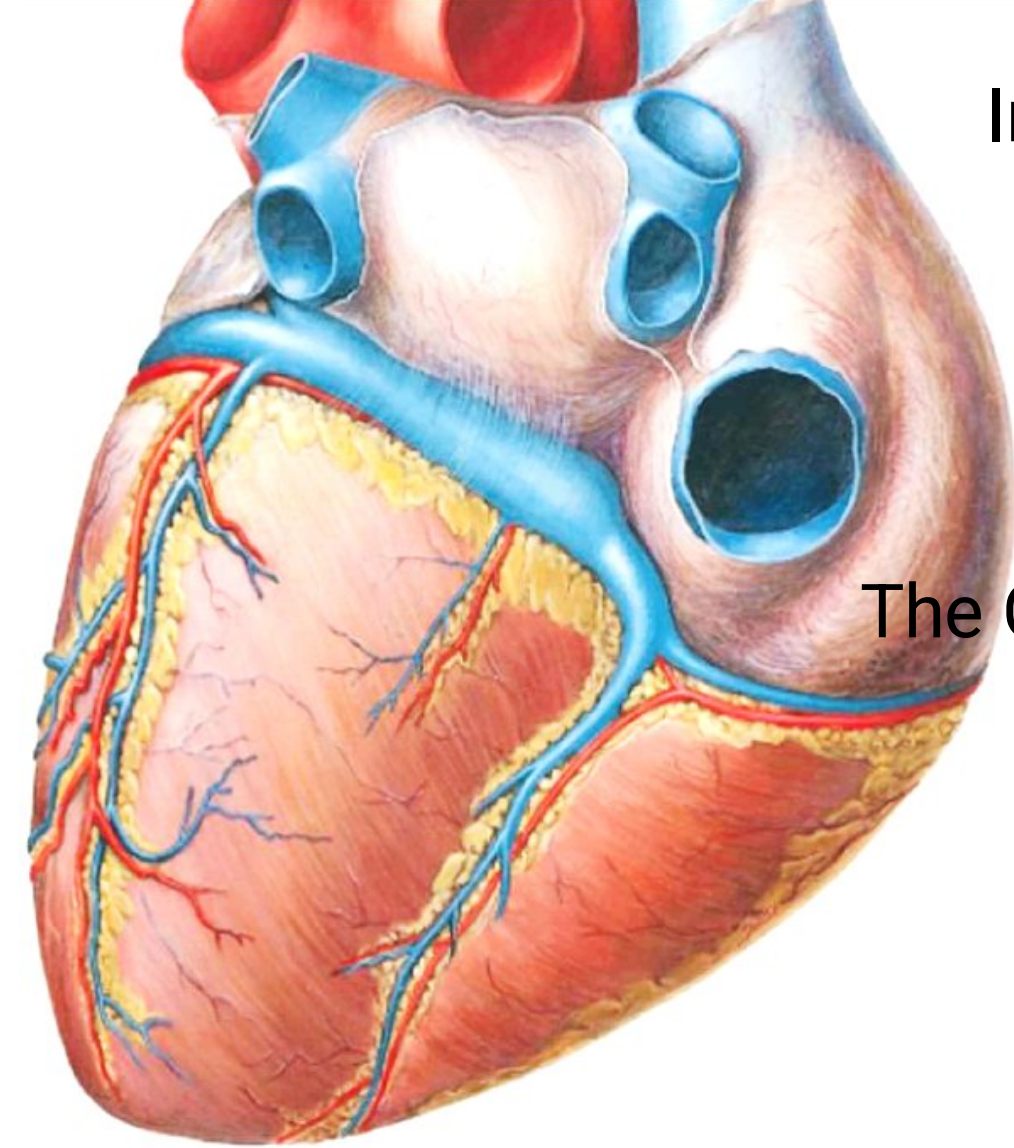


In the name of God

1

The Cardiovascular system

Part 5



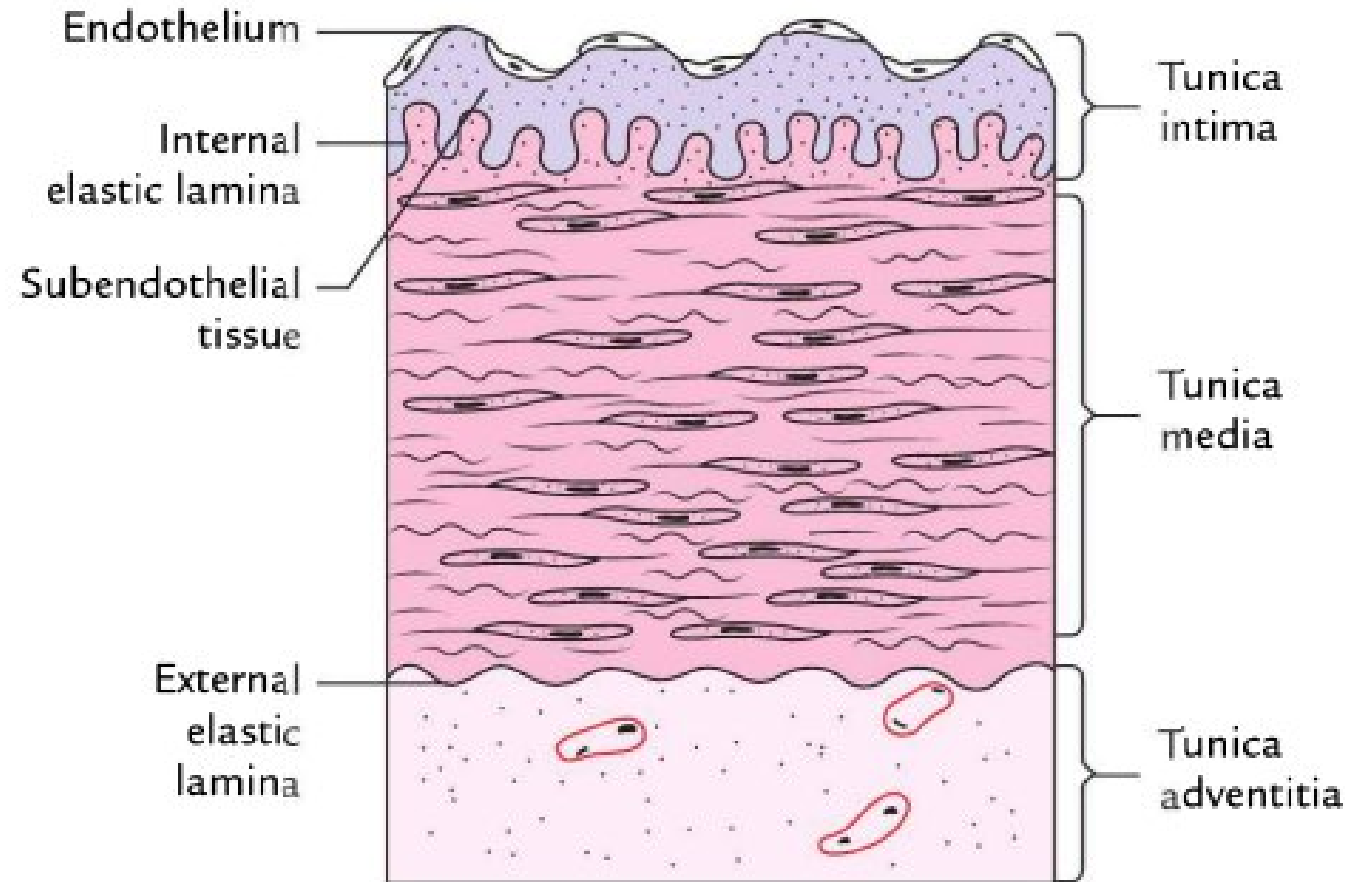
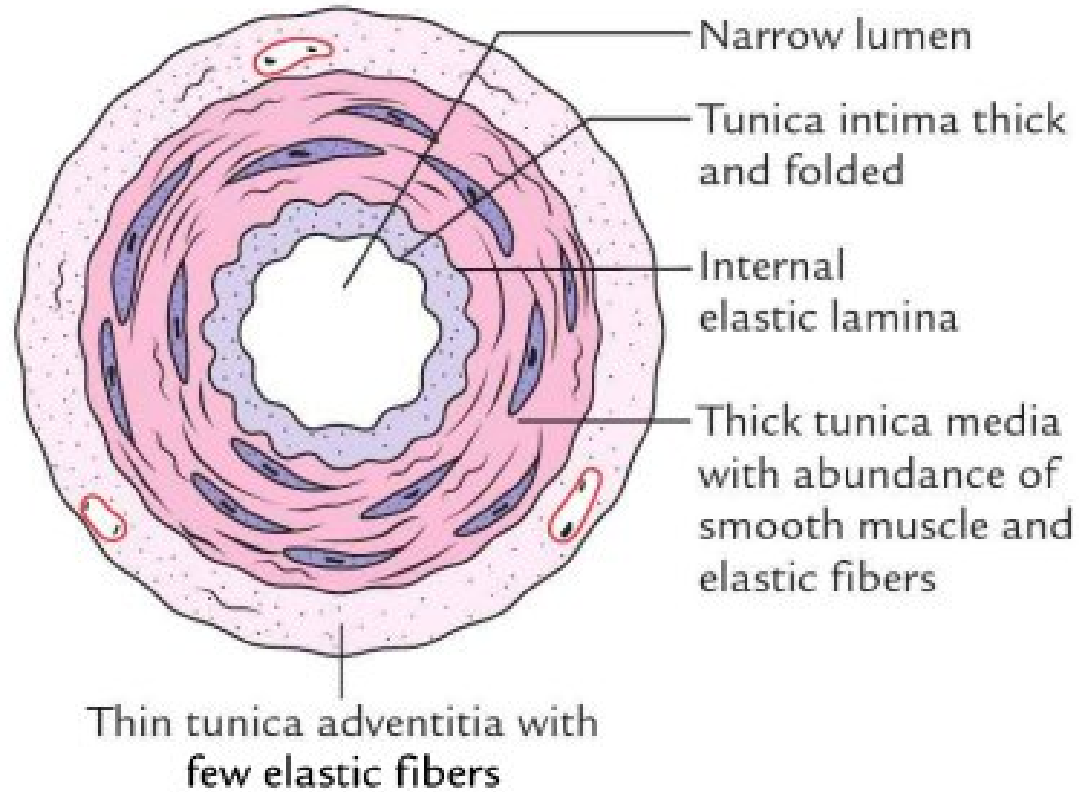
The Cardiovascular system

- This system provides nutrients and removes wastes from various tissues
- The system contains Heart, blood and Vessels
- Arteries; blood vessels that carry blood away from heart
- Veins; the blood vessels that bring back the blood to the heart
- Capillaries; the microscopic vessels that connect the arteries and veins

Structure of blood vessels

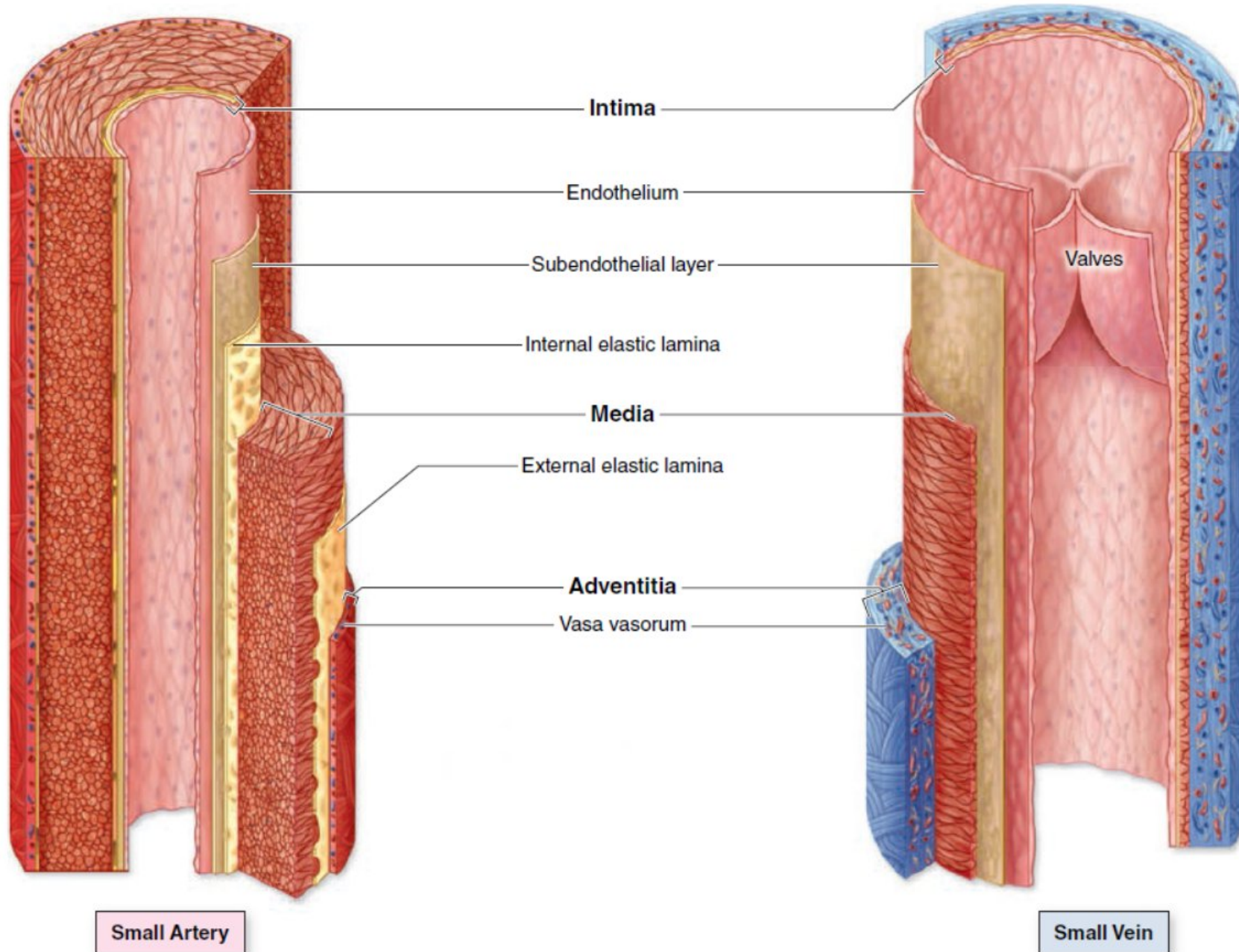
Structure of Artery

4



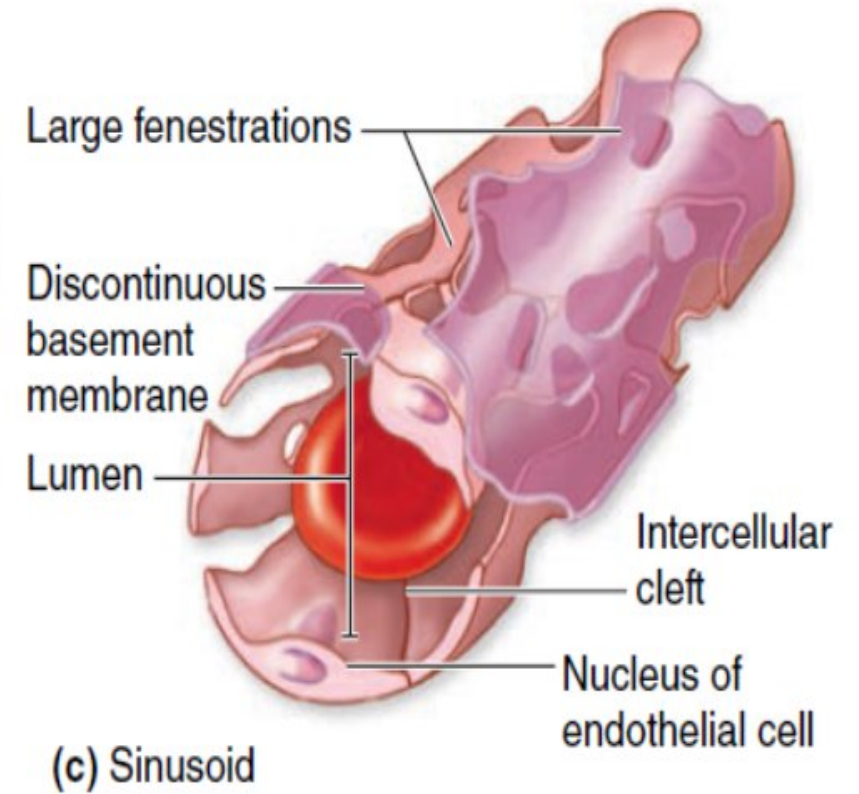
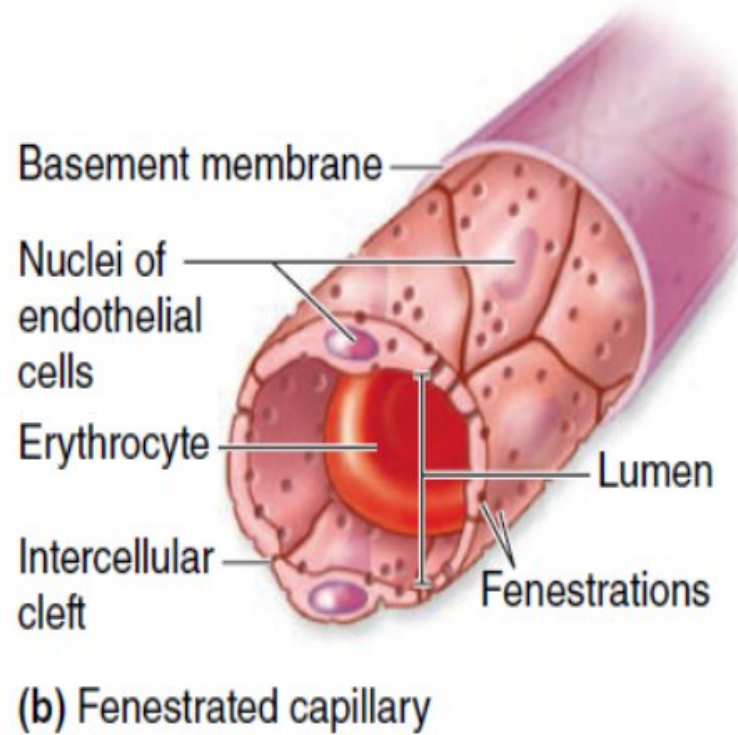
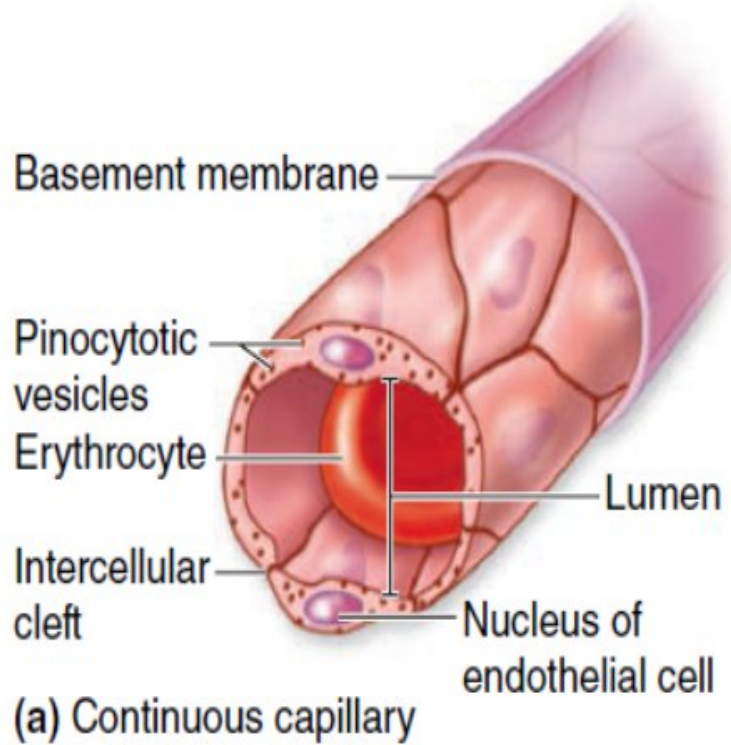
Structure of Artery

5



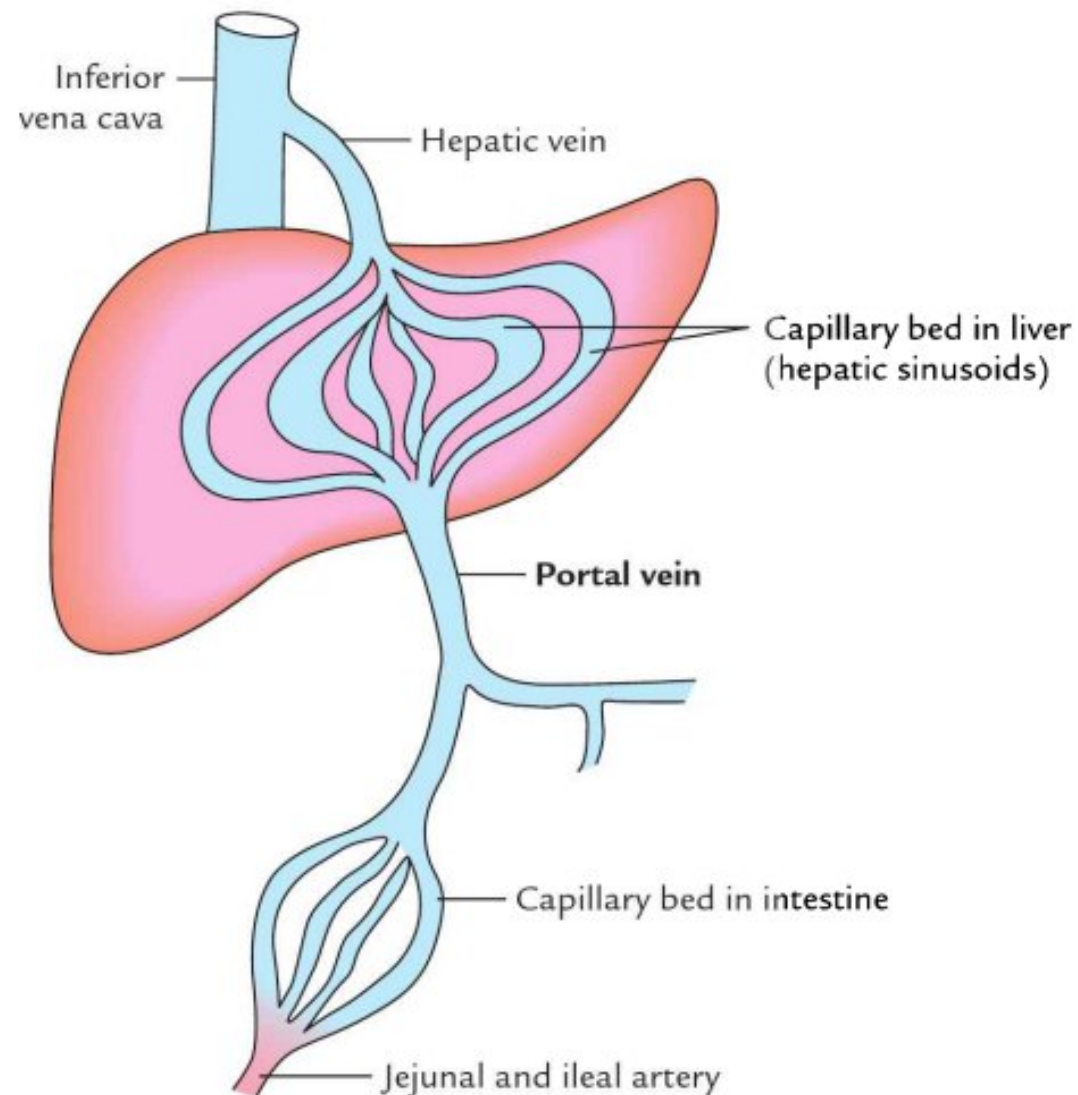
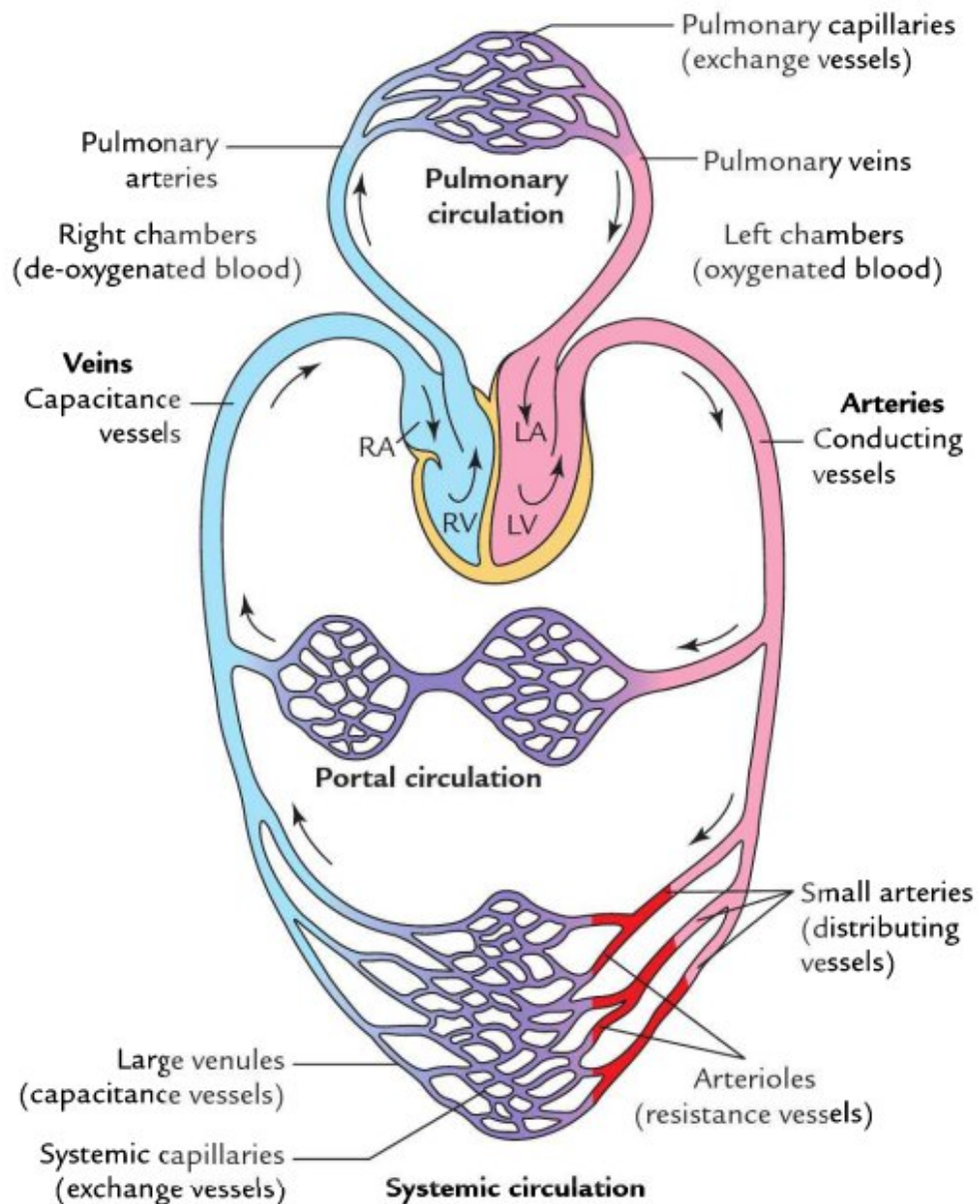
Capillaries

6



Blood circulation

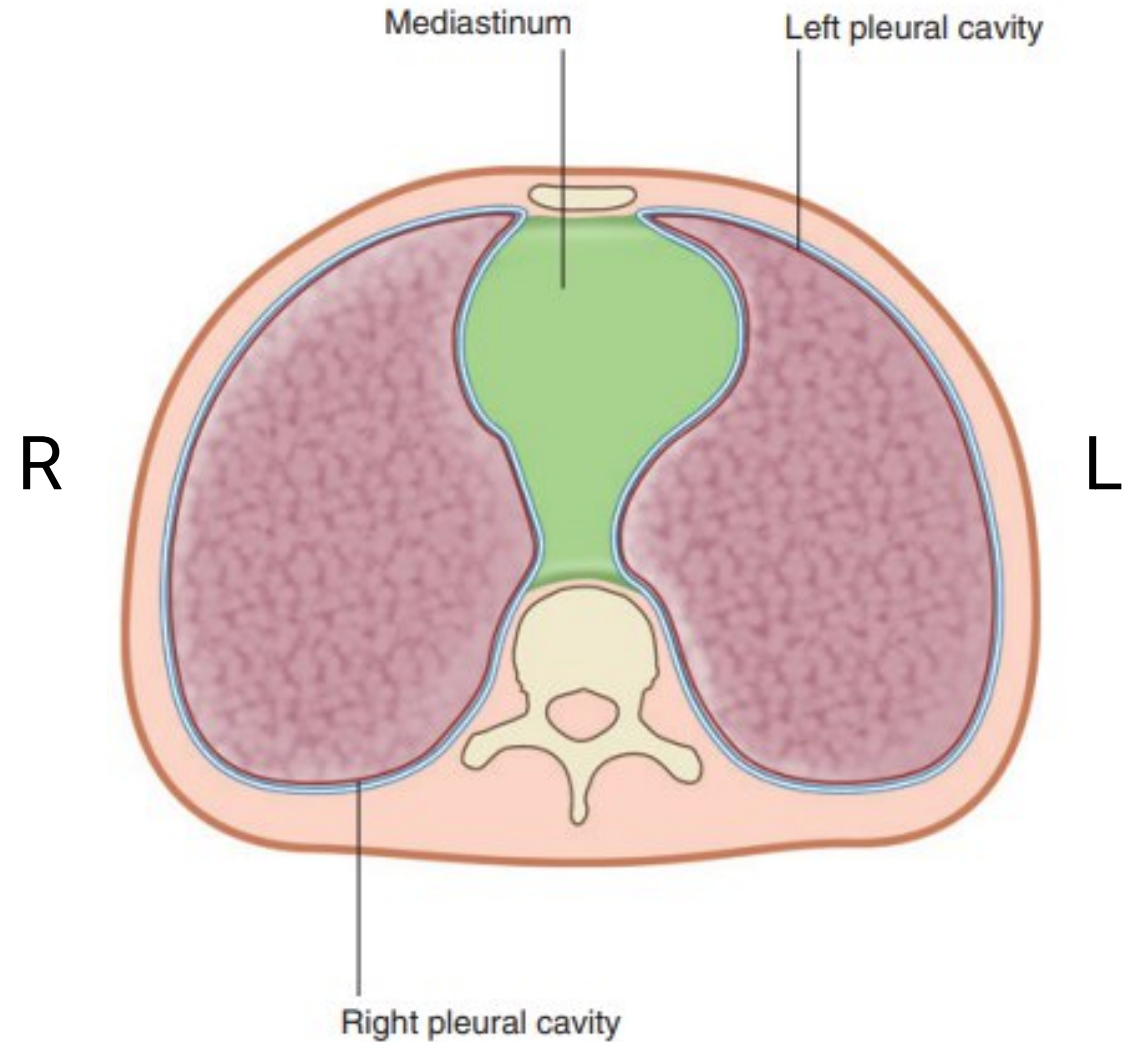
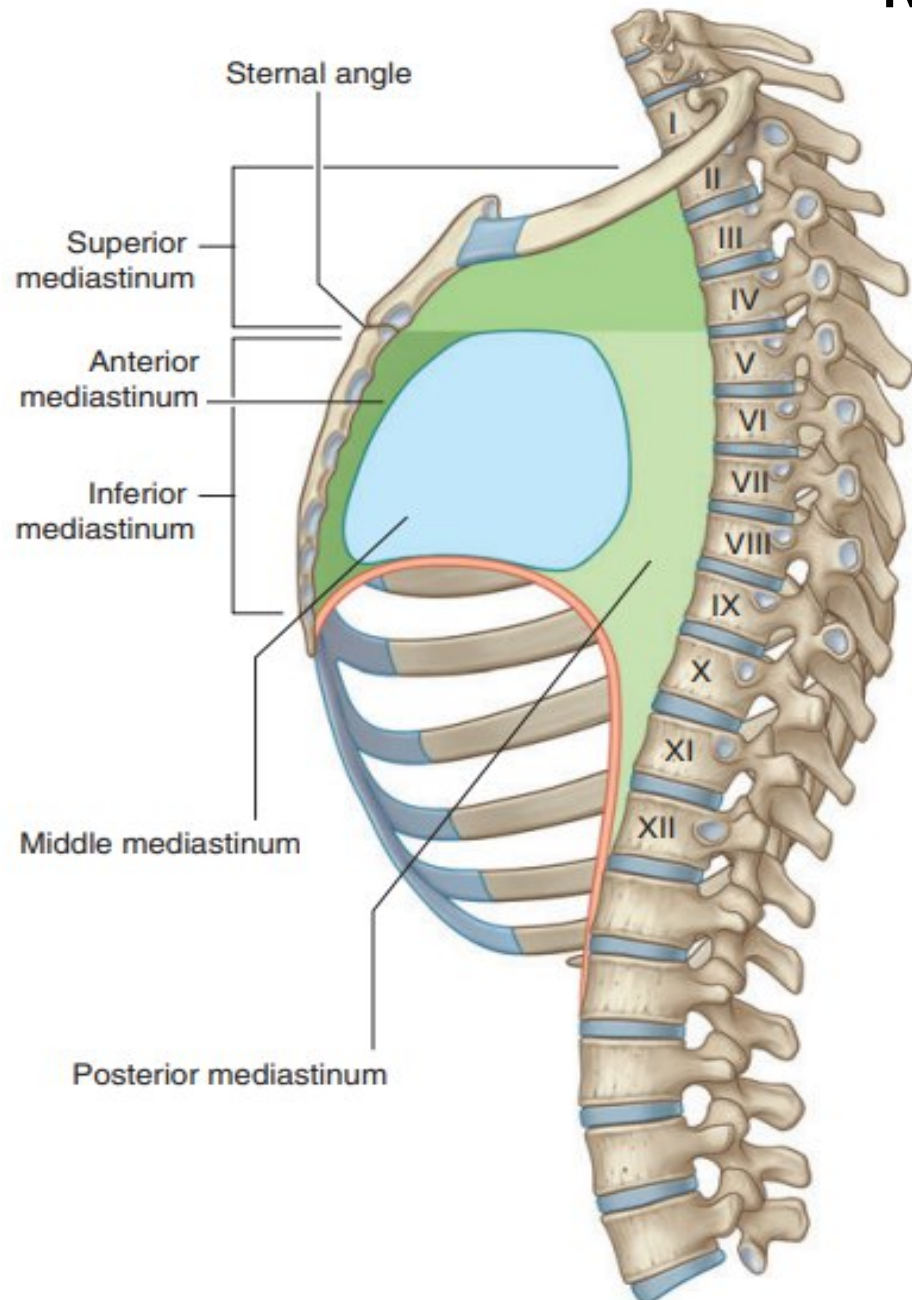
7



Anatomy of the Heart

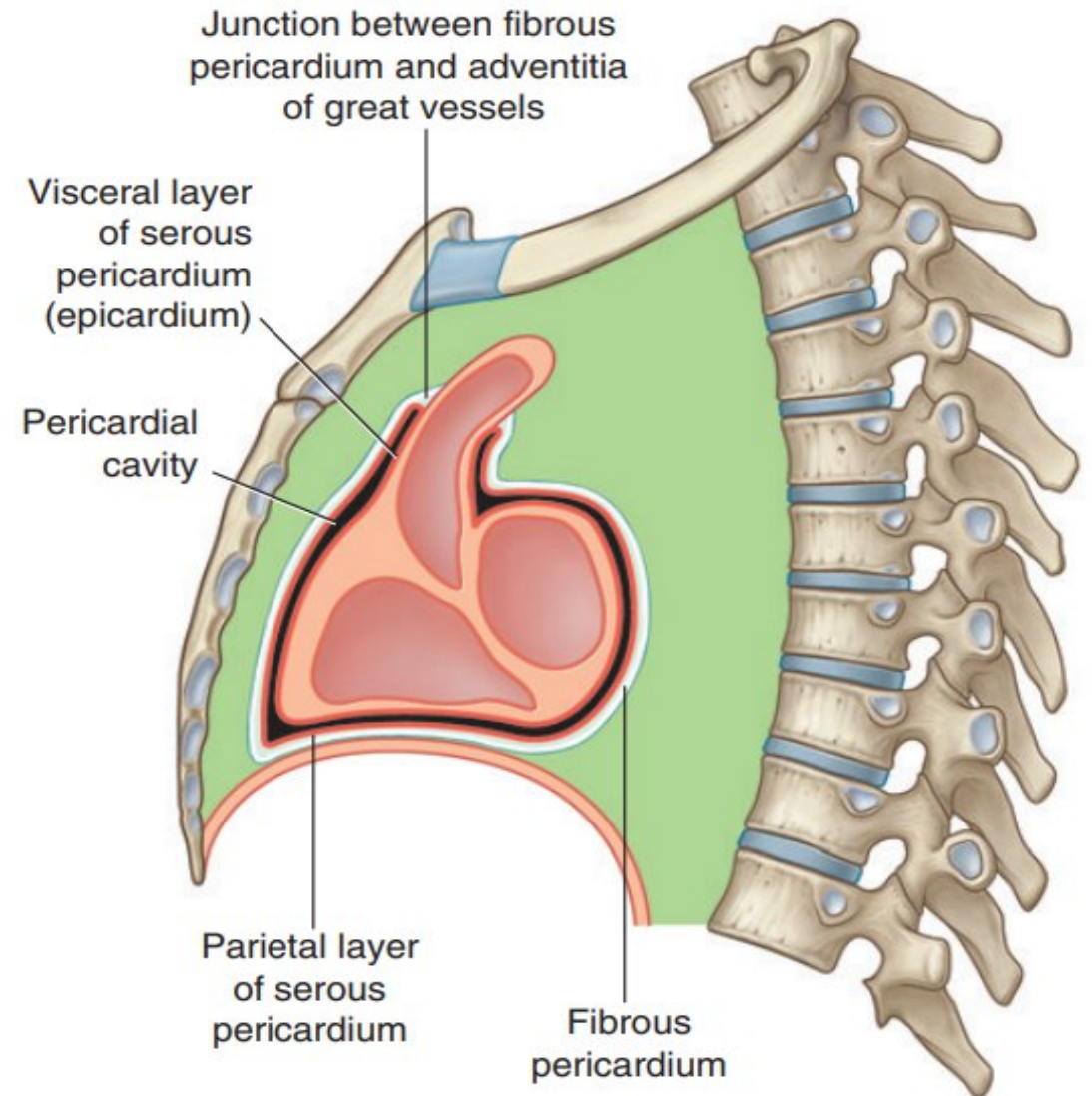
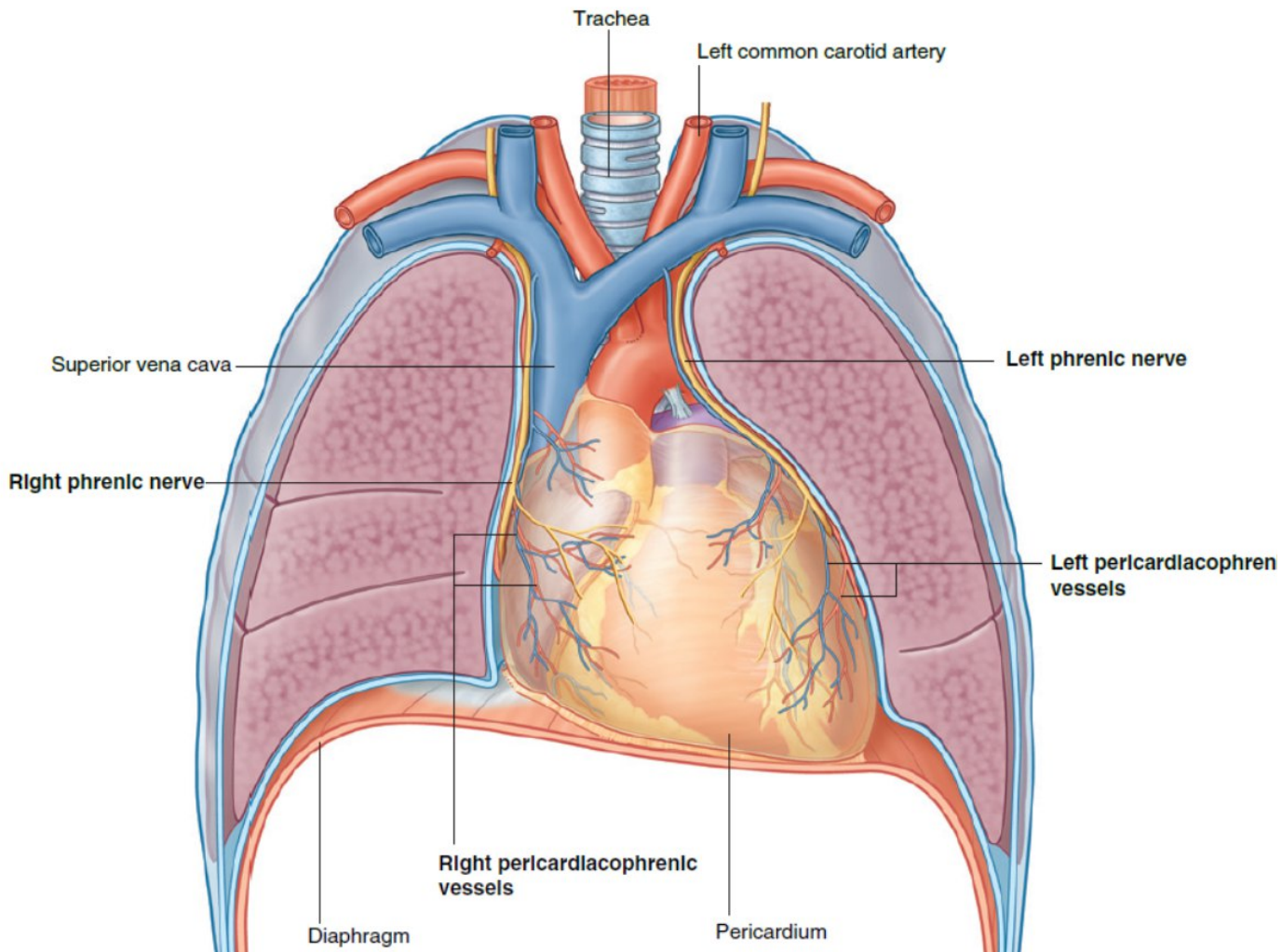
Mediastinum & heart

