

# MODULE 5 L05

## Systemic Circuit: Blood Vessels of Thoracic and Abdominal Cavities

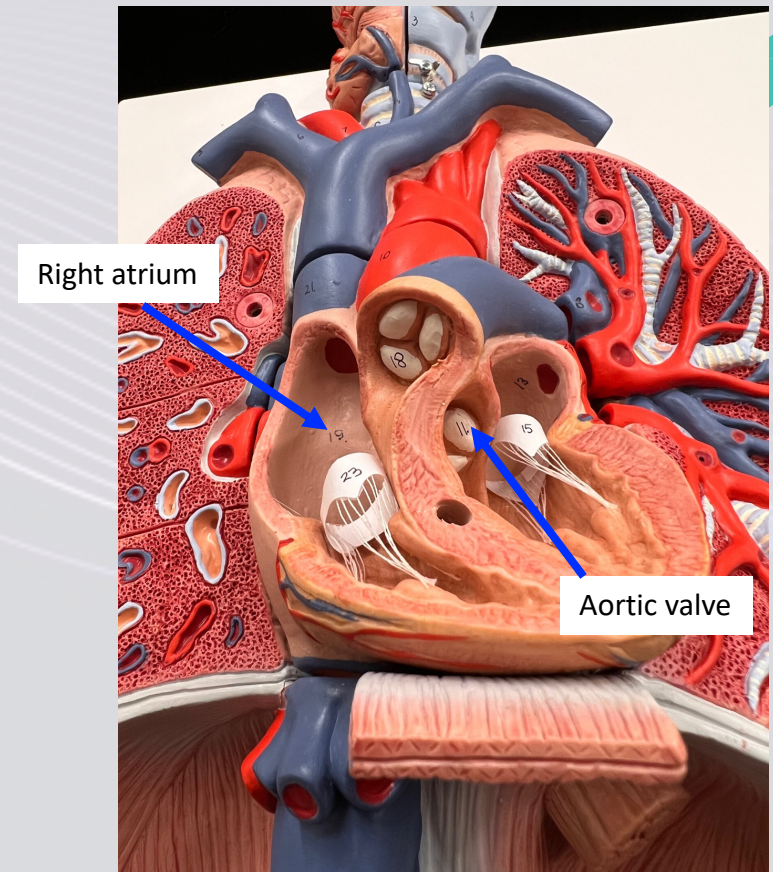
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# Systemic Circuit

- Begins: aortic valve
- Ends: entrance to right atrium
- Supplies capillary beds – all parts of body except for pulmonary circuit
- Total blood volume = 84%
  1. Systemic arteries
    - ❖ Transport O<sub>2</sub> rich blood
    - ❖ Towards capillary beds
  2. Systemic veins
    - ❖ Transport CO<sub>2</sub> rich blood
    - ❖ Towards the heart (right atrium)



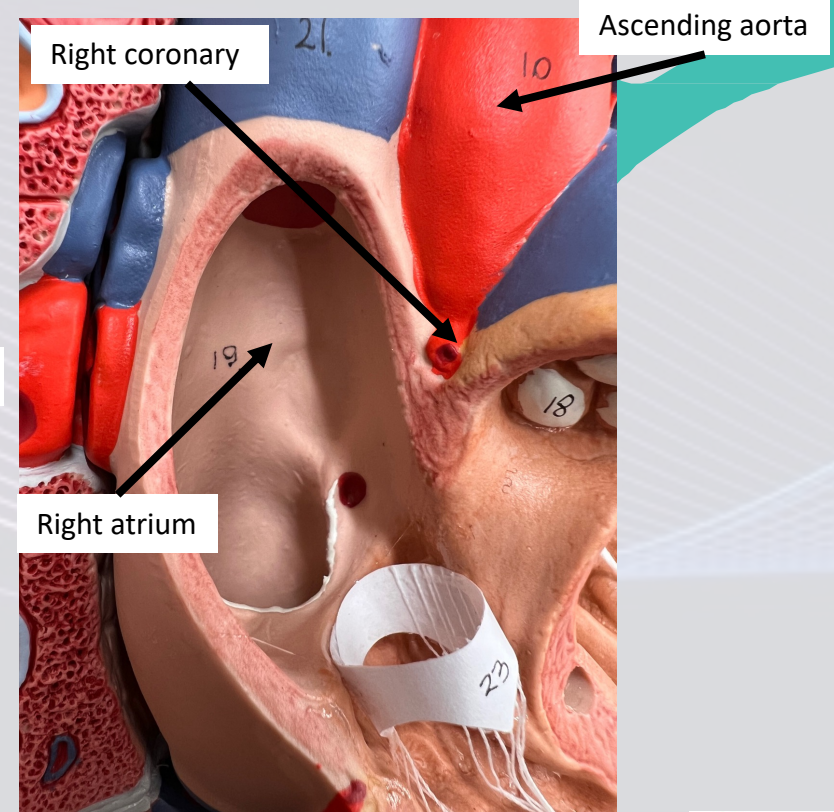
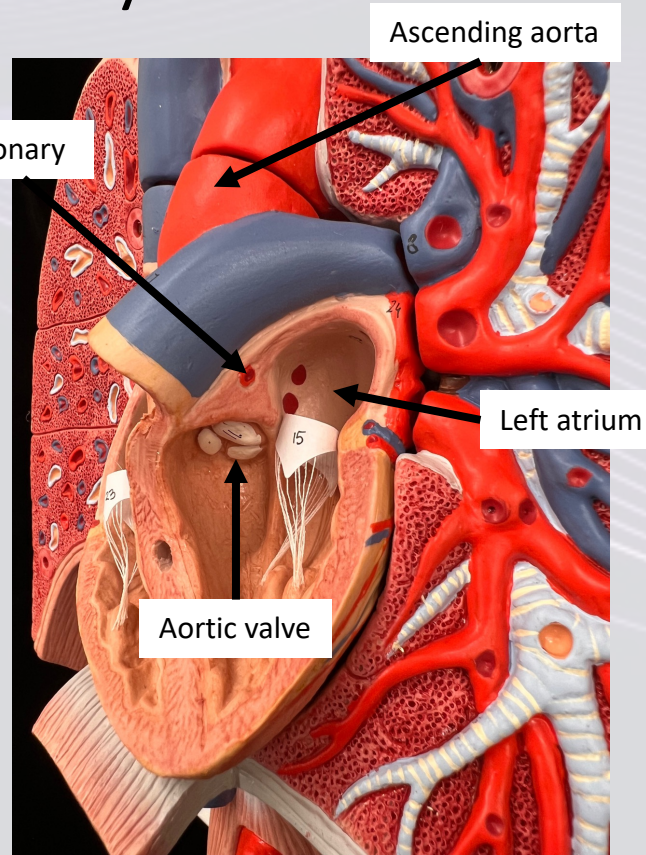
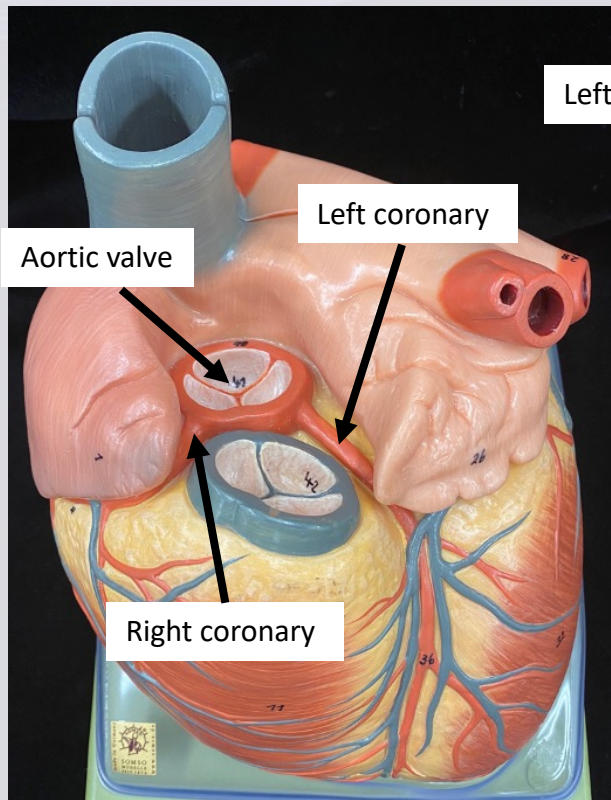
# Systemic Blood Vessels

- A. Aorta
  - a) Ascending aorta
  - b) Aortic arch
  - c) Descending aorta
    - Thoracic aorta
    - Abdominal aorta
- B. Veins that drain into superior vena cava
- C. Pelvic arteries and veins
- D. Blood supply to the brain
- E. Upper limb arteries and veins
- F. Lower limb arteries and veins



