

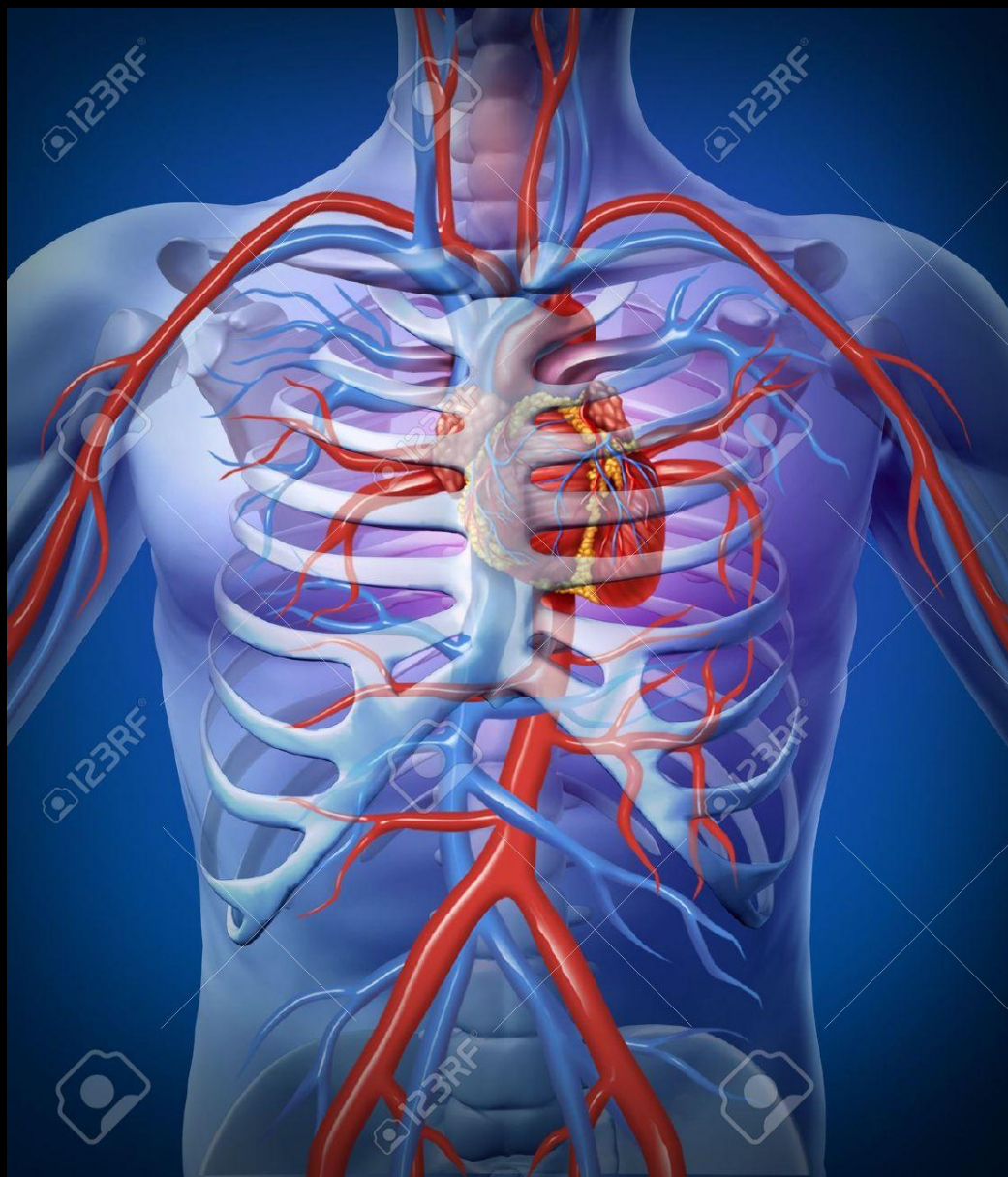


# HEART

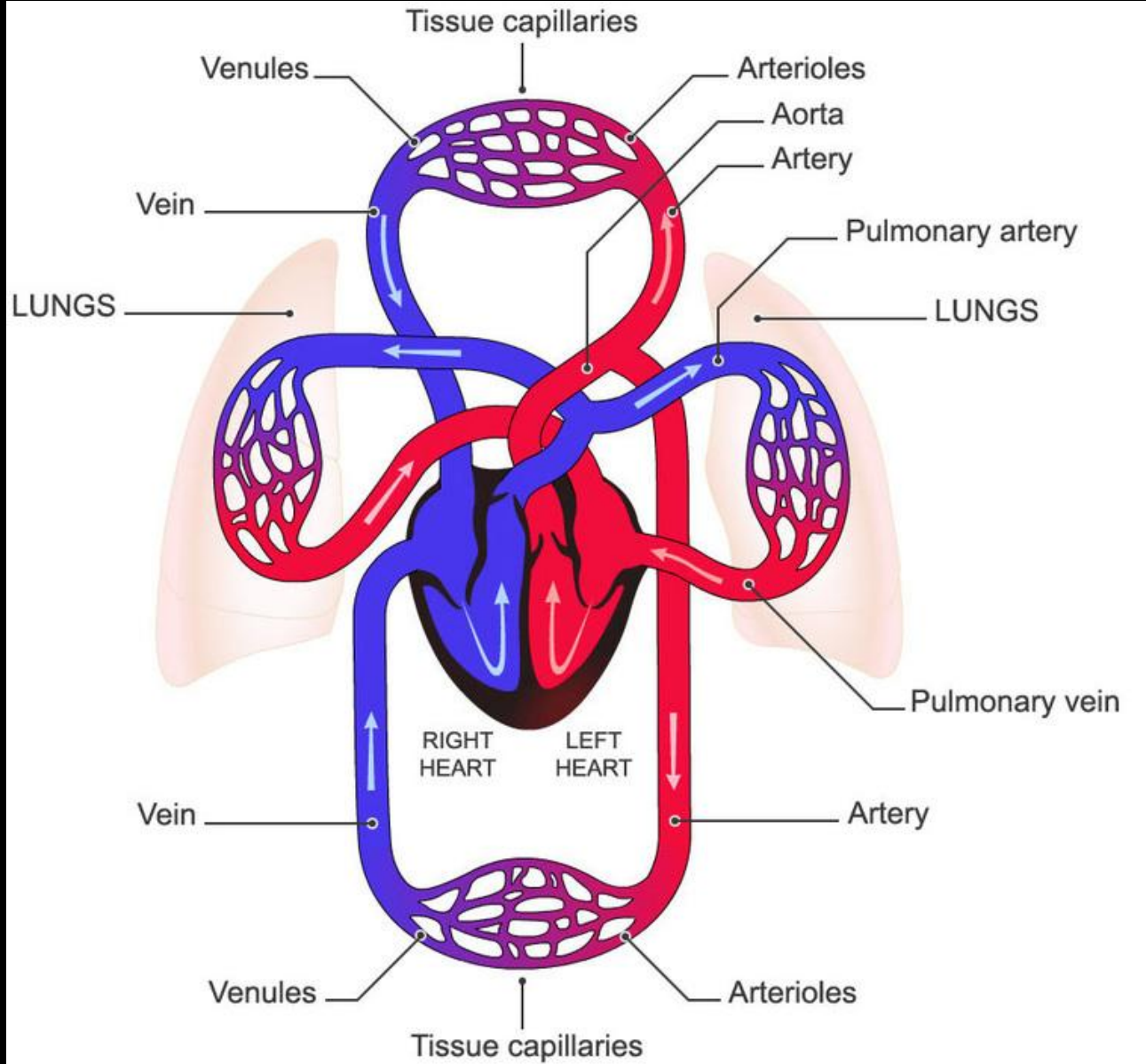
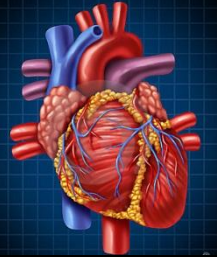
II semester

Associate Professor,

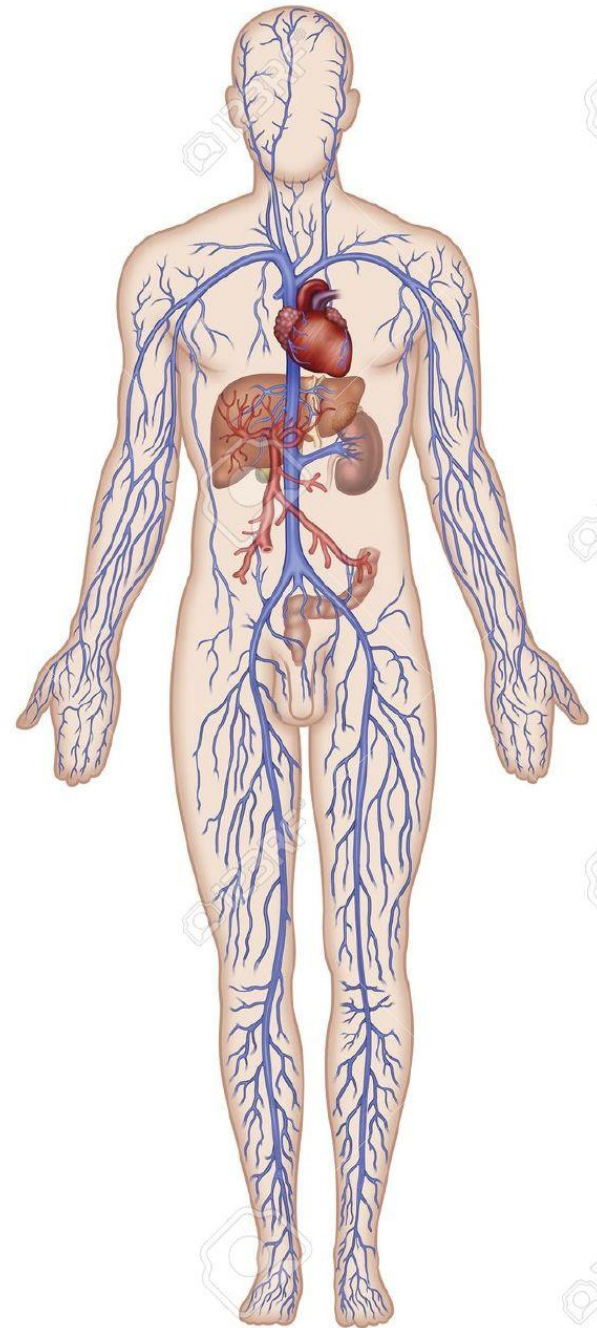
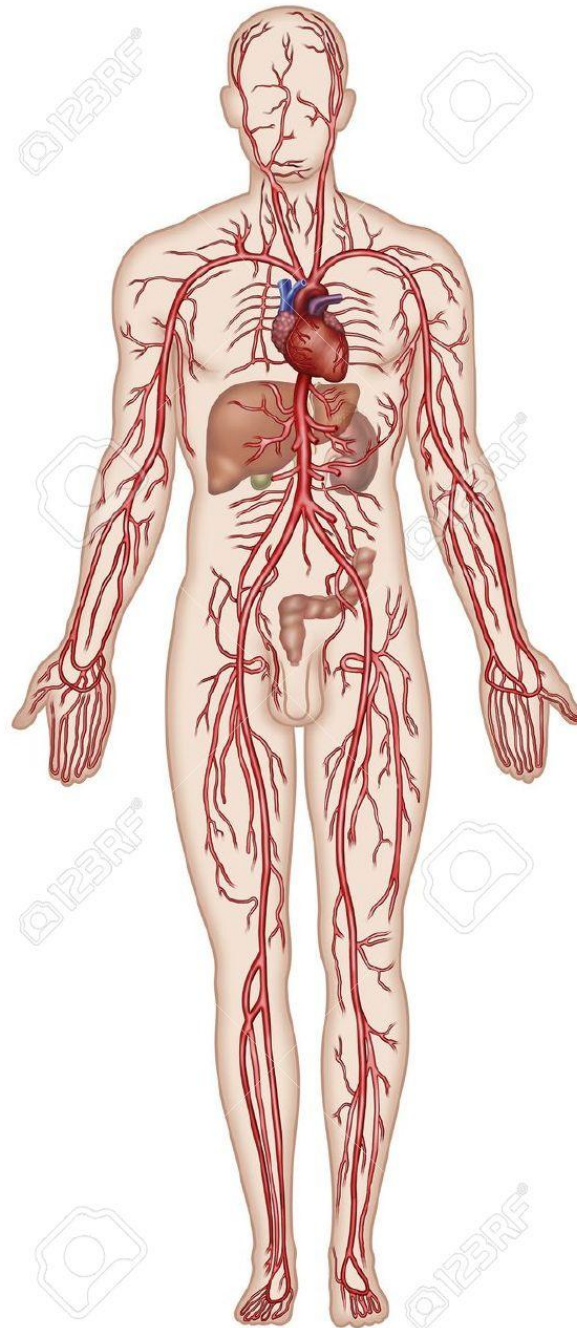
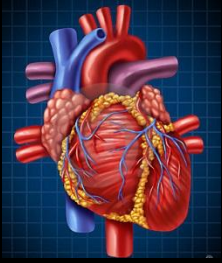
Lilia R. Shaymardanova, M.D., Ph.D.



