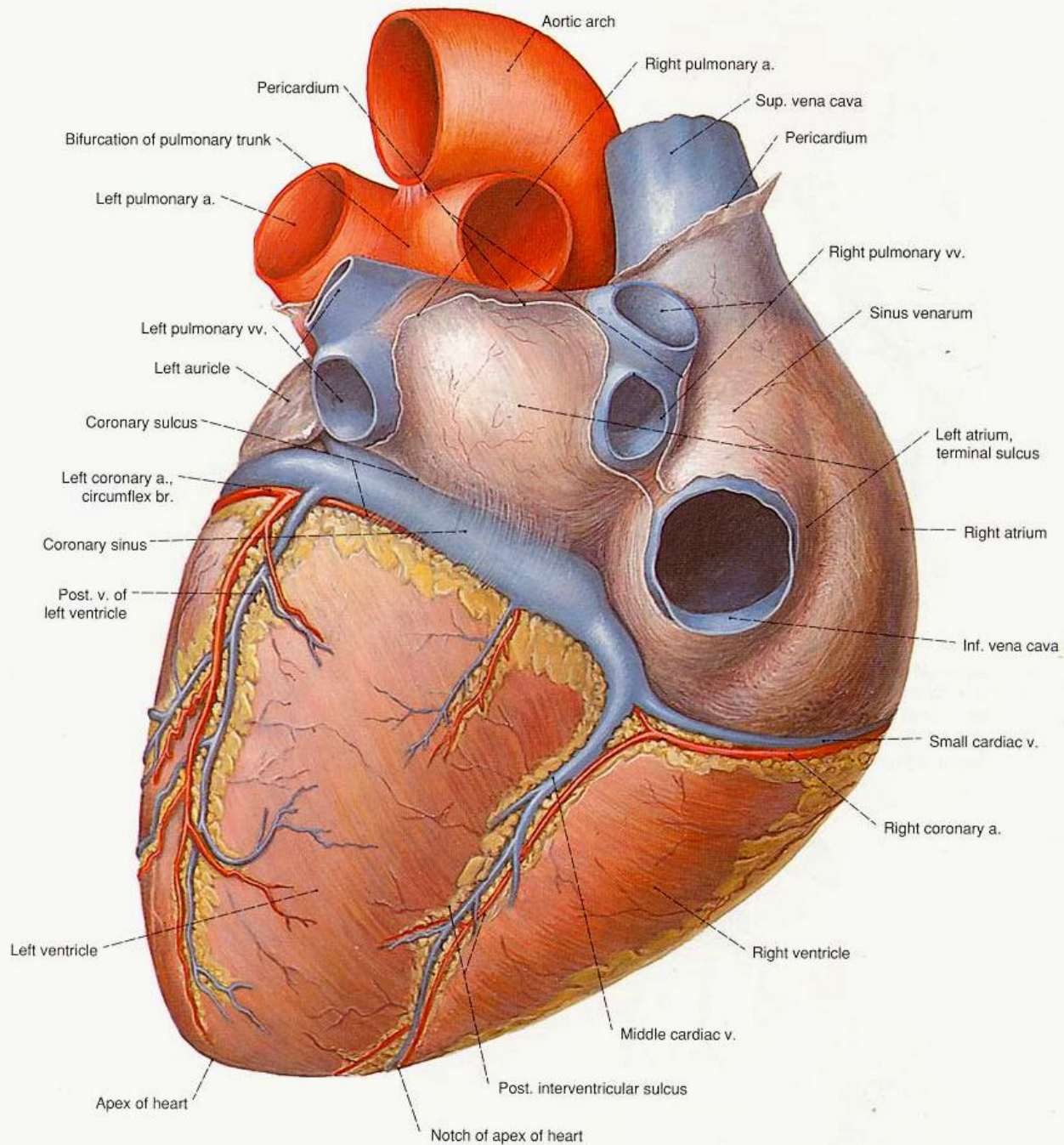


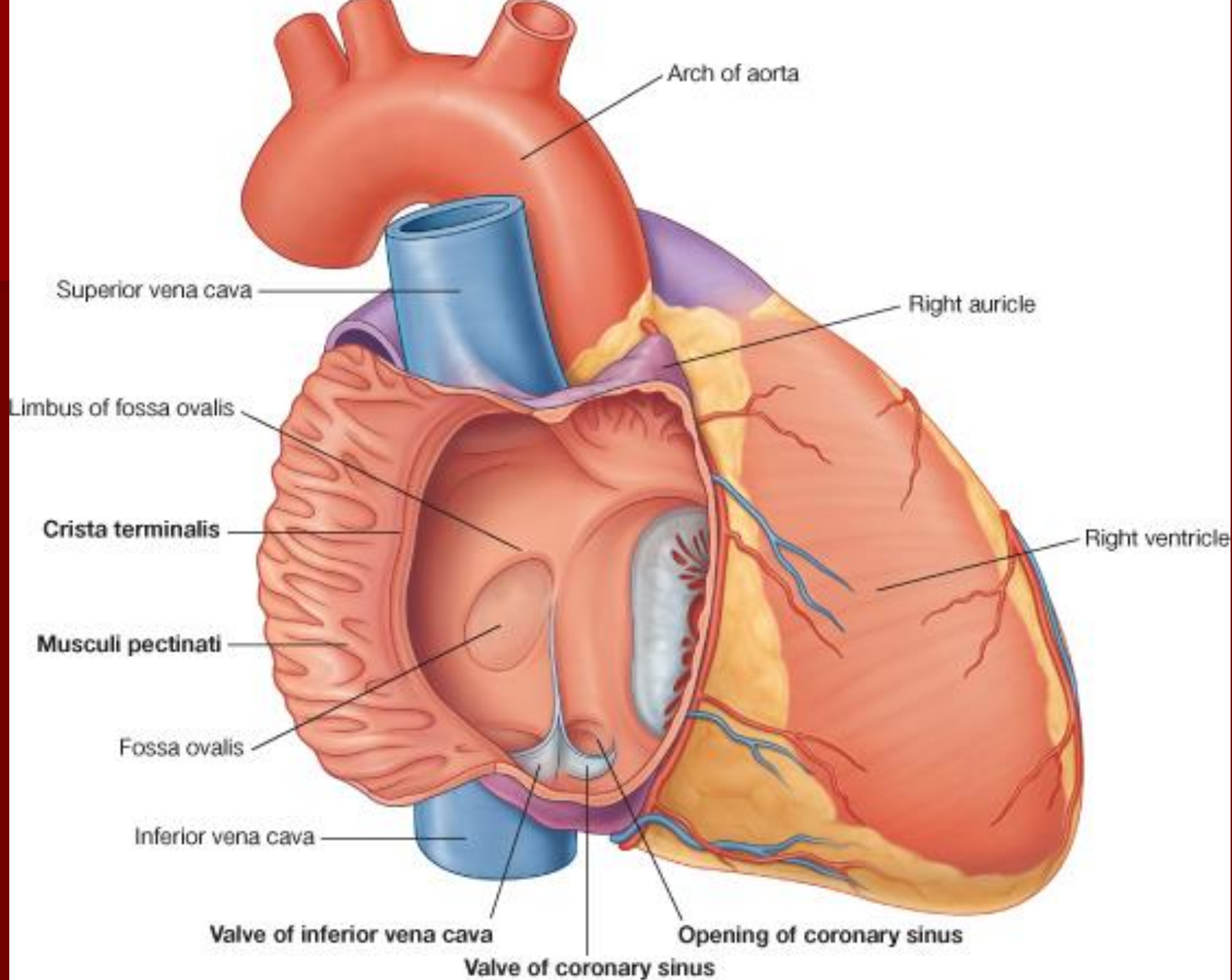
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- Walls
- Pectinate muscle
- Crista terminalis
- Fossa ovalis
- Opening of coronary sinus
- Valve of inf. vena cava (Eustachian valve)
- Valve of coronary sinus (Tebezius)

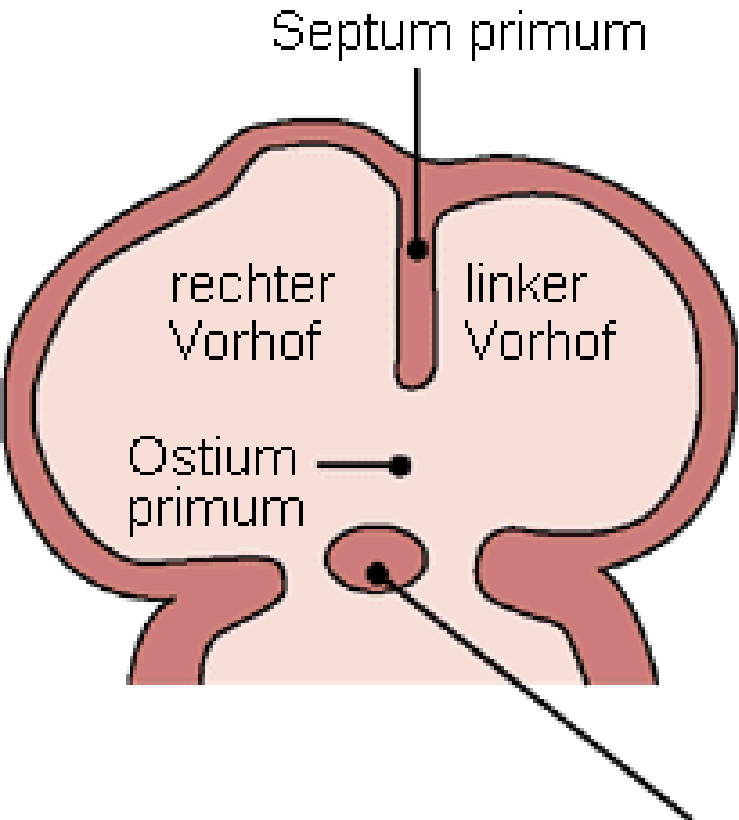


Right atrium

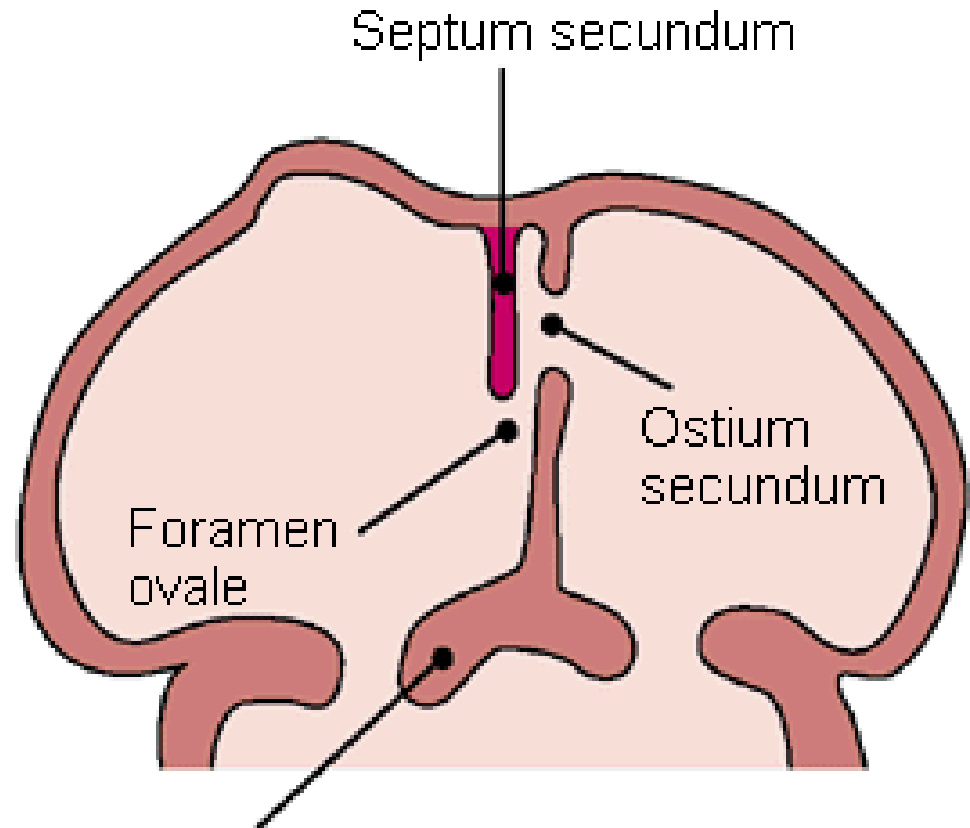




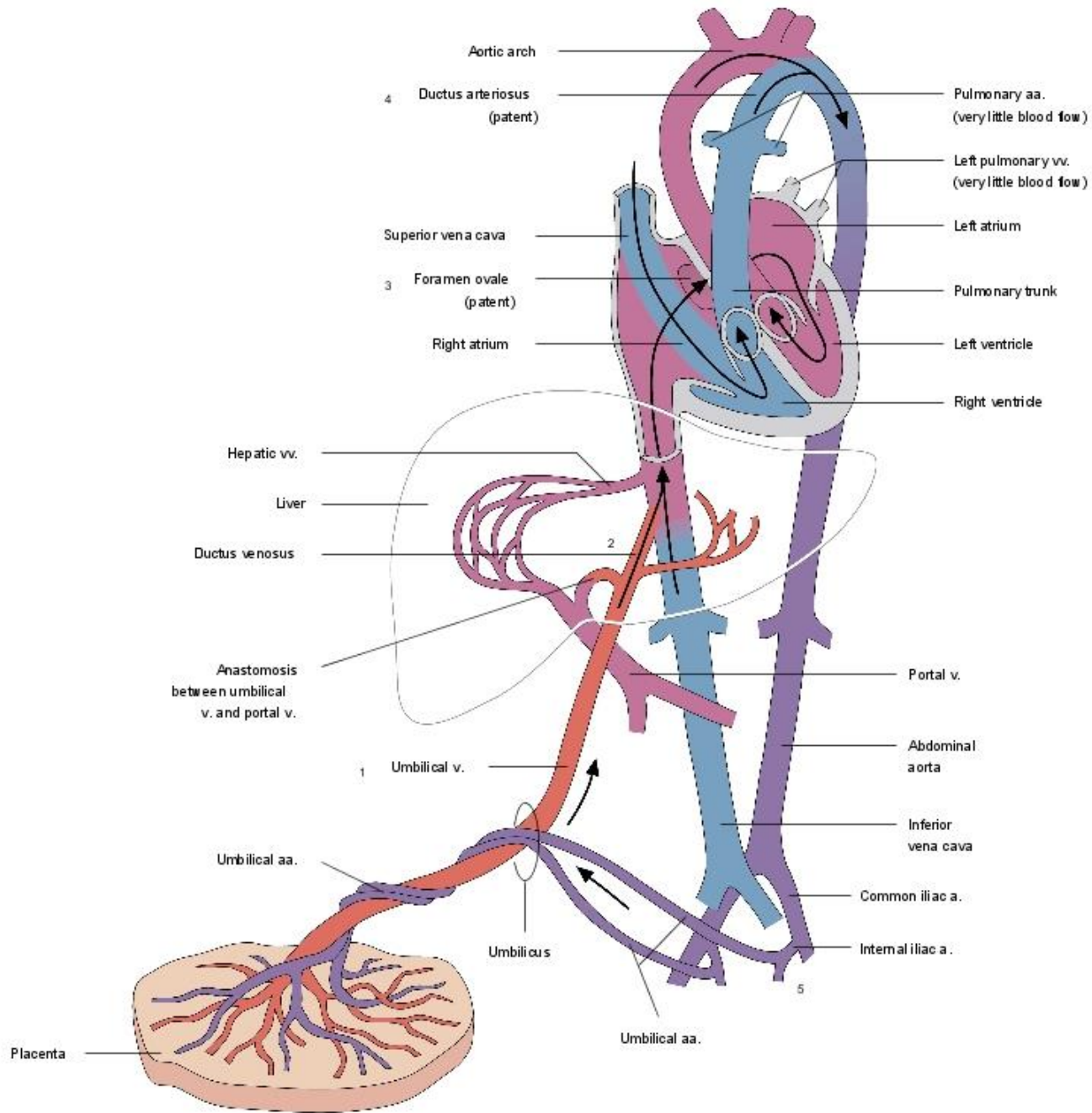
5. Schwangerschaftswoche



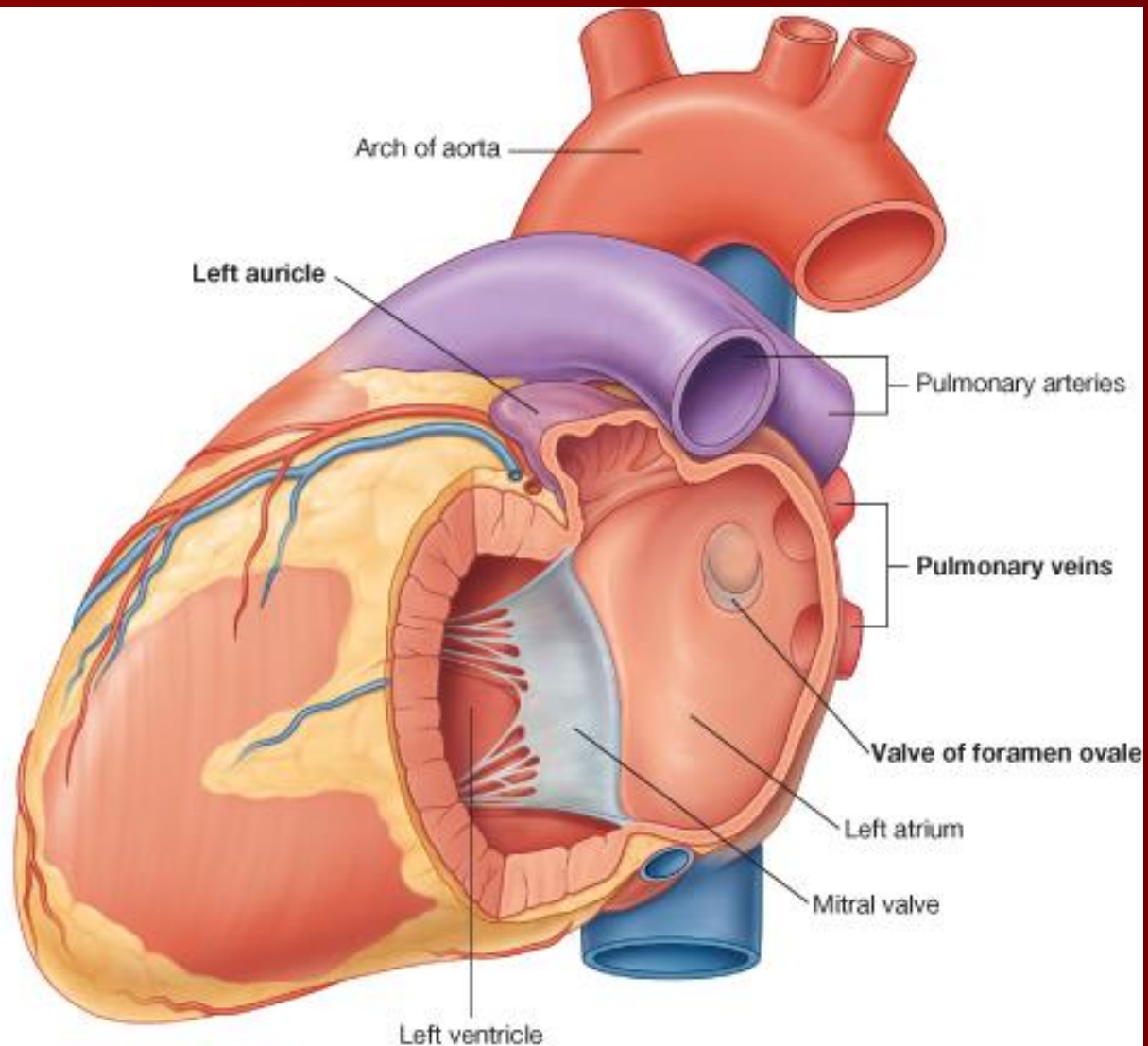
6. Schwangerschaftswoche



Endokardkissen



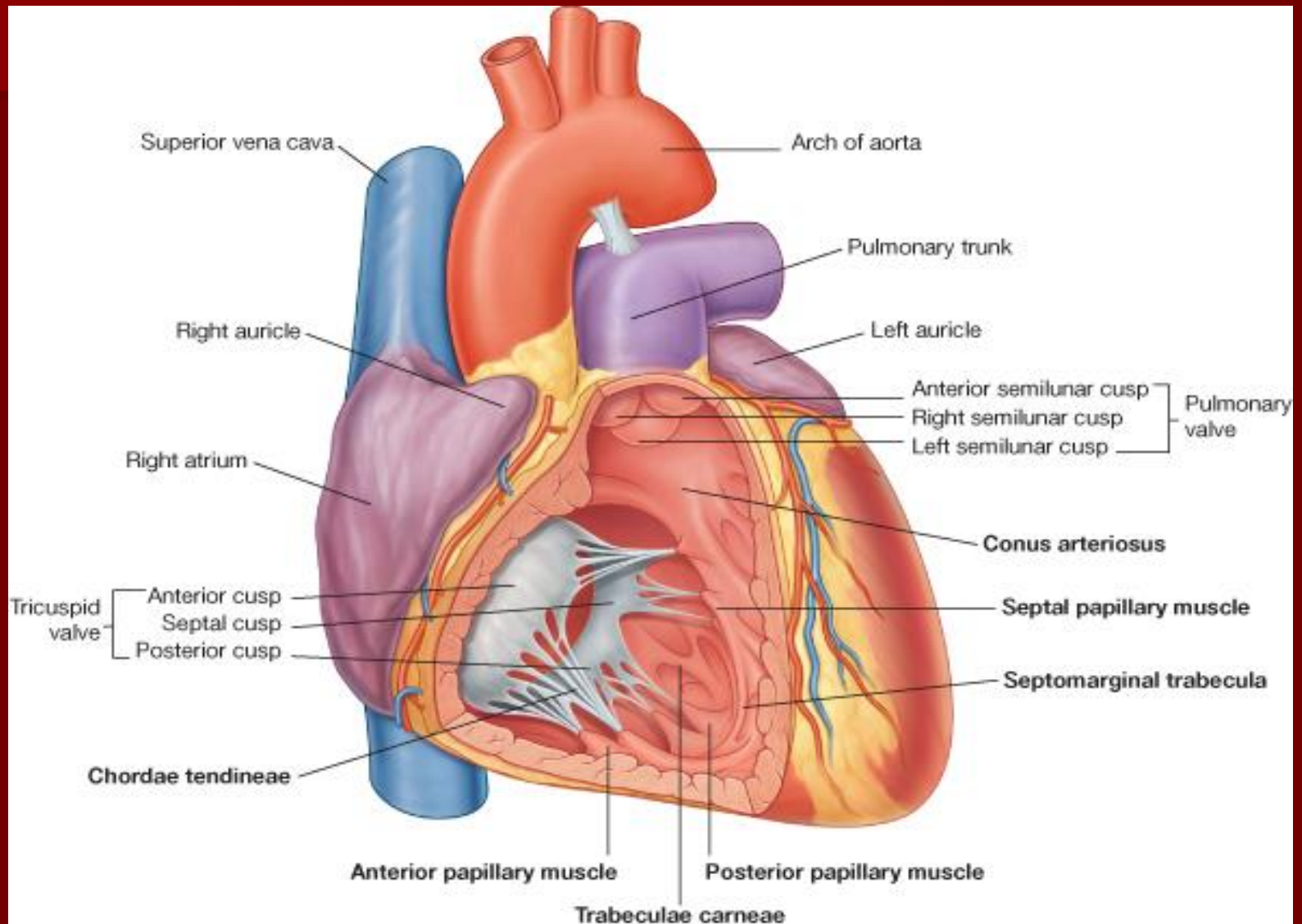
A



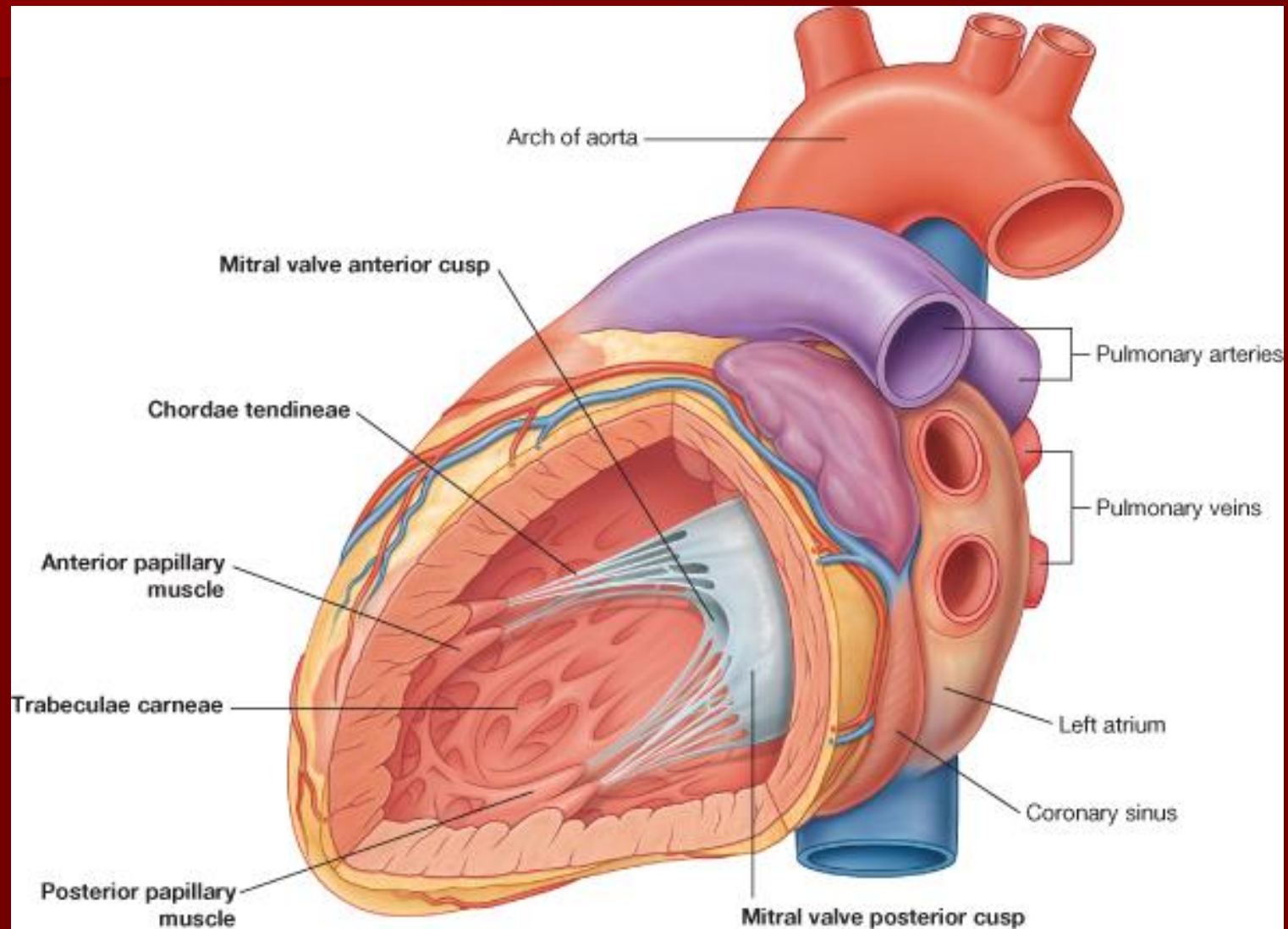
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Left atrium