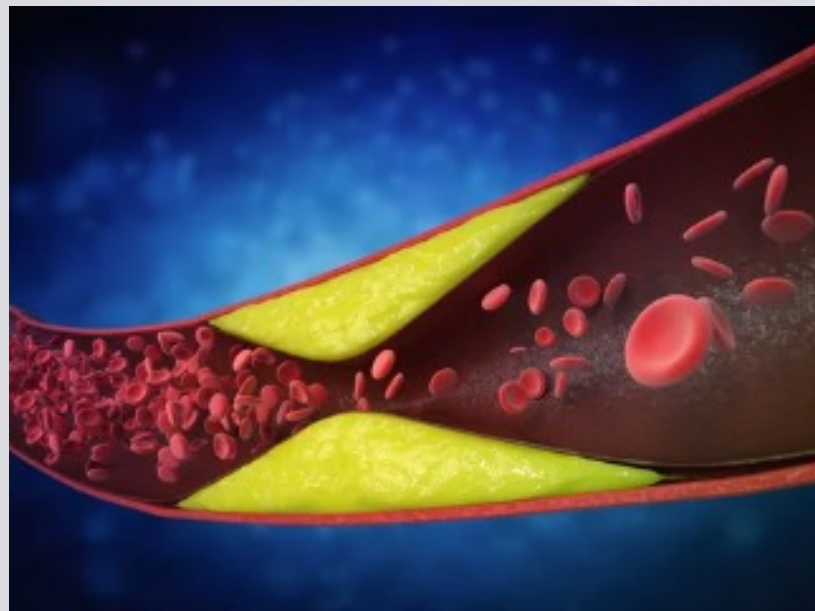
# a. Aorta – Ascending Aorta

- Left coronary artery
- Right coronary artery

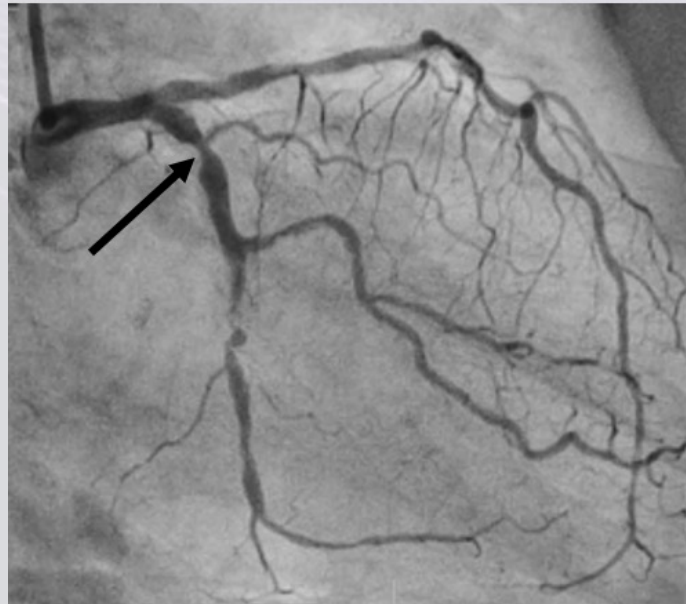


# Common Coronary Heart Diseases

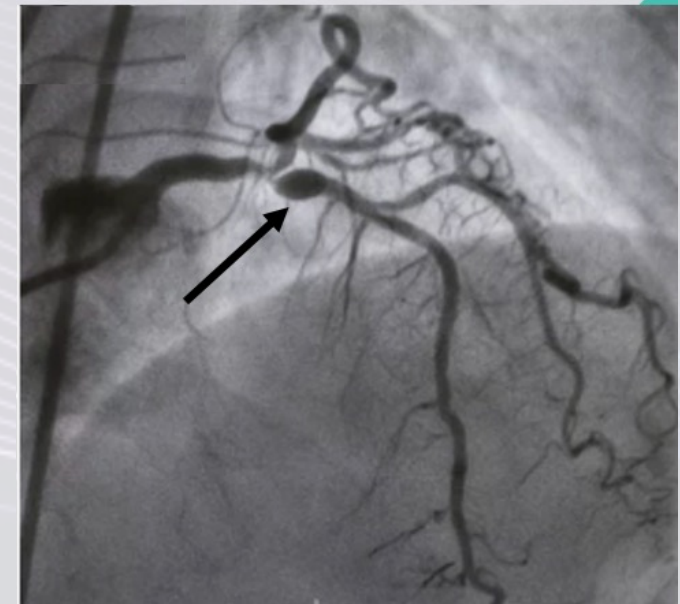
Atherosclerosis



Coronary Artery Disease



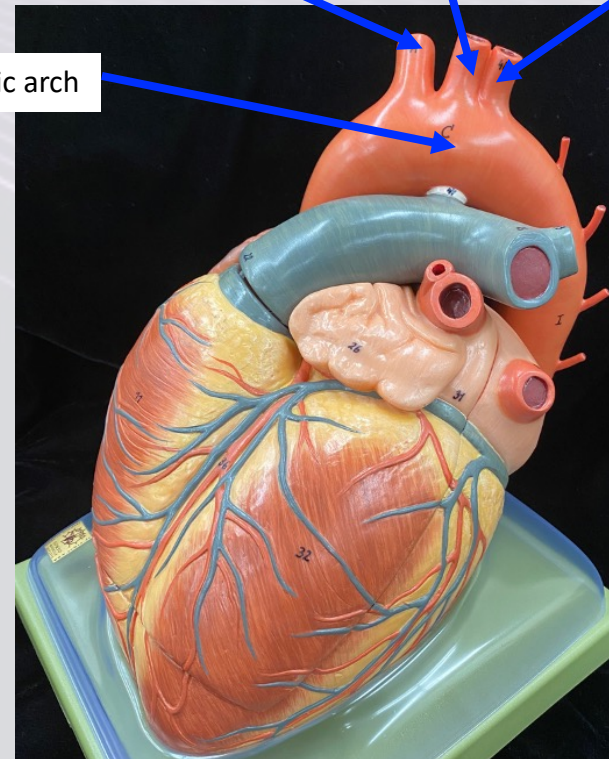
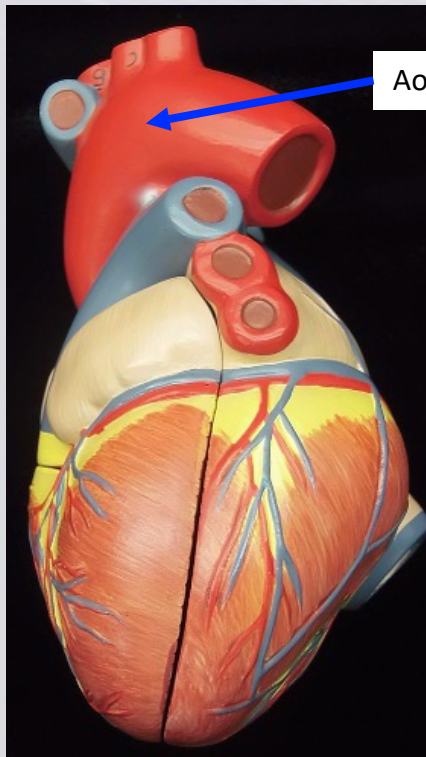
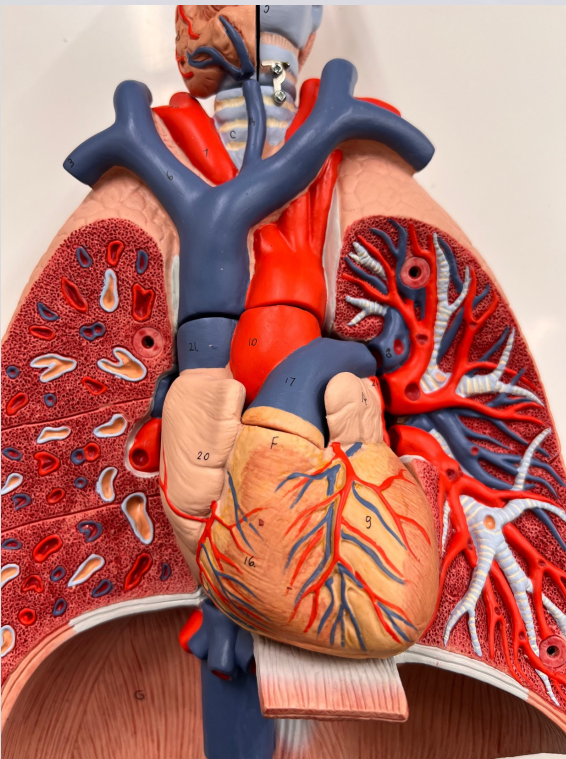
Coronary Aneurysm