# Круги крово- обращения



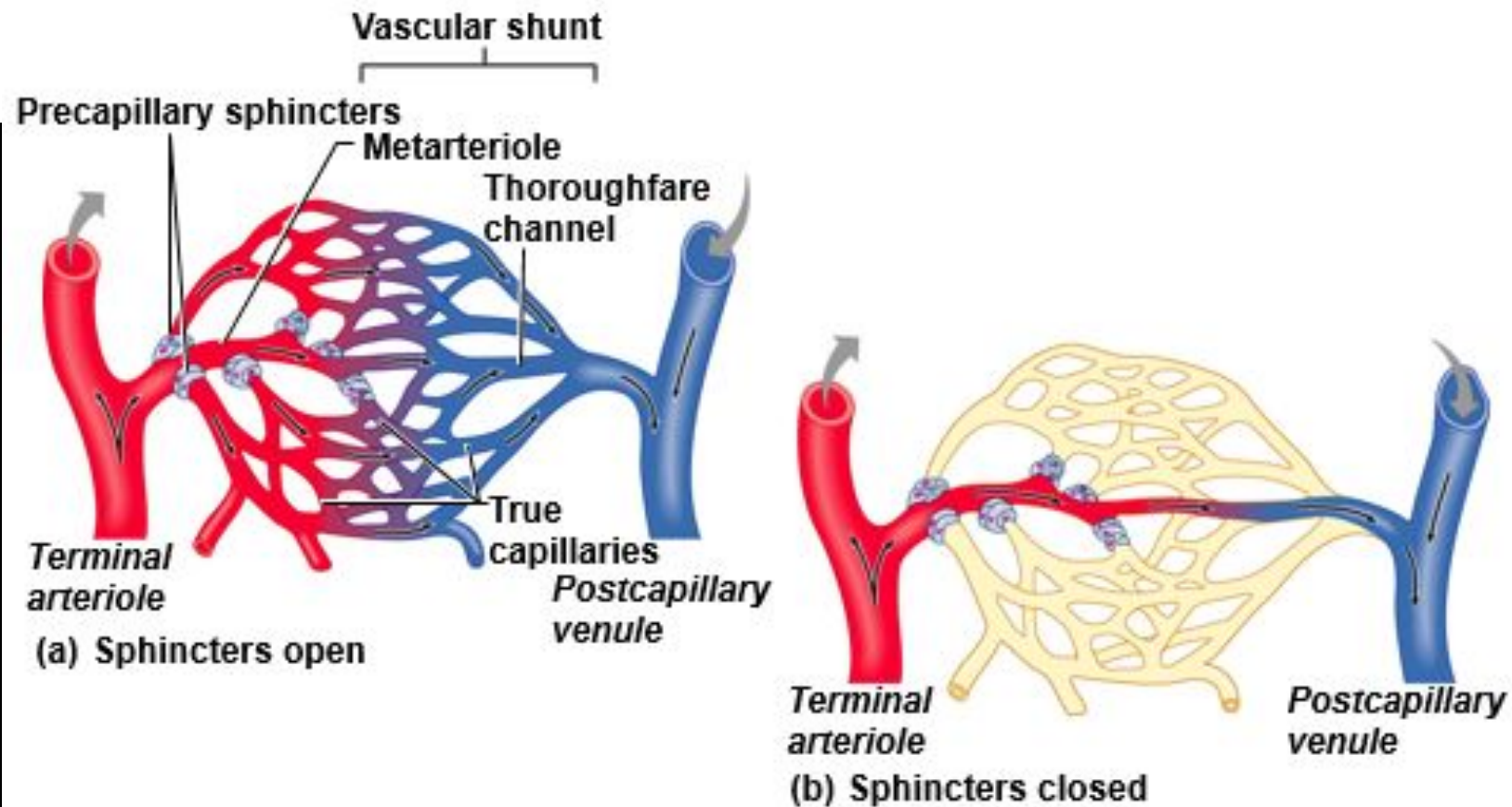


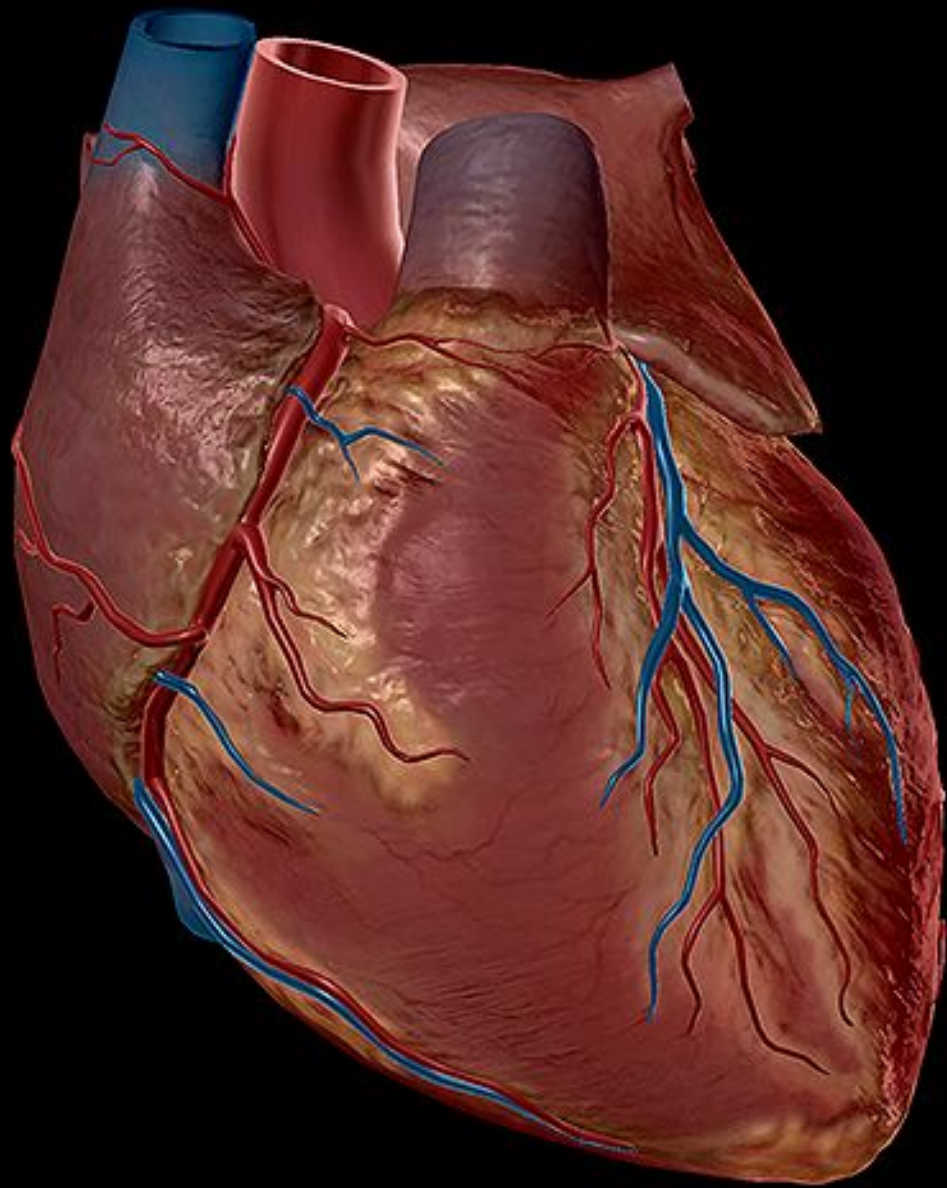


MICROCIRCULATORY BED COMPRISES SEVEN STRUCTURES

- ❖ ARTERIOLES
- ❖ PRECAPILLARY ARTERIOLES
- ❖ CAPILLARIES
- ❖ POSTCAPILLARY VENULES
- ❖ VENULES
- ❖ PRECAPILLARY SPHINCTERS
- ❖ AV SHUNT

