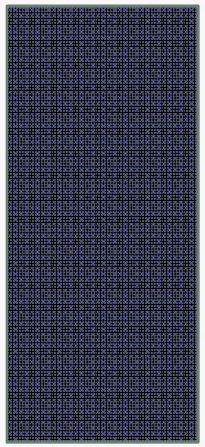
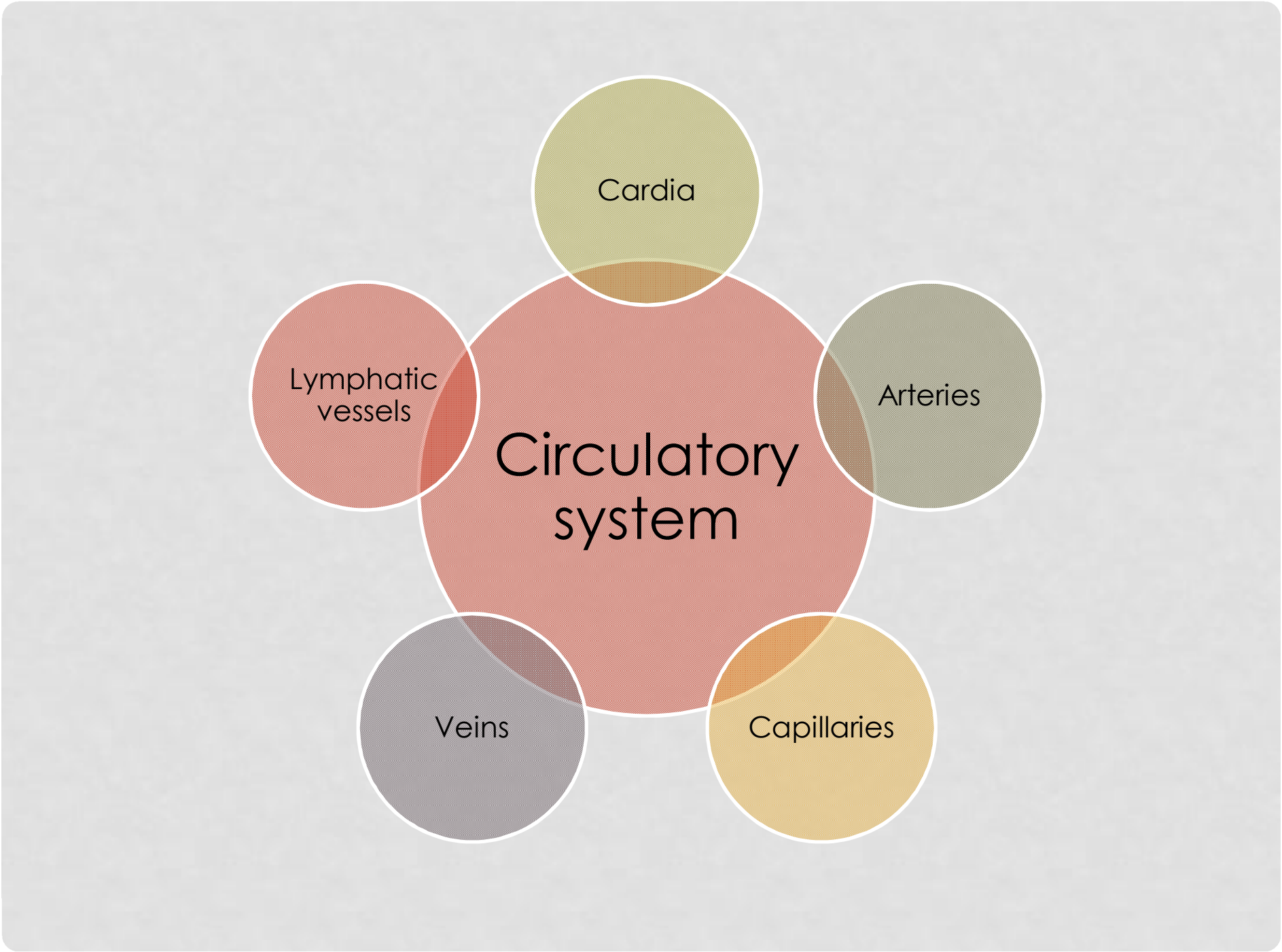
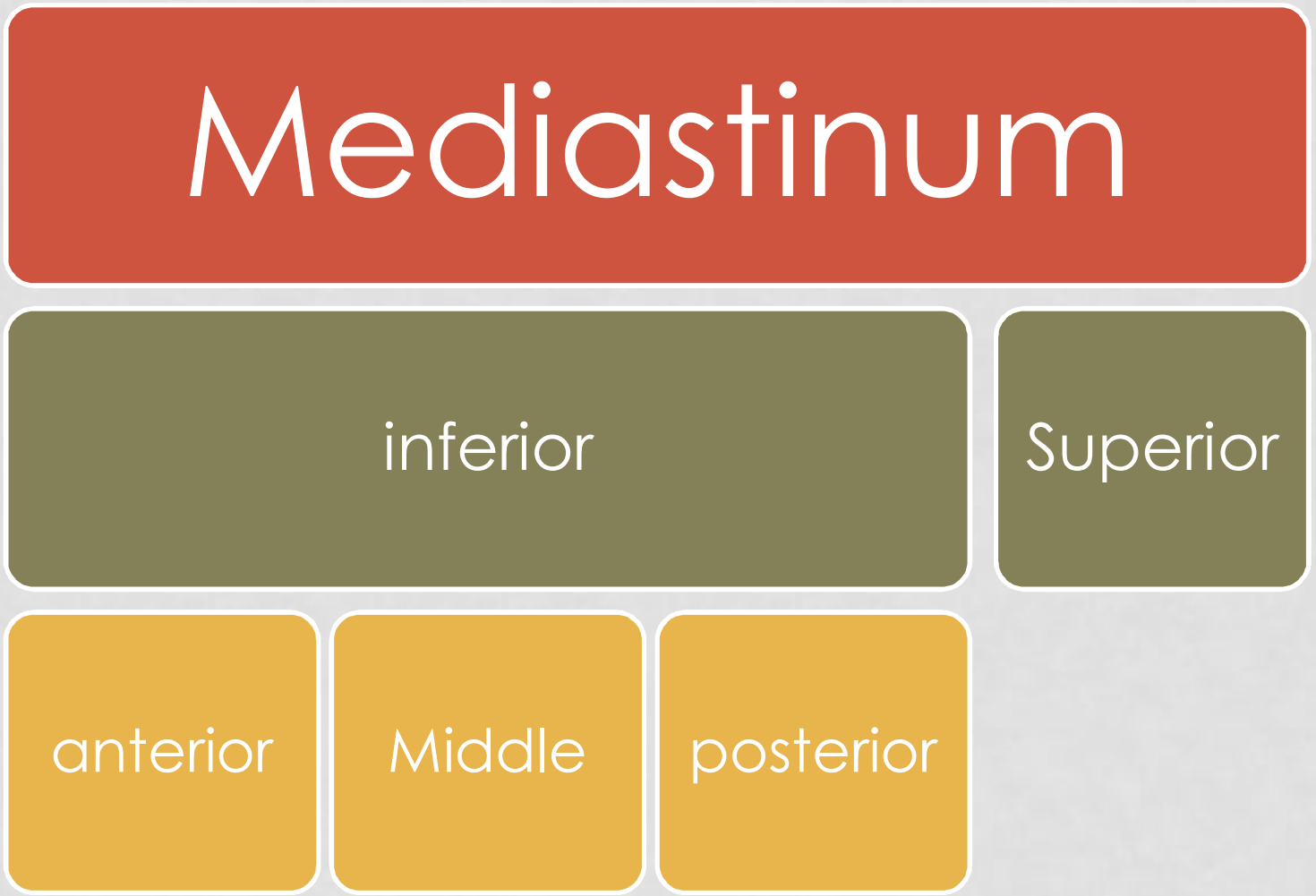
CIRCULATORY SYSTEM

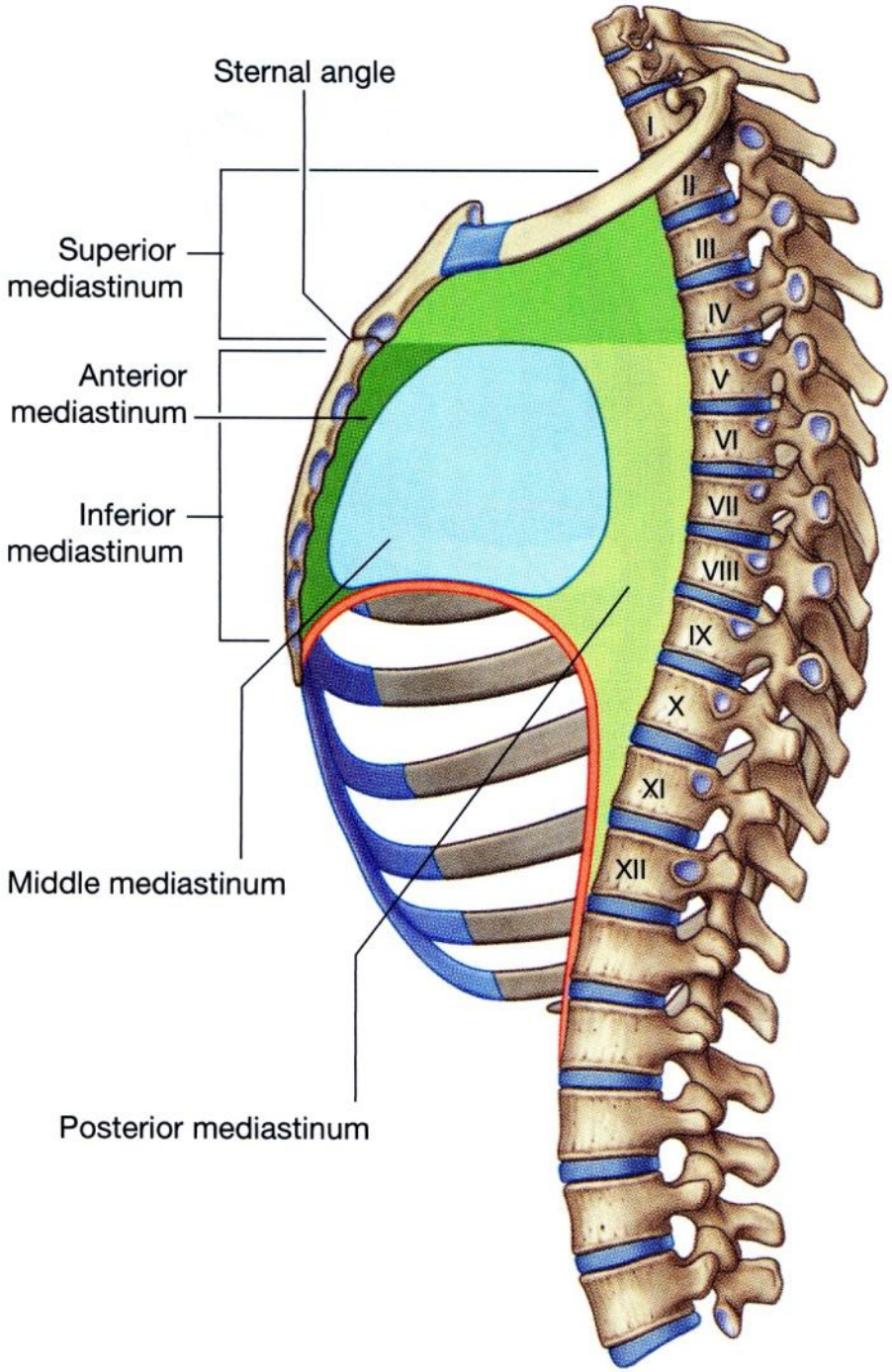
FOR PARA MEDICINE STUDENT

DR. SAEEDNIA




Cardia
Lymphatic vessels
Arteries
Circulatory system
Veins
Capillaries


Mediastinum
inferior
Superior
anterior
Middle
posterior


Sternal angle
Superior mediastinum
Anterior mediastinum
Inferior mediastinum
Middle mediastinum
Posterior mediastinum
I
II
III
IV
V
VI
VII
VIII
IX
X
XI
XII

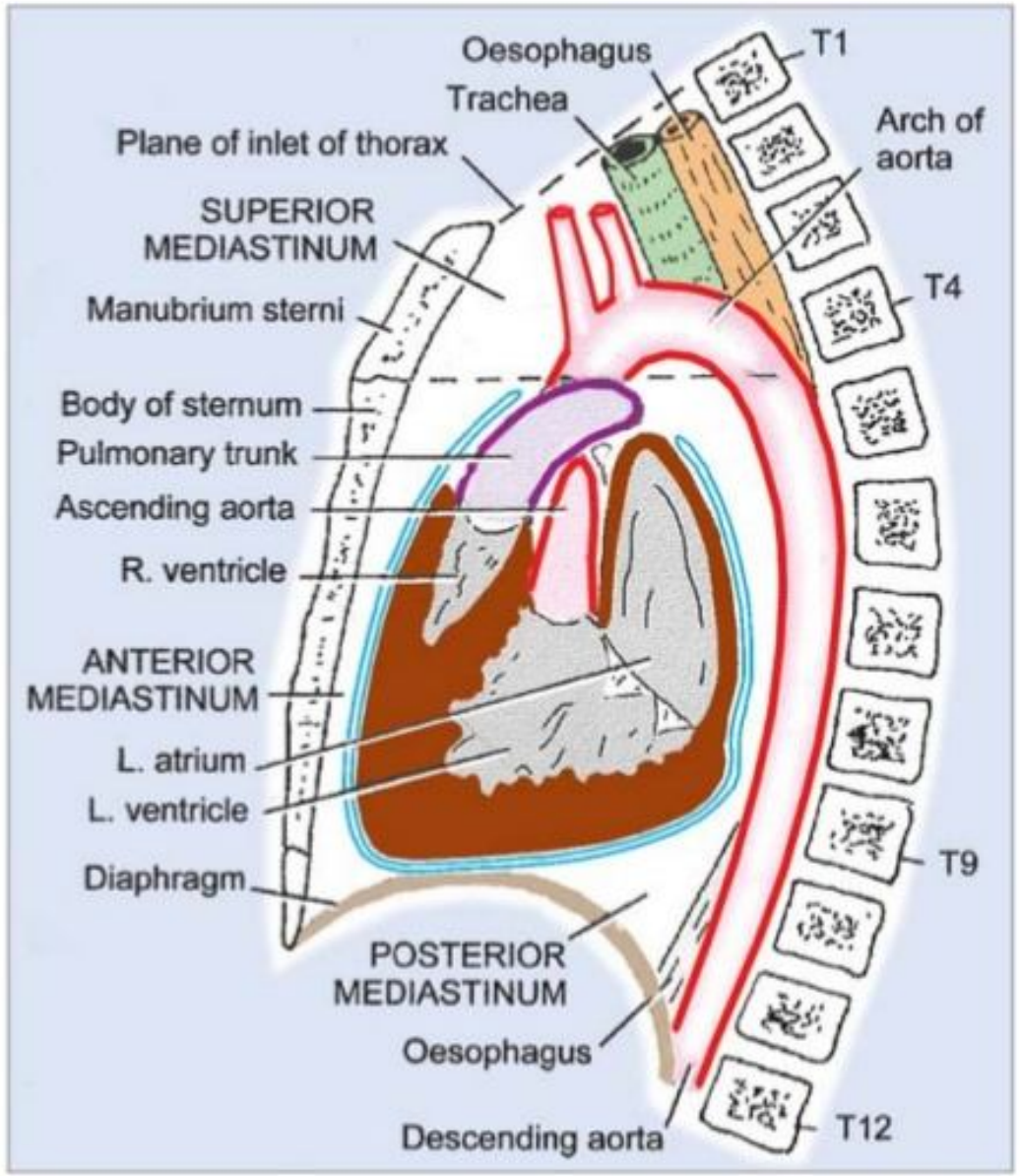
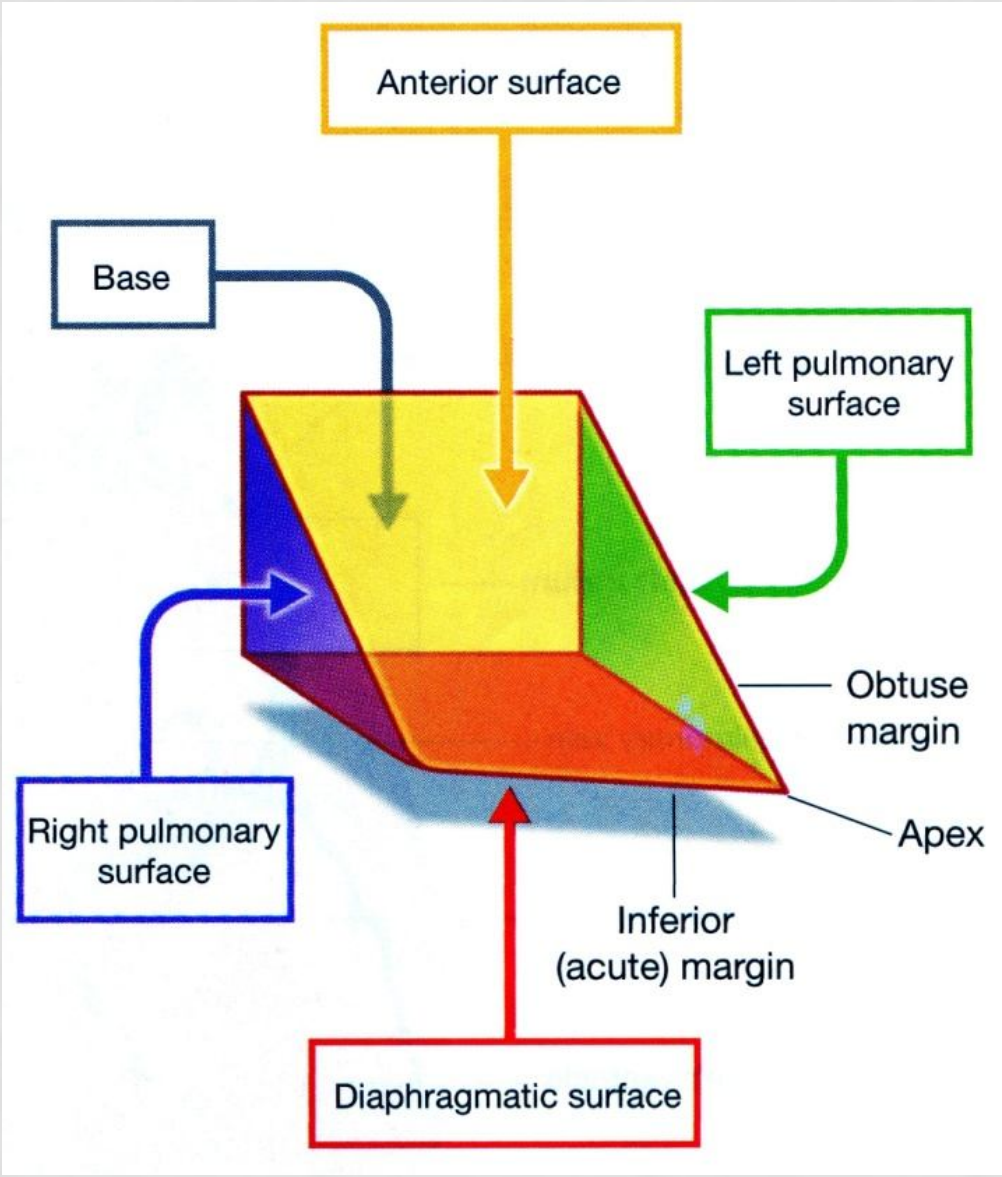


Fig. 18.5. Schematic sagittal section through the thorax to show the subdivisions of the mediastinum

Cardiac surfaces

- Sternocostal
- Diaphragmatic
- Left pulmonary
- Right pulmonary
- Base=in supine position T5-T9
- apex