# b. Aorta – Aortic Arch

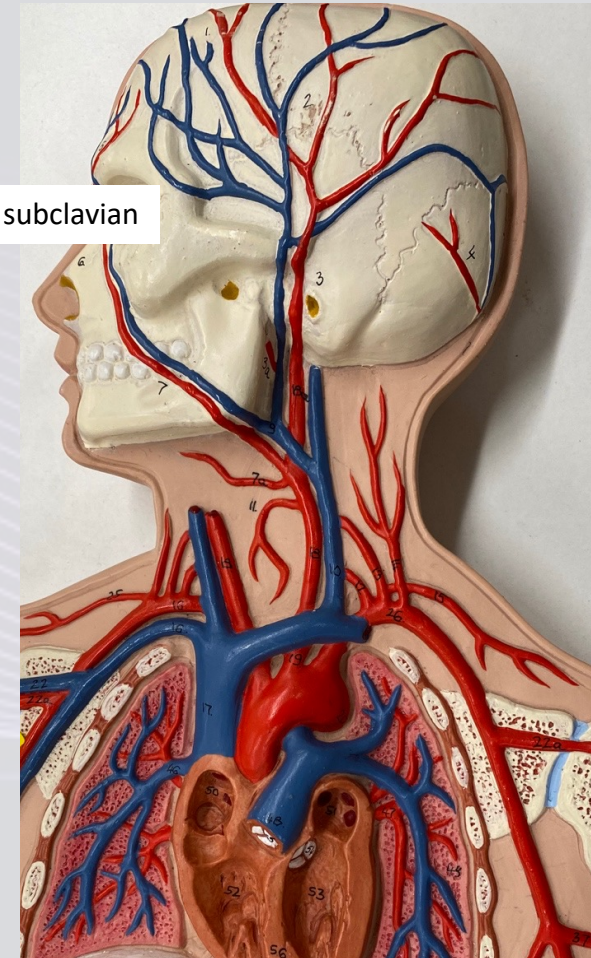
- Brachiocephalic trunk
- Left common carotid artery
- Left subclavian artery



Left common carotid

Brachiocephalic trunk

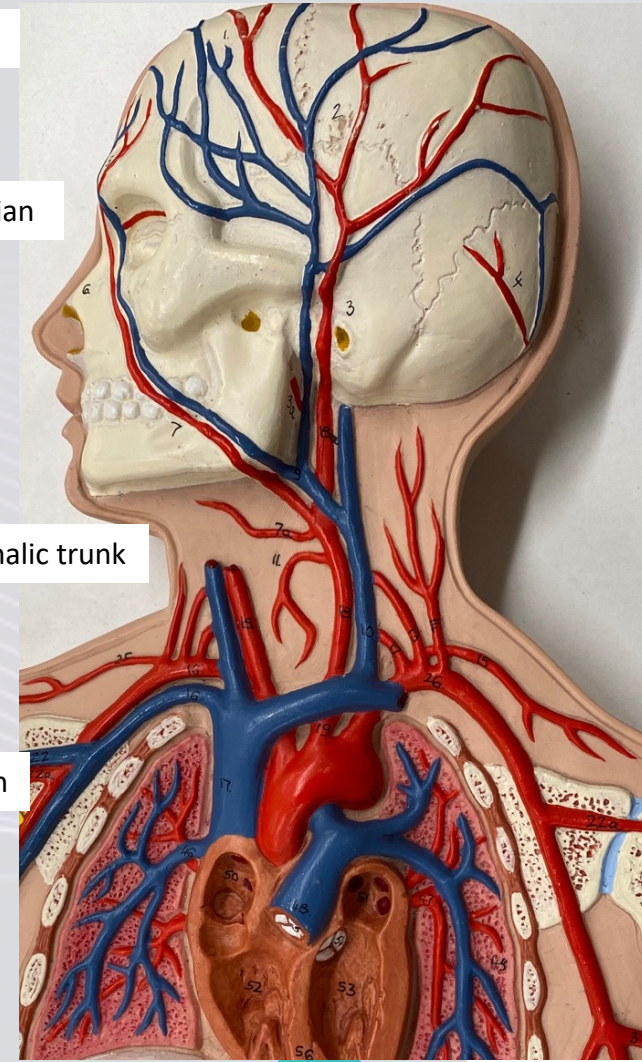
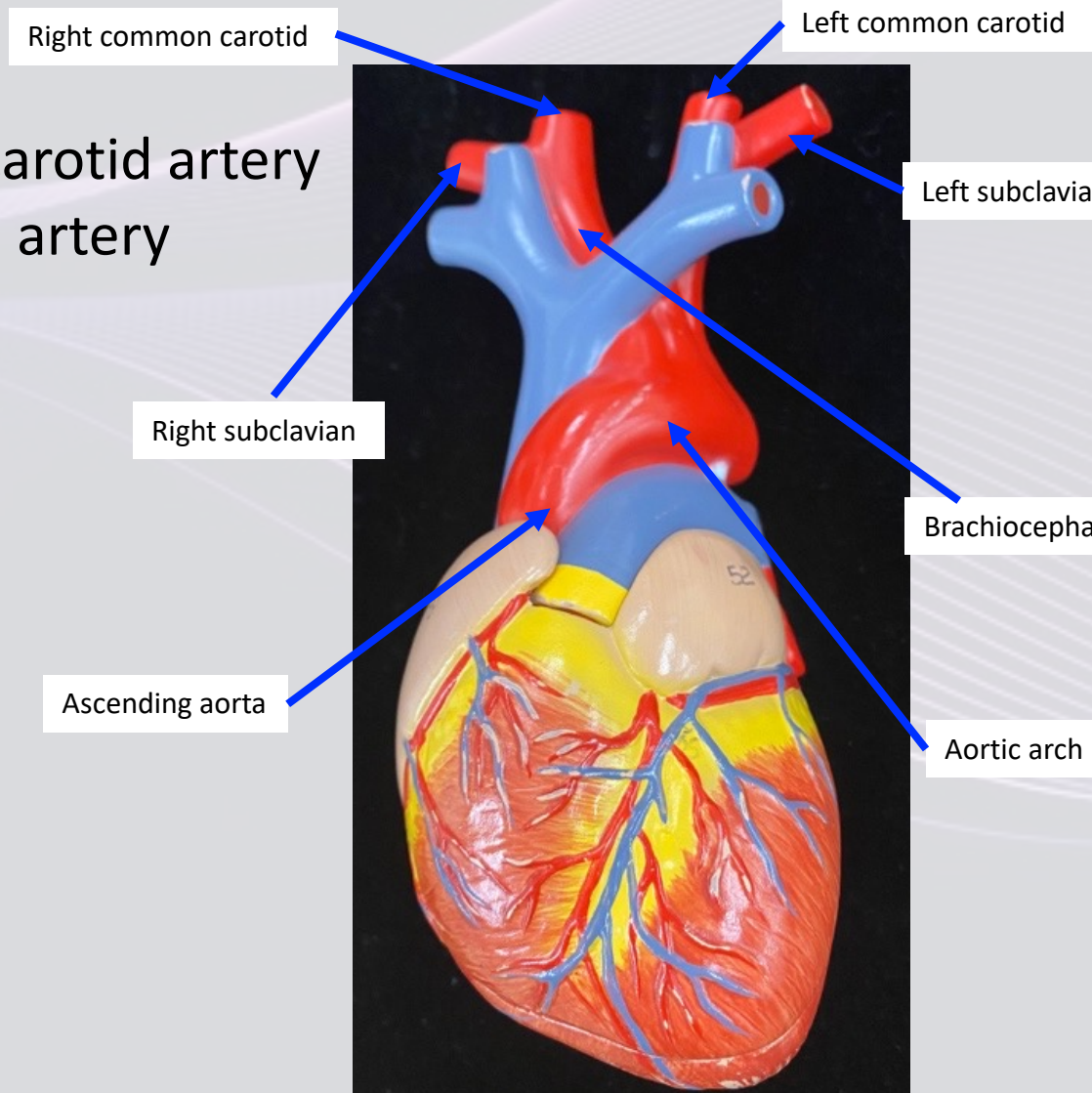
Left subclavian





