

CARDIOVASCULAR SYSTEM: BLOOD VESSELS

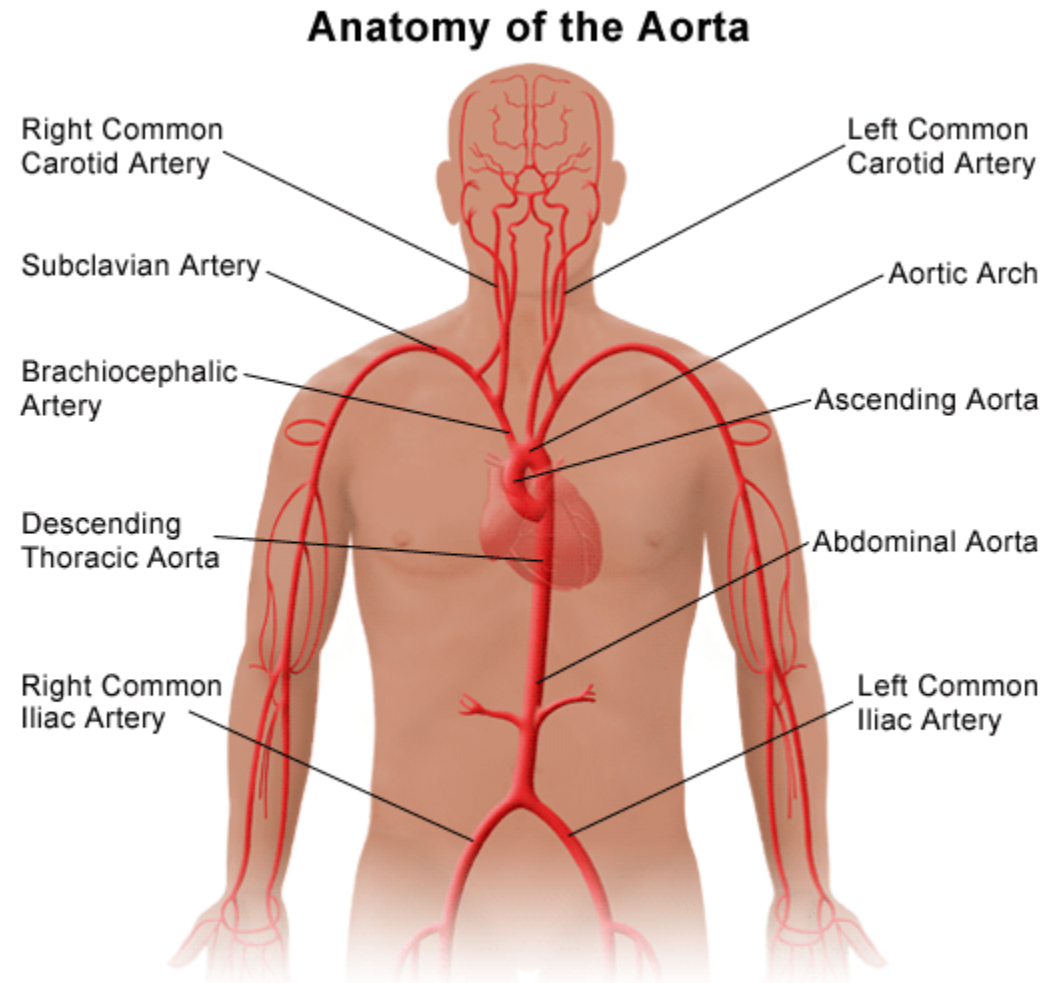
Dr: Wafaa Shunnaq

A decorative horizontal bar at the top of the slide, consisting of an orange square on the left and a blue rectangle on the right.