Surface anatomy

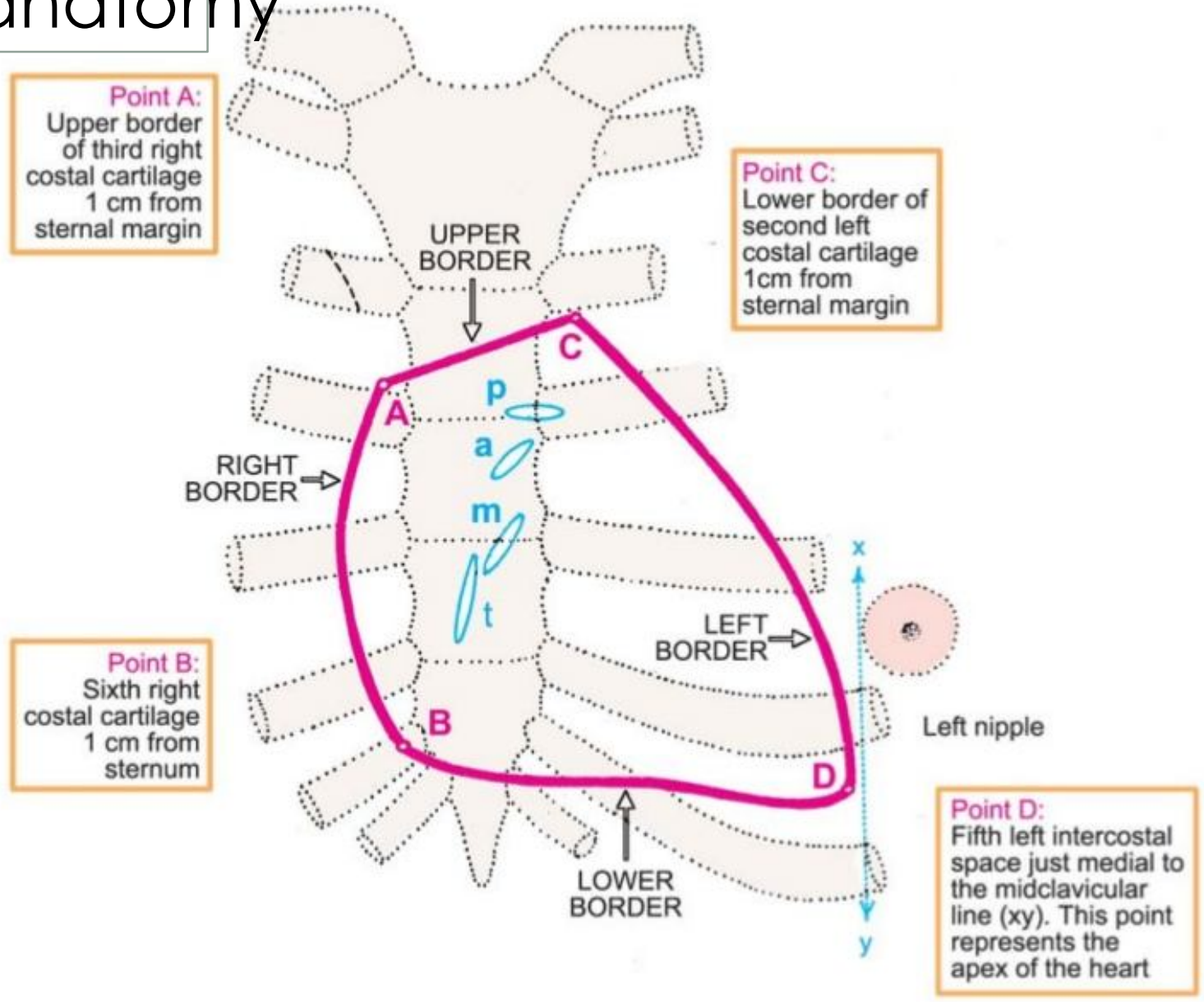
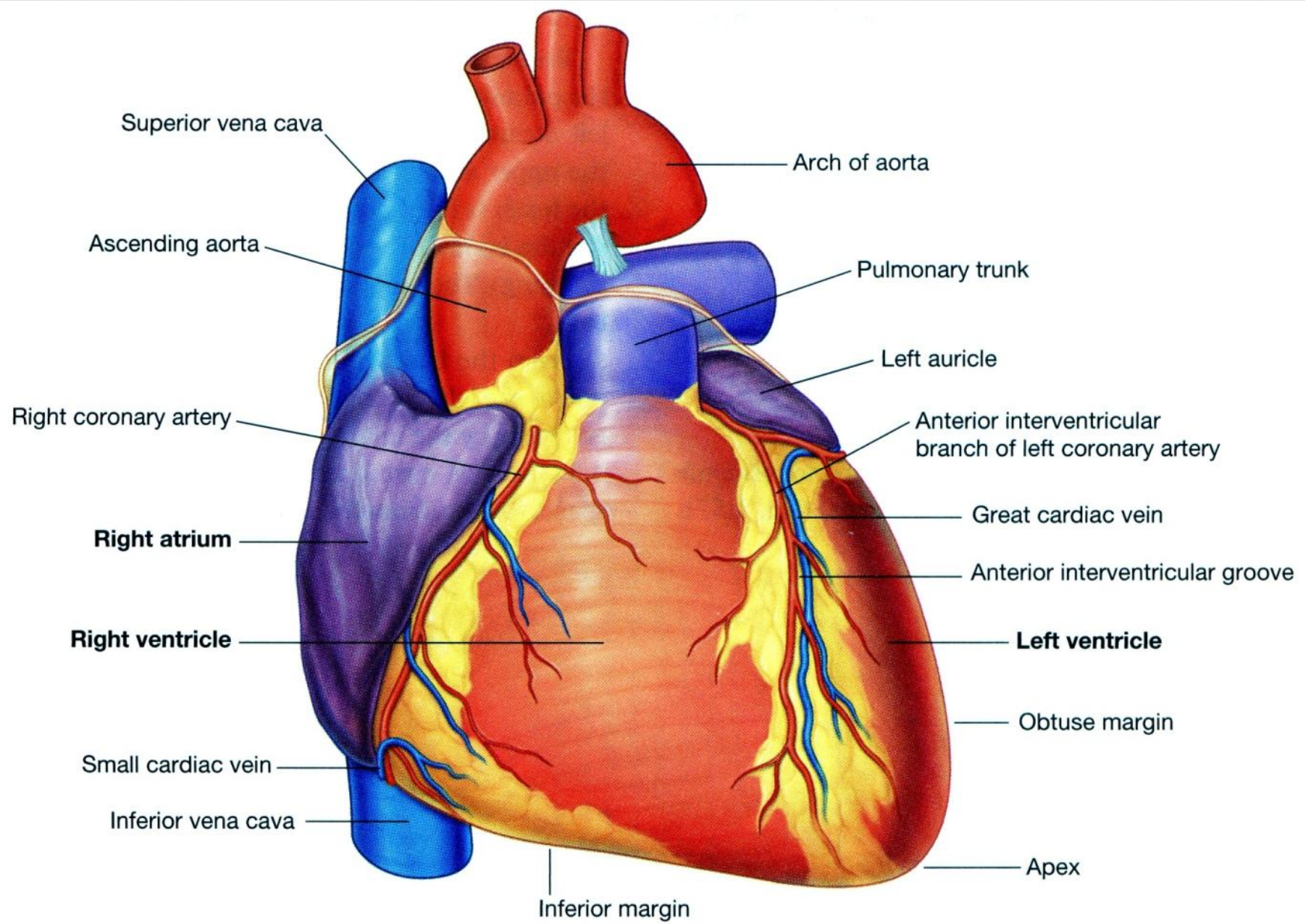
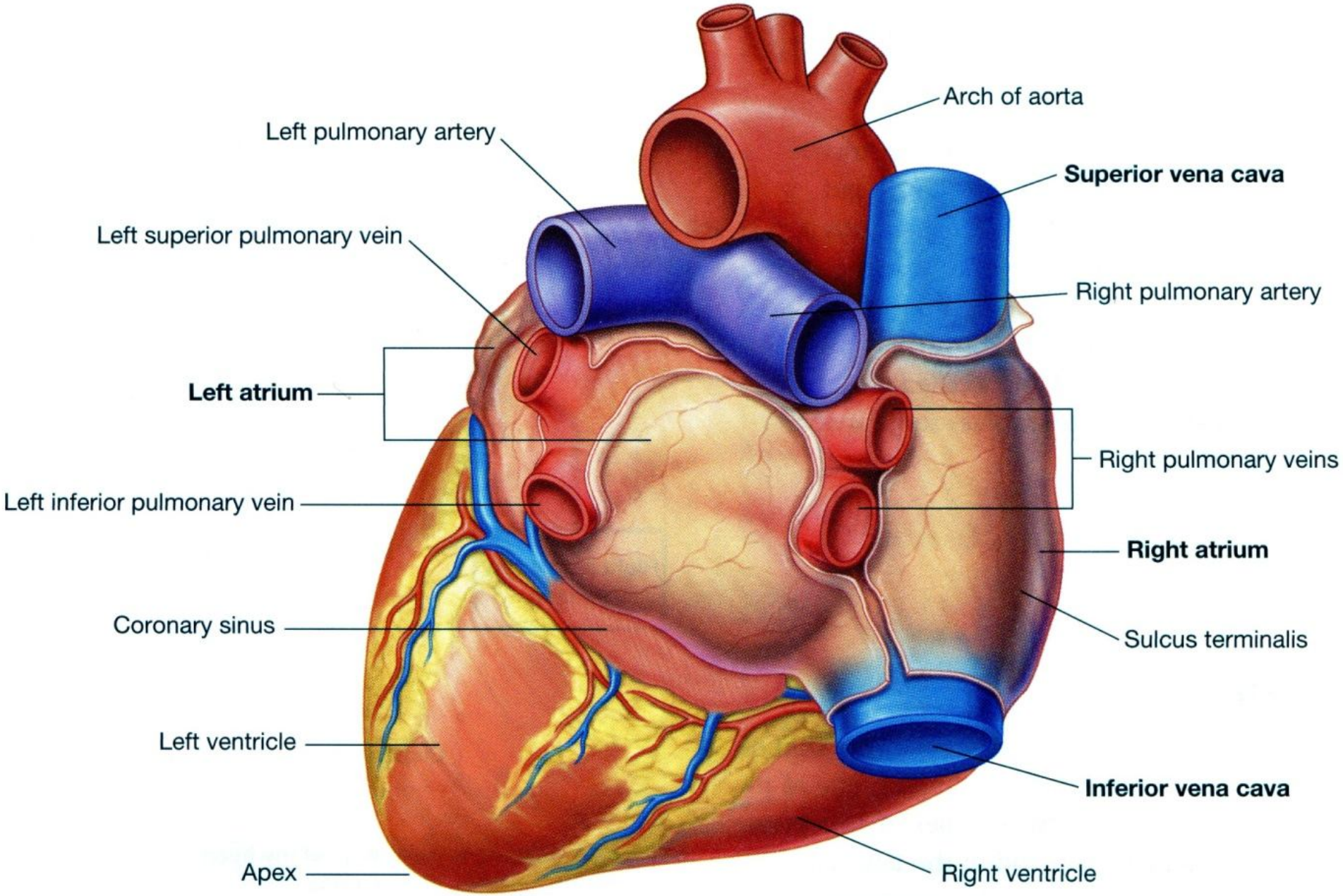


Fig. 19.18. Surface projection of the heart.

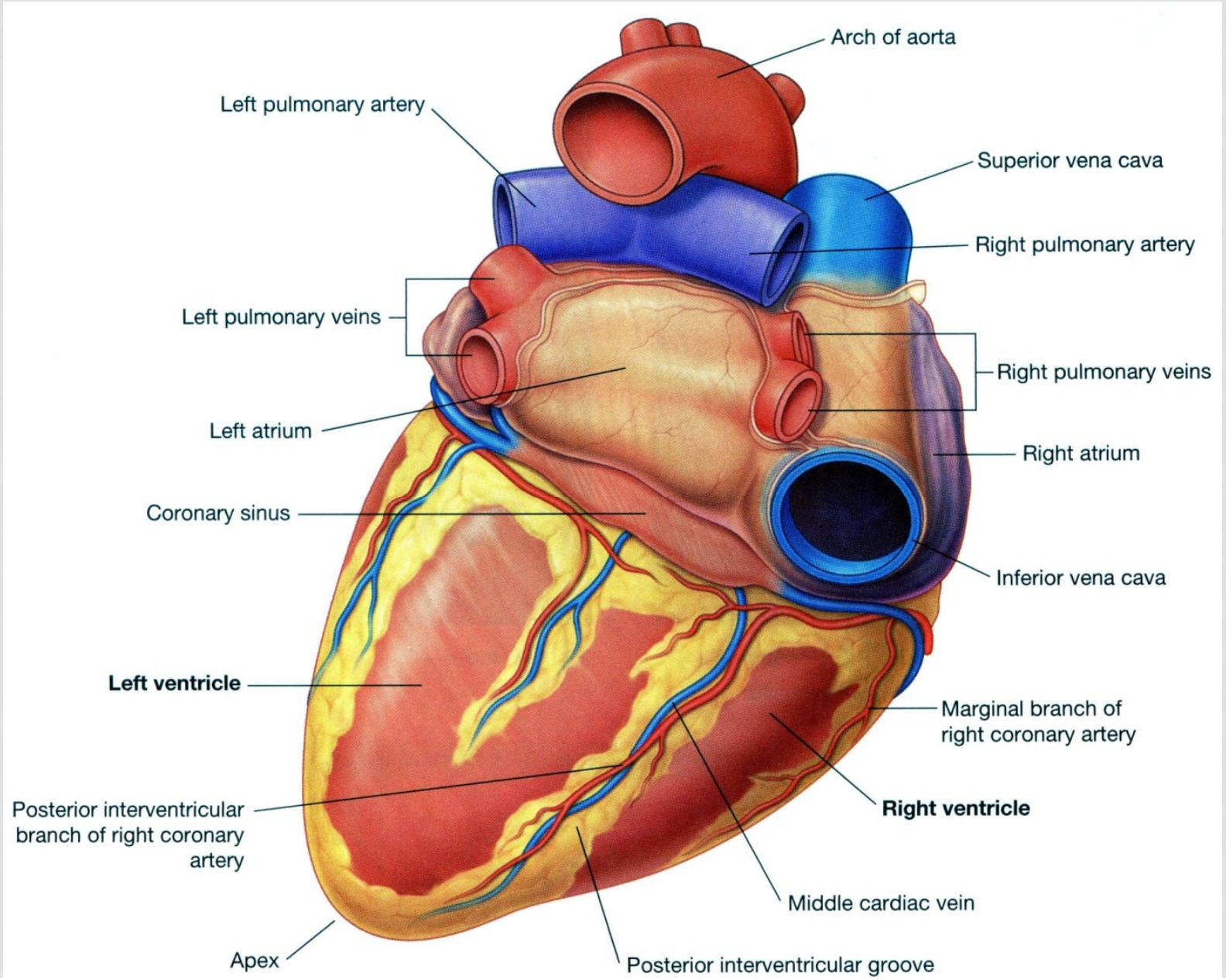
Sternocostal surface of heart



Base of Heart

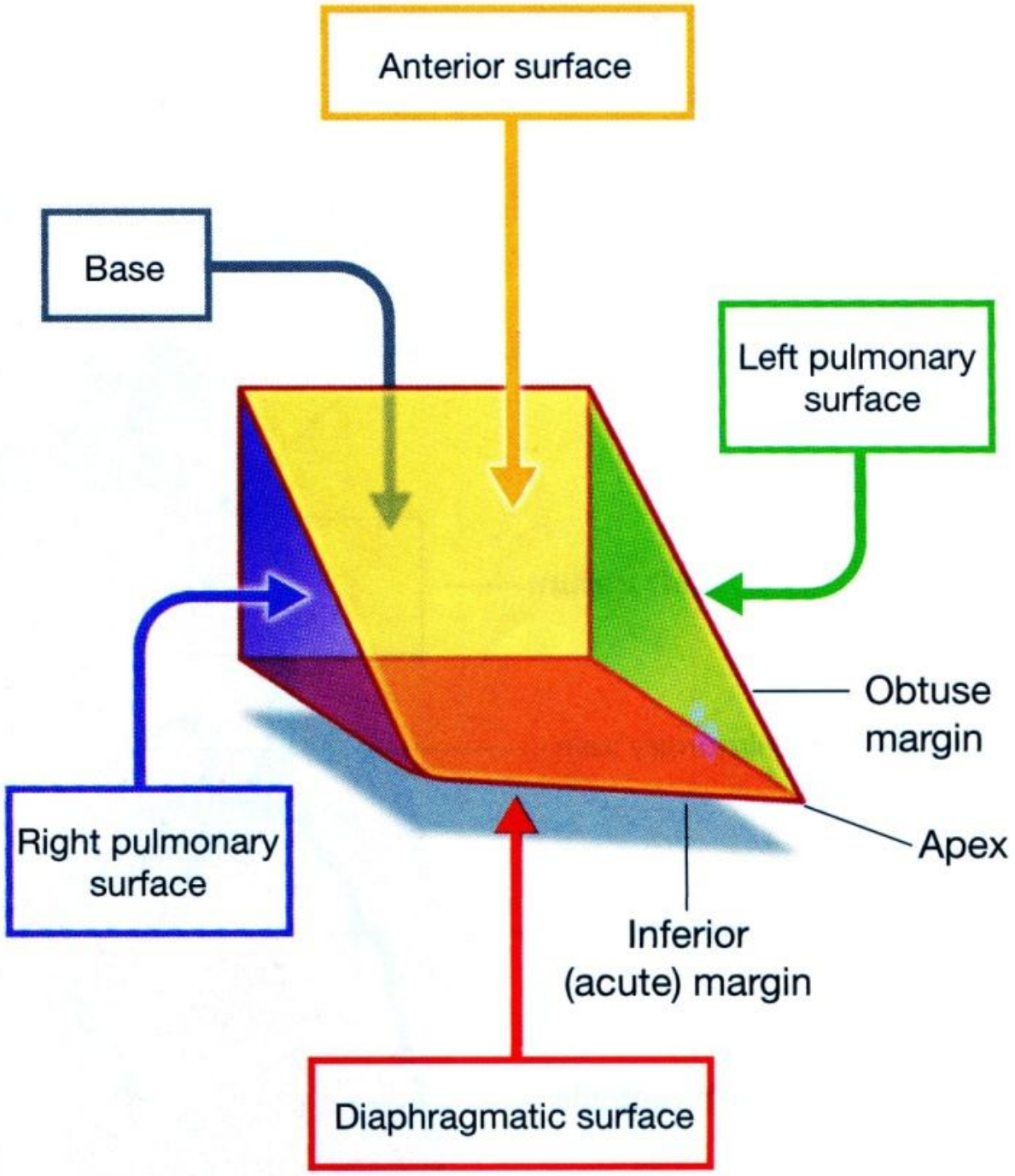


Diaphragmatic surface of heart



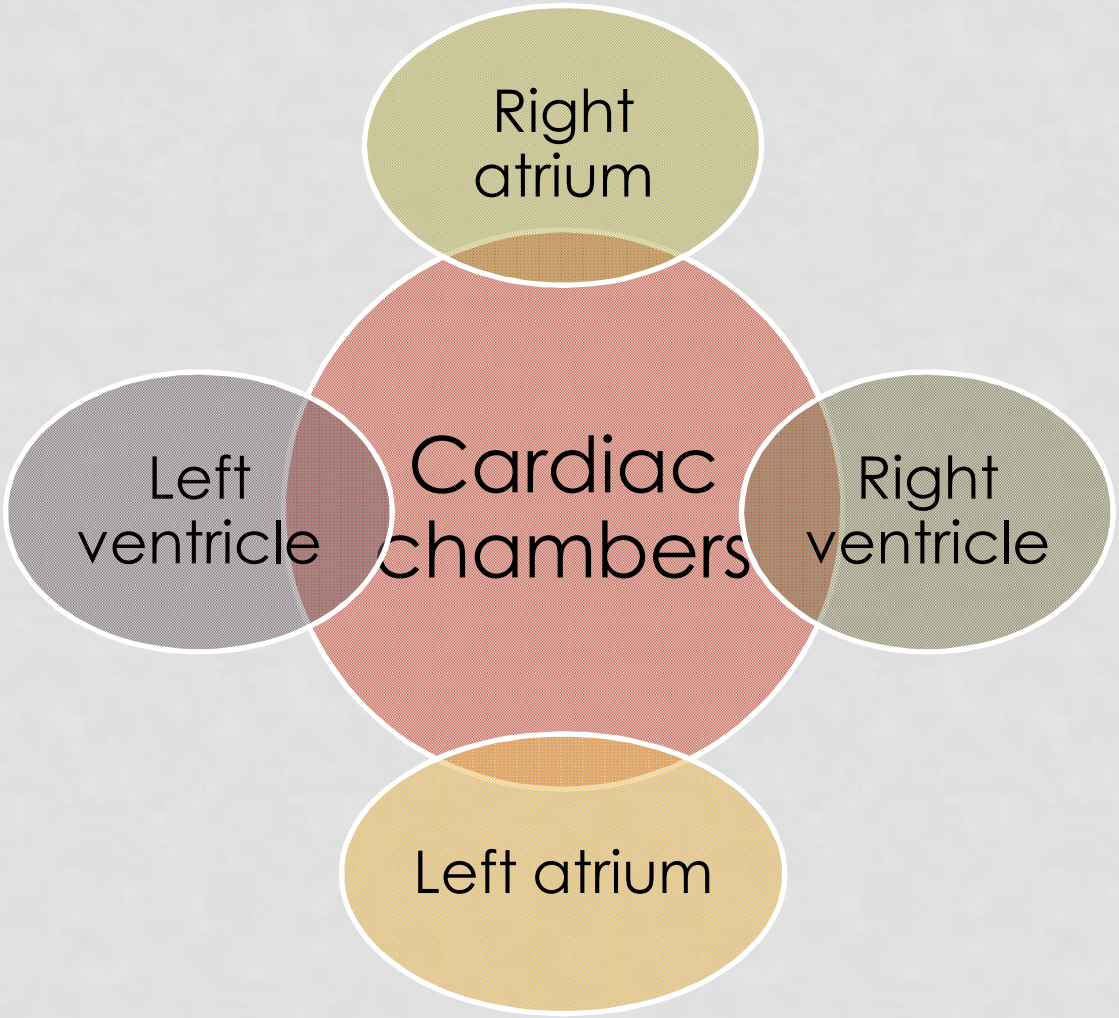
Cardiac borders:

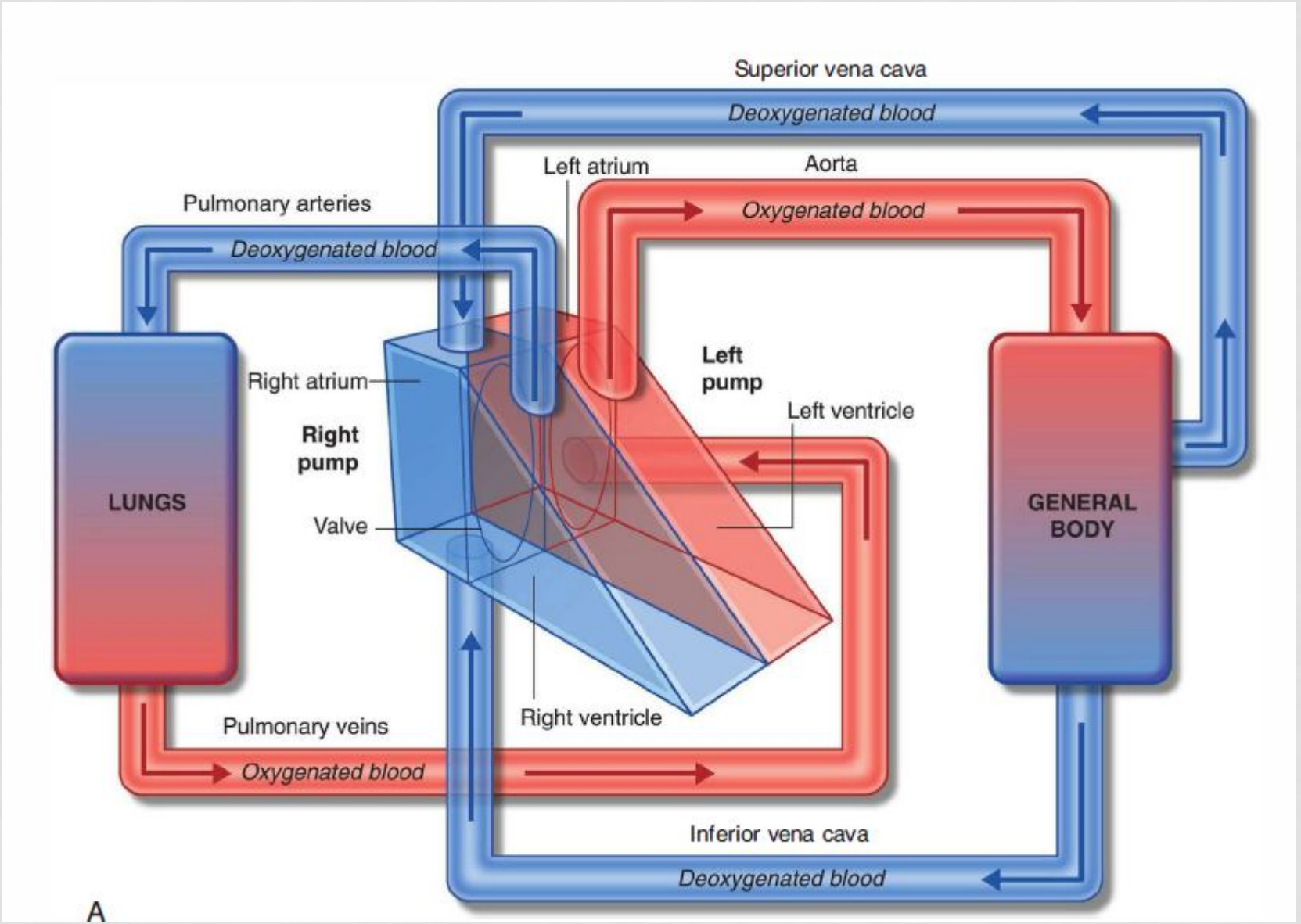
Sup./ inf./ Rt./ Lf.