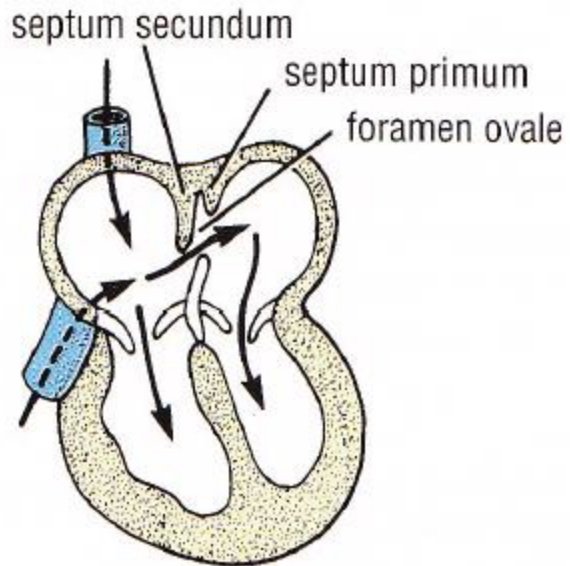
Tricuspid valve



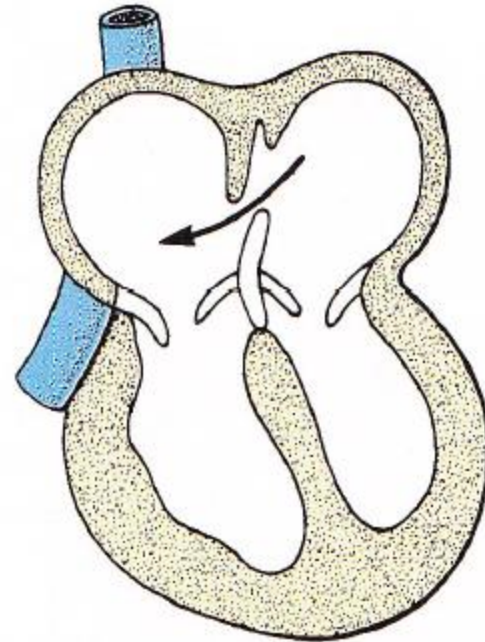
Bicuspid Valve (Mitral)



Atrial Septal Defect (ASD)

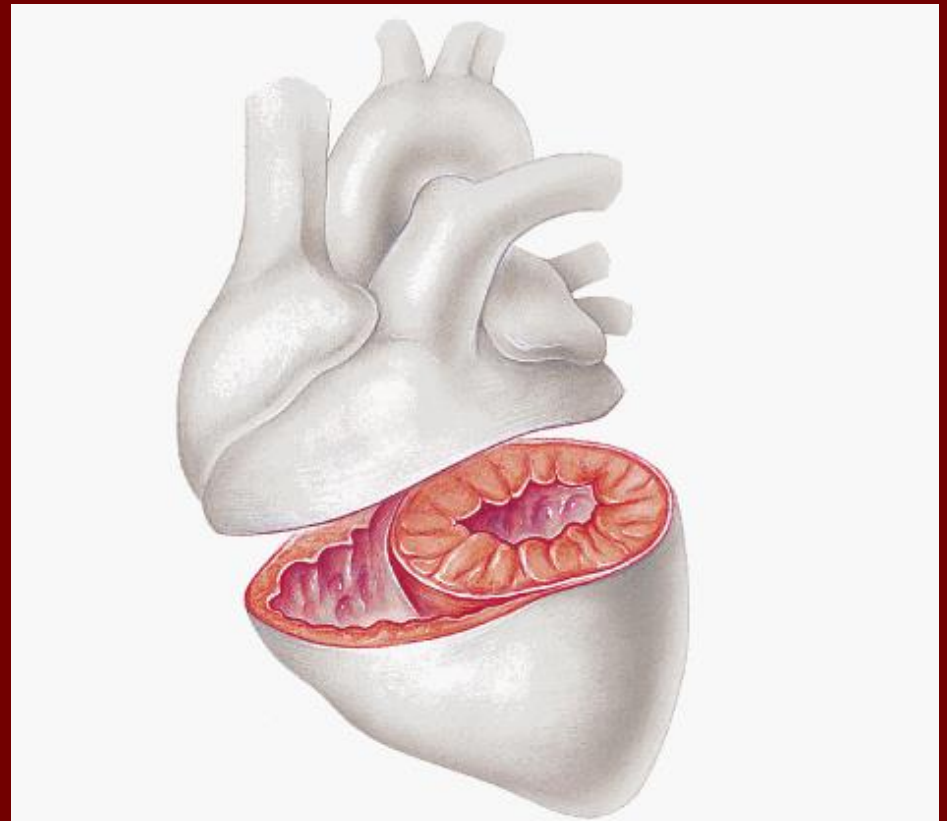
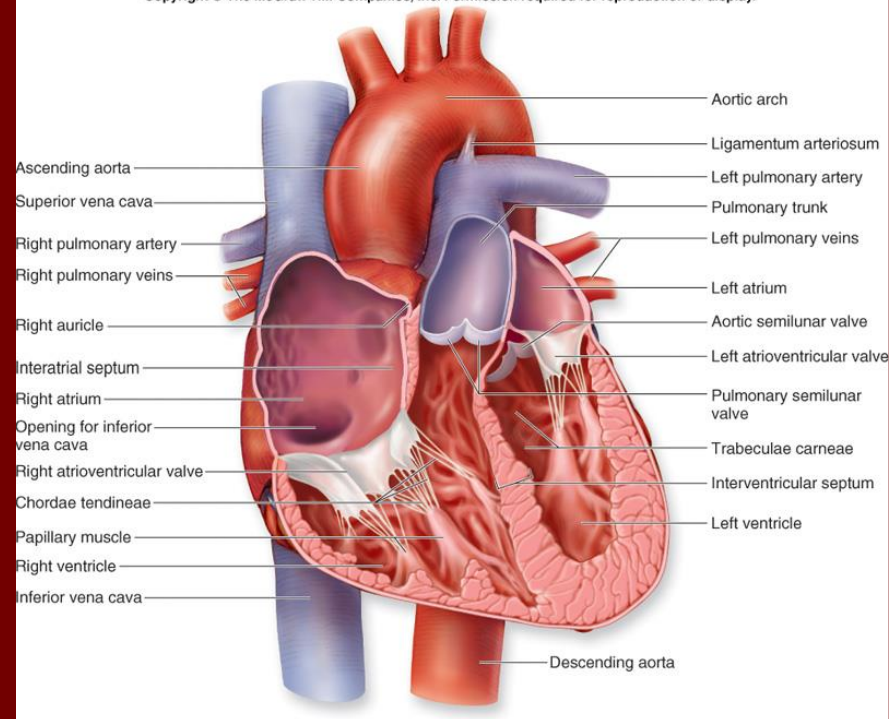


A



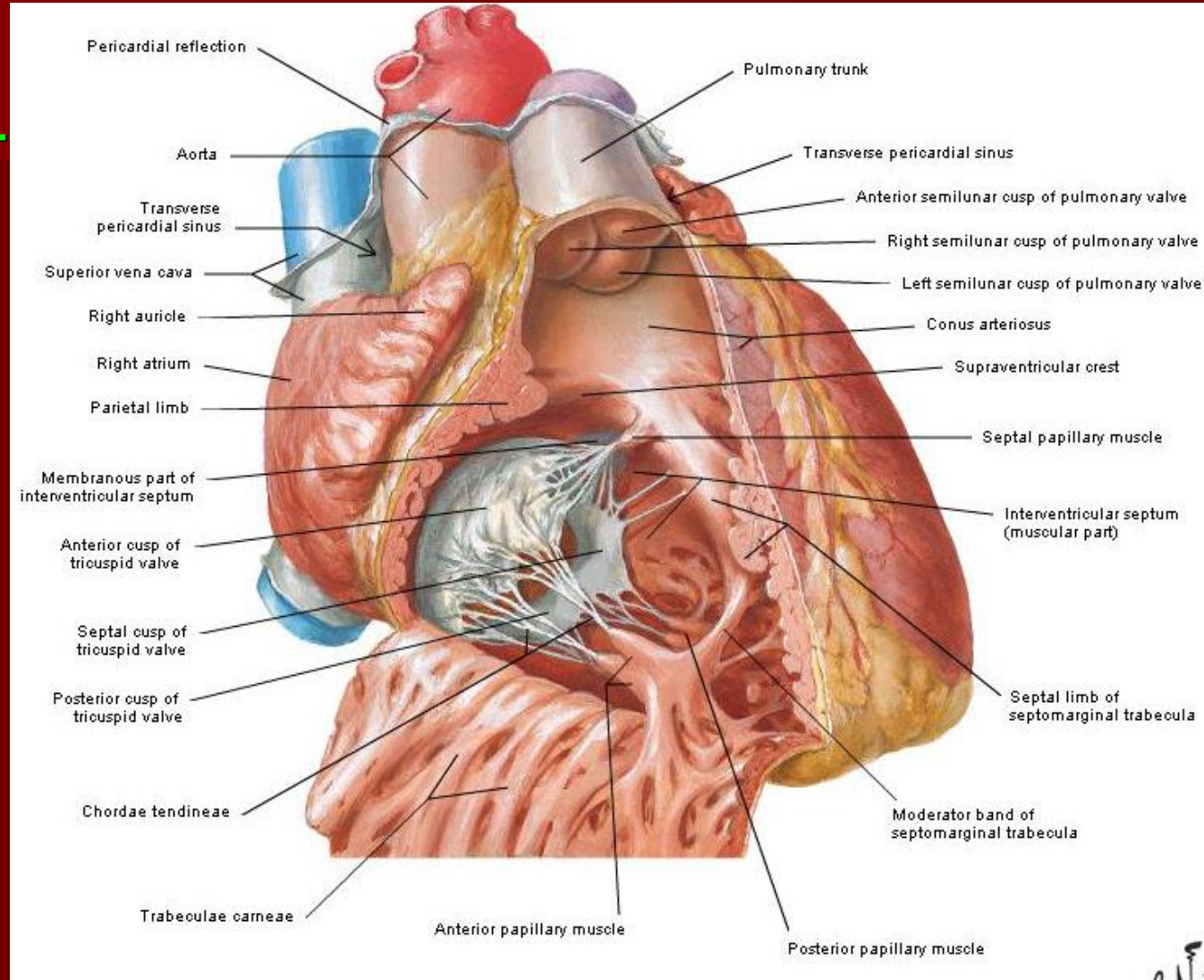
Internal Aspect of Ventricles

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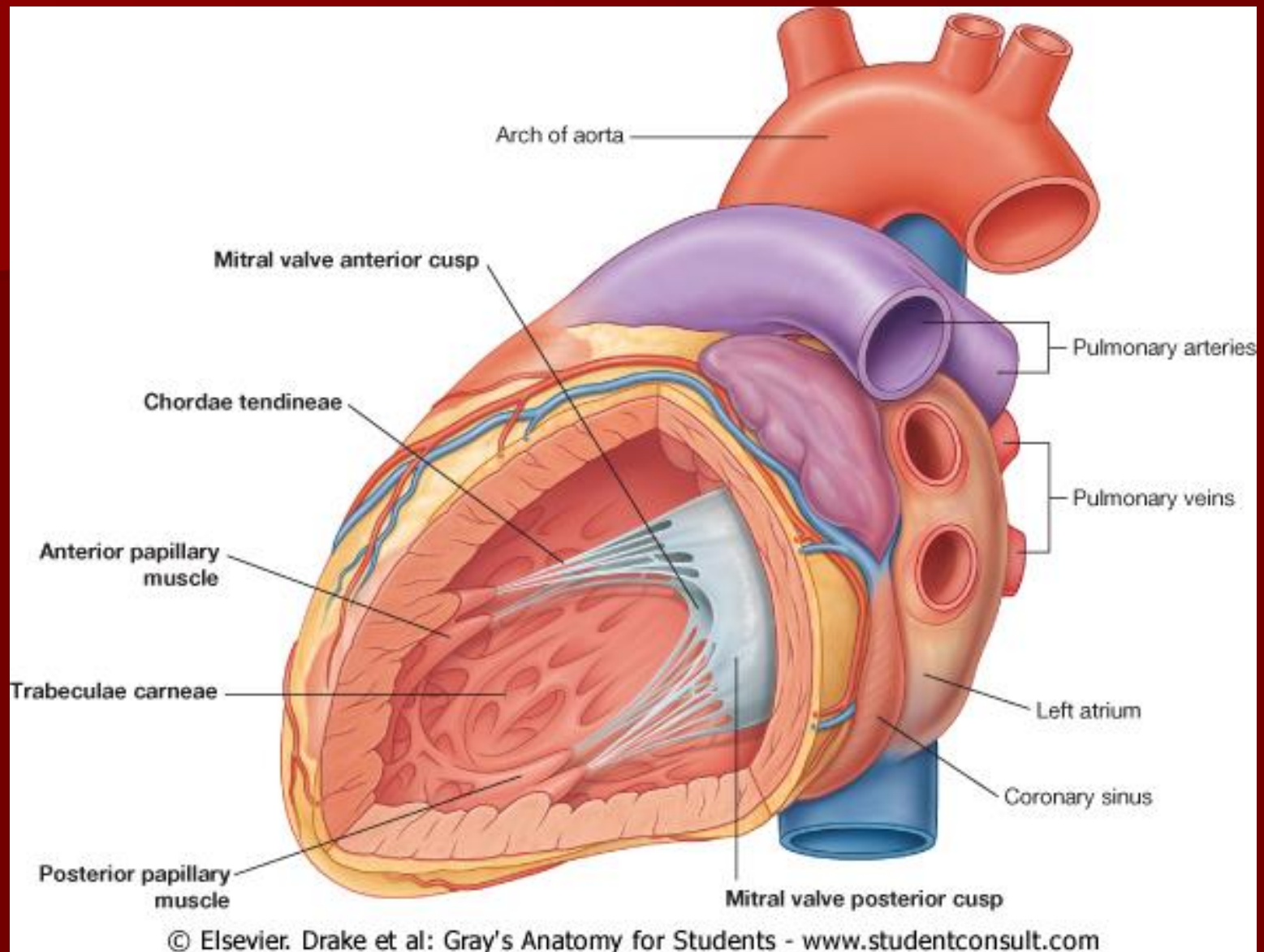


Trabeculae Carneae

- 1-Ridge
- 2-Bridge
- 3-Papillary m.

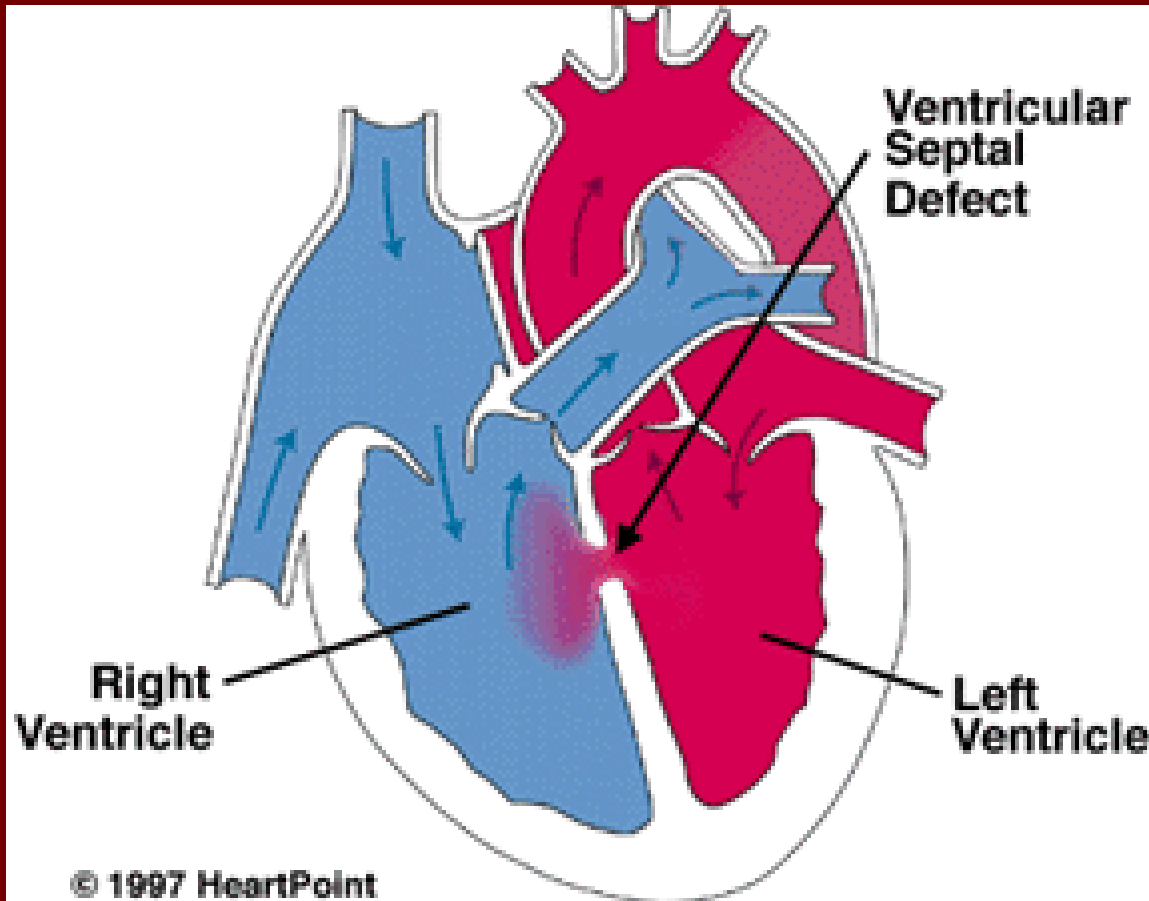


Right ventricle



Left ventricle

Ventricular Septal Defect (VSD)