9



Pericardium

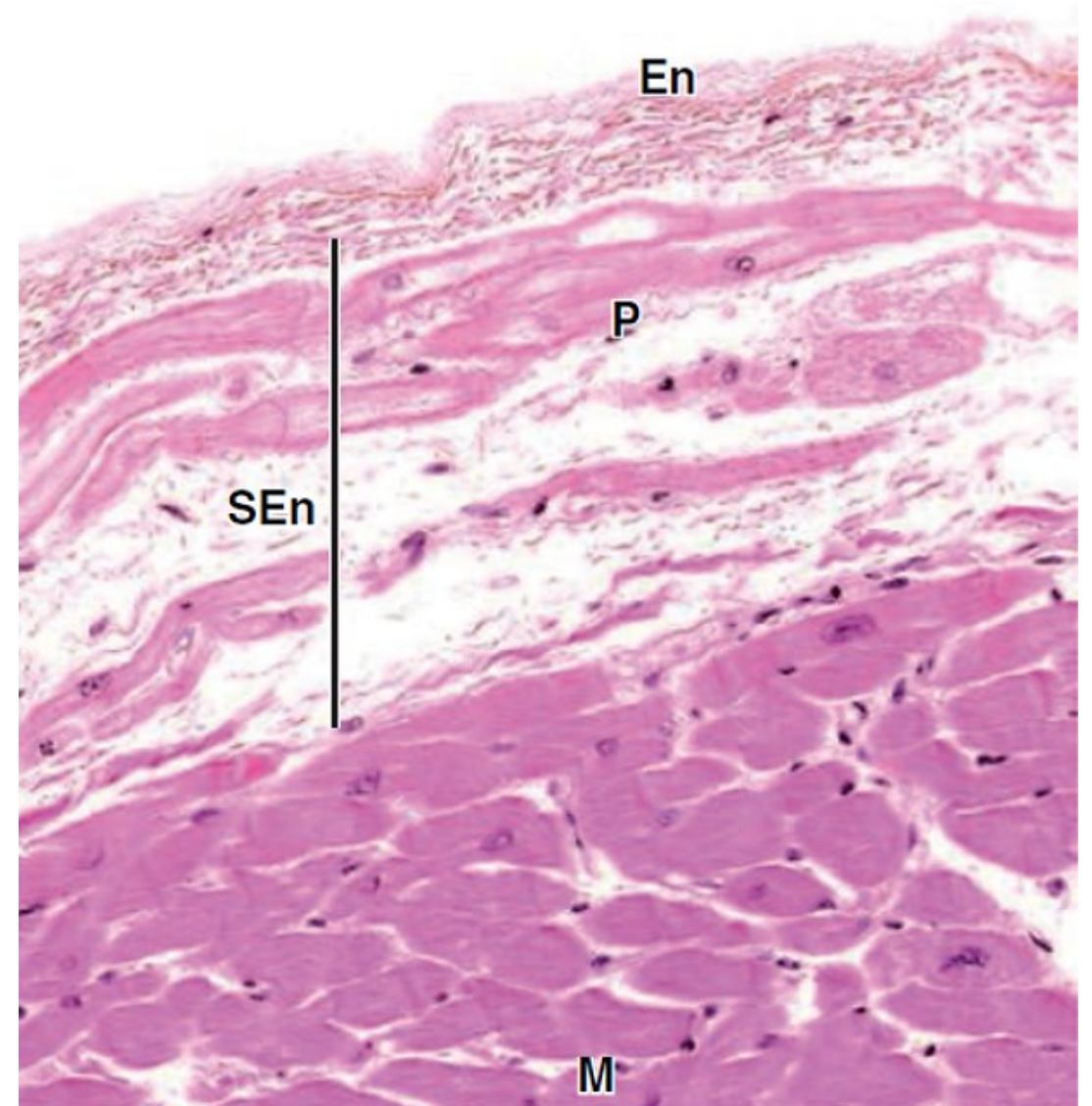
10



Heart; Histology

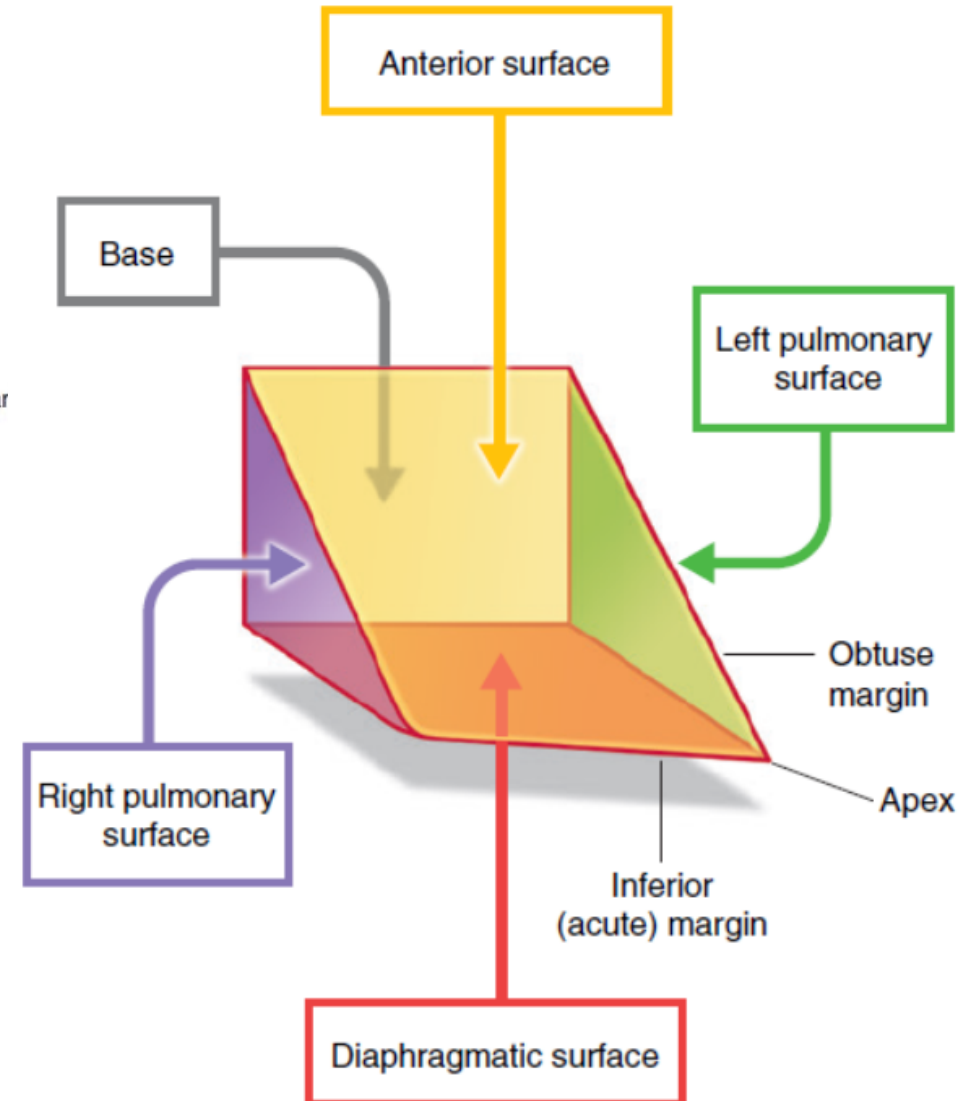
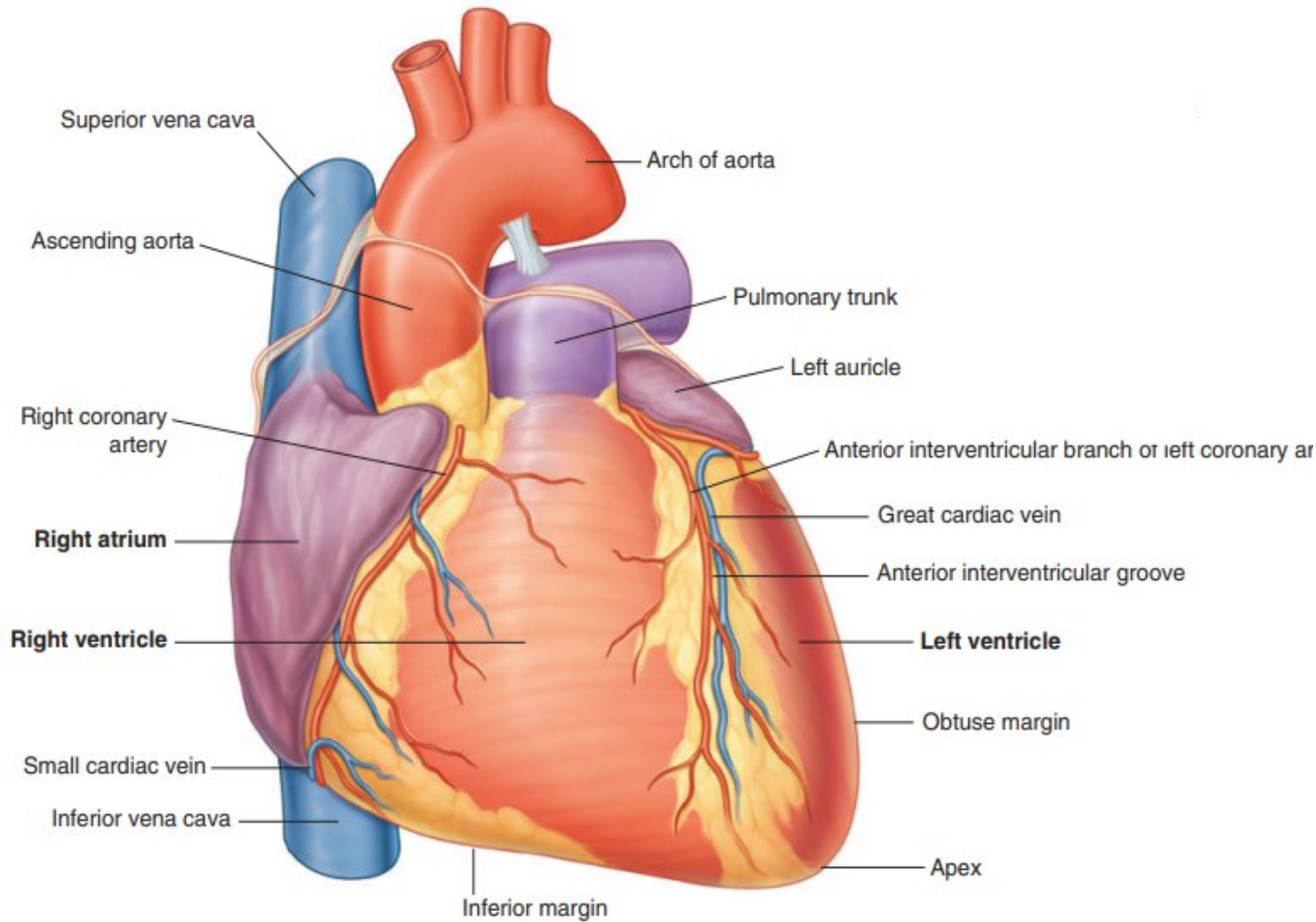
11

- ✓ Epicardium (EP) = visceral layer of serous pericardium
- ✓ Miocardium (M)
- ✓ Endocardium (En)
 - P; Purkinje fibers
 - SEN; Sub-endocardium connective tissue
 - CT; Connective tissue



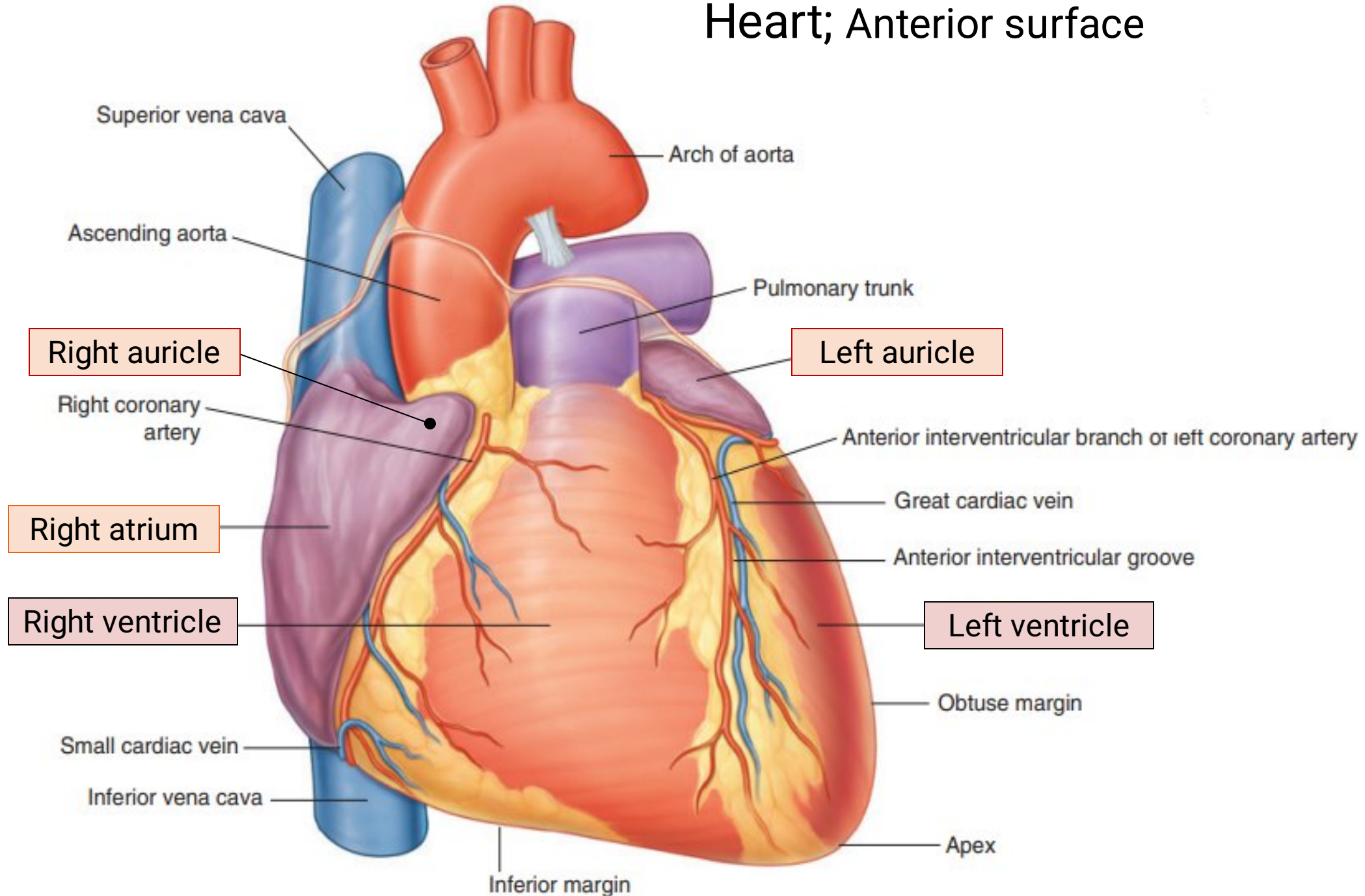
Heart

12



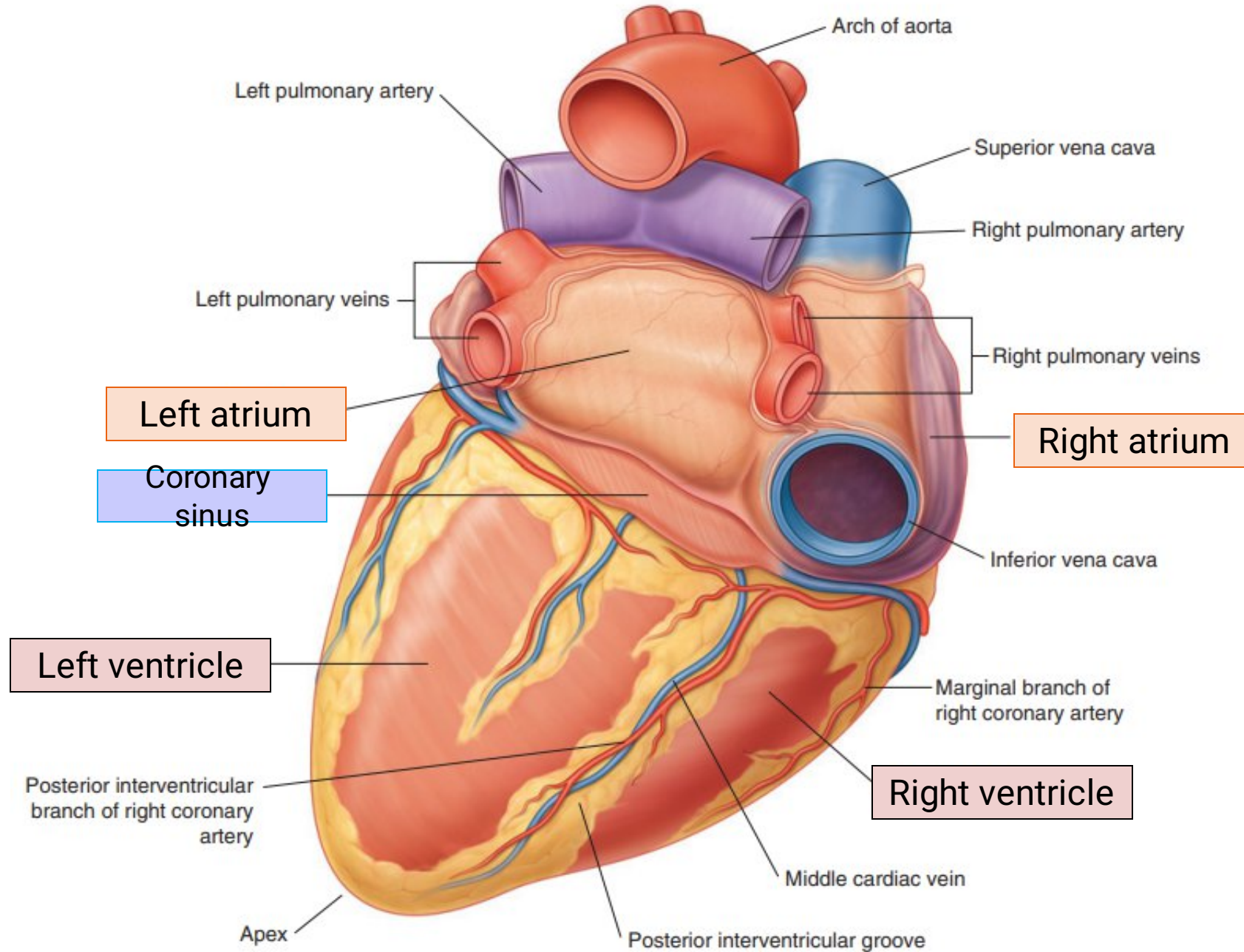
Heart; Anterior surface

13



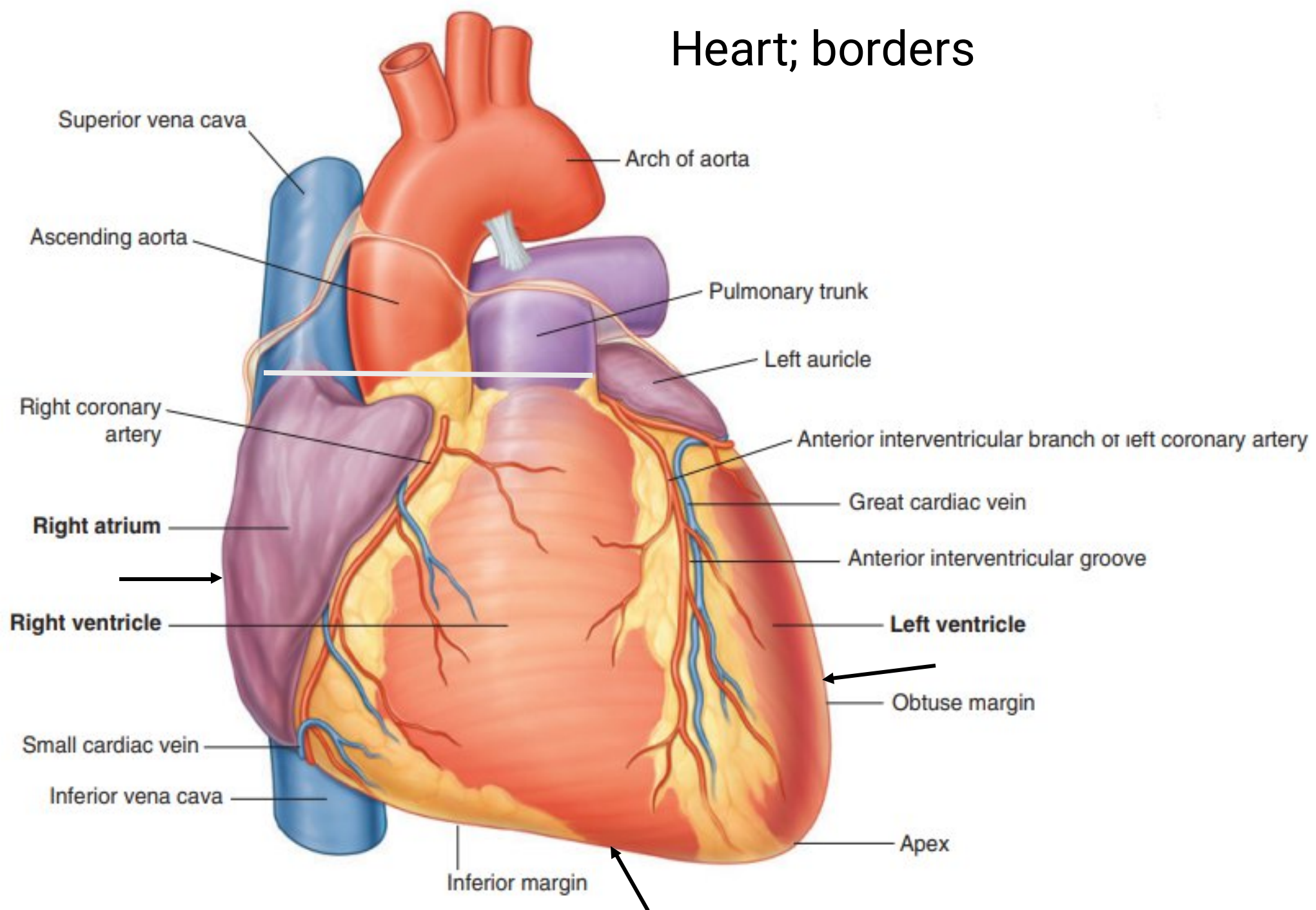
Heart; Diaphragmatic surface

14



Heart; borders

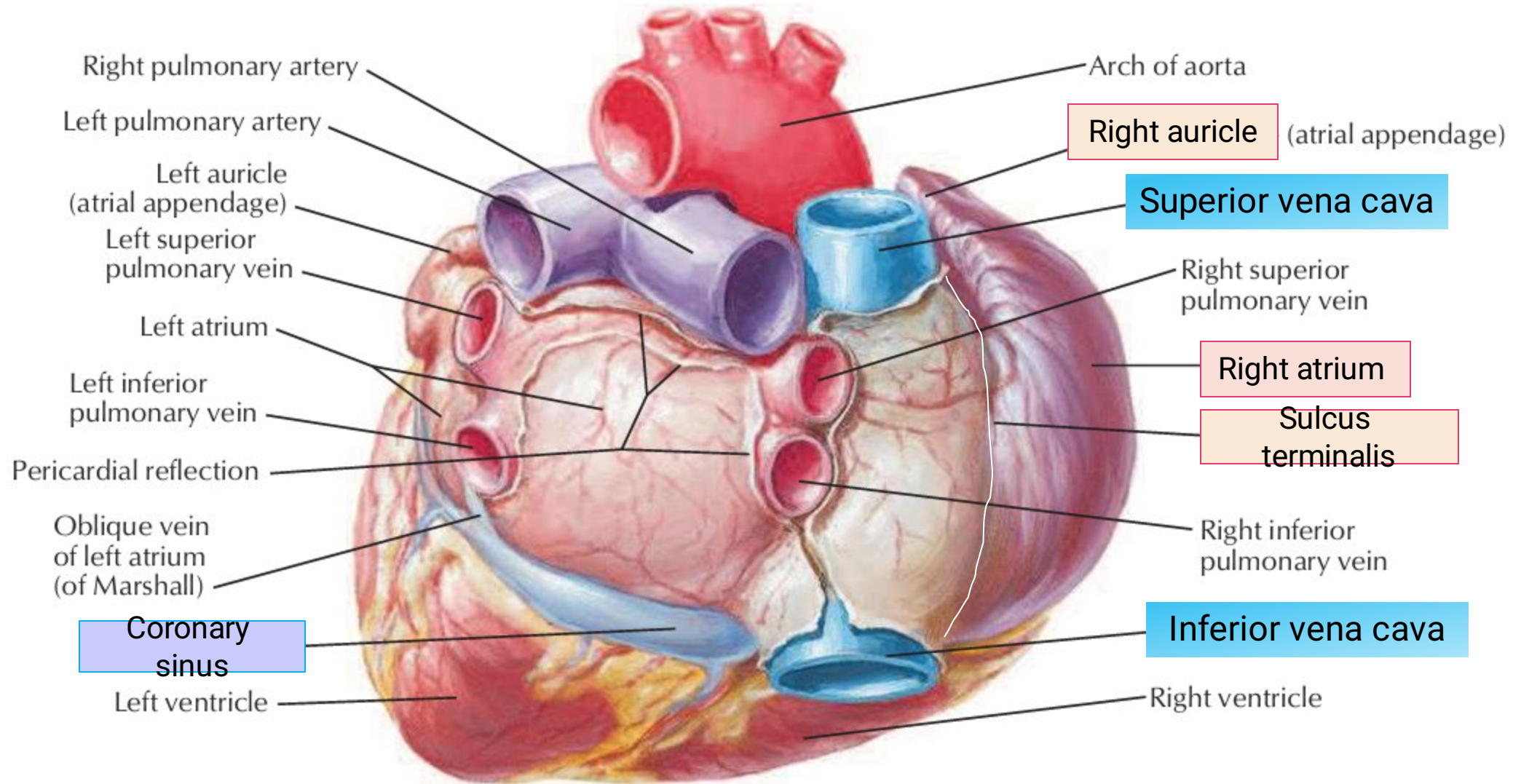
15



chambers of the Heart

Right atrium

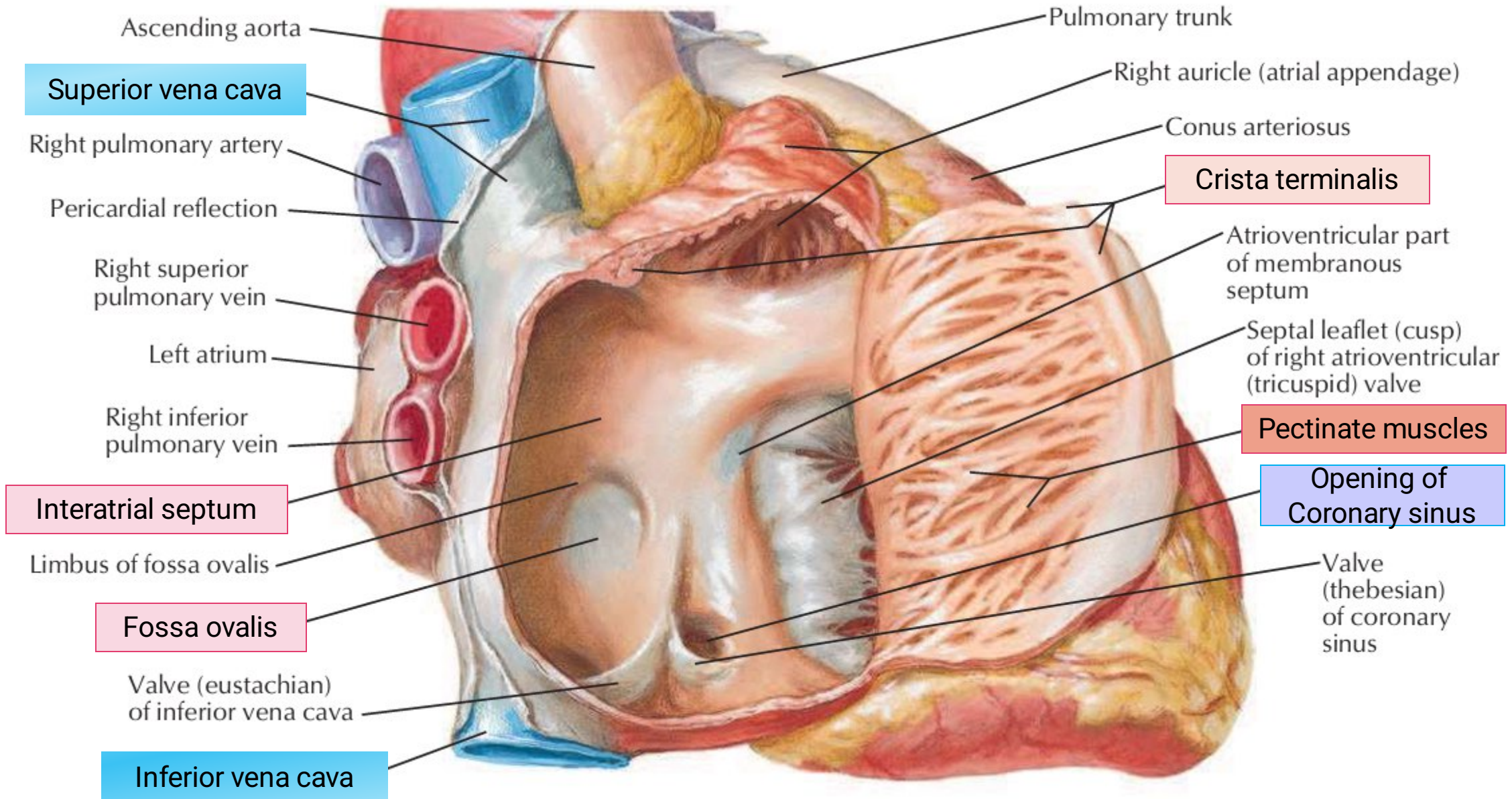
17



Base of heart: posterior view

Right atrium

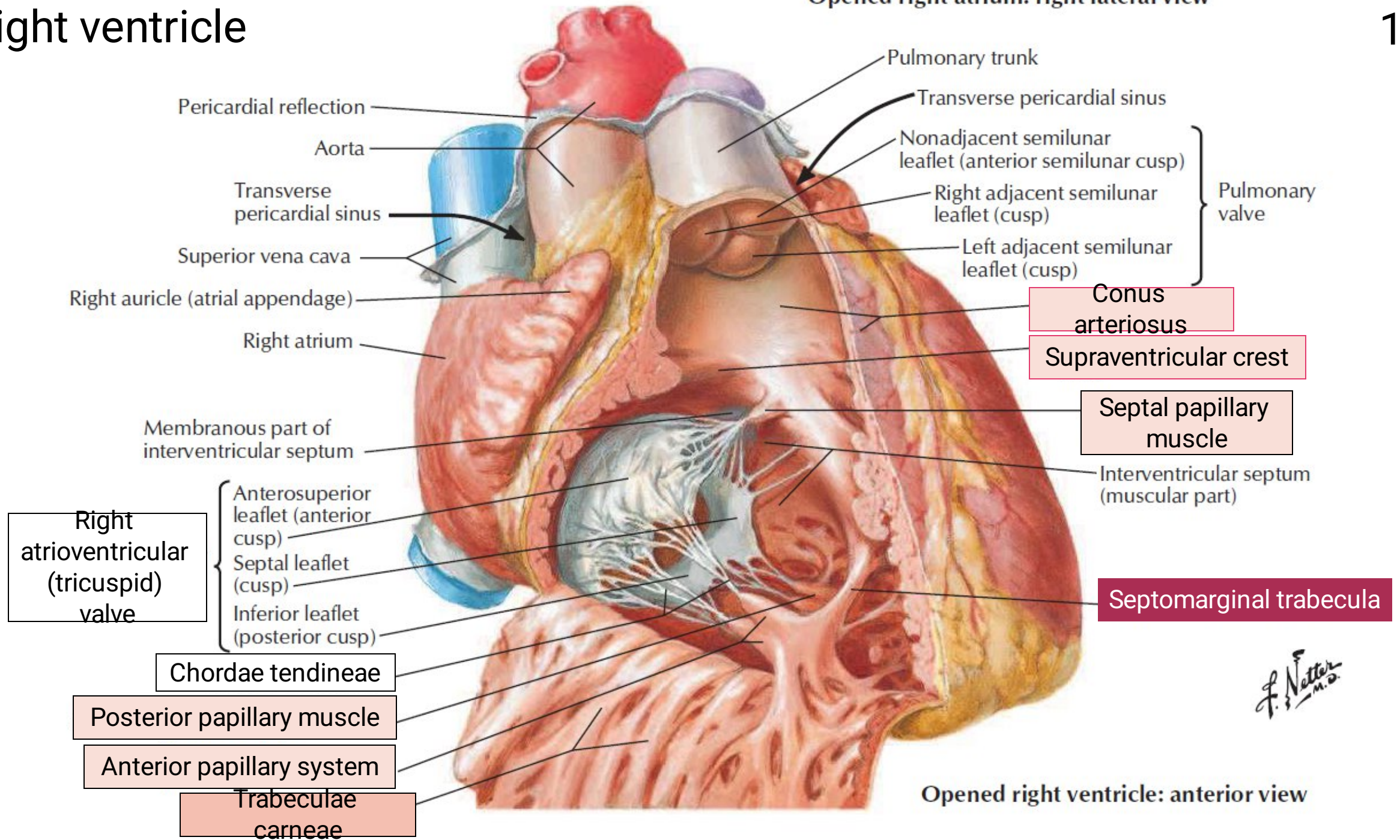
18



Right ventricle

19

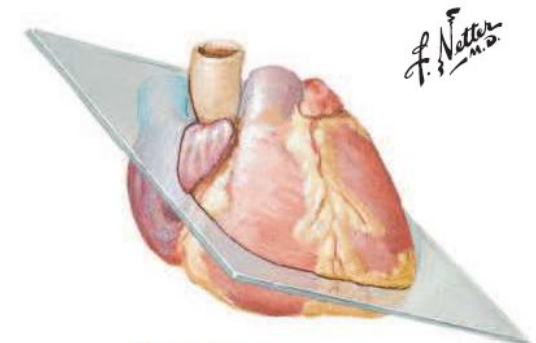
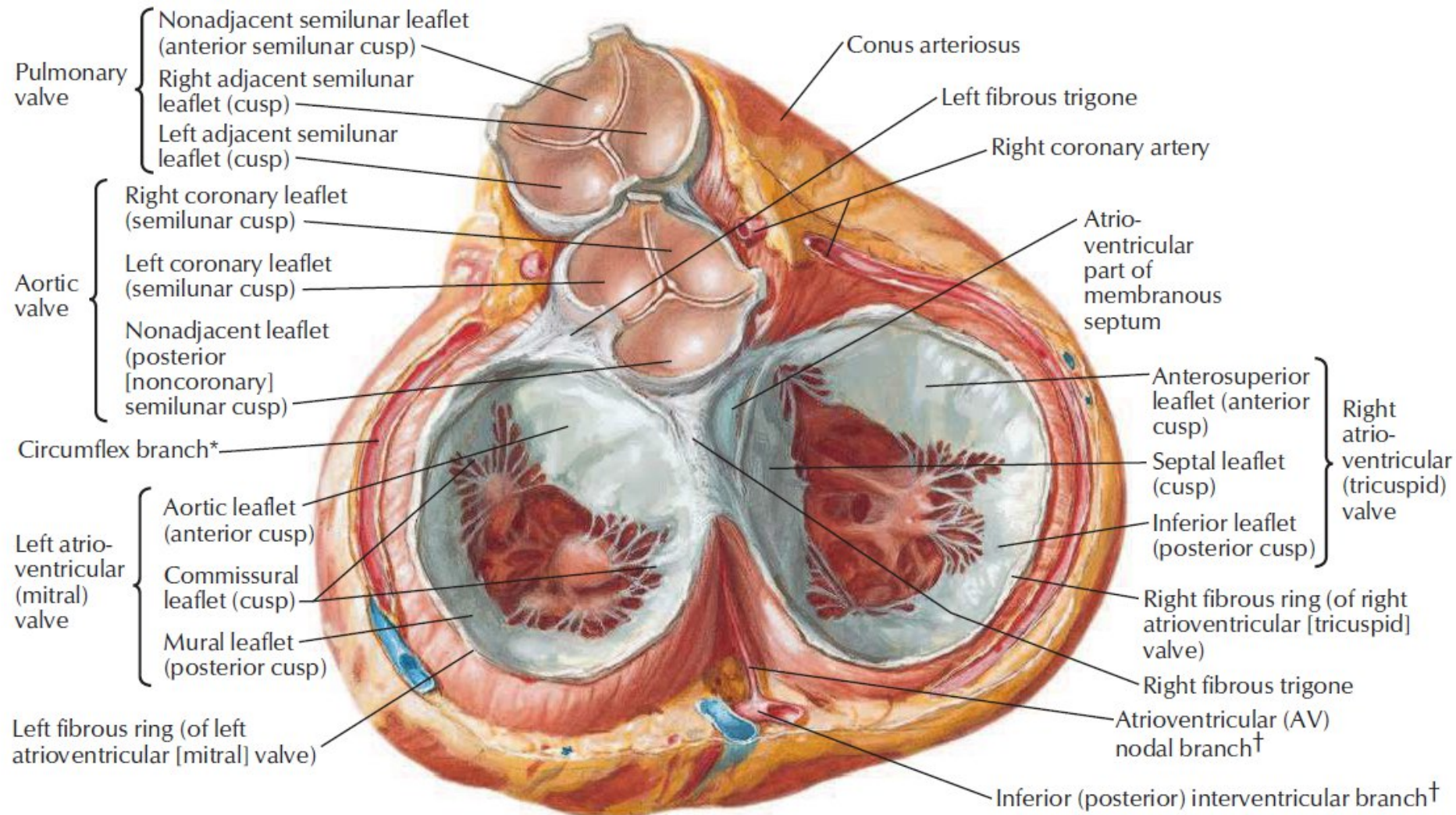
Opened right atrium: right lateral view