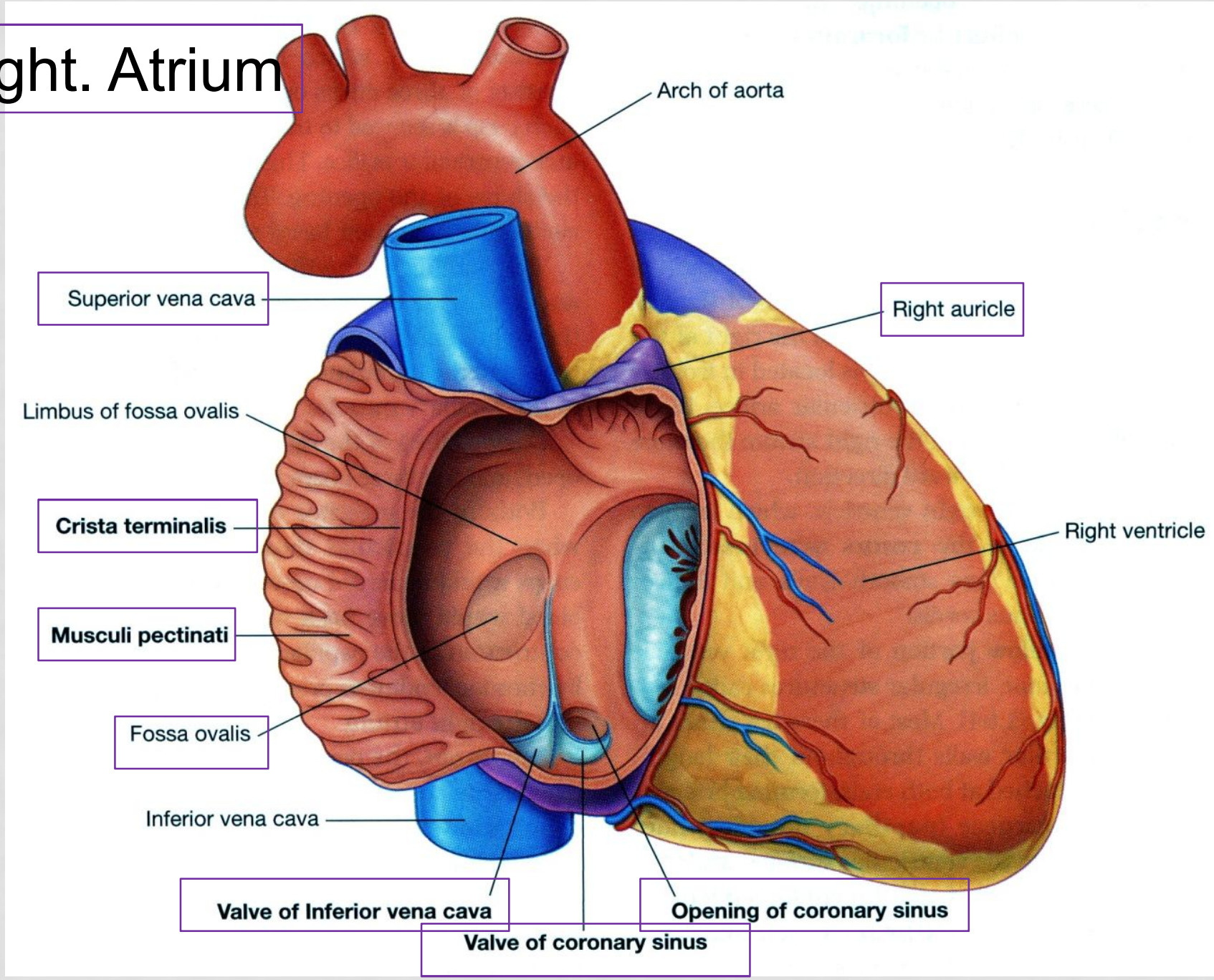
CARDIAC CHAMBERS

- Coronary Sulcus
- Ant. Interventricular Sulcus
- Post. Interventriculr Sulcus
- Interatrial Sulcus

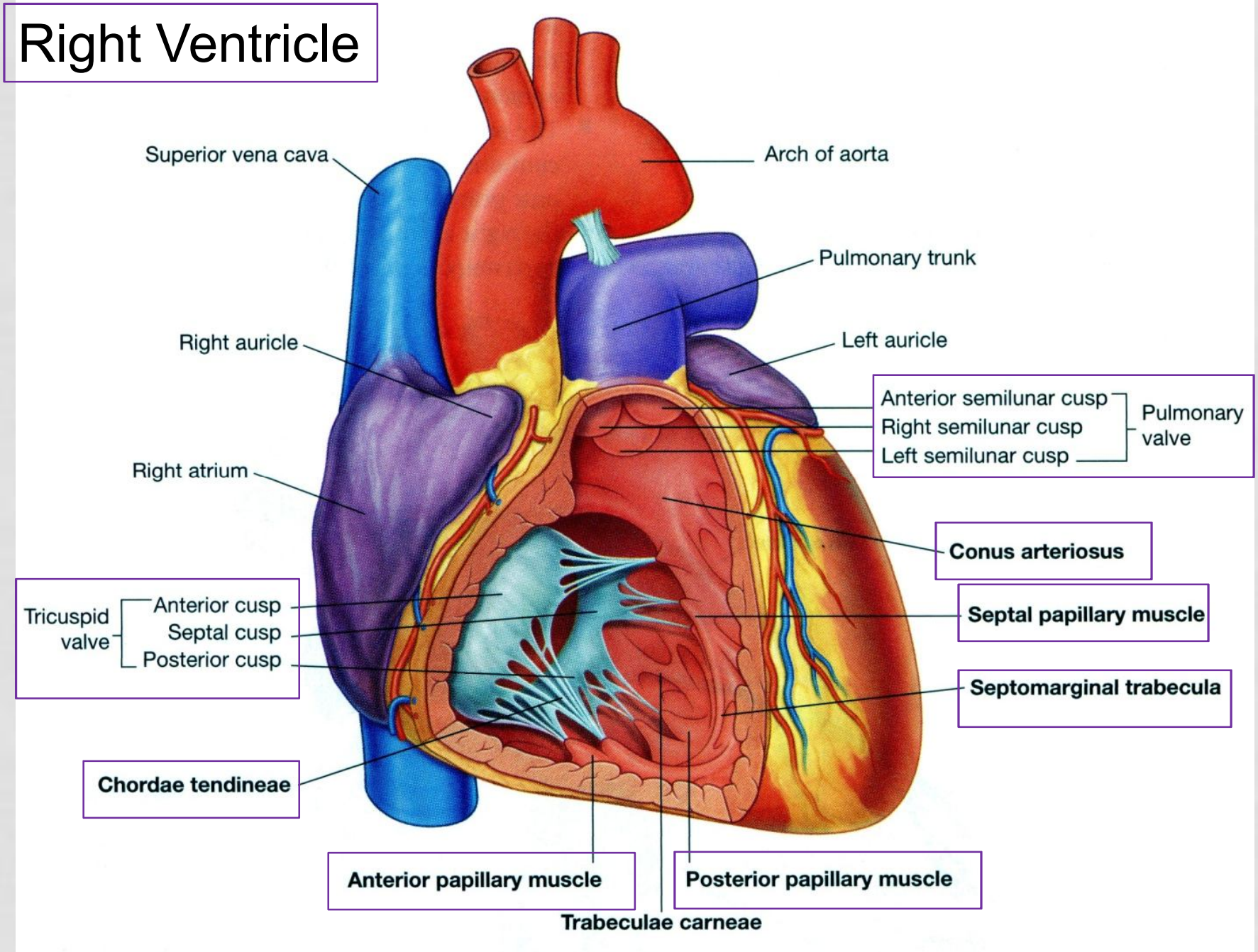



Superior vena cava
Deoxygenated blood
Left atrium
Aorta
Pulmonary arteries
Oxygenated blood
Deoxygenated blood
Right atrium
Left pump
Left ventricle
Right pump
LUNGS
Valve
GENERAL BODY
Pulmonary veins
Right ventricle
Oxygenated blood
Inferior vena cava
Deoxygenated blood
A