Cardiothoracic Ratio

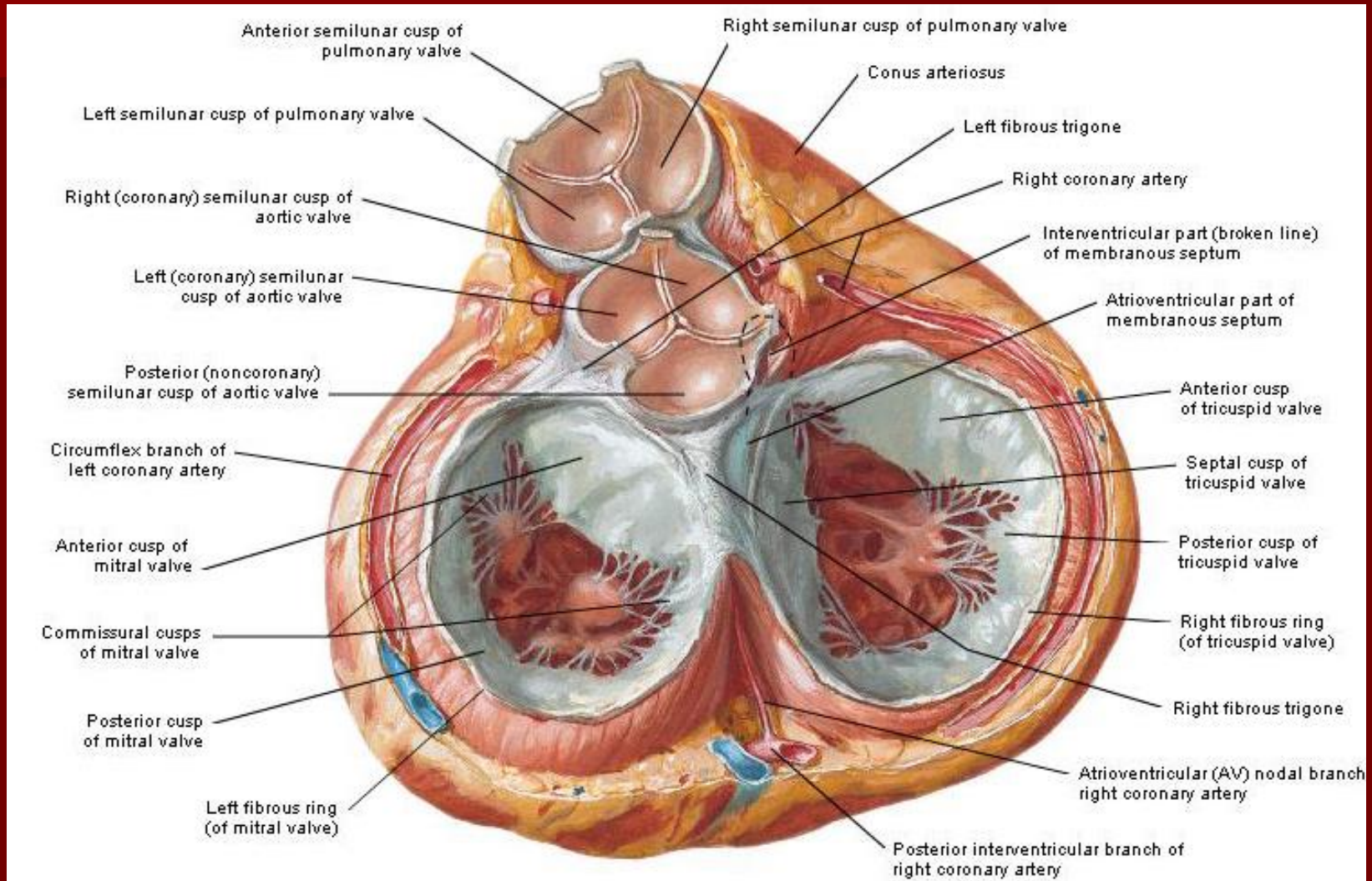


RV Configuration

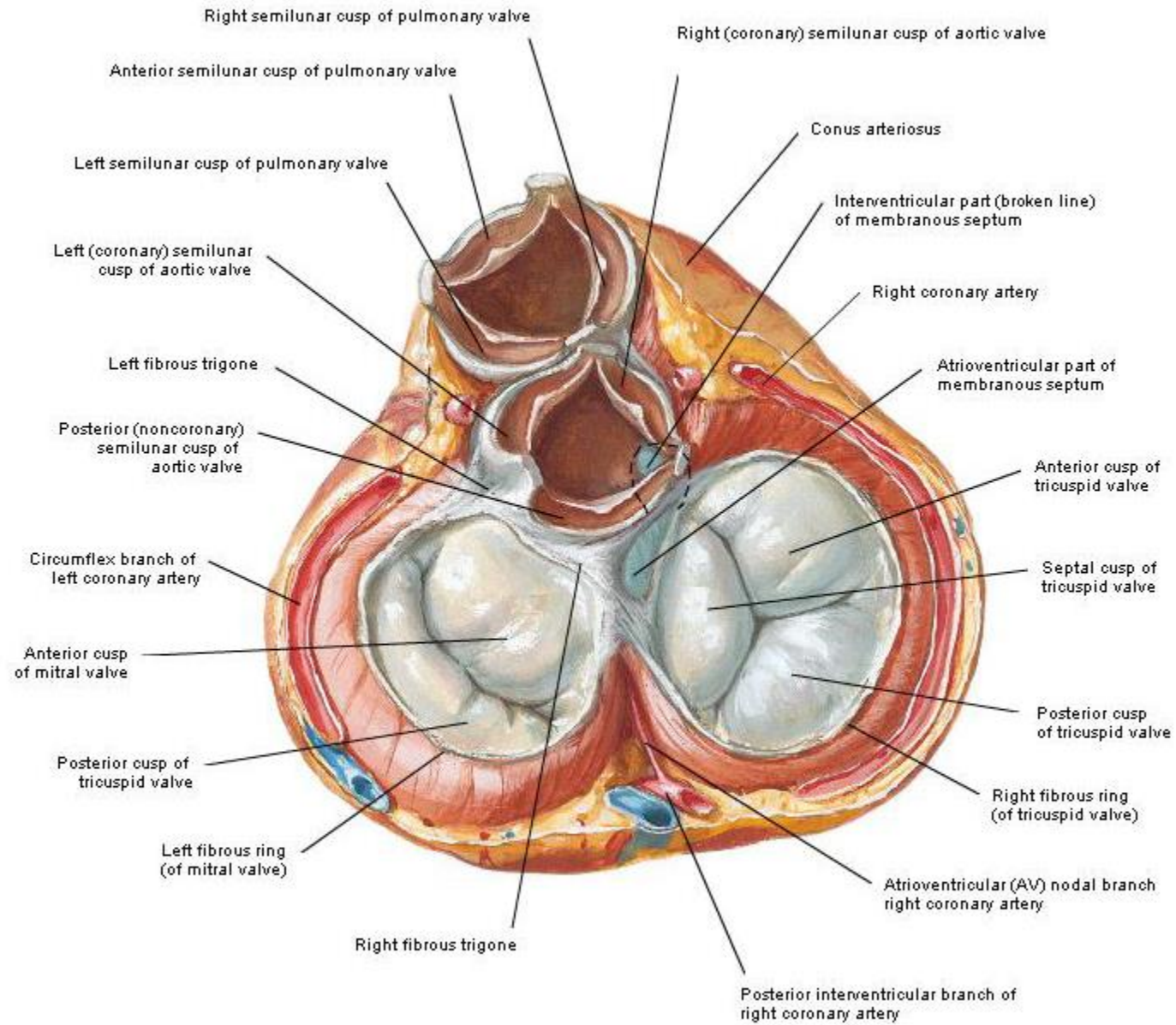


Aortic valve

Pulmonary valve



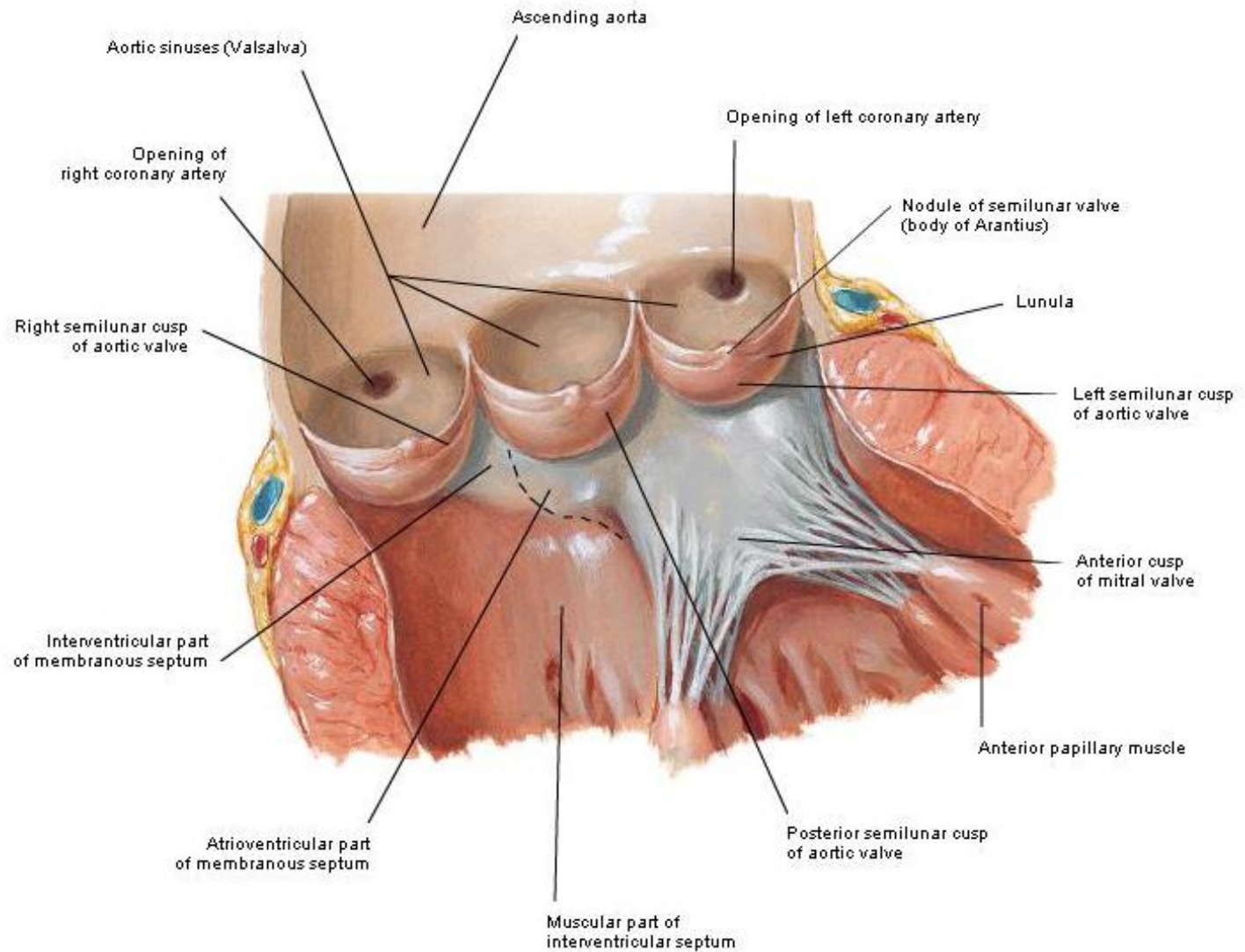
Valves of Heart in Systole

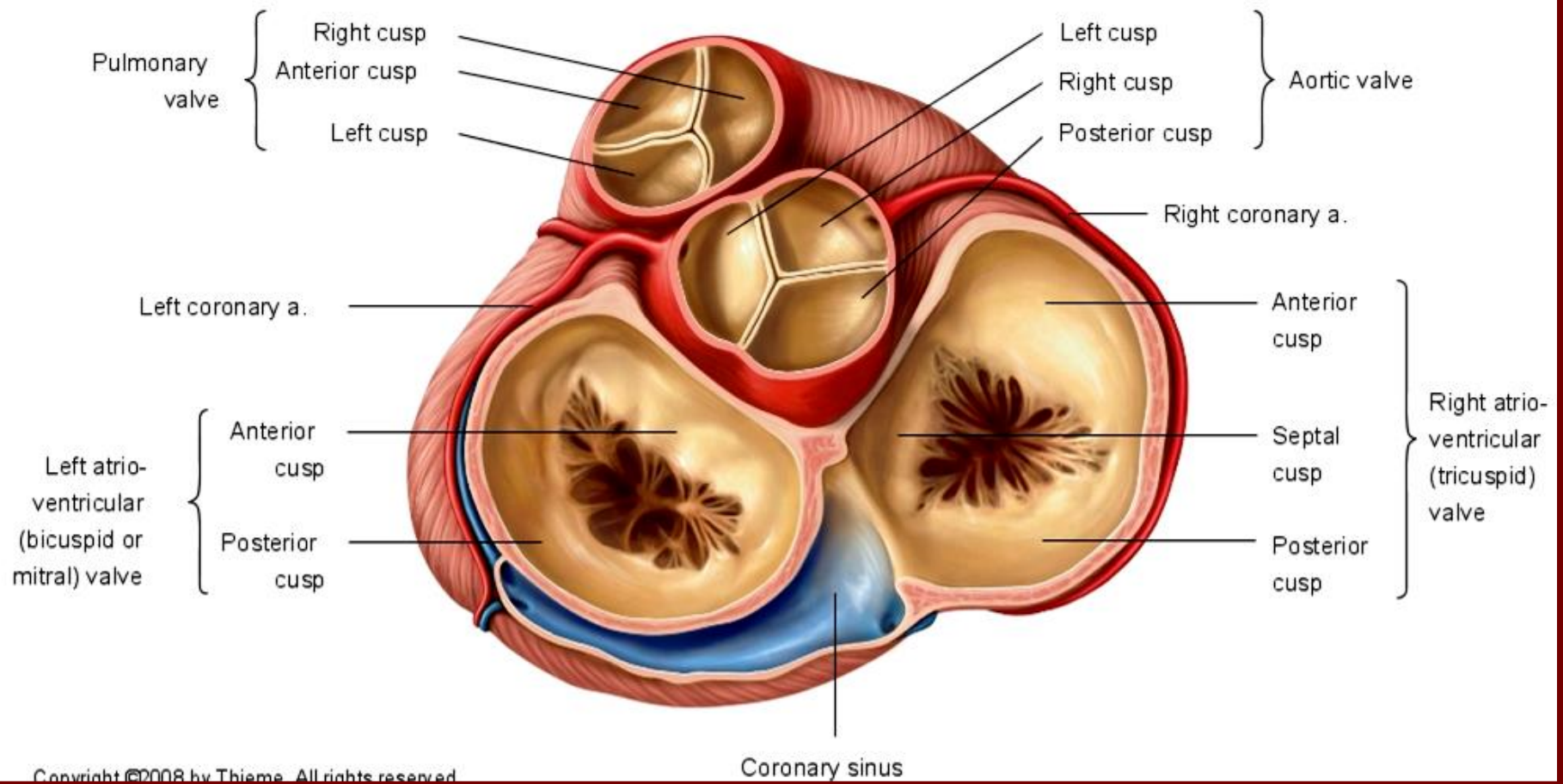


Viewed from base with atria removed

f

Aortic Valve





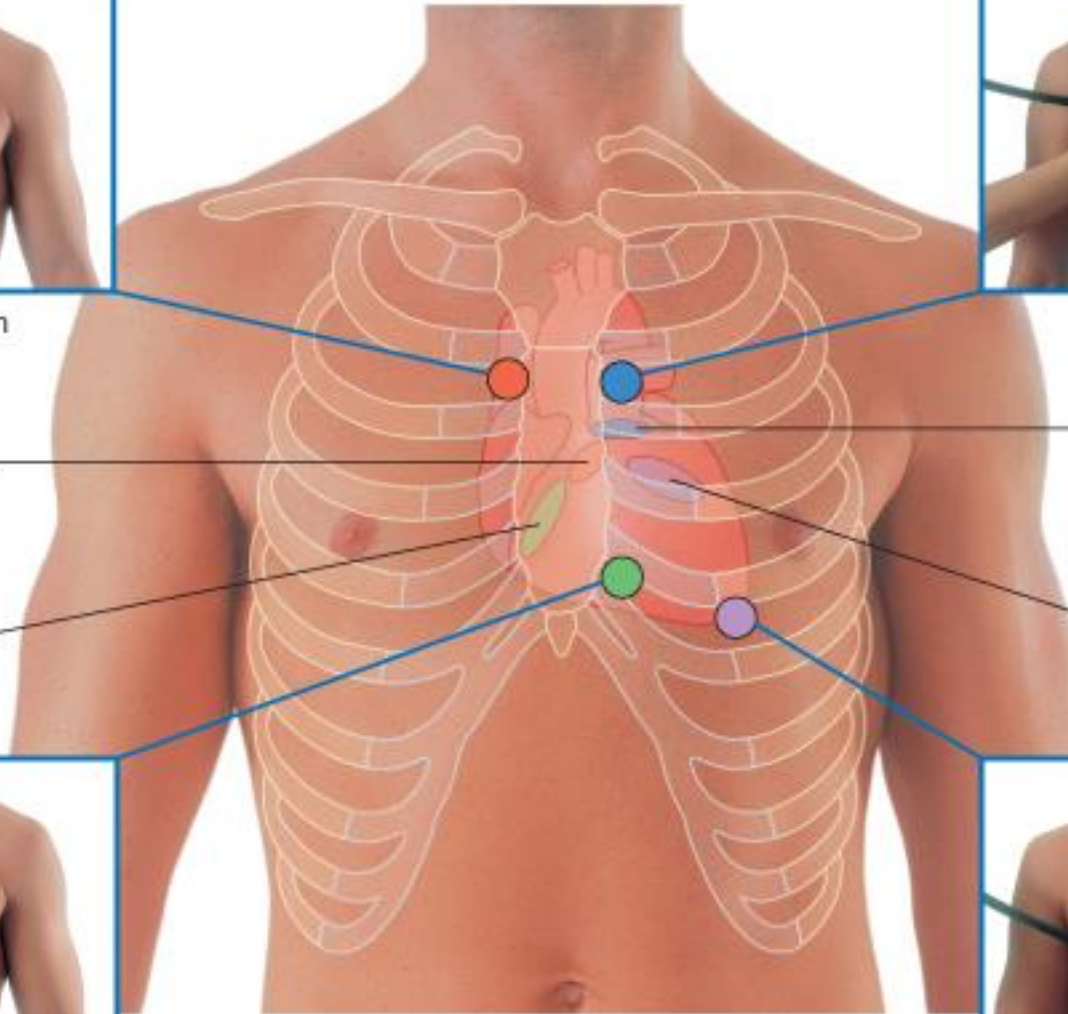
Auscultation of the Heart Valves



Auscultation position for aortic valve



Auscultation position for pulmonary valve



Aortic valve

Pulmonary valve

Tricuspid valve

Mitral valve

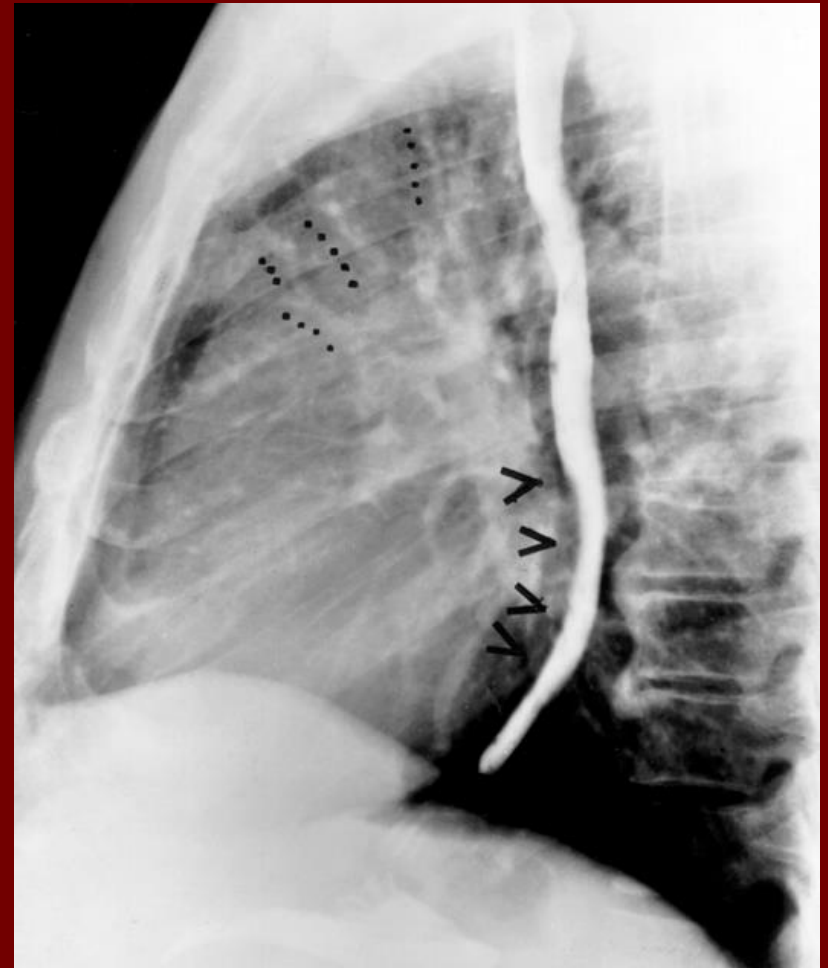
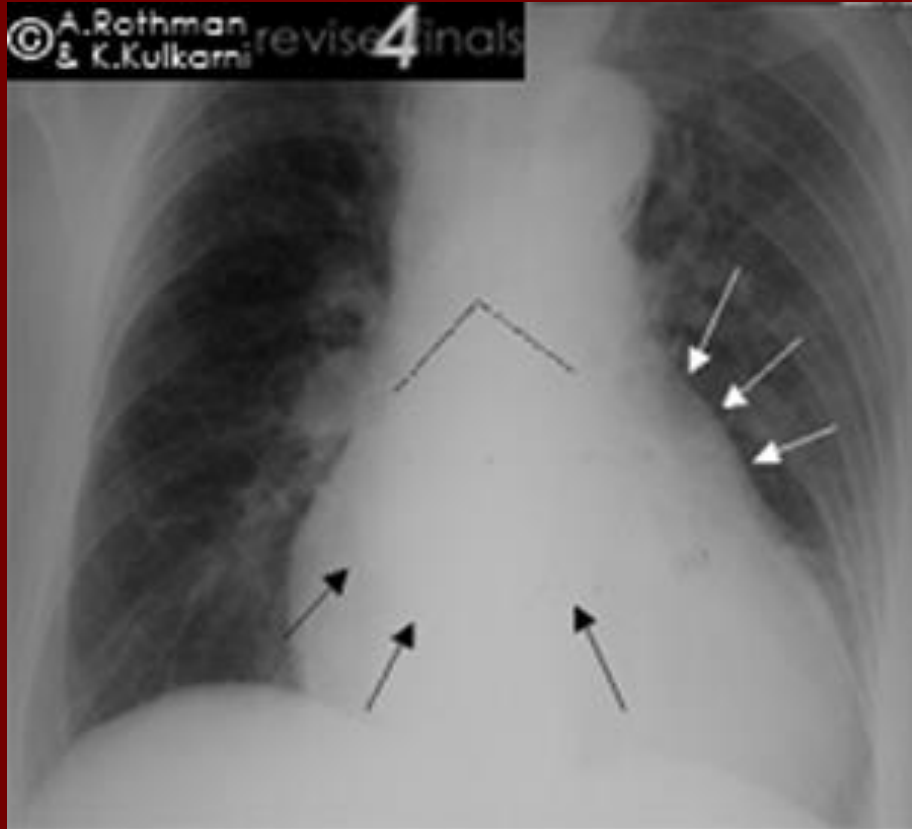


Auscultation position for tricuspid valve

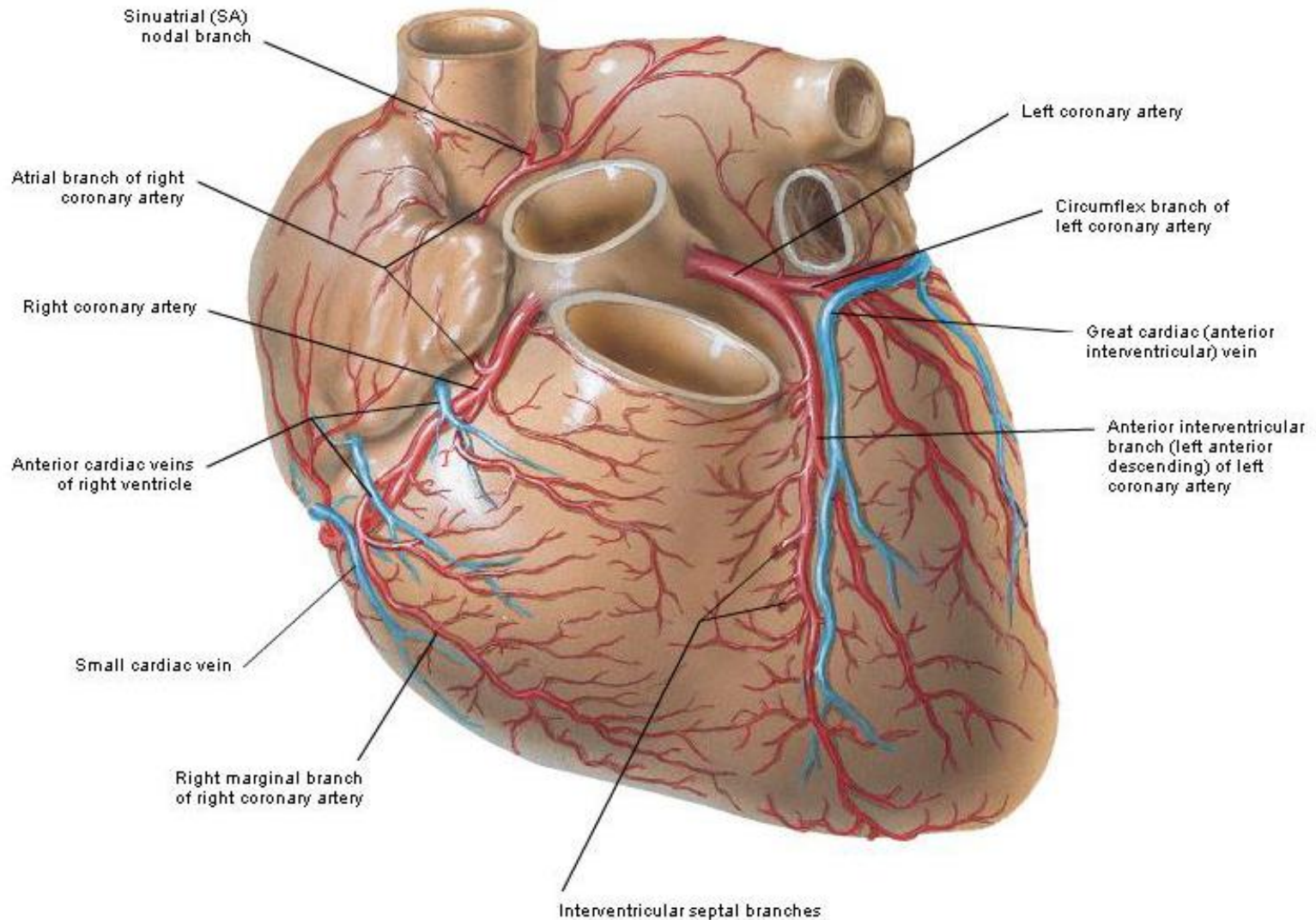


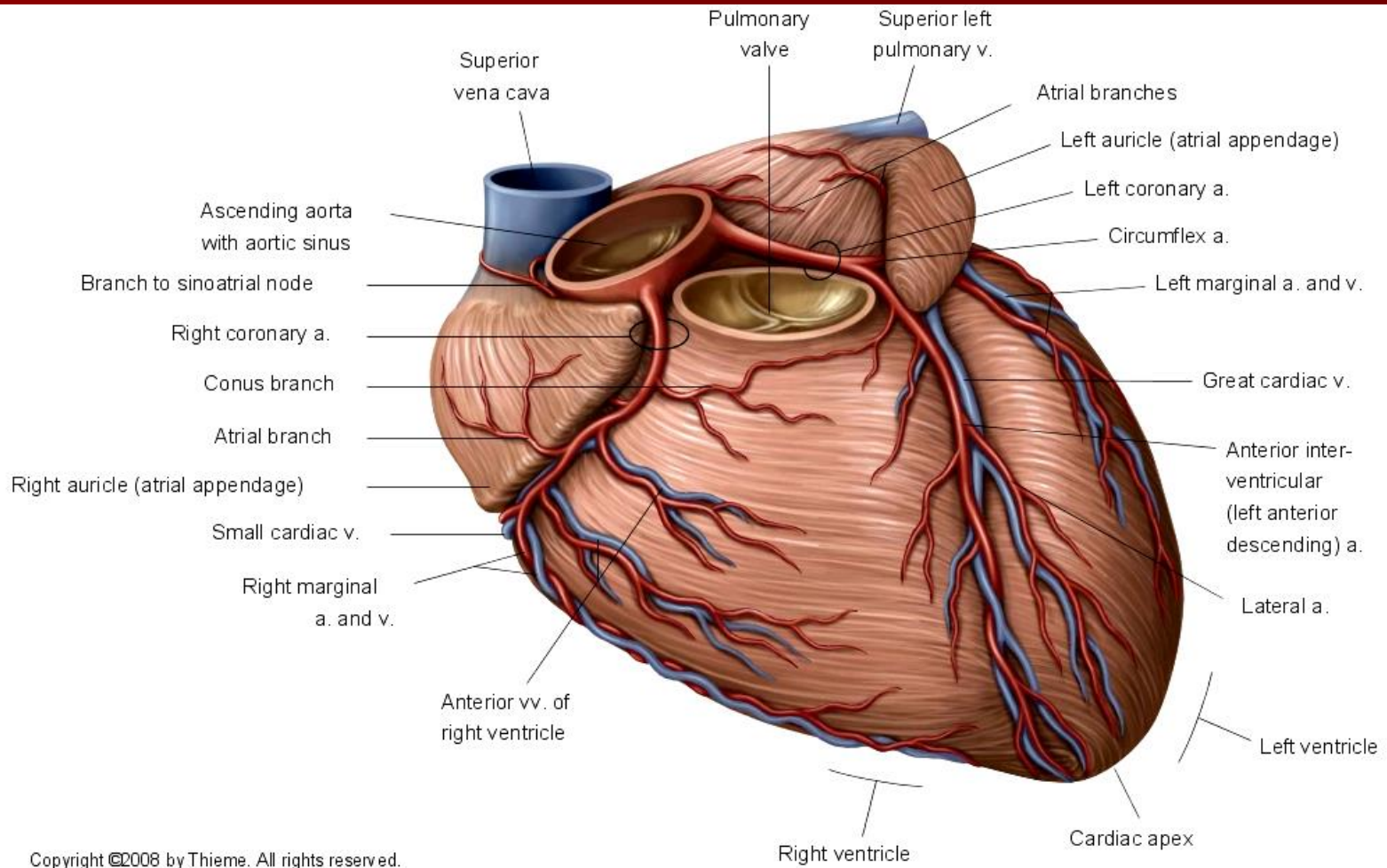
Auscultation position for mitral valve

Mitral Stenosis (MS) & LA Hypertrophy



Coronary aa.