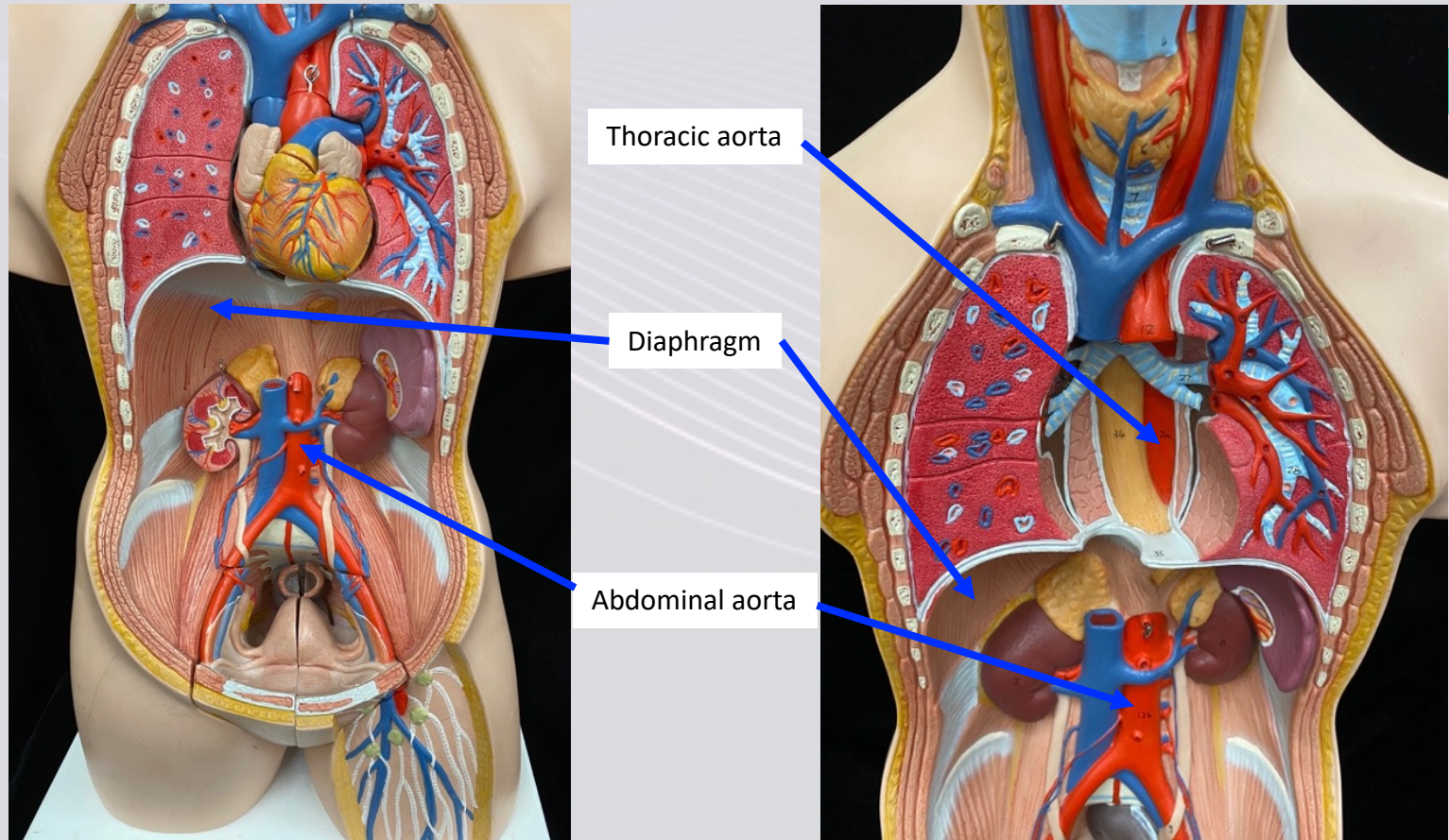
# Brachiocephalic Trunk Branches

- Right common carotid artery
- Right subclavian artery



# c. Aorta – Descending Aorta

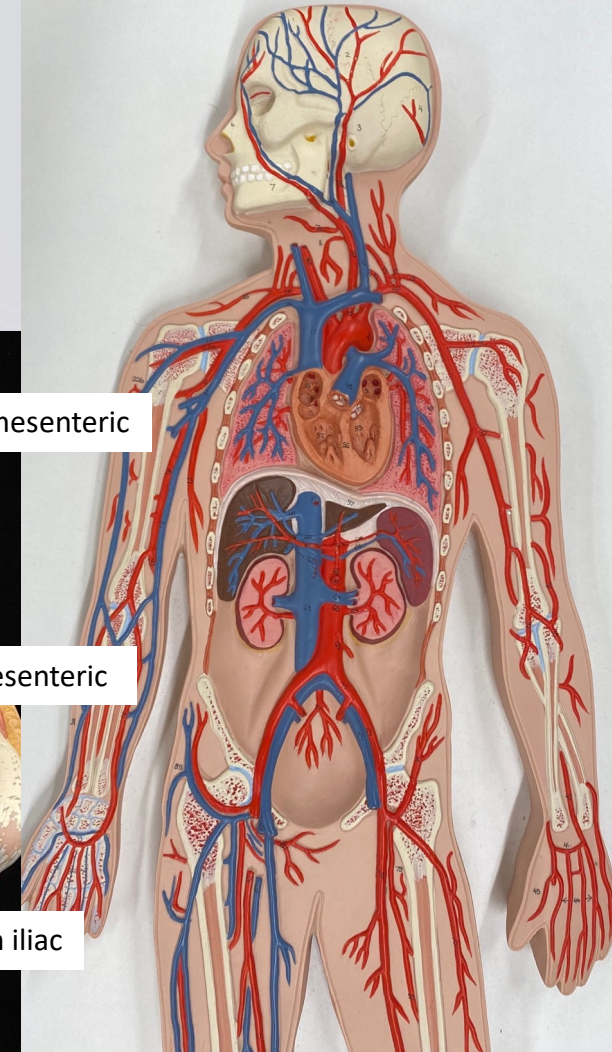
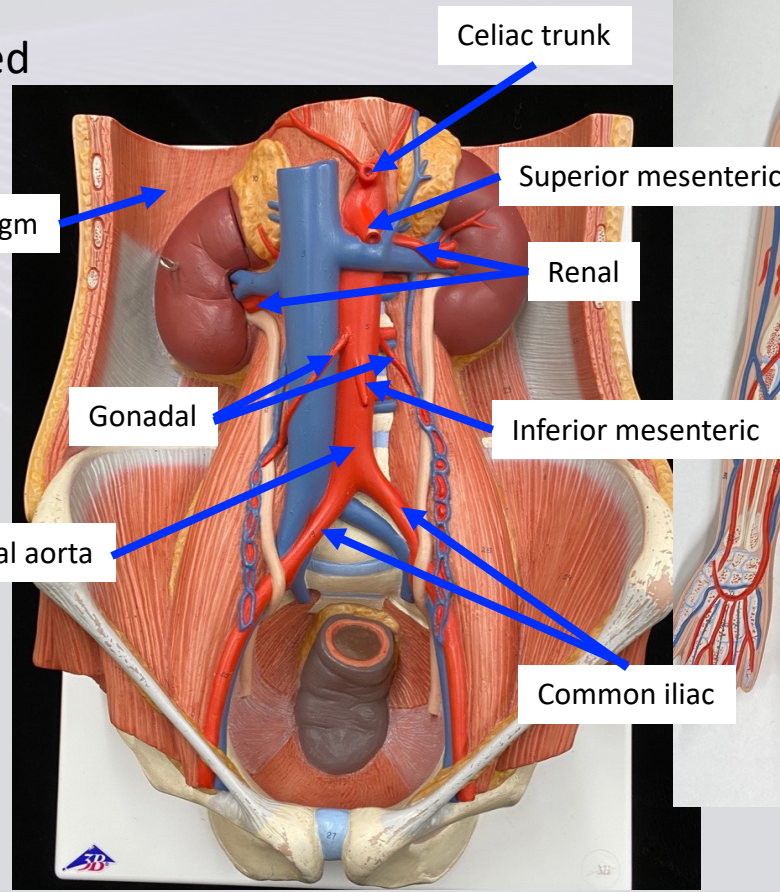
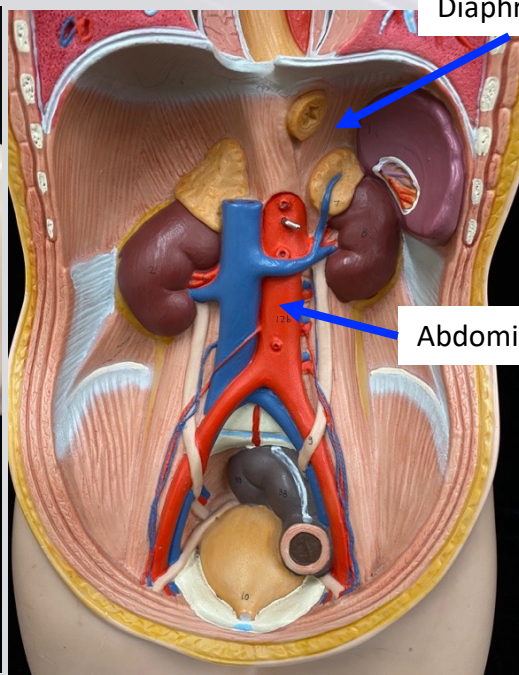
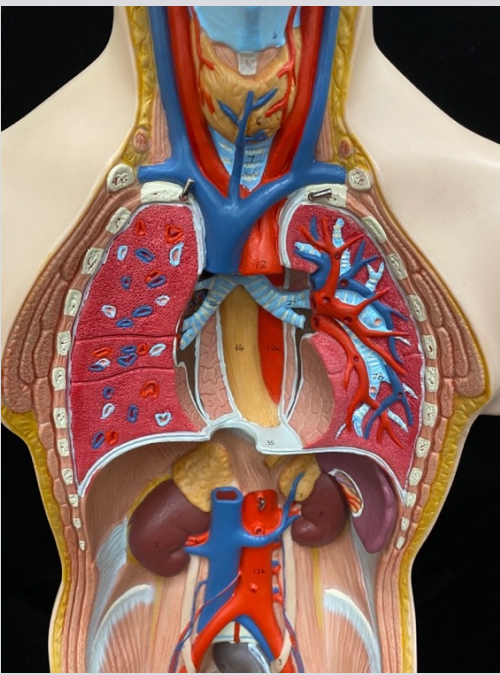
- Thoracic aorta
  - Abdominal aorta
- } Separated by diaphragm