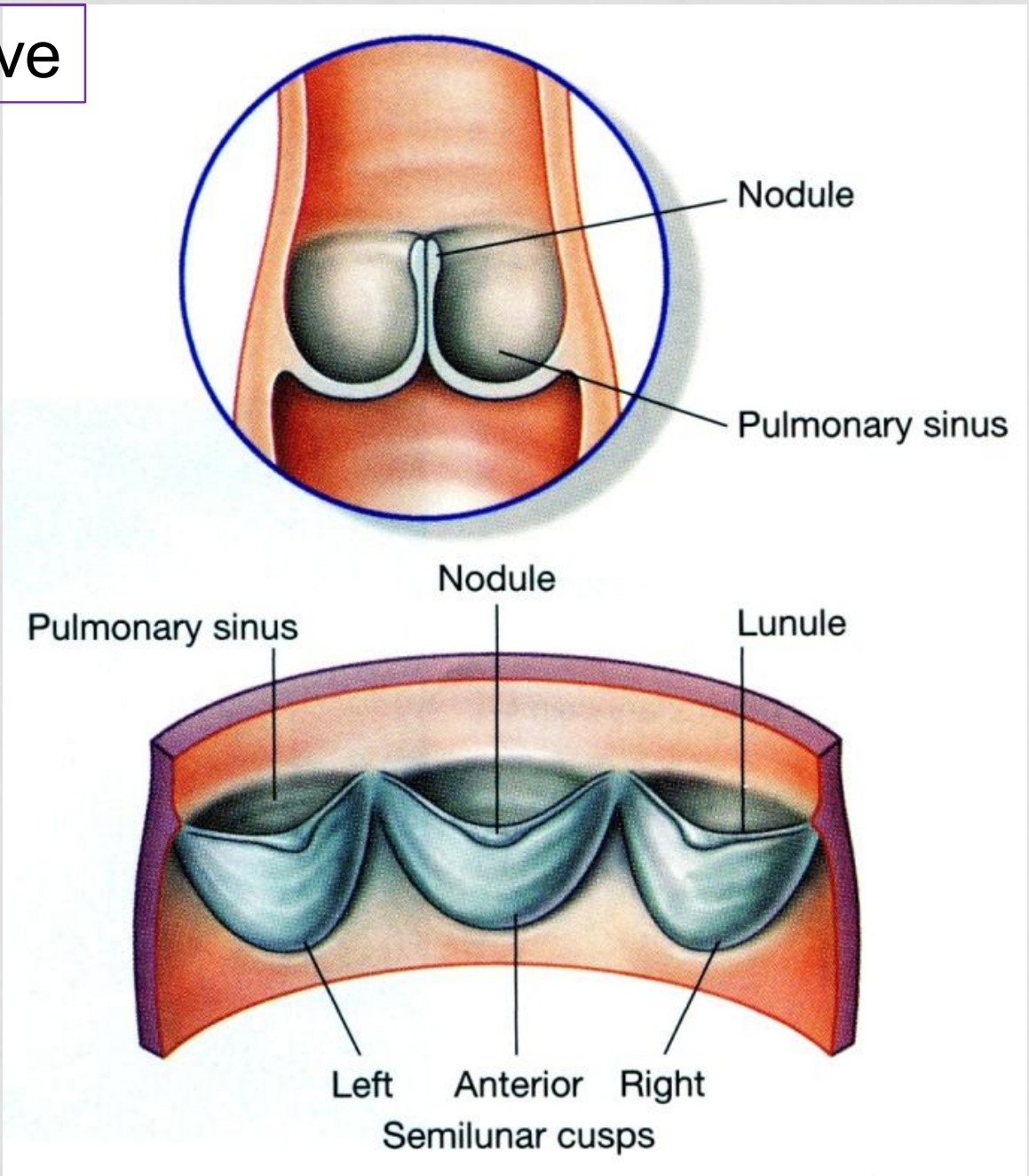
Right. Atrium



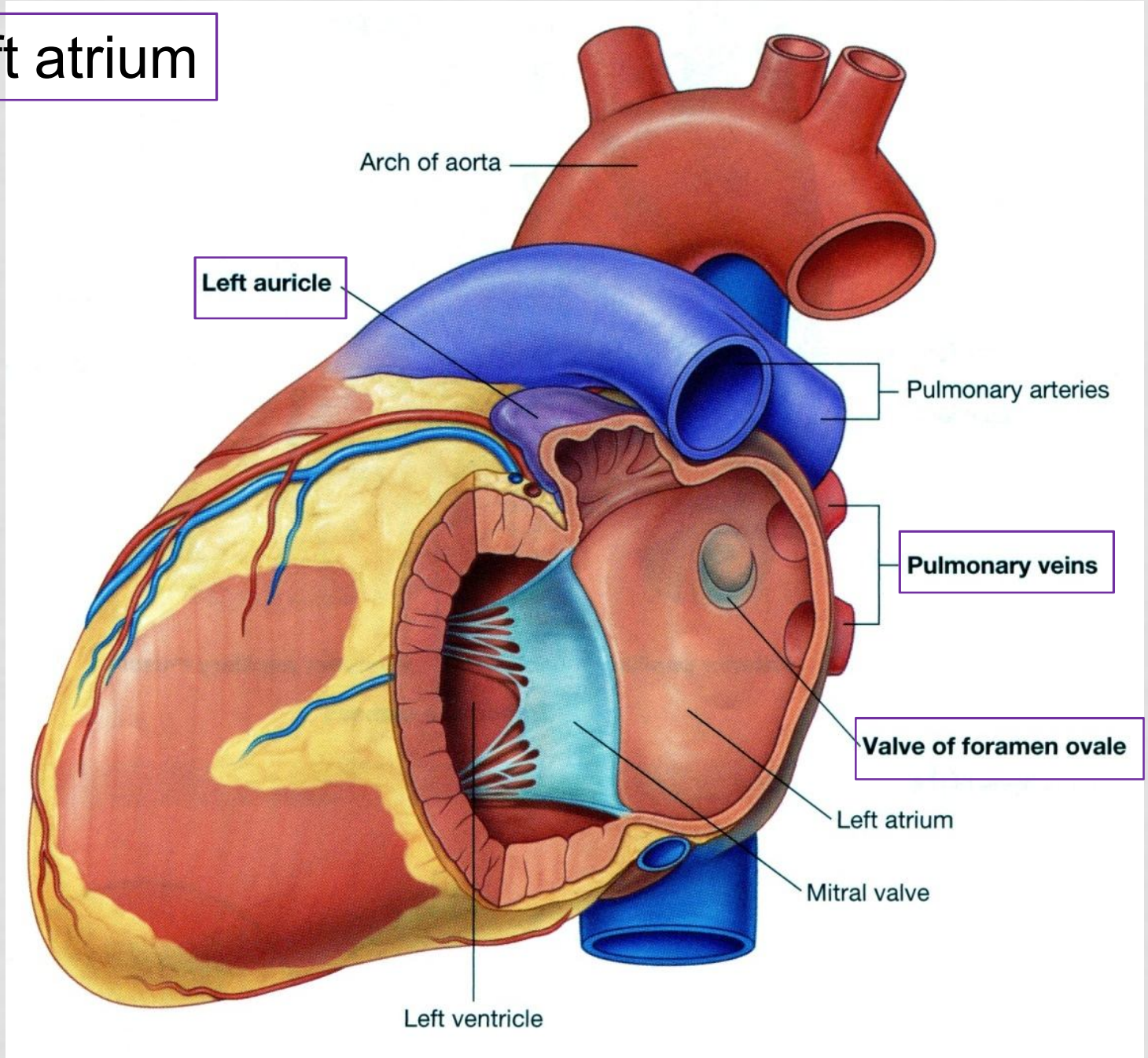
Right Ventricle



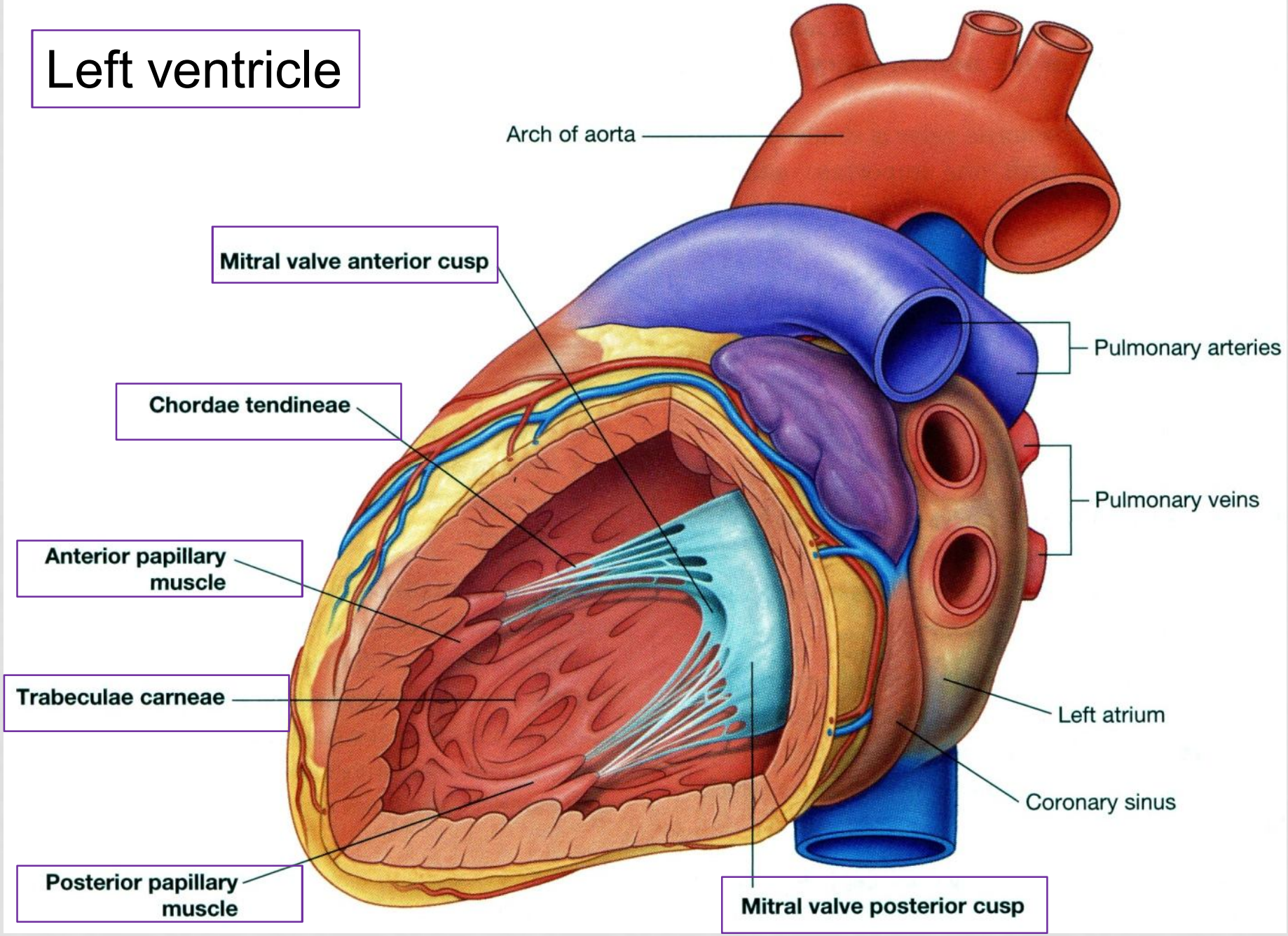
Pulmonary Valve



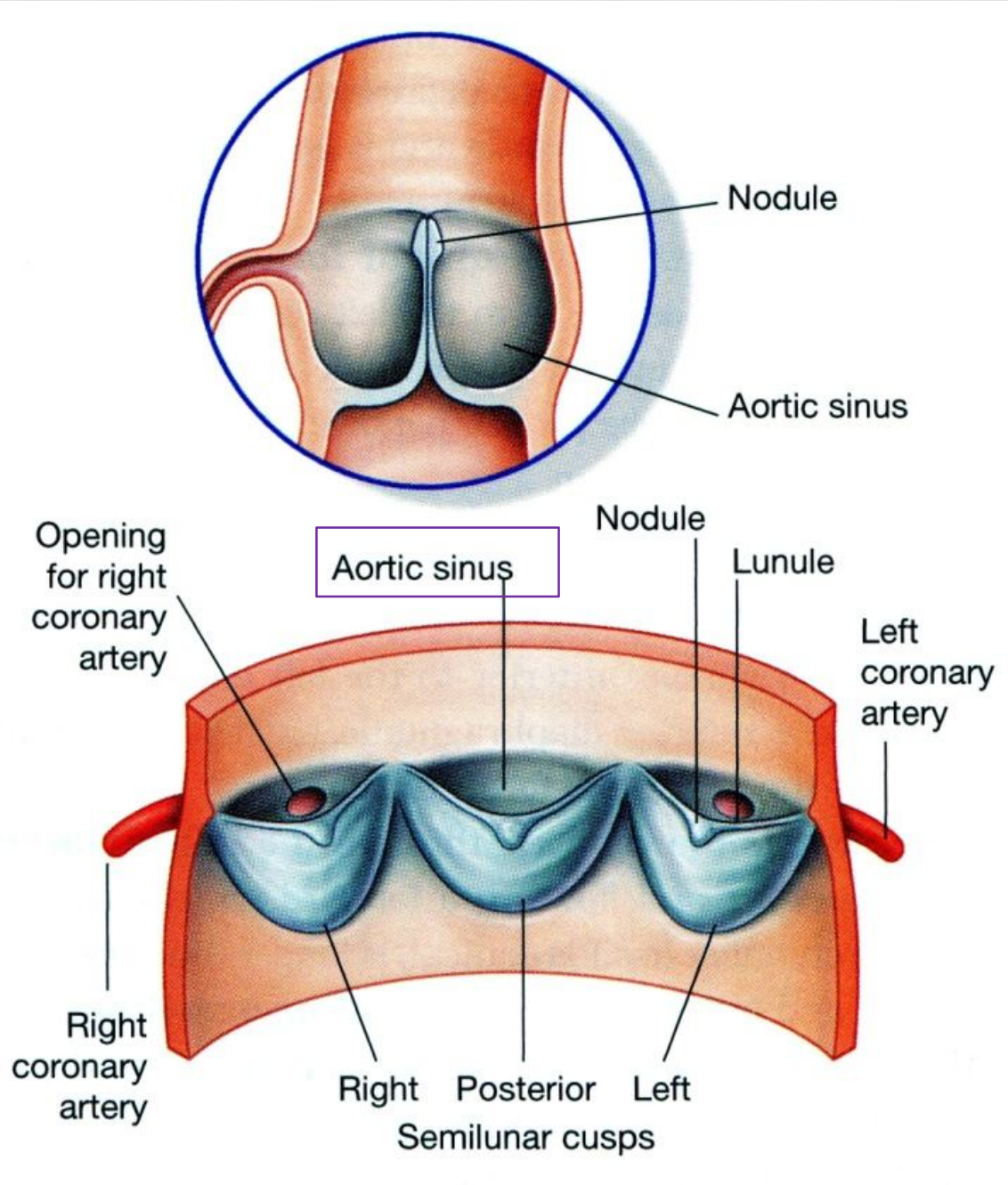
Left atrium


Arch of aorta
Left auricle
Pulmonary arteries
Pulmonary veins
Valve of foramen ovale
Left atrium
Mitral valve
Left ventricle

Left ventricle



Aortic Valve



Cardiac structure:

Epicardium:

Serouse :

Visceral
parietal

fibrouse

Myocardium
Endocardium

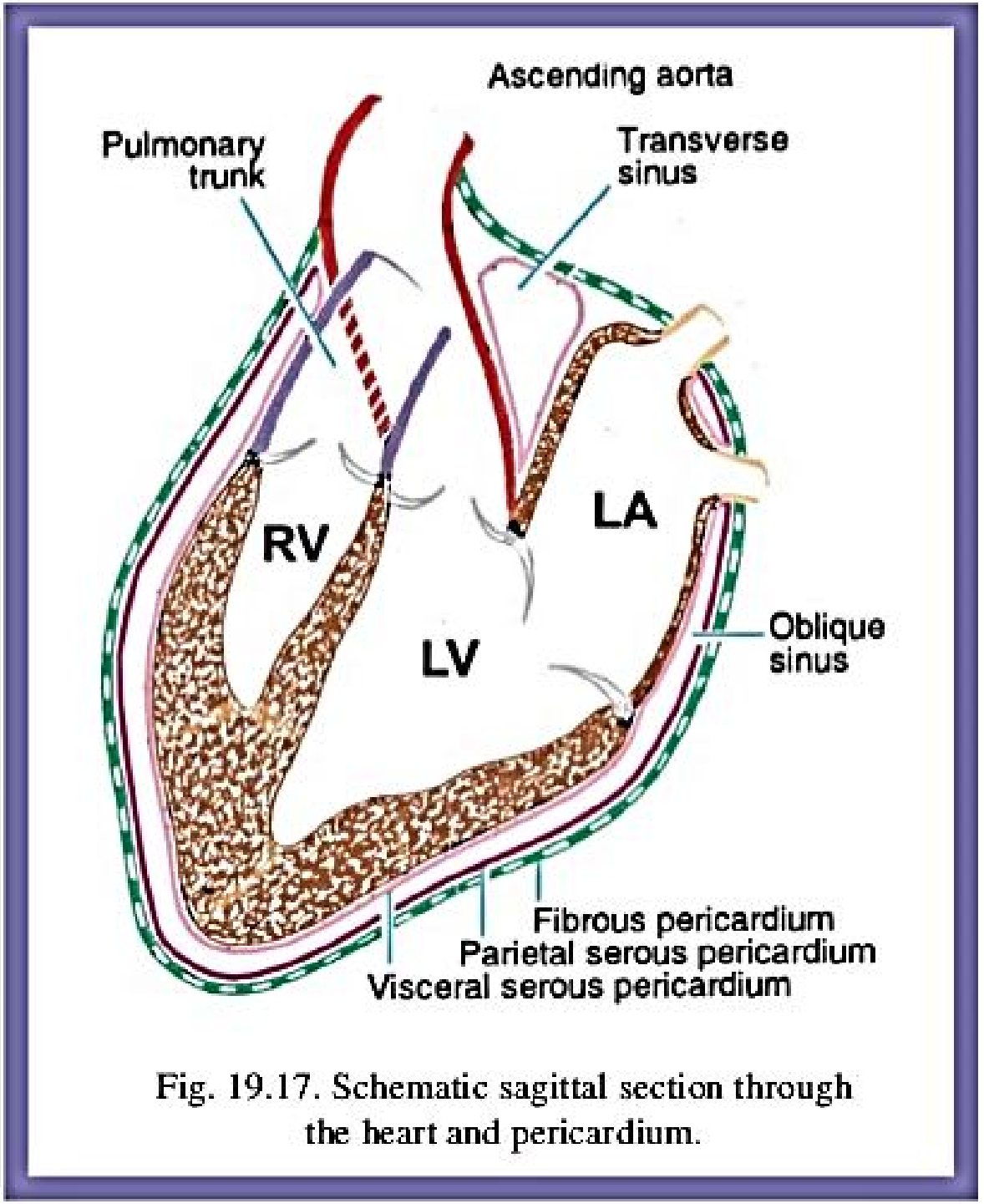


Fig. 19.17. Schematic sagittal section through the heart and pericardium.

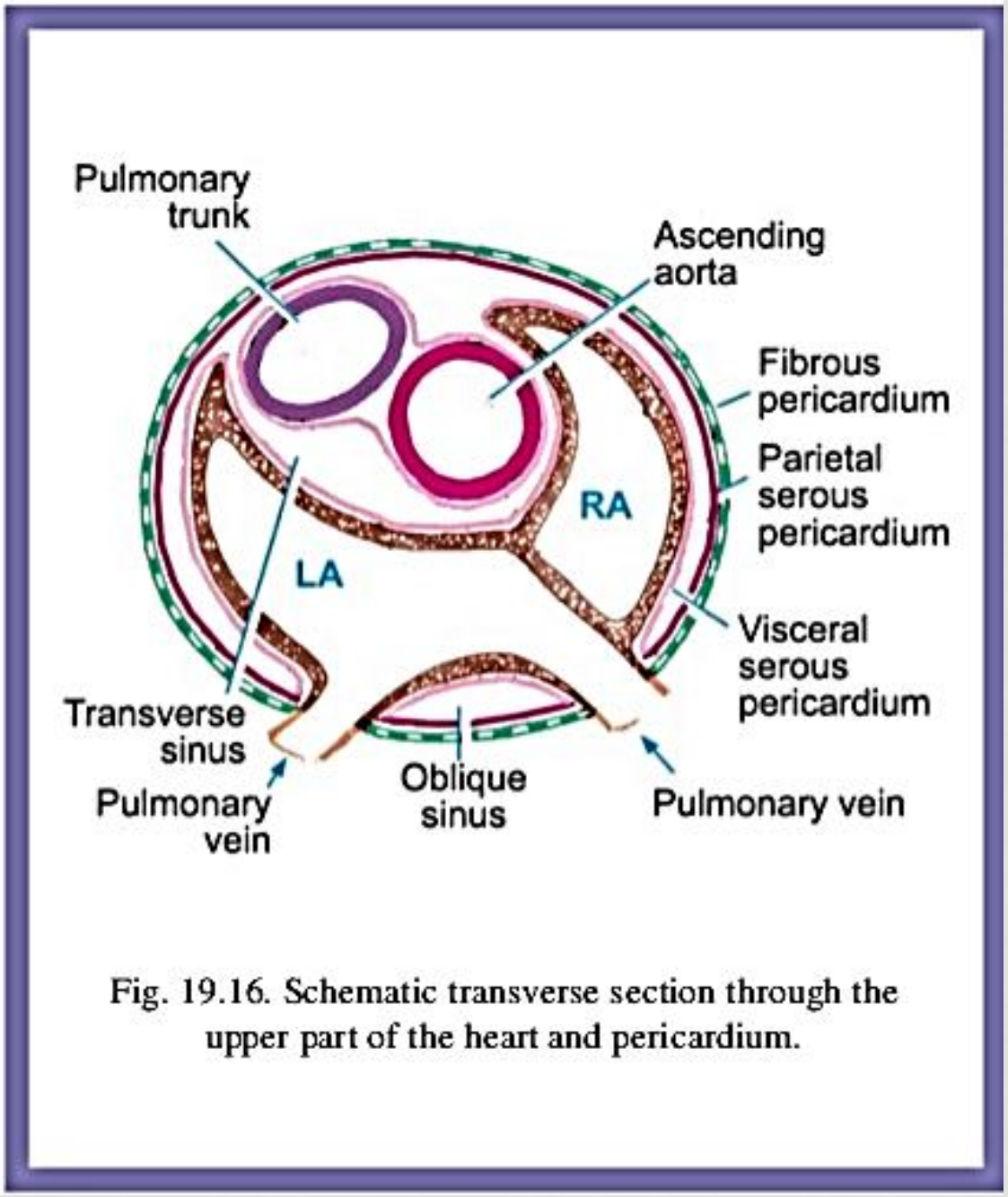
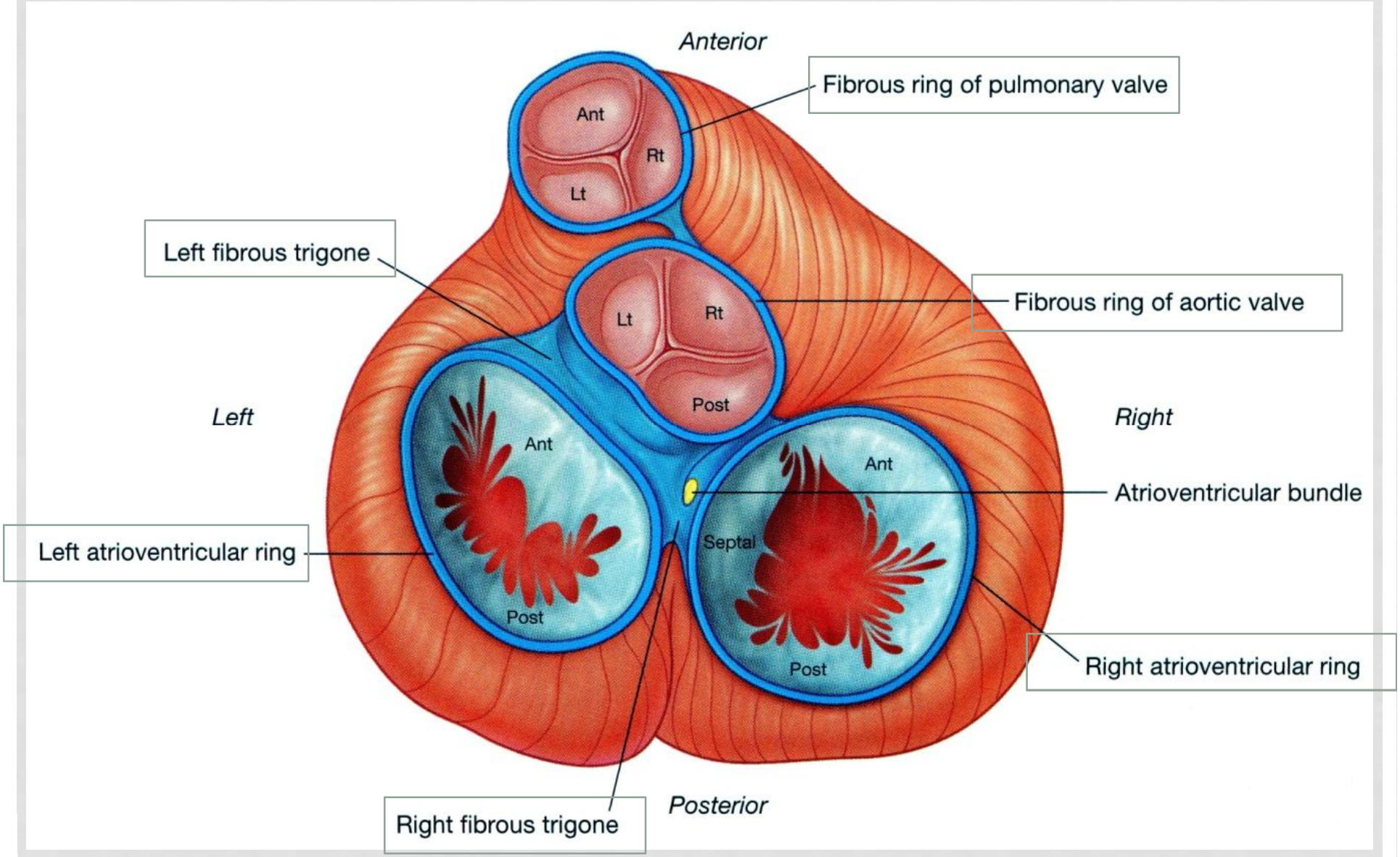


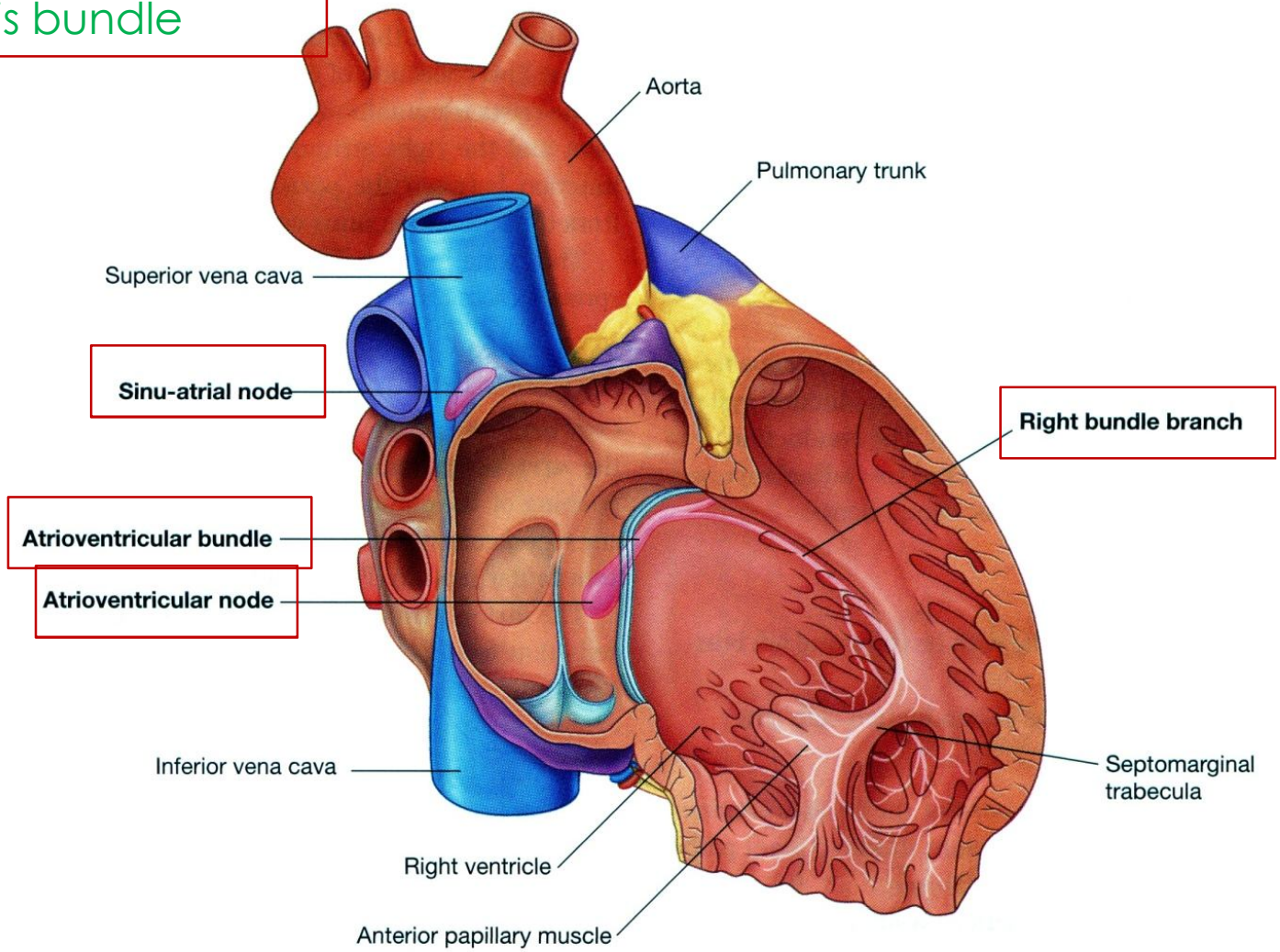
Fig. 19.16. Schematic transverse section through the upper part of the heart and pericardium.