Opened right ventricle: anterior view

Tricuspid valve

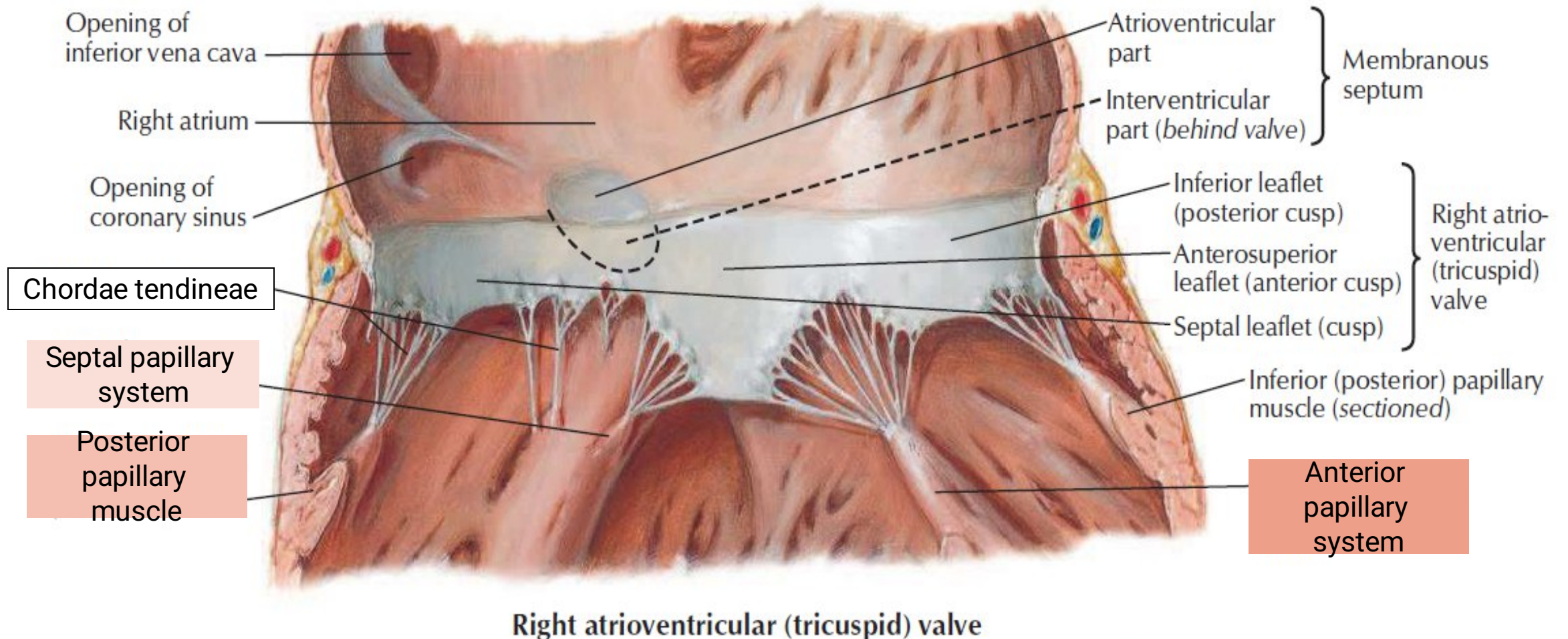
20



Plane of section

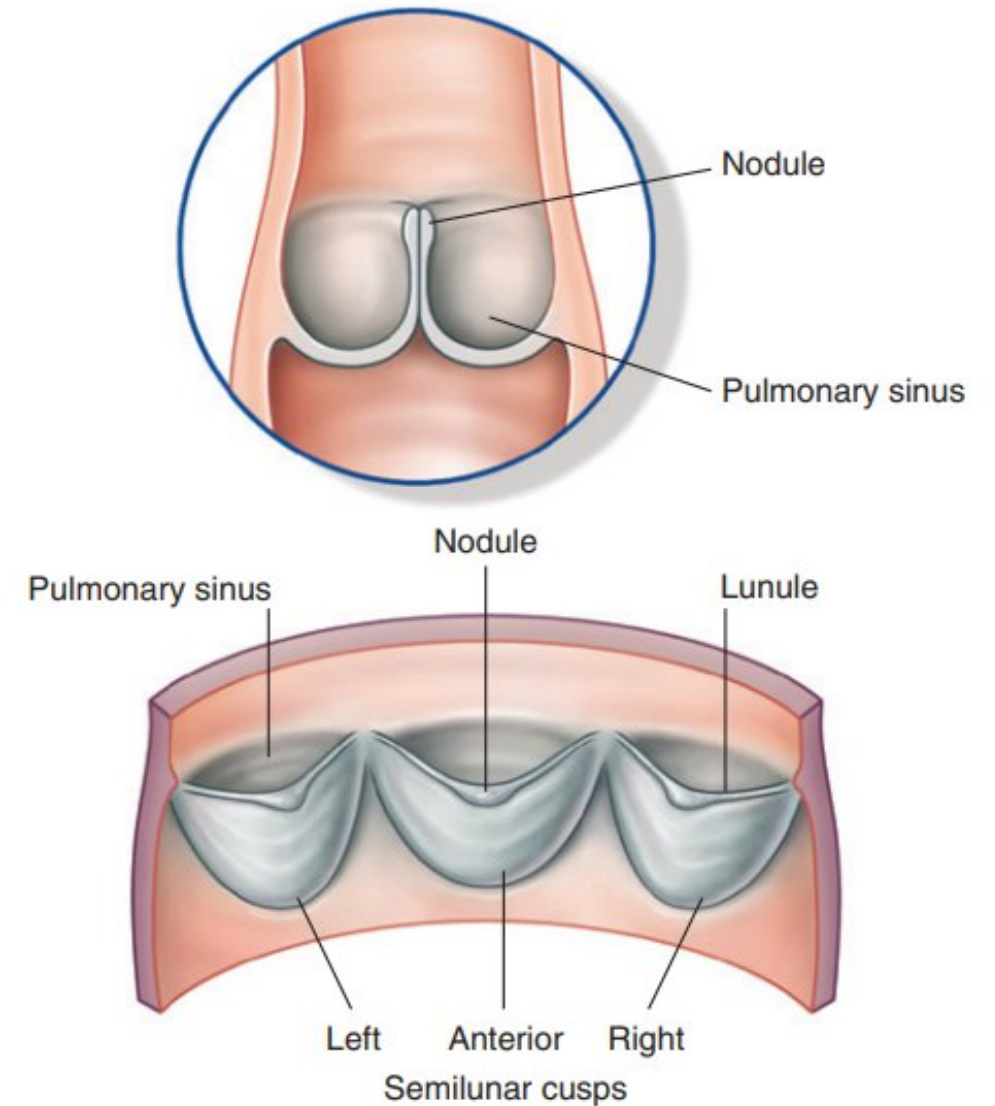
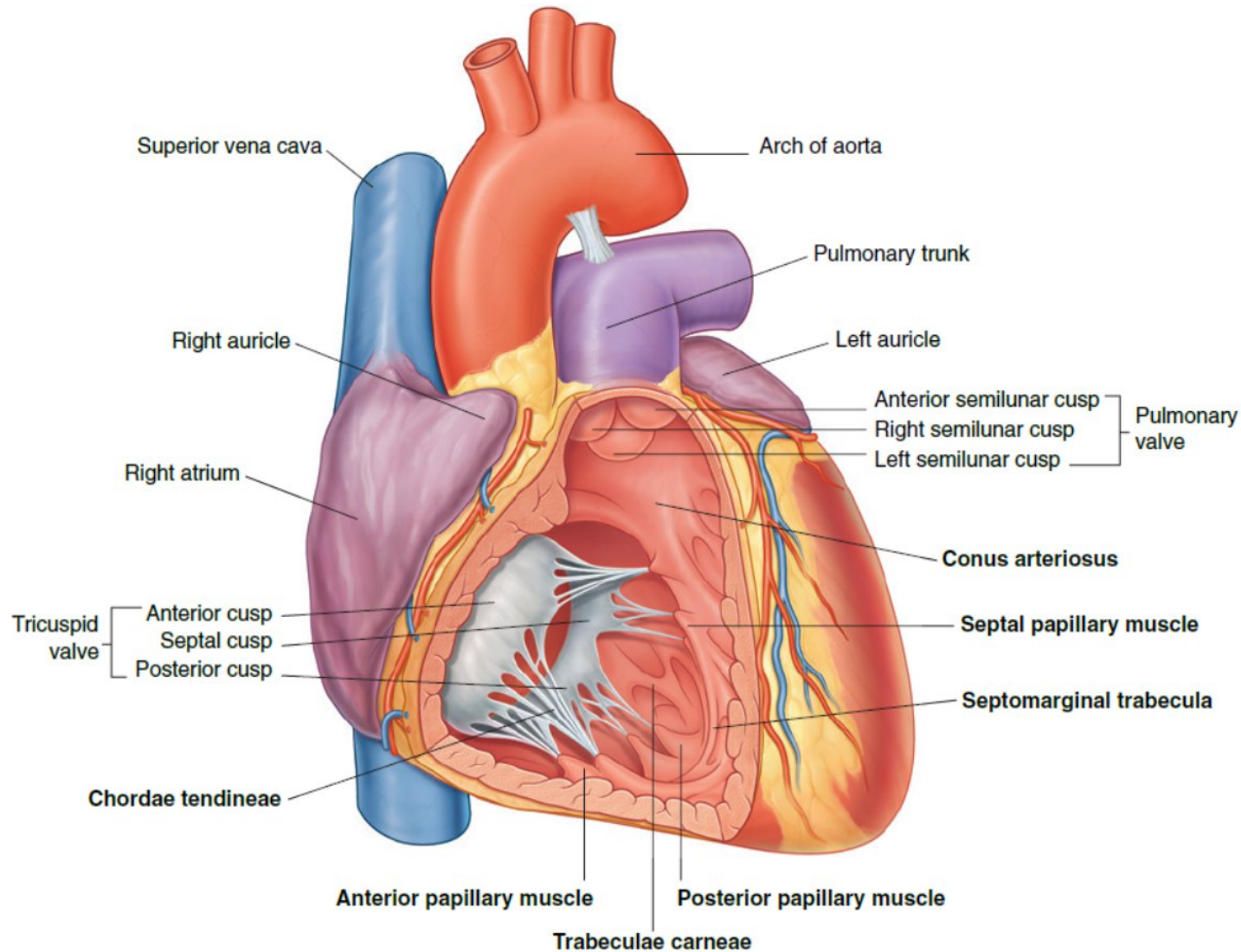
Tricuspid valve

21



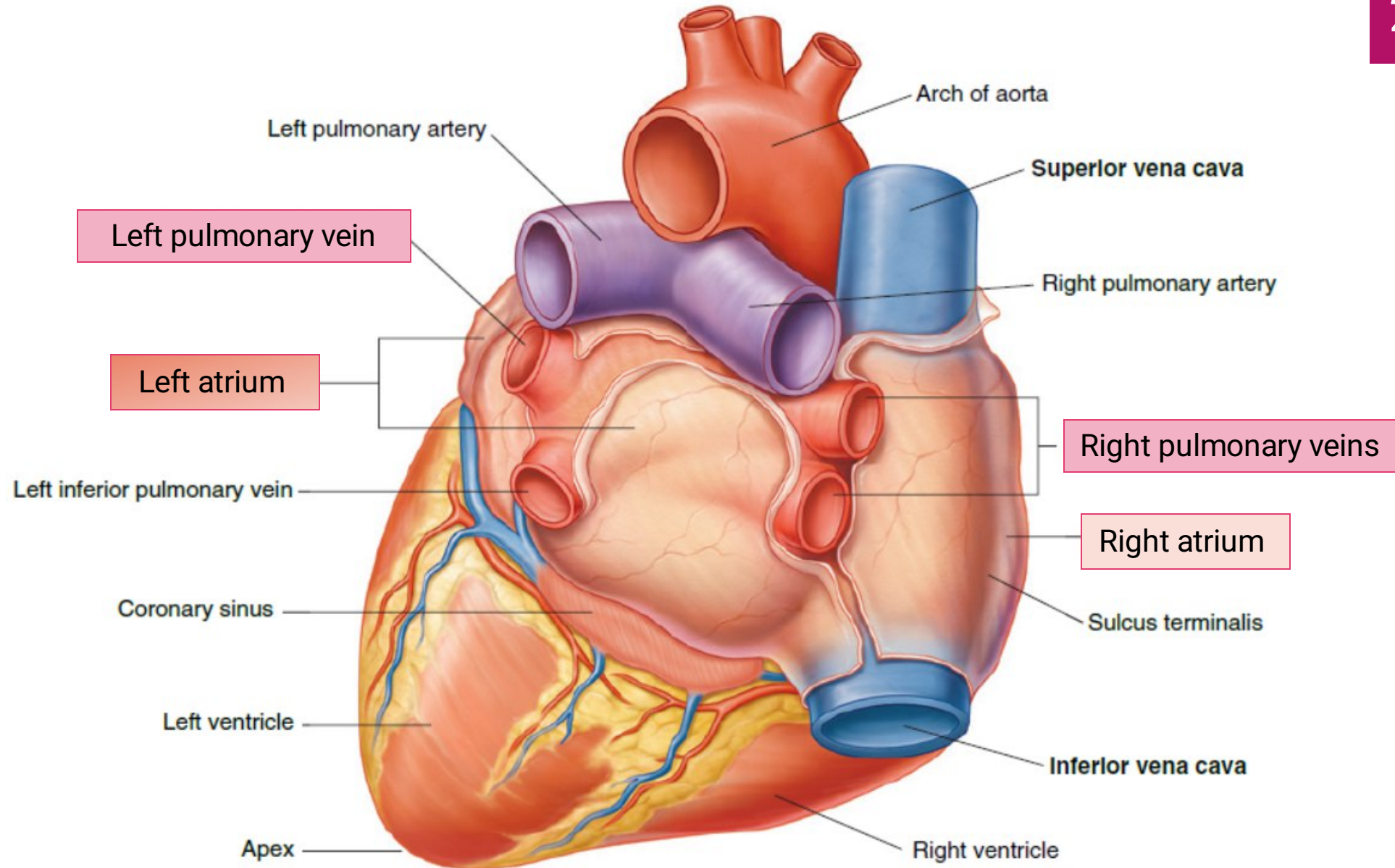
Pulmonary valve

22



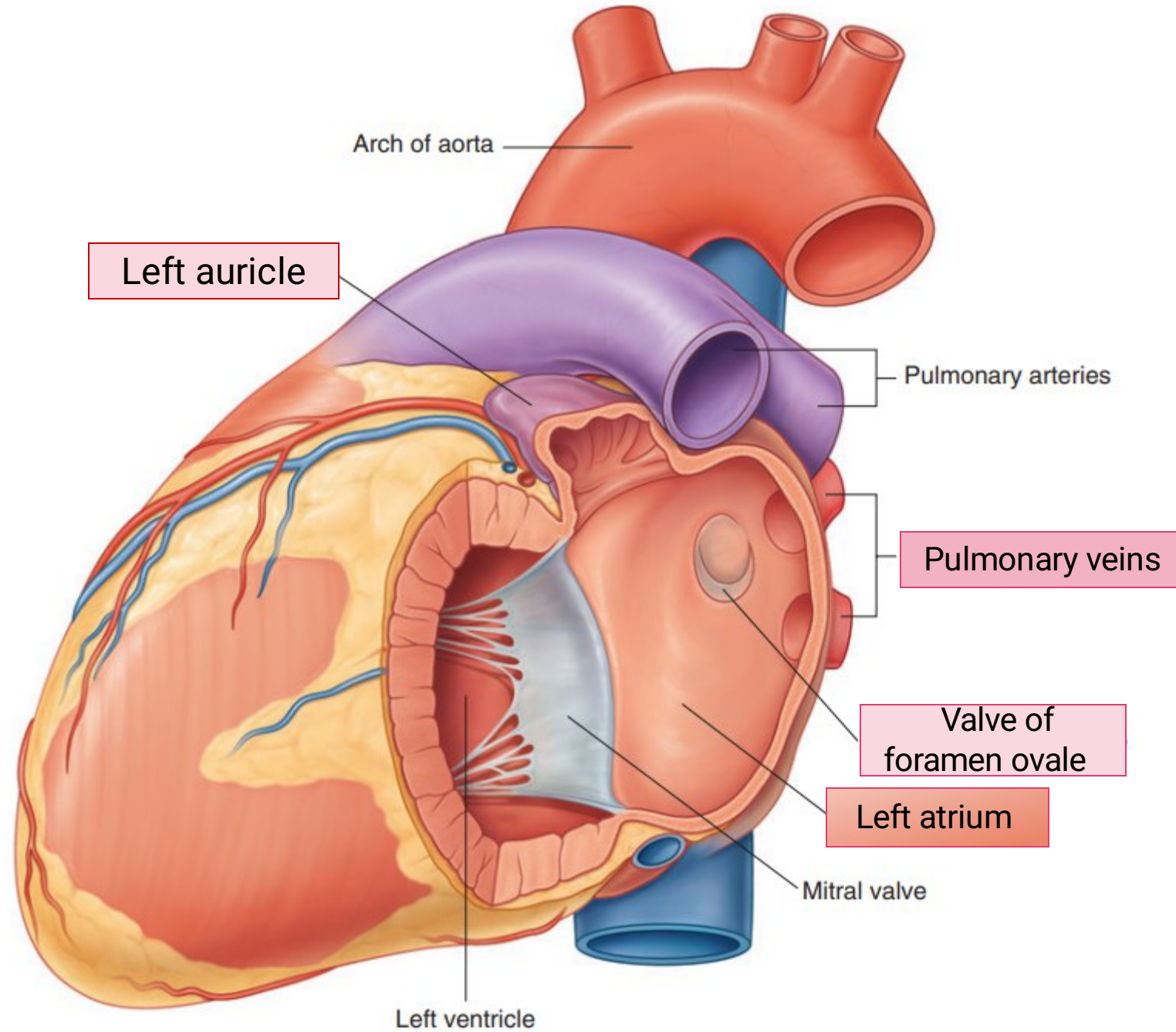
Left atrium

23

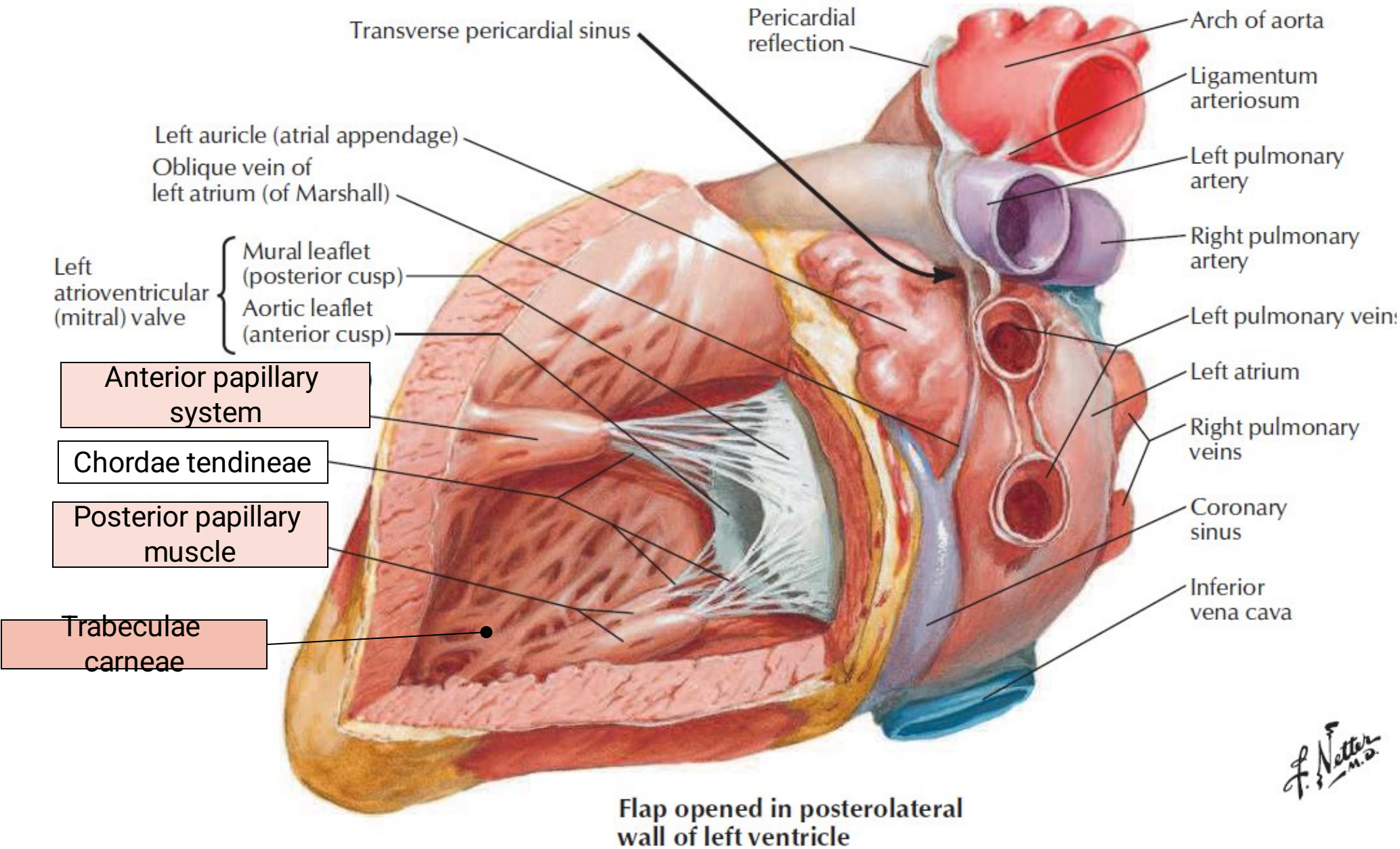


Left atrium

24



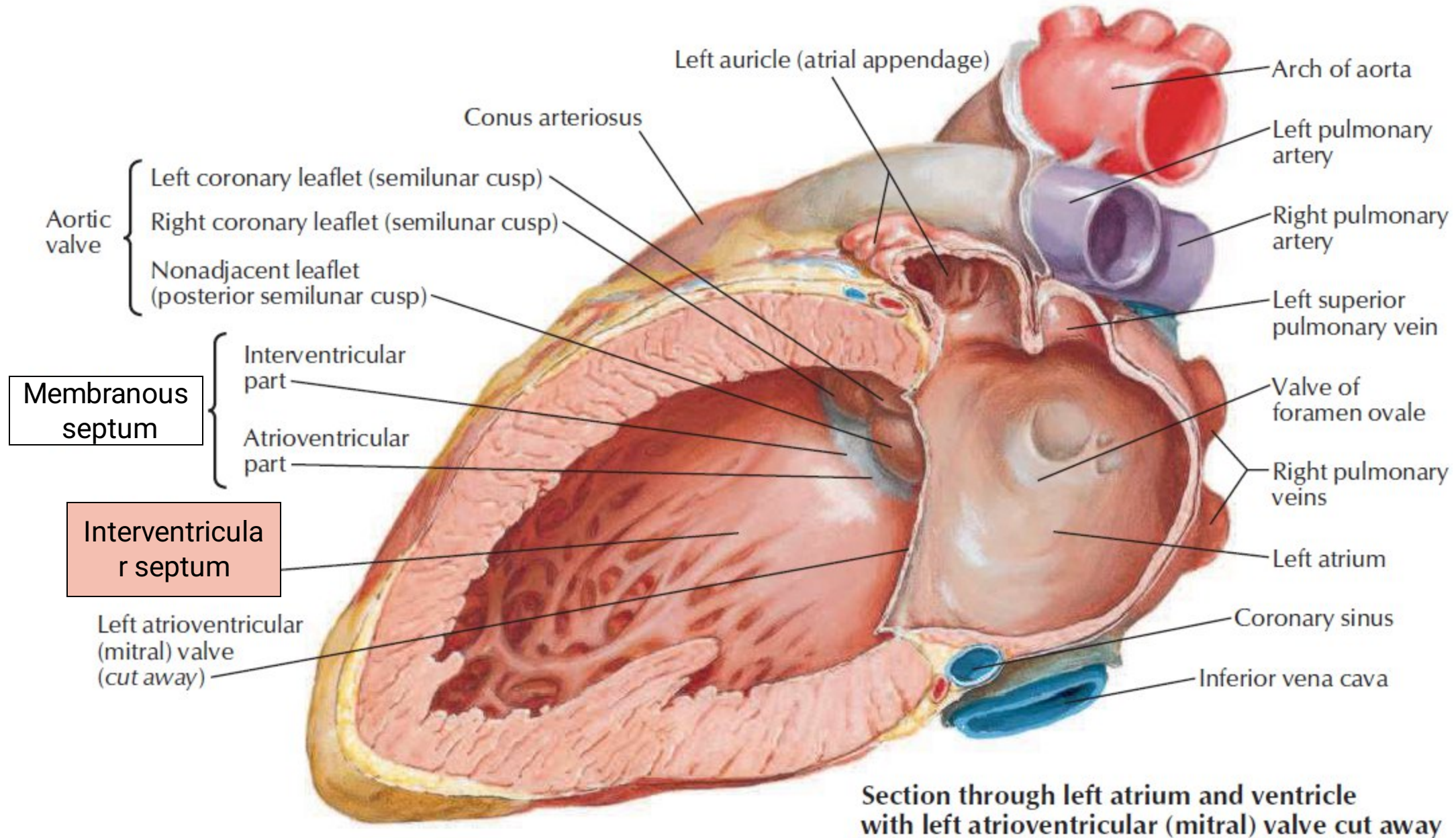
Left ventricle



F. Netter M.D.

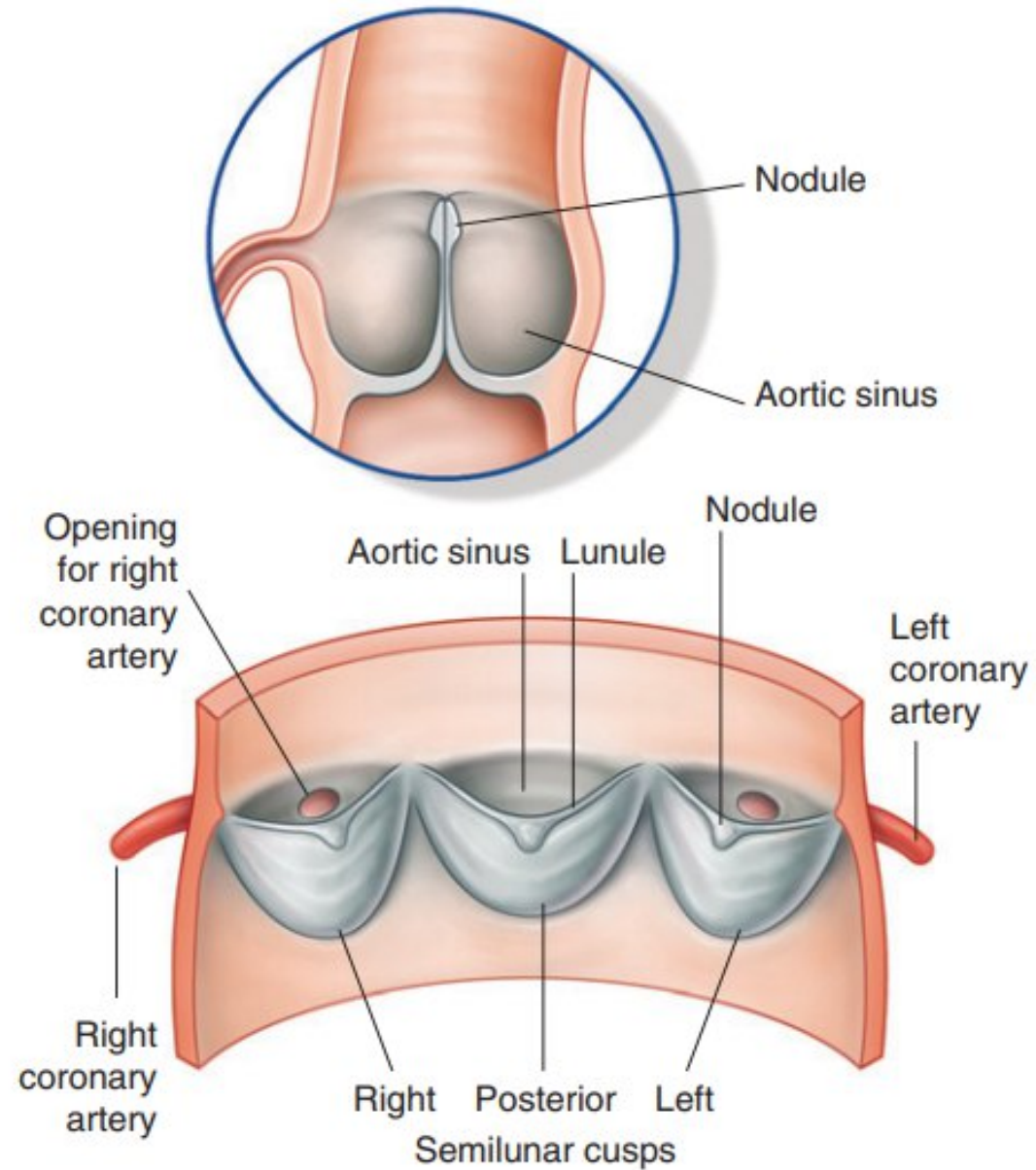
Left ventricle

26

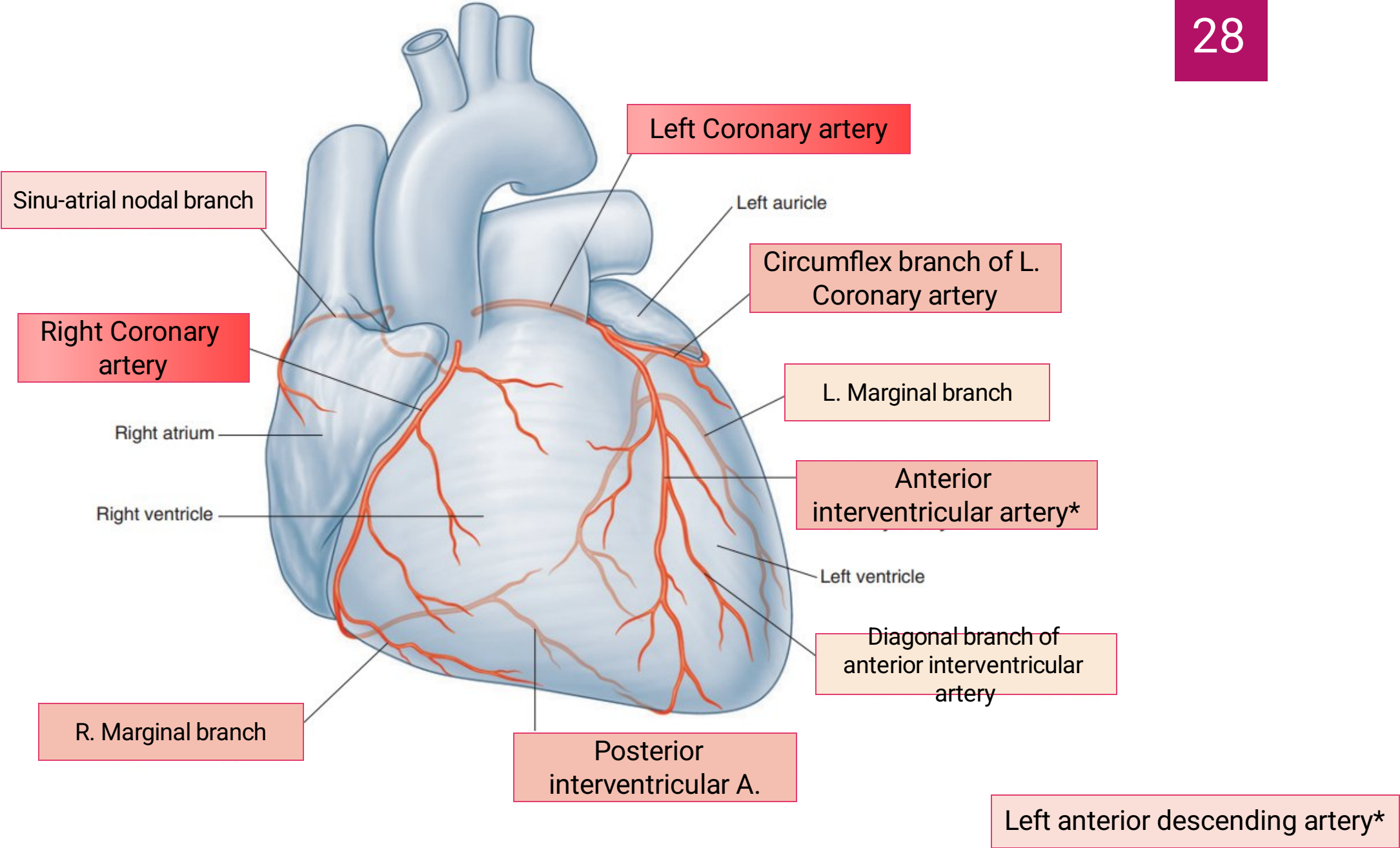


Aortic valve

27

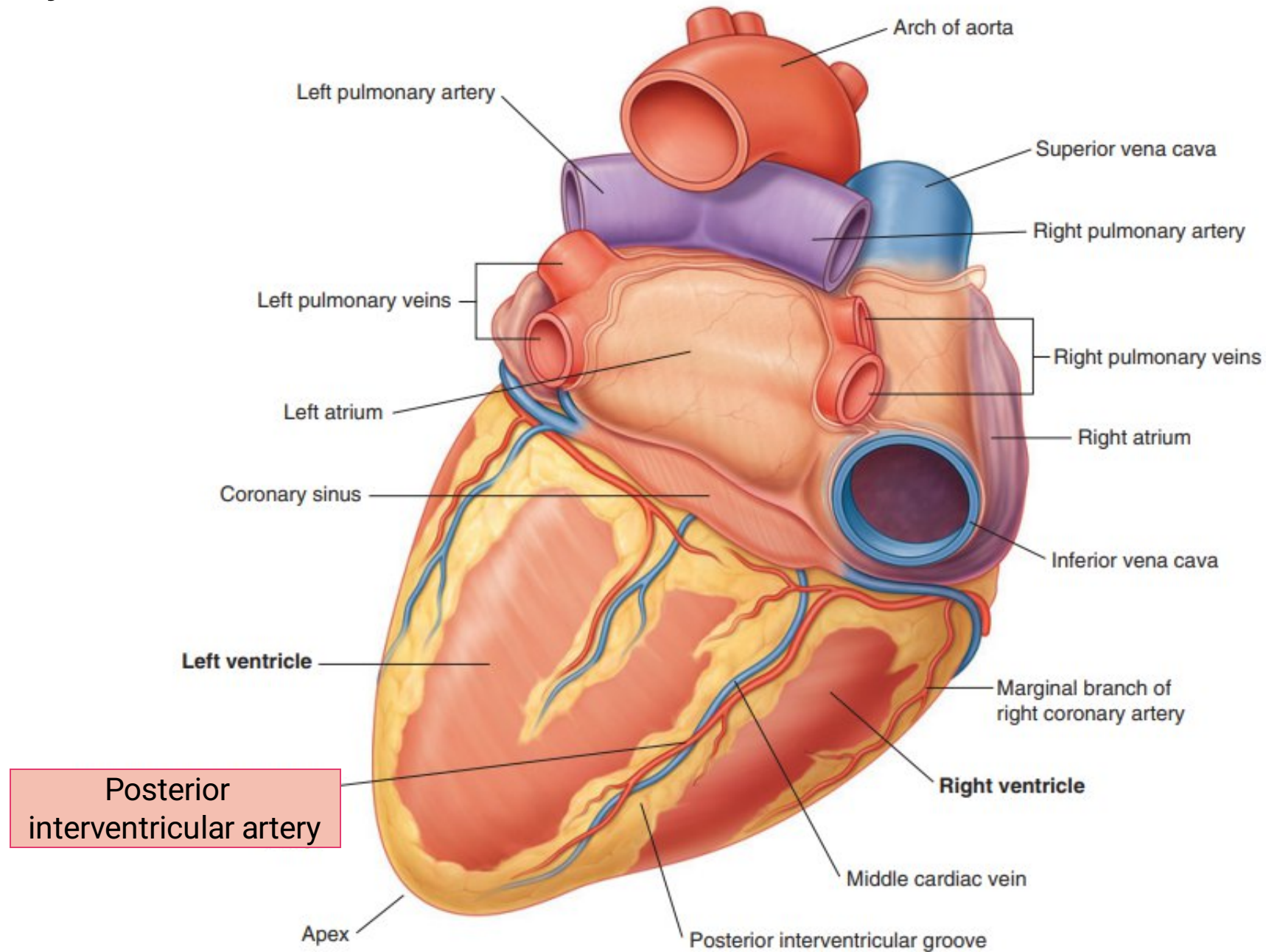


Coronary arteries



Coronary arteries

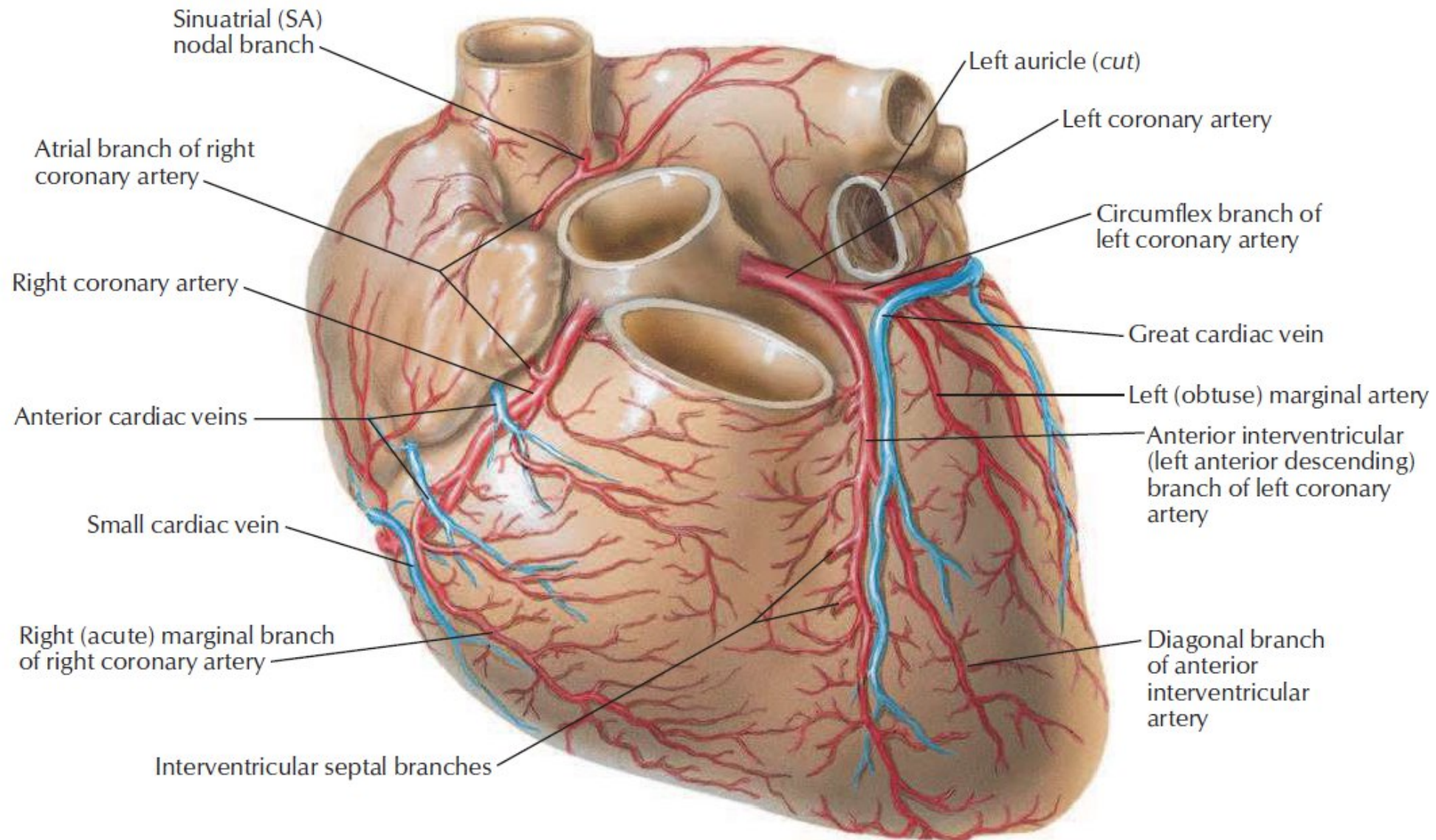
29



Cardiac veins

30

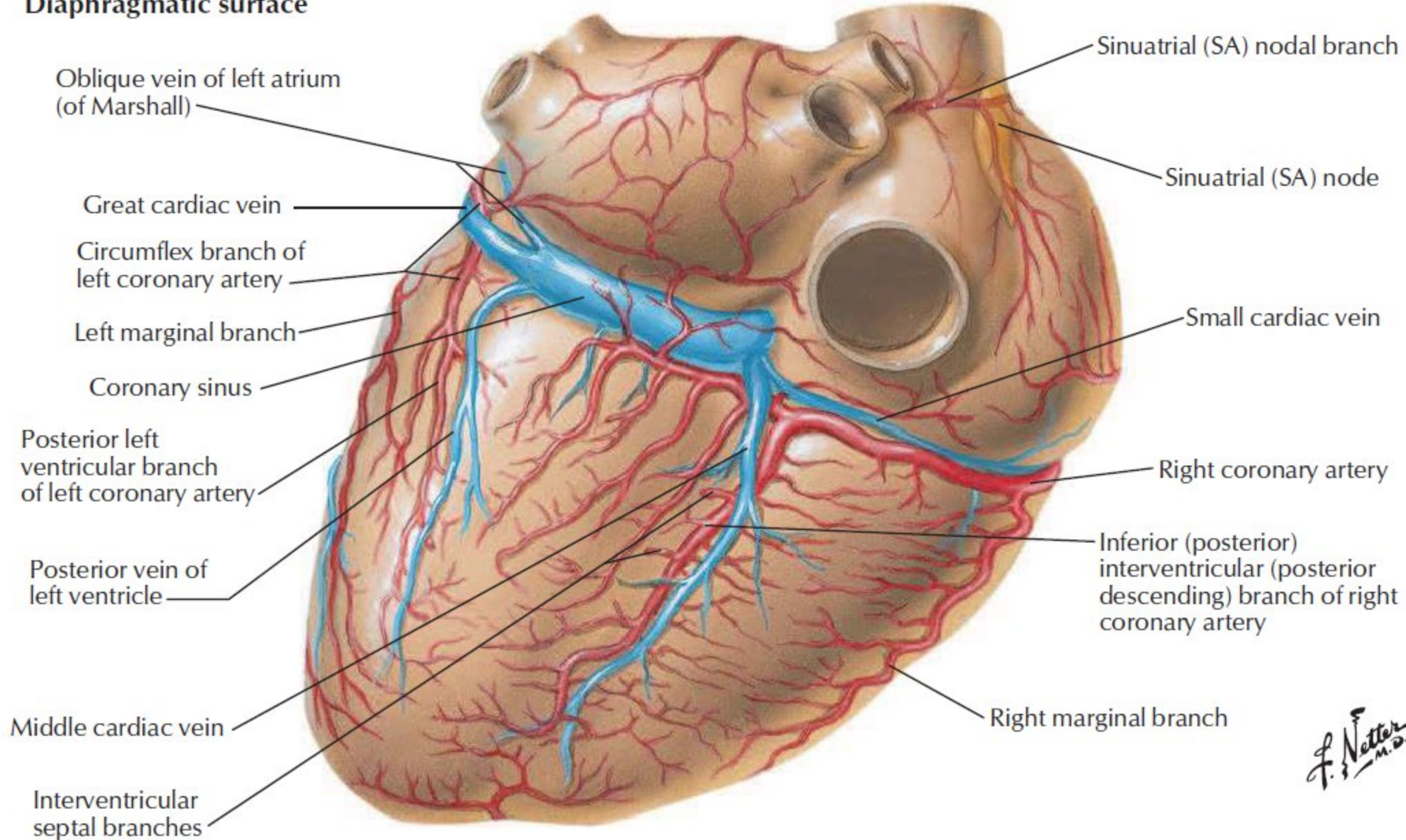
Sternocostal surface



Cardiac veins

31

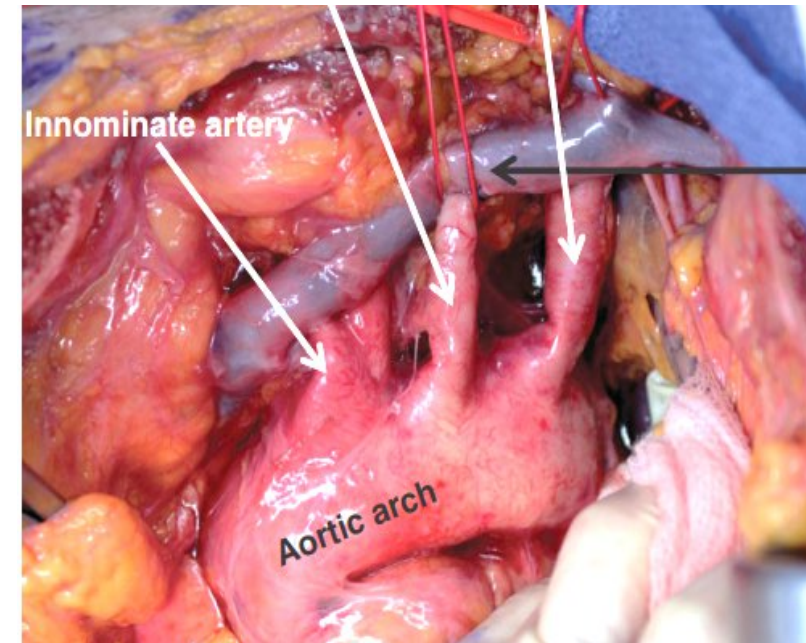
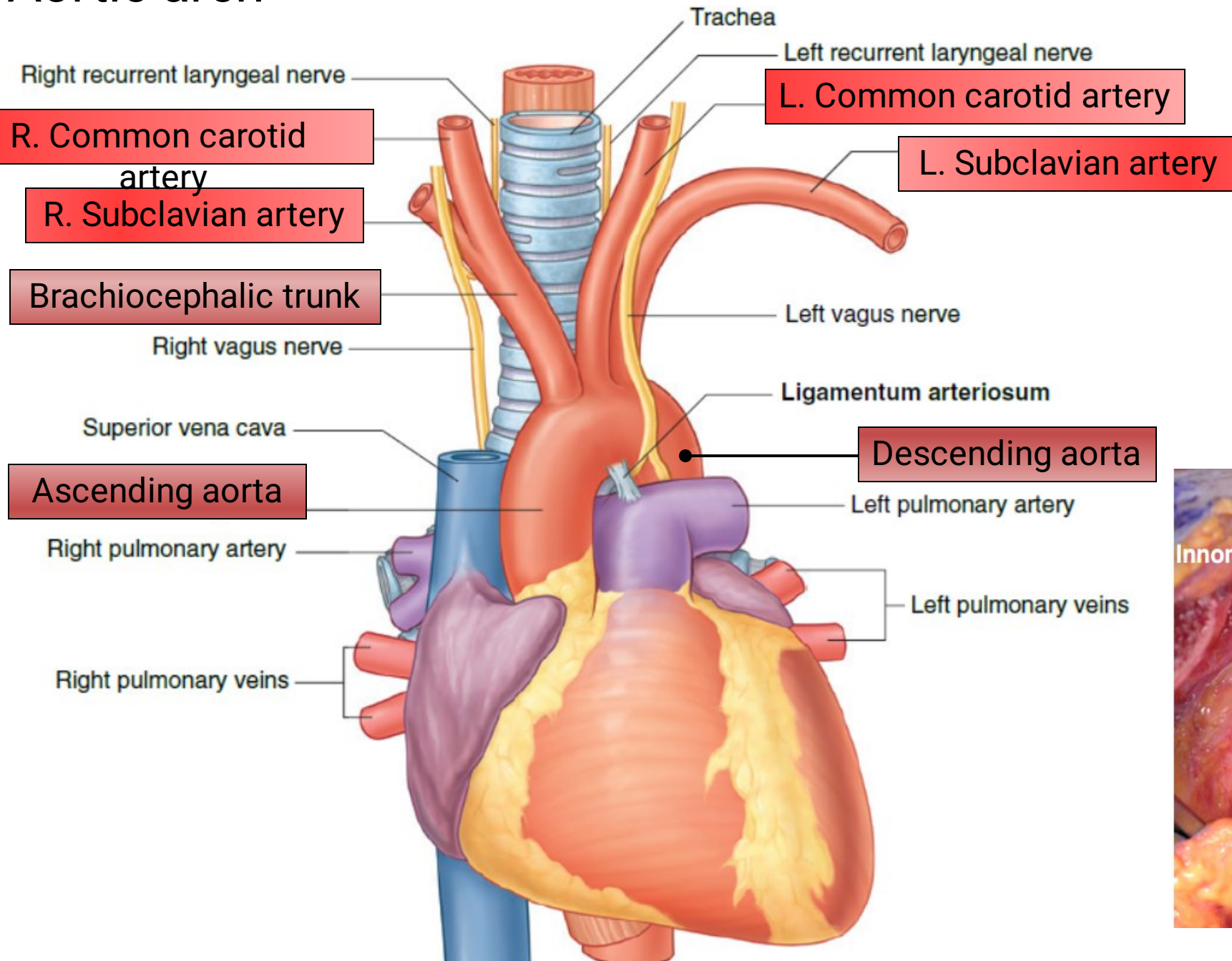
Diaphragmatic surface