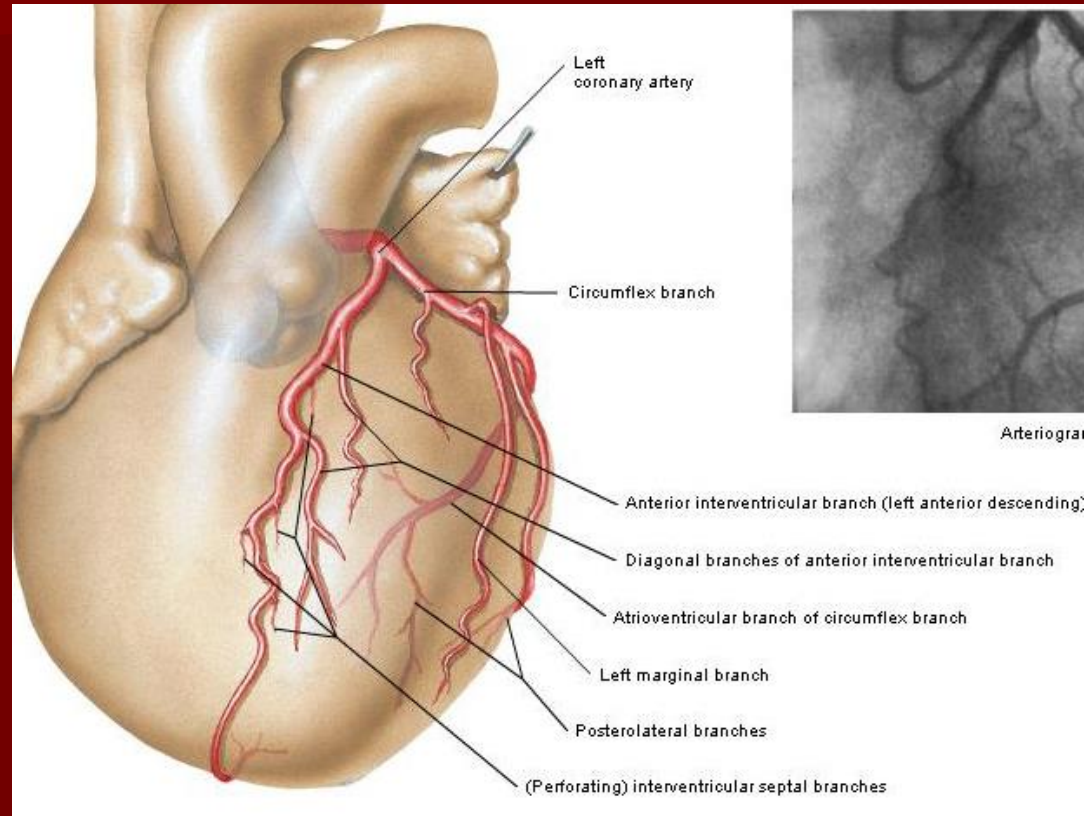


Left coronary a.

1- Circumflex br.

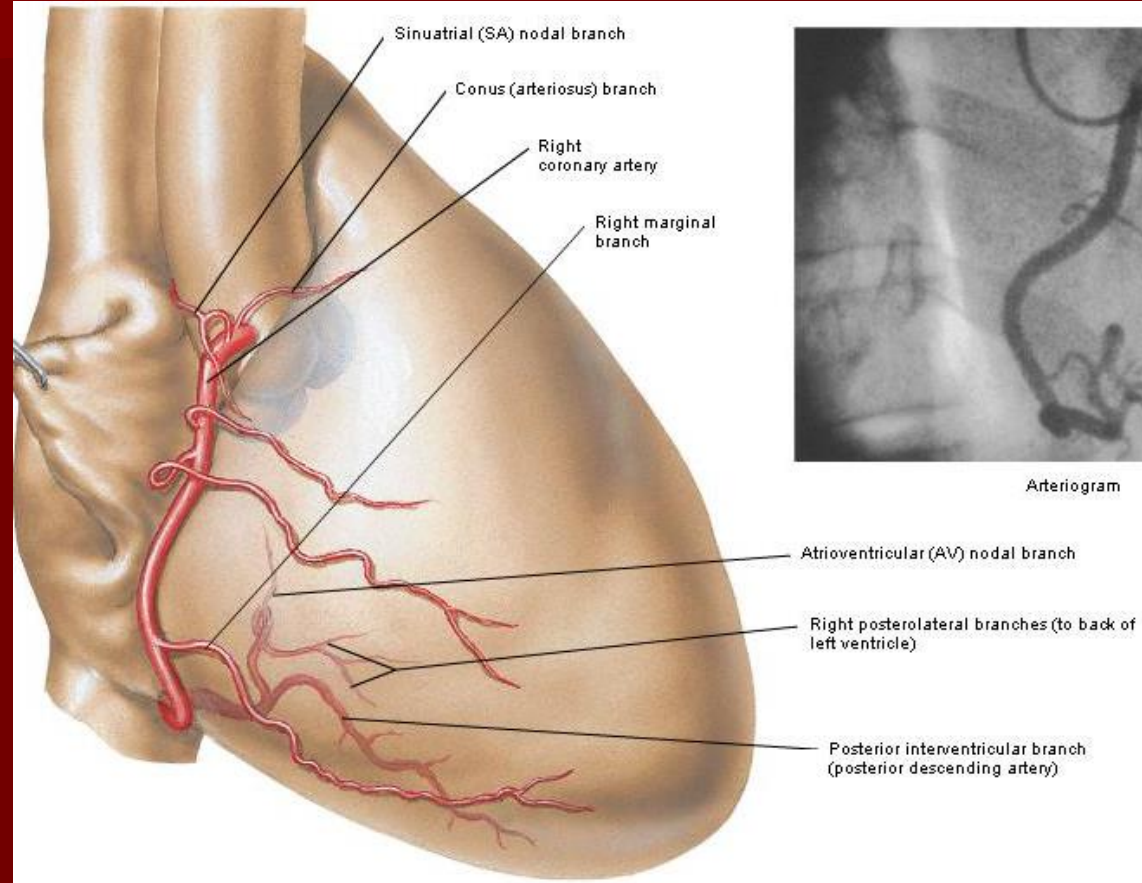
- atrioventricular br.
- posterolateral Br.
- Left marginal br.

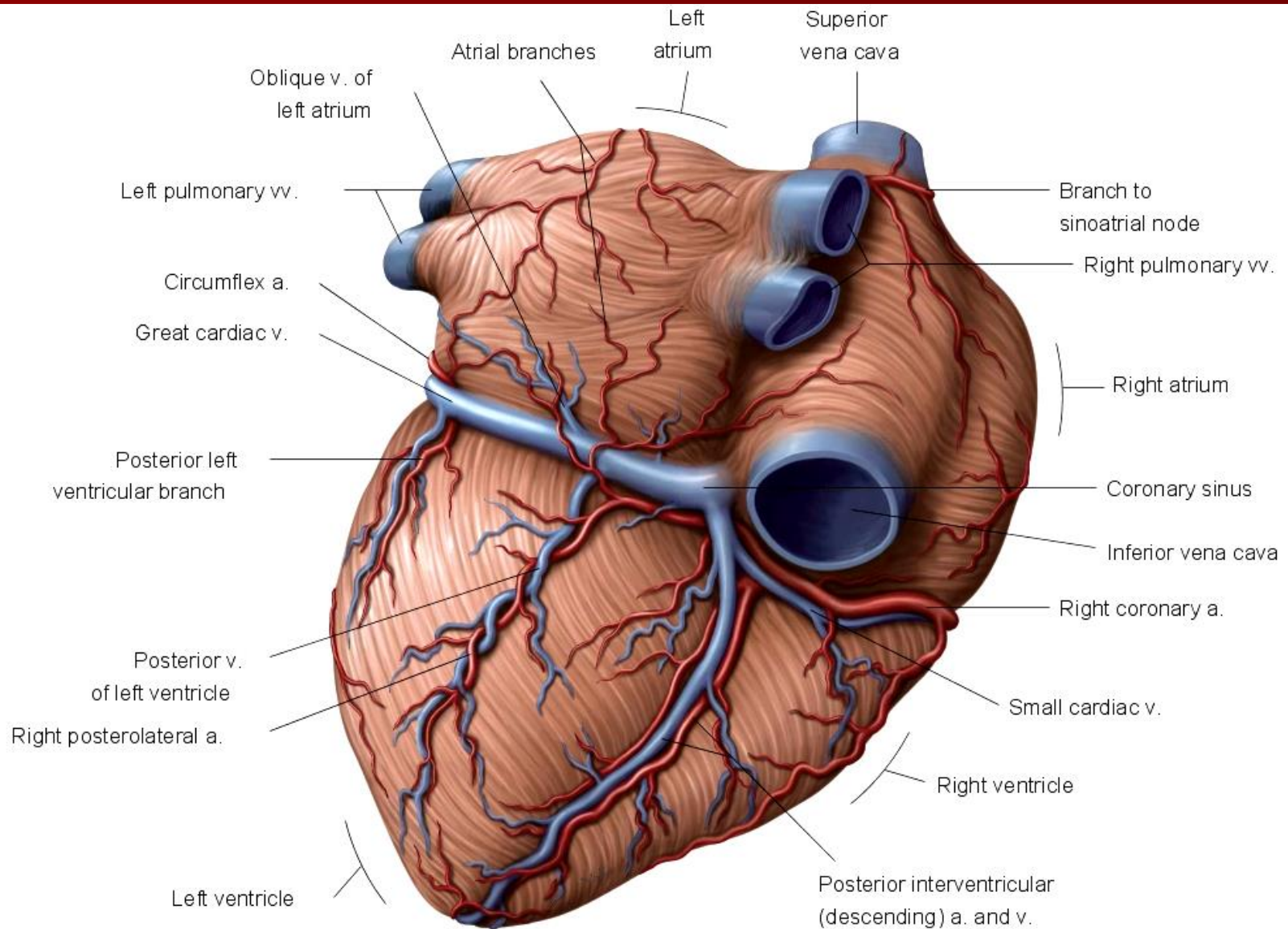
2- Ant. Interventricular br.



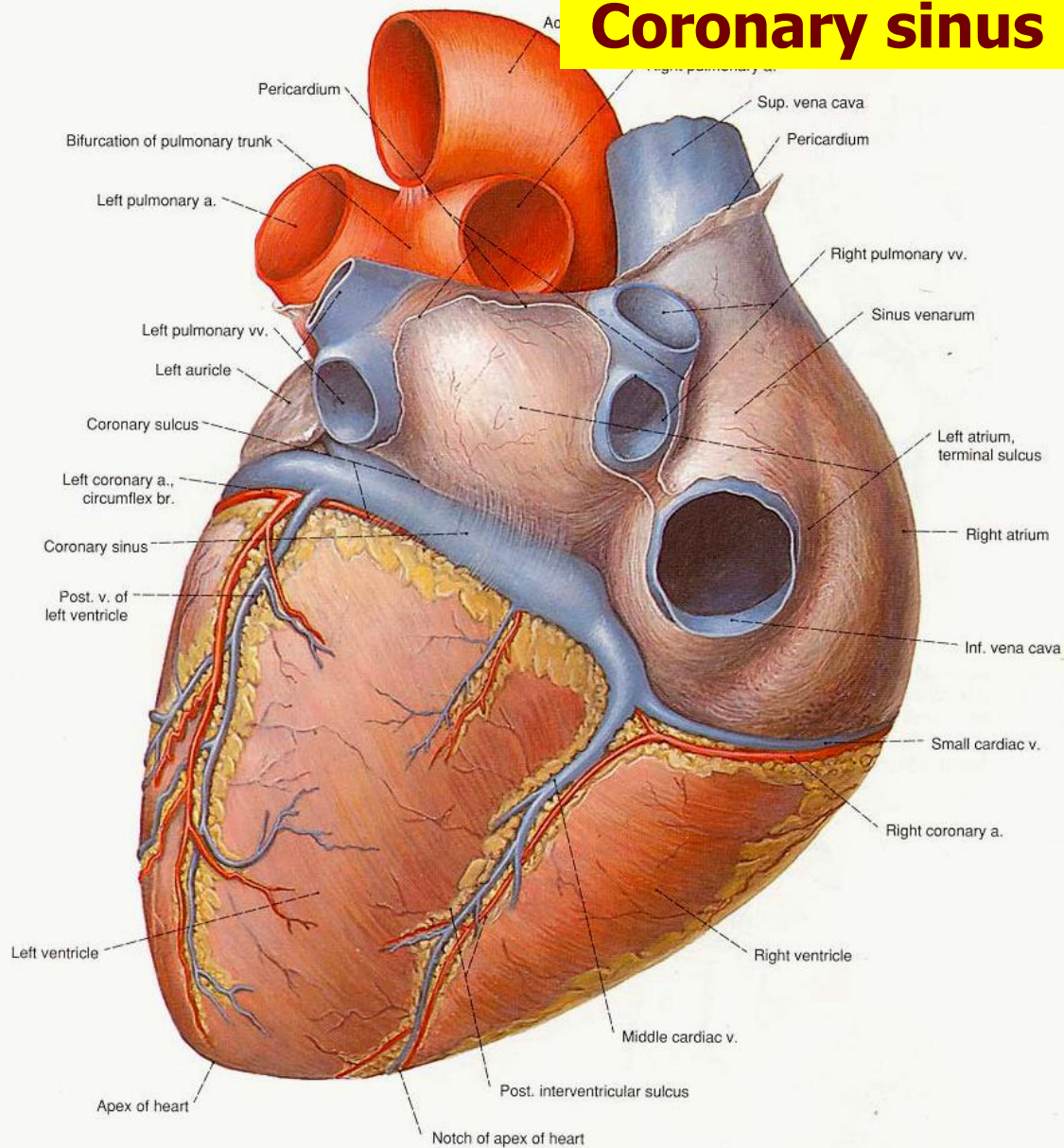
Right coronary a.

- 1- Conus (arteriosus) br.
- 2- Sinuatrial nodal br.
- 3- Right marginal br.
- 4- Post. Interventricular br.

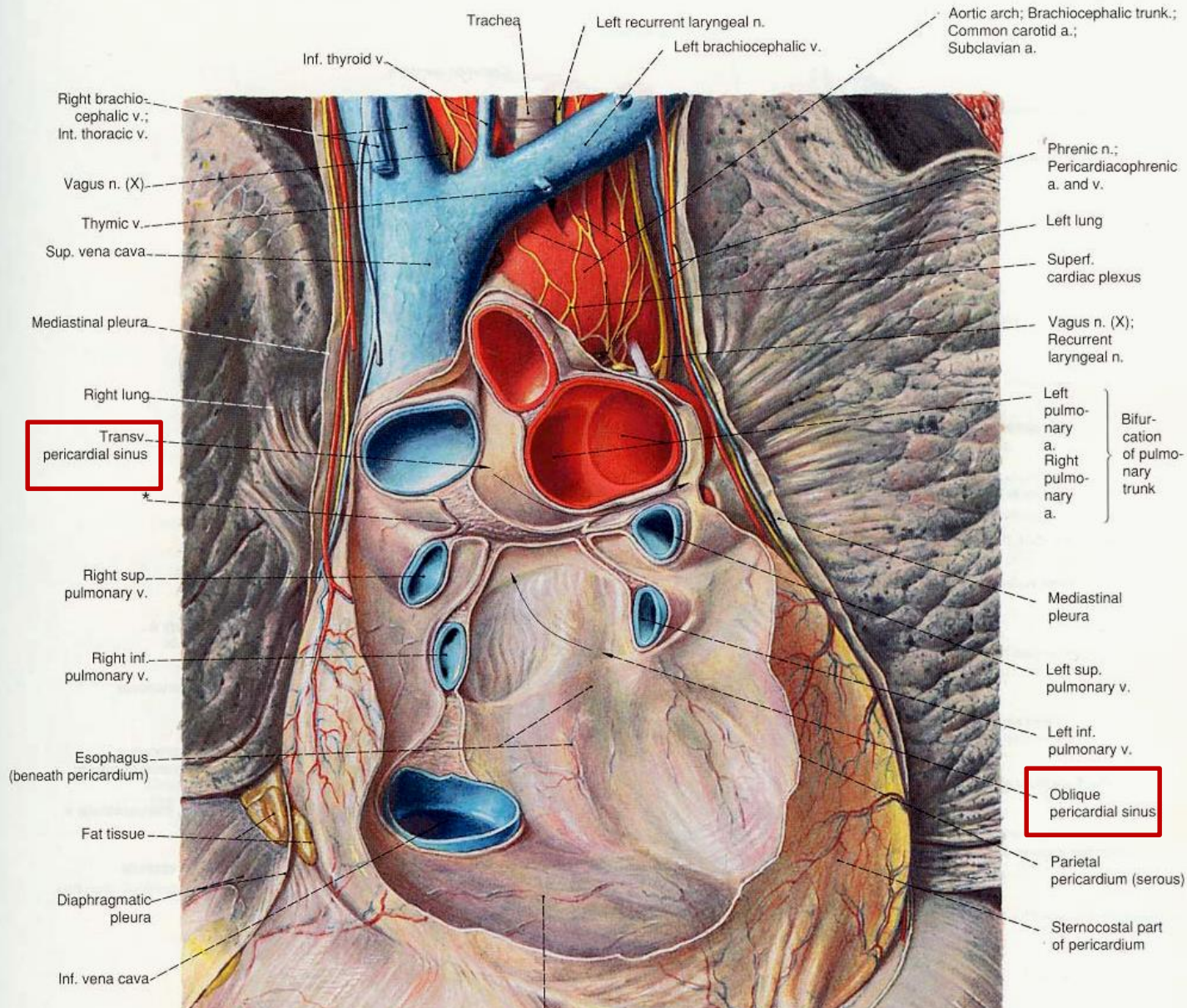




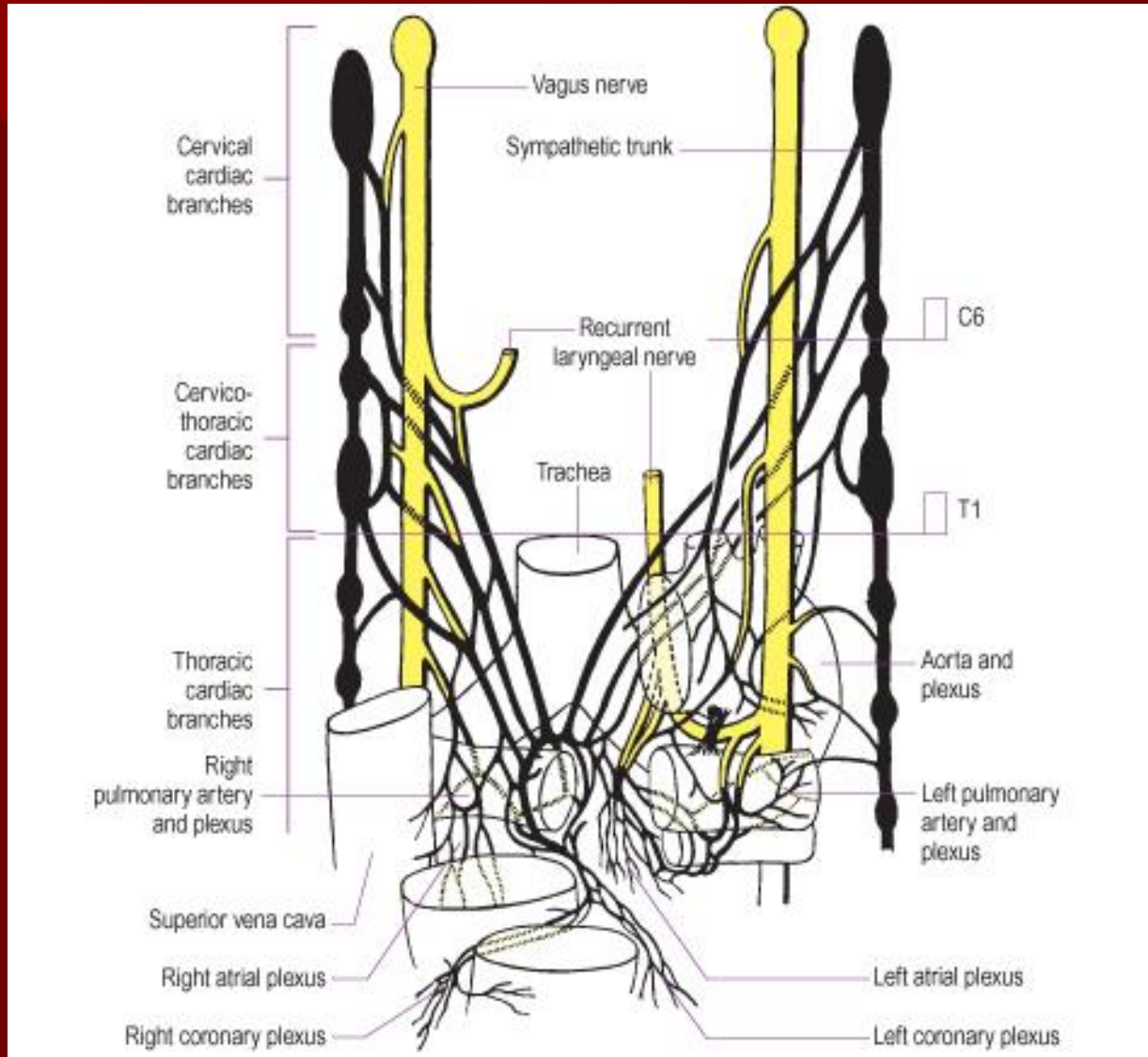
Coronary sinus



Oblique pericardial sinus (Haller) Transverse pericardial sinus (Till)