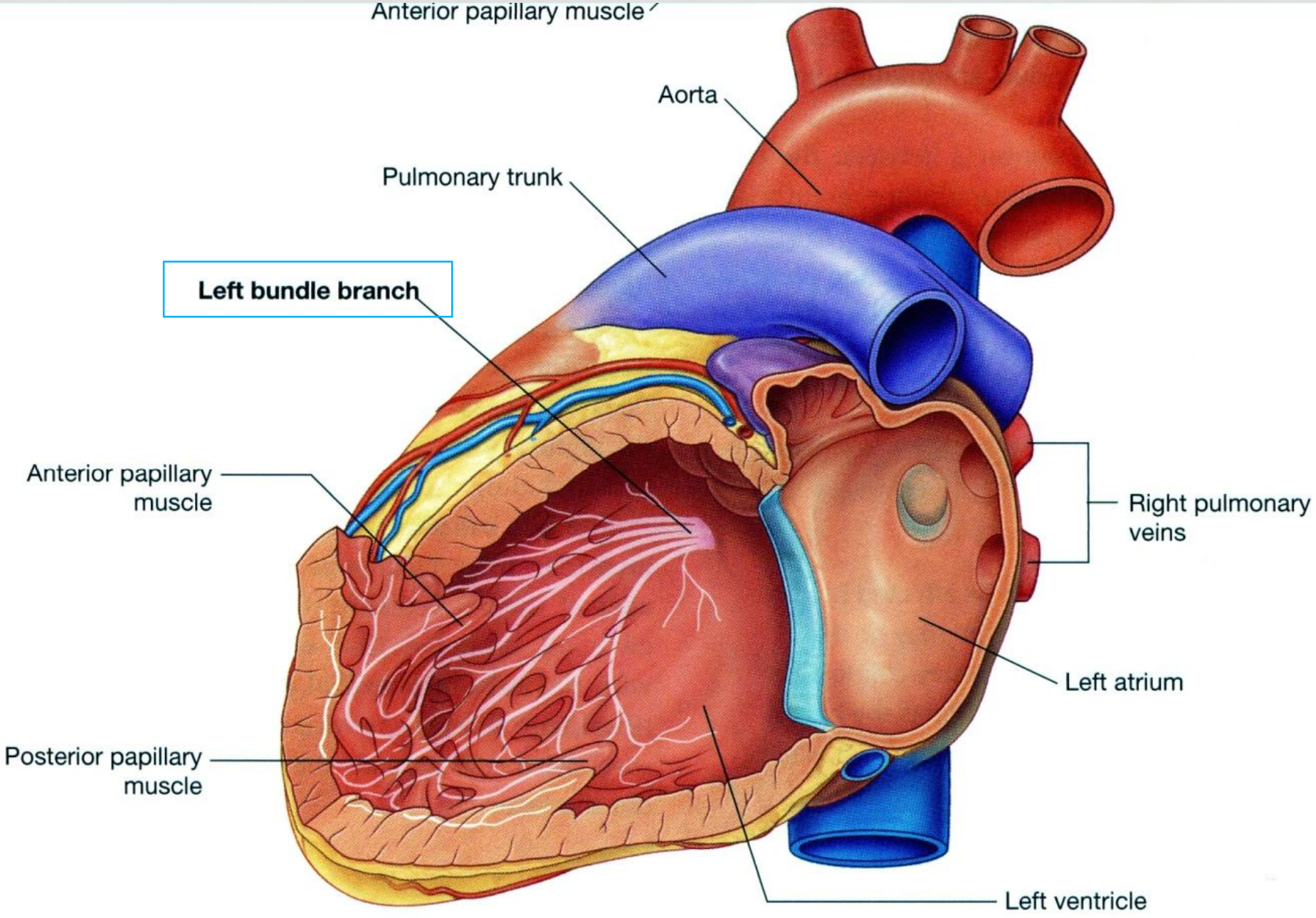
Cardiac Fibrous Skeletal



Conducting System Of The Heart:

SA node
AV node
His bundle
Rt. & Lf. branch of His bundle




Anterior papillary muscle
Aorta
Pulmonary trunk
Left bundle branch
Anterior papillary muscle
Right pulmonary veins
Left atrium
Posterior papillary muscle
Left ventricle

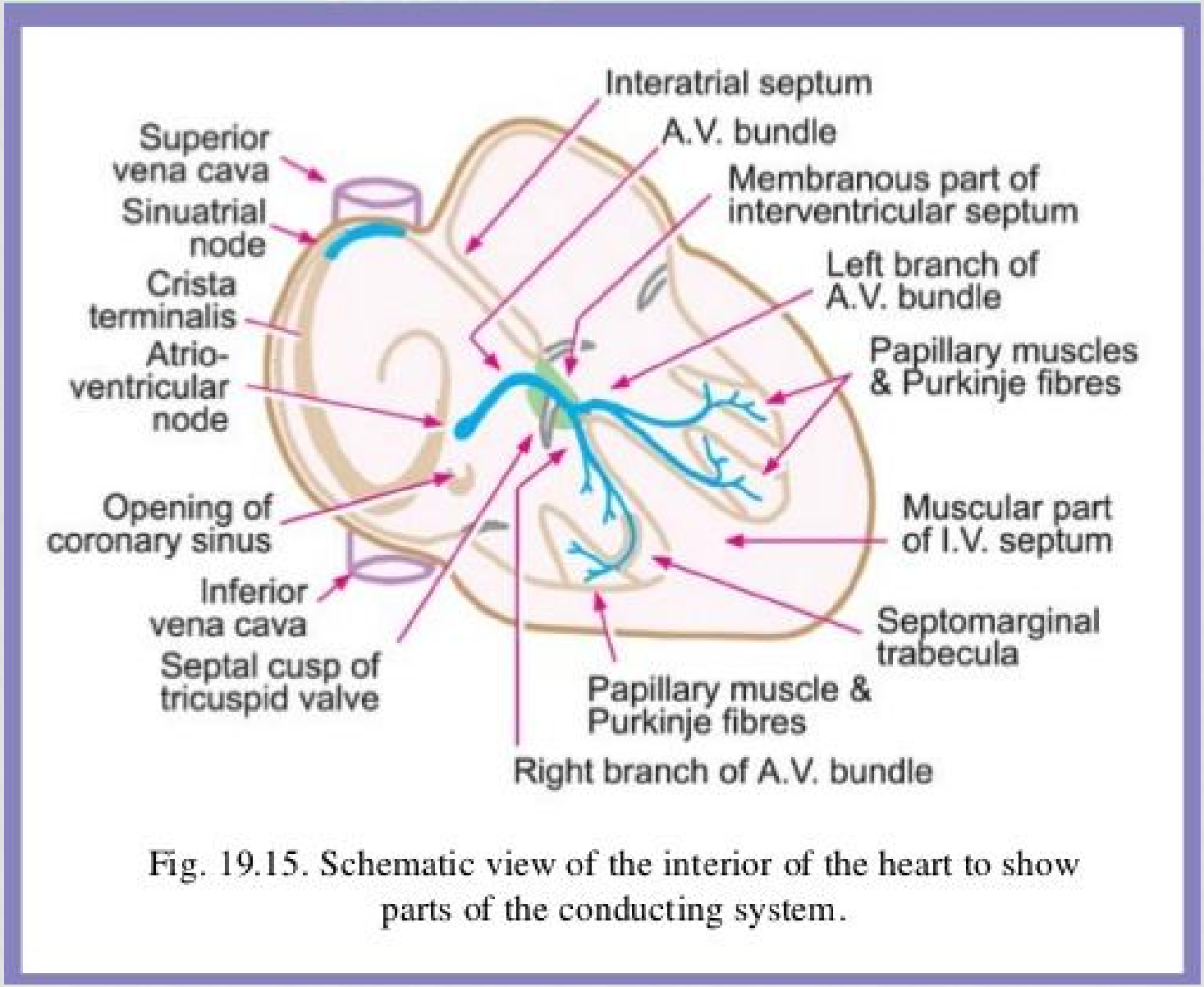
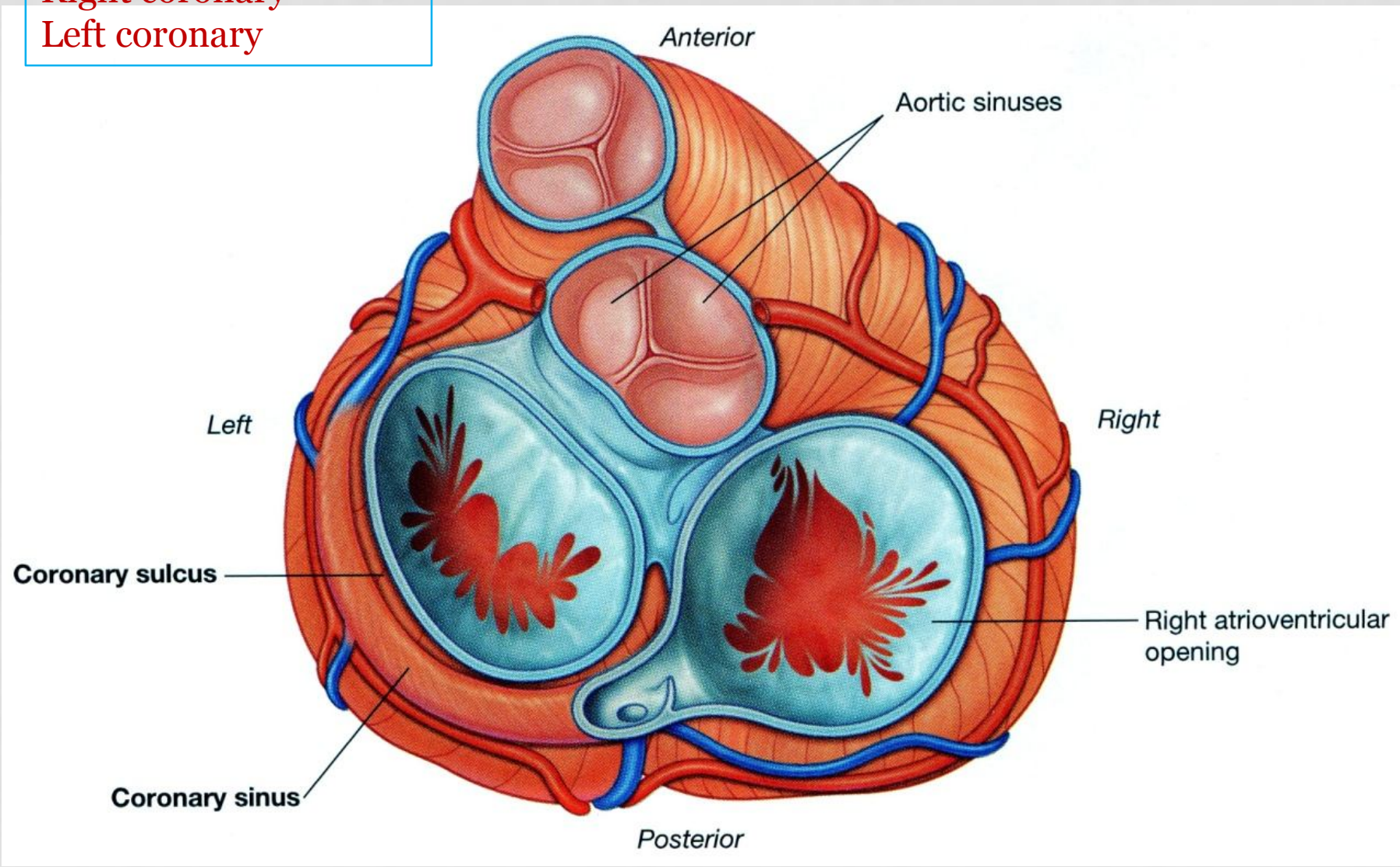
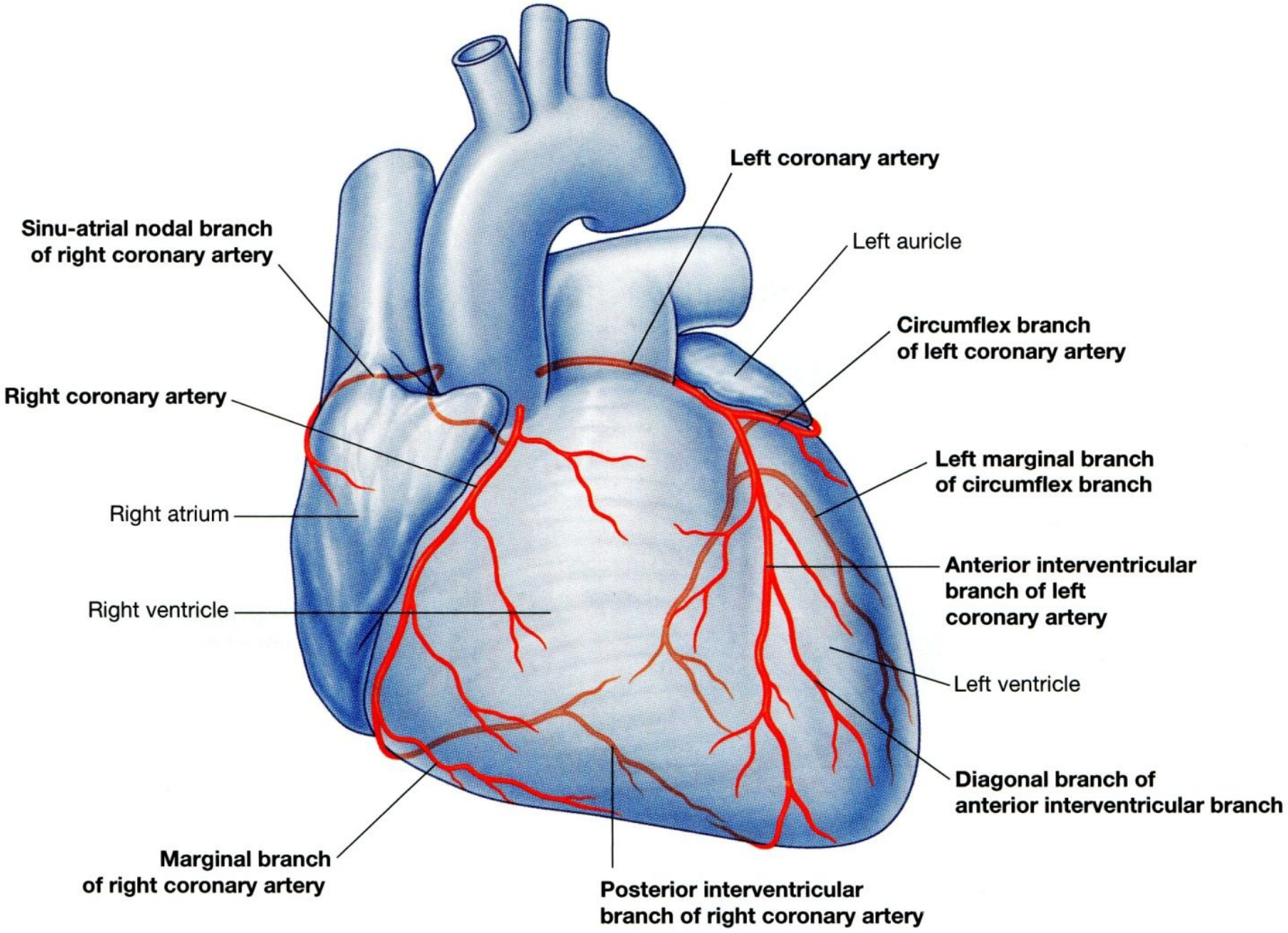


Fig. 19.15. Schematic view of the interior of the heart to show parts of the conducting system.

Cardiac Arteries:

Right coronary
Left coronary




Left coronary artery
Sinu-atrial nodal branch of right coronary artery
Left auricle
Circumflex branch of left coronary artery
Right coronary artery
Left marginal branch of circumflex branch
Right atrium
Anterior interventricular branch of left coronary artery
Right ventricle
Left ventricle
Diagonal branch of anterior interventricular branch
Marginal branch of right coronary artery
Posterior interventricular branch of right coronary artery

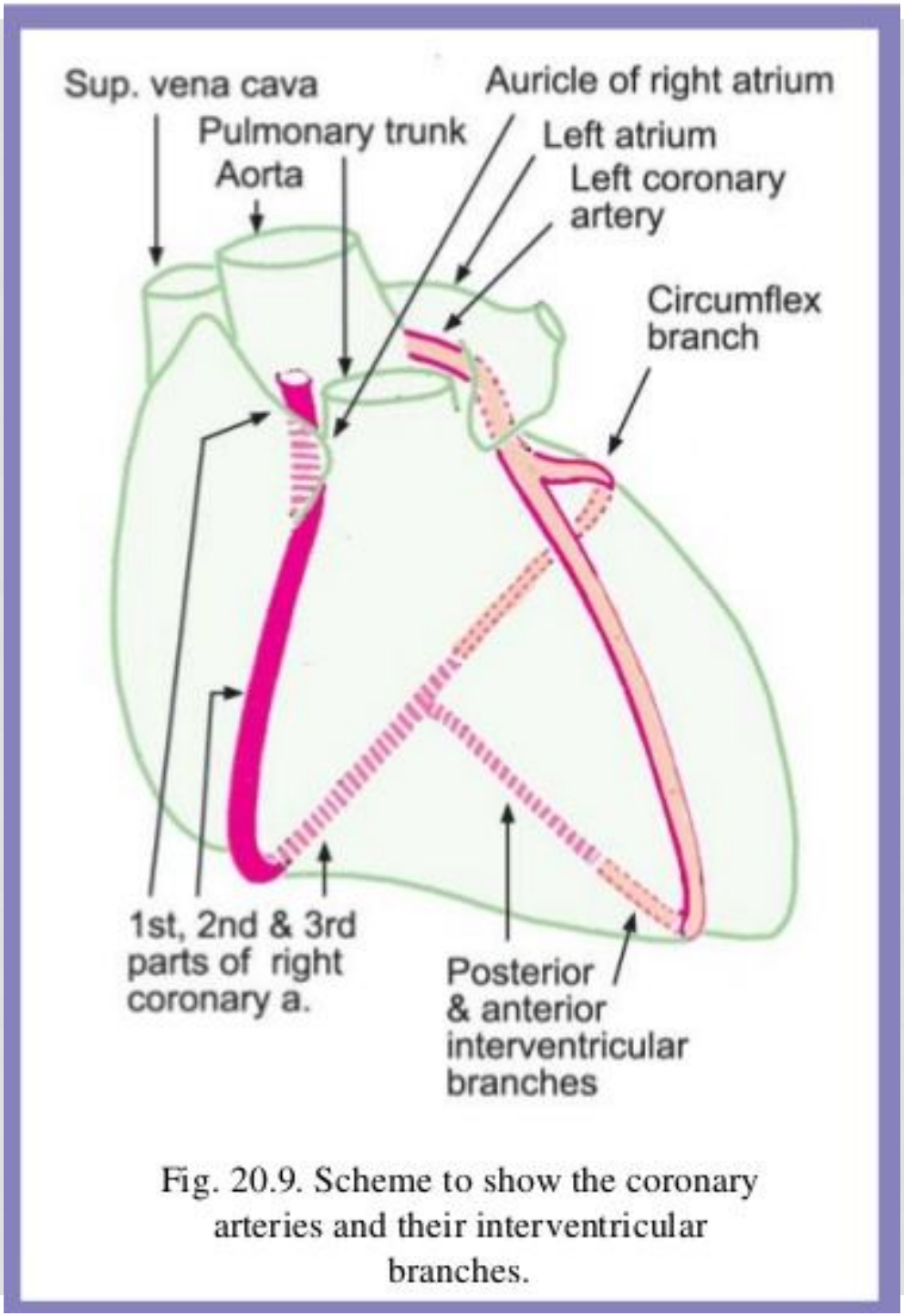


Fig. 20.9. Scheme to show the coronary arteries and their interventricular branches.

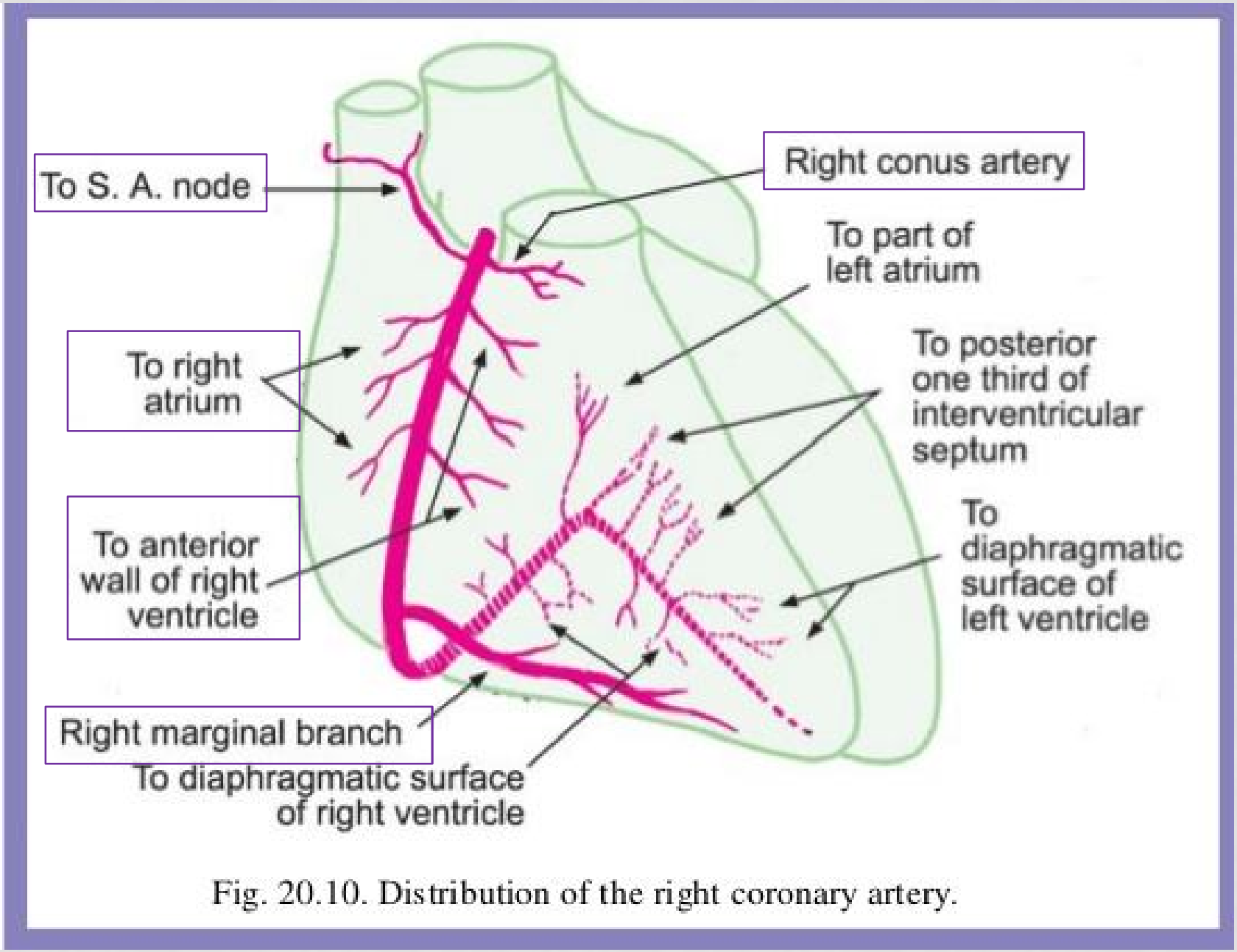


Fig. 20.10. Distribution of the right coronary artery.