# Микроциркуляторное русло

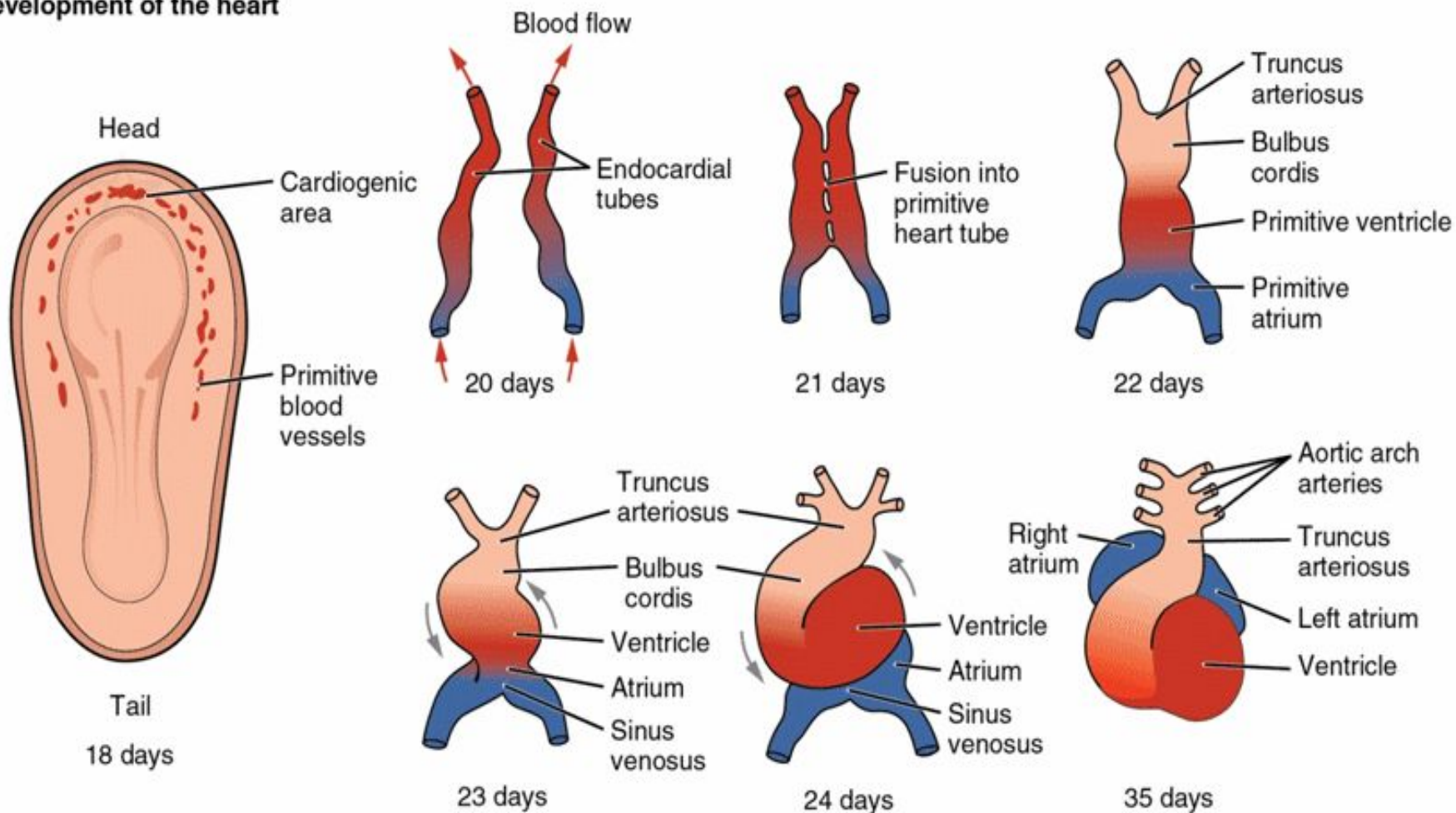




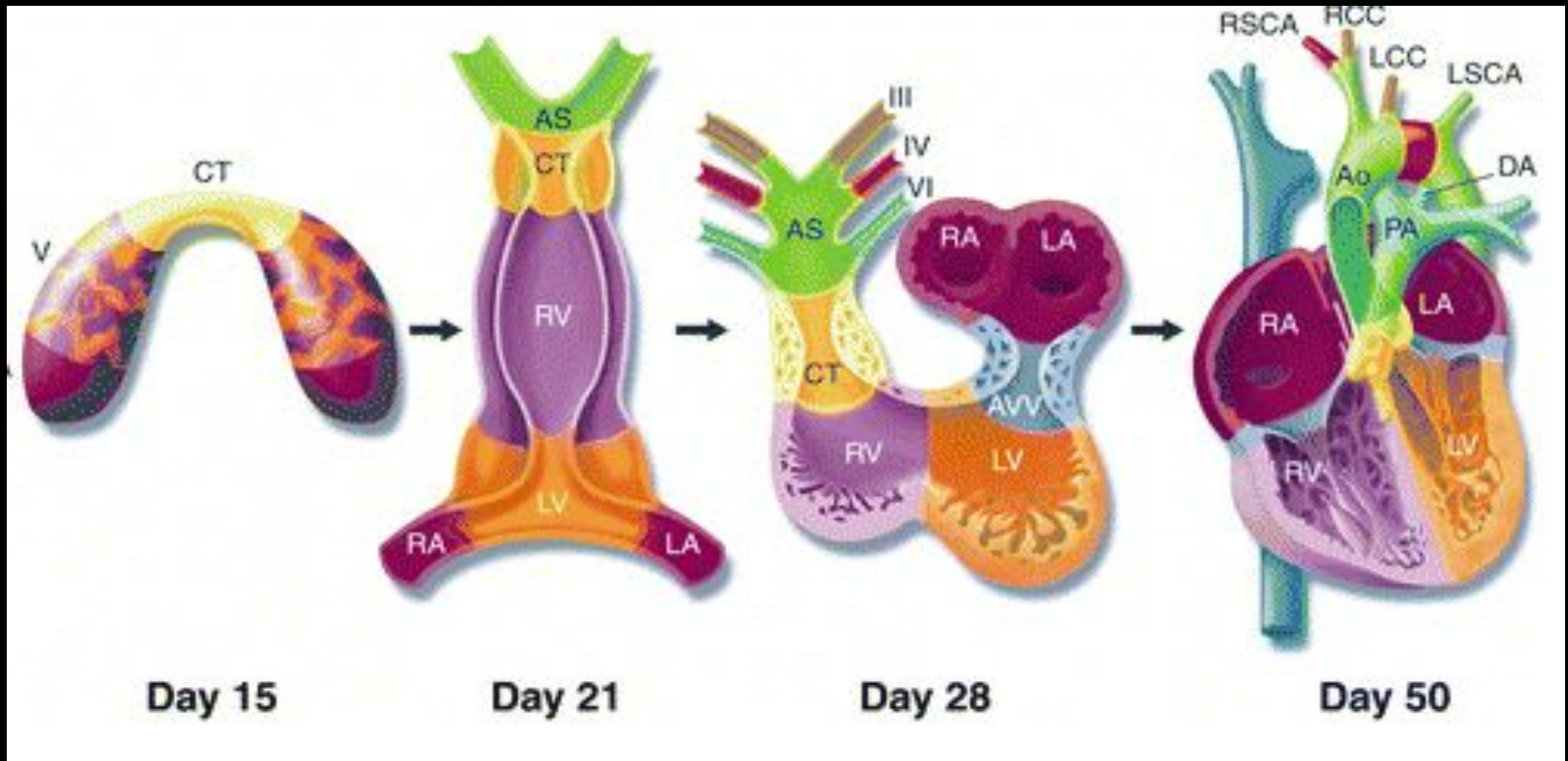
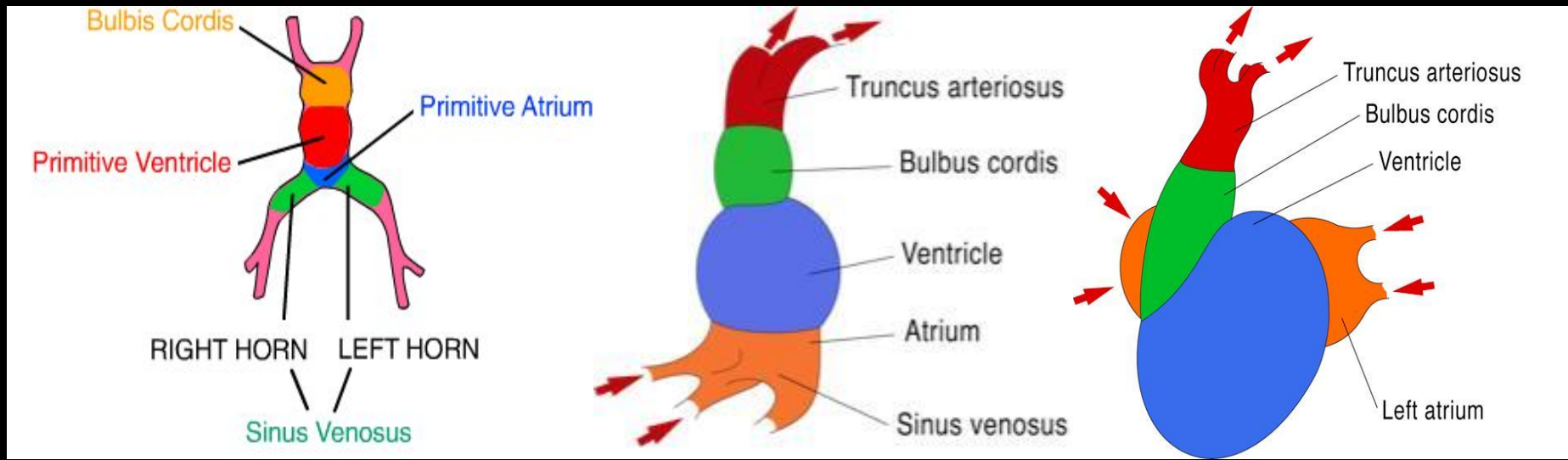


# развитие

## Development of the heart

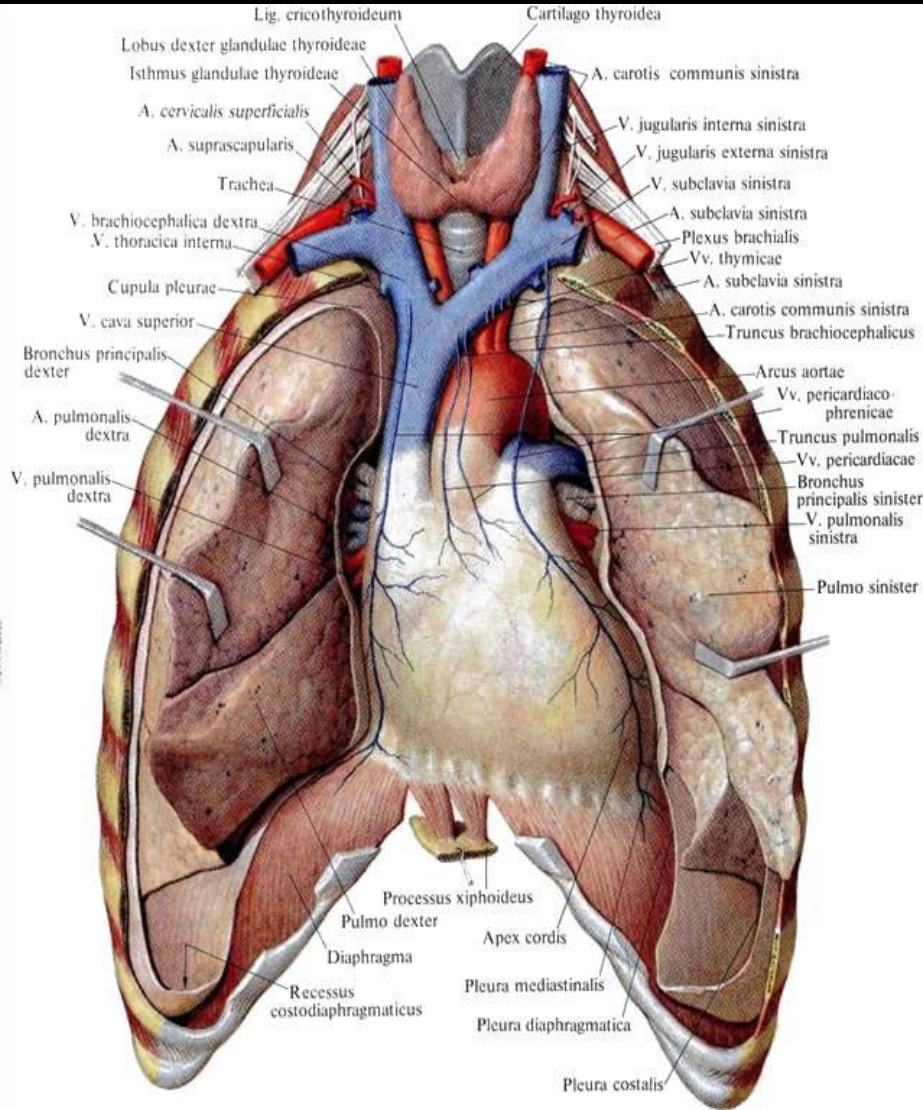
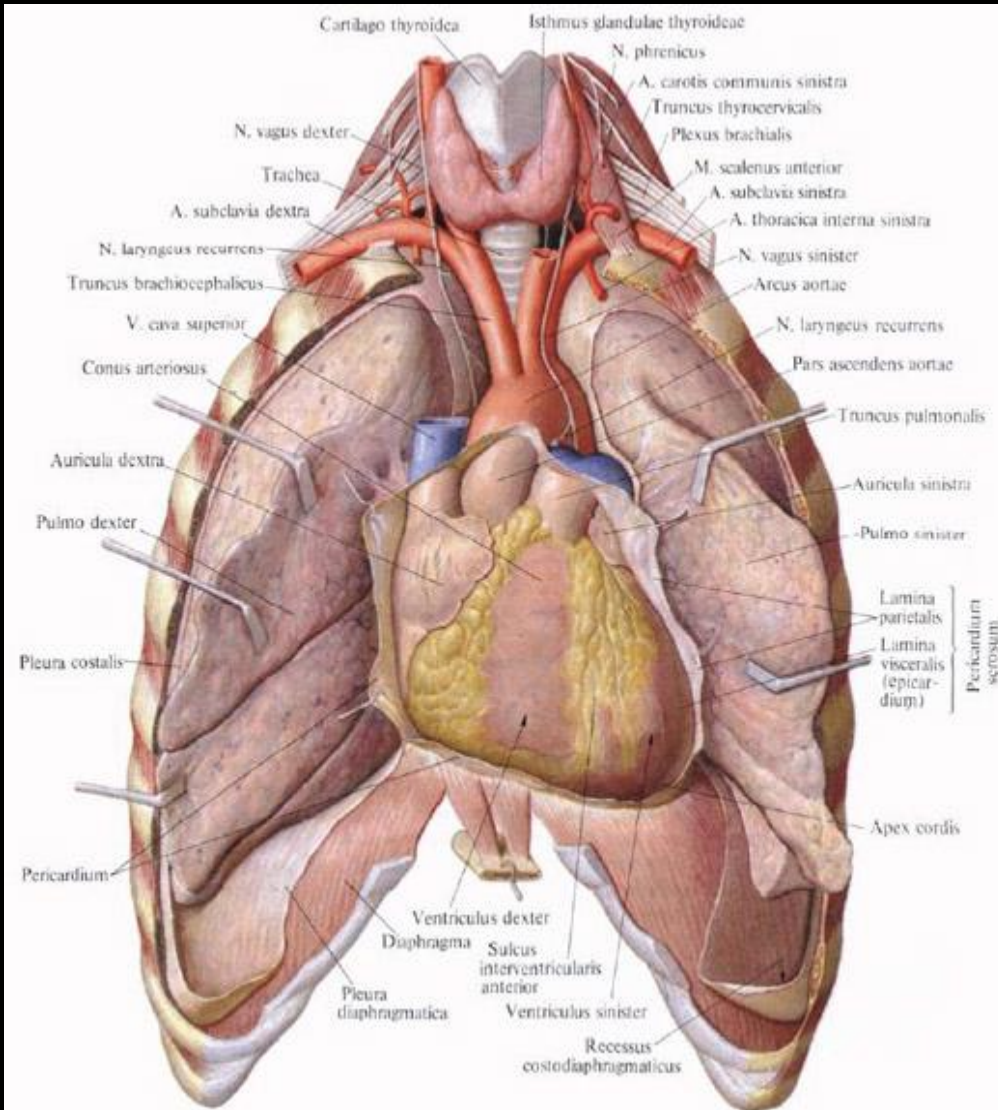