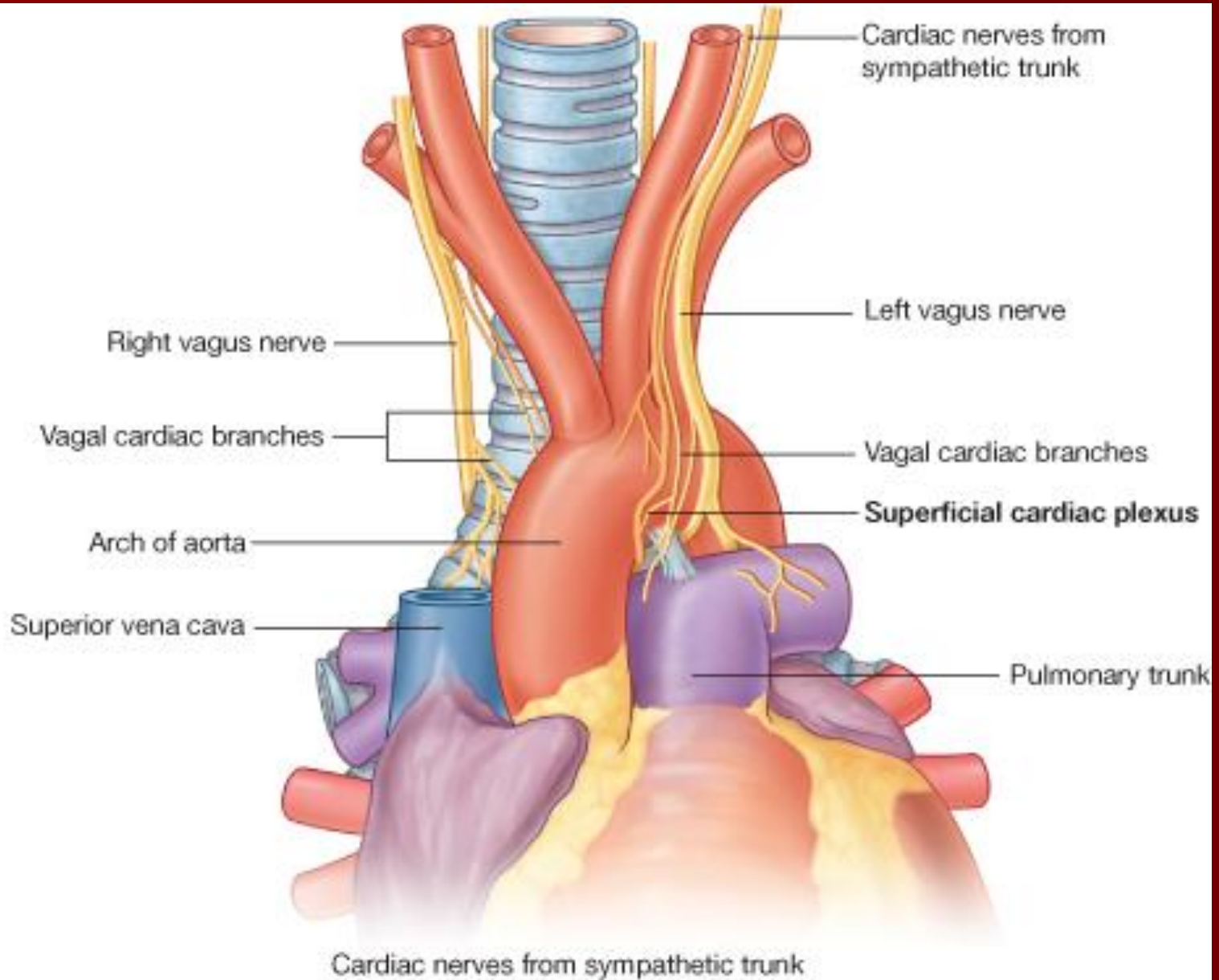


Cardiac Plexus



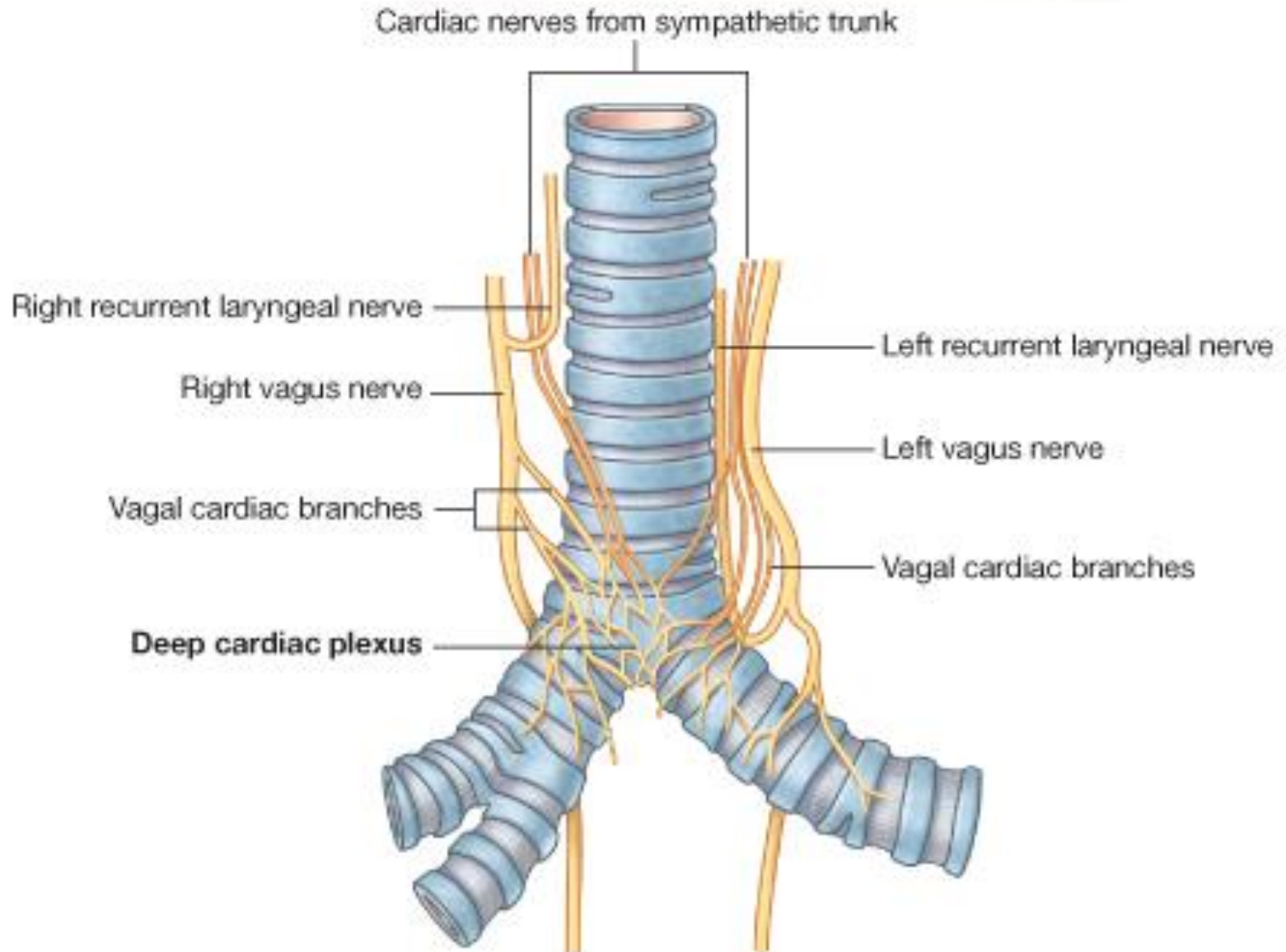
Superficial cardiac plexus

A



Deep cardiac plexus

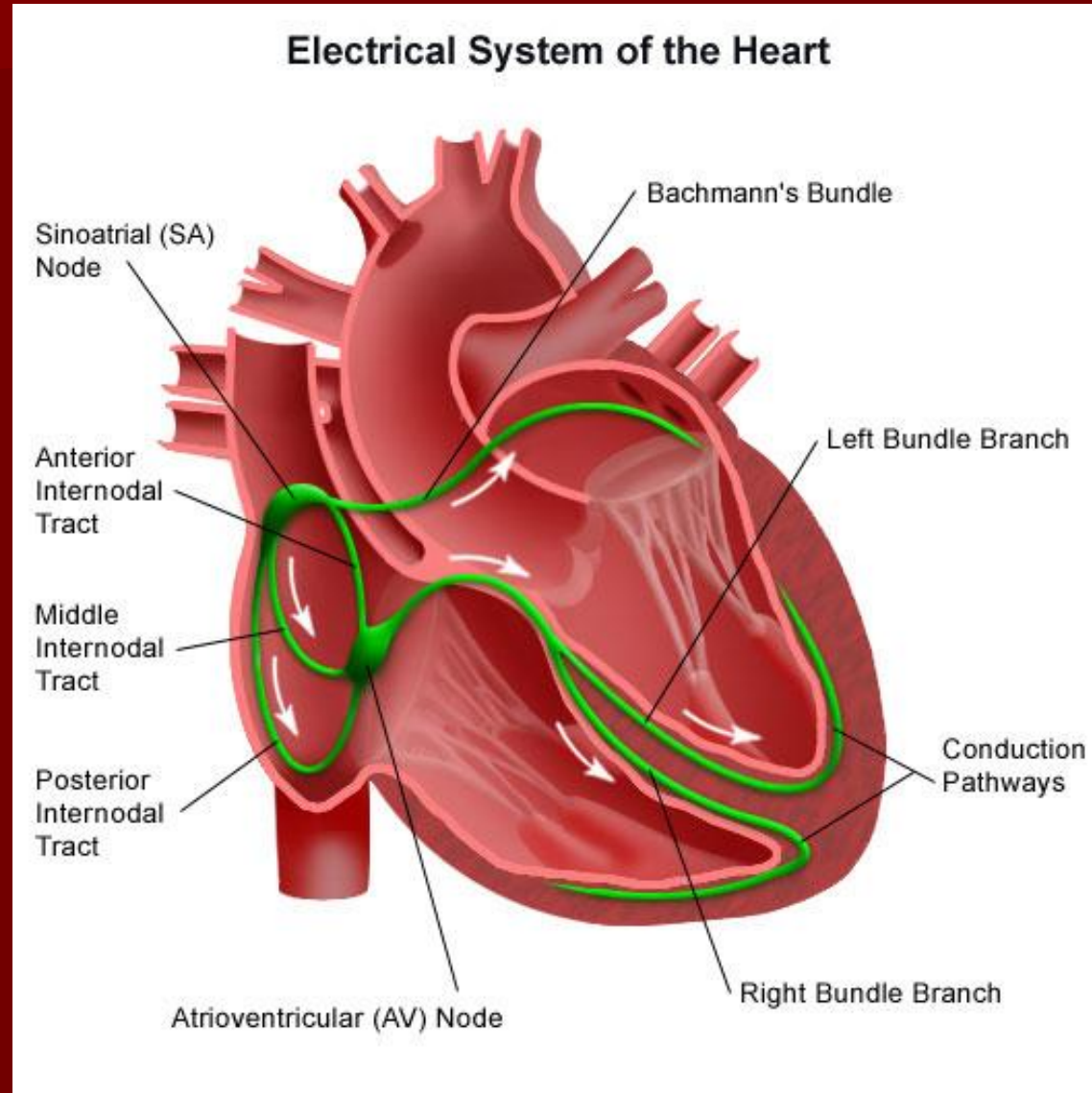
B

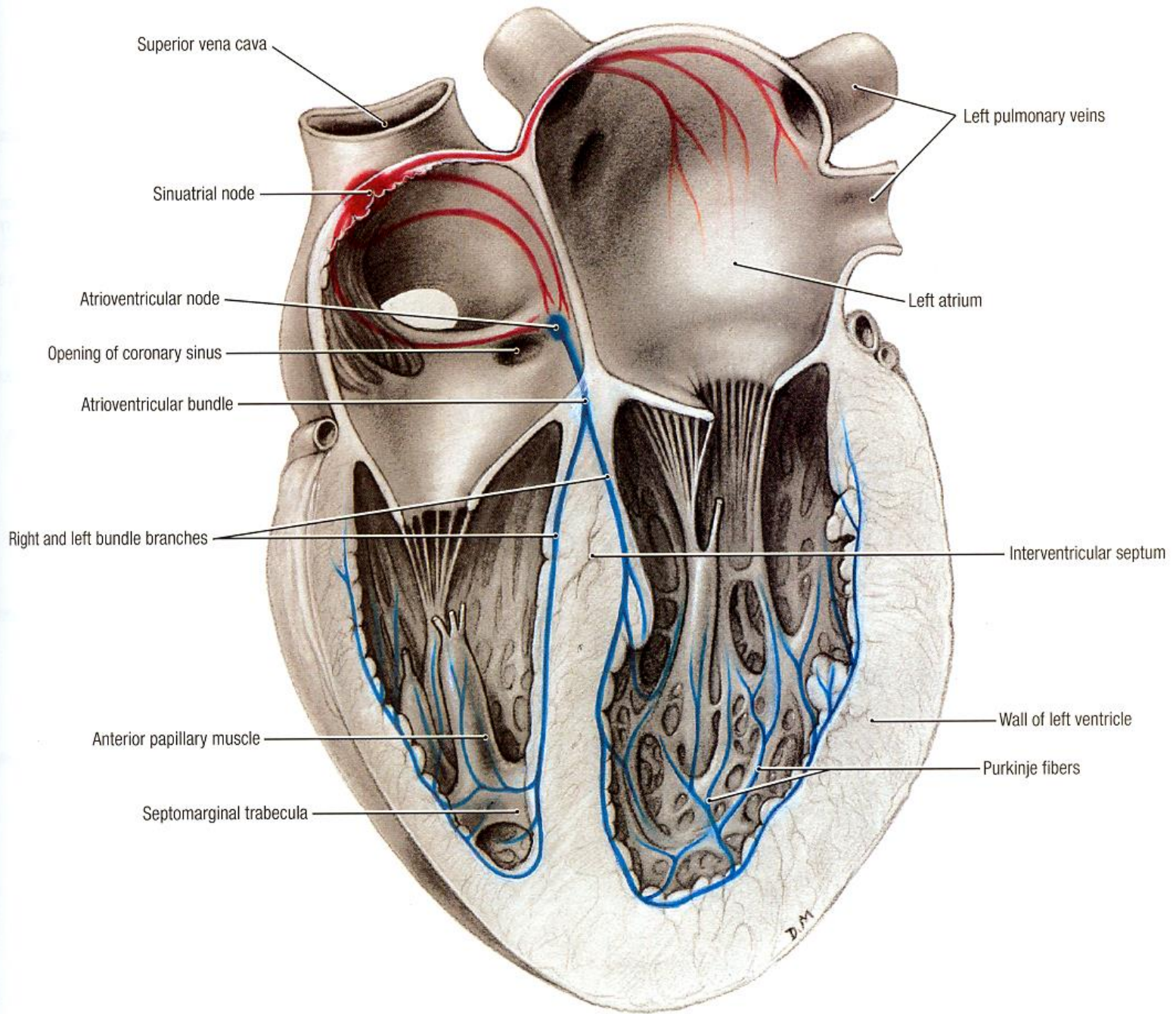


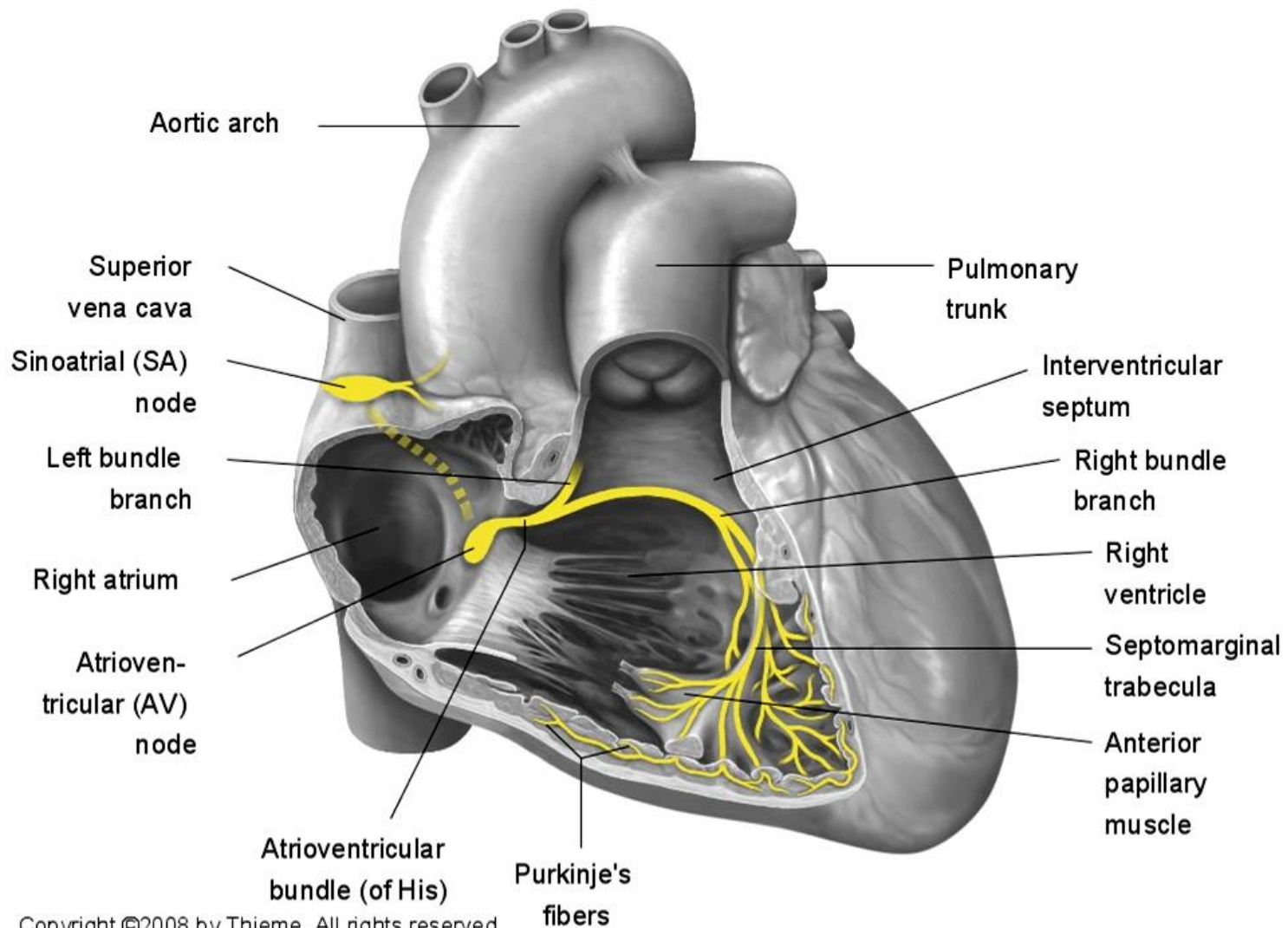
Conducting Tissue

1-Sinoatrial node

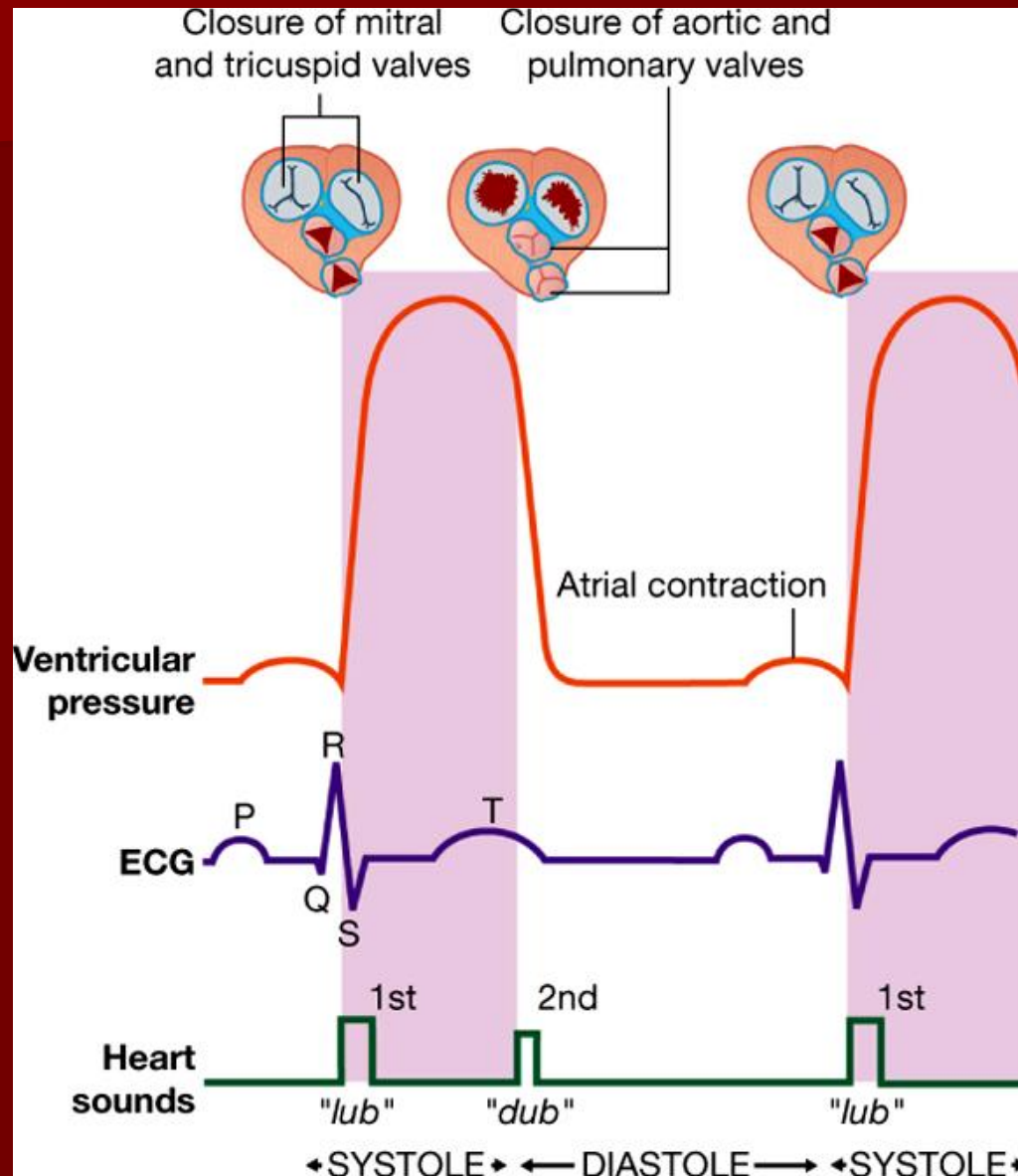
2-Atrioventricular node



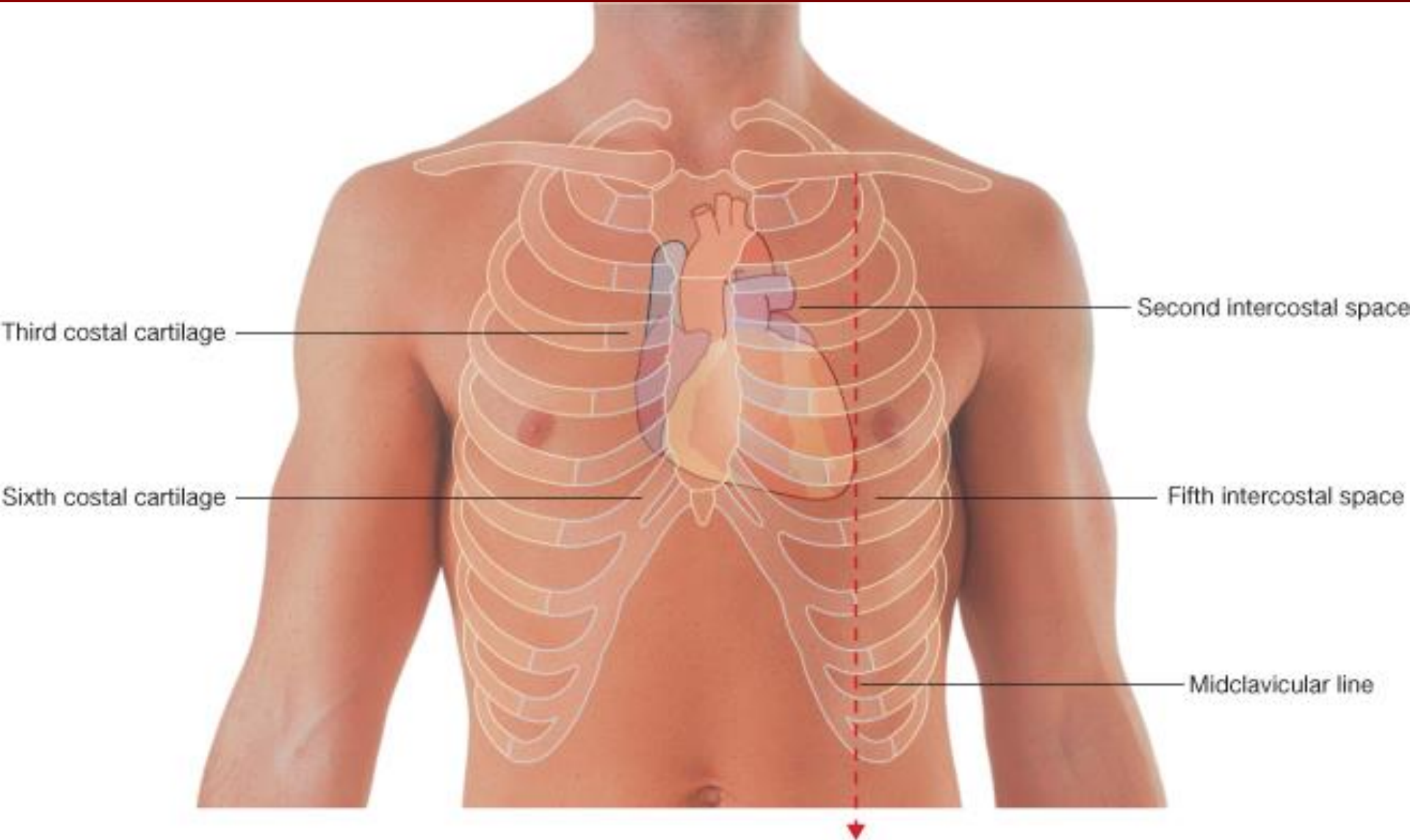


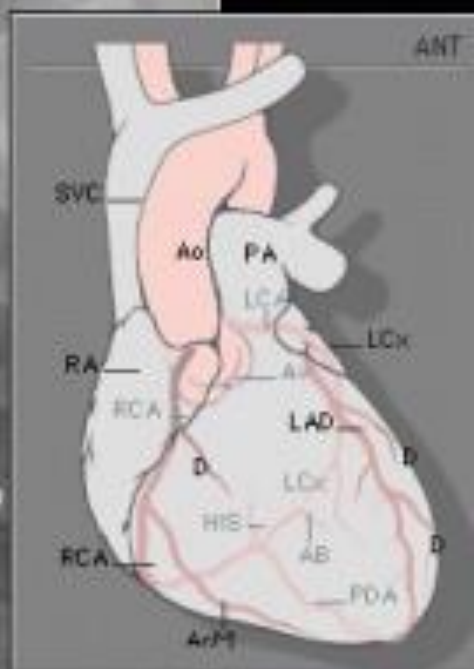
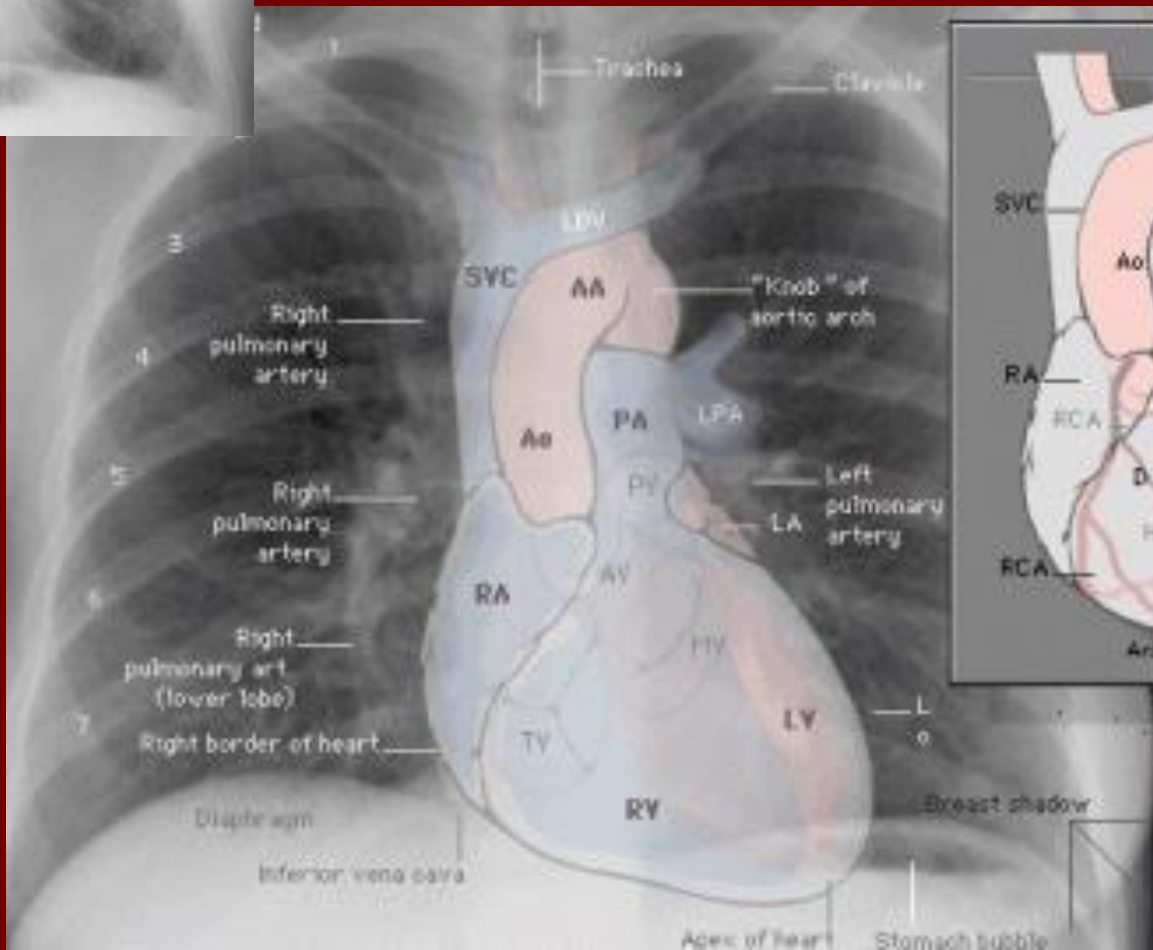