Main arteries of the body

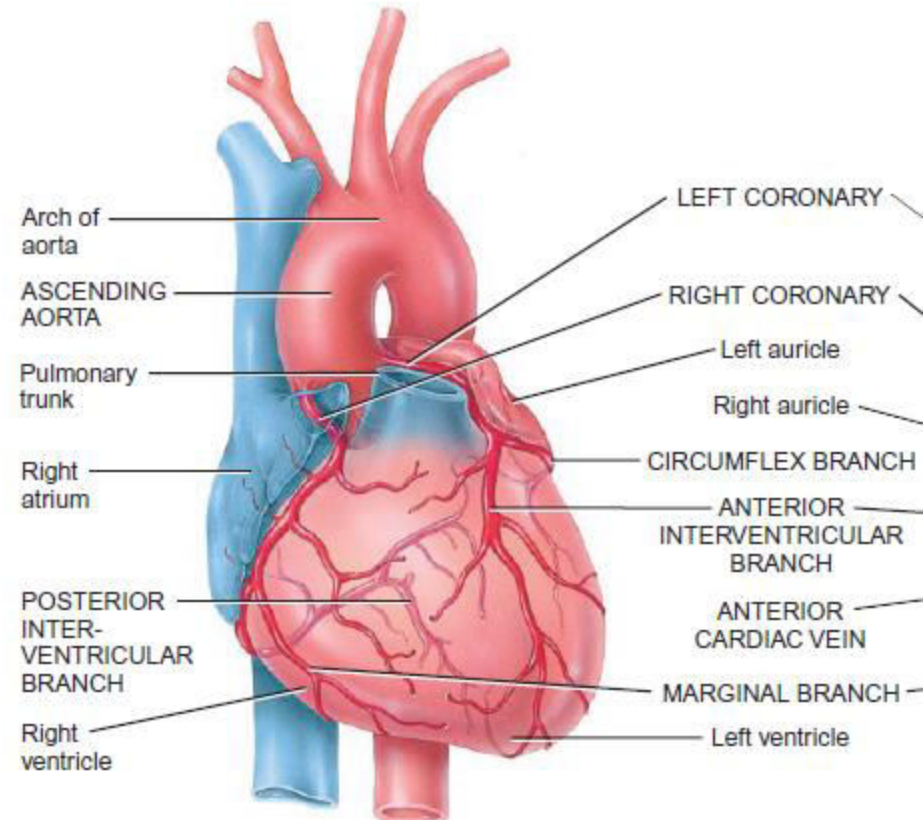
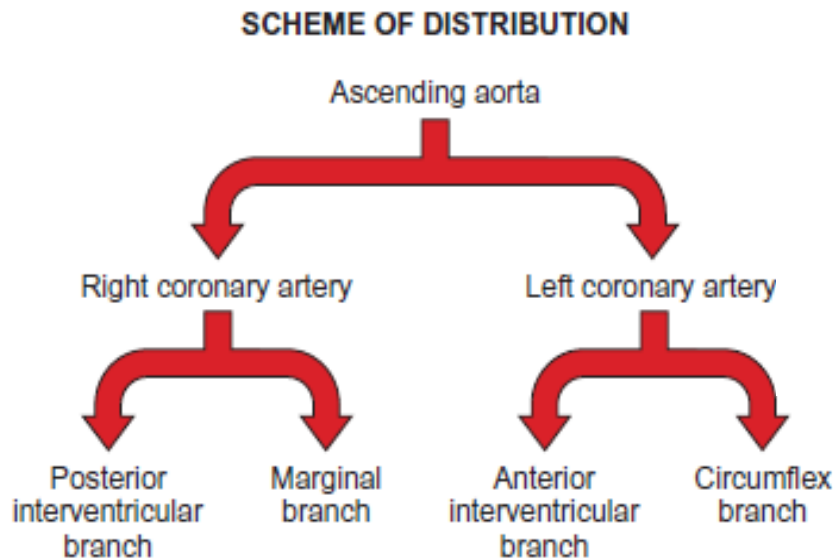
Aorta

- The aorta is the largest artery of the body
- Different parts of aorta are named for their location or shape.
- The aorta arise from left ventricle of the heart as **ascending aorta**.
- It arches to the left as **arch of aorta**.
- Then descends in the thorax as **descending or thoracic aorta**.
- It passes through diaphragm to enters the abdominopelvic cavity and becomes **abdominal aorta**.