# Abdominal Aorta

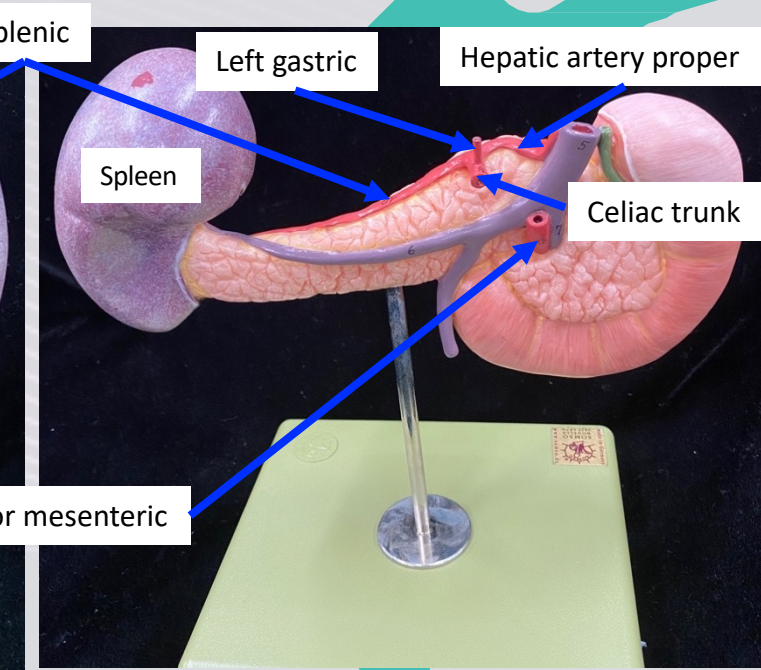
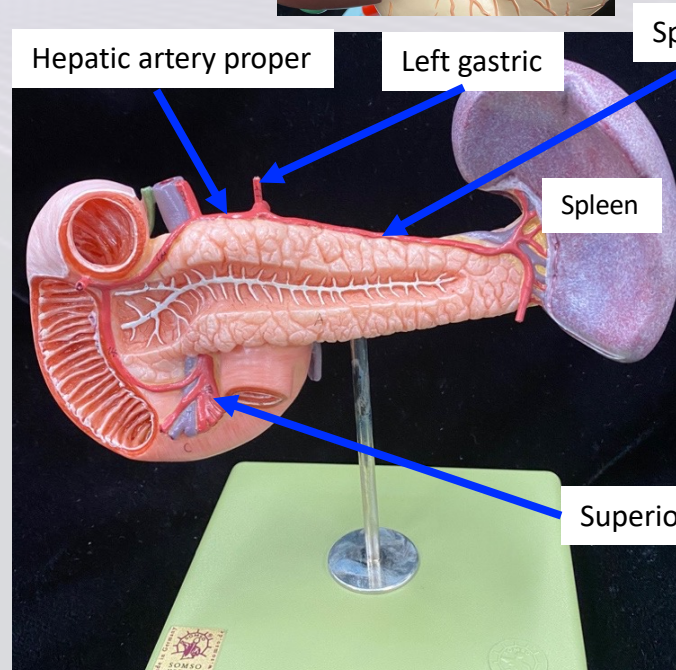
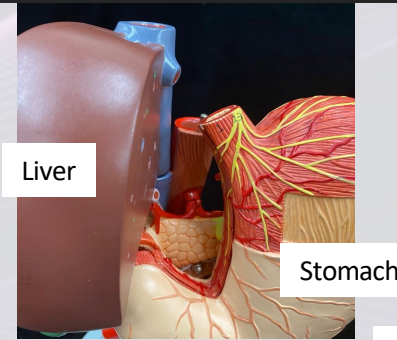
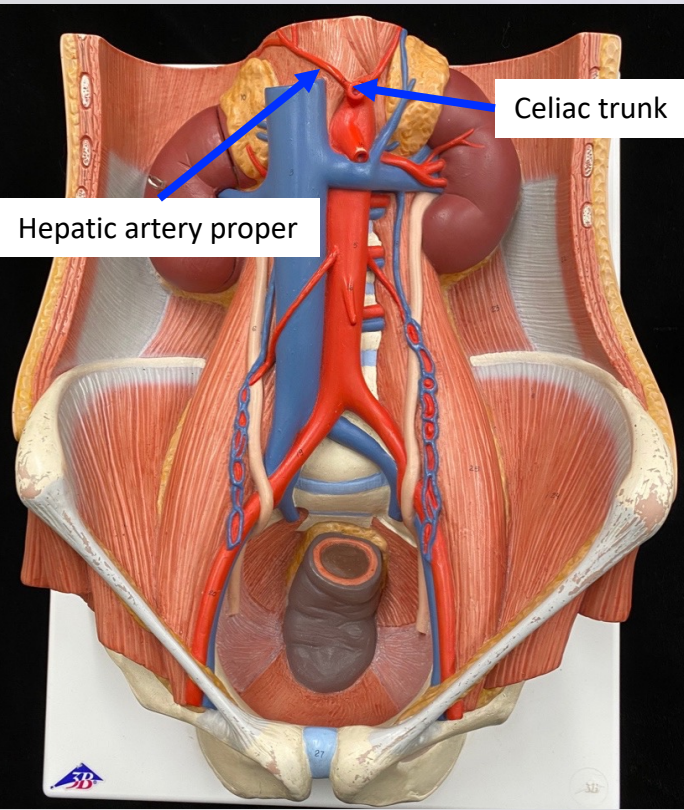
- Celiac trunk
  - Superior mesenteric artery
  - Inferior mesenteric artery
  - Renal arteries
  - Gonadal arteries
  - Common iliac arteries
- 3 Unpaired
- 3 Paired