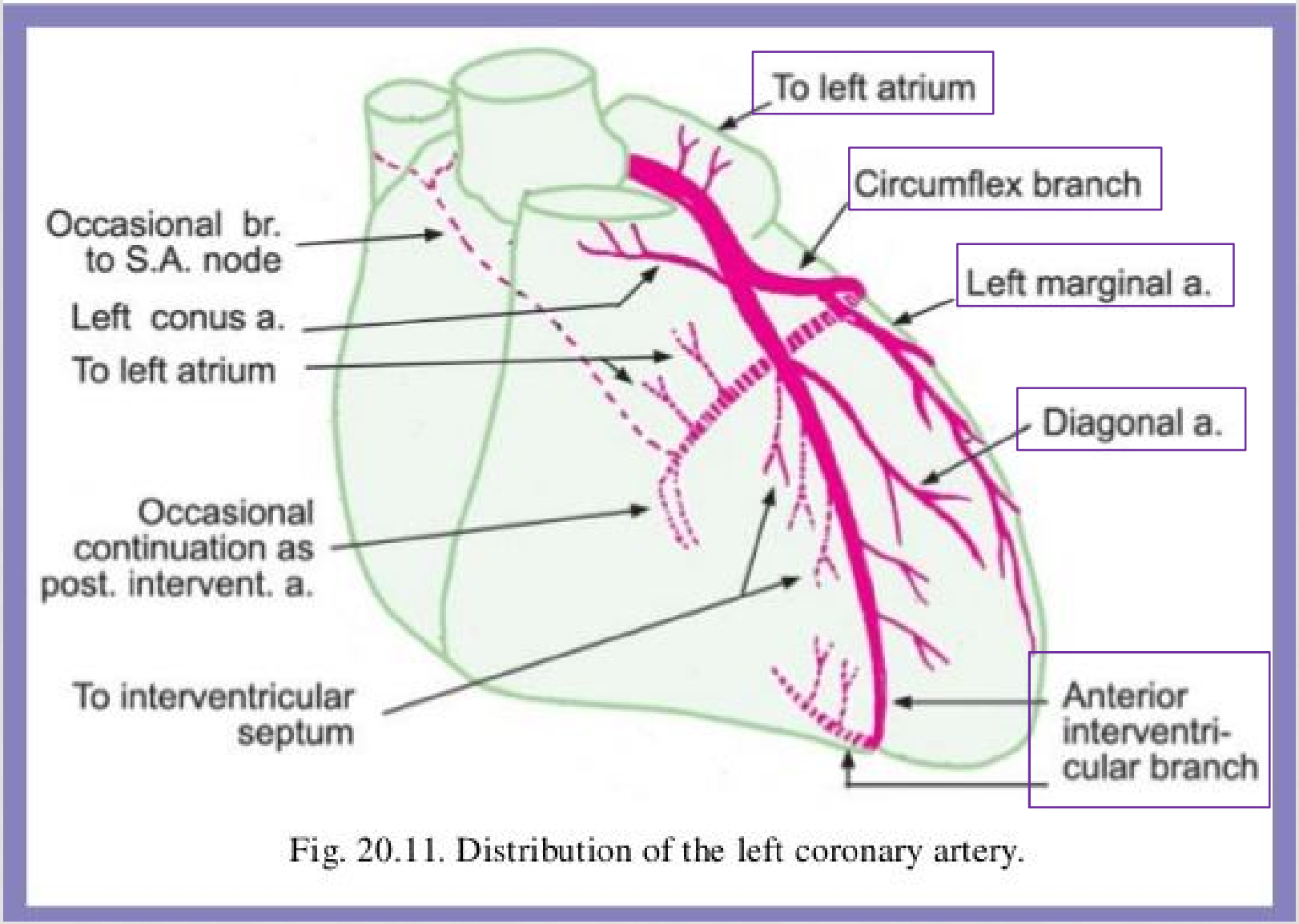
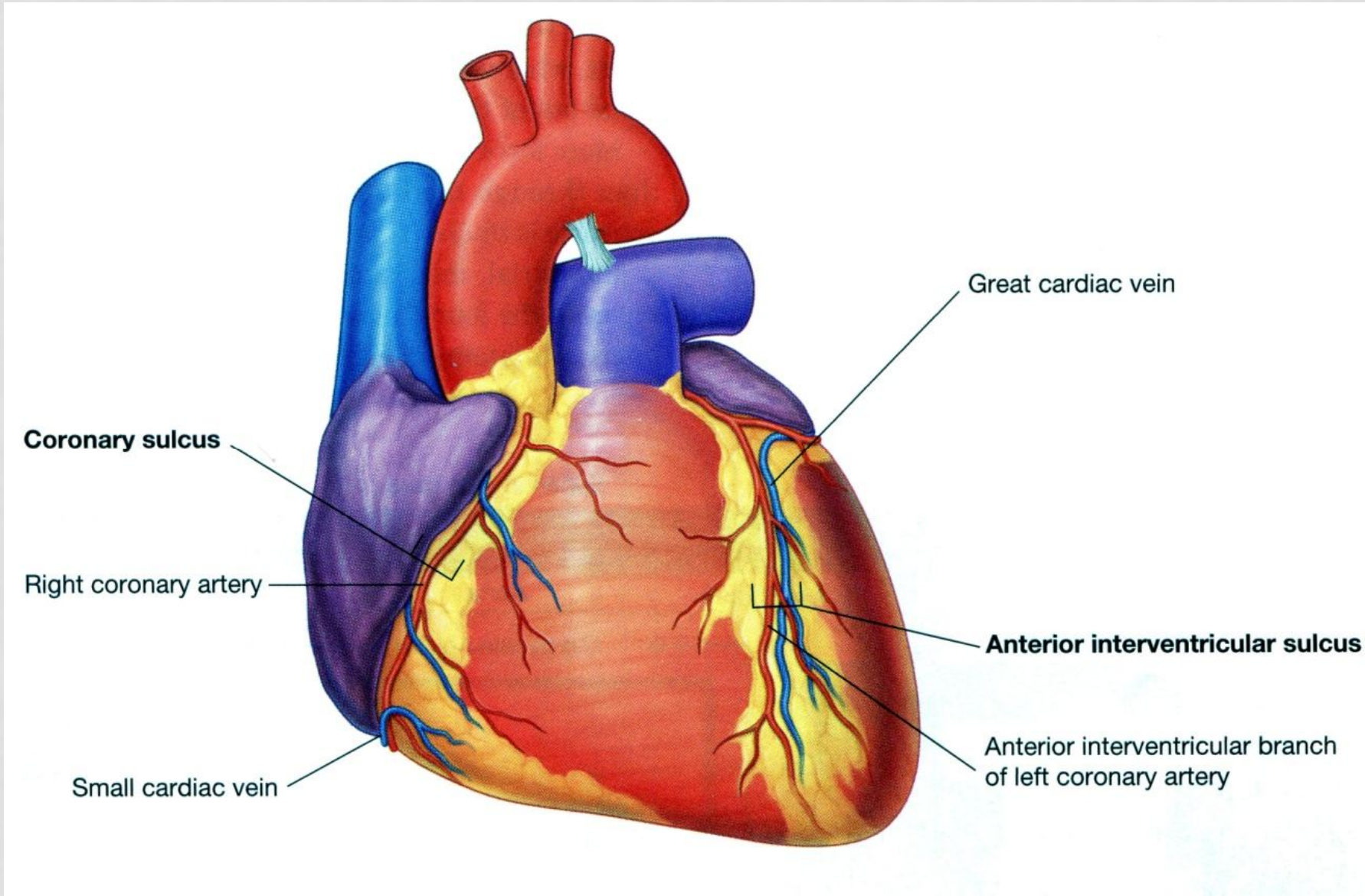
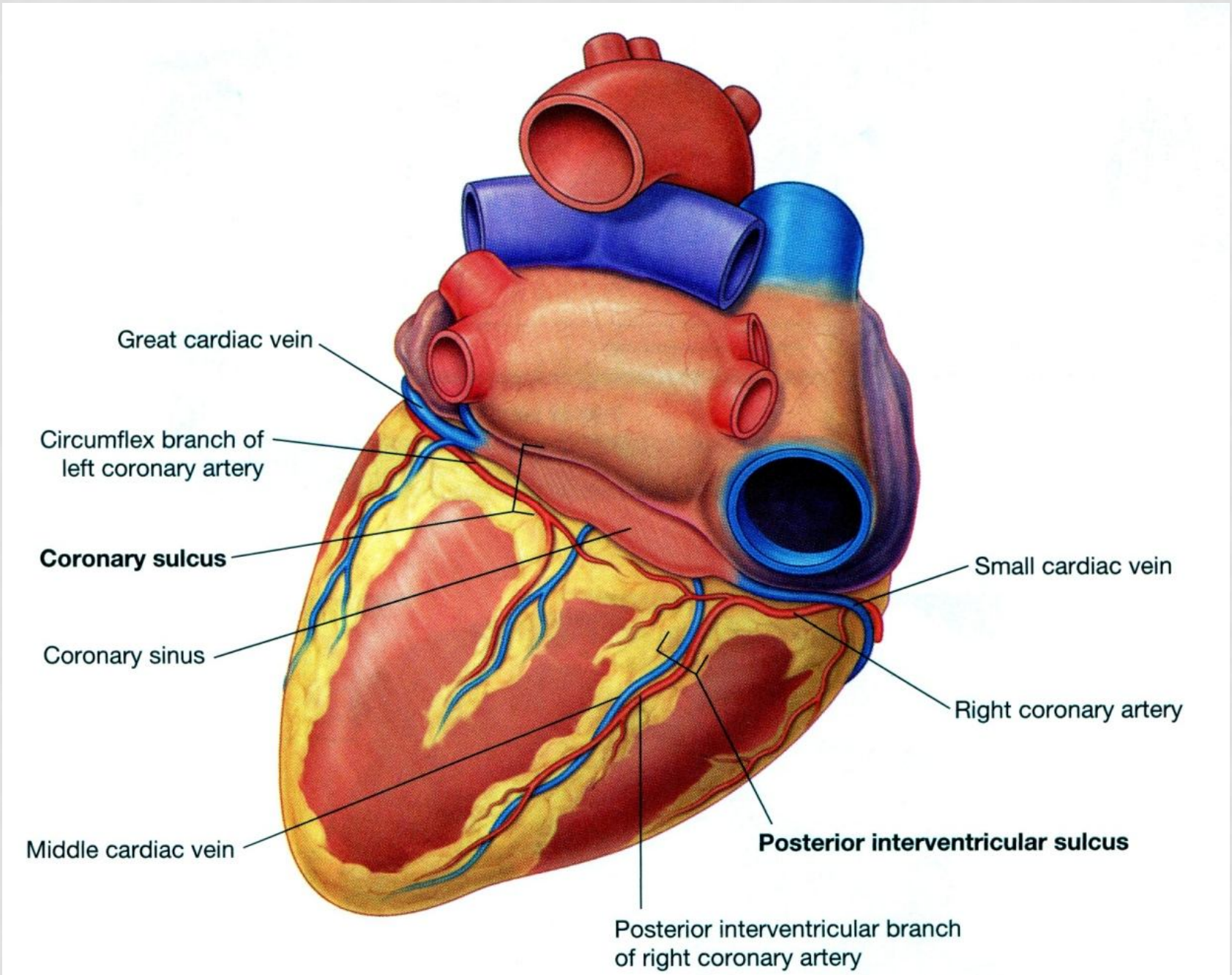


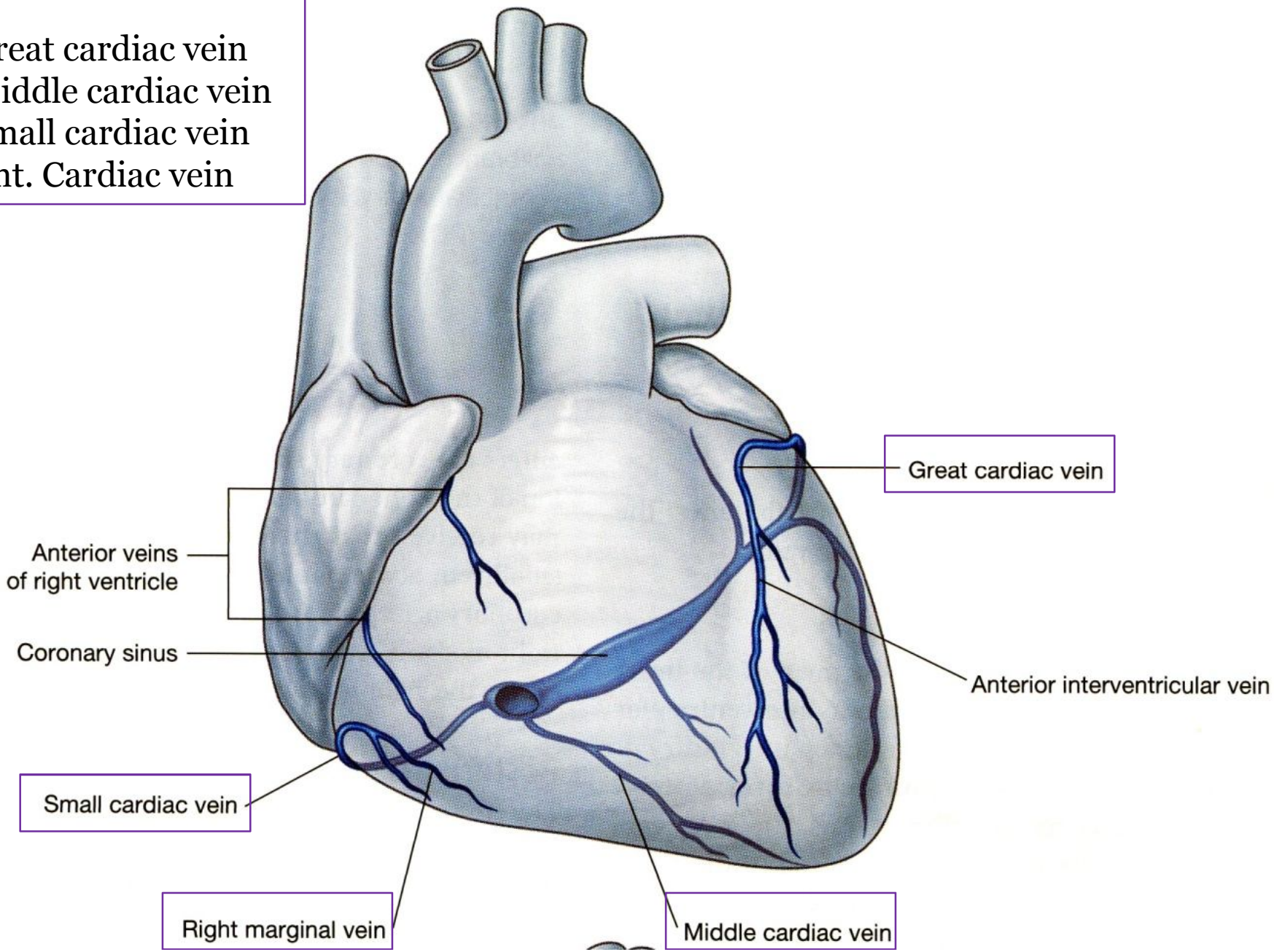
Fig. 20.11. Distribution of the left coronary artery.

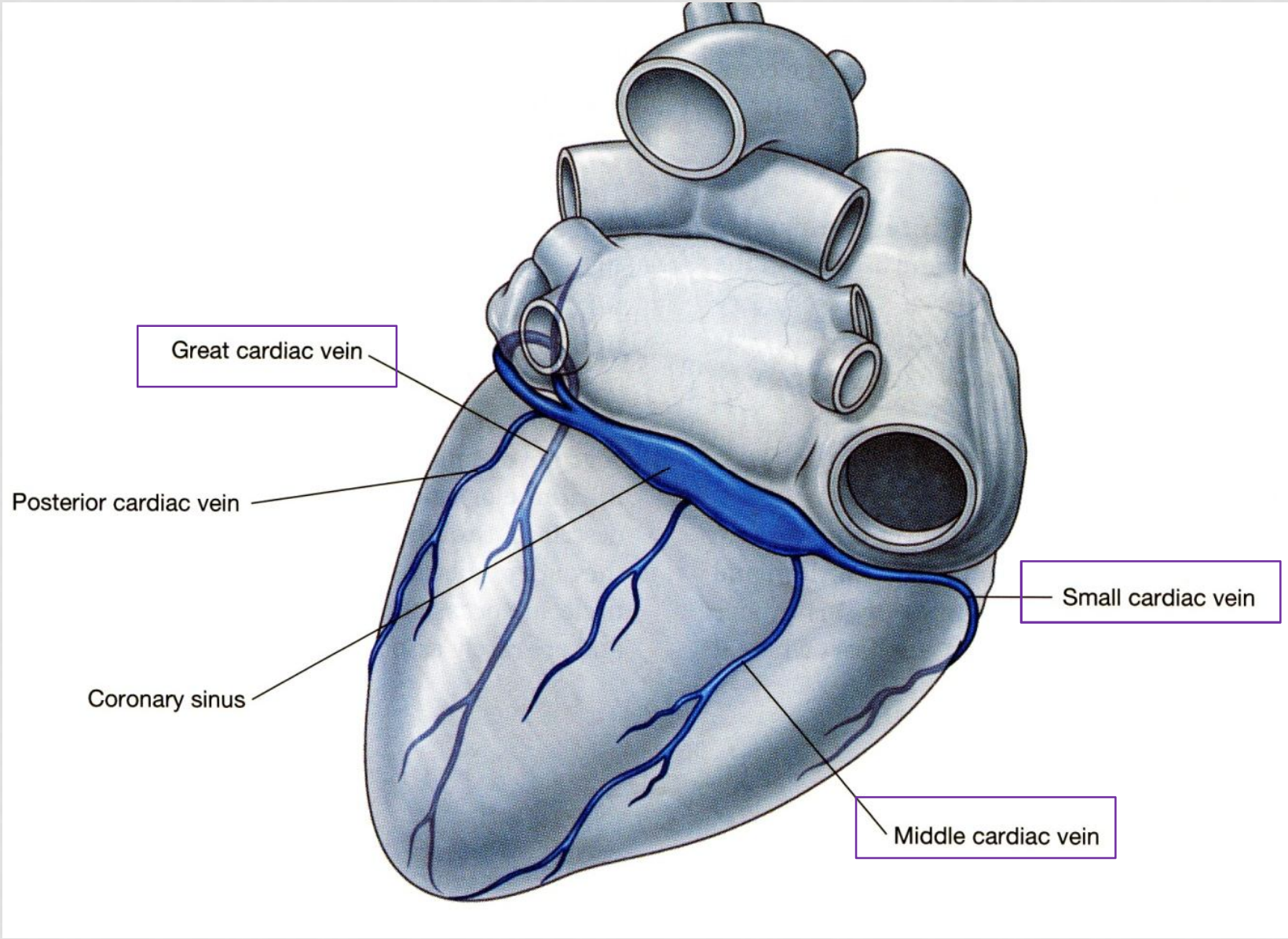

Great cardiac vein
Coronary sulcus
Right coronary artery
Anterior interventricular sulcus
Anterior interventricular branch of left coronary artery
Small cardiac vein


Great cardiac vein
Circumflex branch of left coronary artery
Coronary sulcus
Coronary sinus
Middle cardiac vein
Small cardiac vein
Right coronary artery
Posterior interventricular sulcus
Posterior interventricular branch of right coronary artery

Cardiac veins:

Great cardiac vein
Middle cardiac vein
Small cardiac vein
Ant. Cardiac vein




Great cardiac vein
Posterior cardiac vein
Coronary sinus
Small cardiac vein
Middle cardiac vein