F. Netter M.D.

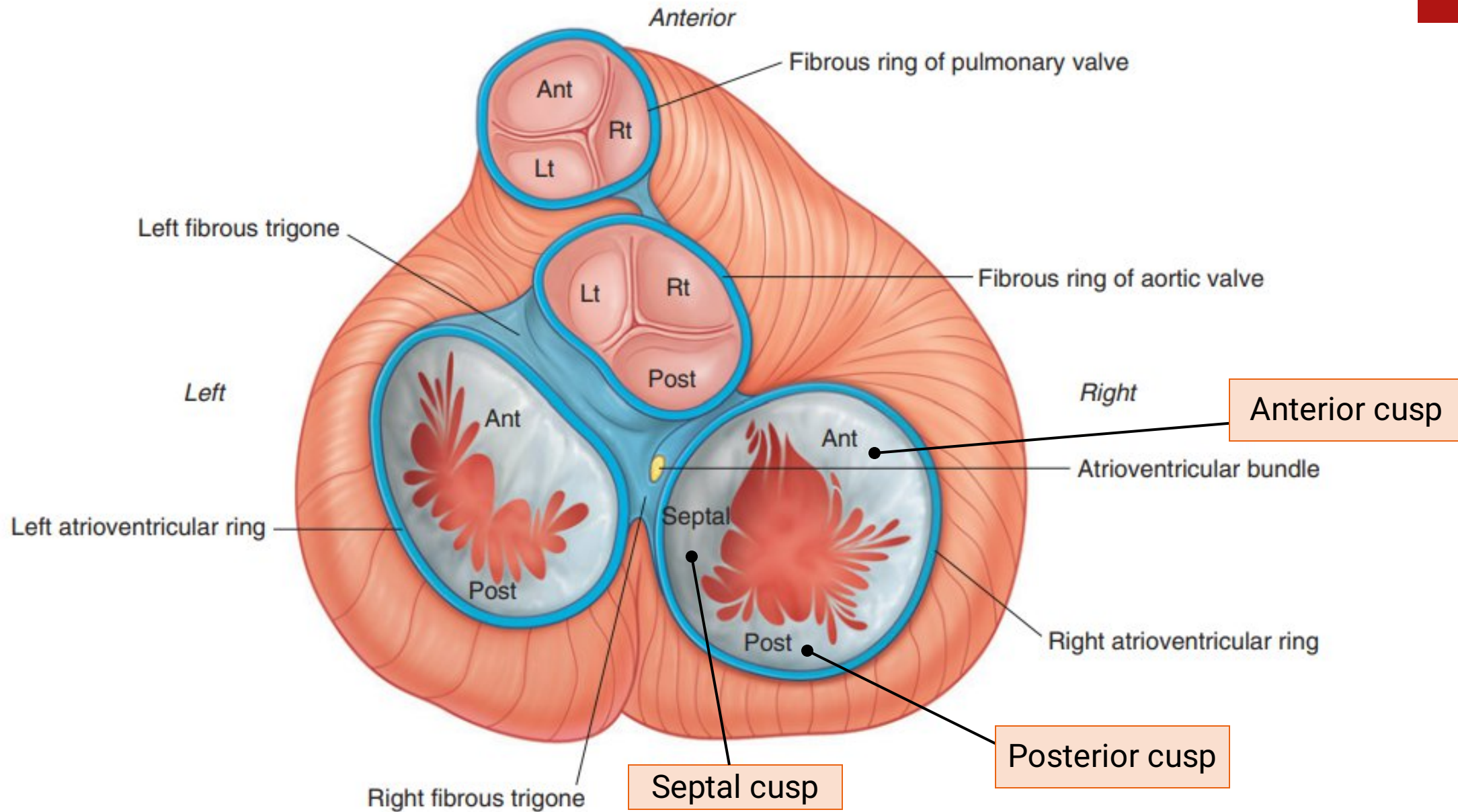
Aortic arch

32



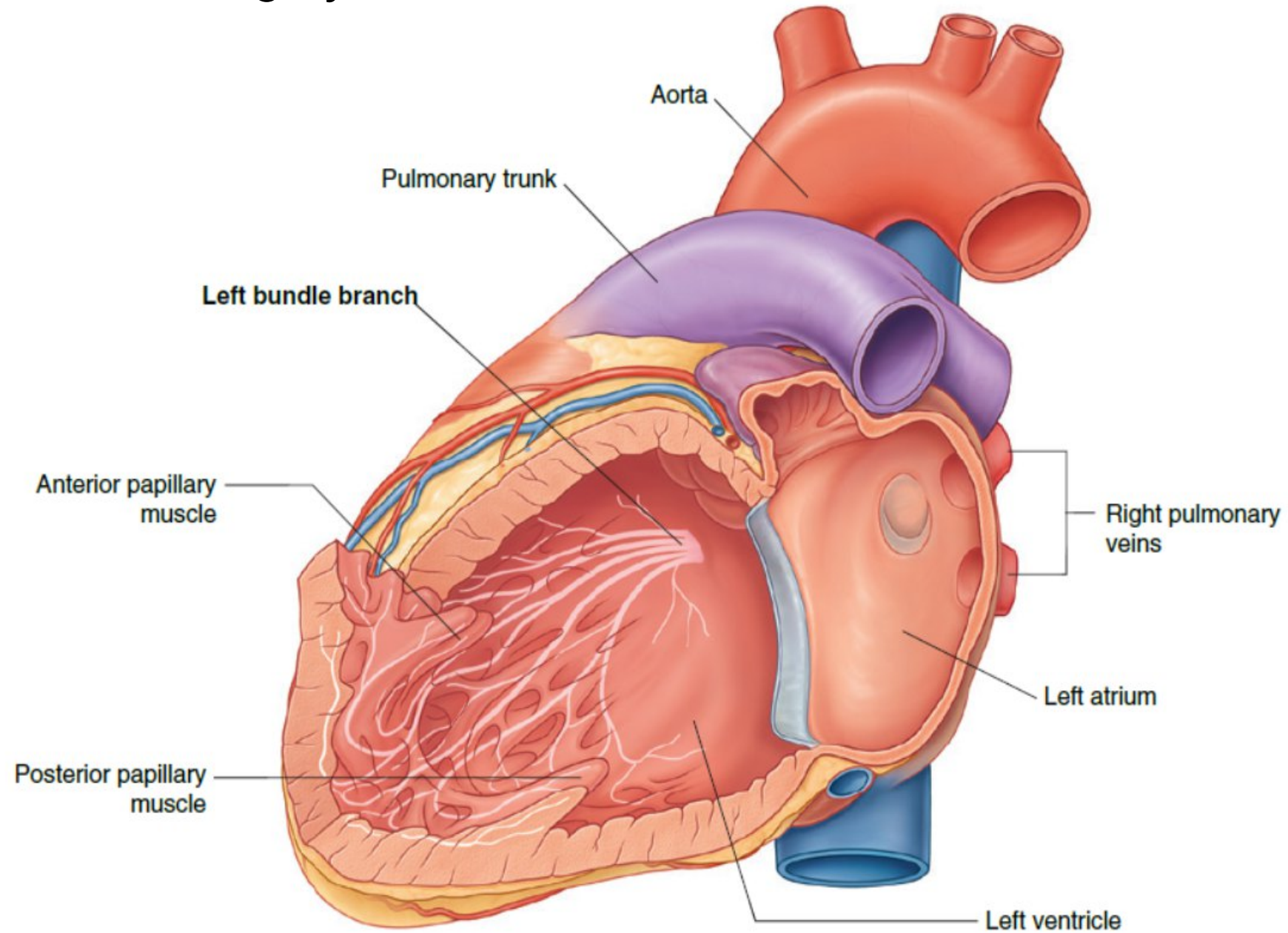
Fibrous rings

33



The conducting system

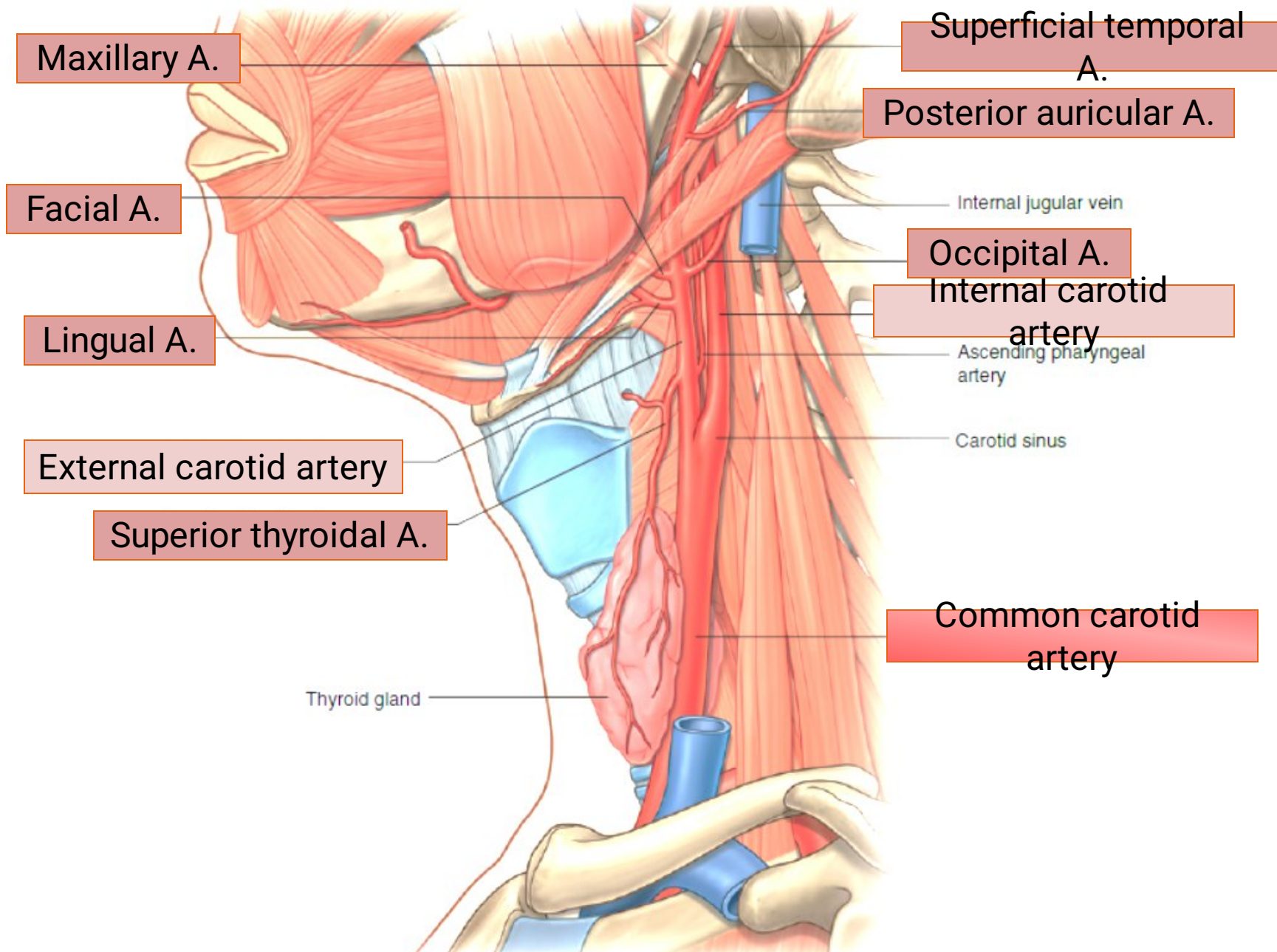
34



Arteries of head & neck

External carotid artery

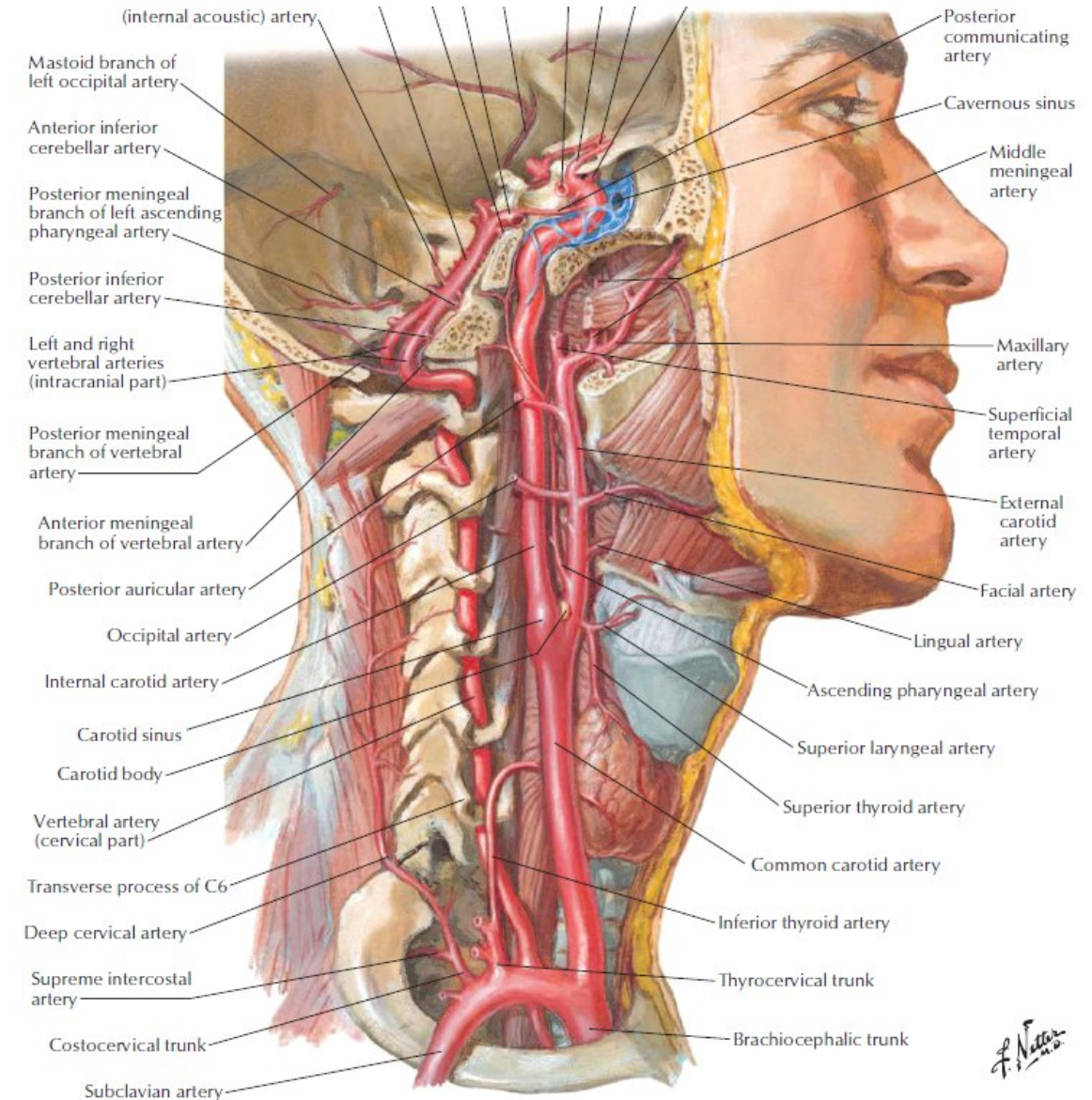
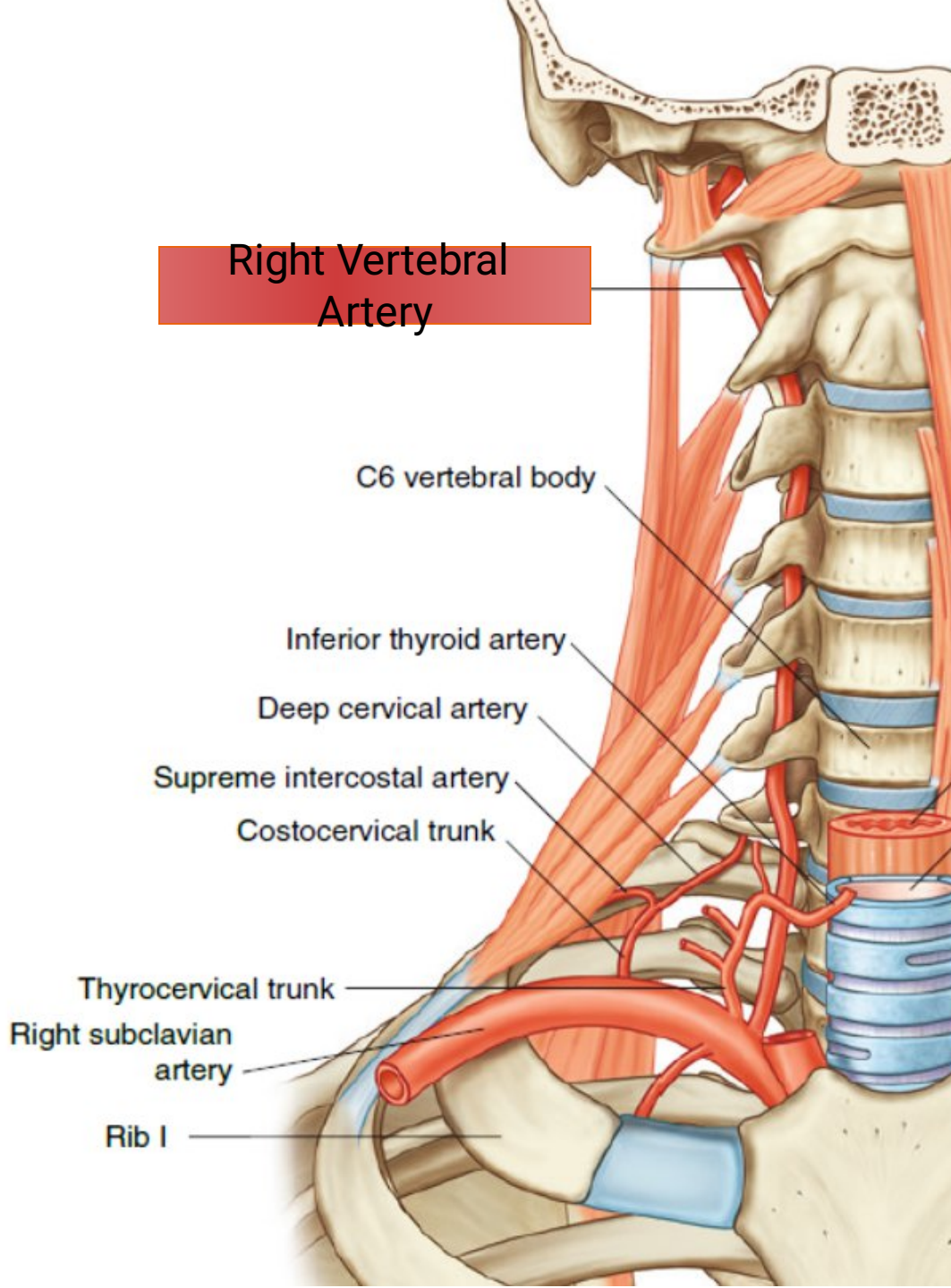
36



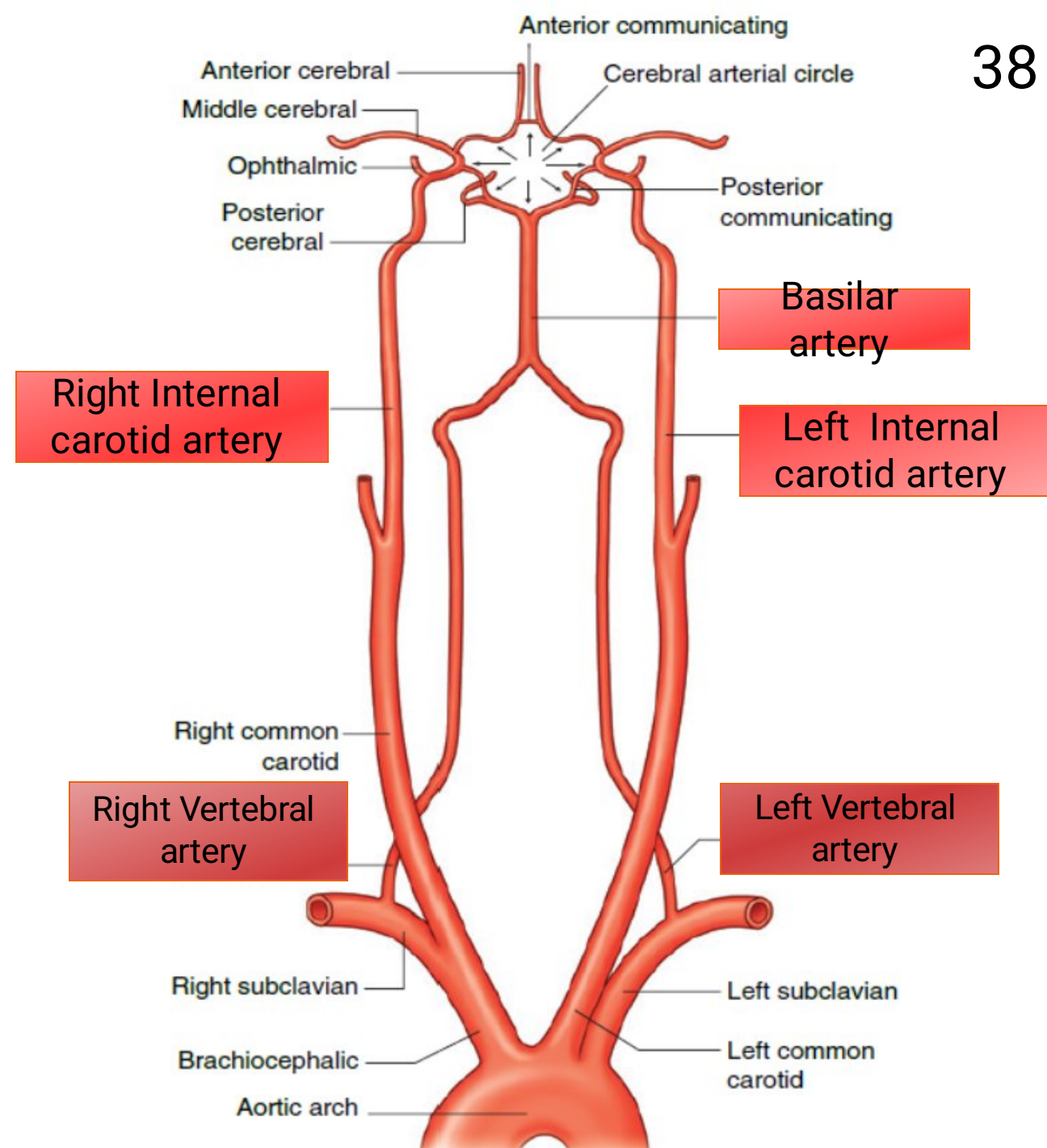
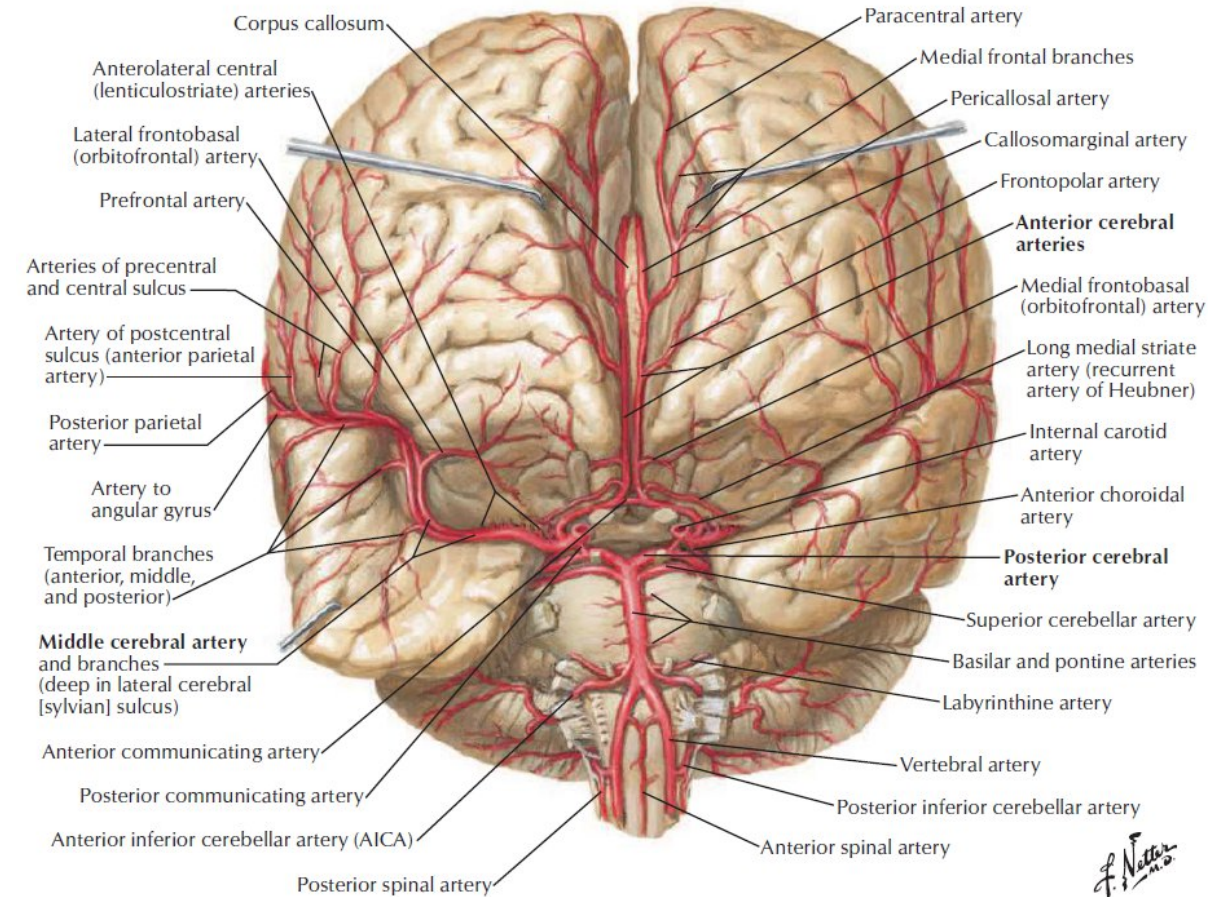
Vertebral artery

37

Right Vertebral Artery

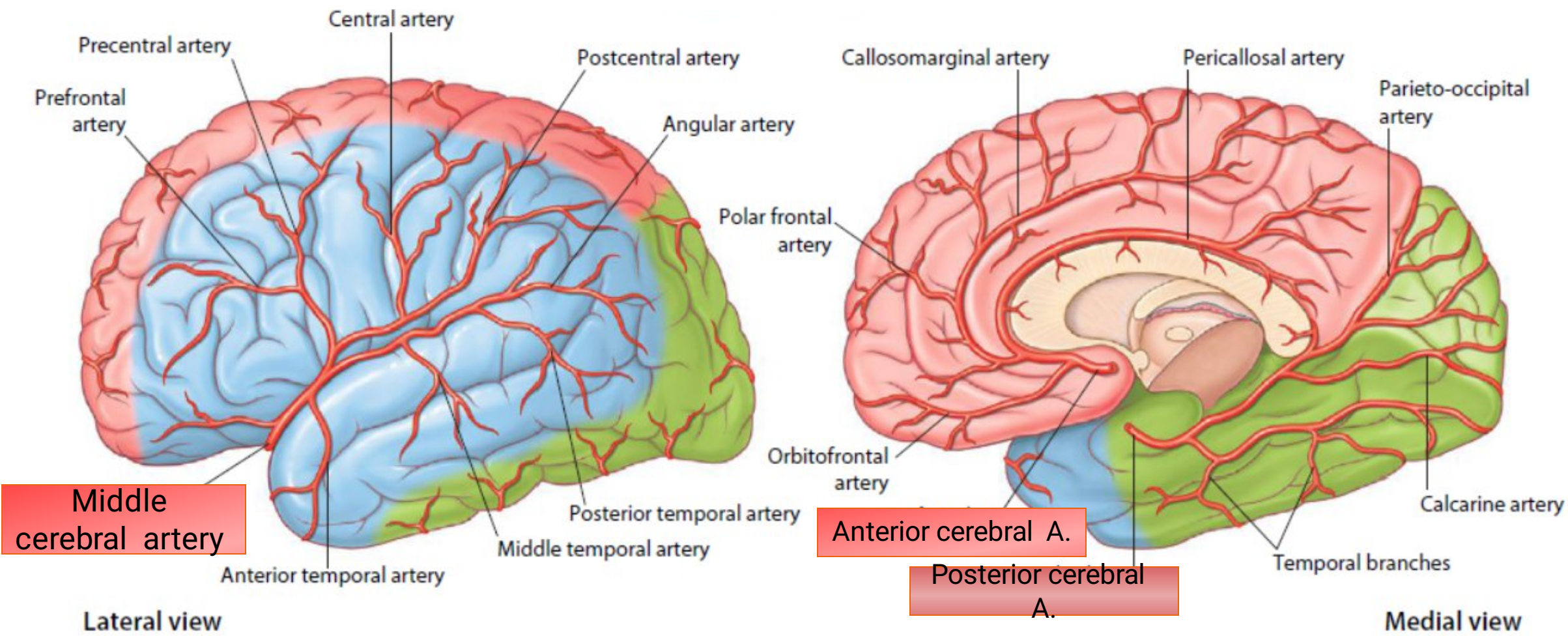


Cerebral arteries



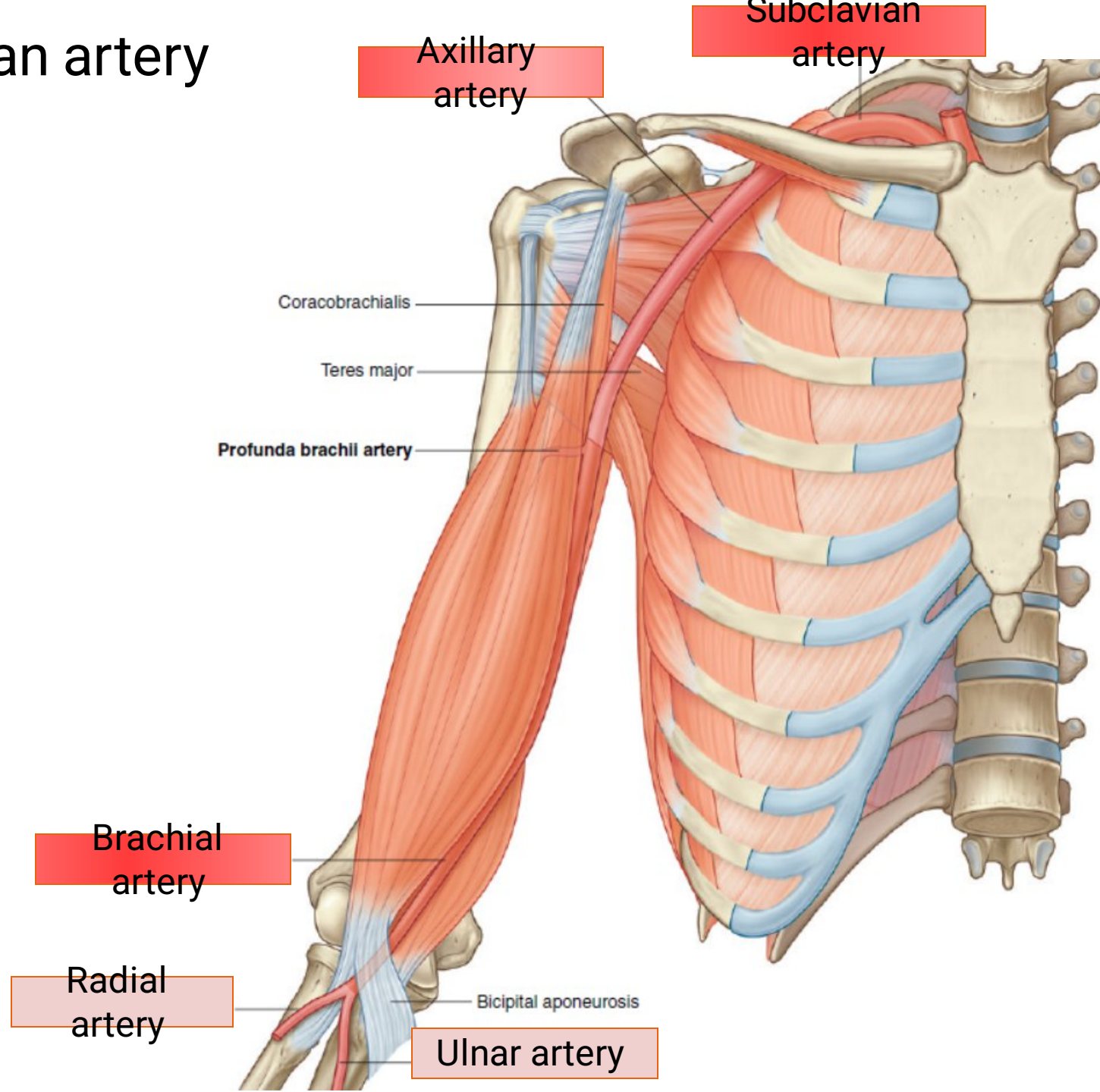
Cerebral arteries

39



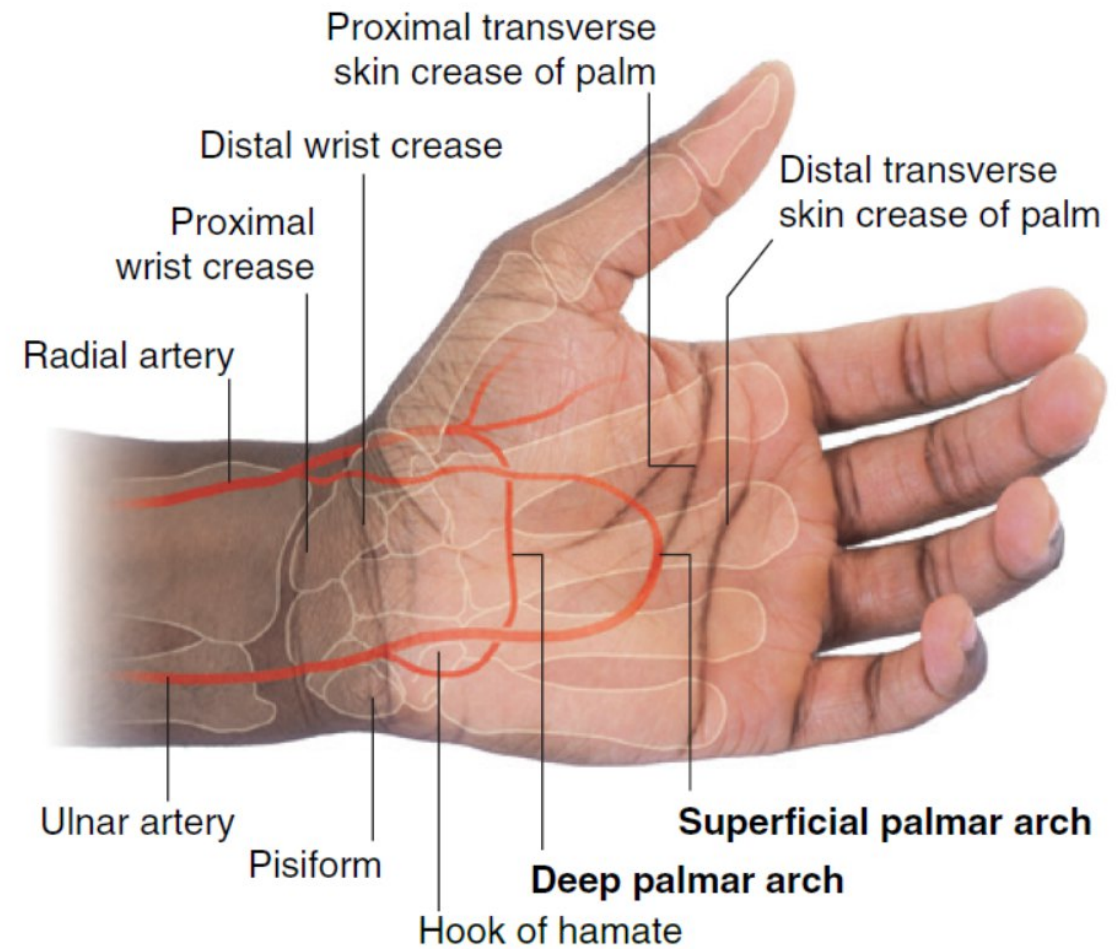
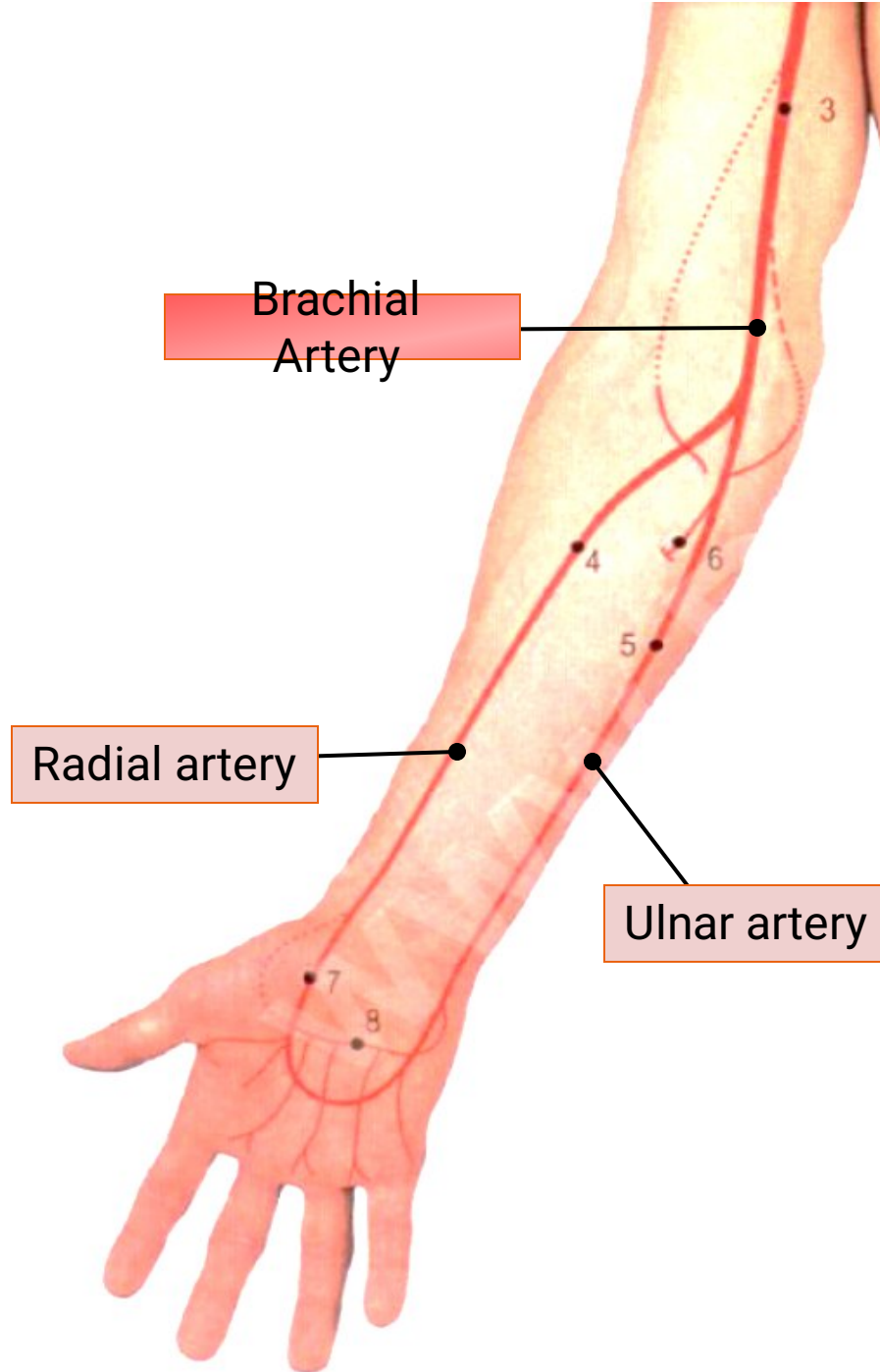
Arteries of upper limb