# Celiac Trunk

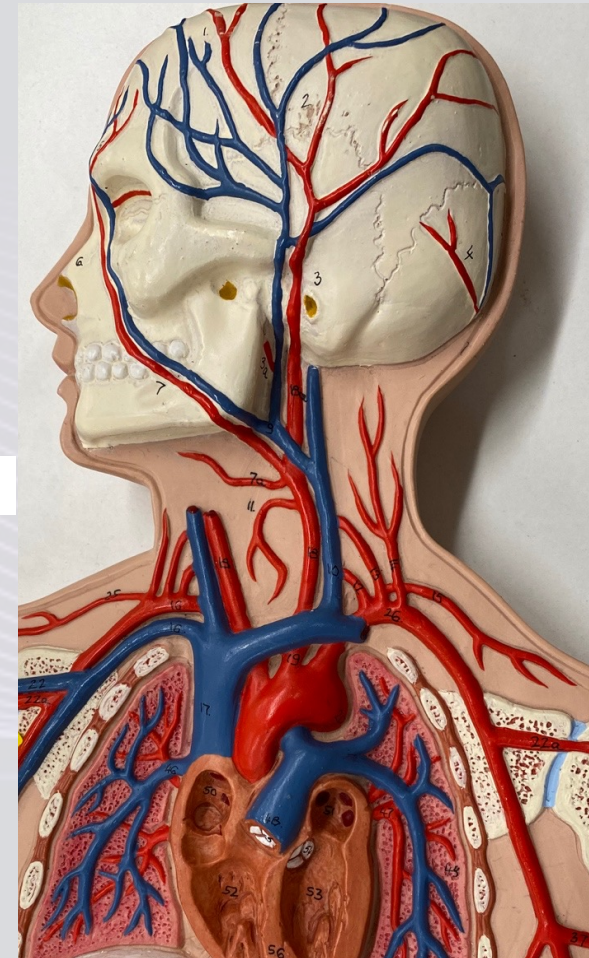
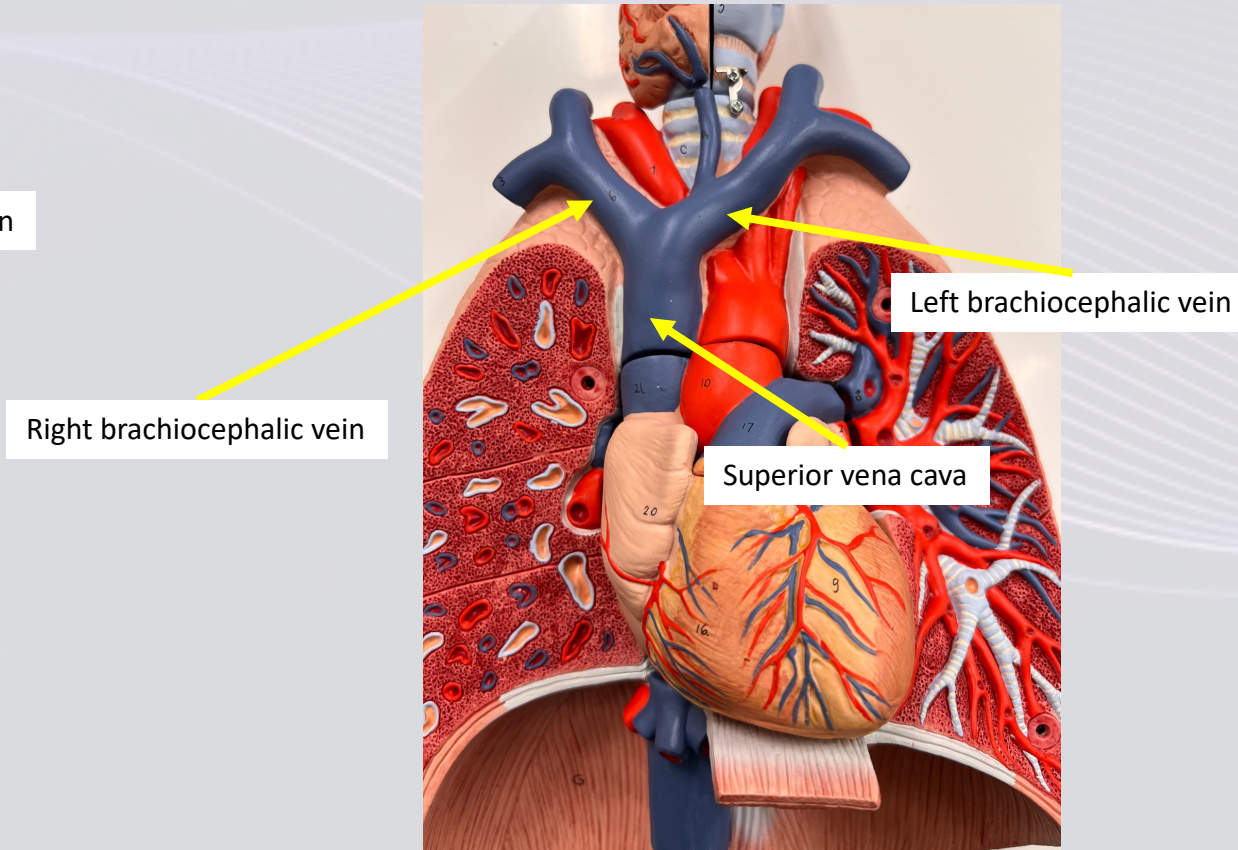
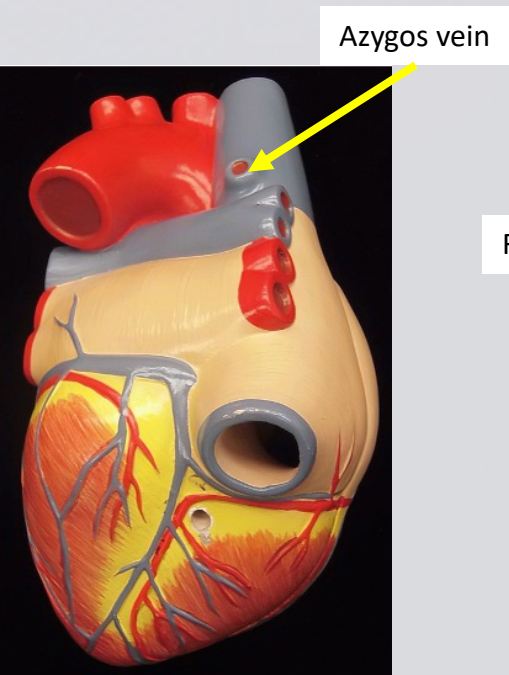
- Hepatic artery proper
- Left gastric artery
- Splenic artery