★ **Cardiogenic area begins right in the middle of head pole**

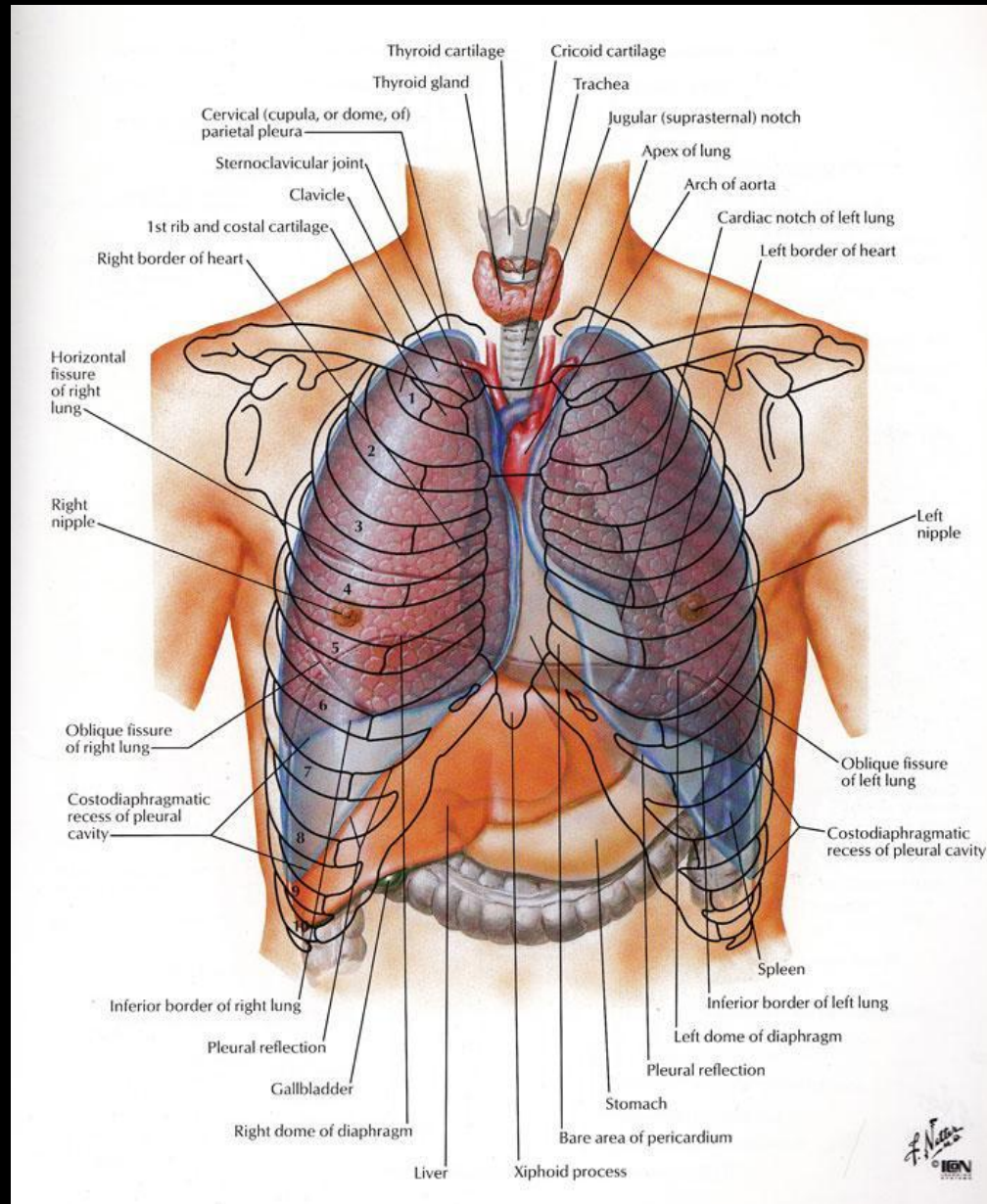




# Топография - голотопия

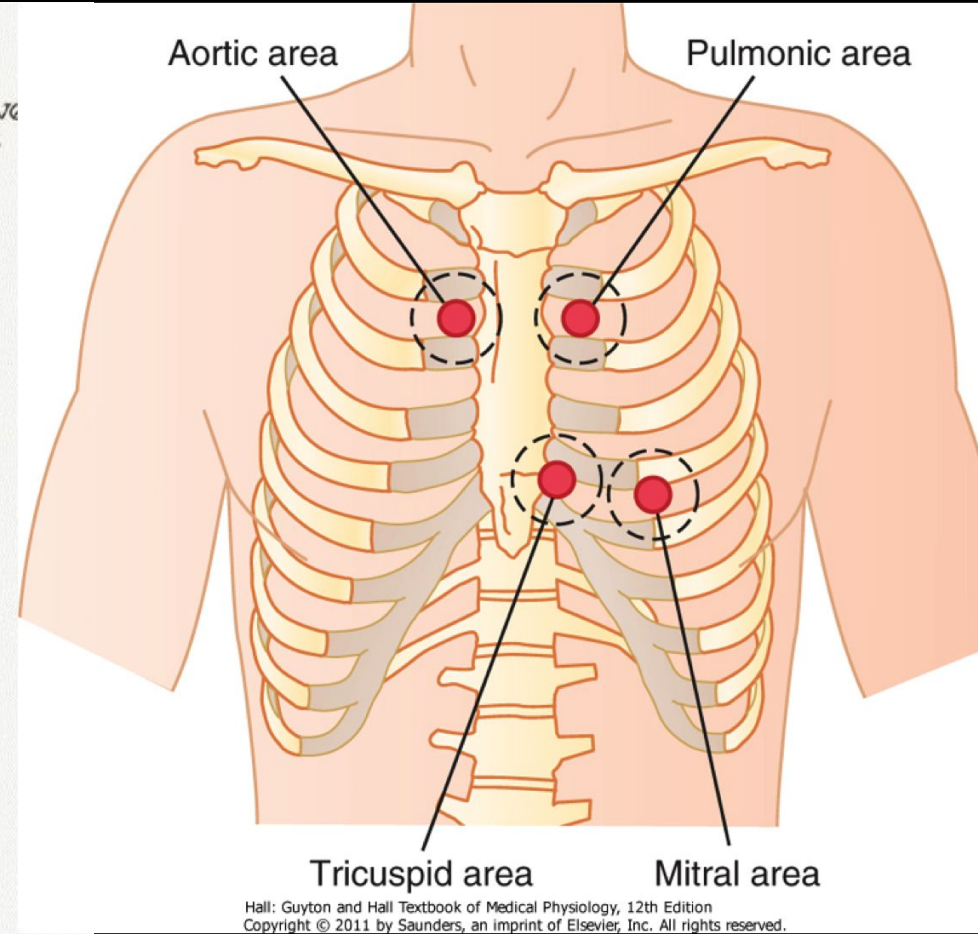
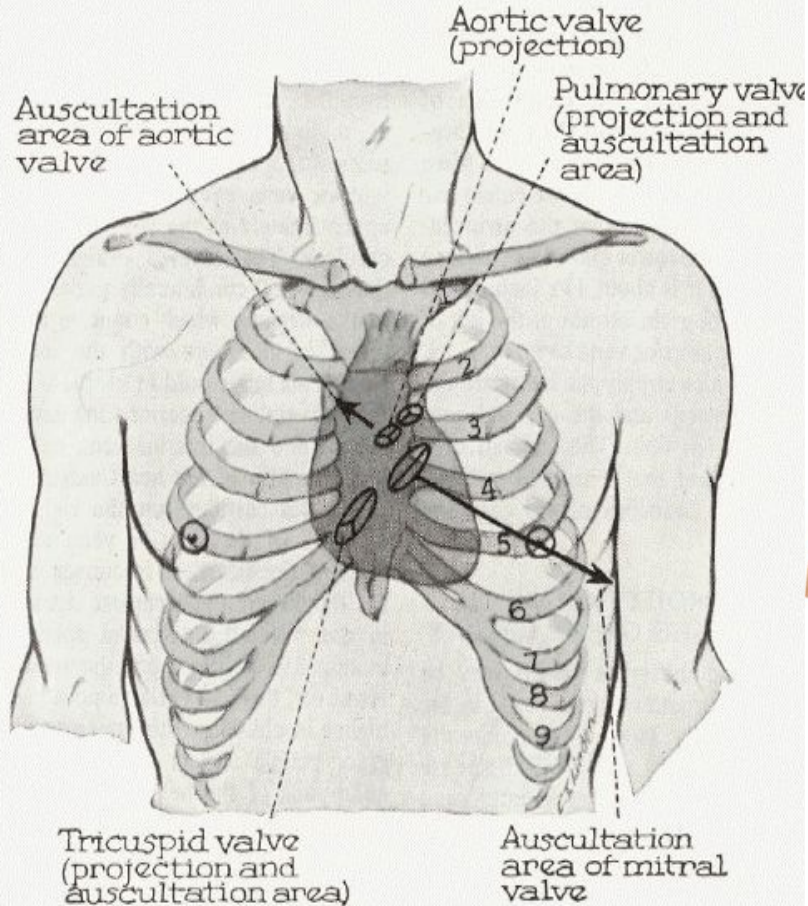