Cardiac Cycle



Surface Anatomy of the Heart







Henry Gray, 1827 – 1861

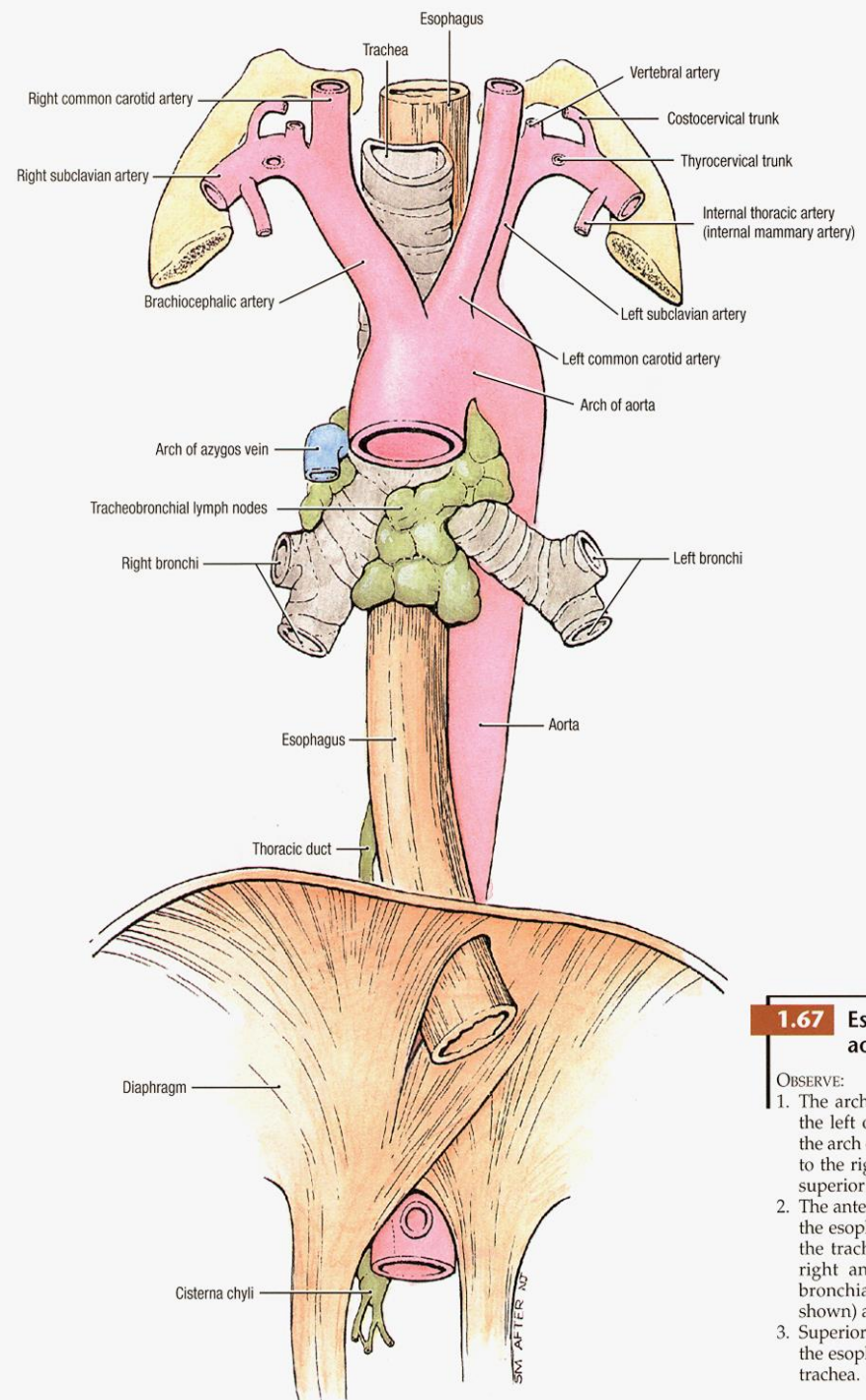
Dissecting room of St George's Hospital medical school in Kinnerton Street, London

Aorta

1-Ascending aorta

2-Arch of aorta

3-Descending aorta



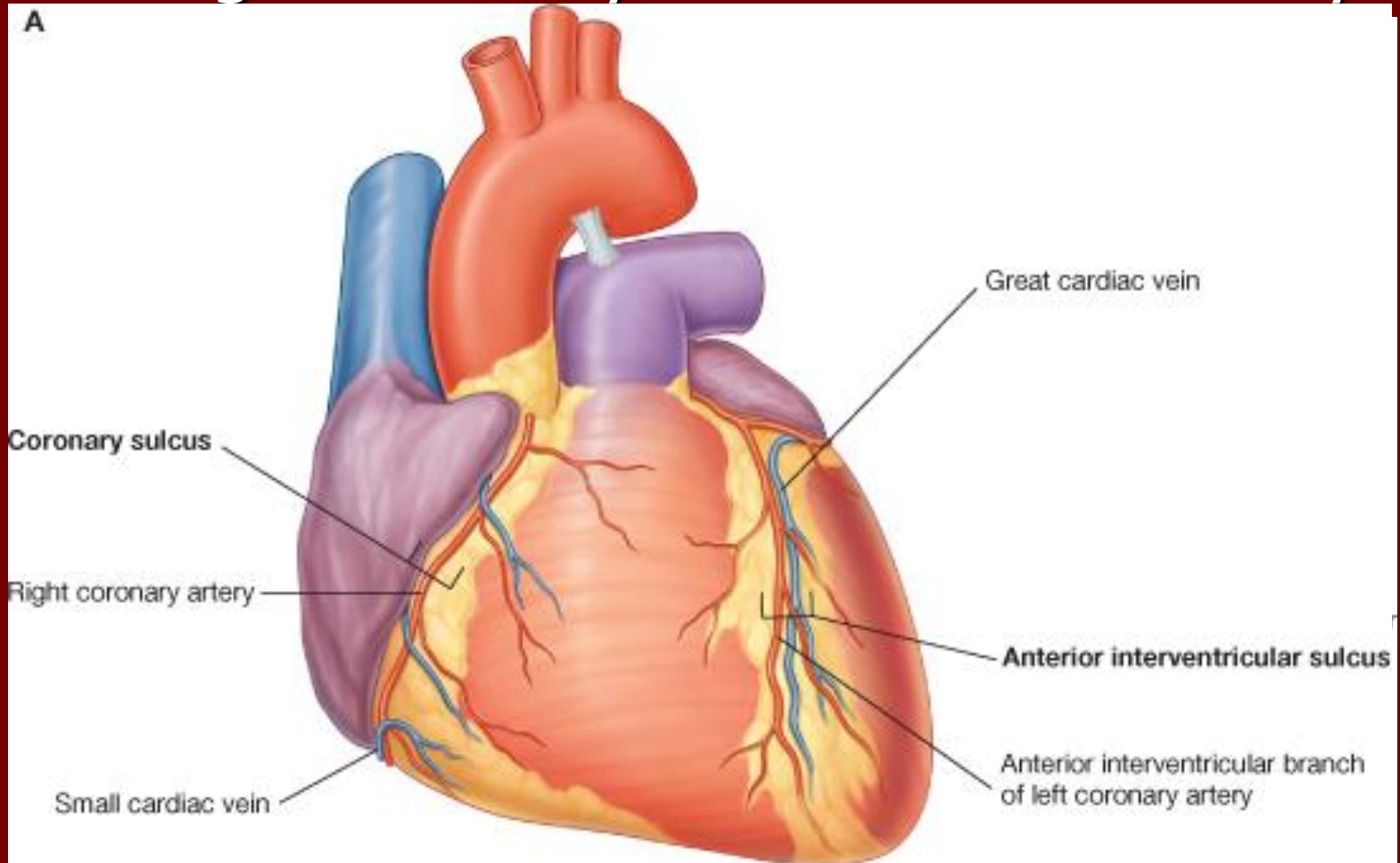
1.67 Esophagus, aorta, and trachea

OBSERVE:

1. The arch of the aorta is on the left of the trachea. The arch of the aorta is superior to the trachea.
2. The anterior relation of the esophagus to the trachea (through the tracheobronchial lymph nodes) and, finally, to the aorta is shown.
3. Superior to the trachea, the esophagus is posterior to the trachea.

Ascending aorta

1- Right coronary a. 2- left coronary a.



Arch of aorta

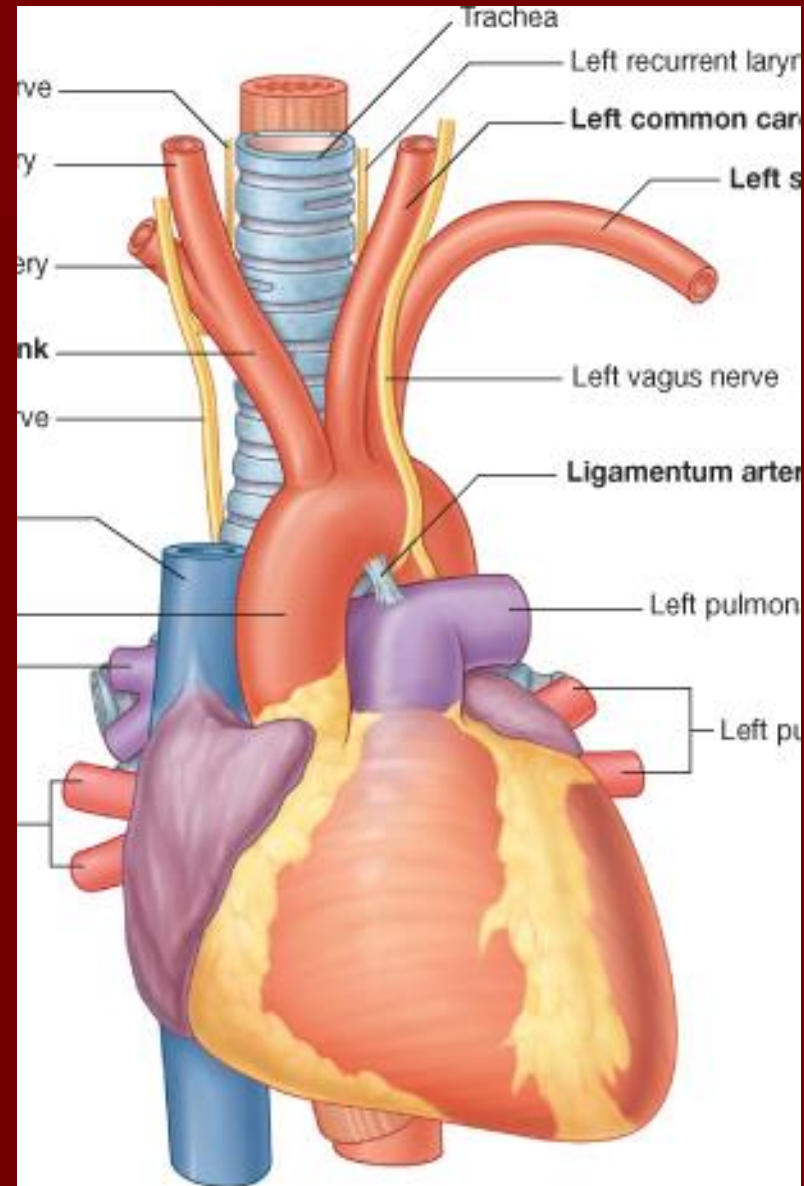
1-Brachiocephalic trunk

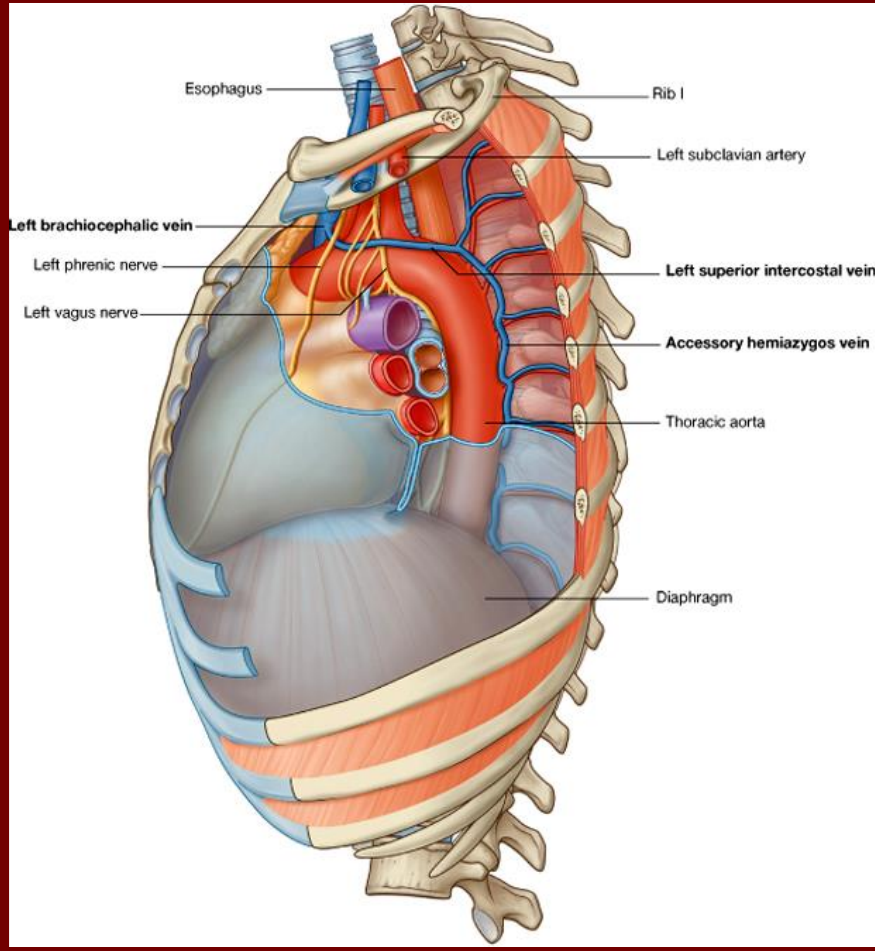
a-Right common carotid a.

b-Right subclavian a.

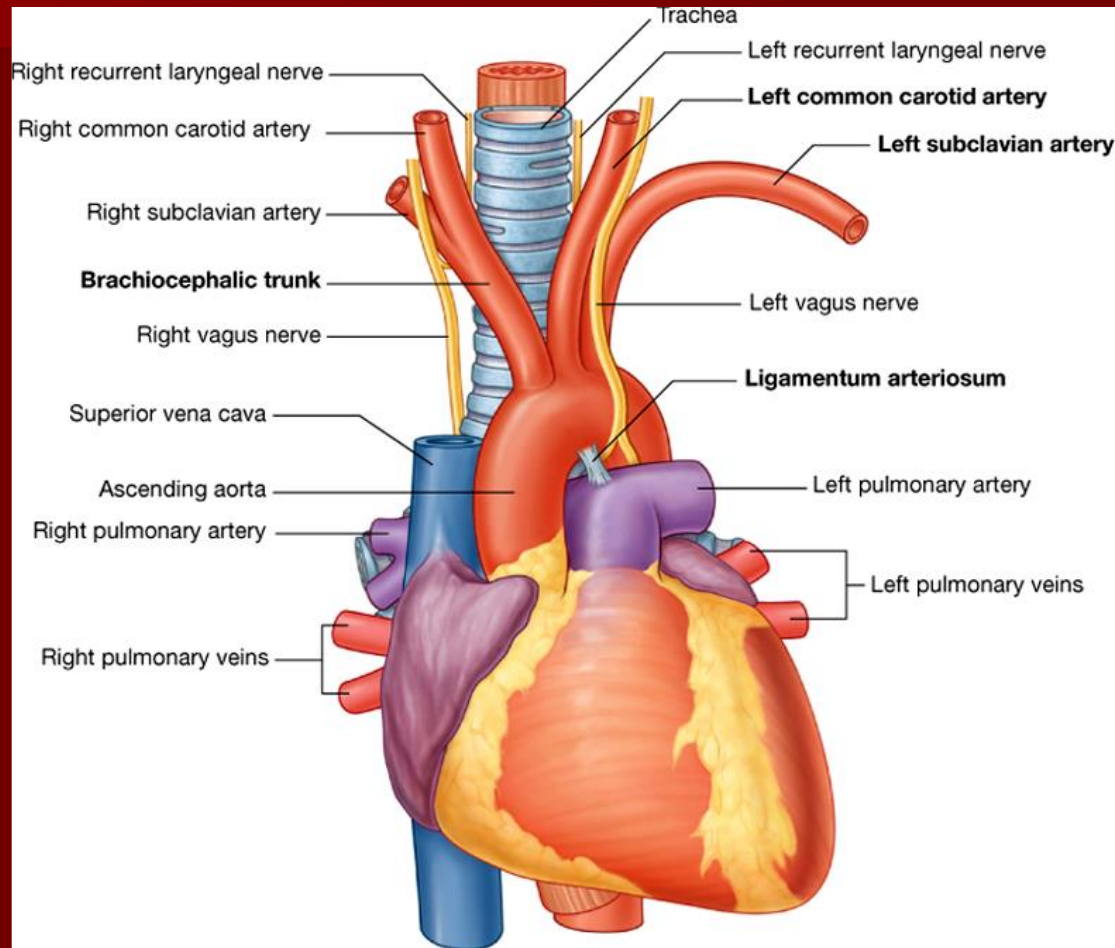
2-Left common carotid a.

3-Left subclavian a.

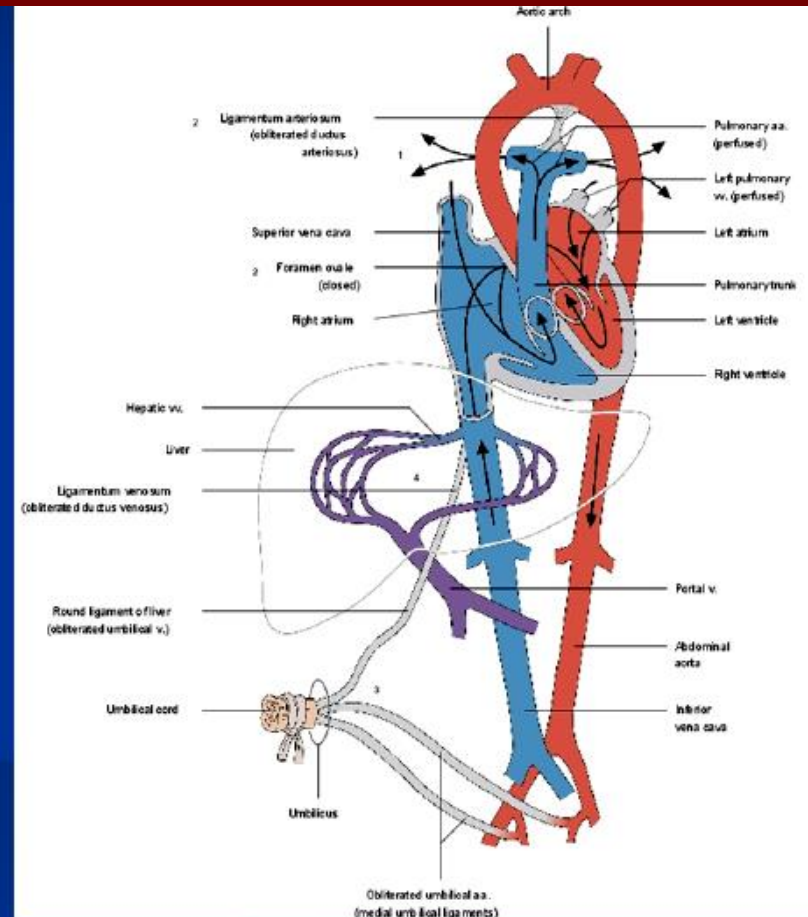
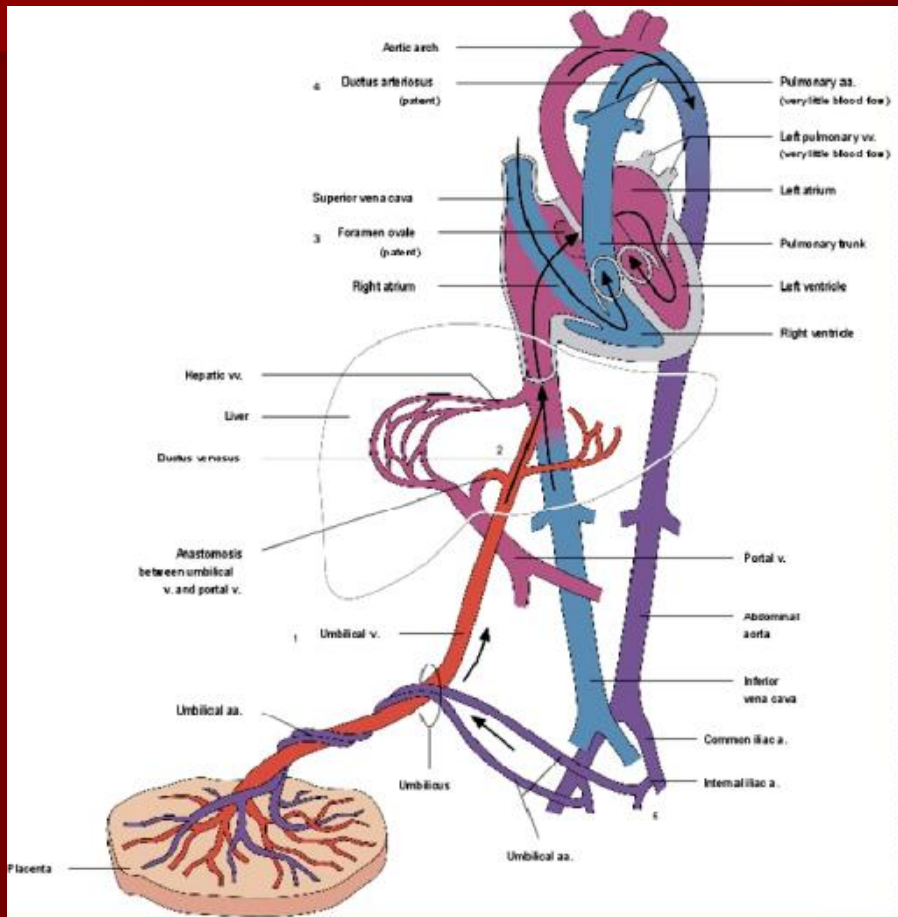




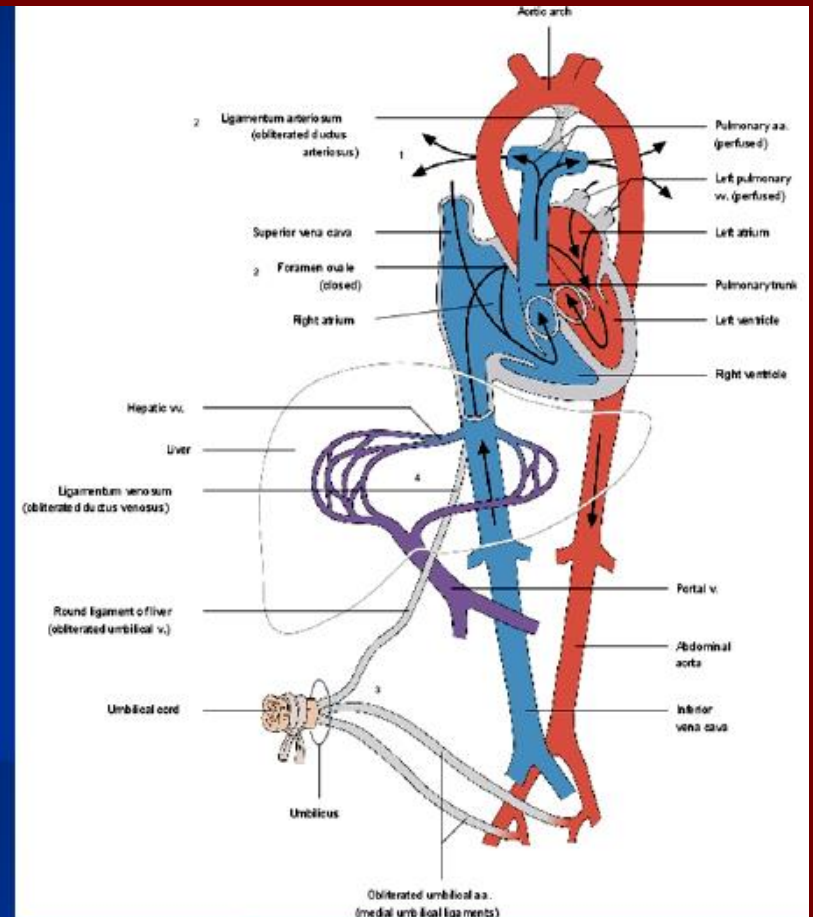
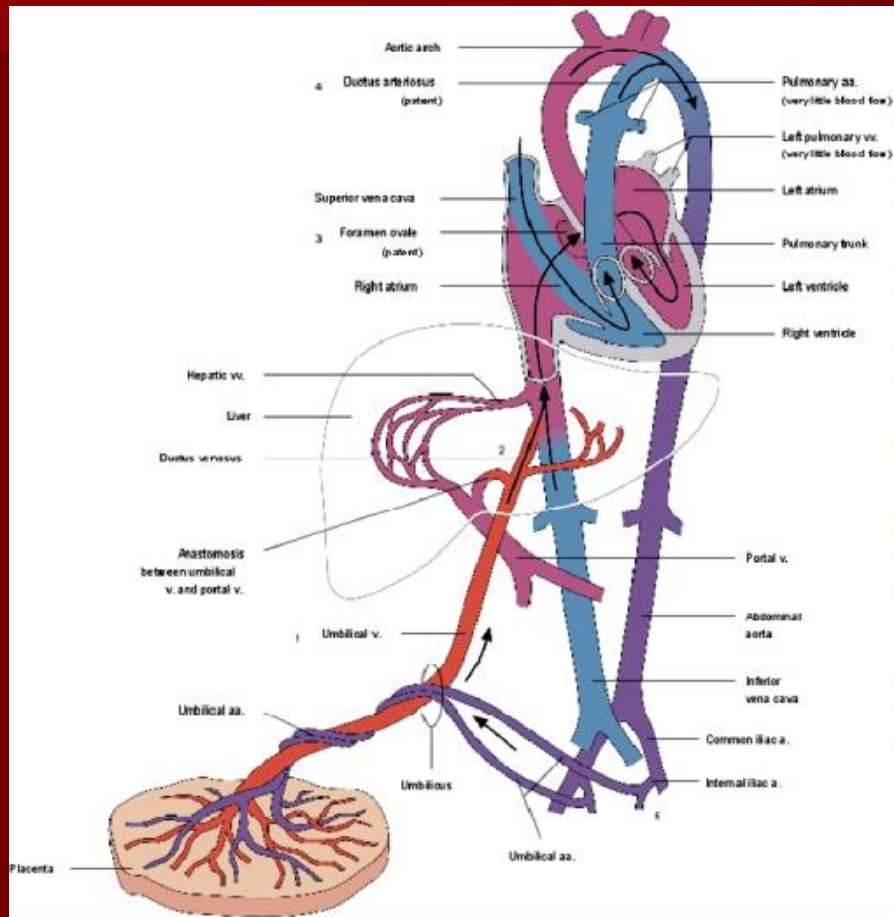
Three Main Branches of Aortic Arch