Subclavian artery



Radial and ulnar arteries

42

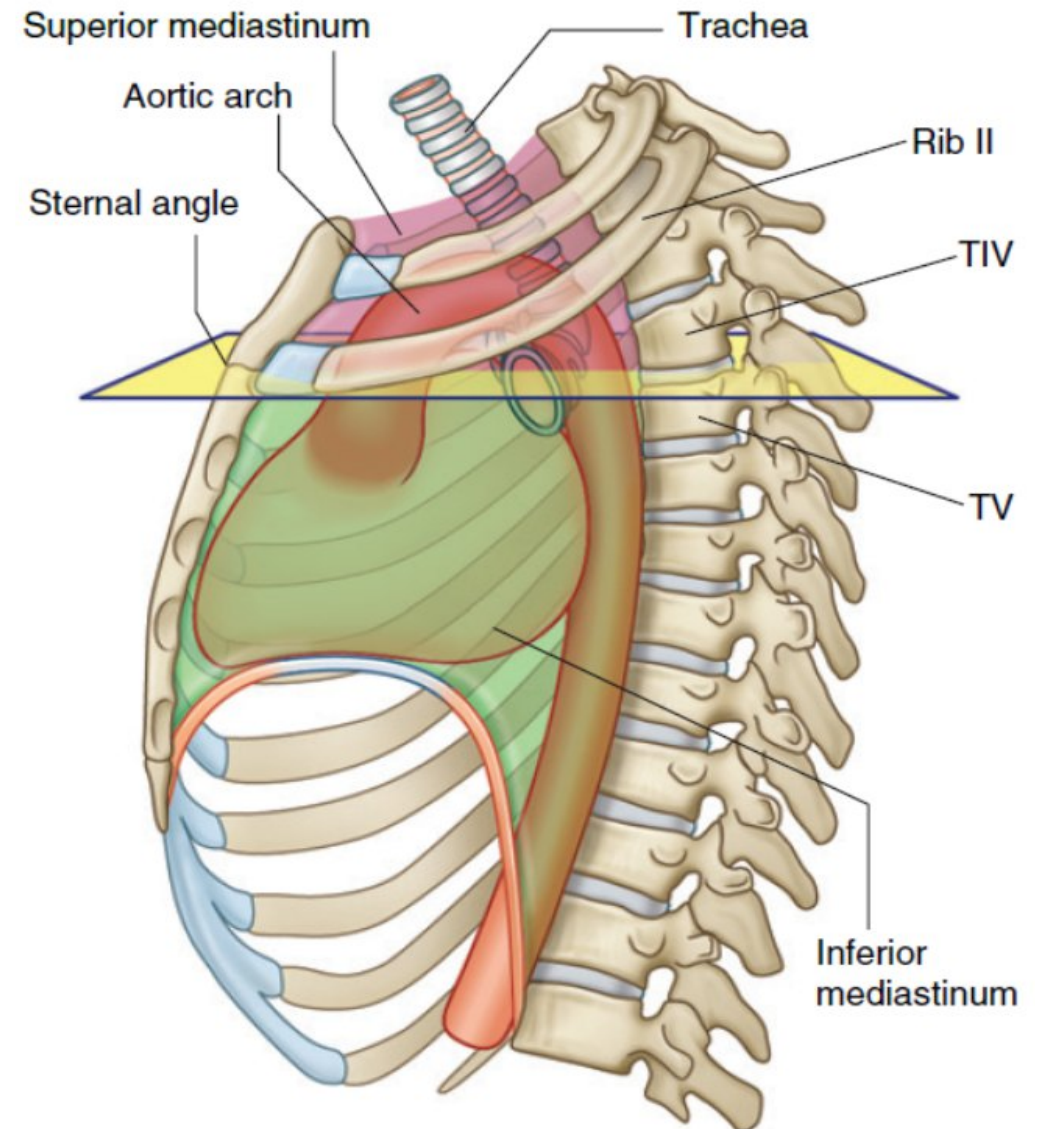
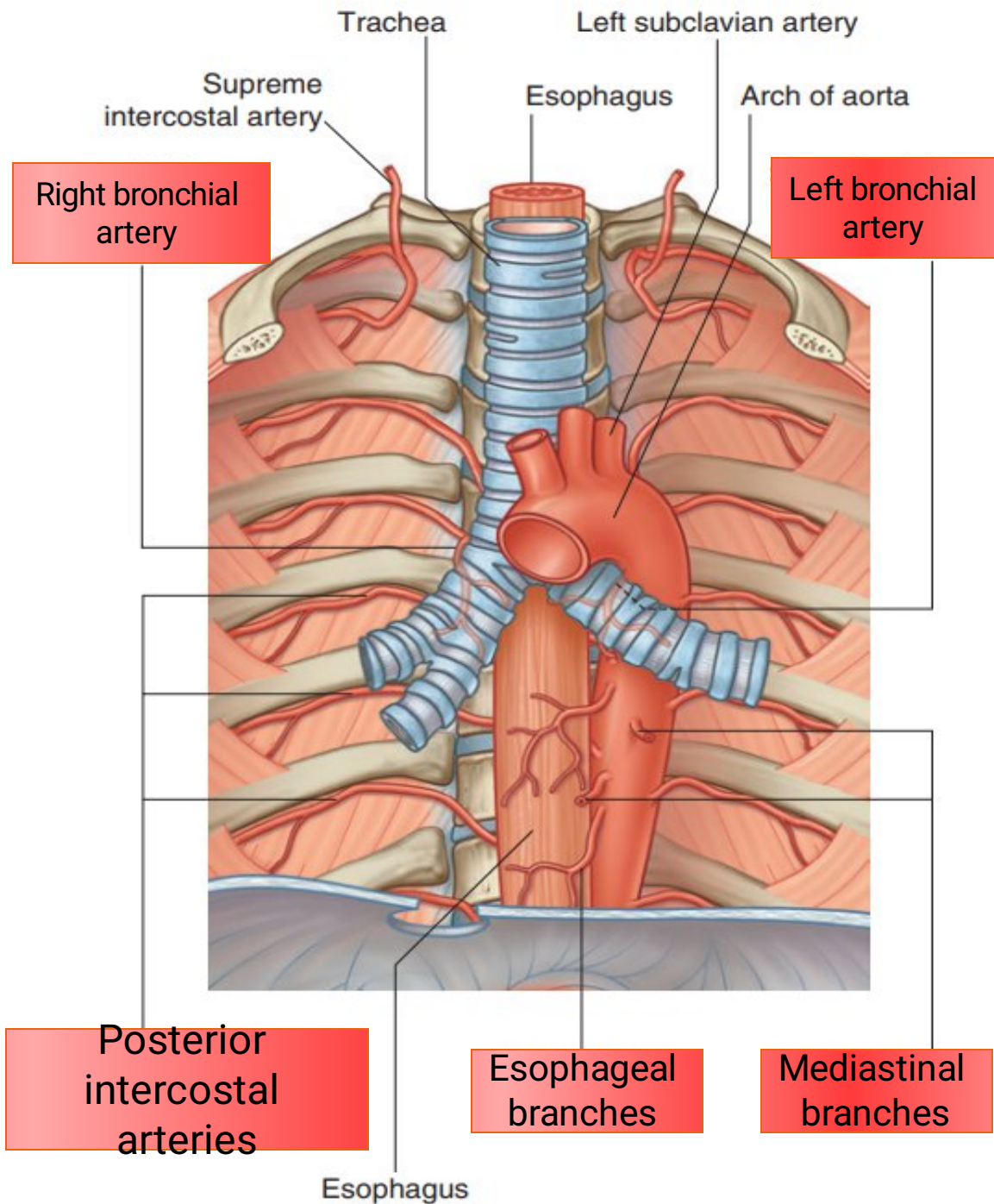