# Топография - синтопия

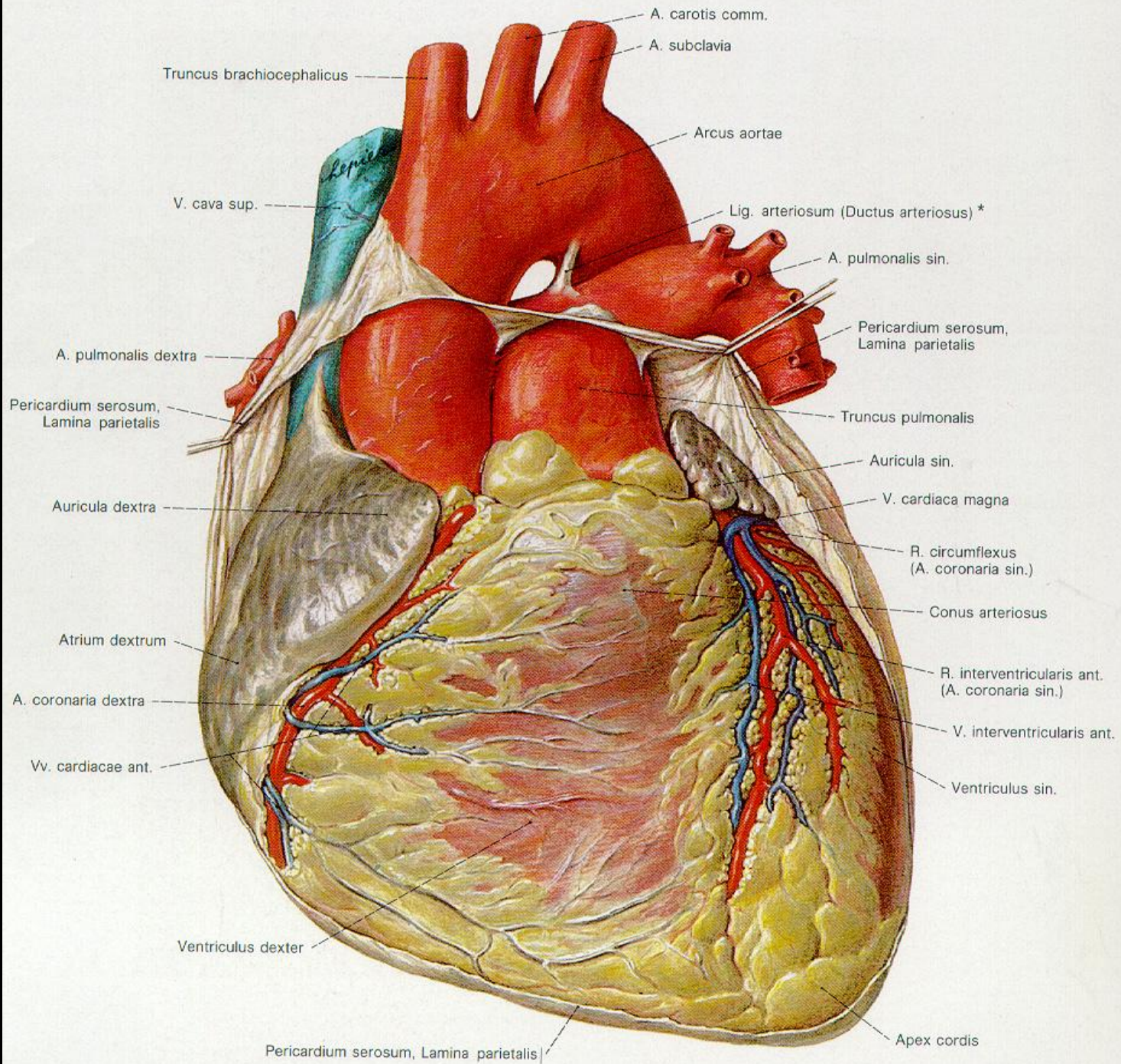




# Топография - скелетотопия



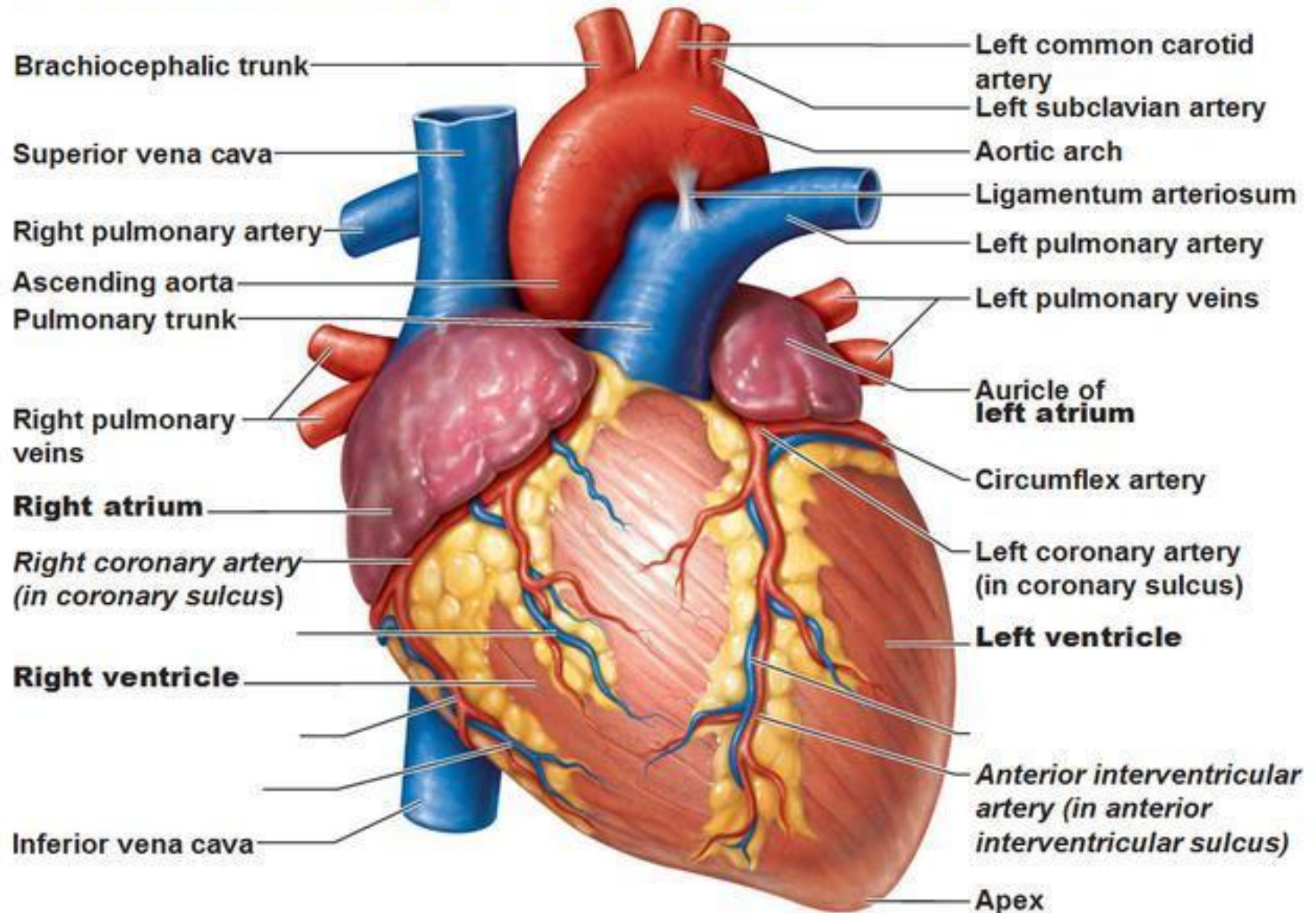




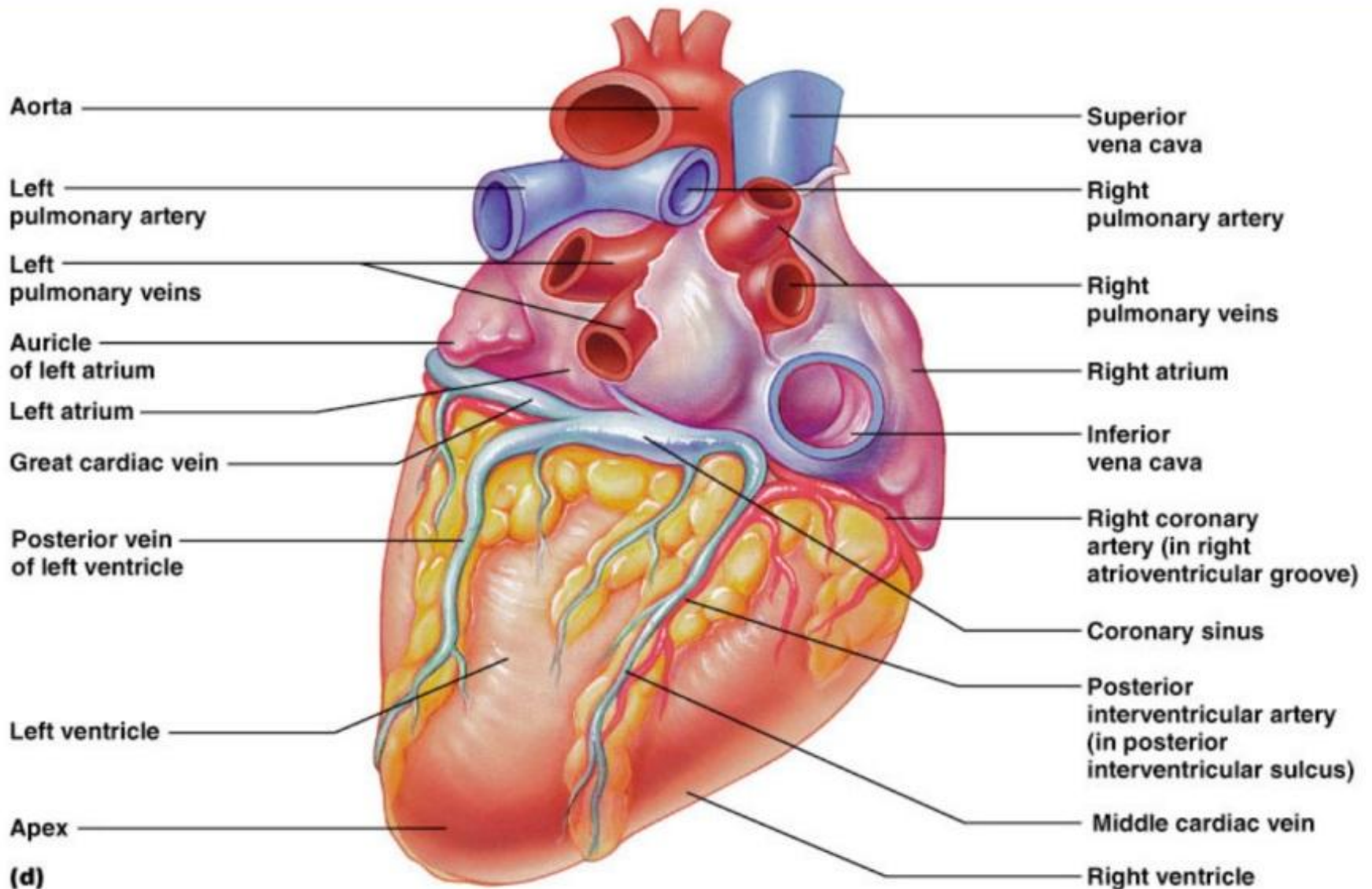


# Gross Anatomy of the Heart

Anterior view

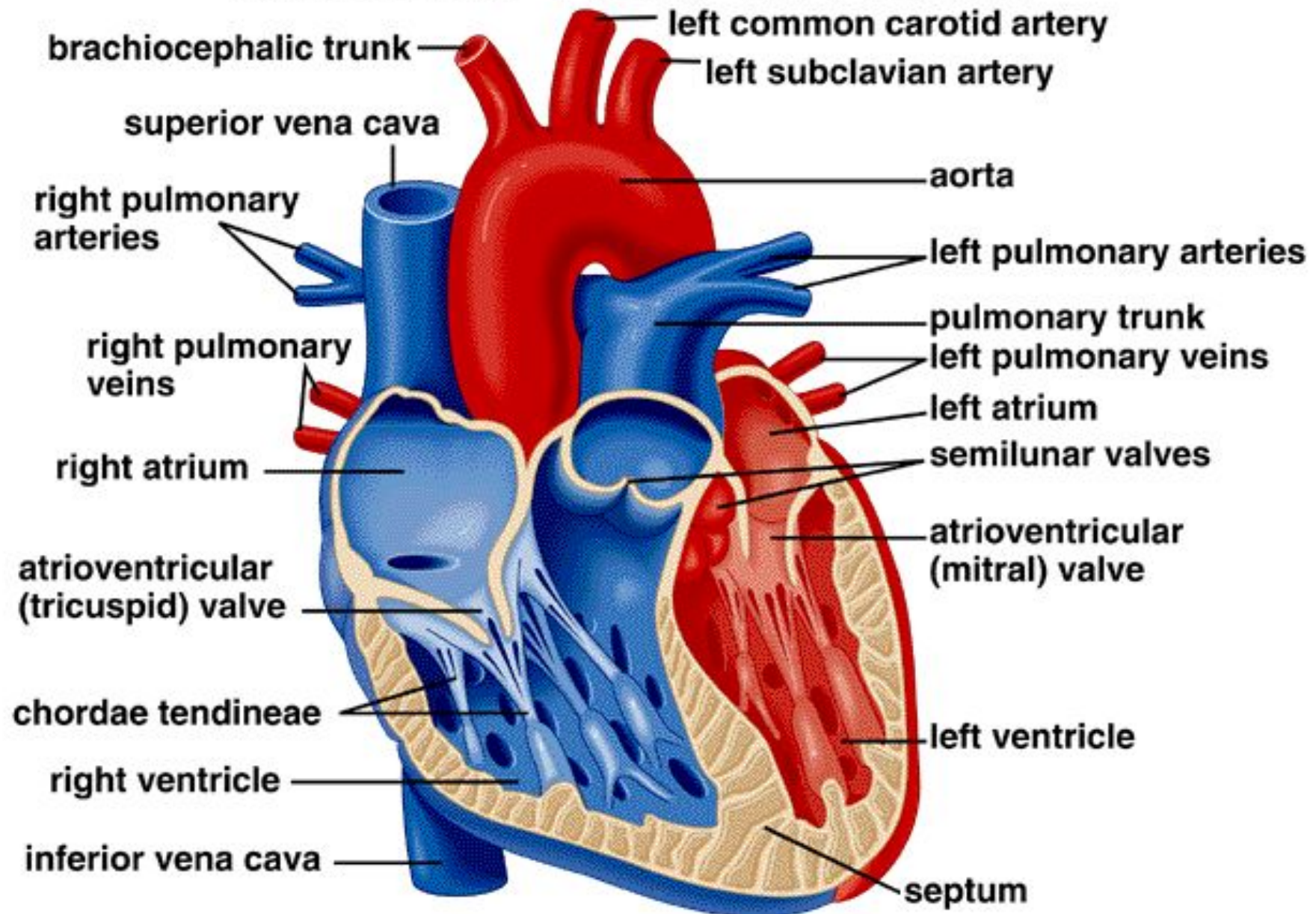


# External Heart: Posterior View

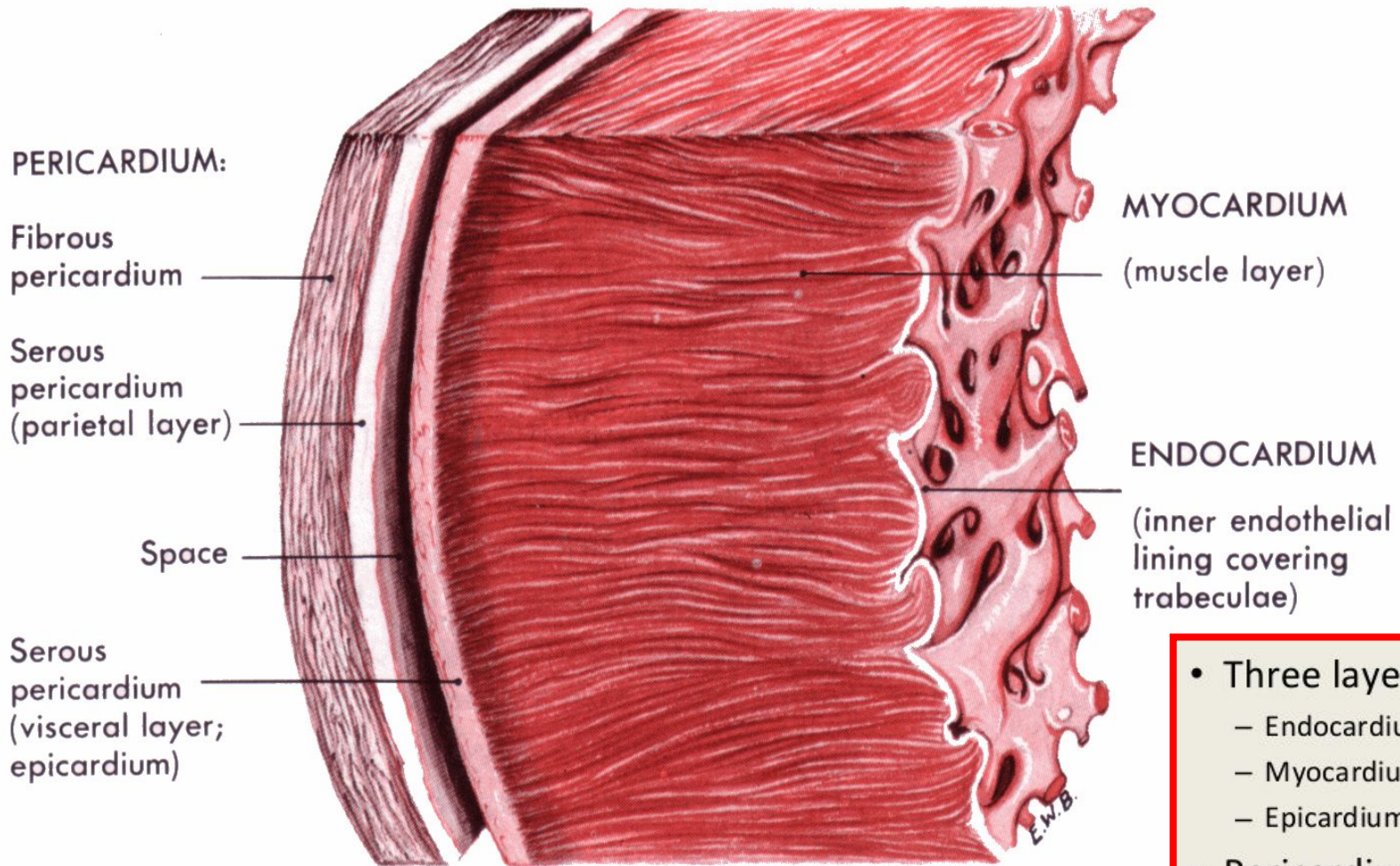




# Internal View of Heart



# Оболочки сердца

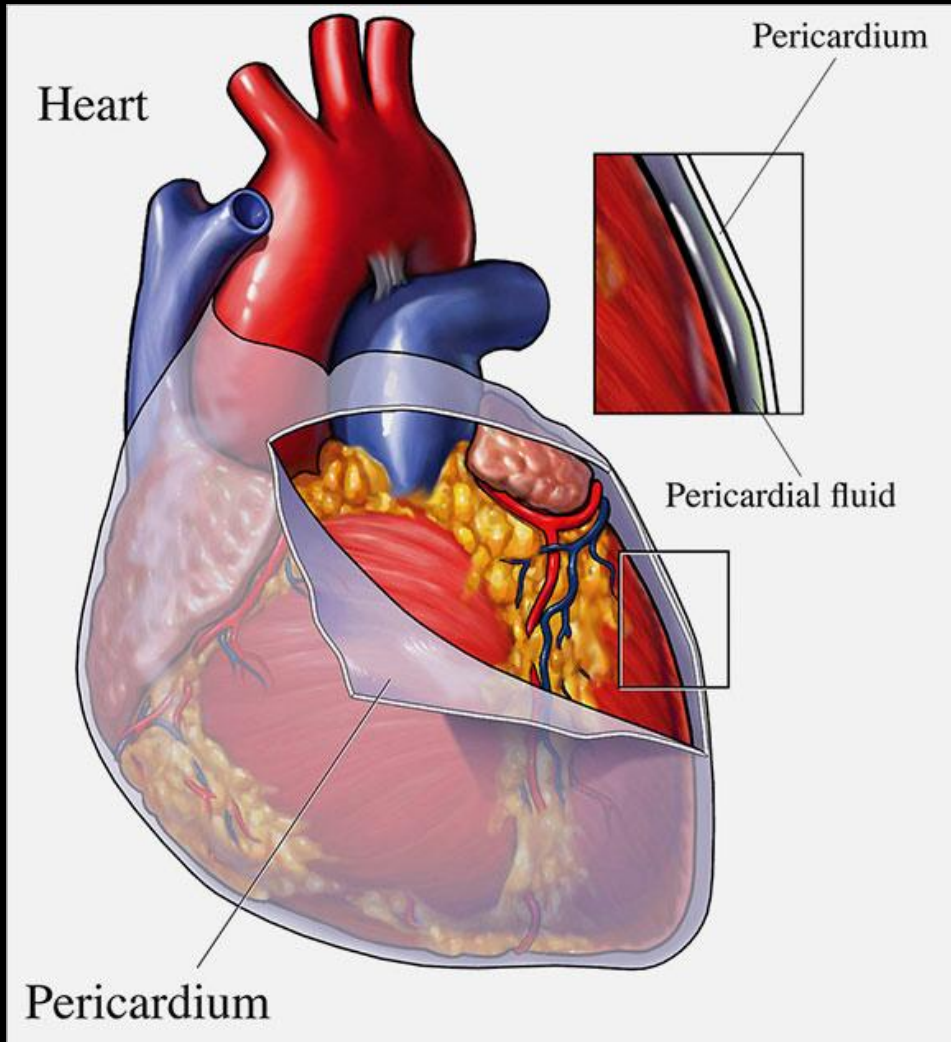