Ductus Arteriosus

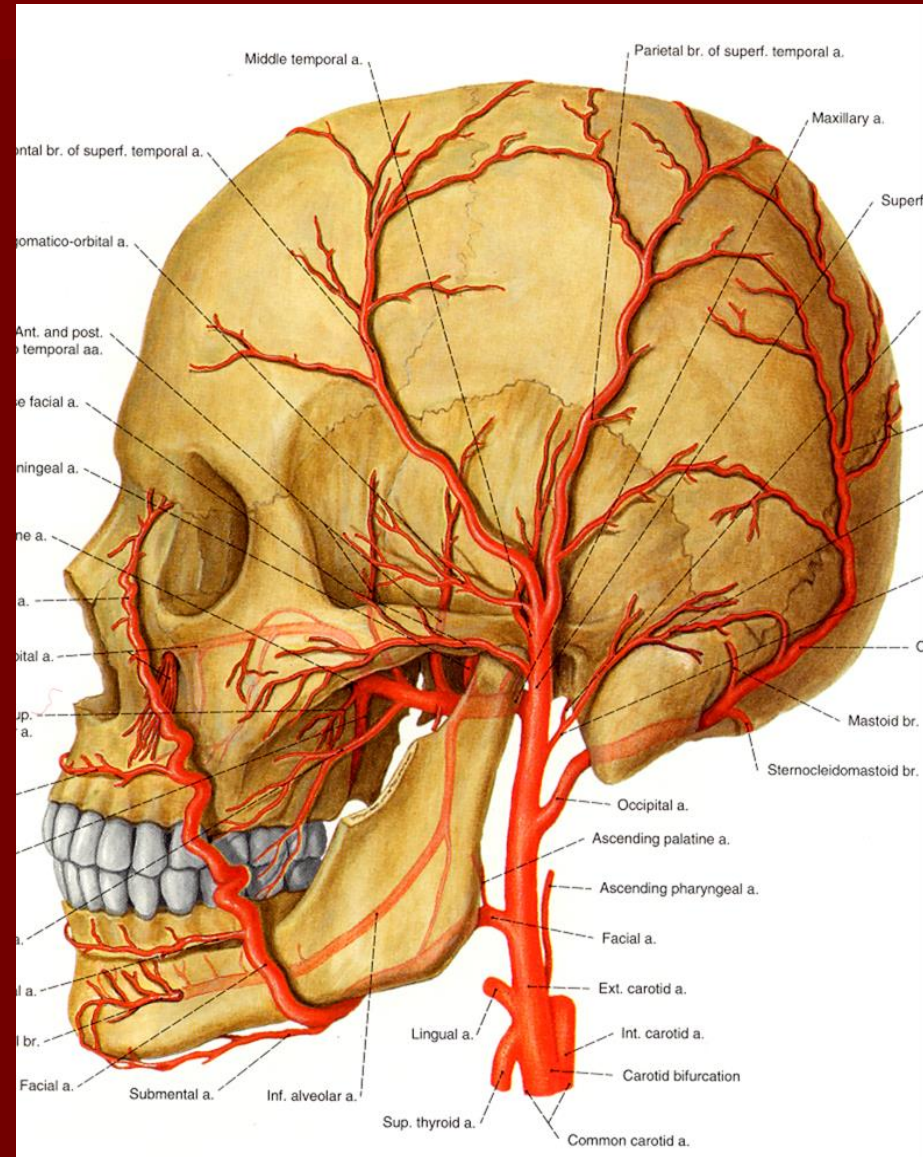


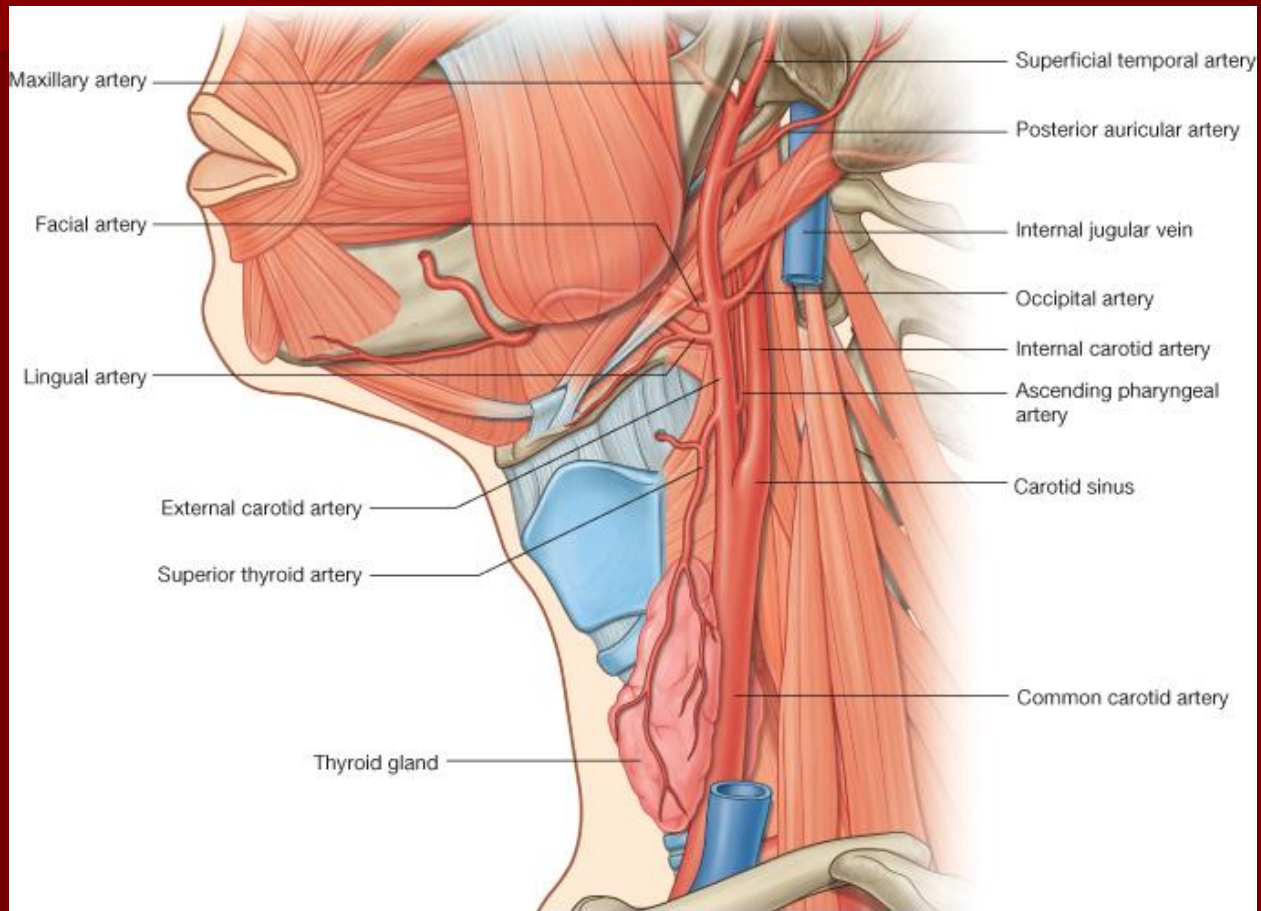
Patent Ductus Arteriosus (PDA)



Common carotid a.

- 1-Ext. carotid a.
- 2-Int. carotid a.





Subclavian a.

Axillary a.

Brachial a.

Ulnar a.

Radial a.

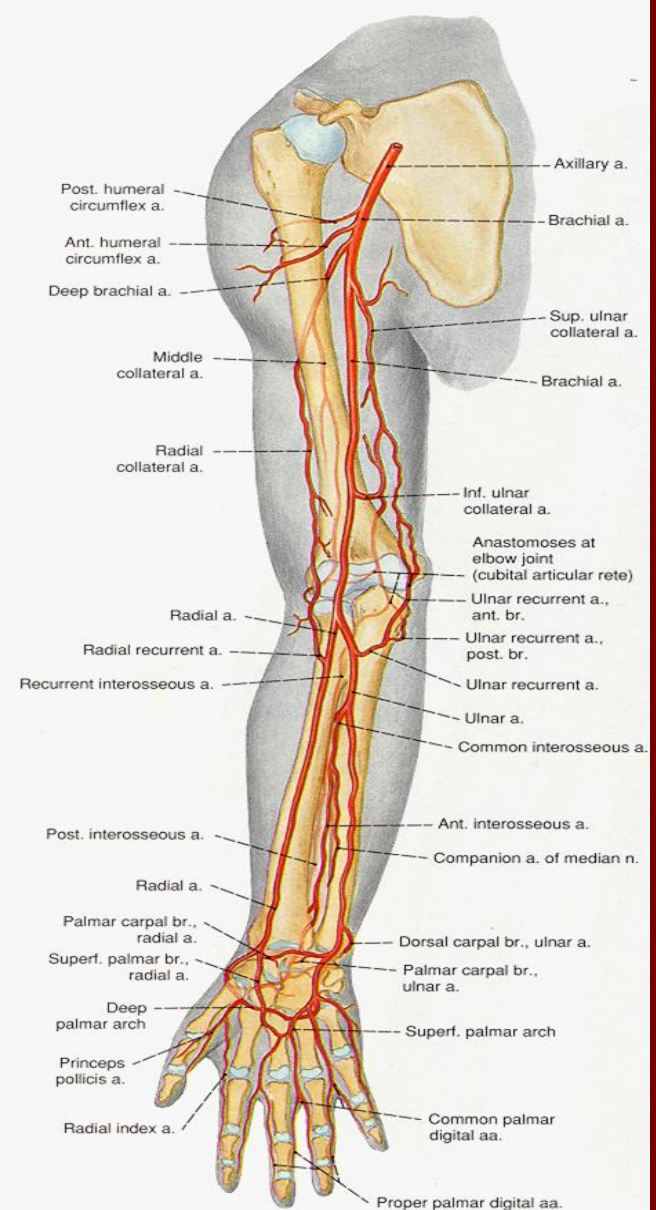
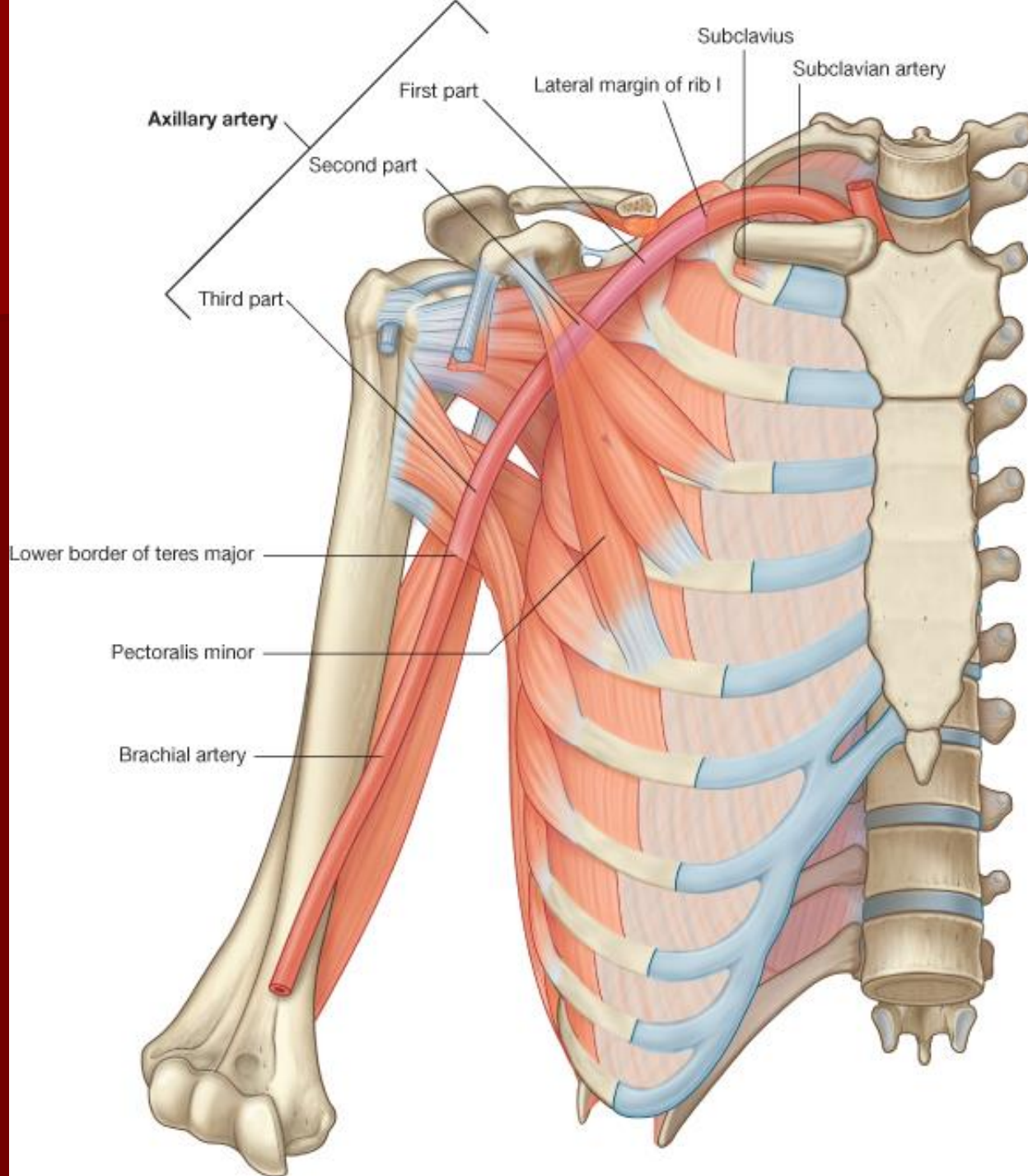


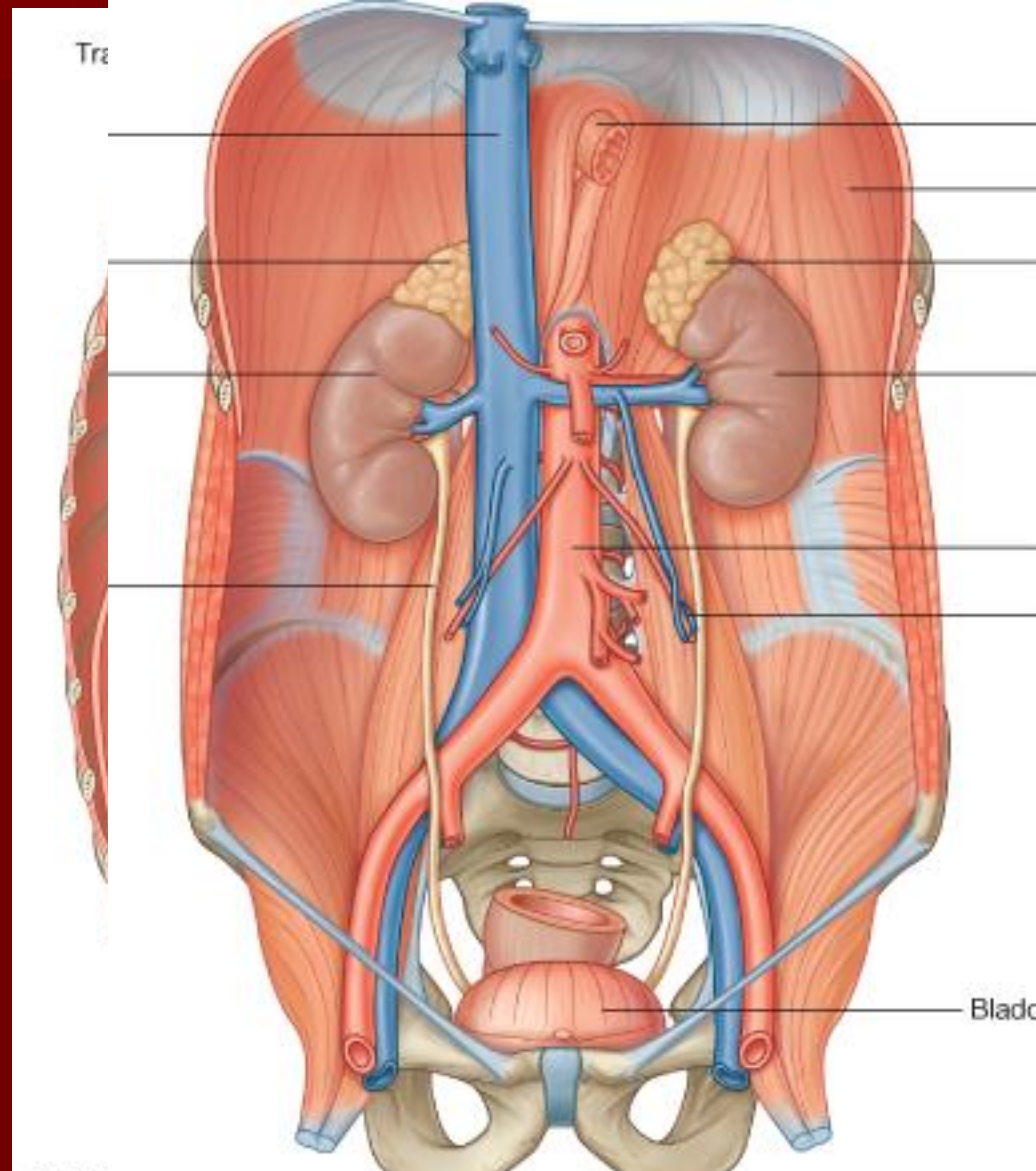
Fig. 373. Arteries of the upper limb. Schematic overview, anterior view.



Descending aorta

**1-Thoracic
aorta**

**2-Abdominal
aorta**



Thoracic aorta

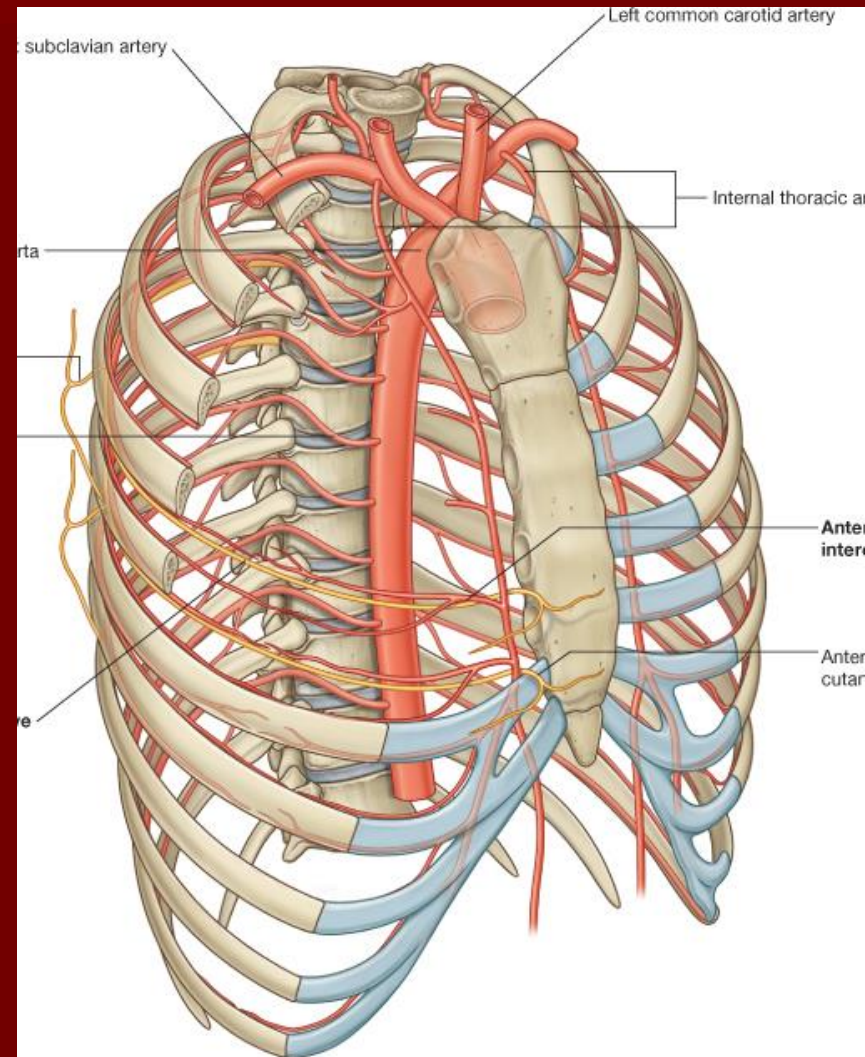
1-Post. intercostal aa.

2-Bronchial a.

3-Esophageal a.

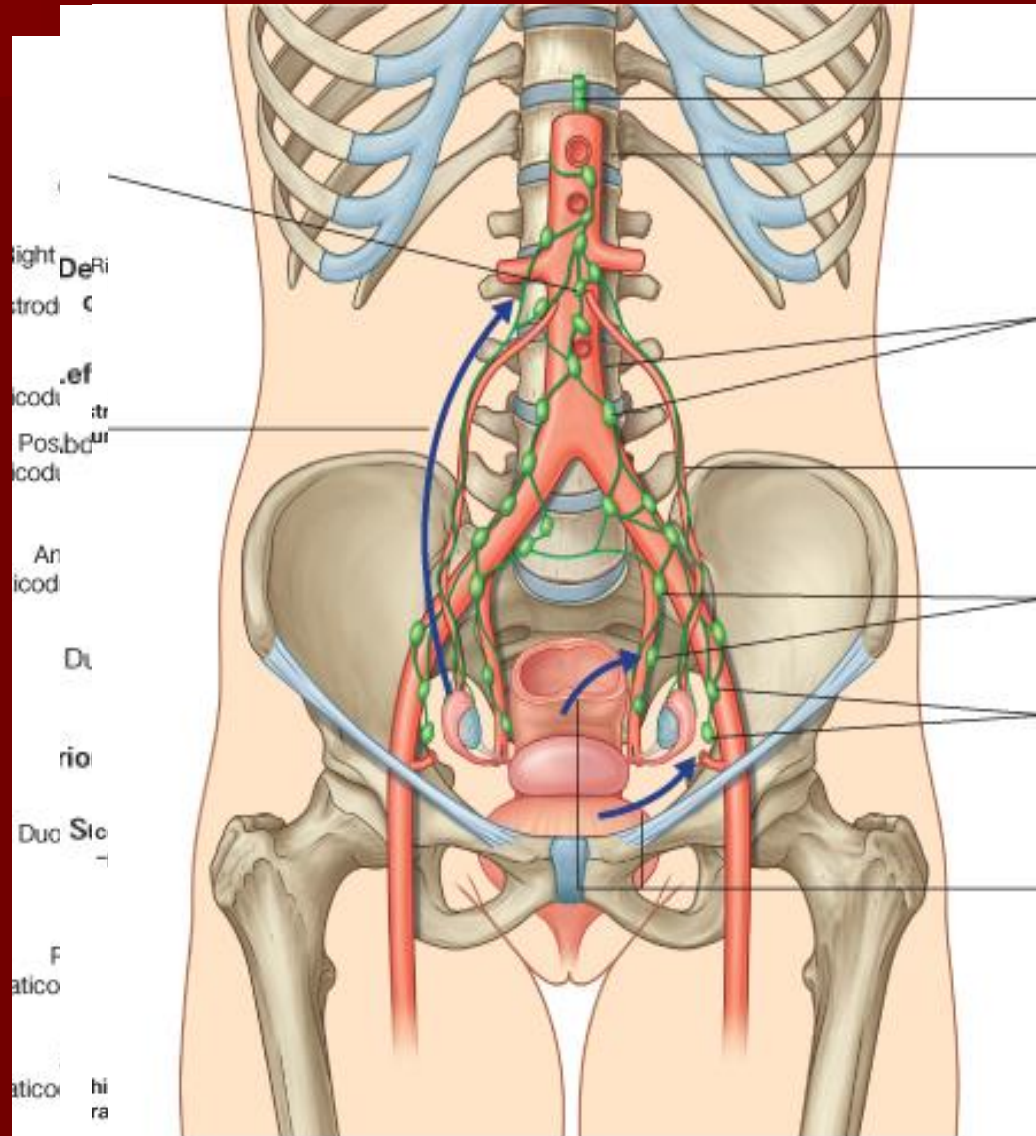
4-Mediastinal a.

5-Diaphragmatic a.



Abdominal aorta

- 1- Celiac a.
- 2-Sup. Mesentric a.
- 3-Inf. Mesentric a.
- 4-Renal aa.
- 5-Gonadal aa.
 - Testicular aa.
 - Ovarian aa.
- 6-Common iliac aa.
 - Int. iliac aa.
 - Ext. iliac aa.



Ext. iliac a.

Femoral a.

Popliteal a.

Ant. Tibial a.

Post. Tibial a.