Descending aorta

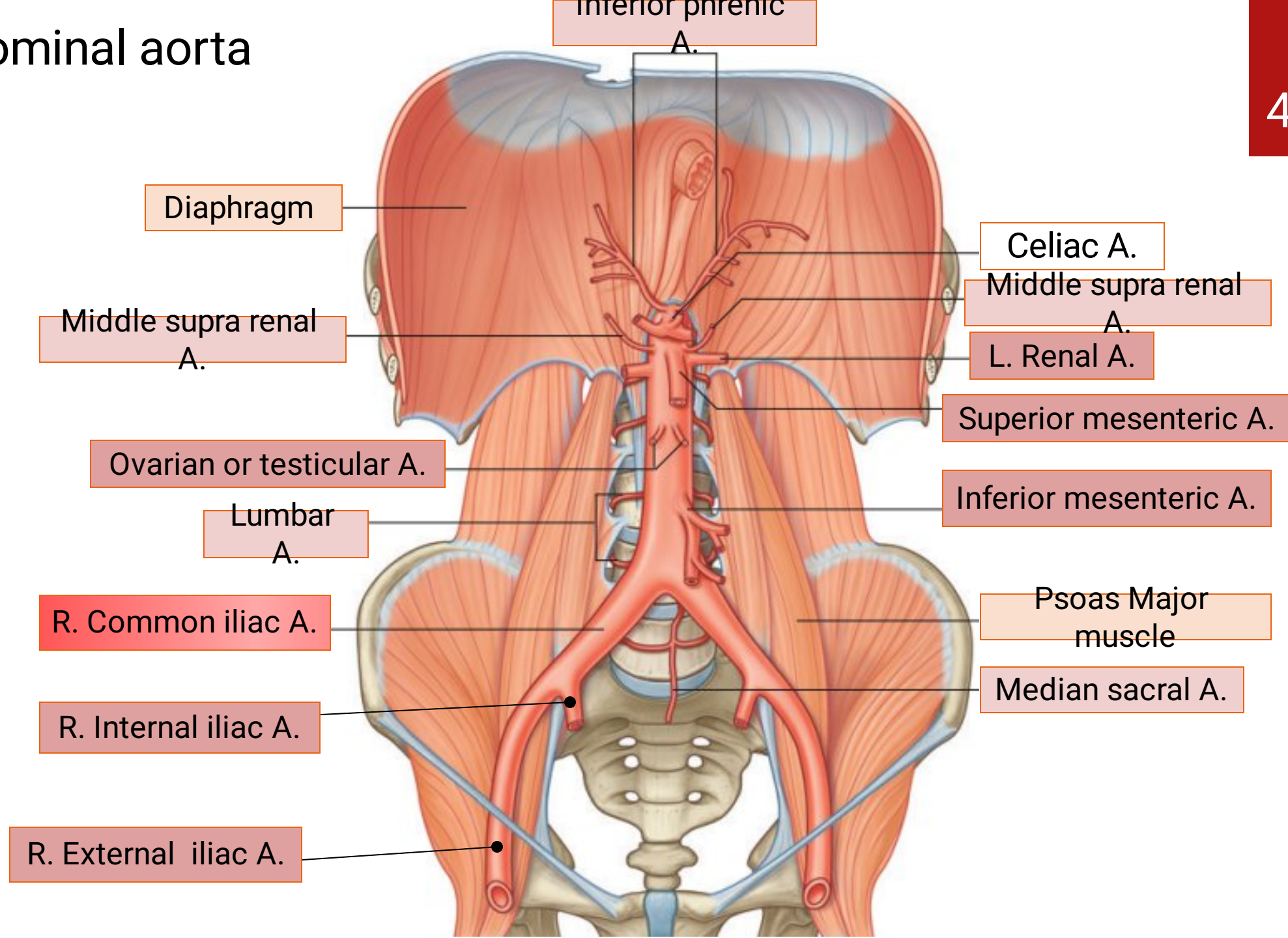
Thoracic aorta

45



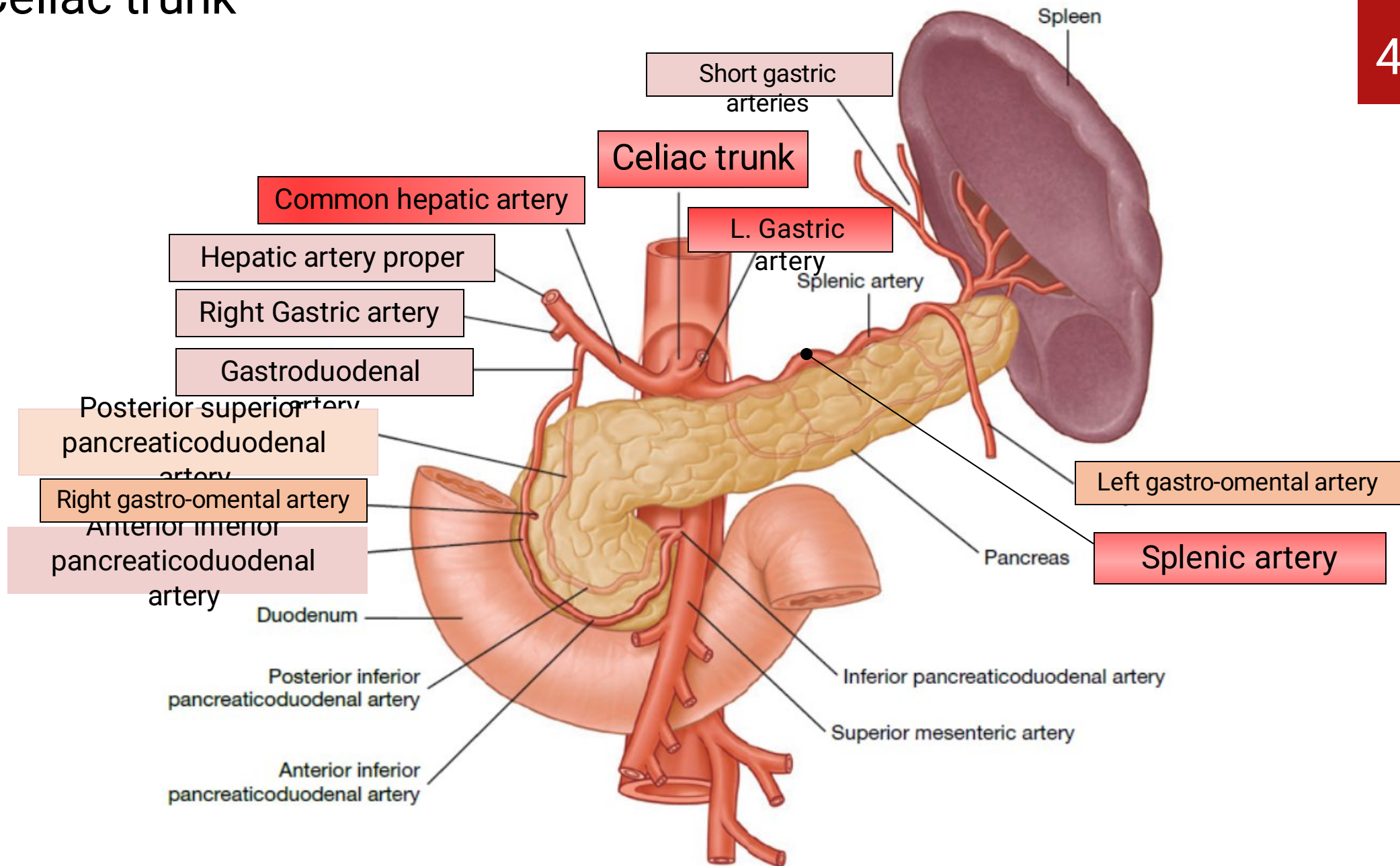
Abdominal aorta

46



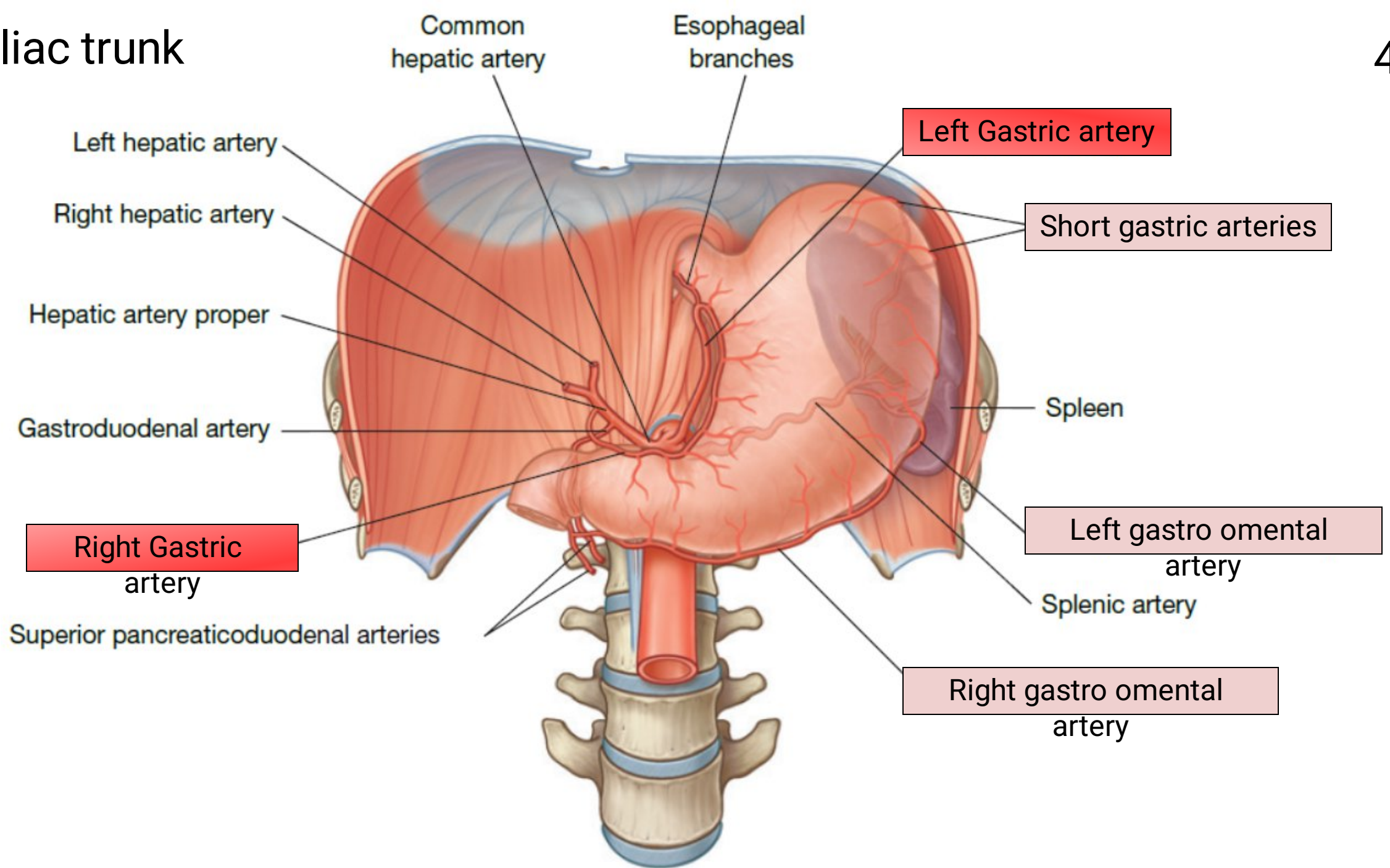
Celiac trunk

47



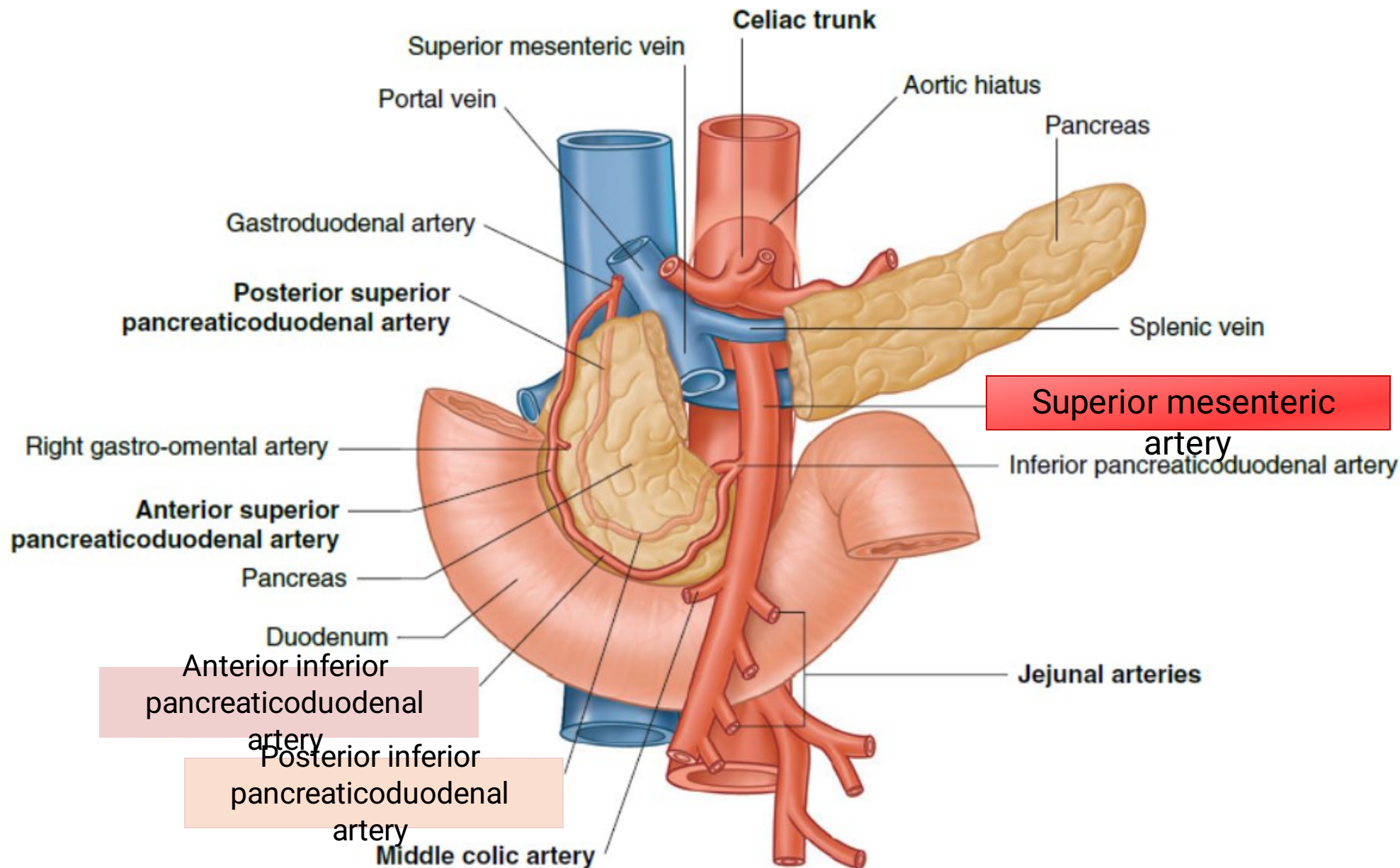
Celiac trunk

48

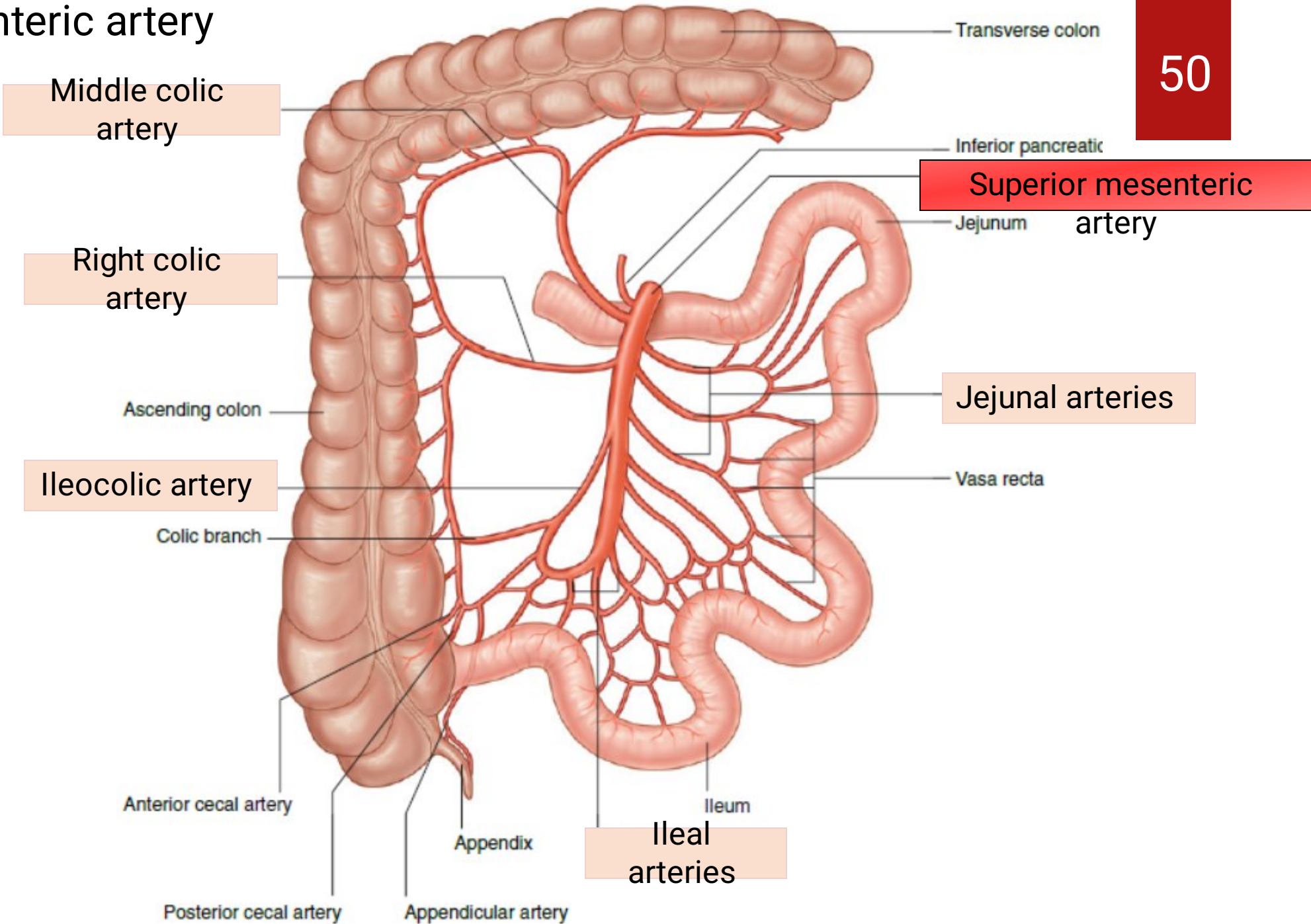


Superior mesenteric artery

49

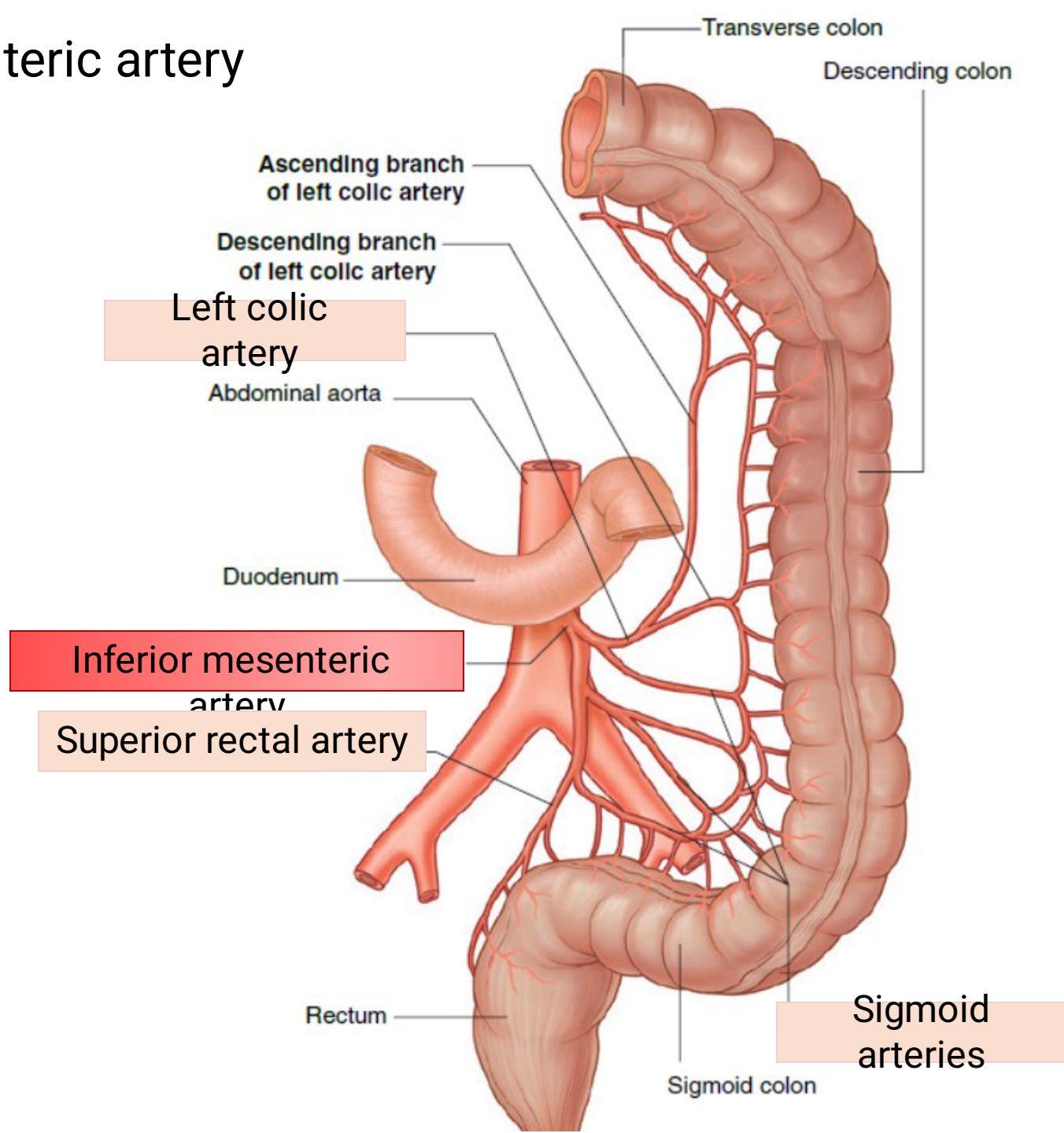


Superior mesenteric artery



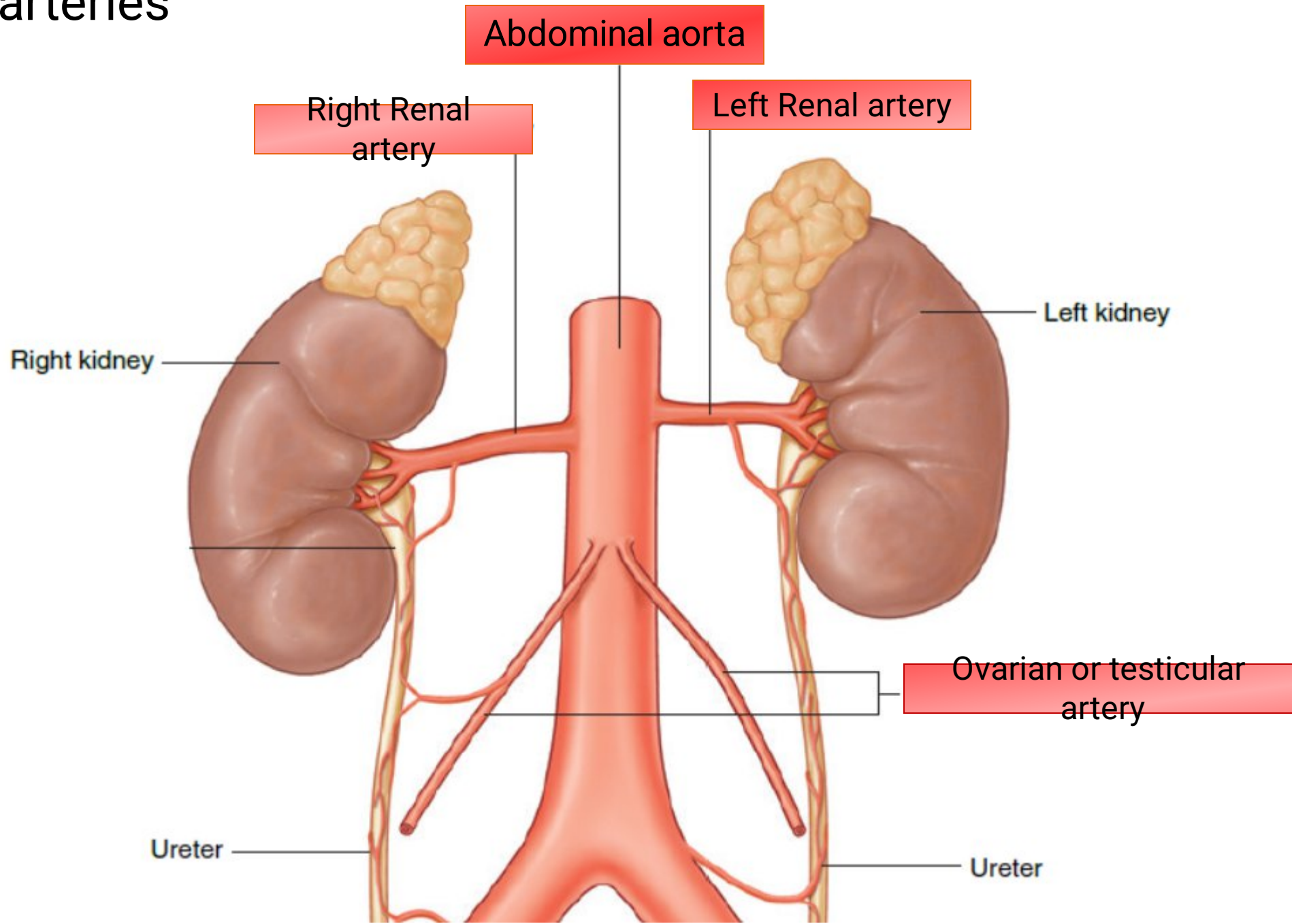
Inferior mesenteric artery

51

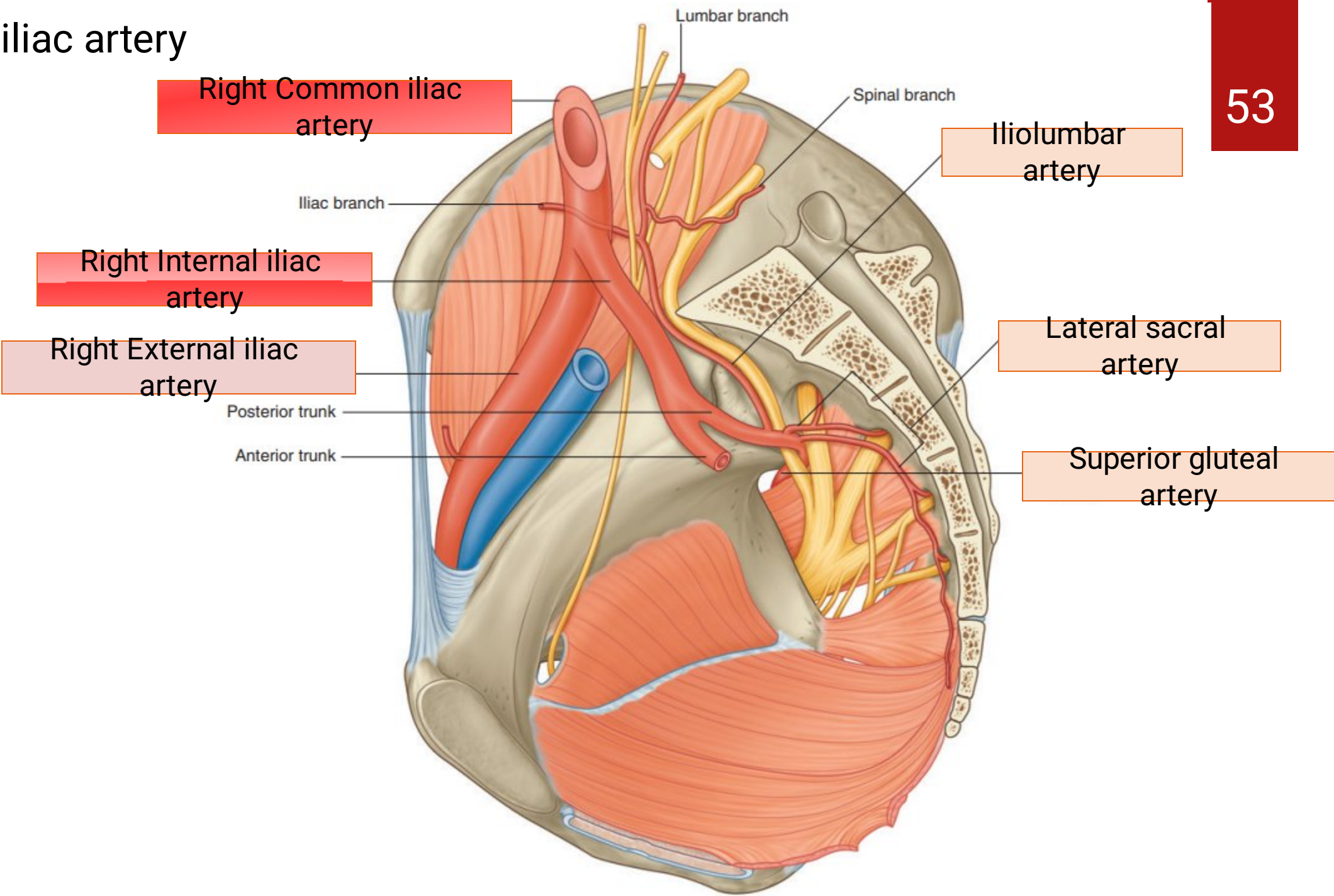


Renal arteries

52

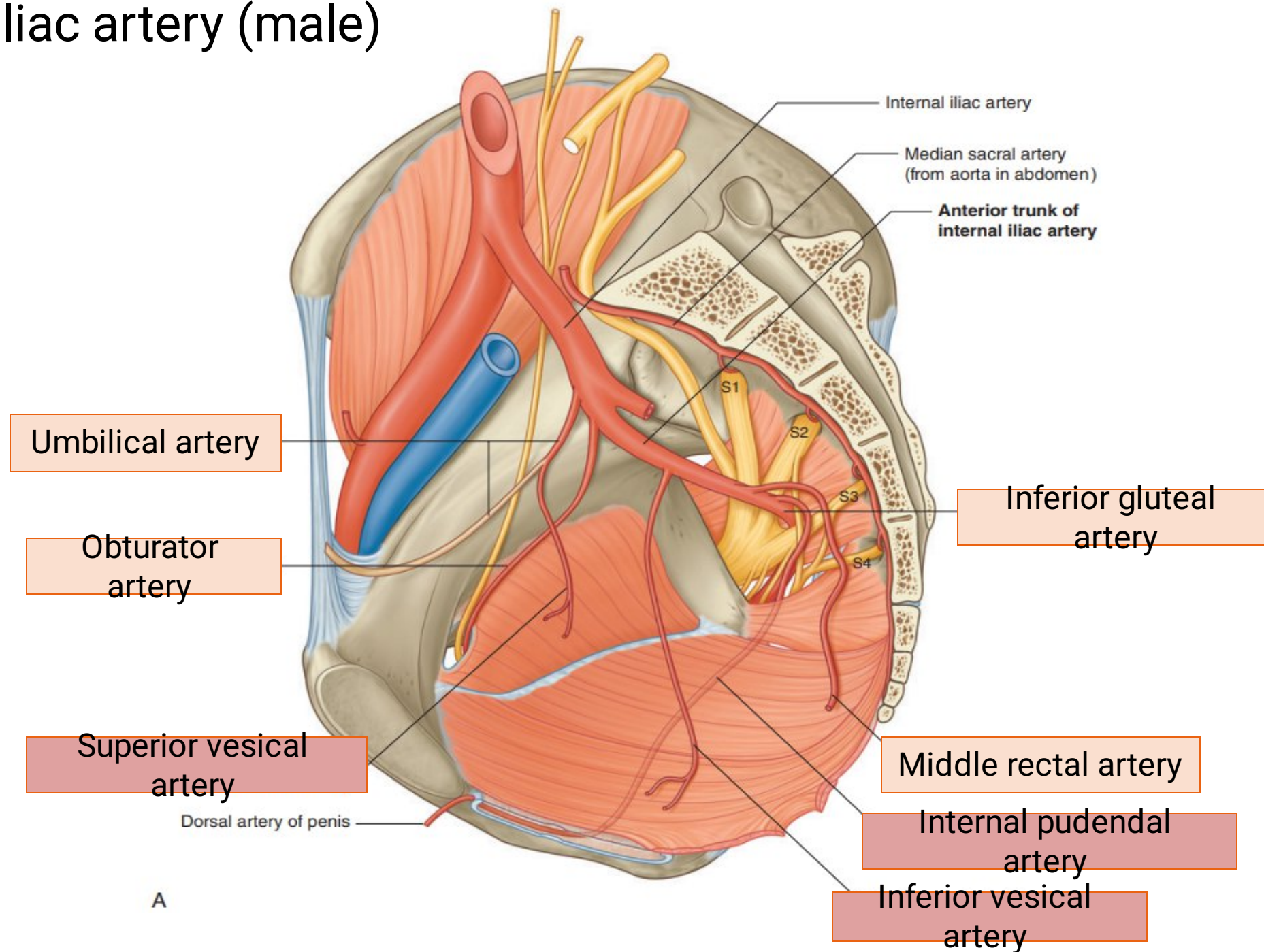


Internal iliac artery



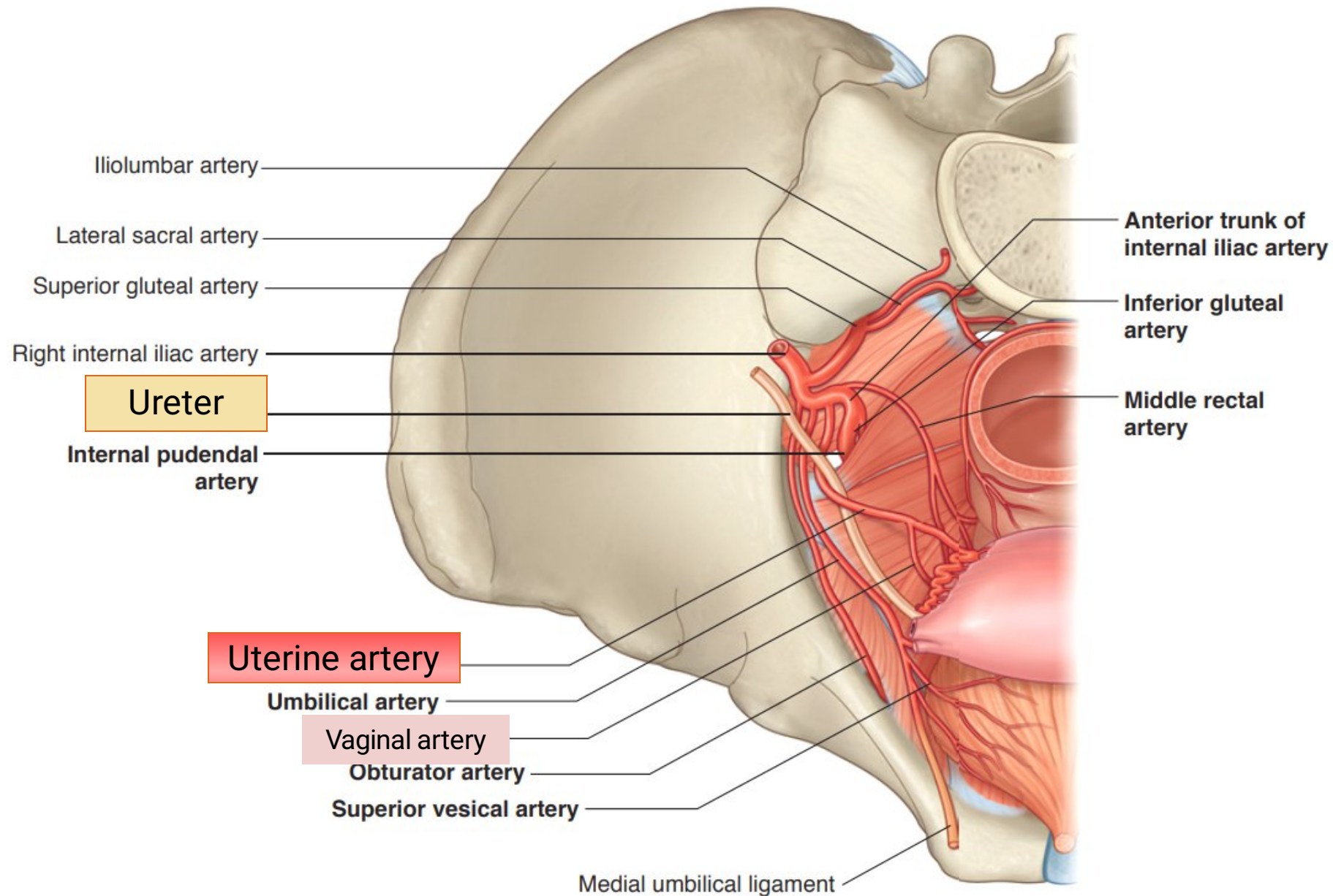
Internal iliac artery (male)

54



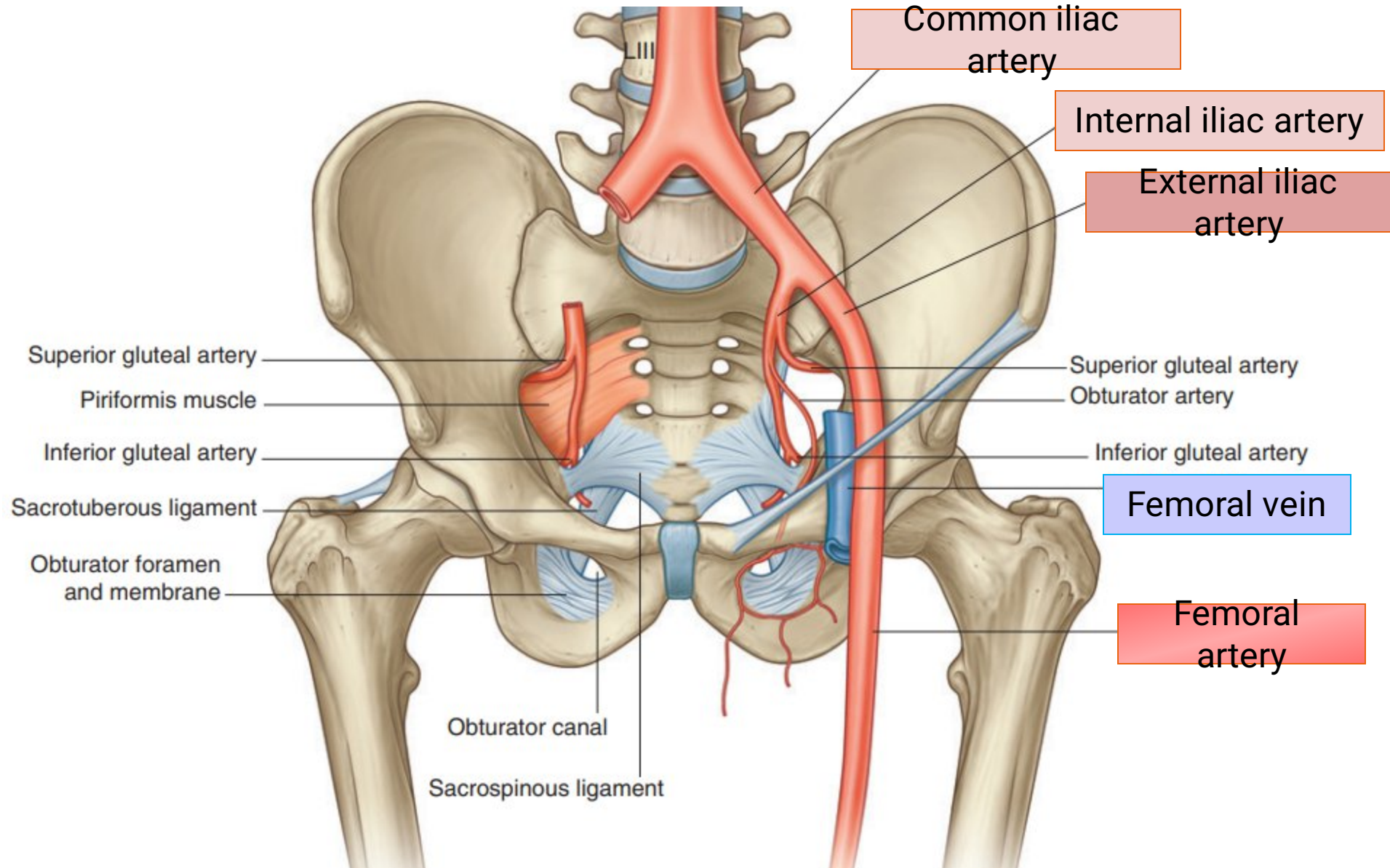
Internal iliac artery (female)

55

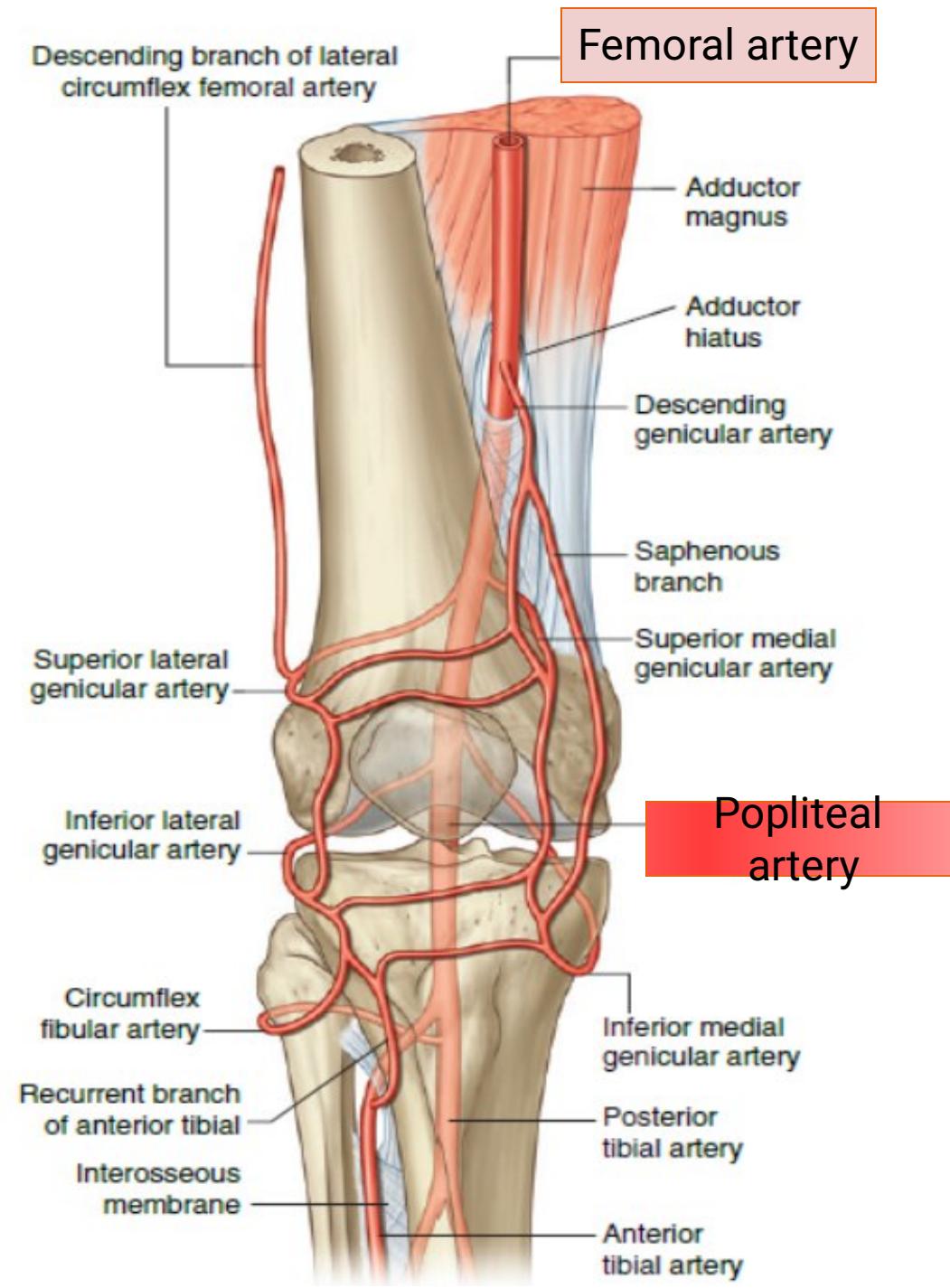


Femoral artery

56

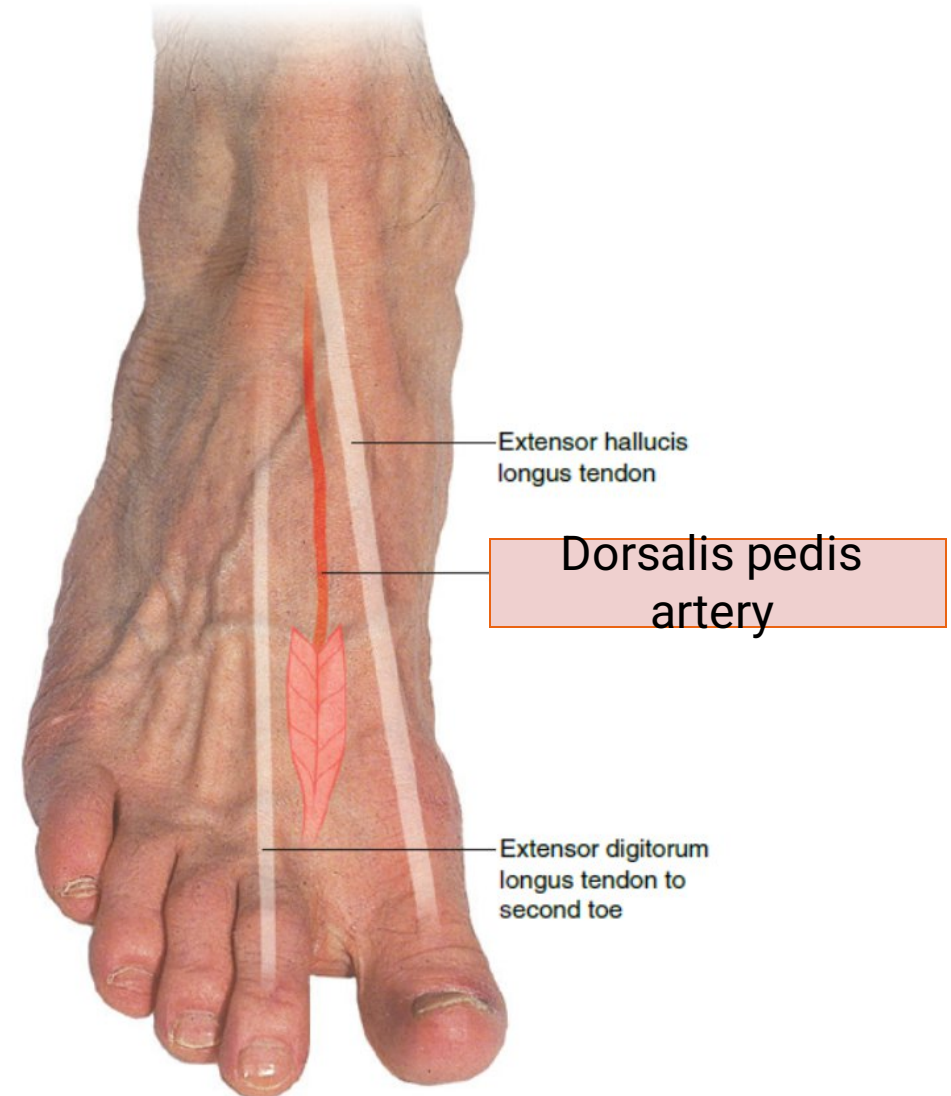
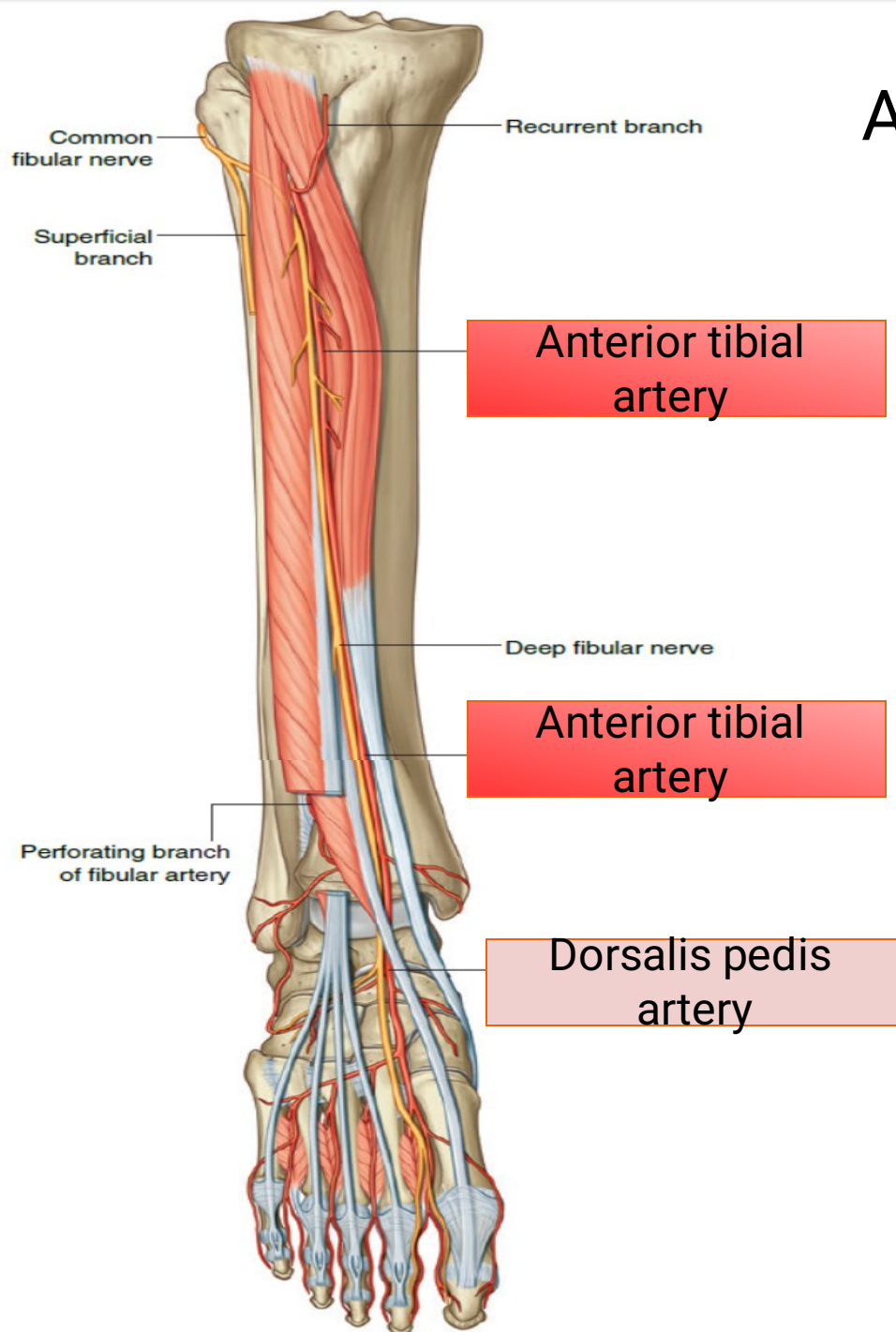


Popliteal artery

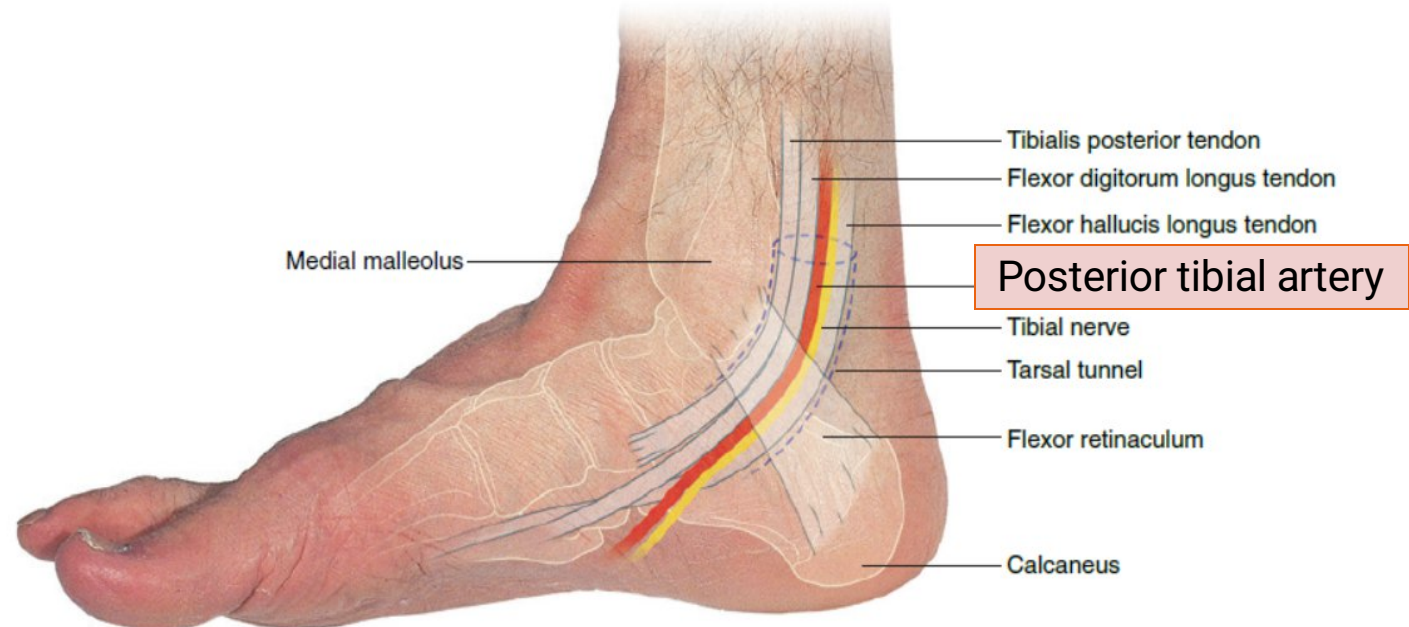
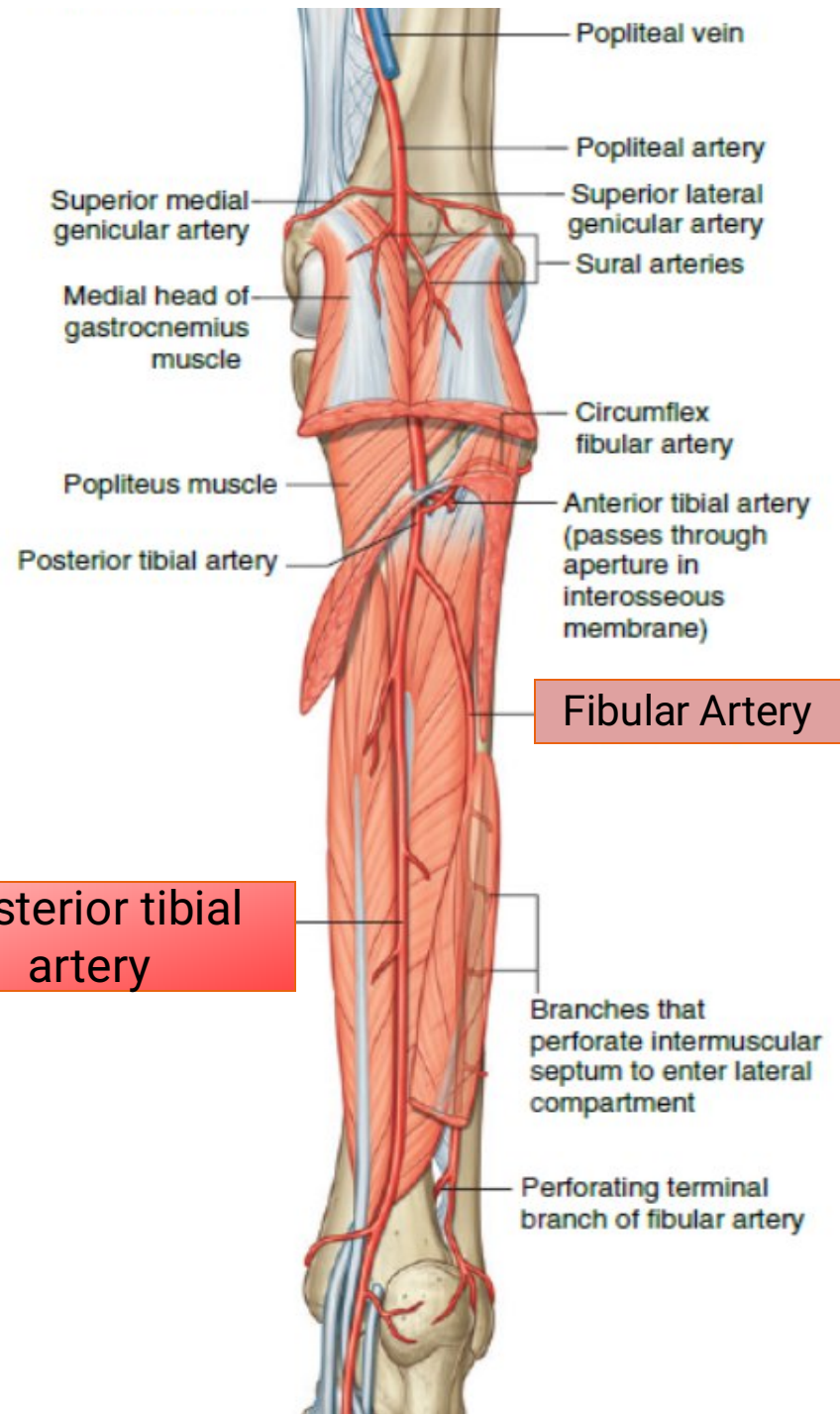


Anterior tibial artery

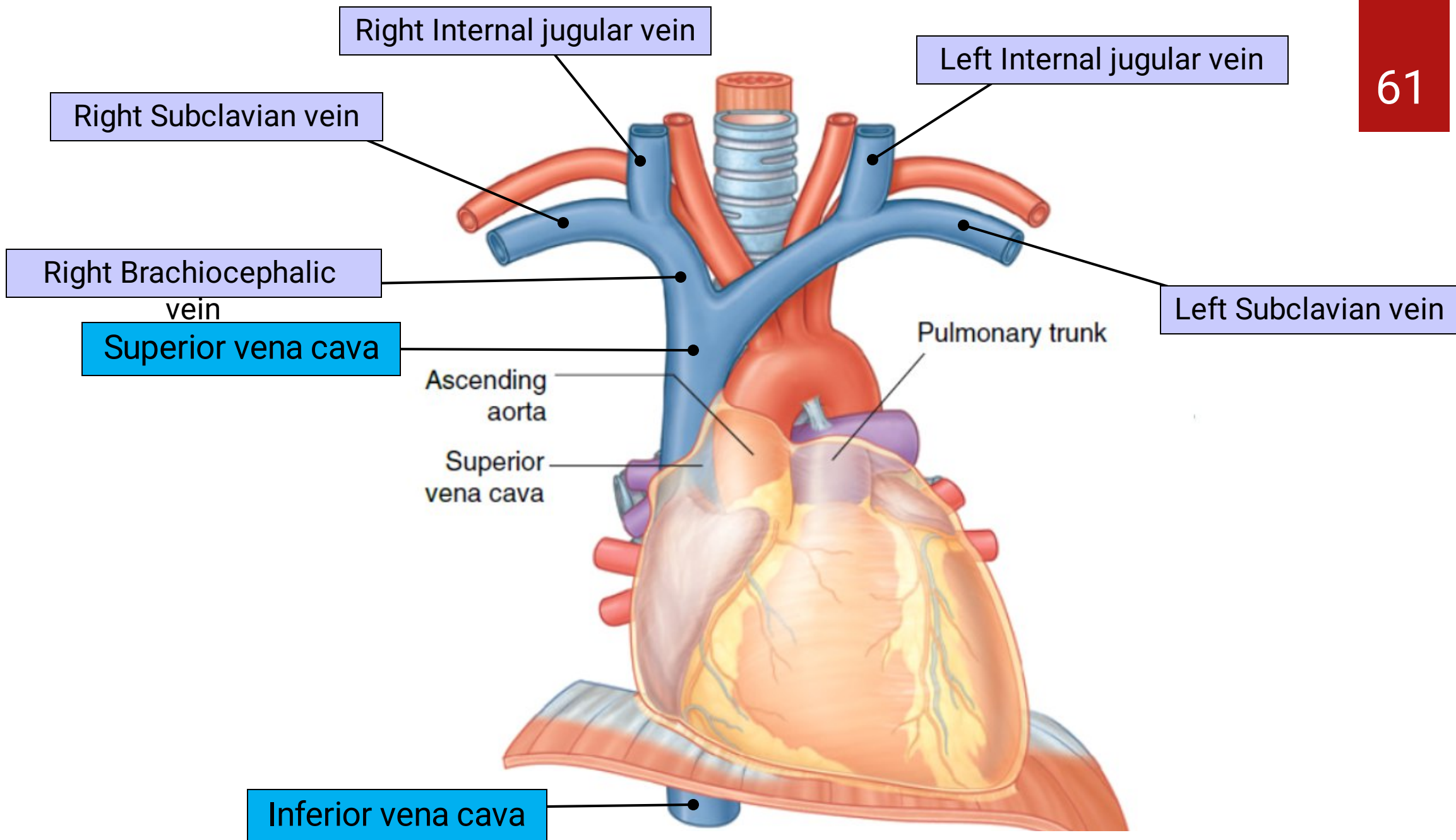
58



Posterior tibial artery



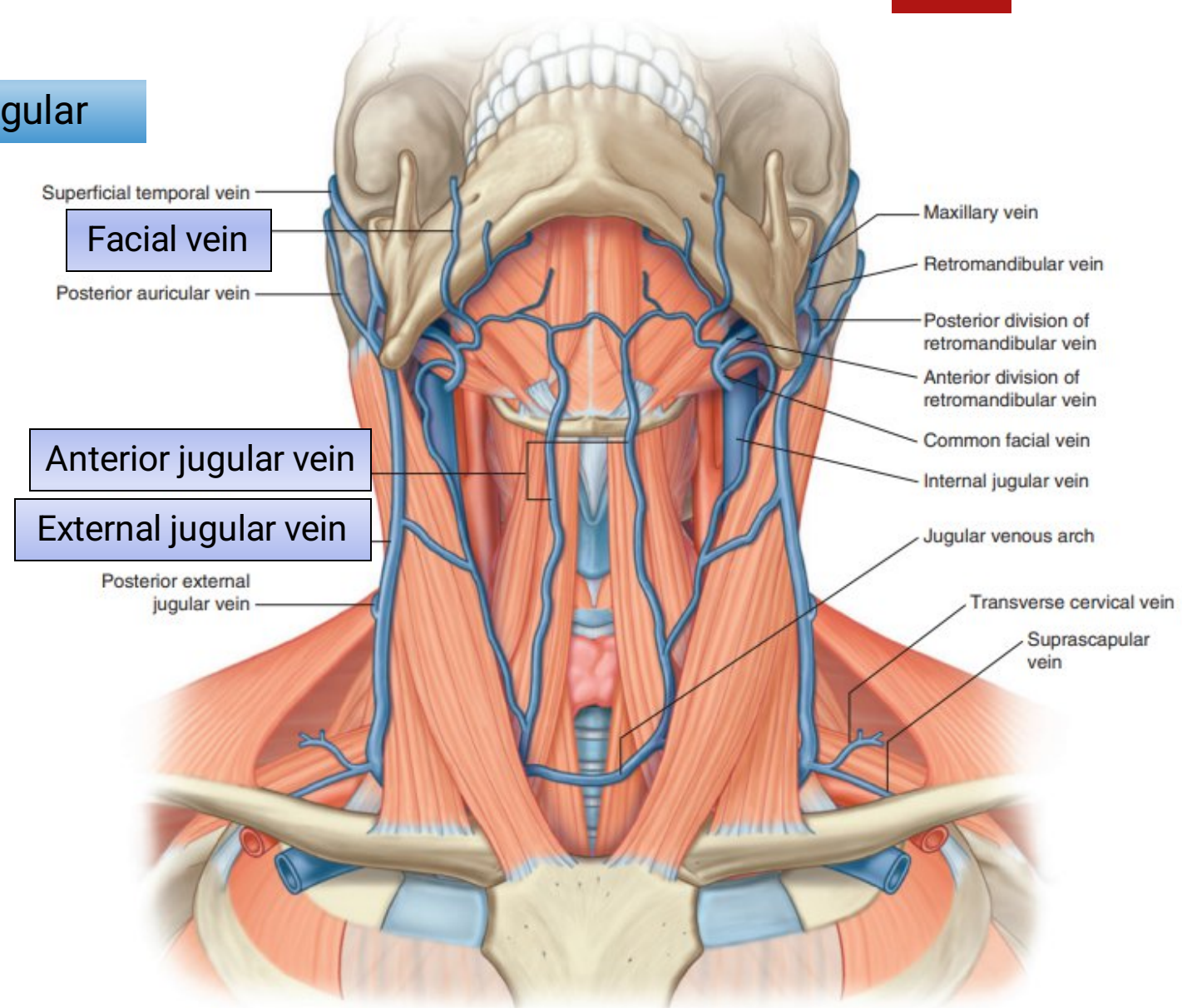
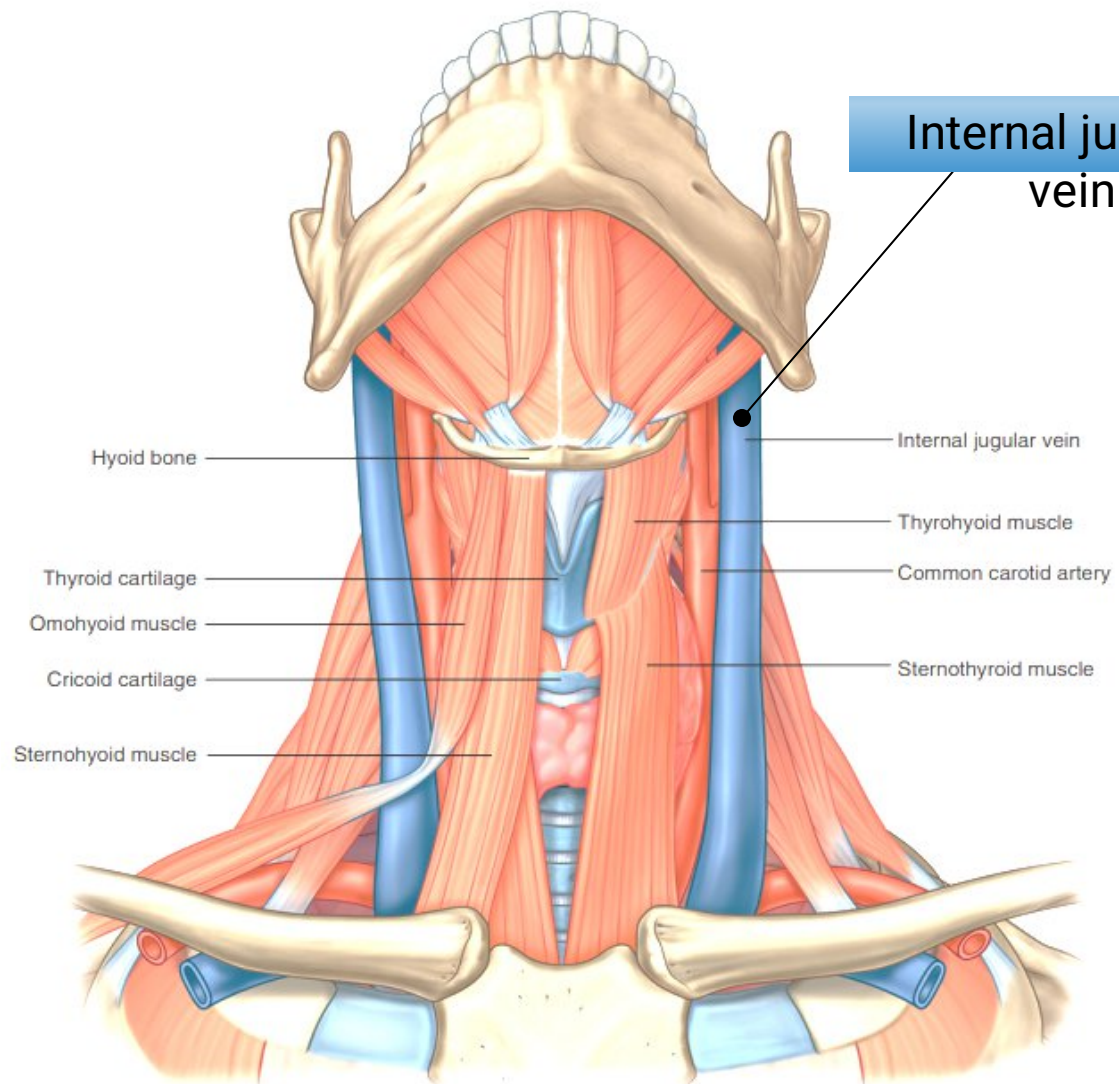
Veins