Section of the heart wall showing the components of the outer pericardium (heart sac), muscle layer (myocardium), and inner lining (endocardium).

- Three layers of heart
  - Endocardium
  - Myocardium
  - Epicardium
- Pericardium
- Pericardial space, with 10 to 30 mL fluid

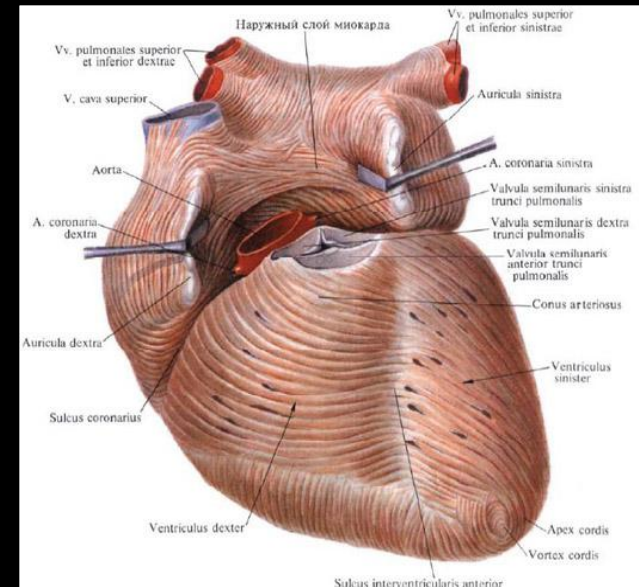
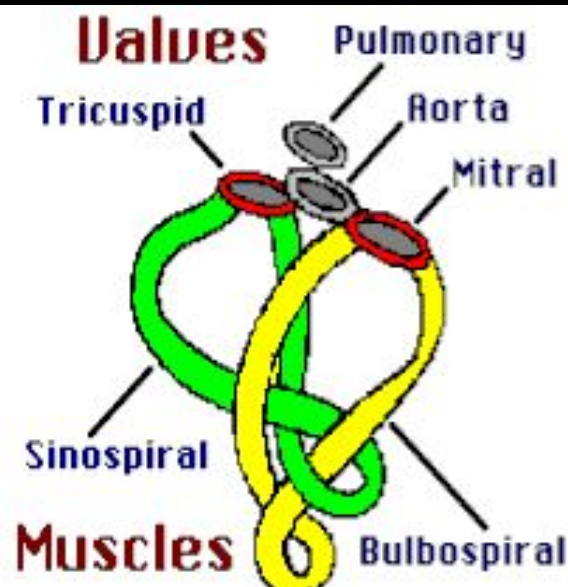
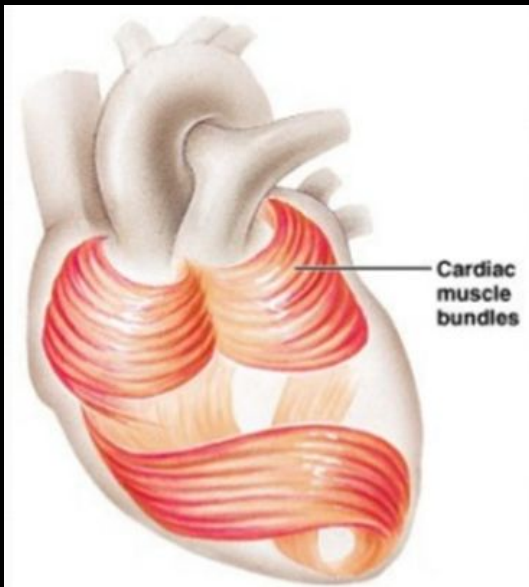
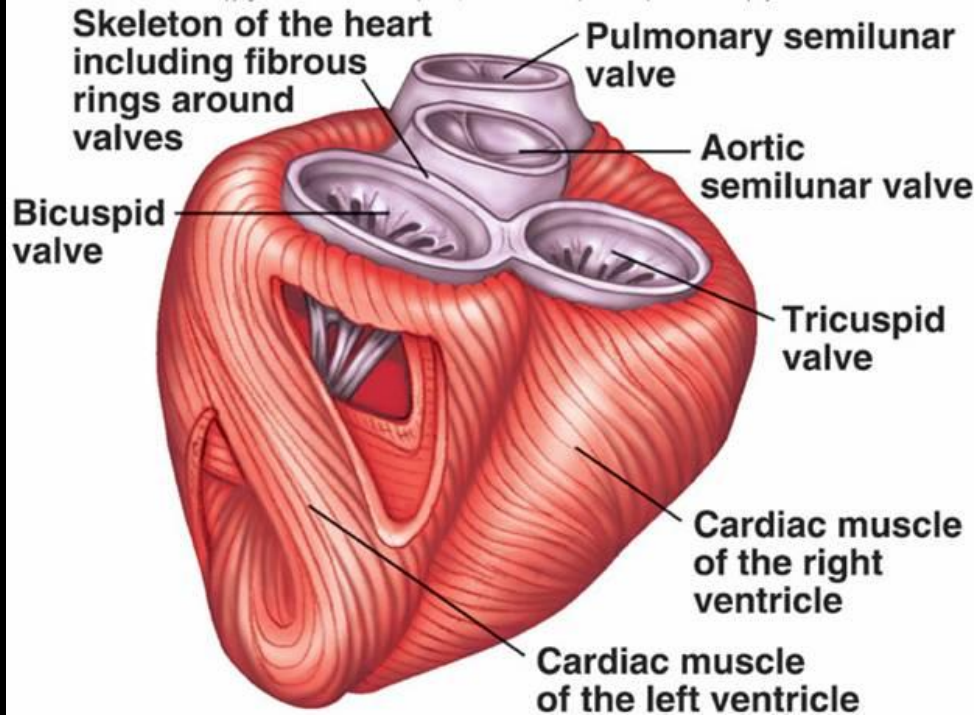