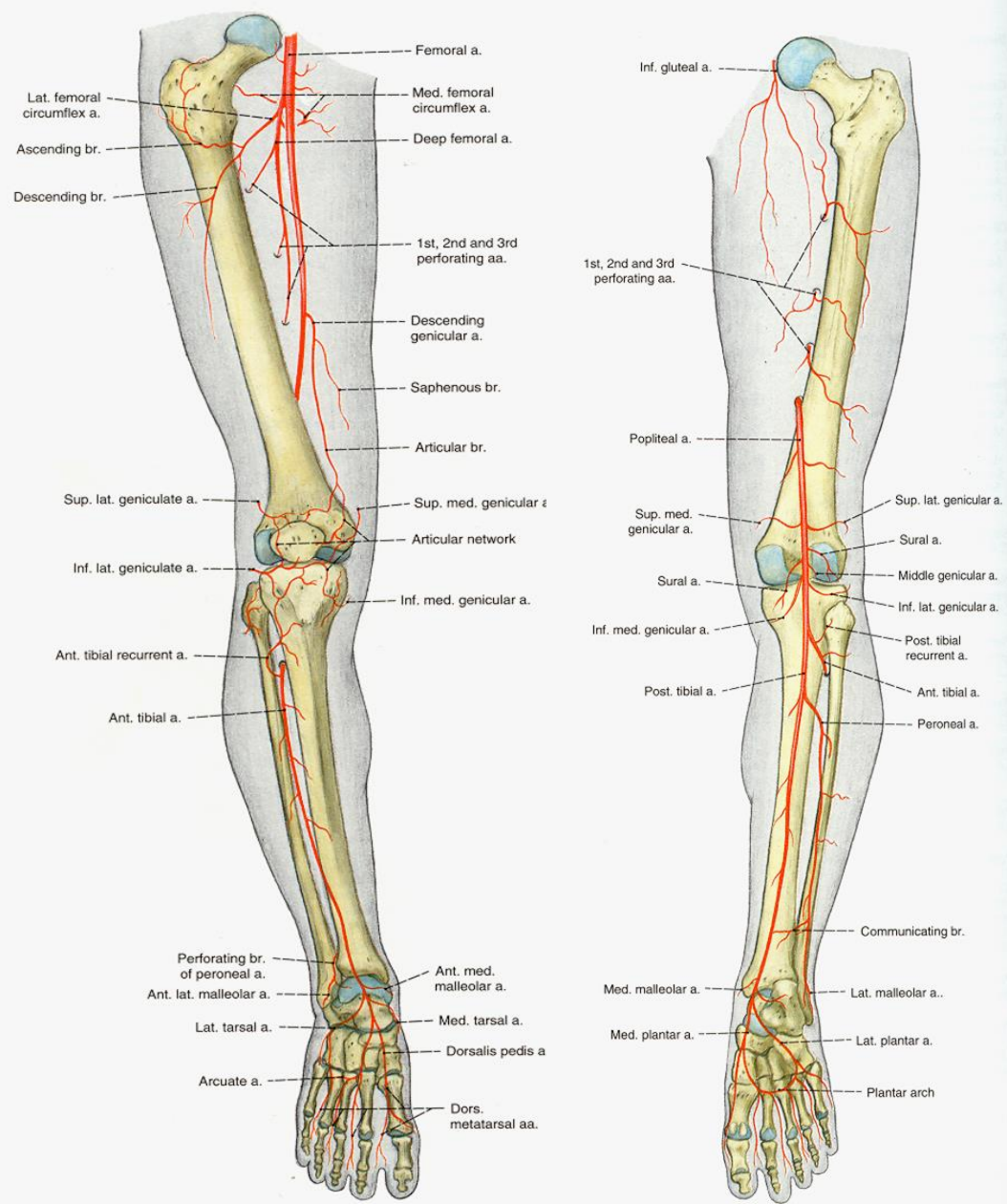


Fig. 461. Survey diagram of the arteries of the lower limb, anterior view.

Fig. 462. Survey diagram of the arteries of the lower limb, posterior view.

Man



ON

OFF

Billie Looy 1001-5001

Woman

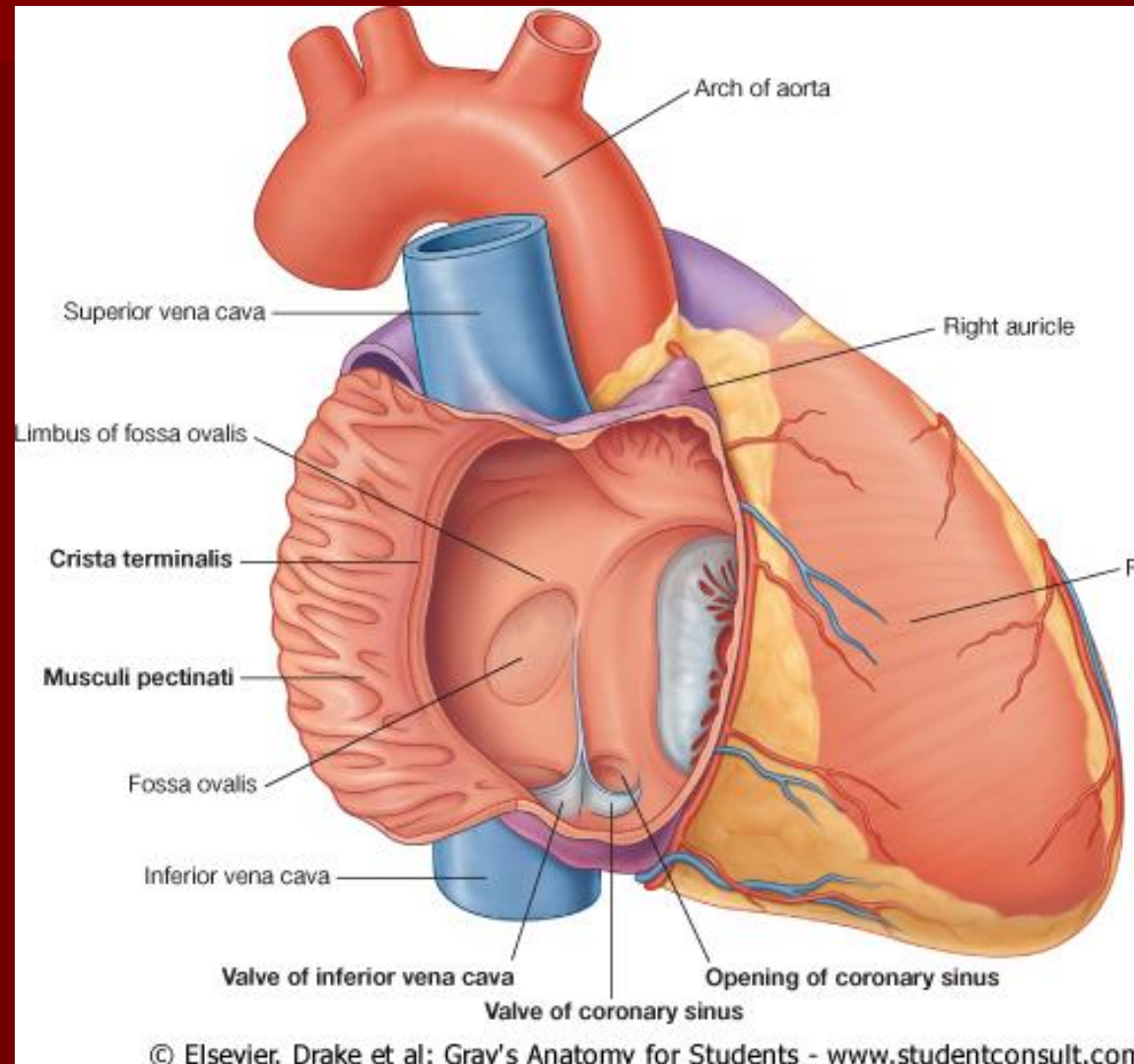
ON

OFF



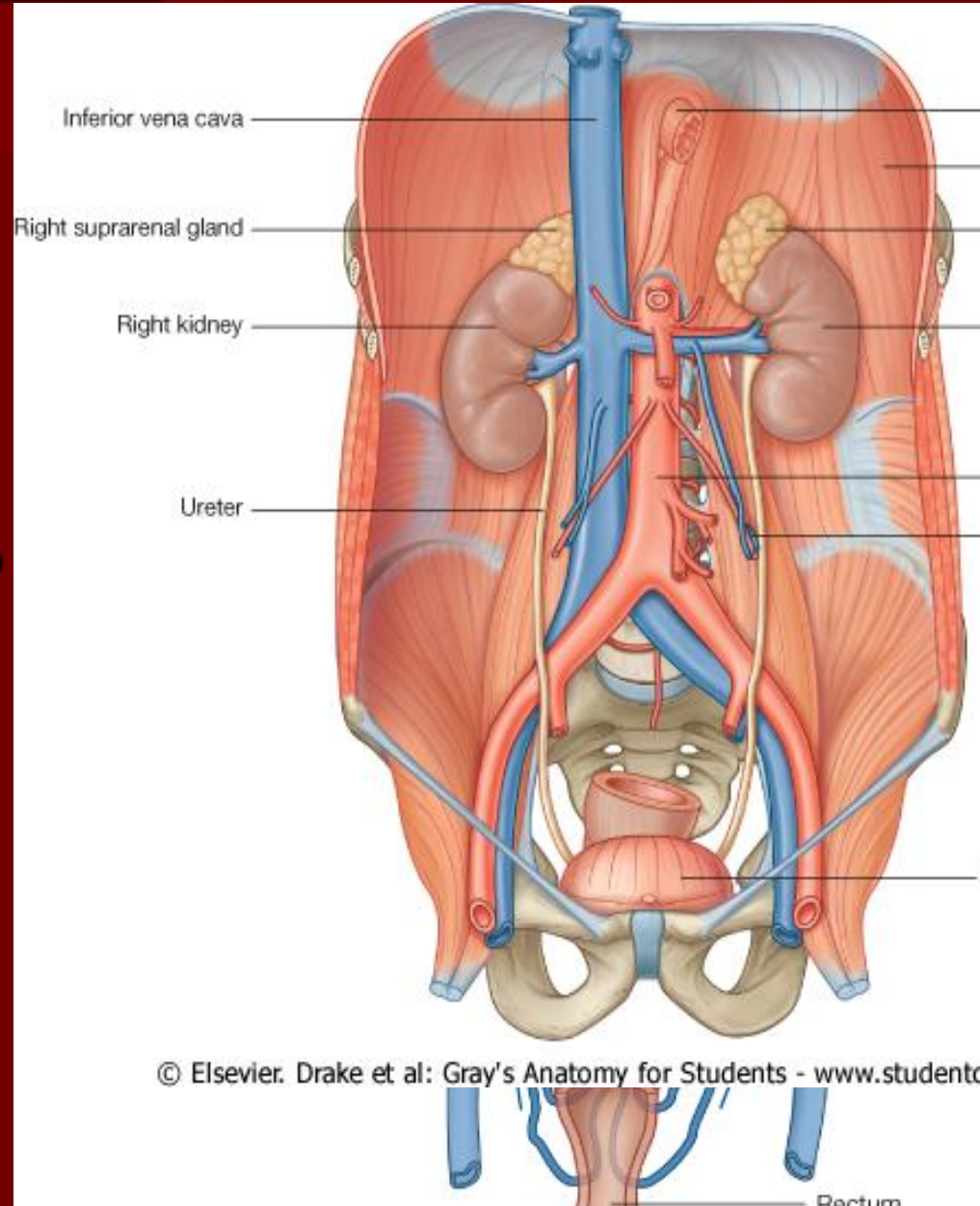
Veins → Right atrium

- 1-Coronary sinus
- 2-Sup. vena cava
- 3-Inf. vena cava



Inf. vena cava

- 1-Hepatic vv.
 - Portal v.
- 2-Renal vv.
- 3-Right gonadal v.
- 4-R. Common iliac v.
 - Int. iliac v.
 - Ext. iliac v.
- 5-L. Common iliac v.
 - Femoral v.



Superficial vv.

Upper limb

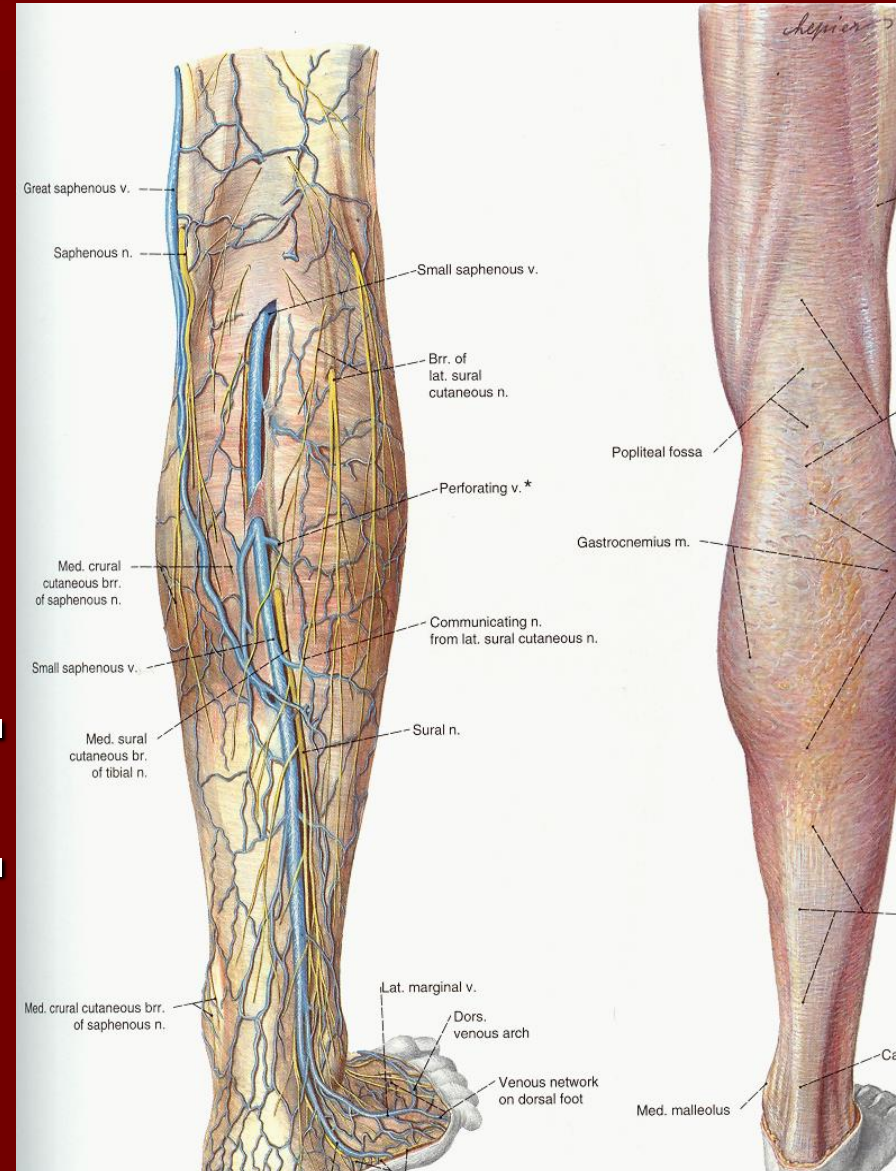
1-Cephalic v.

2-Basilic v.

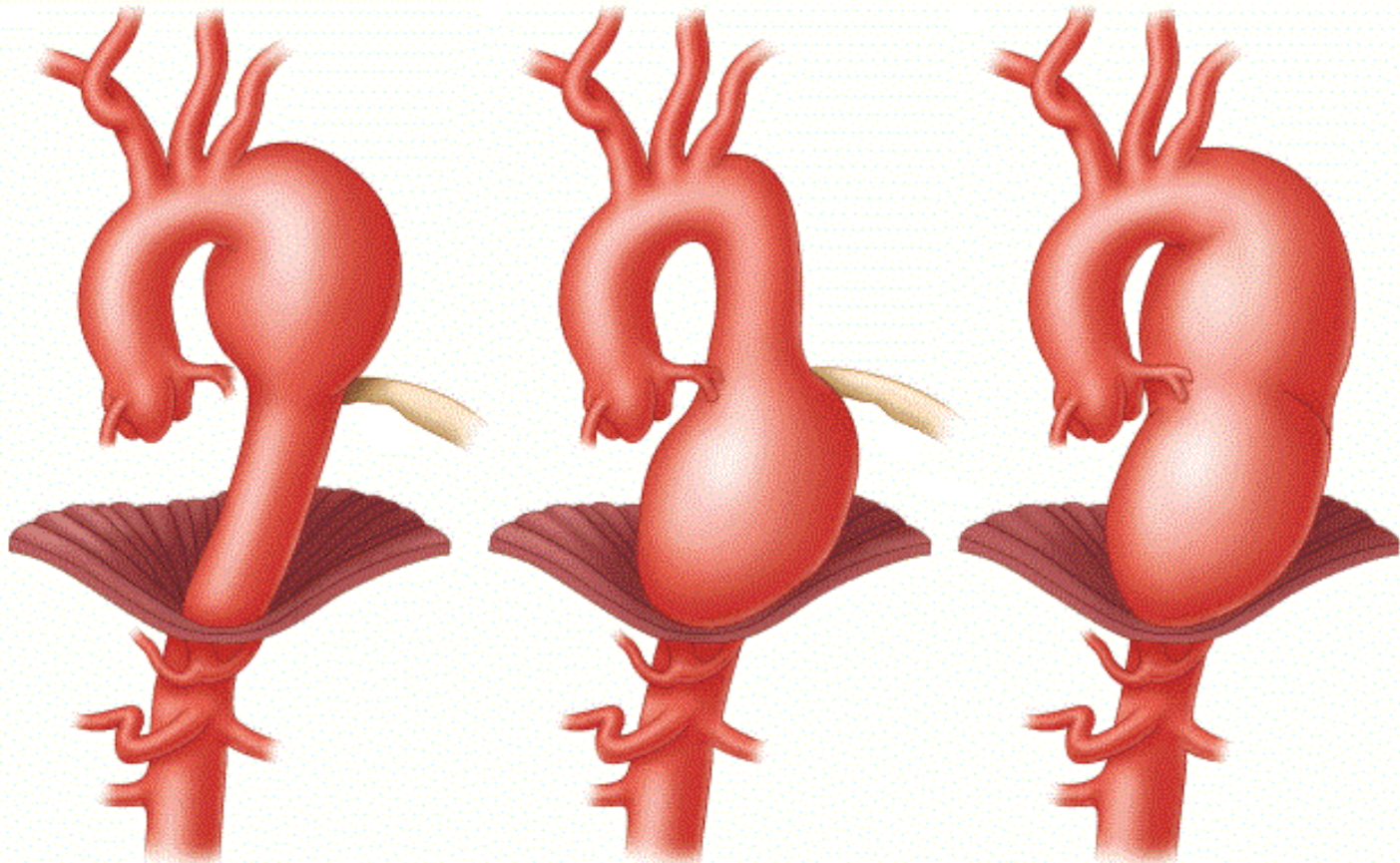
Lower limb

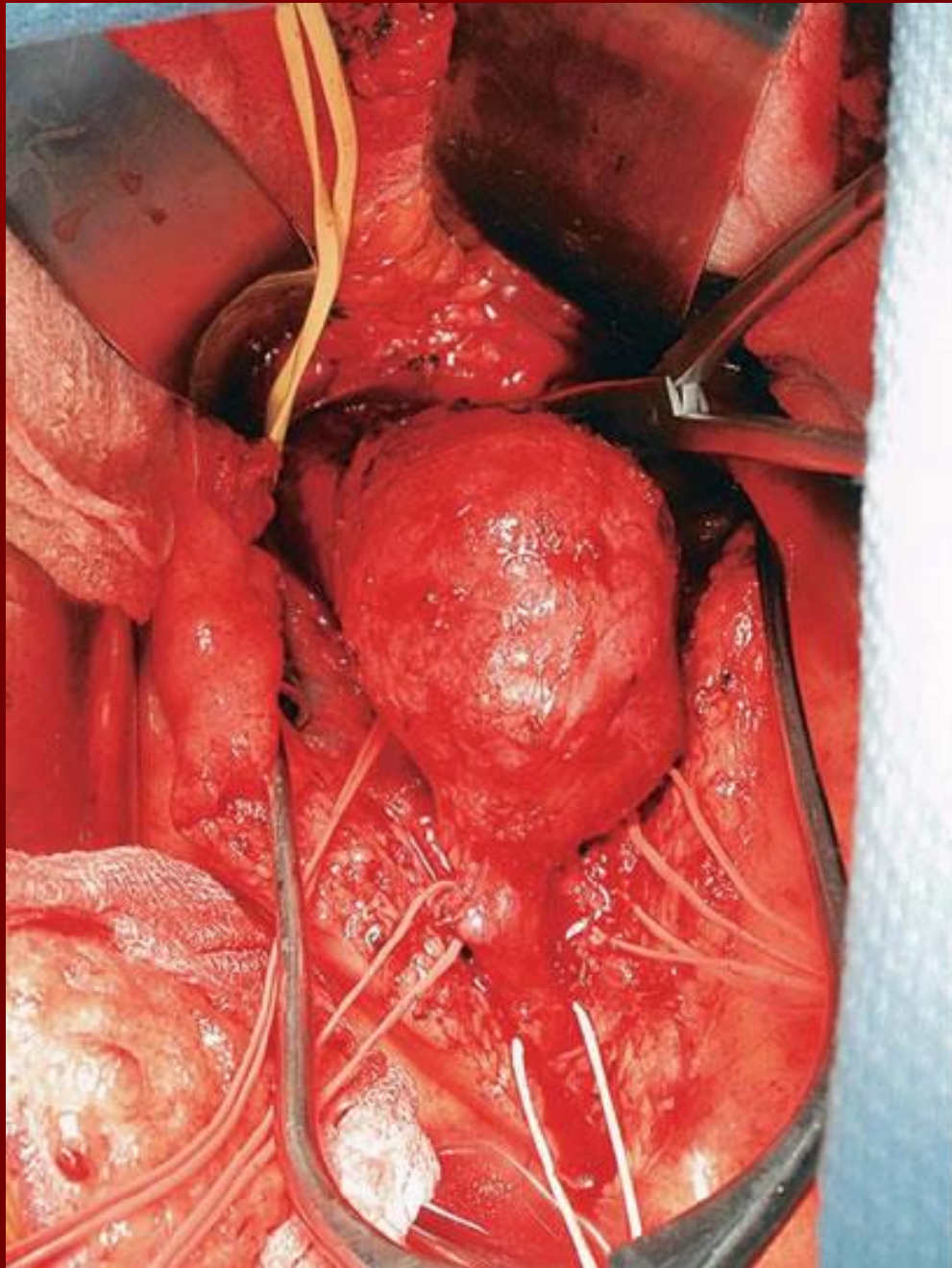
1-Great saphenous v.

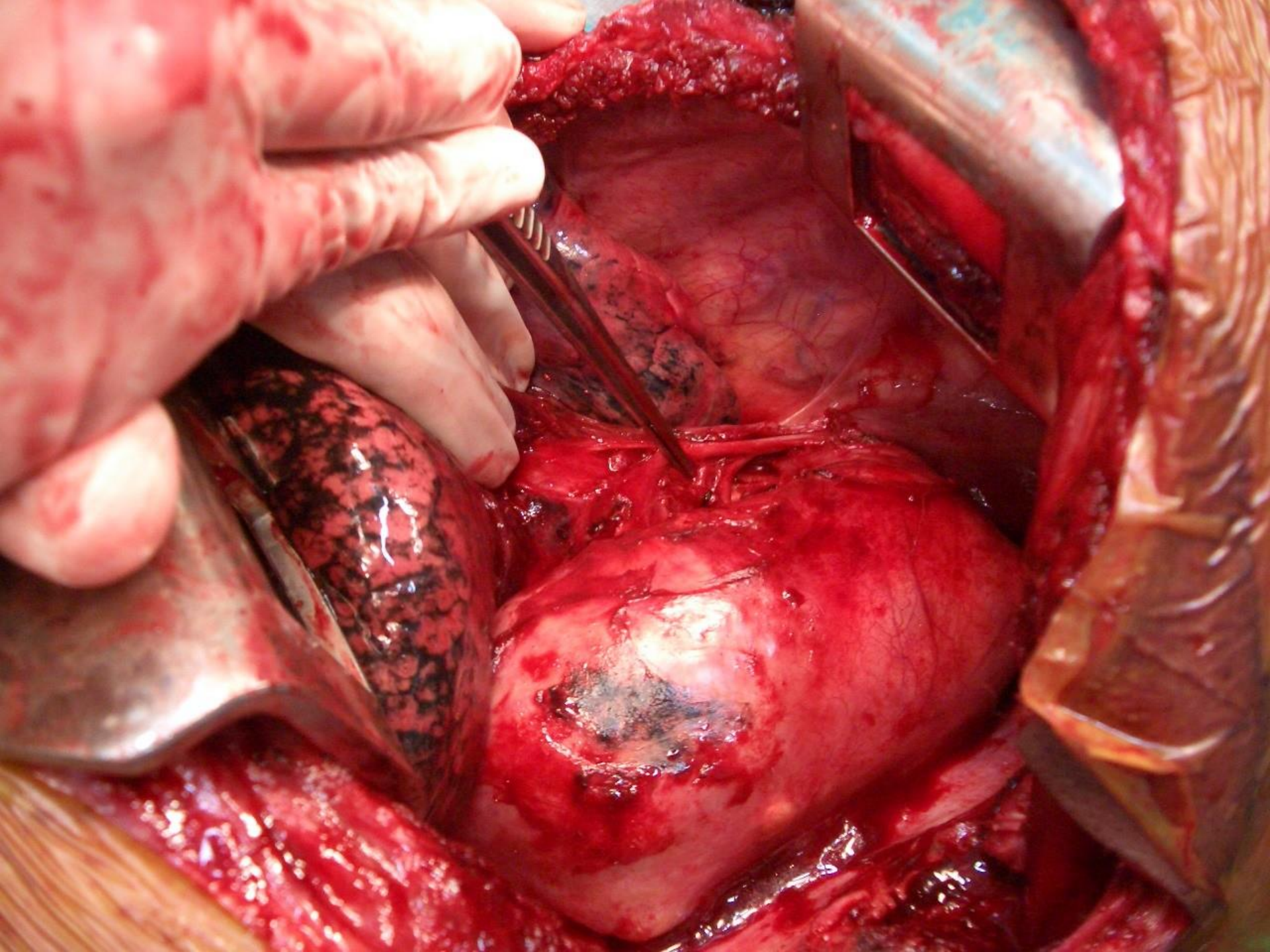
2-Small saphenous v.











Ectopic Heart