Veins of the head & neck

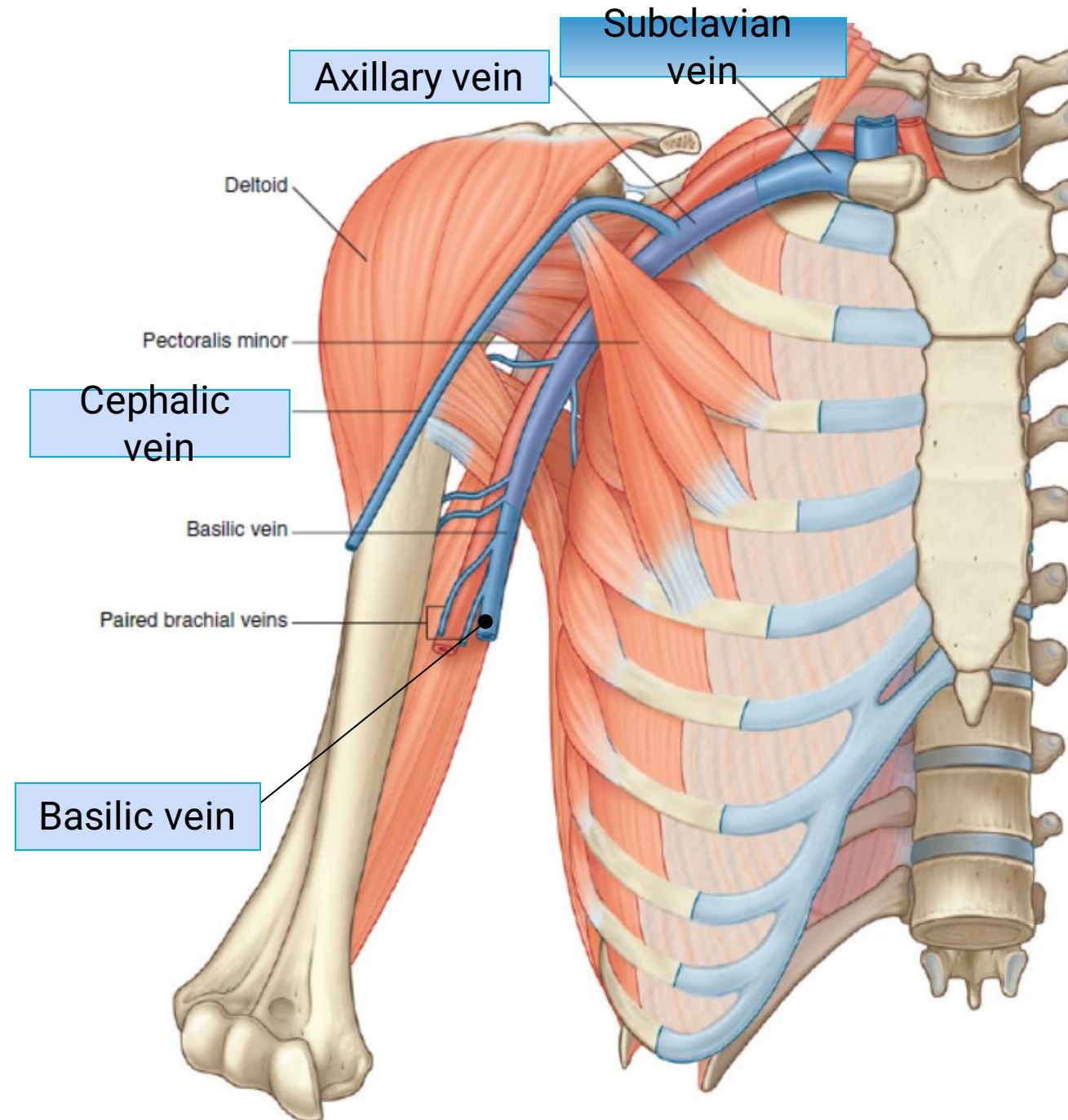
Internal jugular vein

63



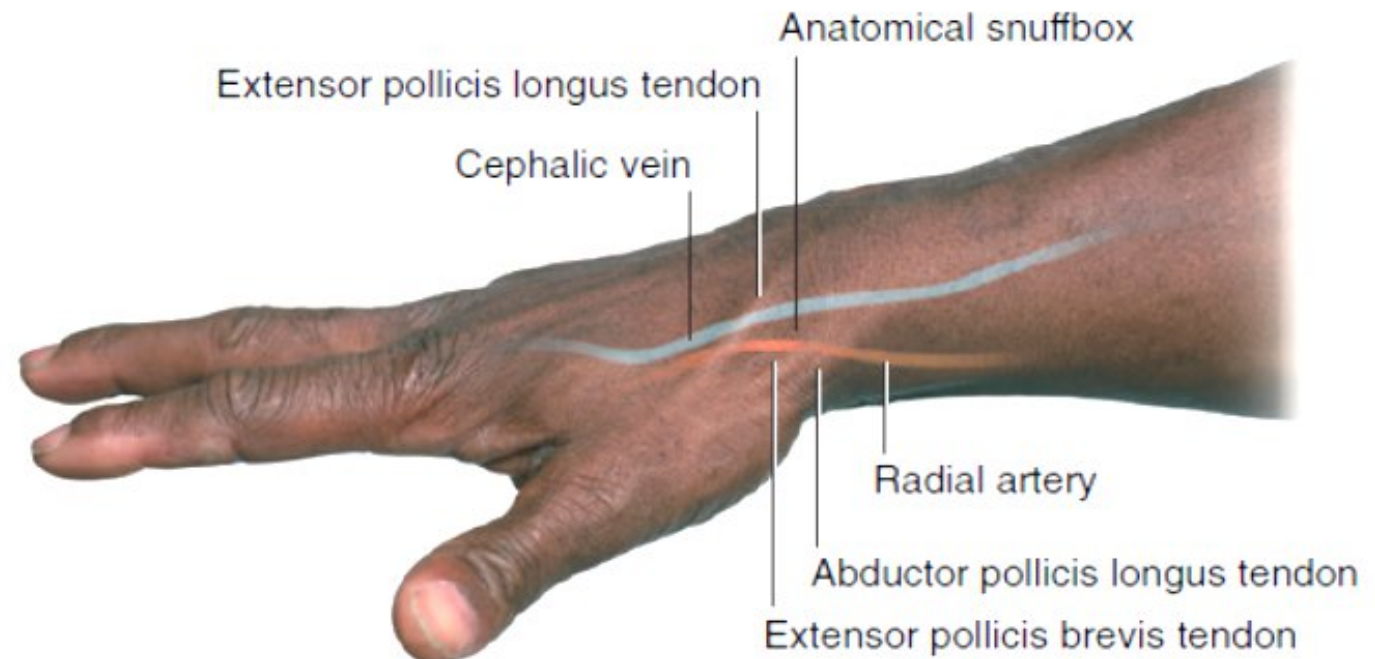
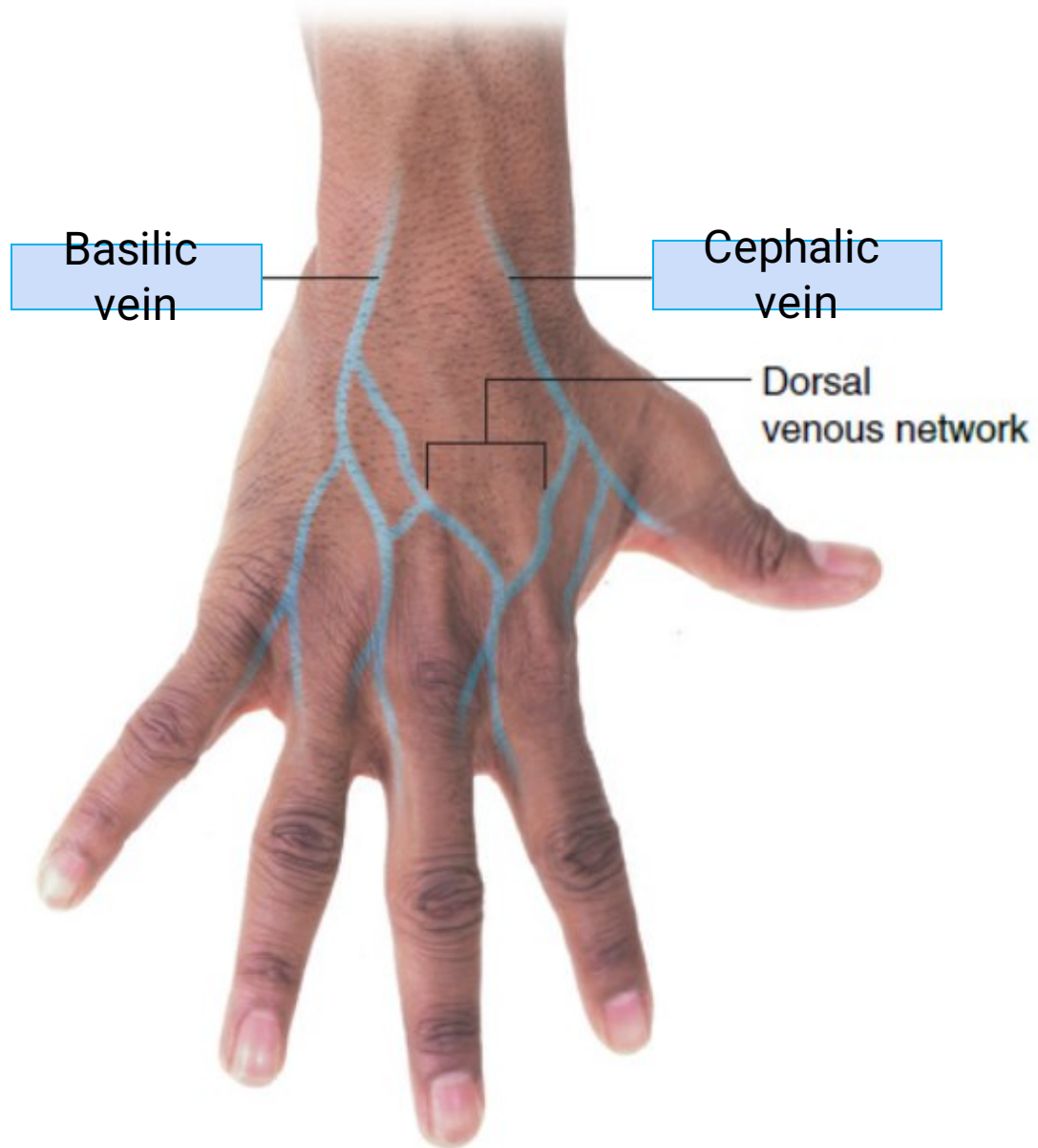
Veins of the upper limb

Subclavian vein



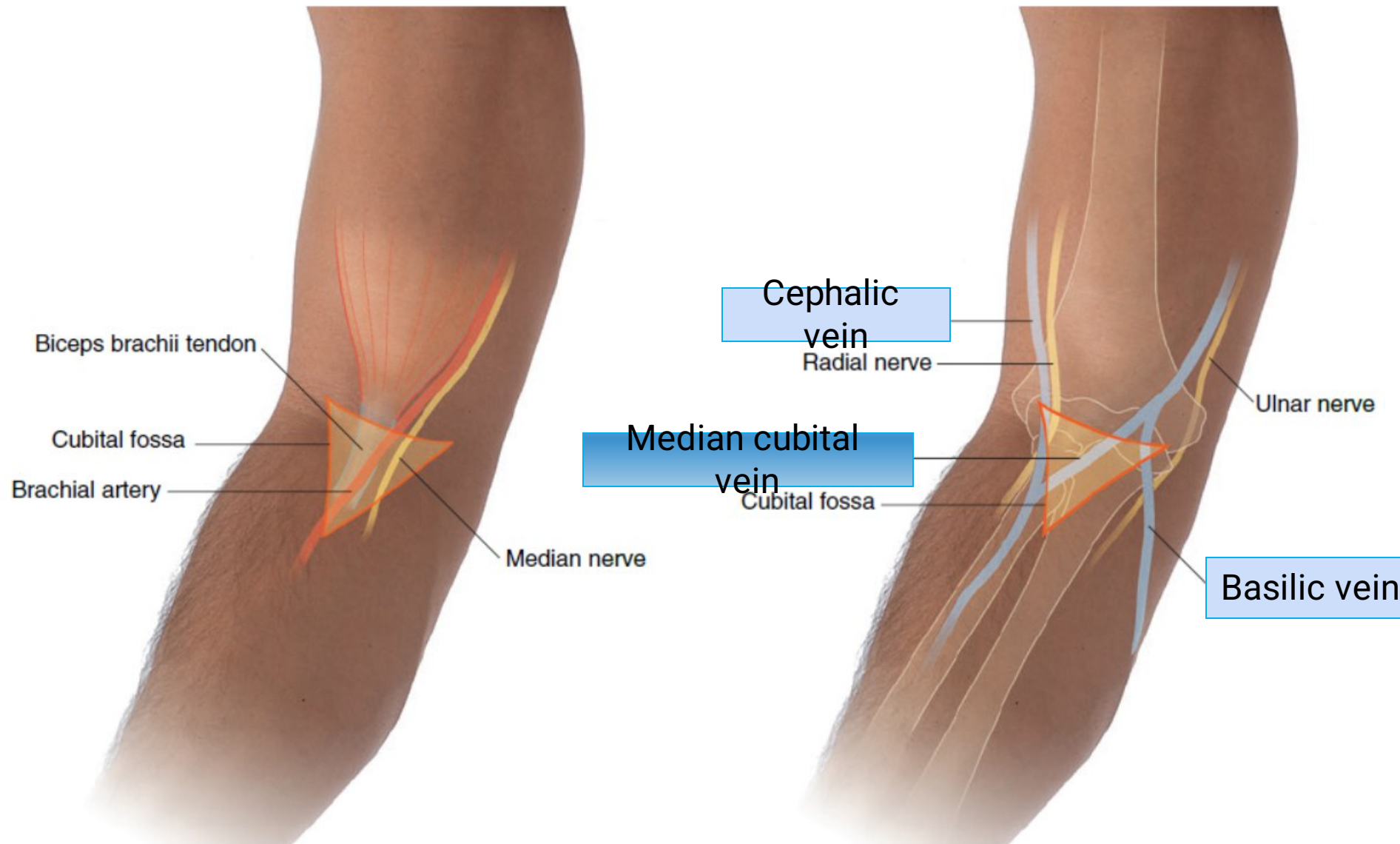
Cephalic & basilic veins

66



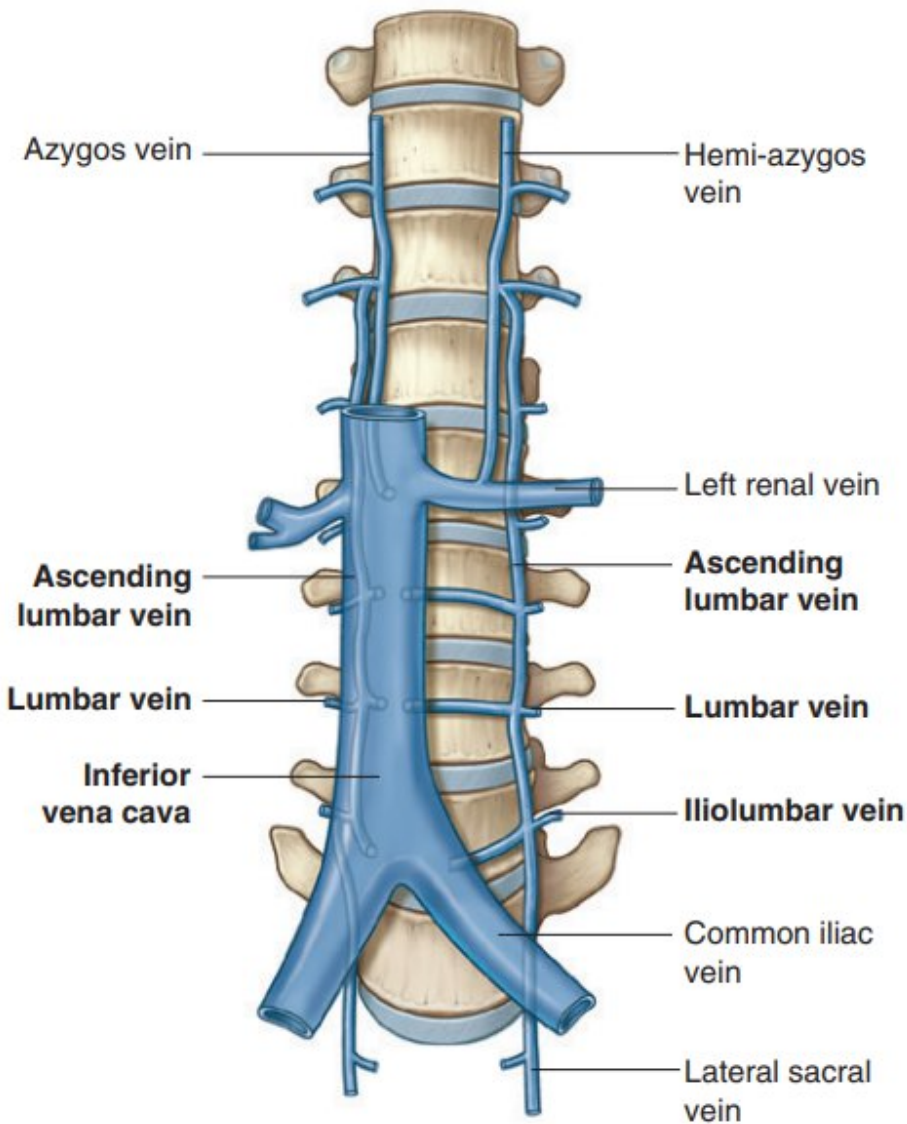
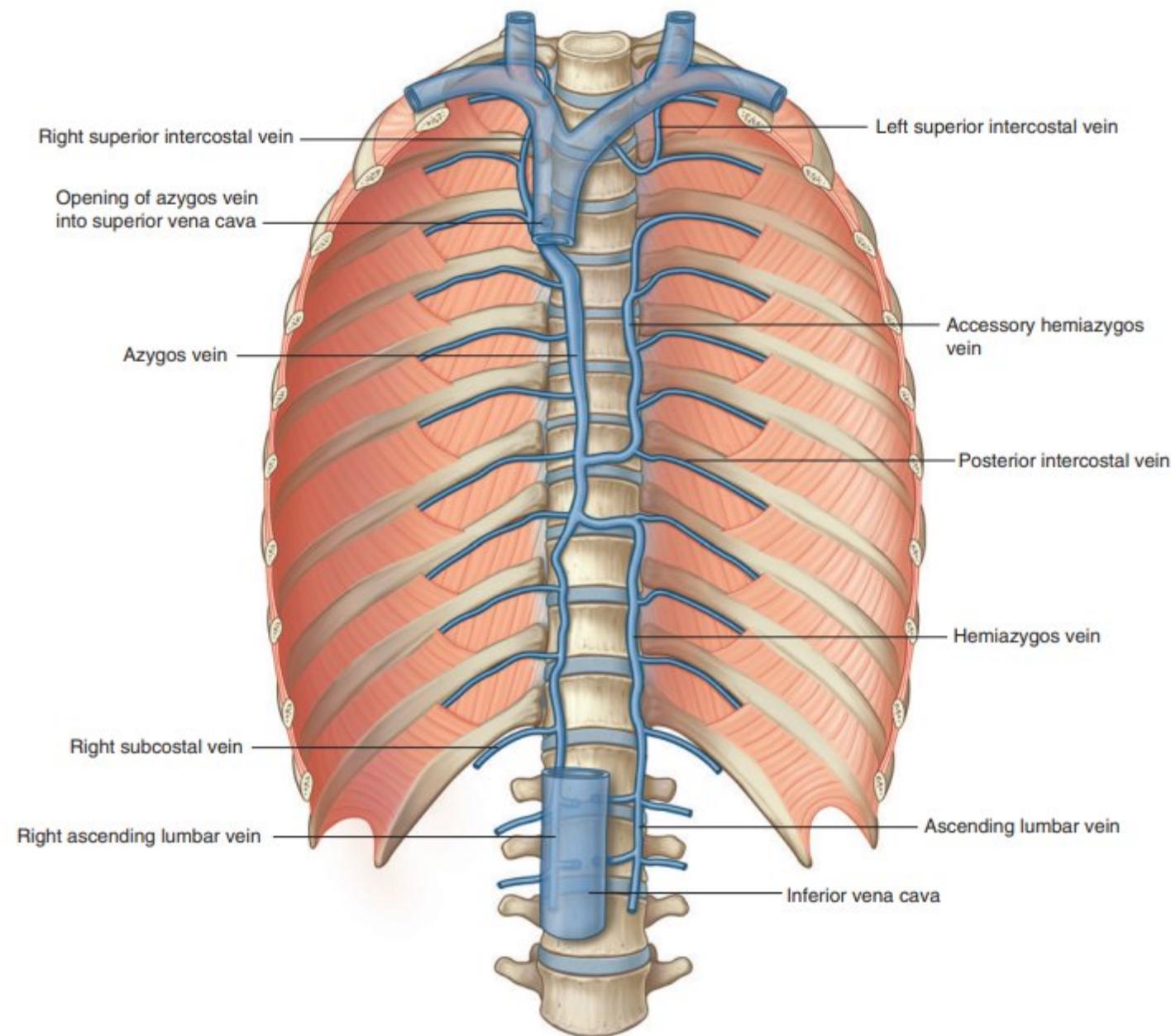
Median cubital vein

67



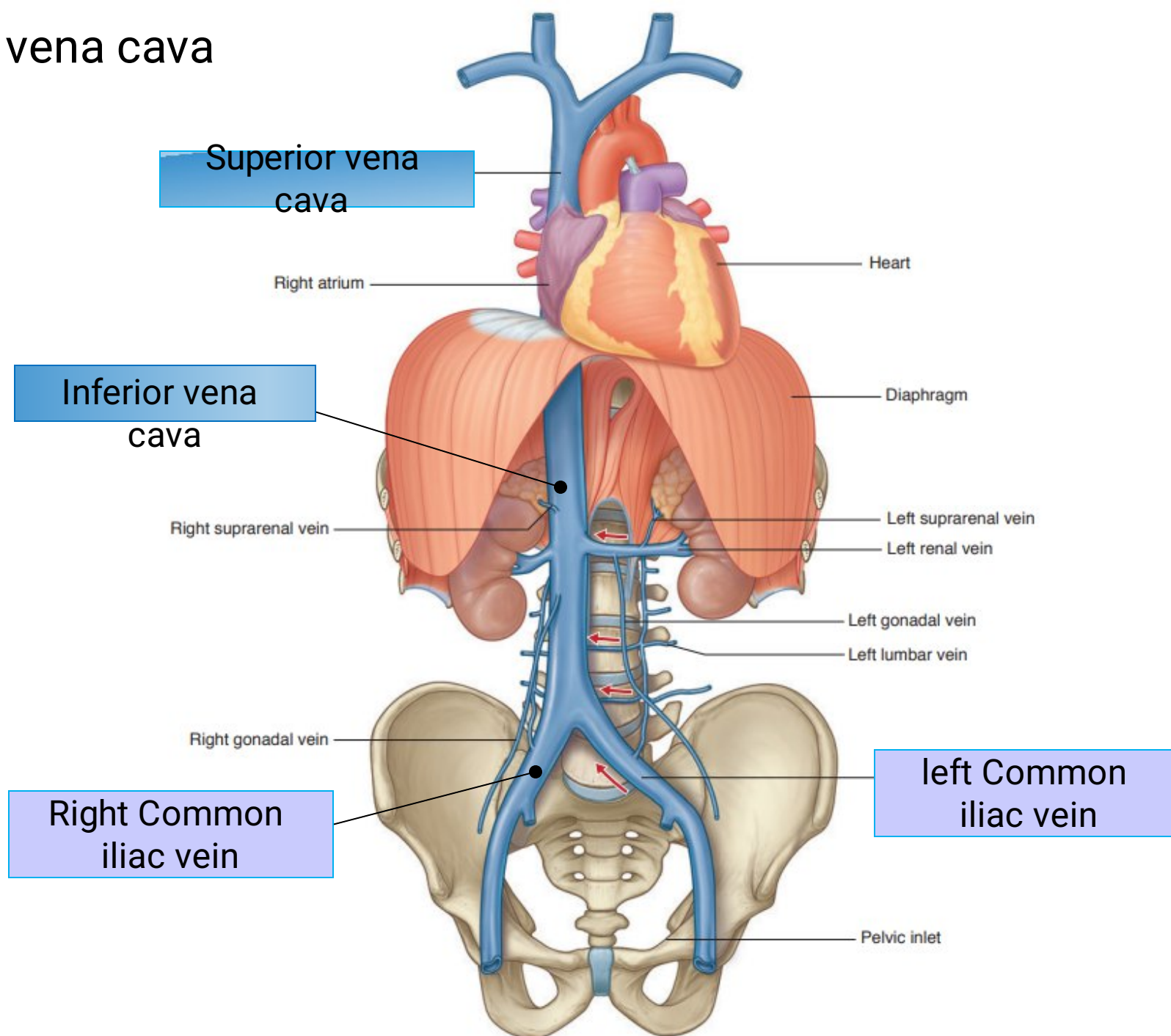
Thoracic & abdominal veins

Azygos veins

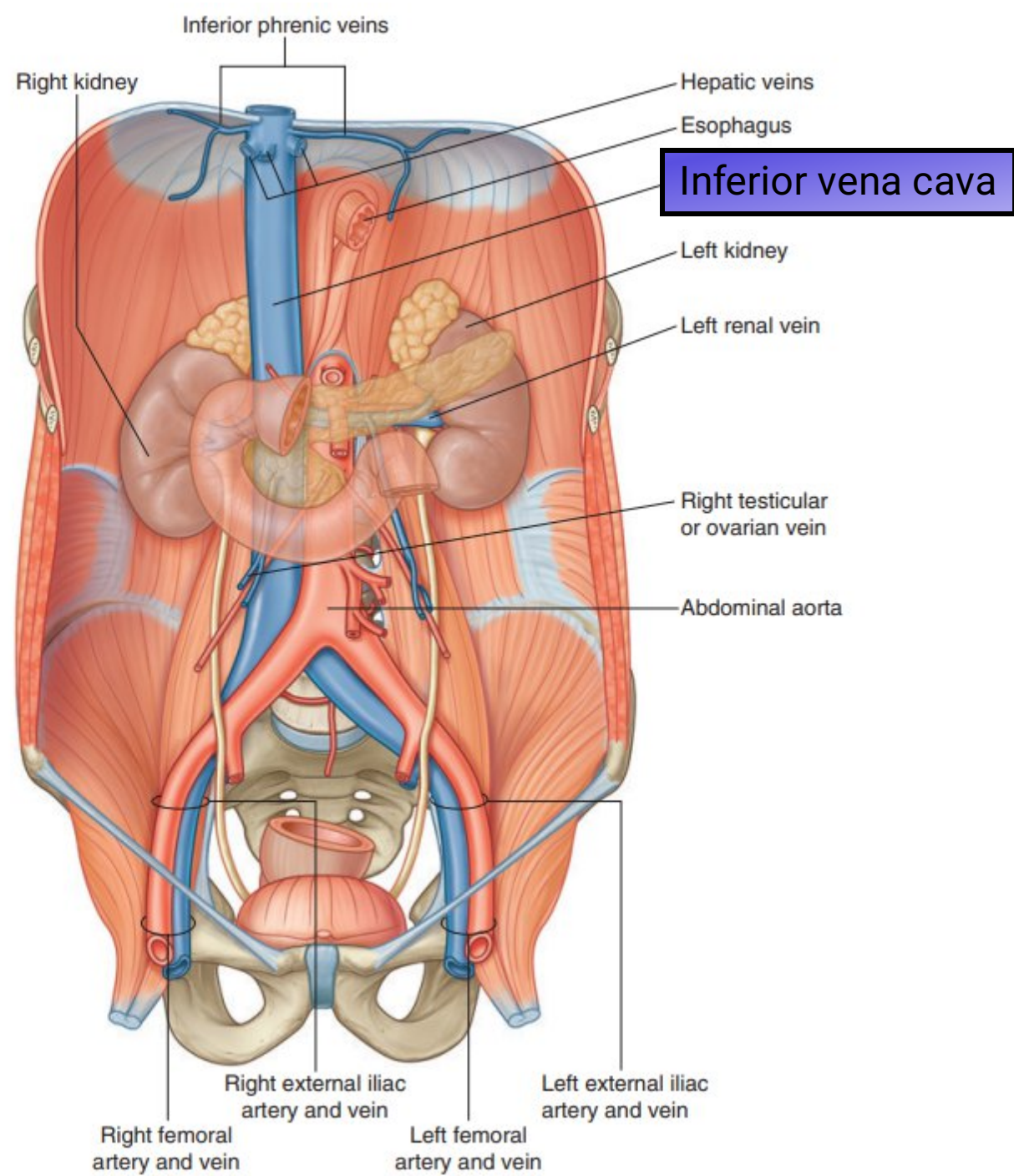


Inferior vena cava

70

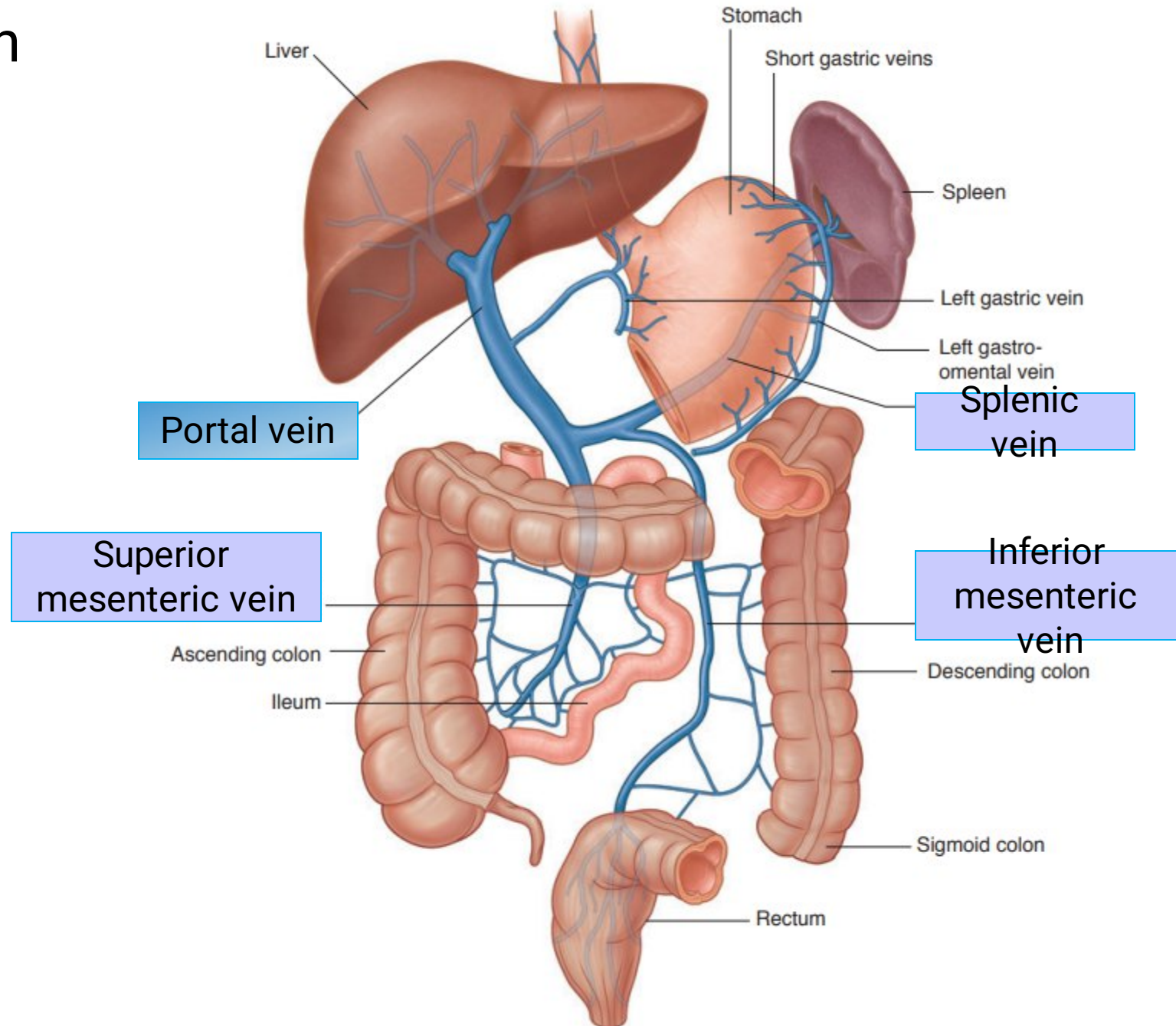


Inferior vena cava



Portal vein

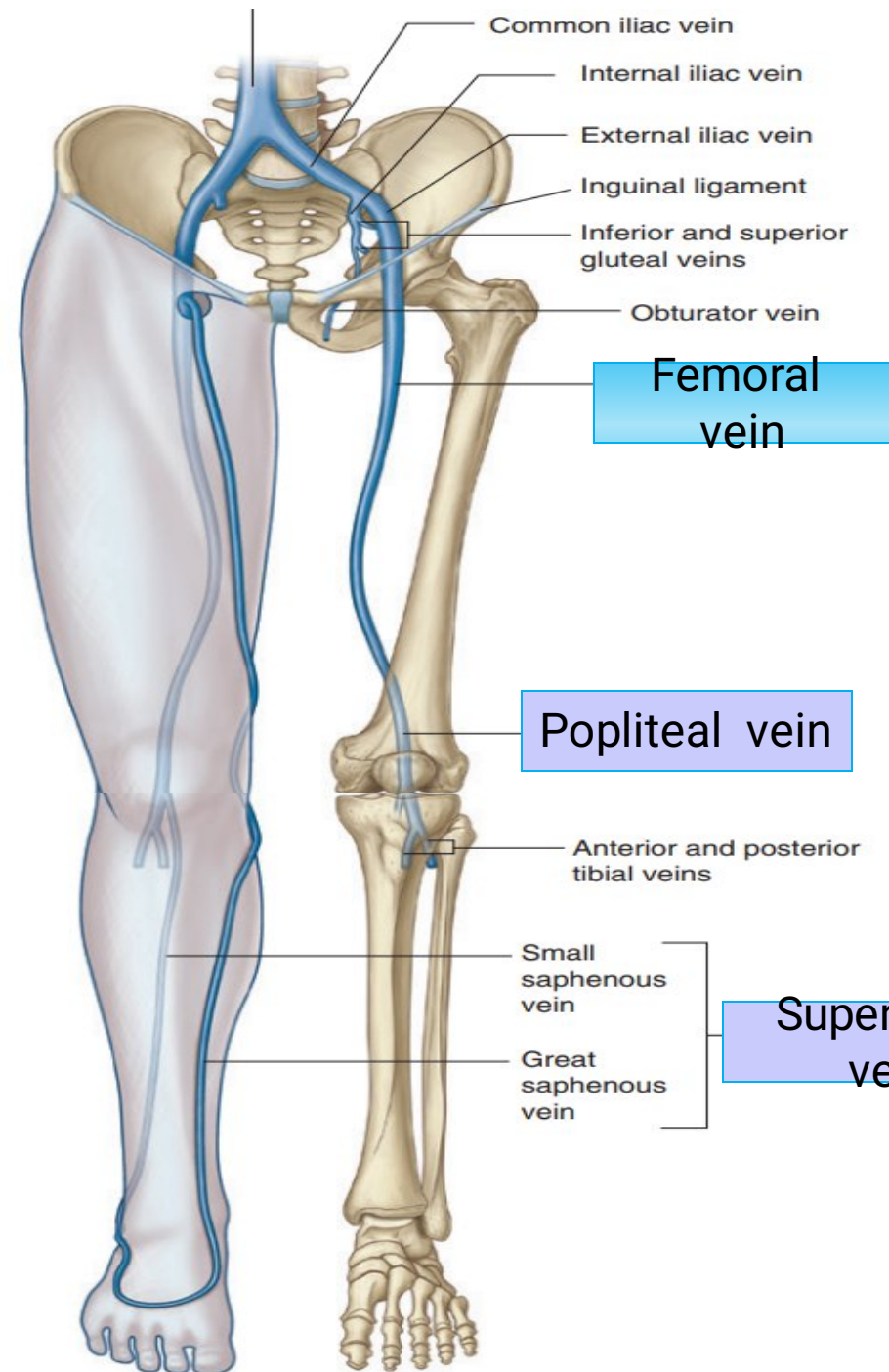
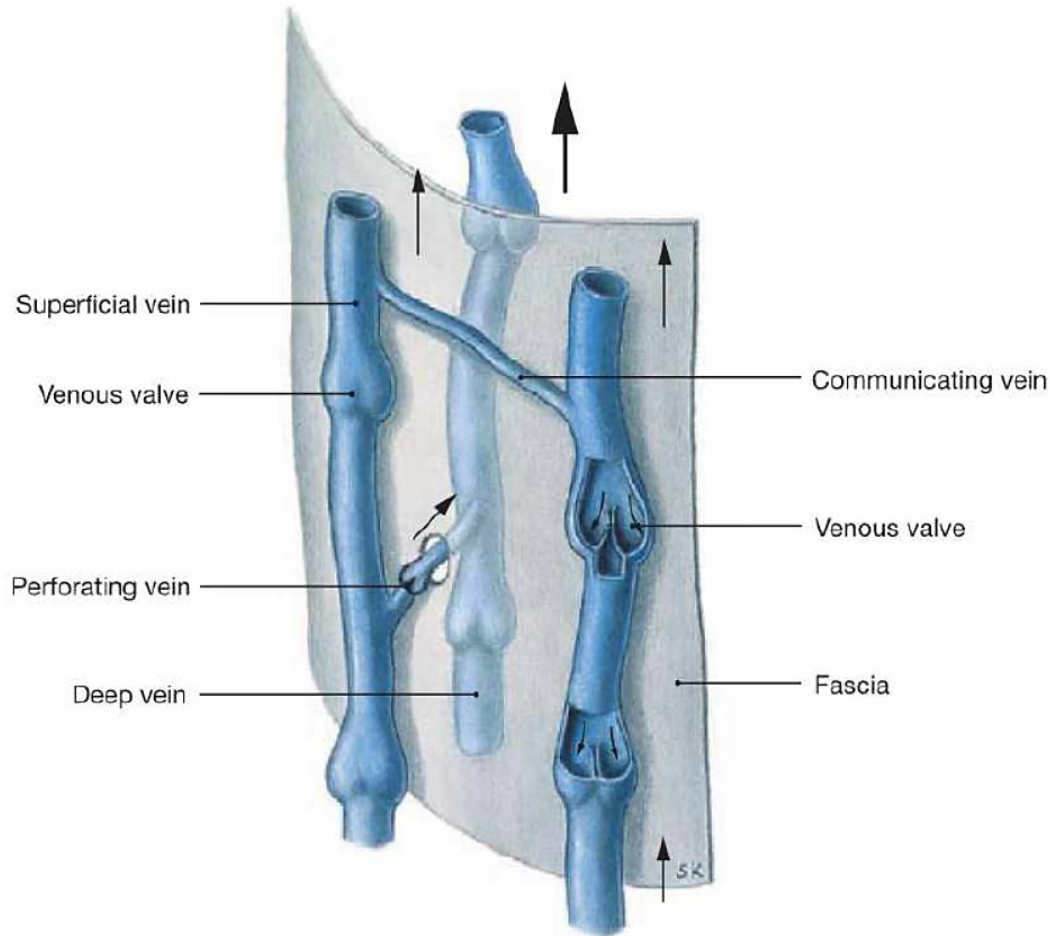
72