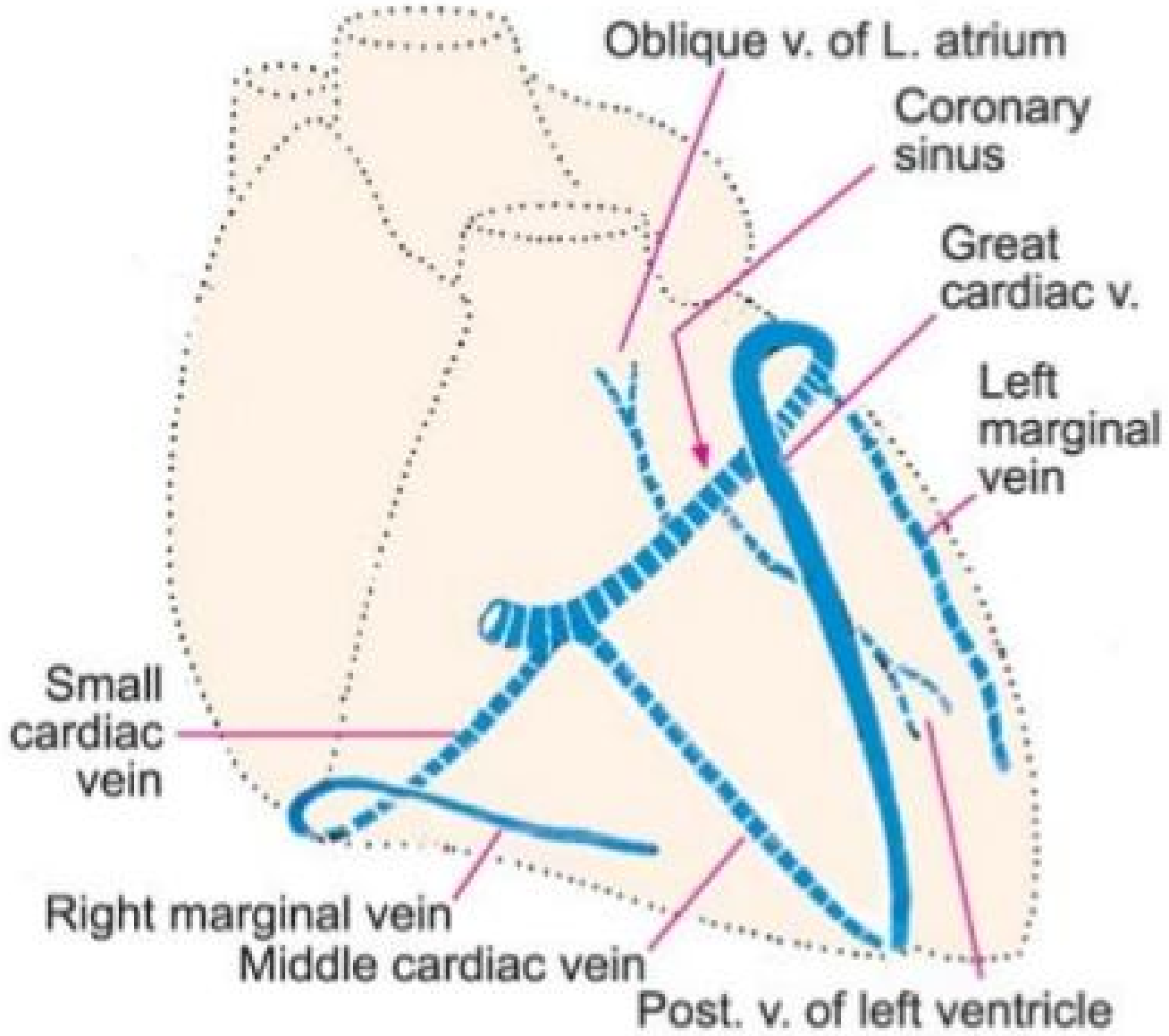
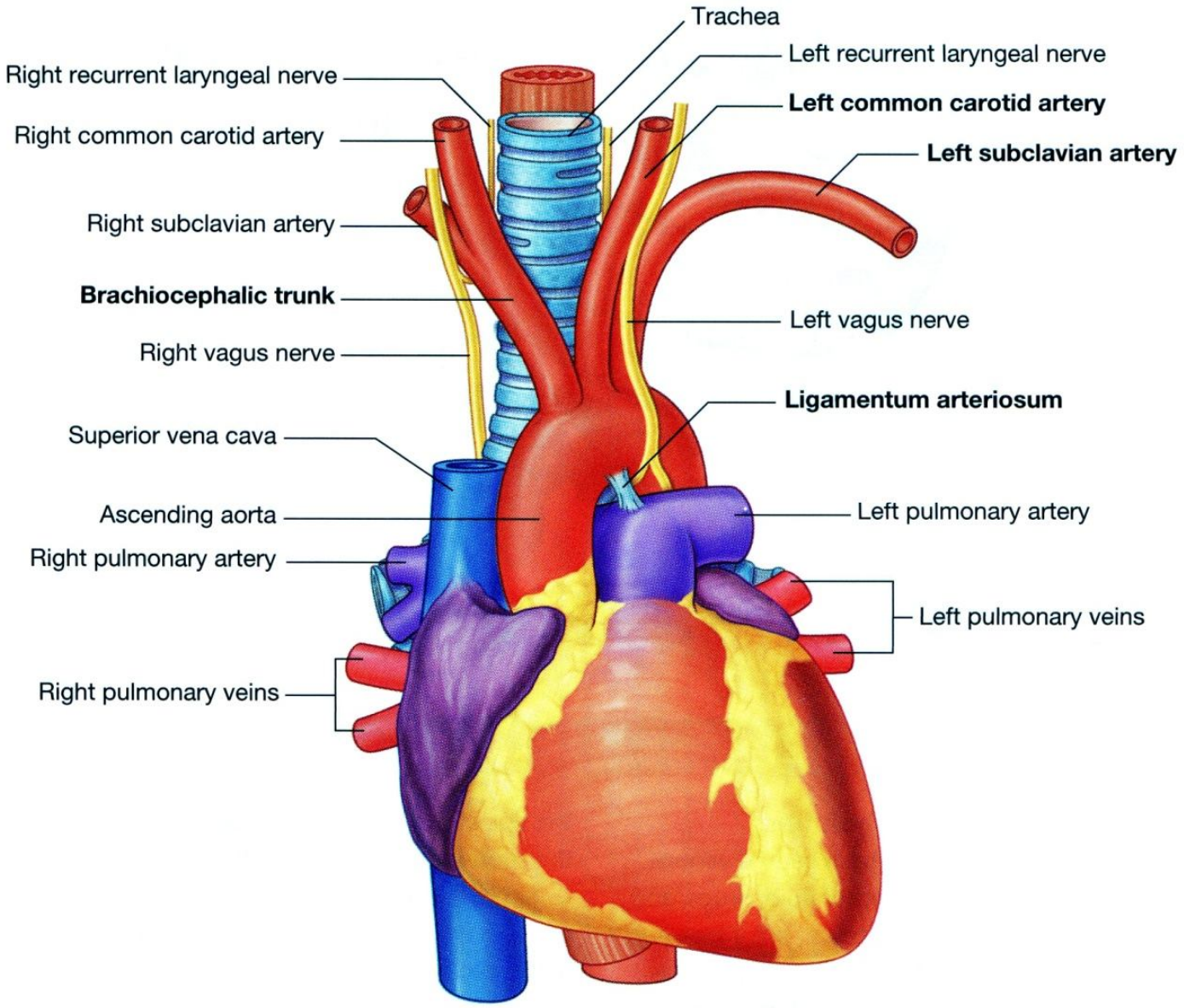


Fig. 20.14. Scheme to show the veins of the heart as seen from the front.

Aorta artery:

Ascending aorta
Arch of aorta
Descending aorta



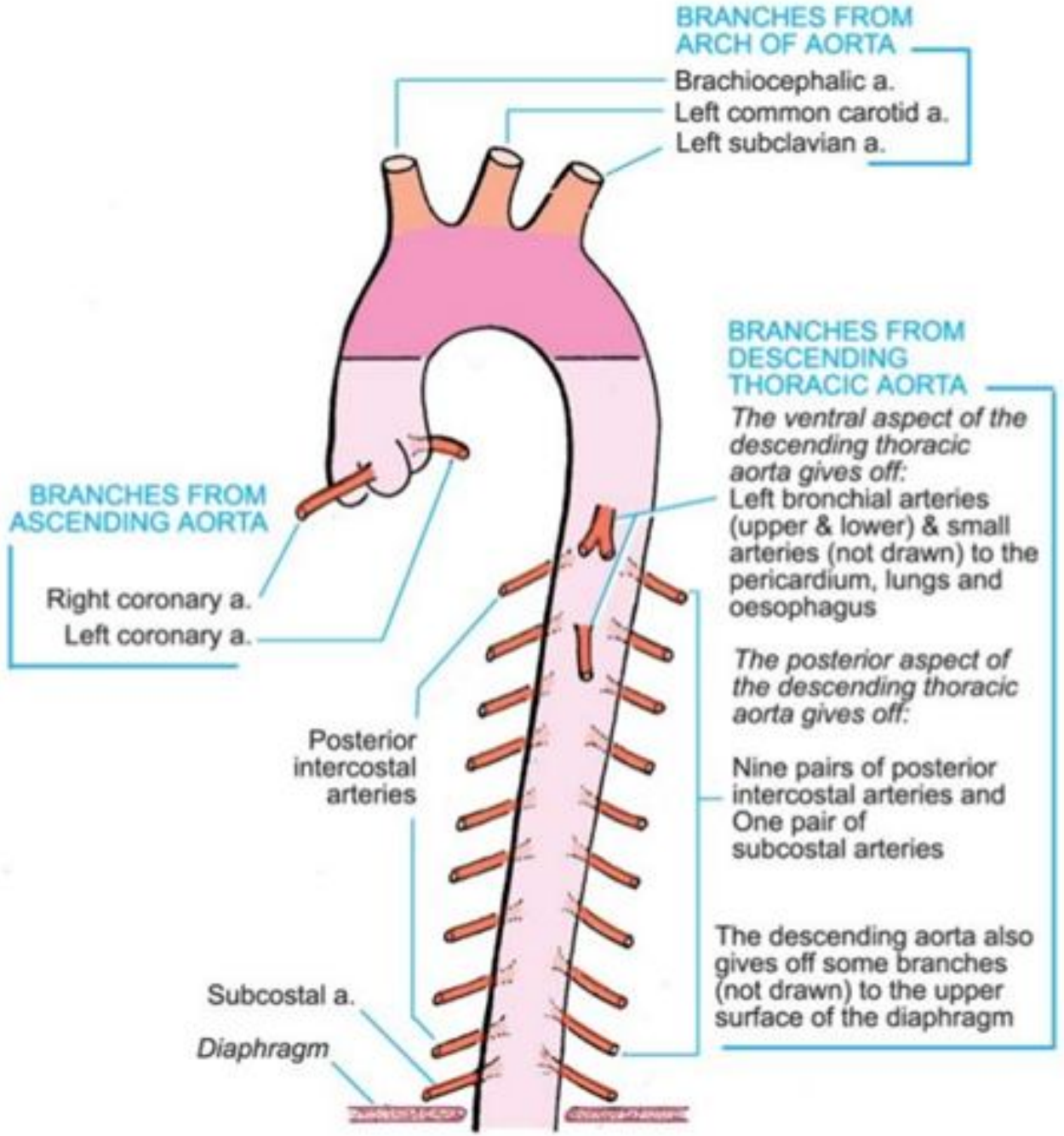


Fig. 20.8. Branches of the aorta in the thorax.

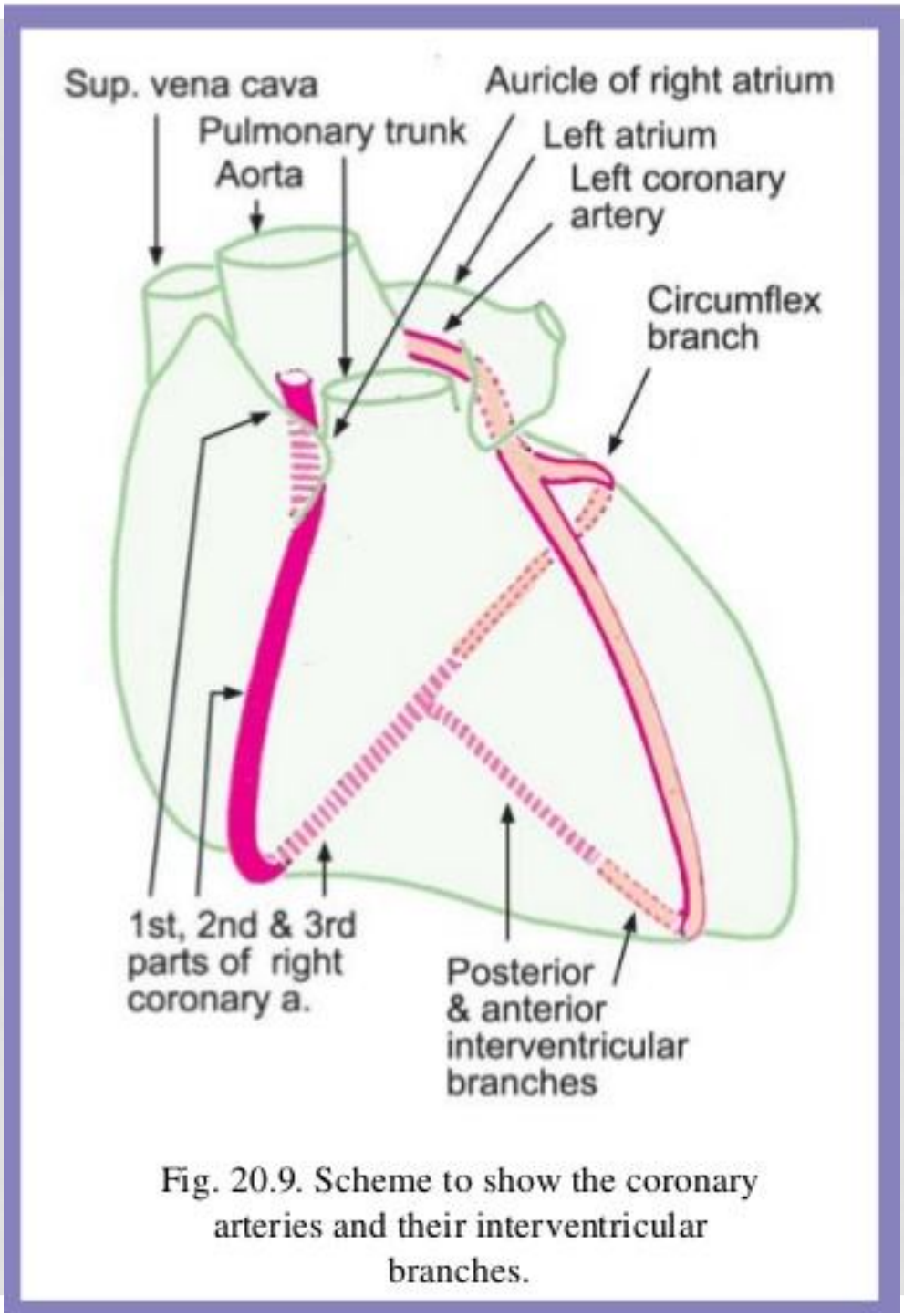


Fig. 20.9. Scheme to show the coronary arteries and their interventricular branches.

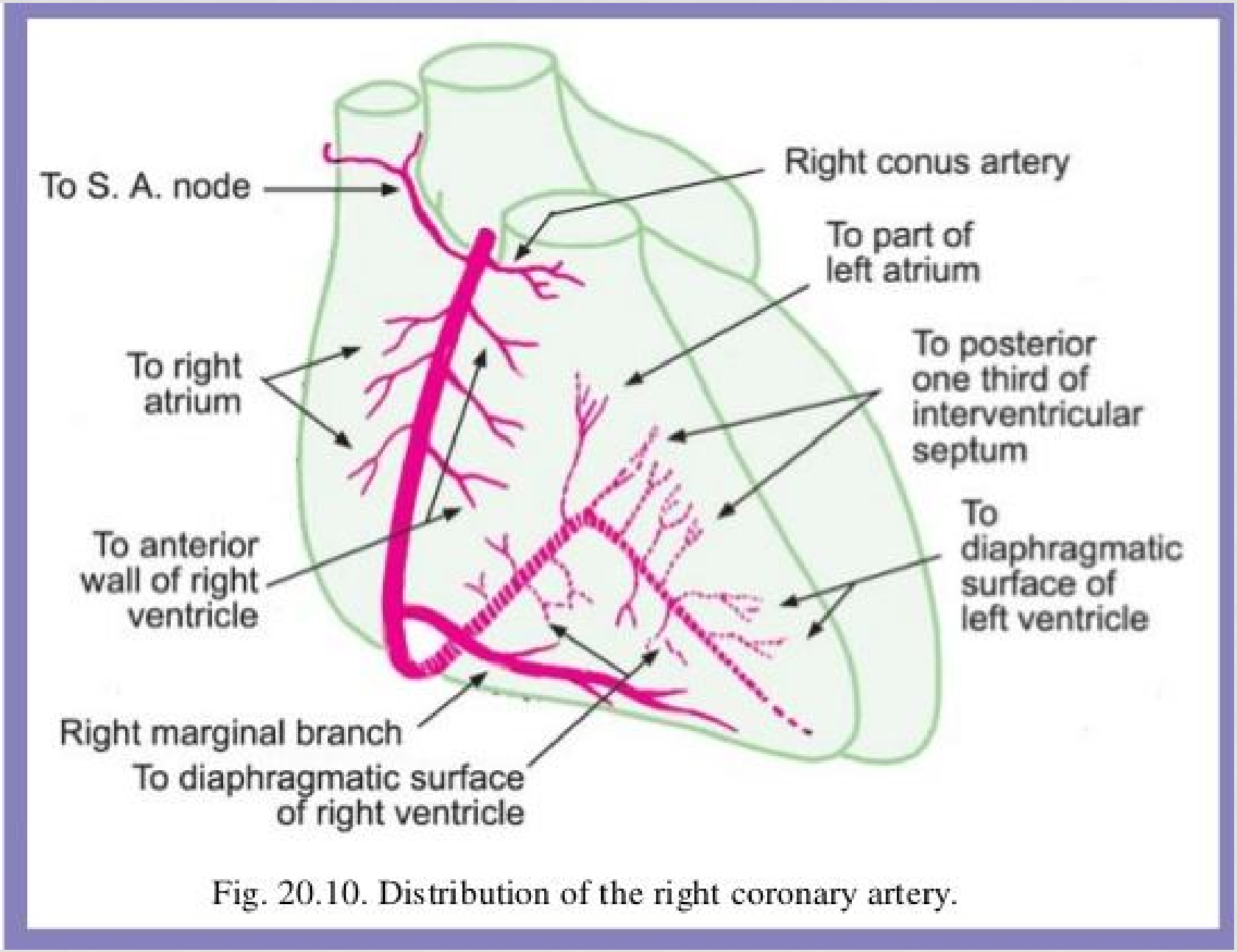


Fig. 20.10. Distribution of the right coronary artery.

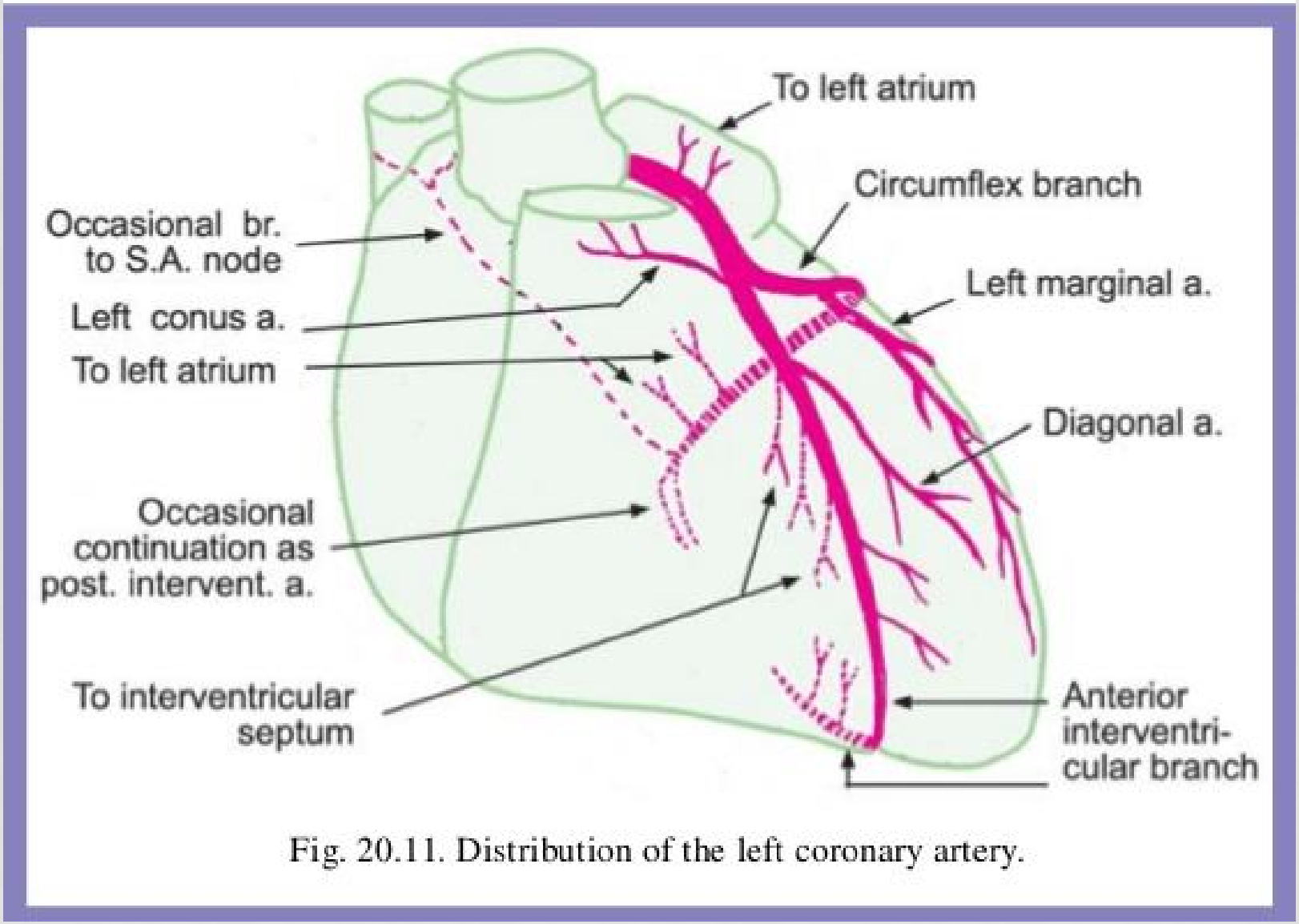


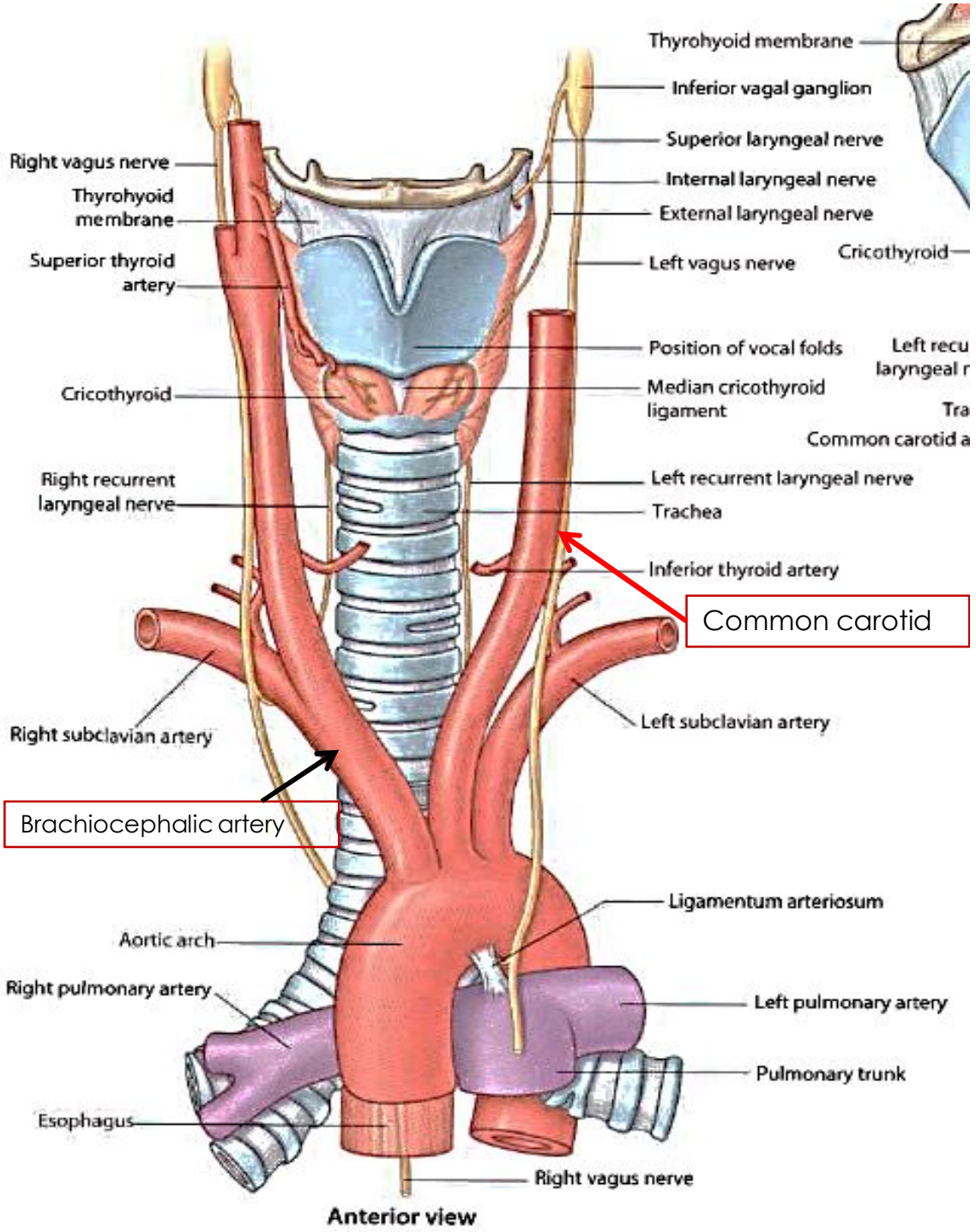
Fig. 20.11. Distribution of the left coronary artery.