# Перикард

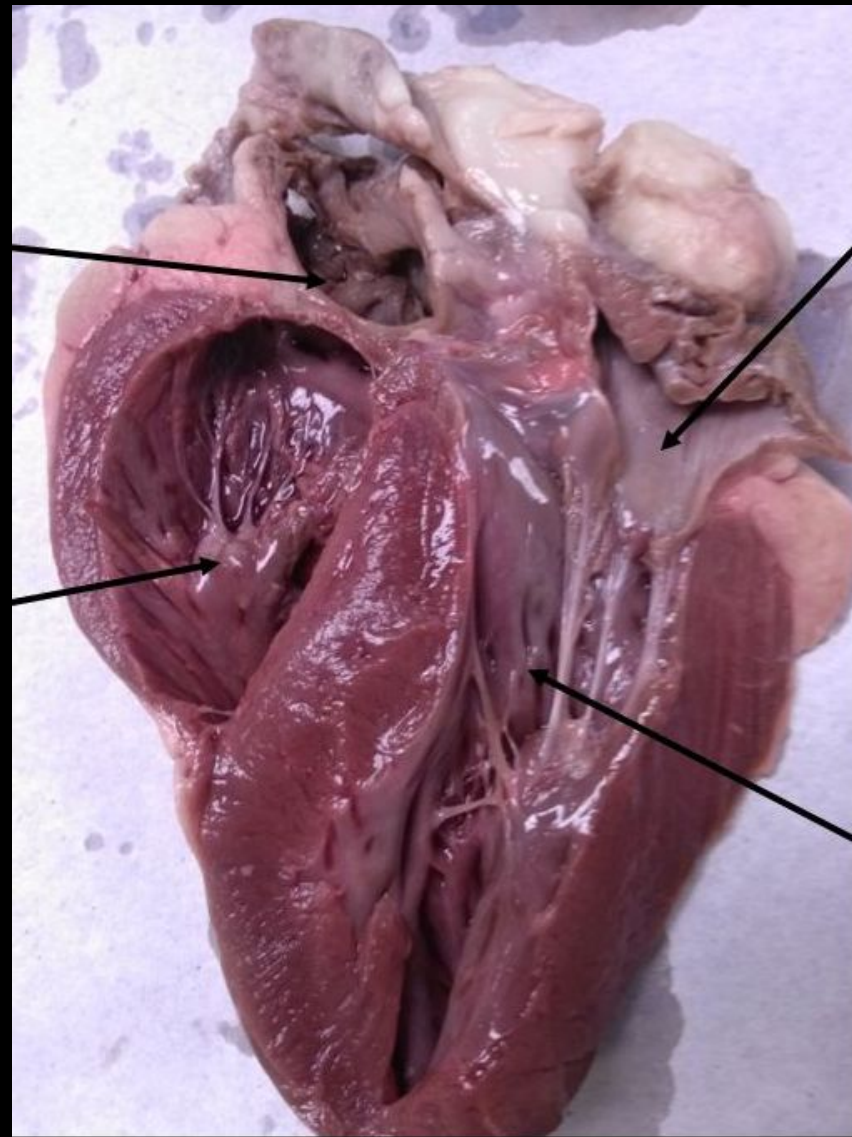
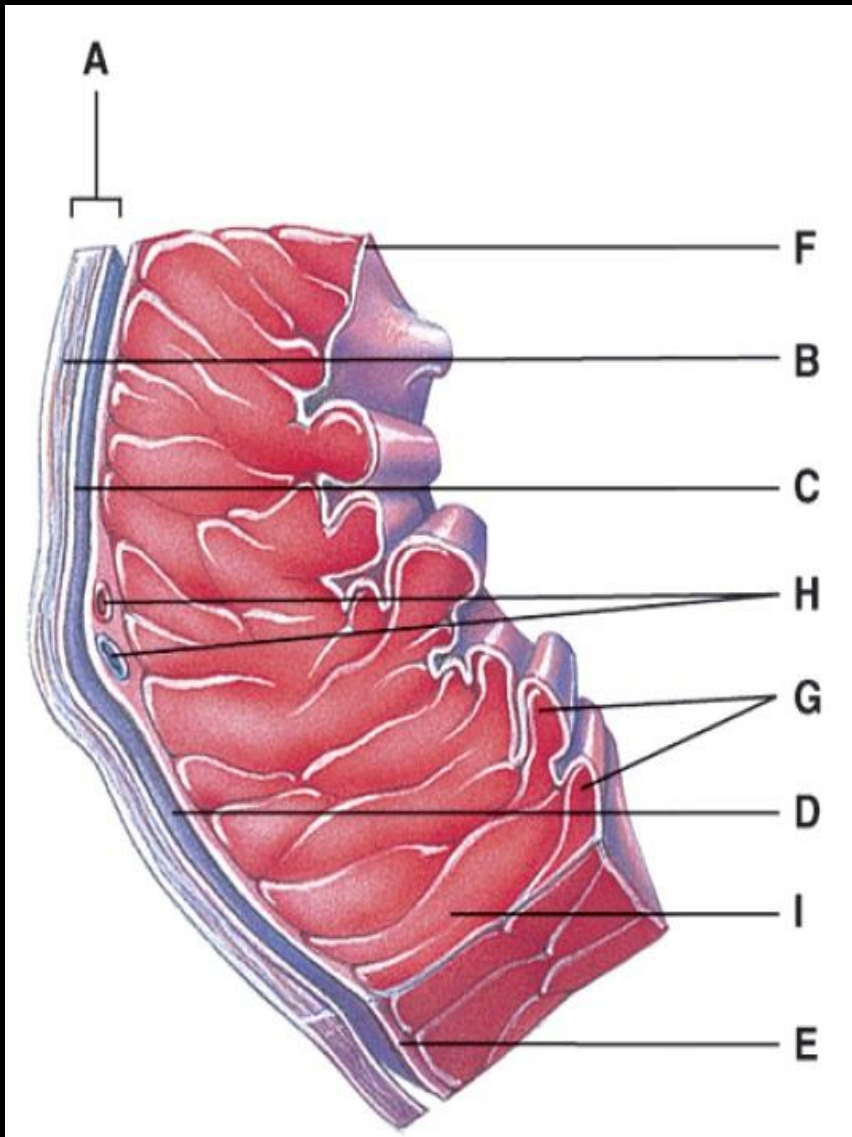




# Миокард

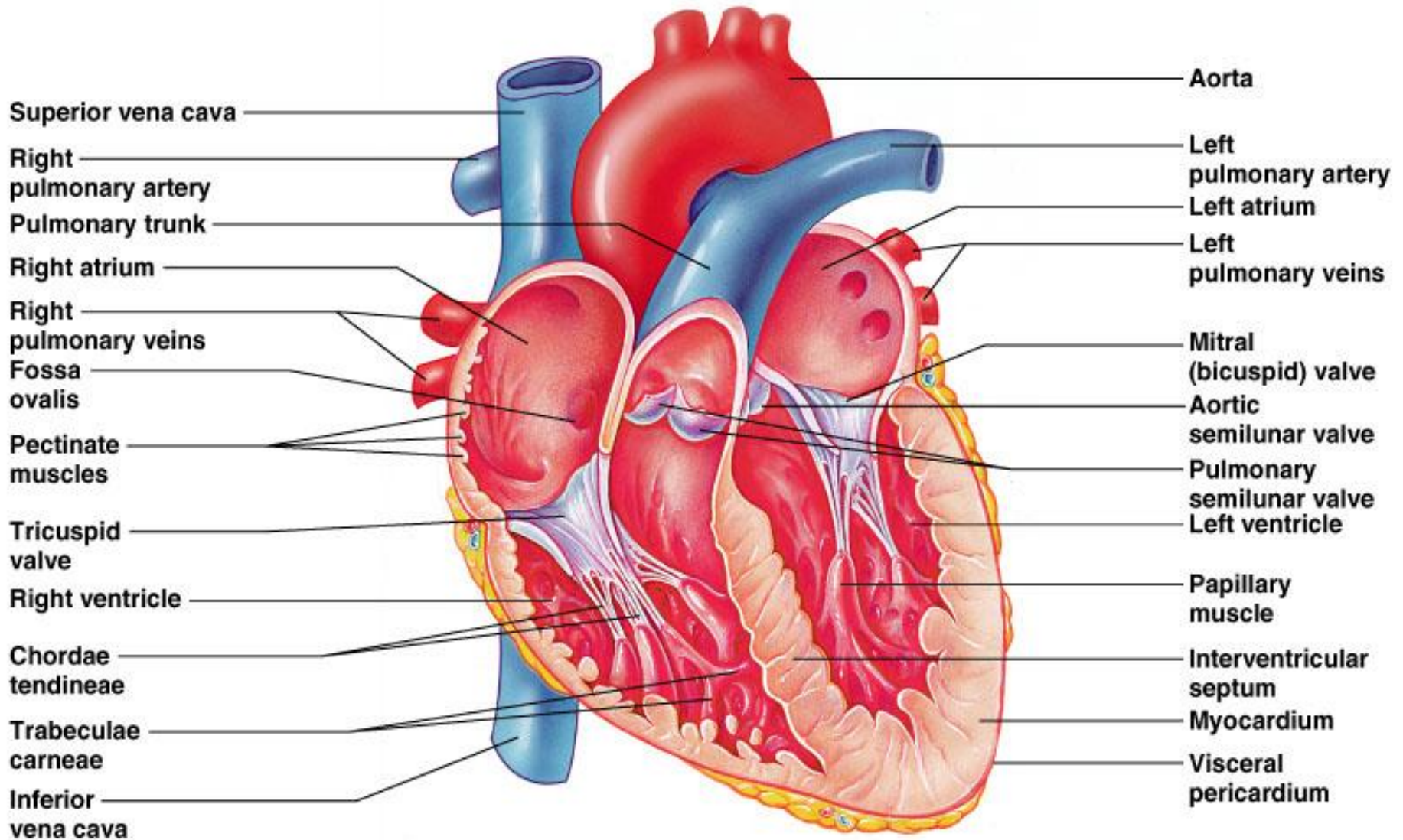


# Эндокард



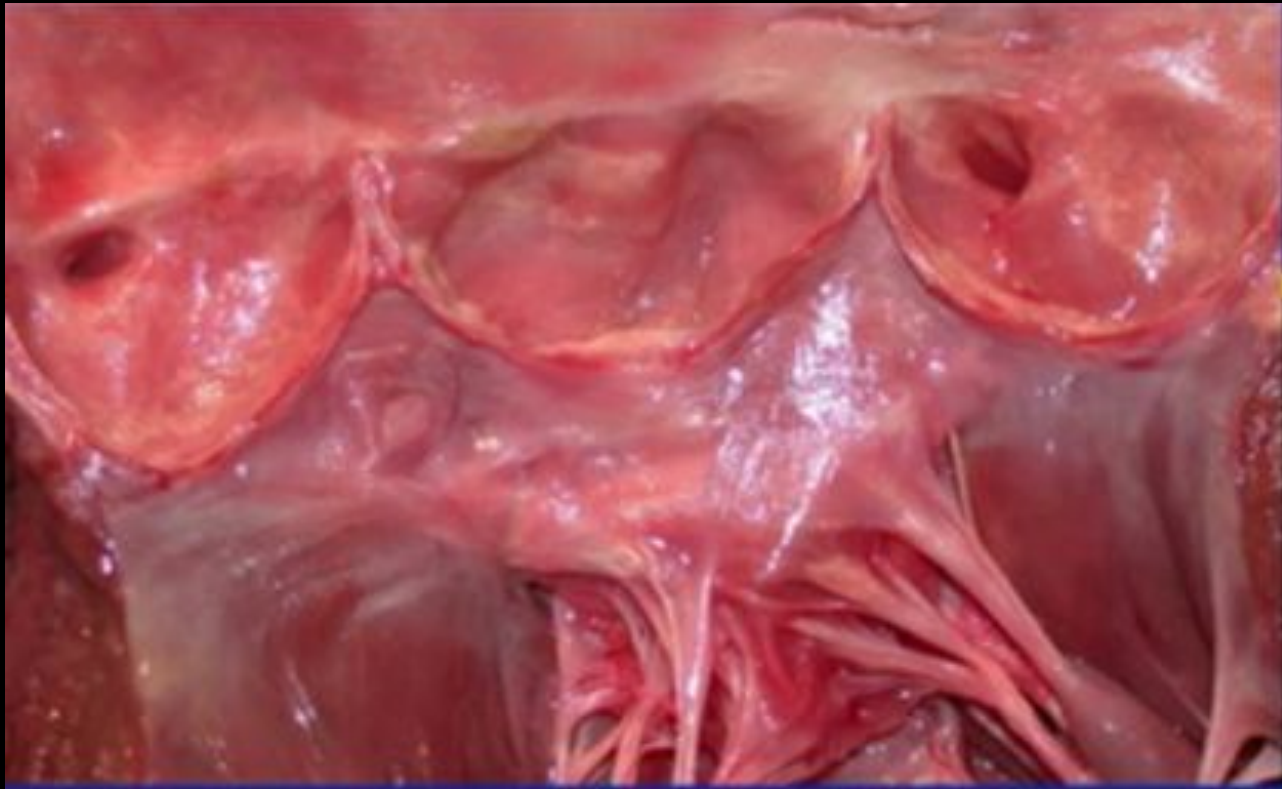


# КЛАПАНЫ



(e)