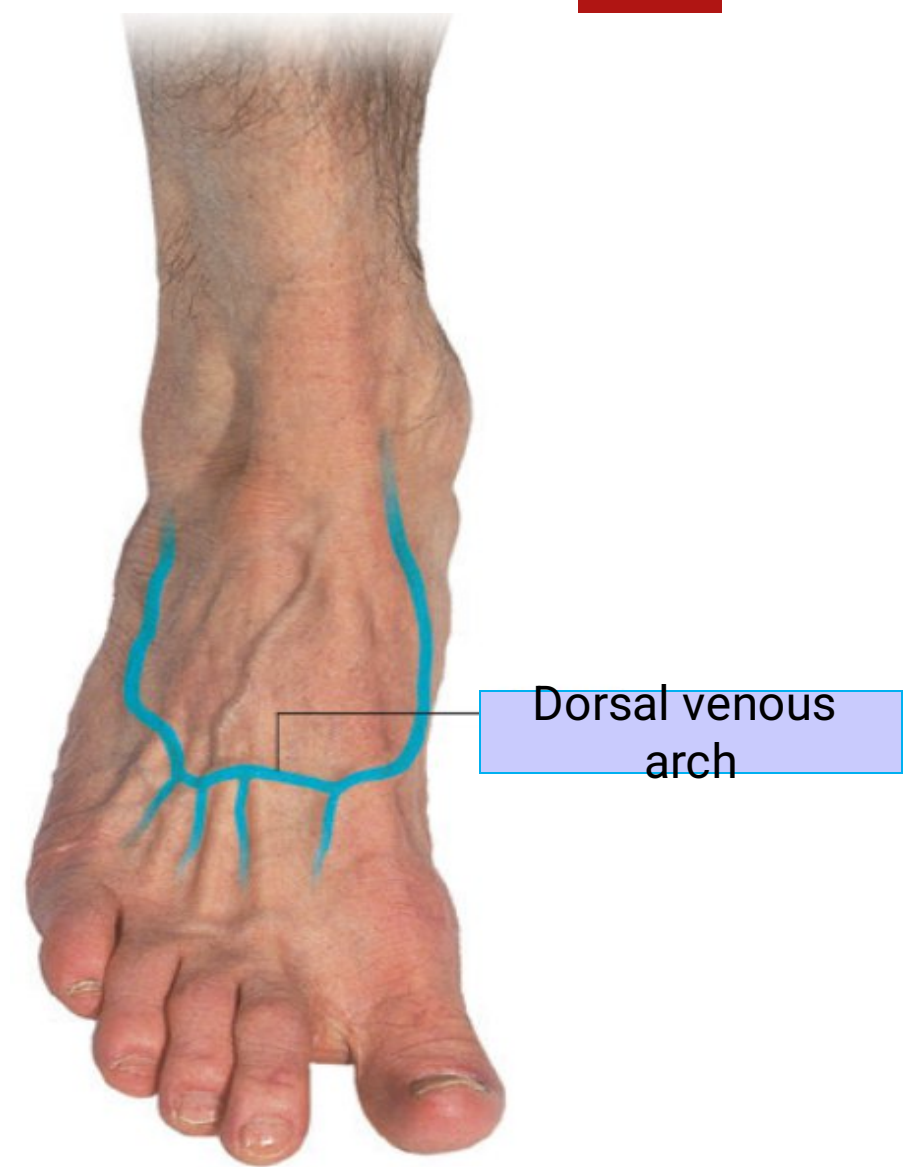
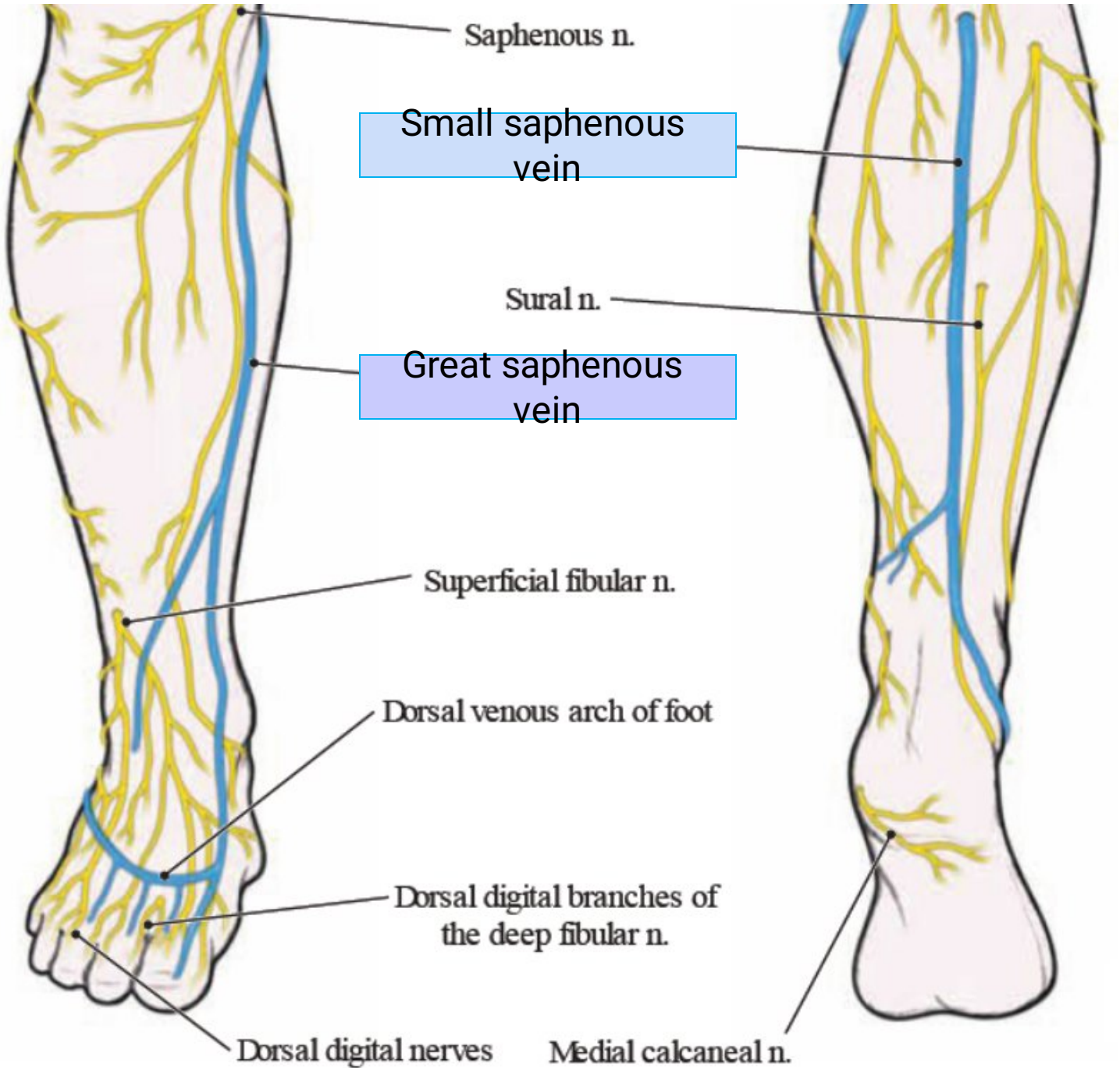


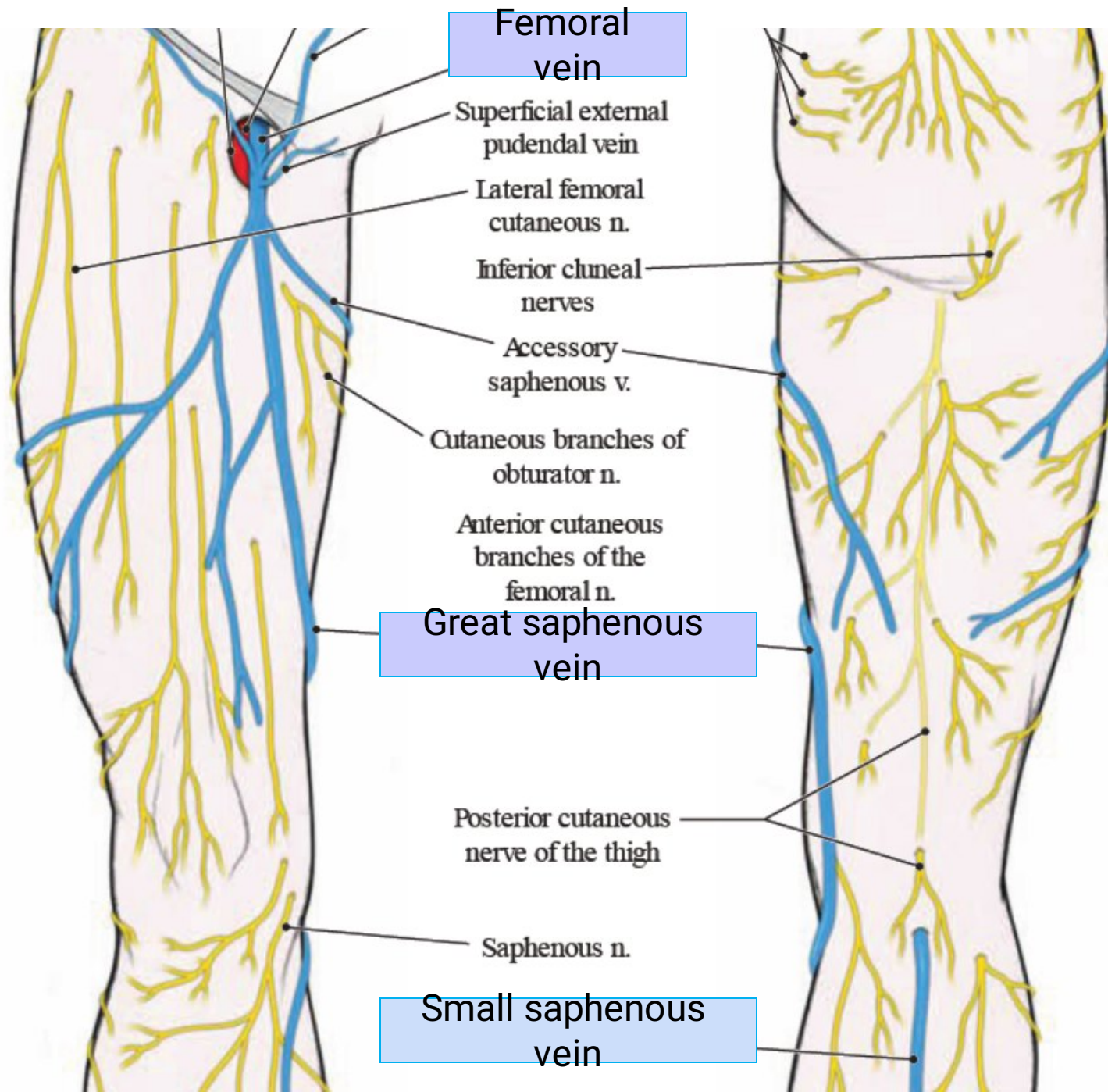
Veins of lower limb

Deep veins

74

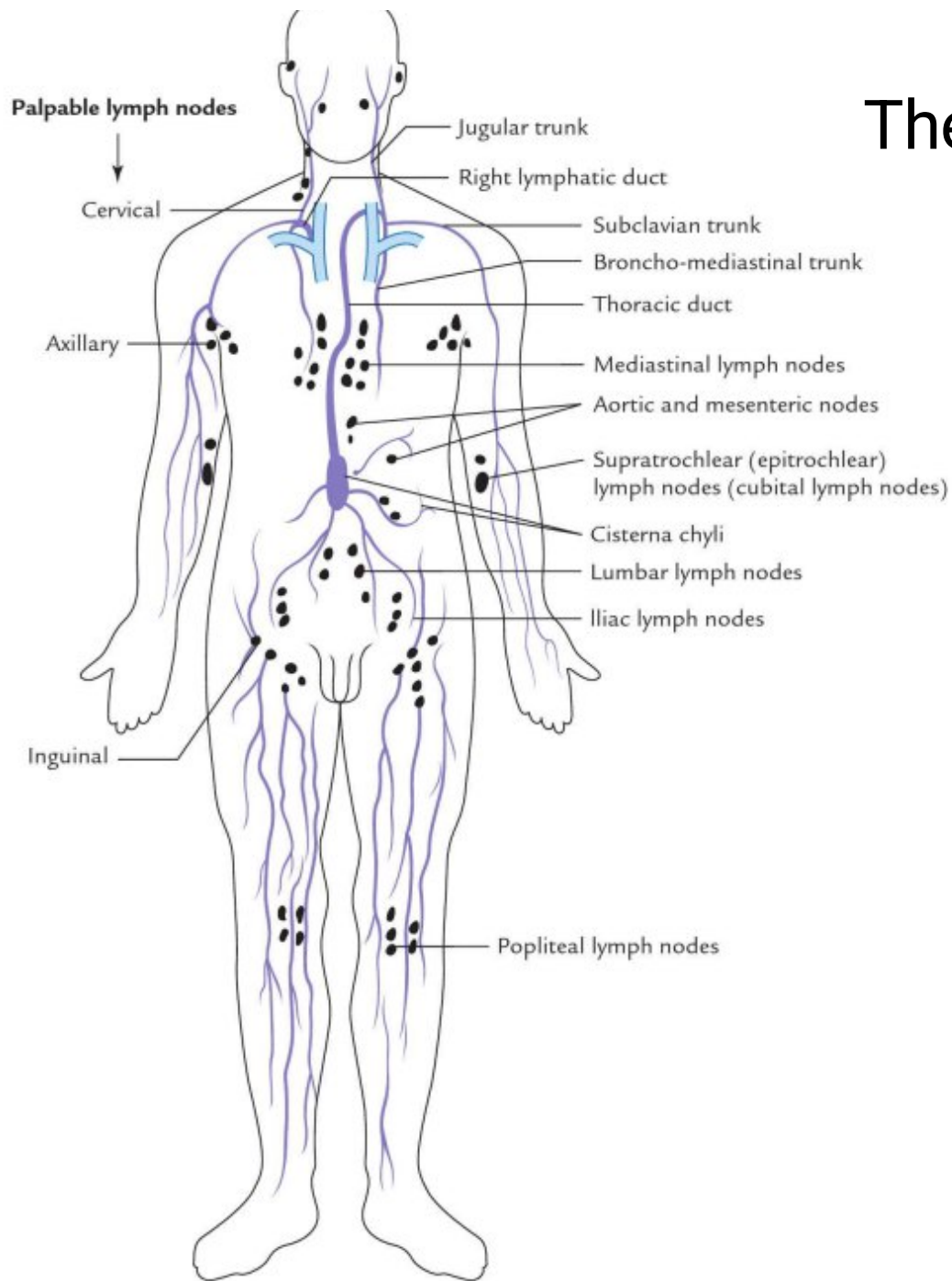




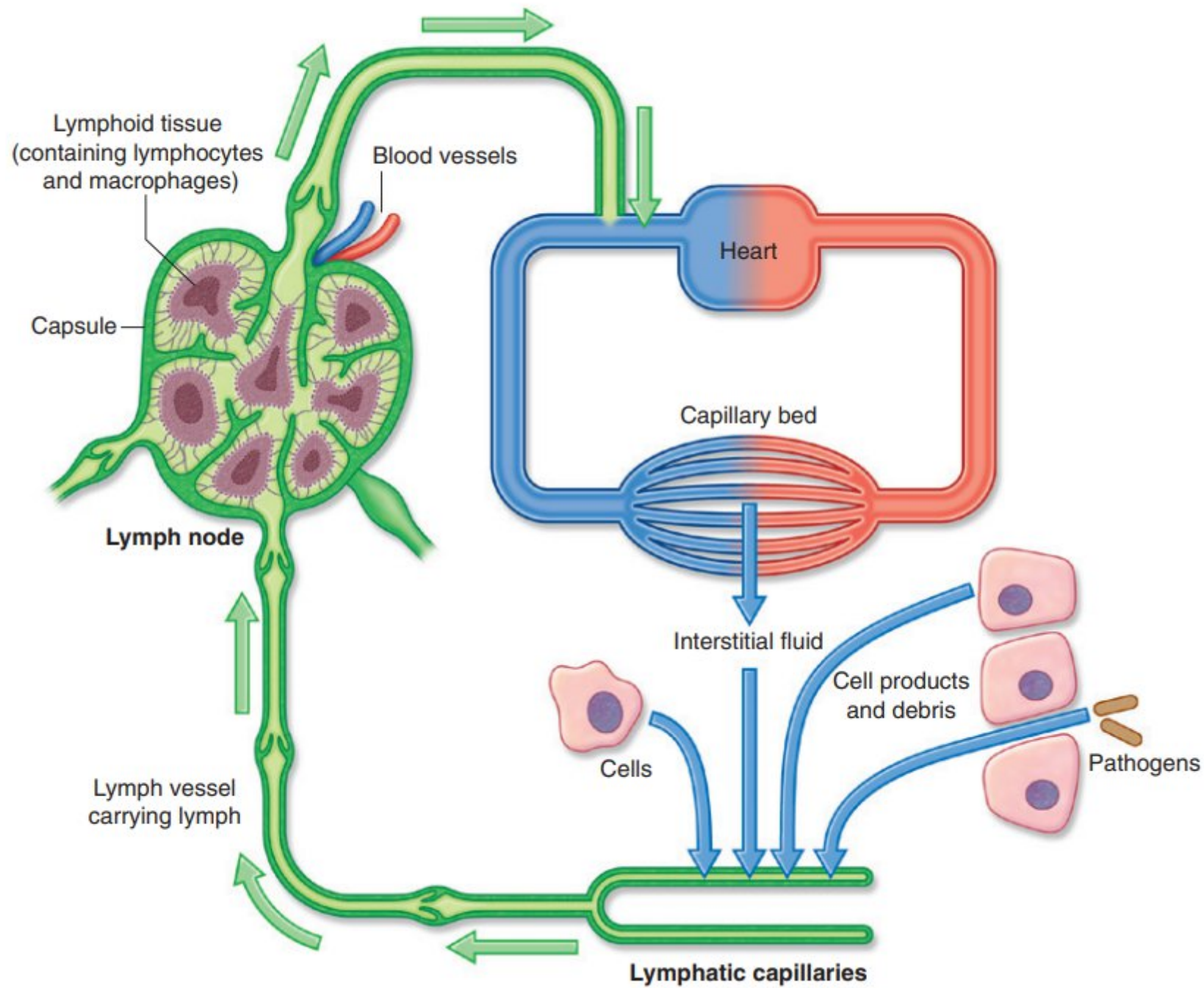


Lymphatic system

The Lymphatic system

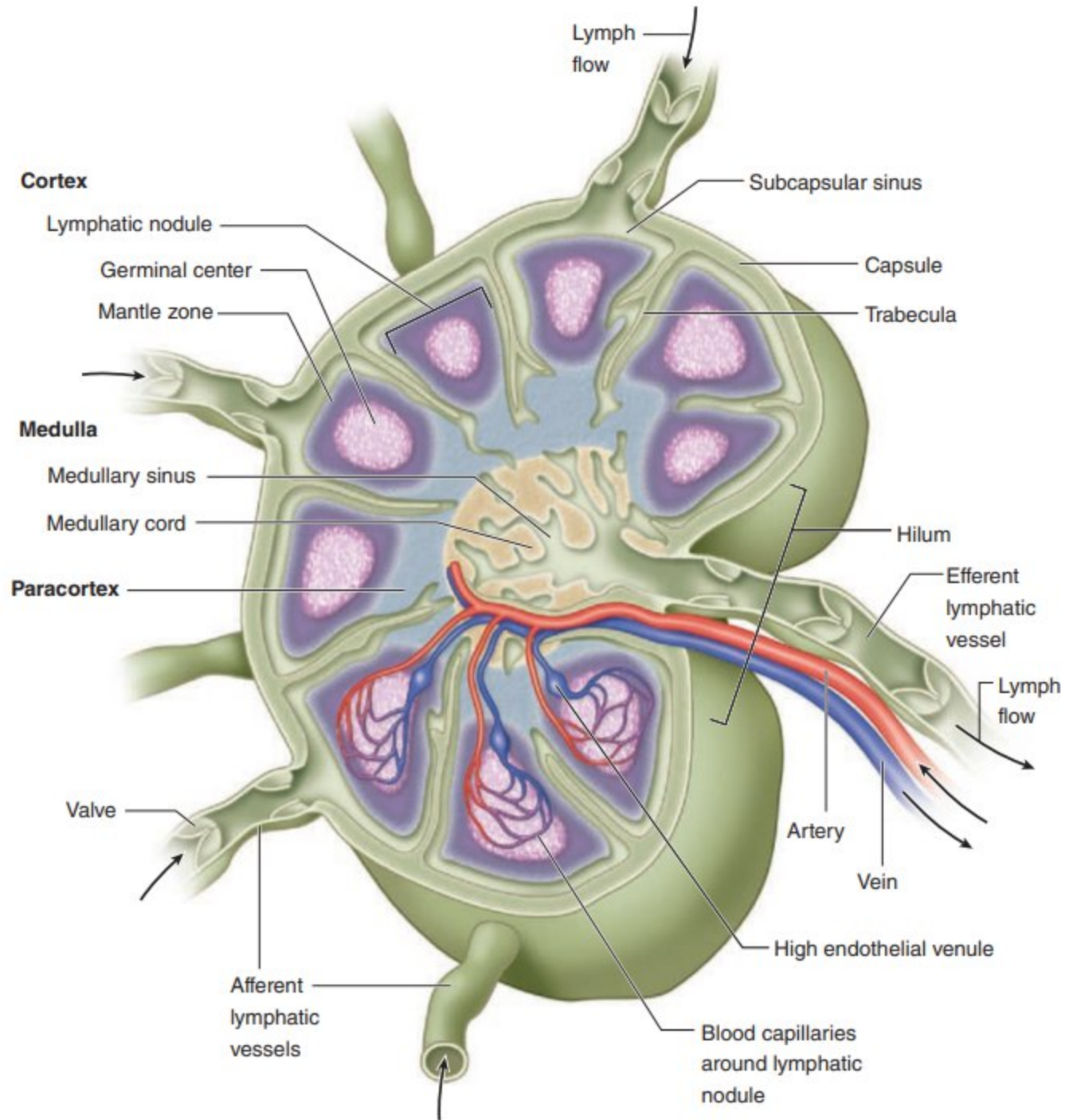


- The lymphatic system drains excess tissue fluid to venous system
- Absorbs lipids from small intestines and transport them to the blood vessels
- Provides immunological defenses against microorganisms & pathogens

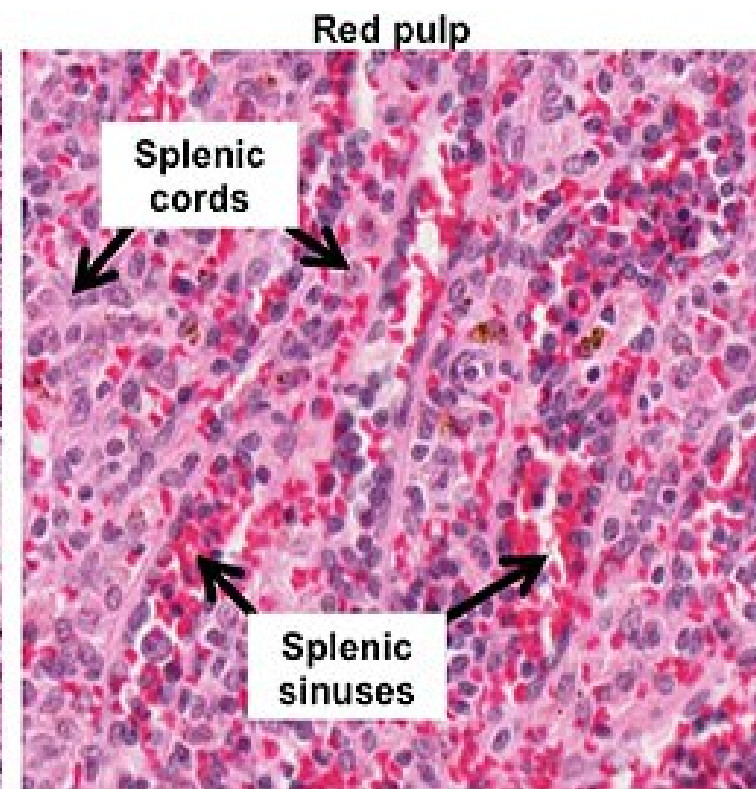
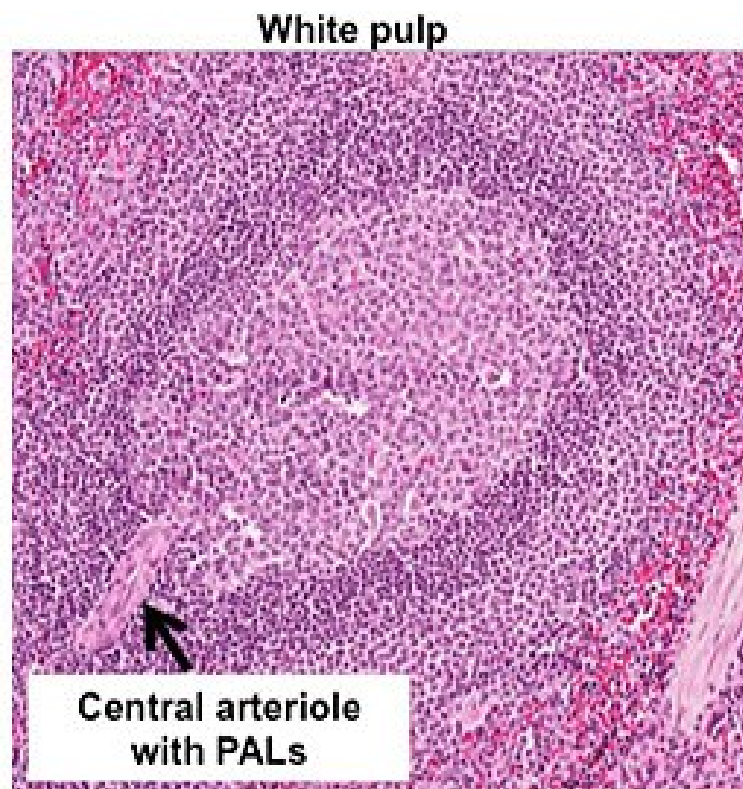
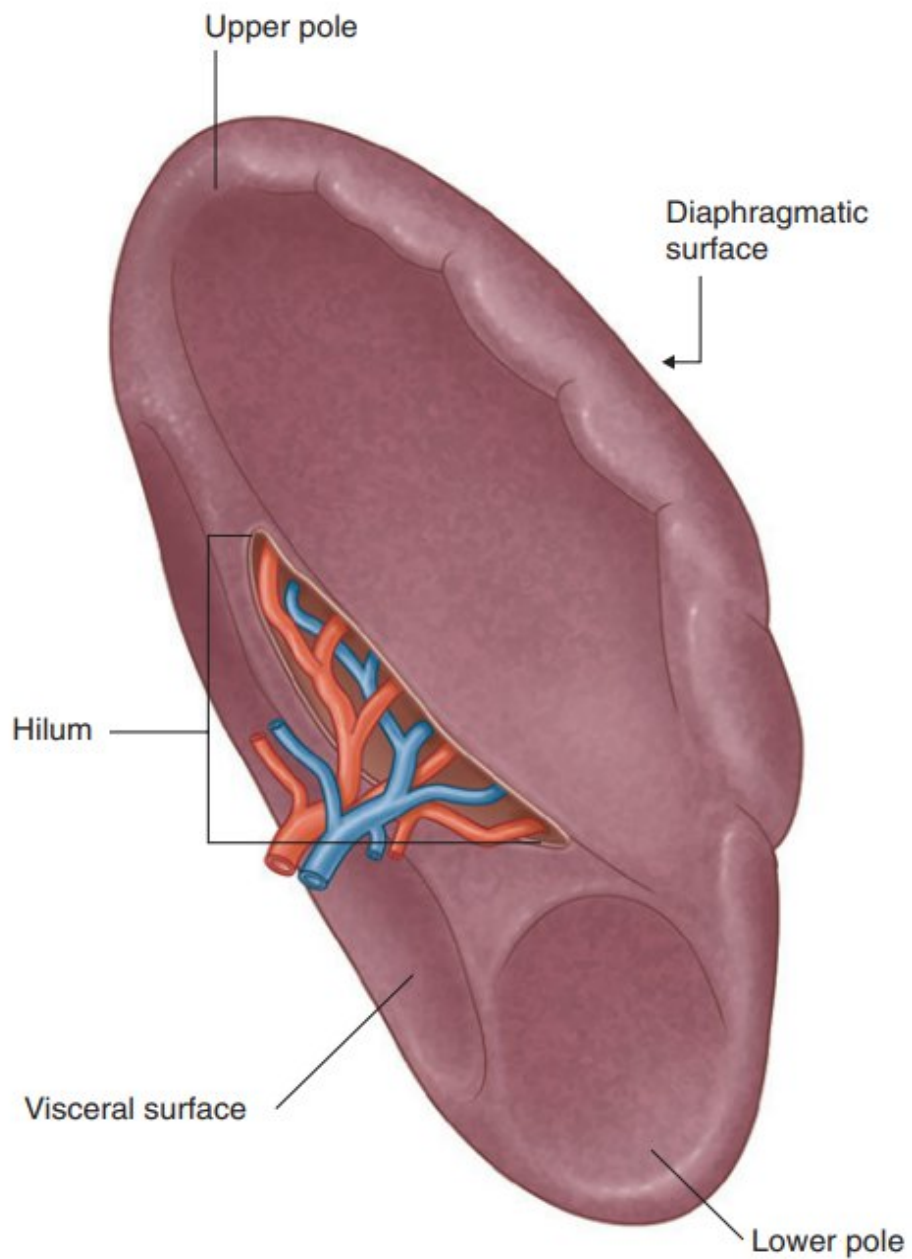


Lymph nodes

80

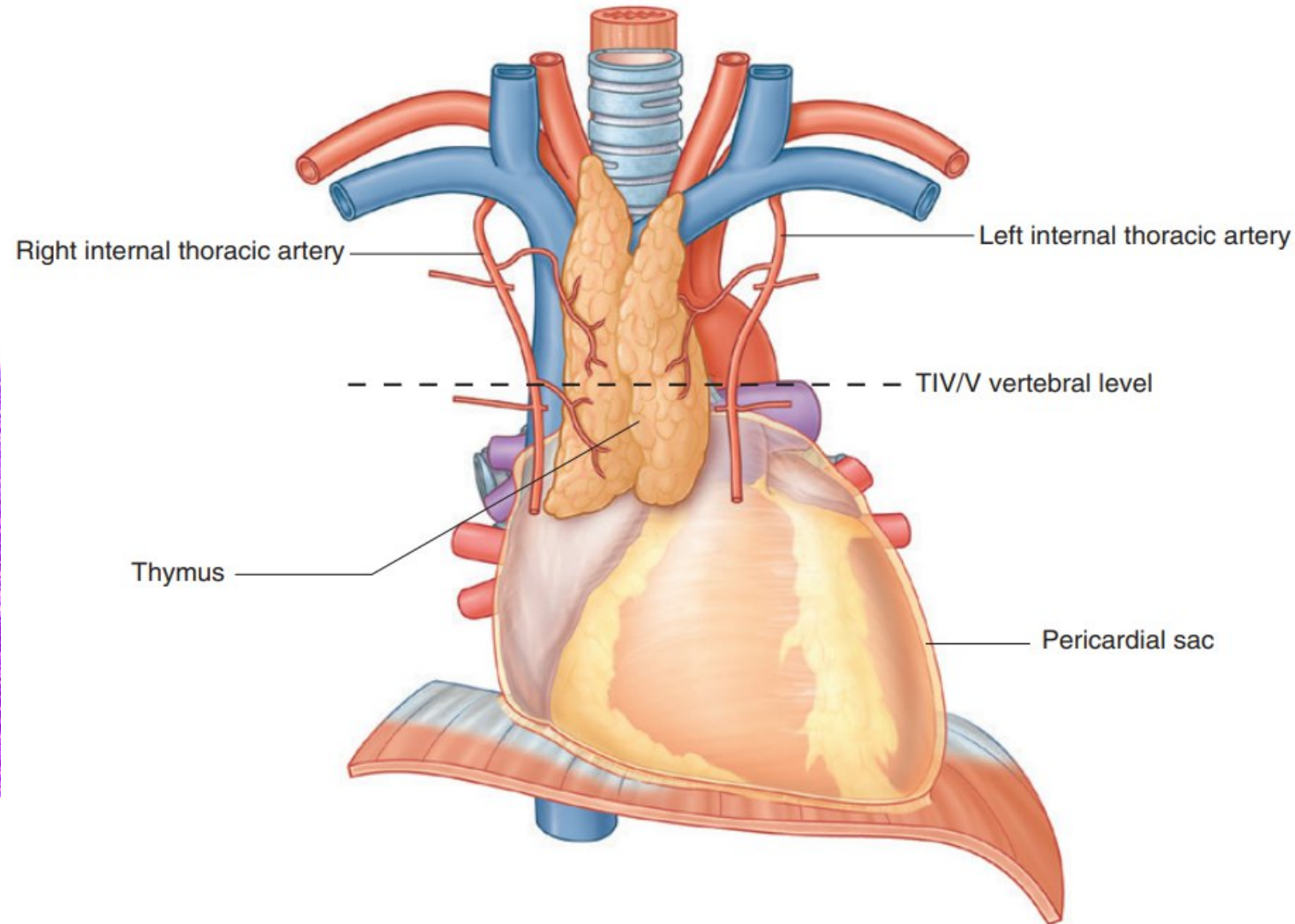
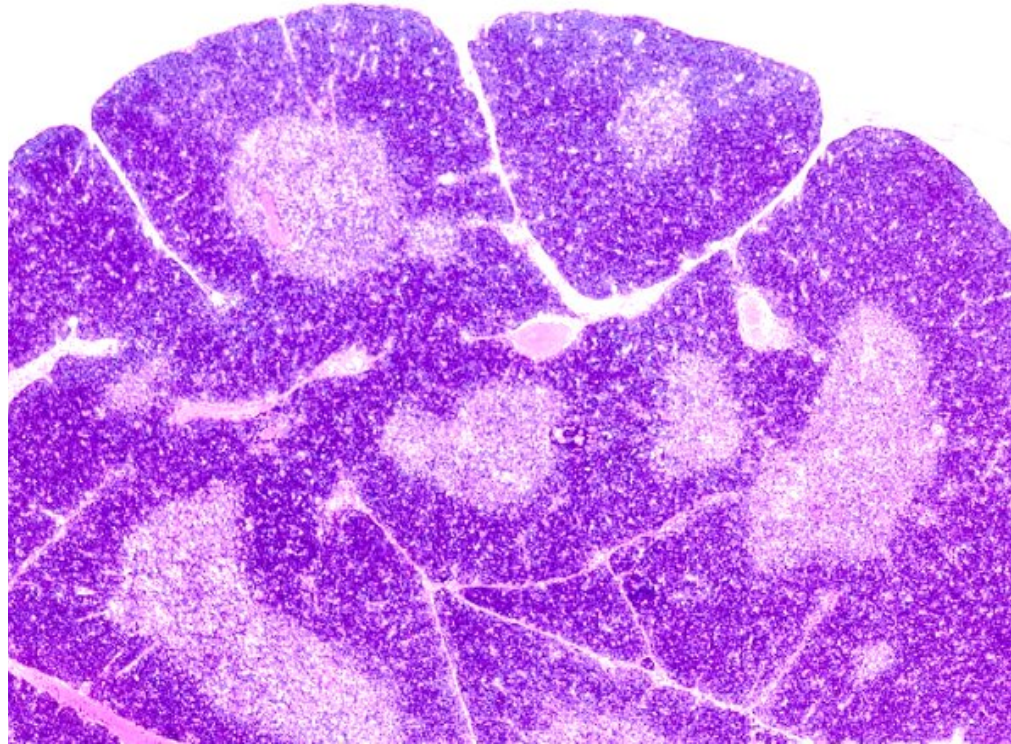


Spleen



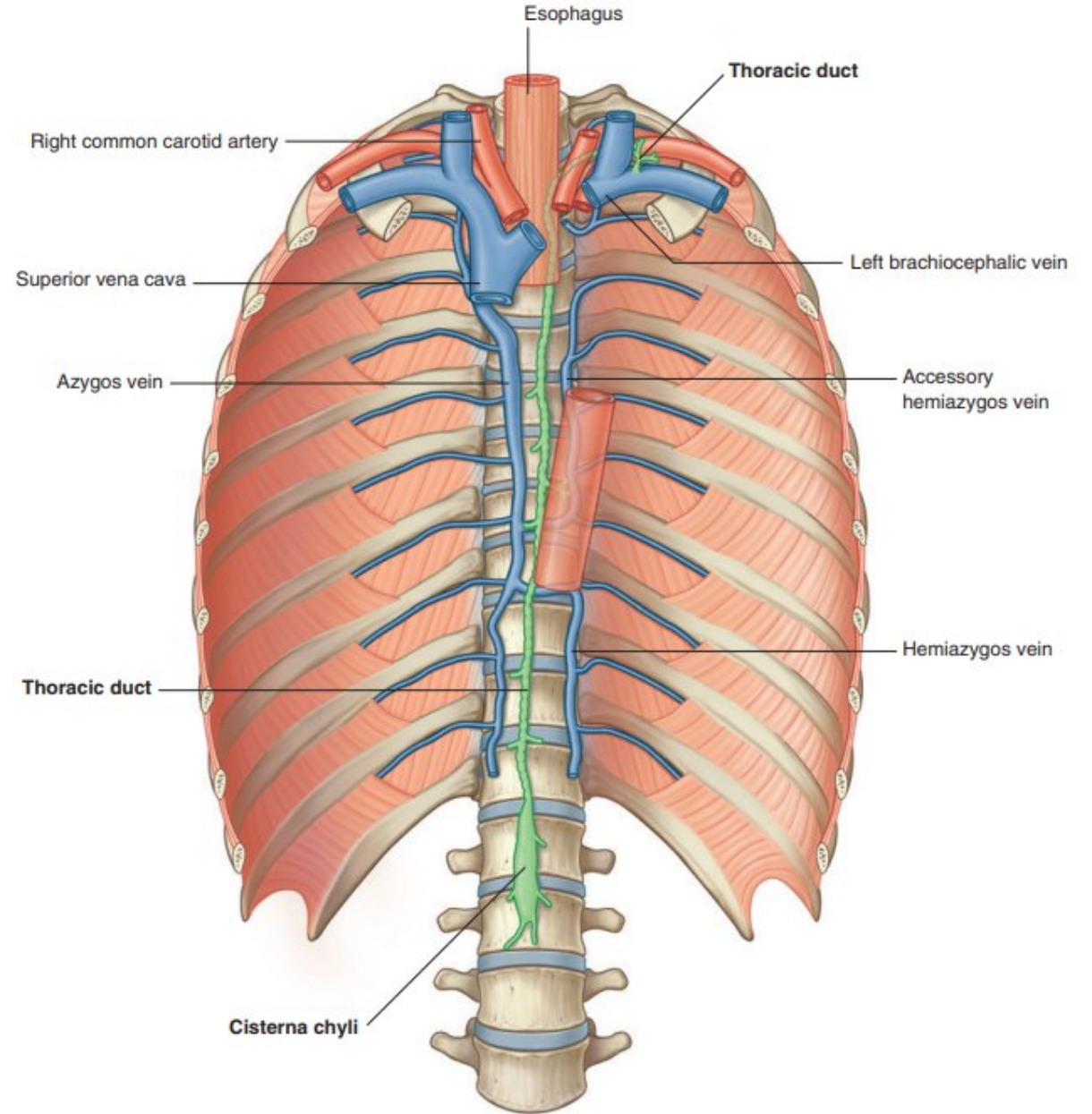
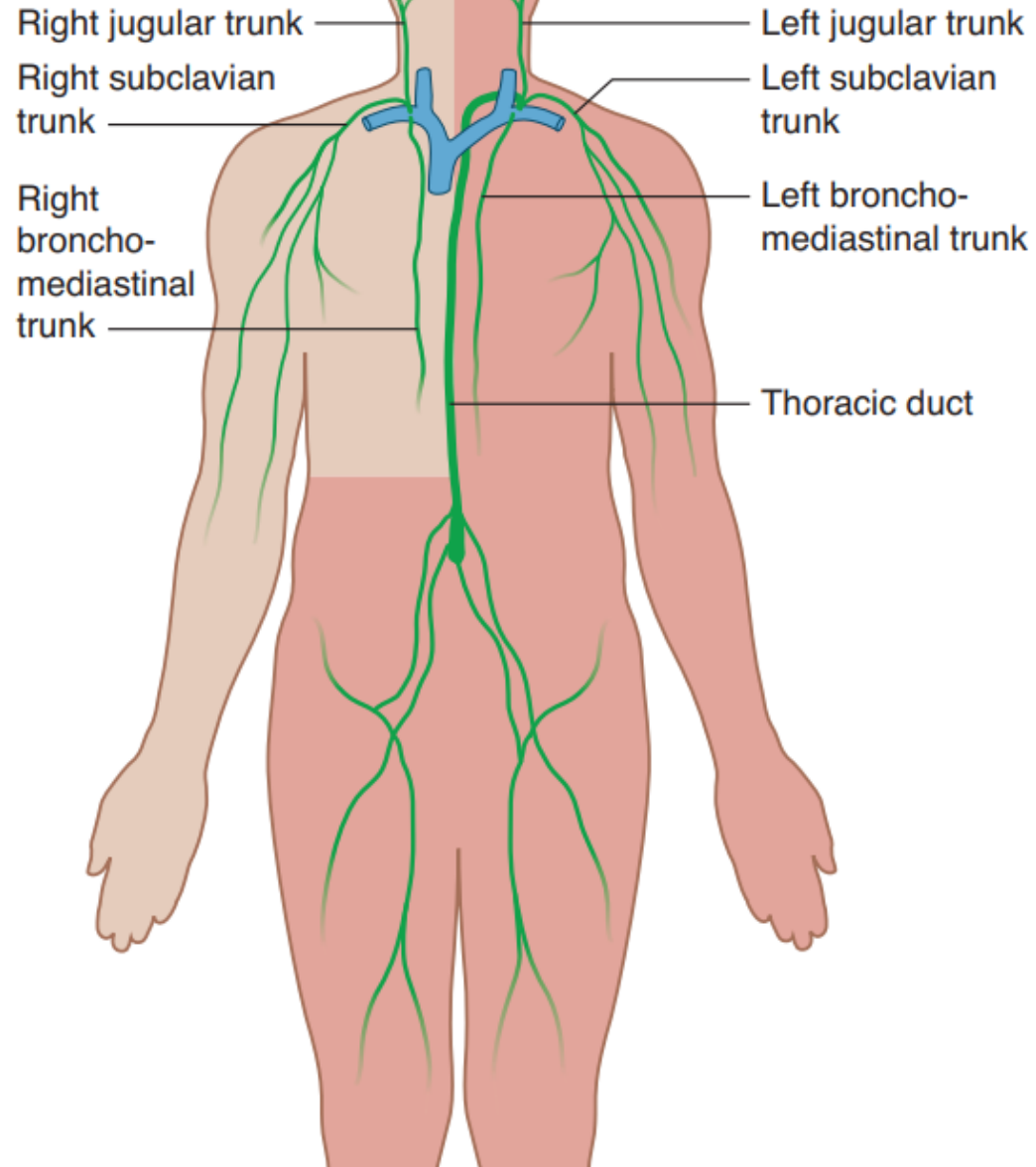
Thymus

82



Lymph vessels

83



Lymph vessels

84