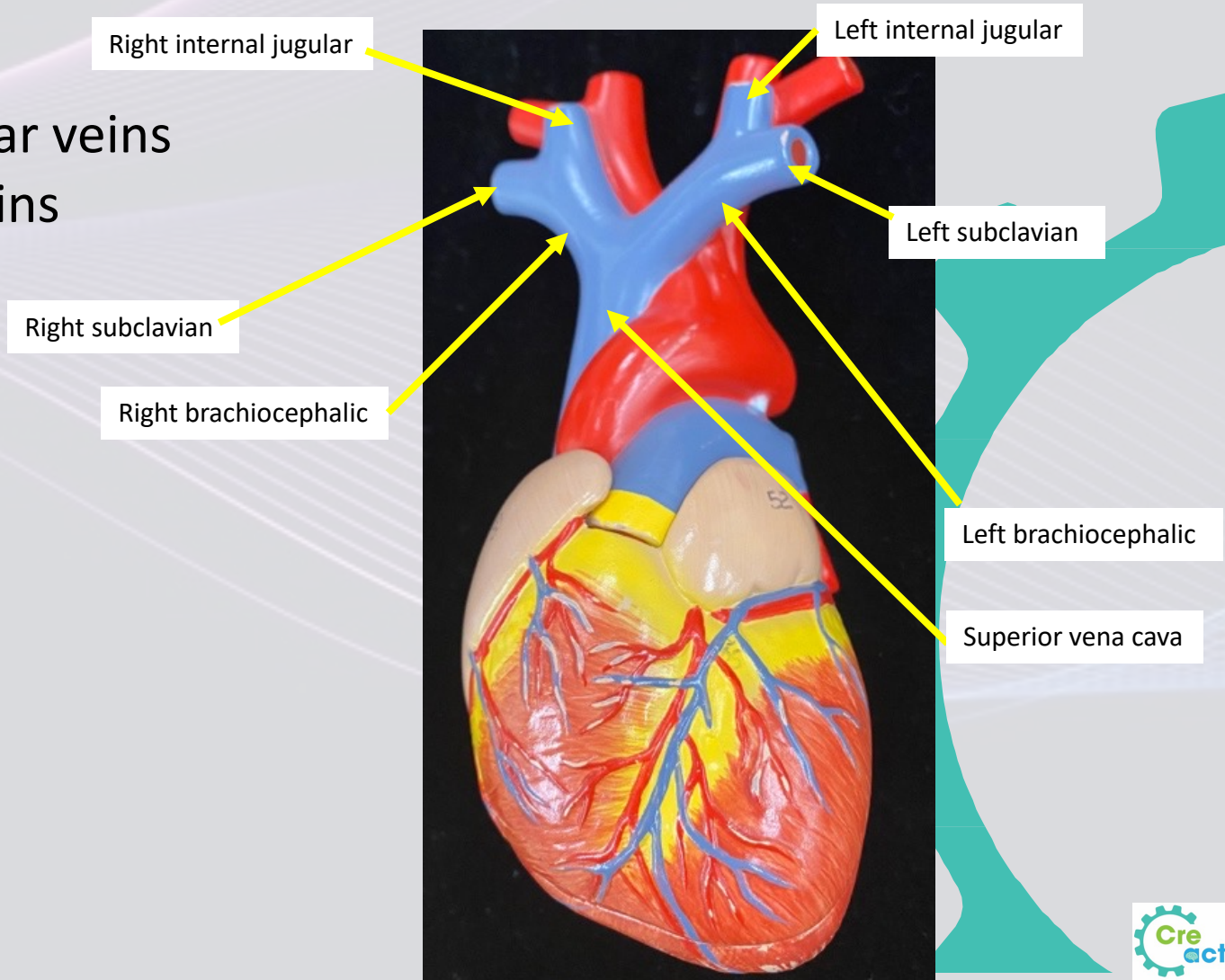
# B. Superior Vena Cava

- Right and left brachiocephalic veins
- Superior vena cava



# Brachiocephalic Veins Branches

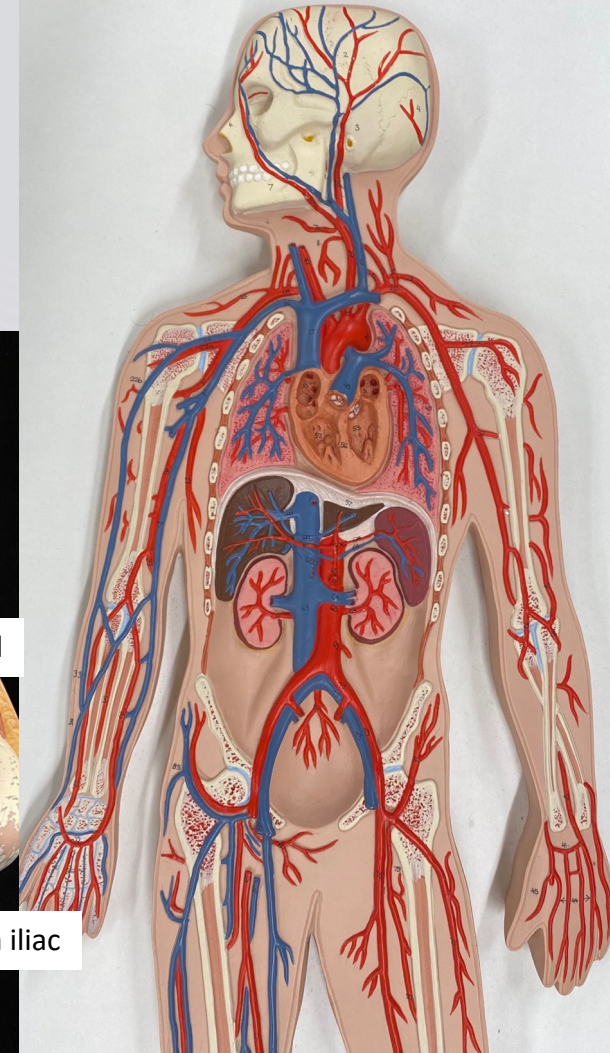
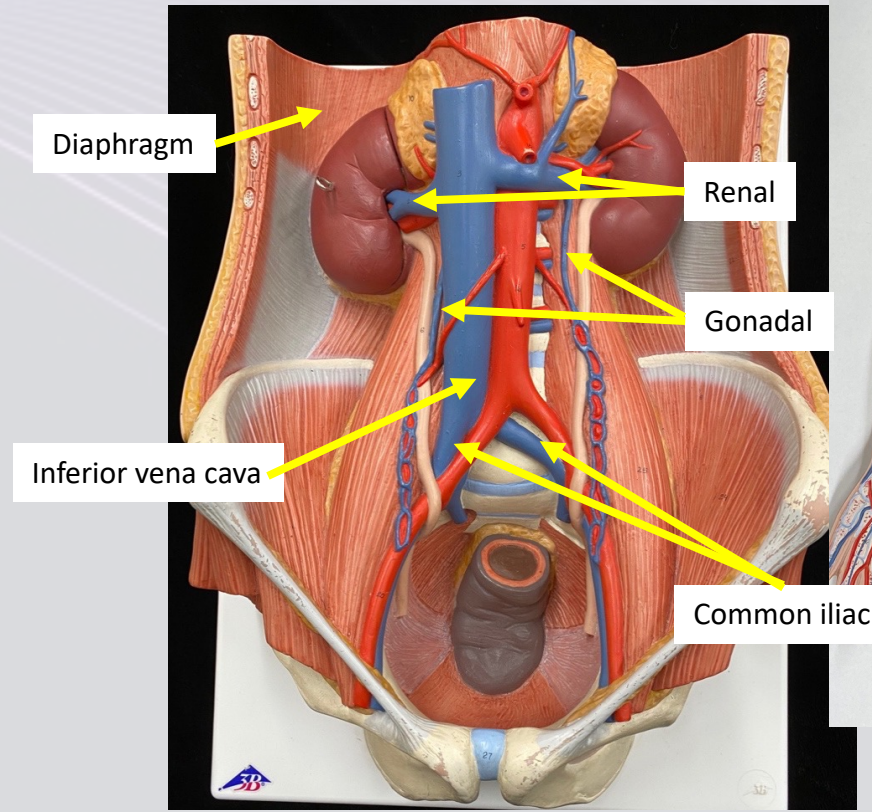
- Right and left internal jugular veins
- Right and left subclavian veins





# Abdominal Cavity

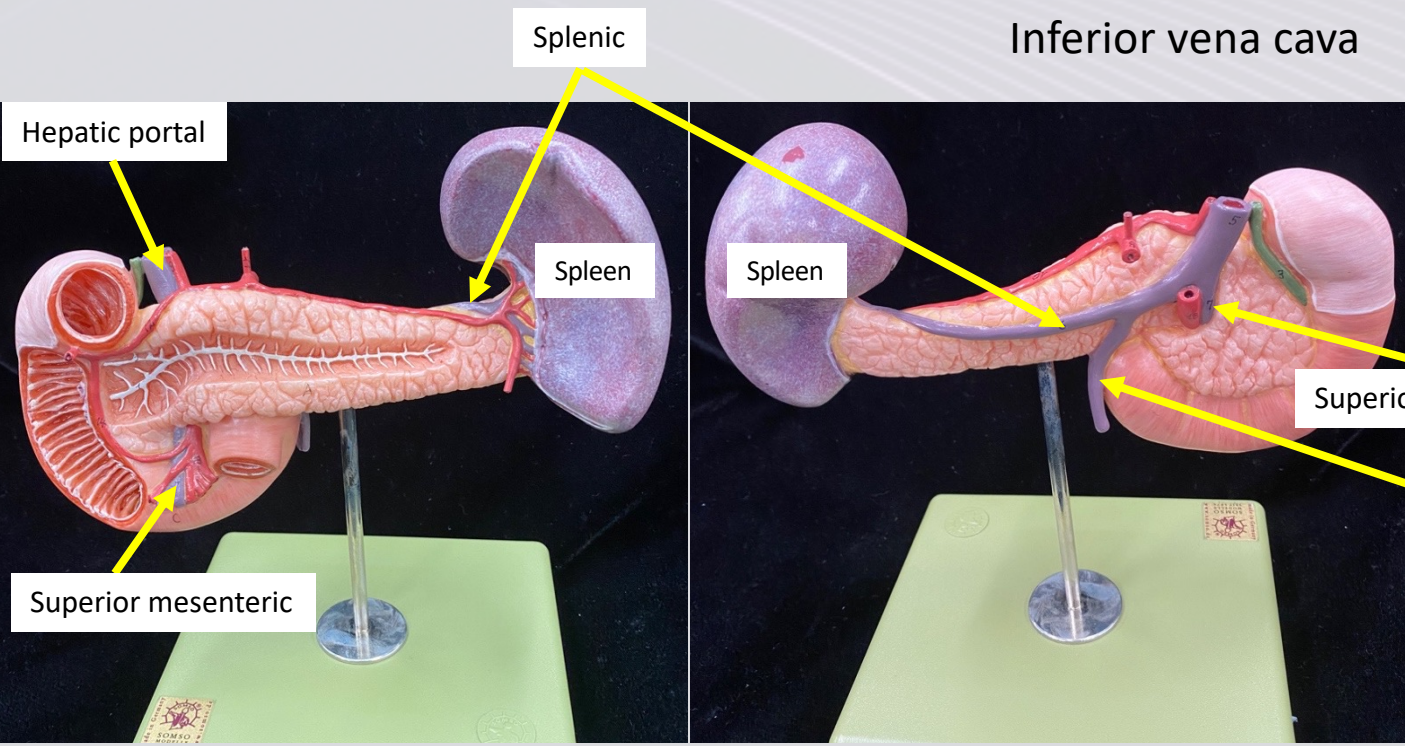
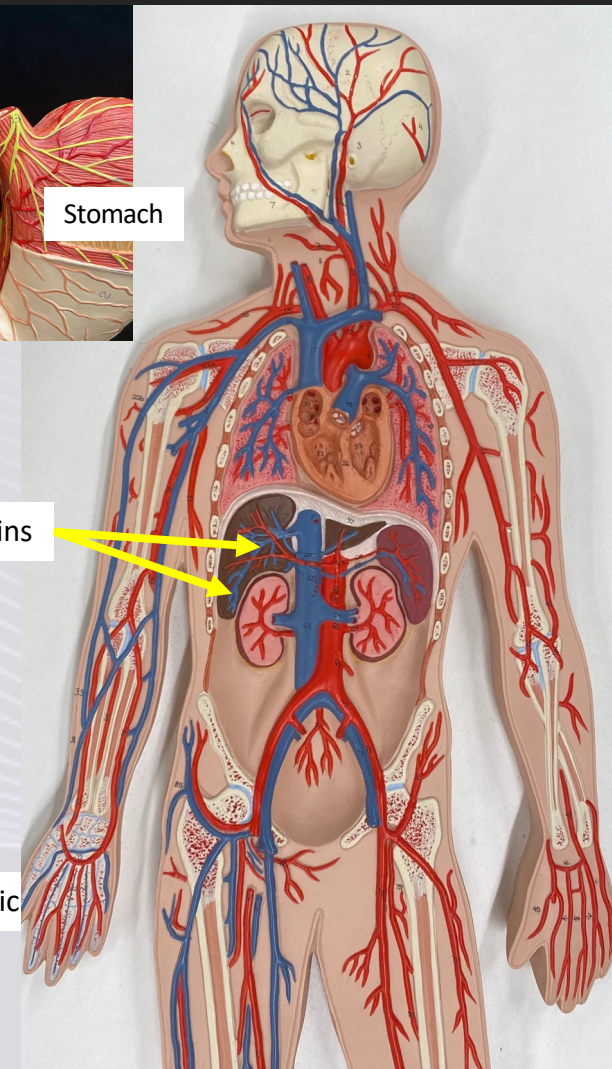
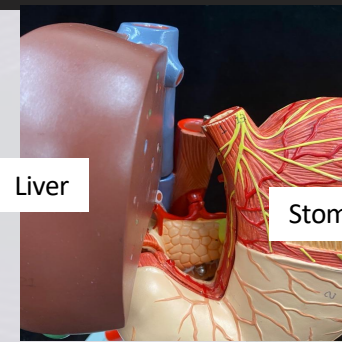
- Common iliac veins
- Gonadal veins
- Renal veins
- Inferior vena cava