Arch of aorta:

Brachiocephalic artery:

Rt. Common carotid
Rt. subclavian

Lf. Common carotid
Lf. subclavian



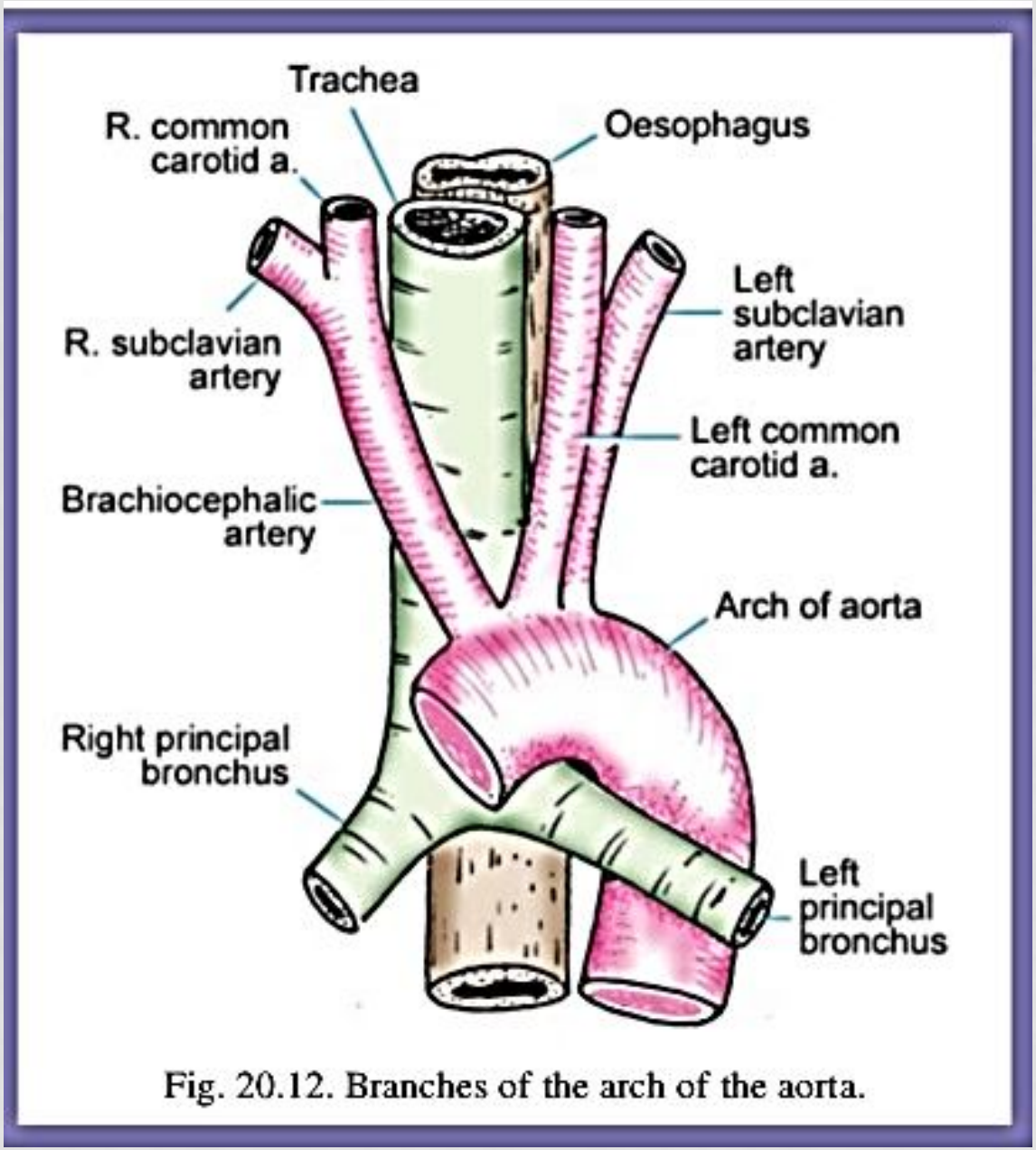


Fig. 20.12. Branches of the arch of the aorta.

Arch of aorta:

Brachiocephalic artery:

Rt. Common carotid:

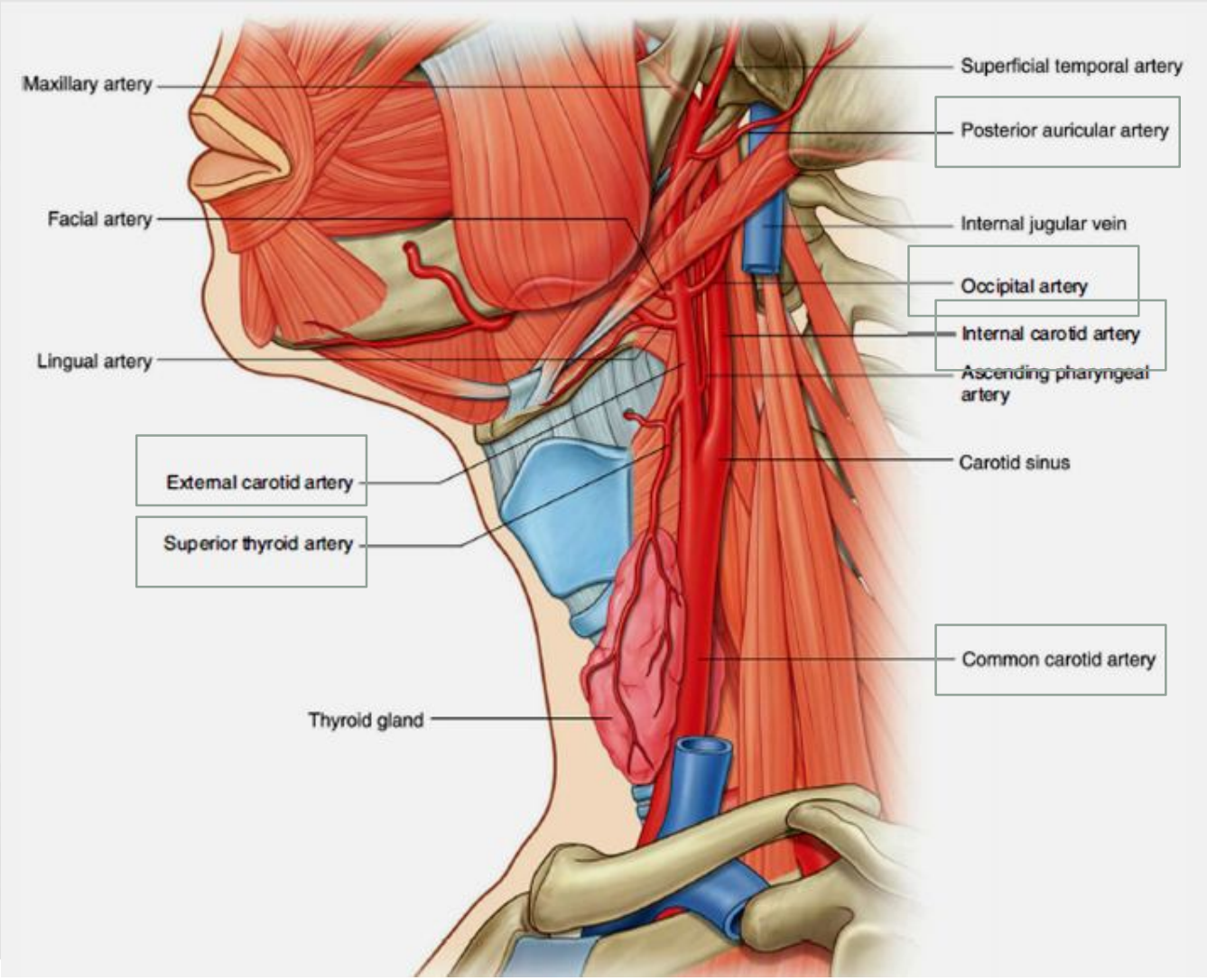
External carotid
Internal carotid

Rt. subclavian

Lf. Common carotid:

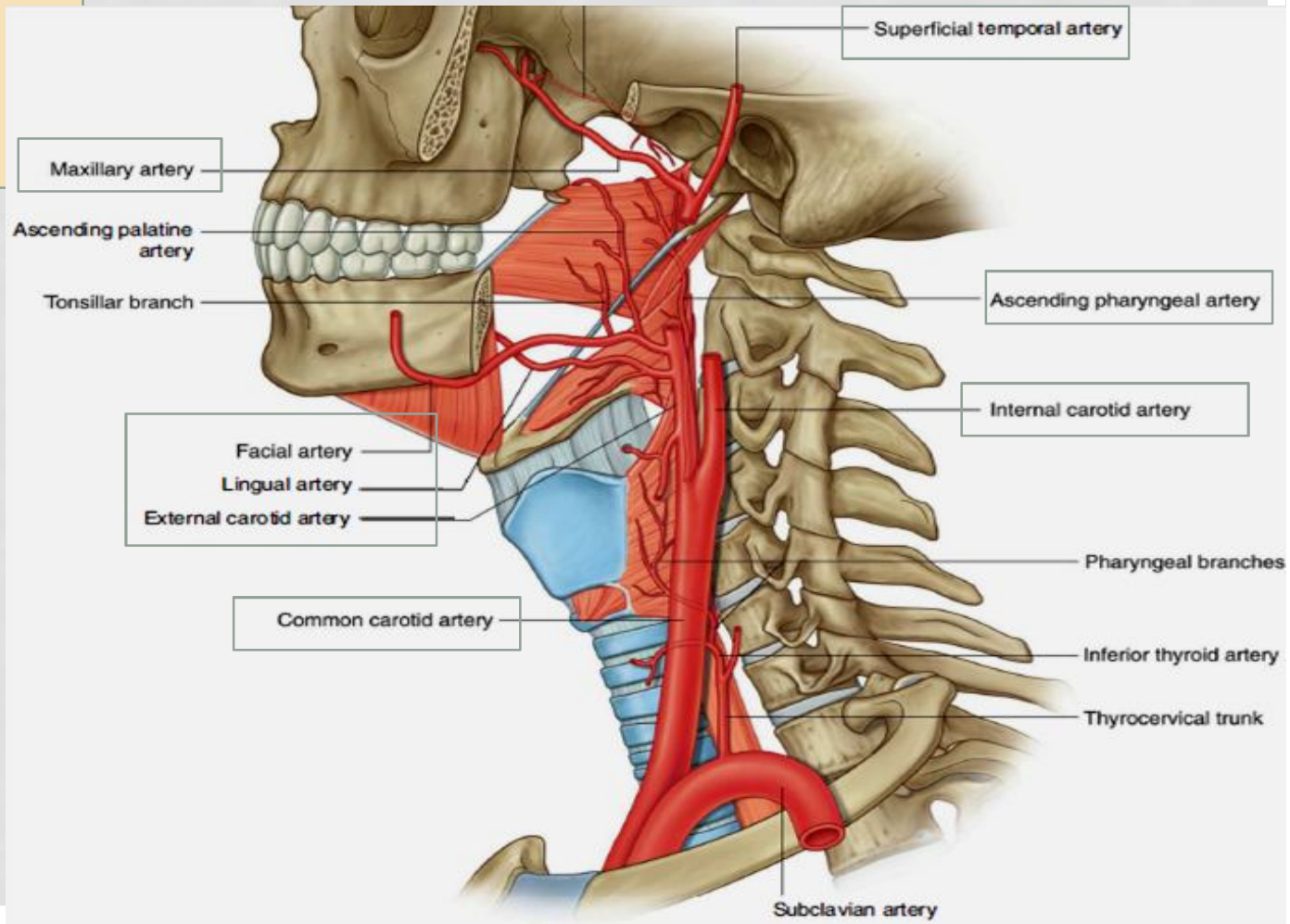
External carotid
Internal carotid

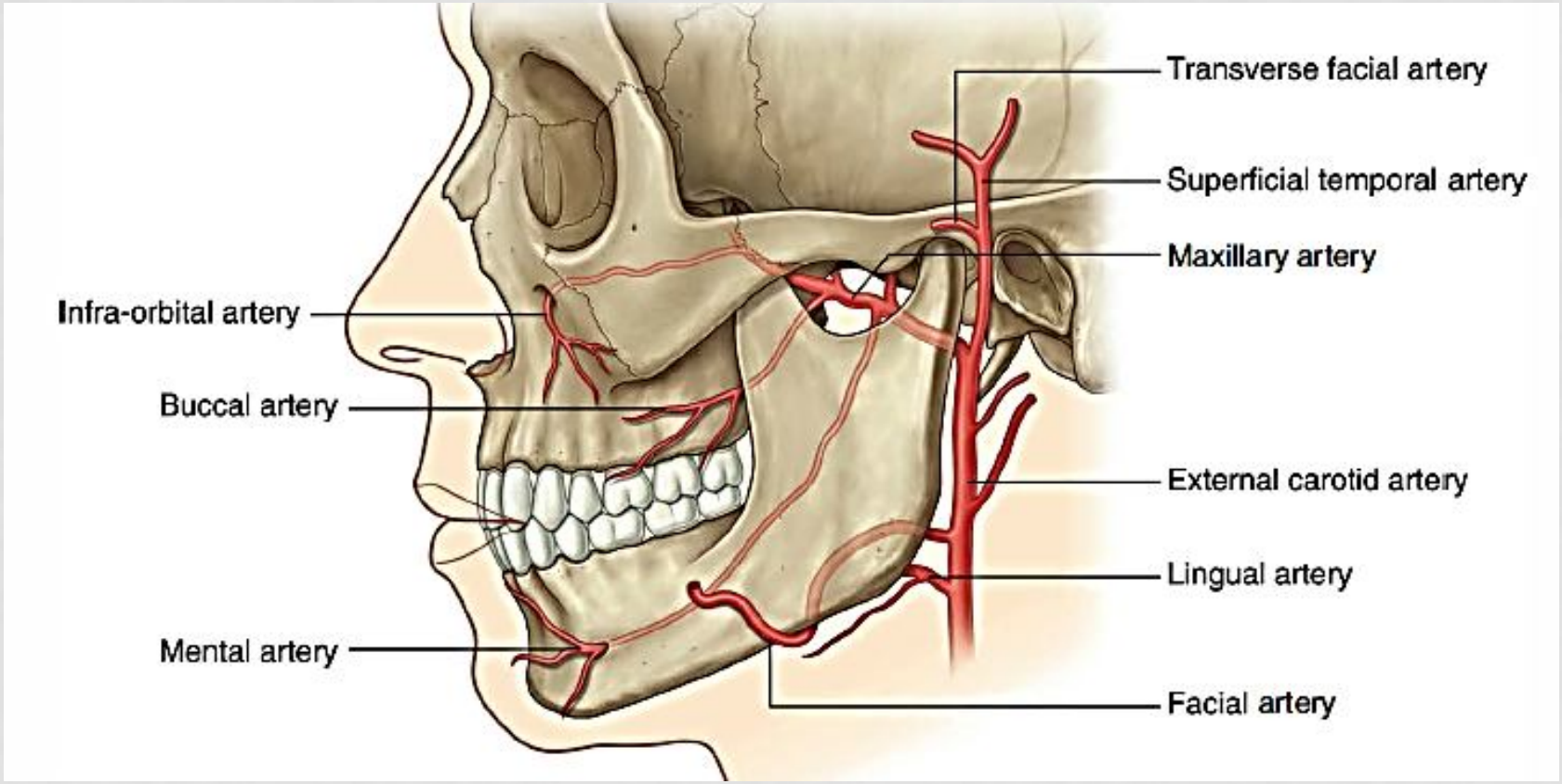
Lf. subclavian



External carotid artery:

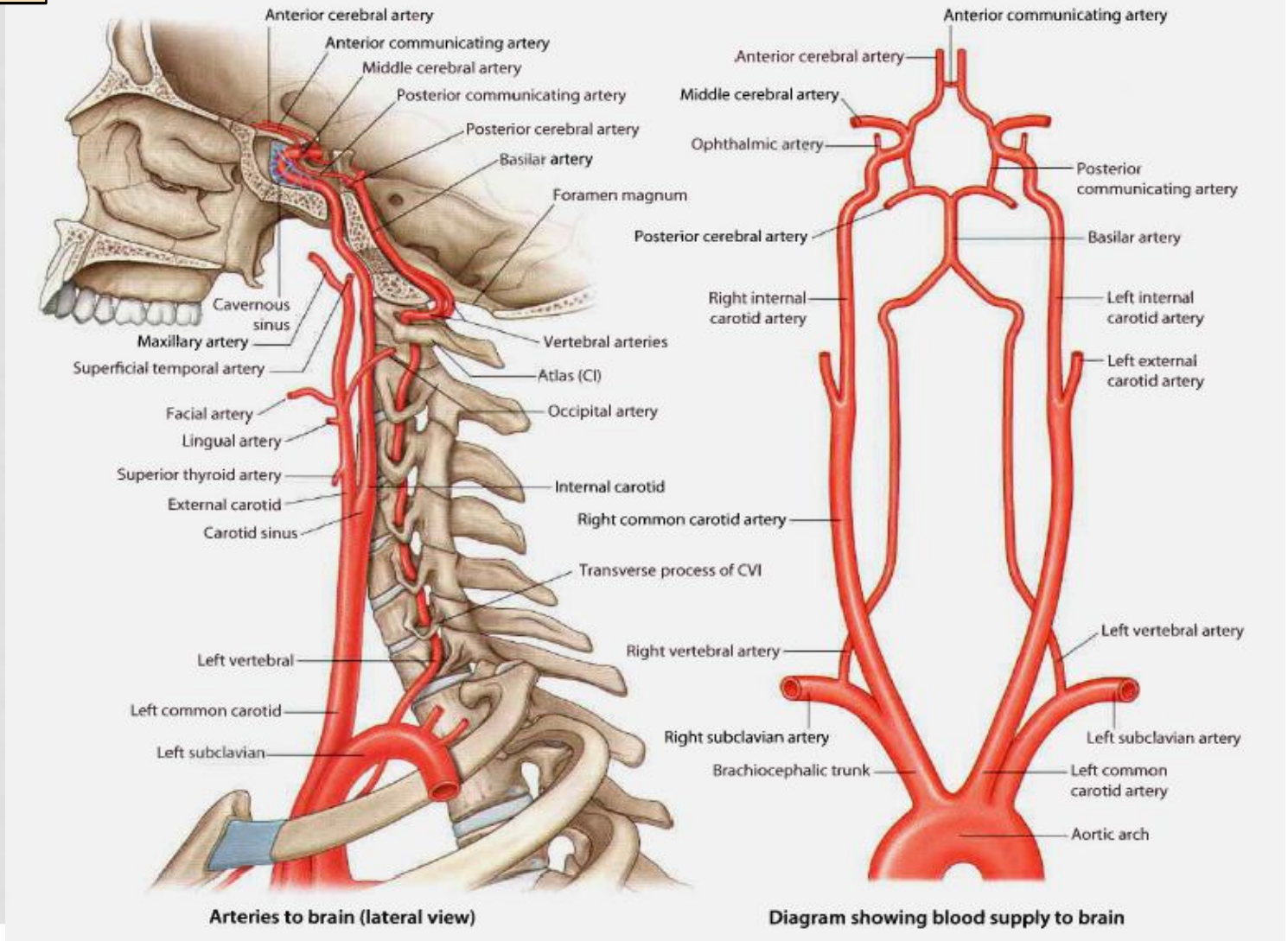
Sup. Thyroid
Ascending pharyngeal
Lingual
Facial
Occipital
Post. Auricular
Maxillary
Superficial temporal




Transverse facial artery
Superficial temporal artery
Maxillary artery
Infra-orbital artery
Buccal artery
External carotid artery
Lingual artery
Mental artery
Facial artery

Internal carotid:

Ophthalmic
Ant. Cerebral
Middle cerebral



The cerebral arterial circle of Willis