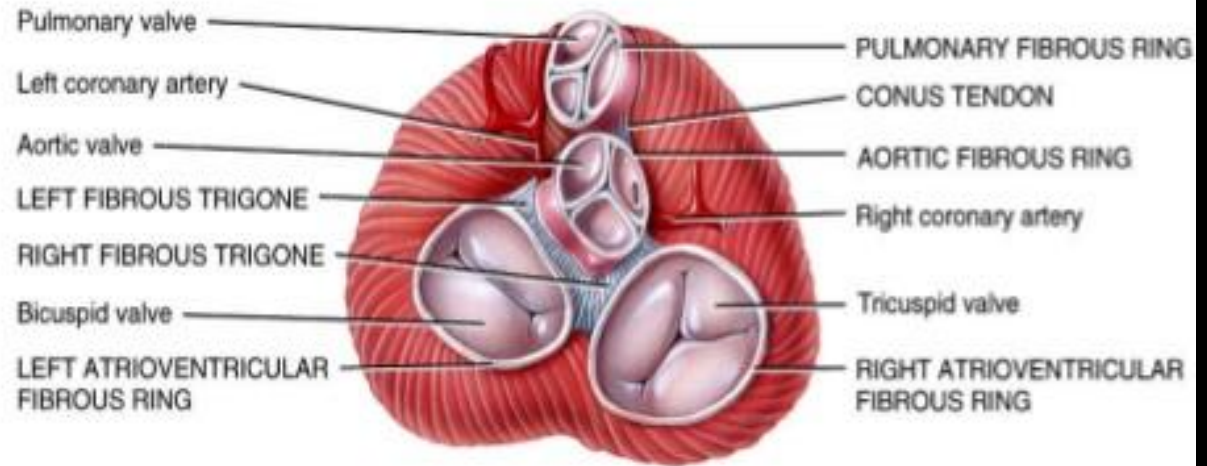
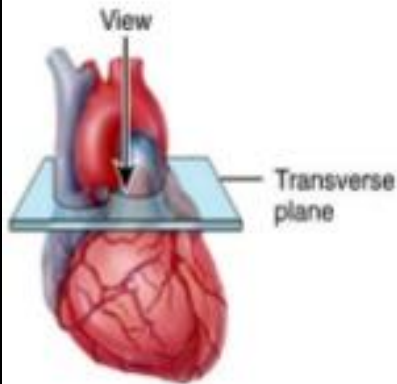
# Клапаны





# Строение клапанов

## Fibrous Skeleton of Heart



Superior view (the atria have been removed)

Dense CT rings surround heart **valves**

- fuse together & merge with interventricular septum

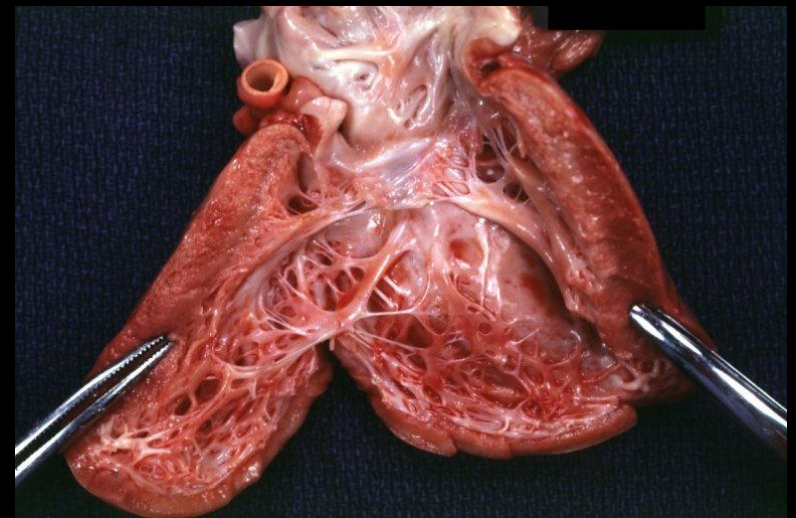
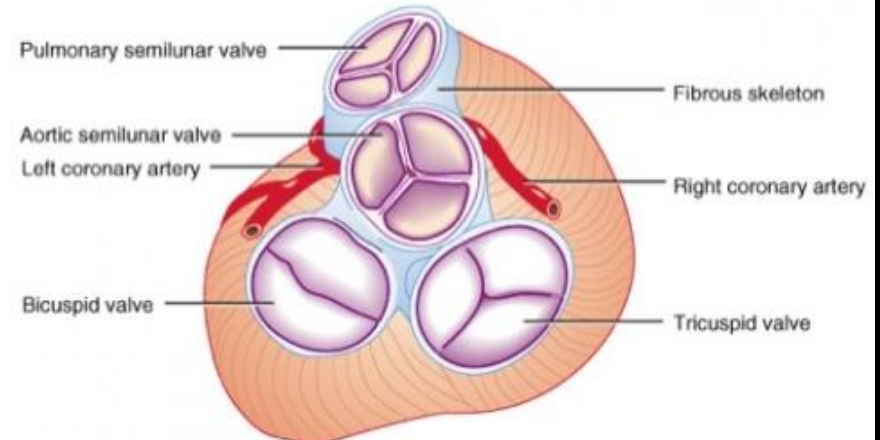
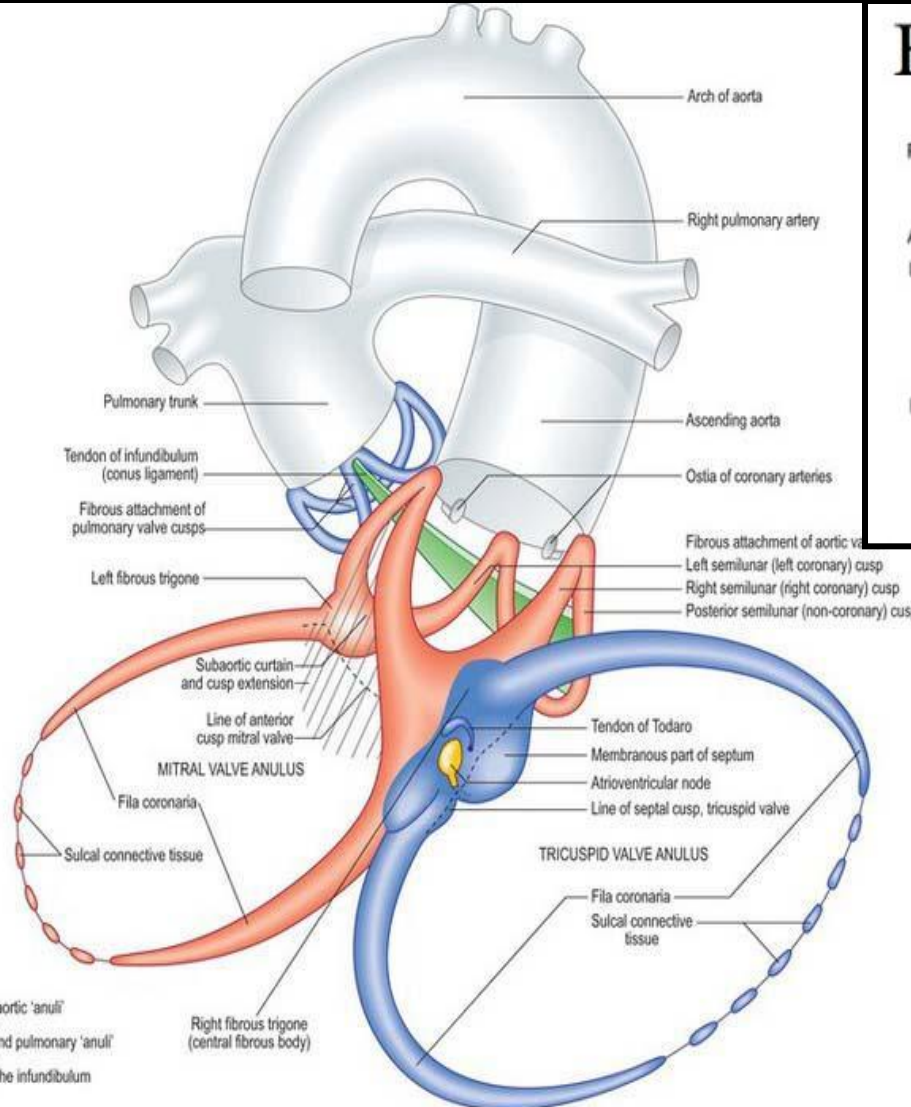
### Functions of fibrous skeleton:

- valve support structure
- Prevents overstretching of the valves
- insertion point for cardiac muscle bundles
- electrical insulator b/w atria & ventricles



# Фиброзный скелет сердца

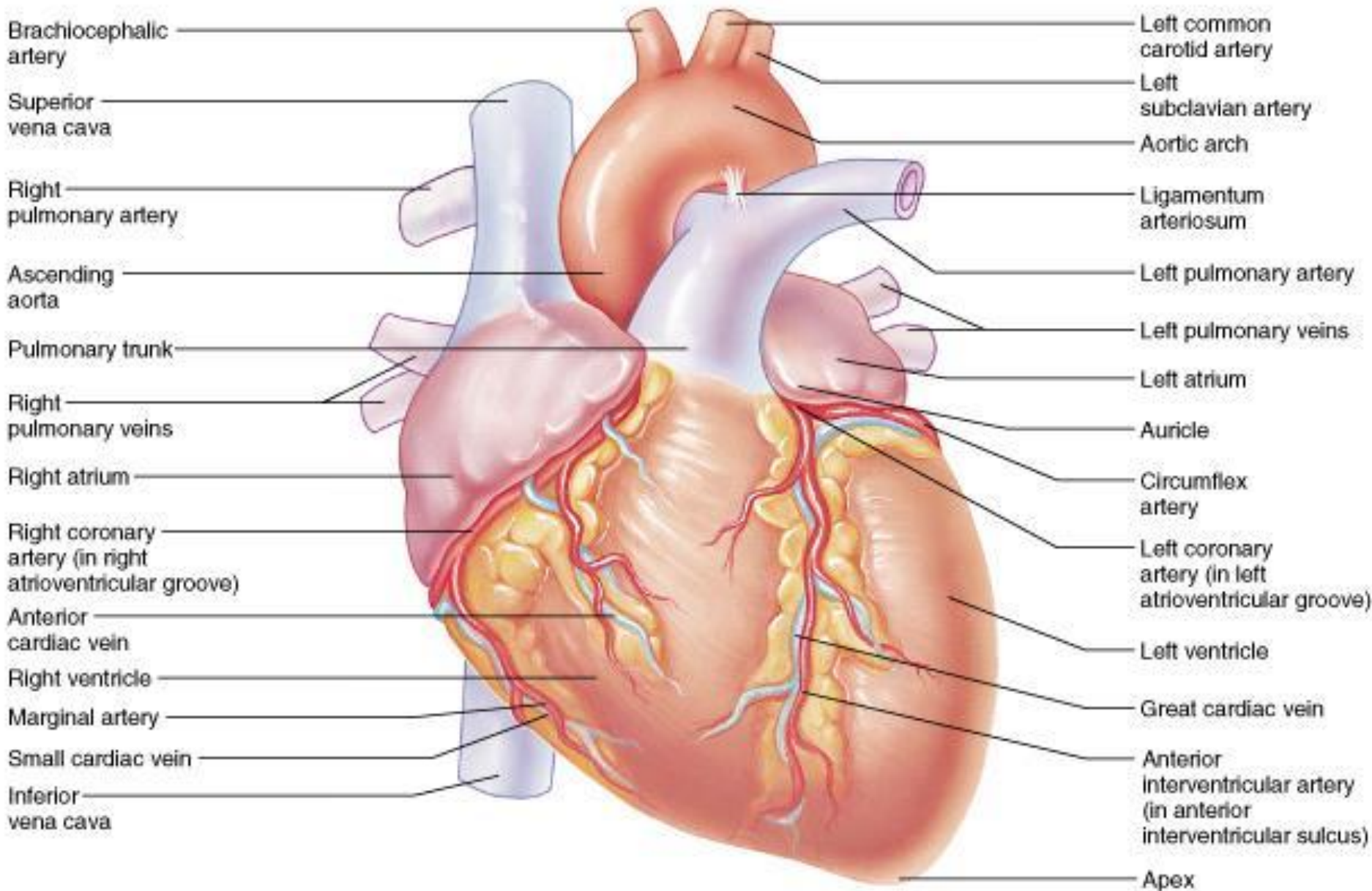
## Fibrous Skeleton of Heart





# Проекция камер сердца на рентгенограмме





**(b)**