# Hepatic Portal System

- Superior mesenteric vein
  - Inferior mesenteric vein
  - Splenic vein
- Hepatic portal vein  
↓  
Hepatic veins  
↓  
Inferior vena cava



Hepatic veins

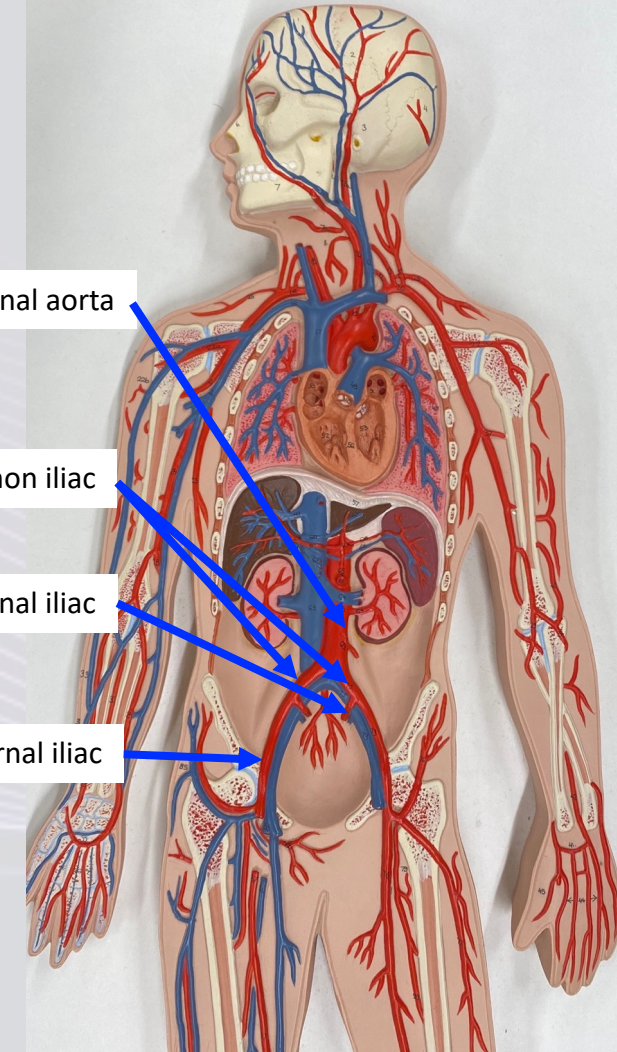
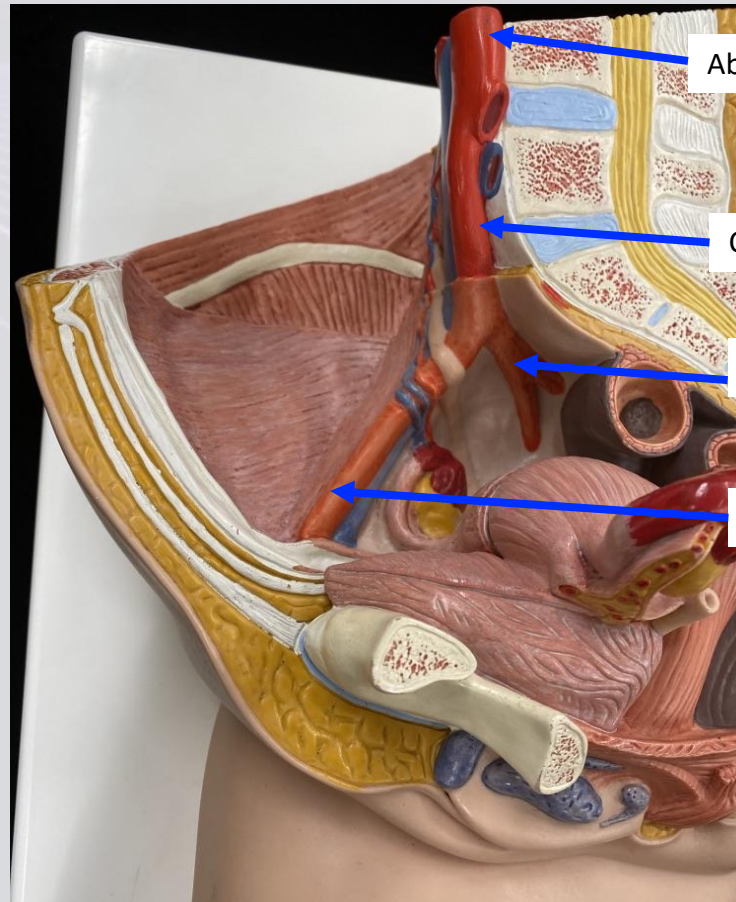
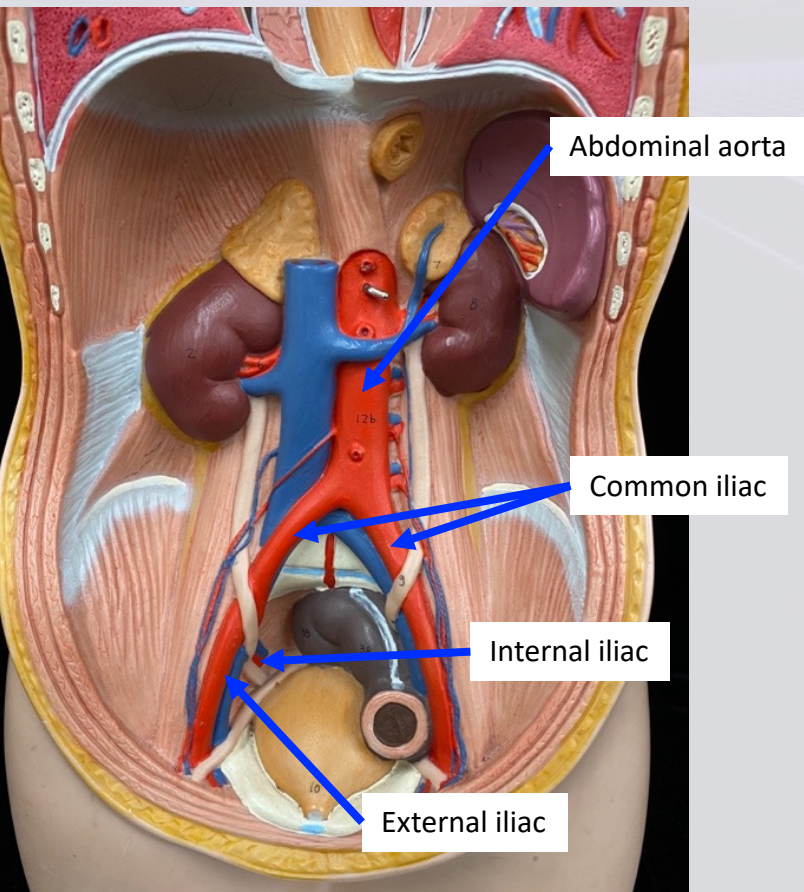
Superior mesenteric

Inferior mesenteric



# C. Pelvic Arteries

- Common iliac arteries
  - ❖ External iliac arteries
  - ❖ Internal iliac arteries





# Pelvic Veins

- Common iliac veins
  - ❖ External iliac veins
  - ❖ Internal iliac veins