Branches of ascending aorta

- The only branches of descending aorta are:
 1. Right coronary artery.
 2. Left coronary artery.



Branches of the aortic arch

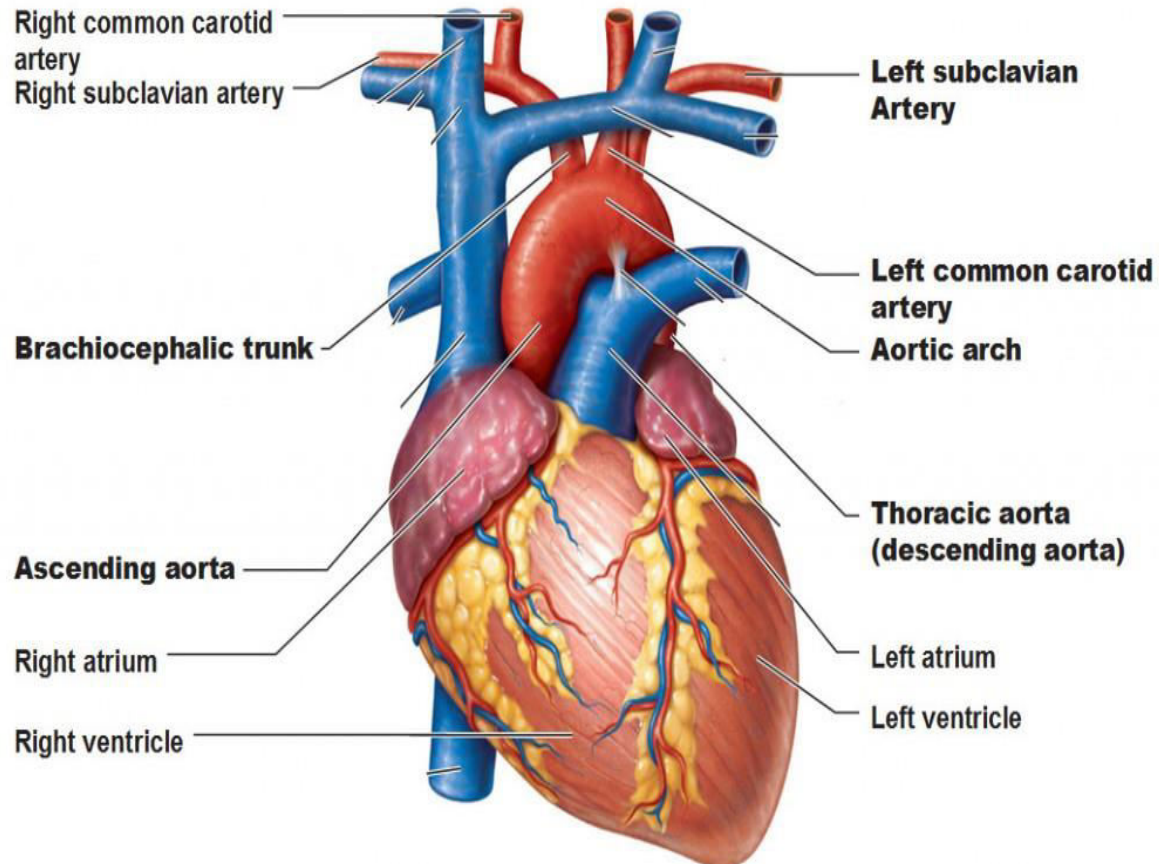
1. **Brachiocephalic trunk** (first branch) divides into:

Right subclavian artery and right common carotid artery.

2. **Left common carotid artery** (second branch).

3. **Left subclavian artery** (third branch).

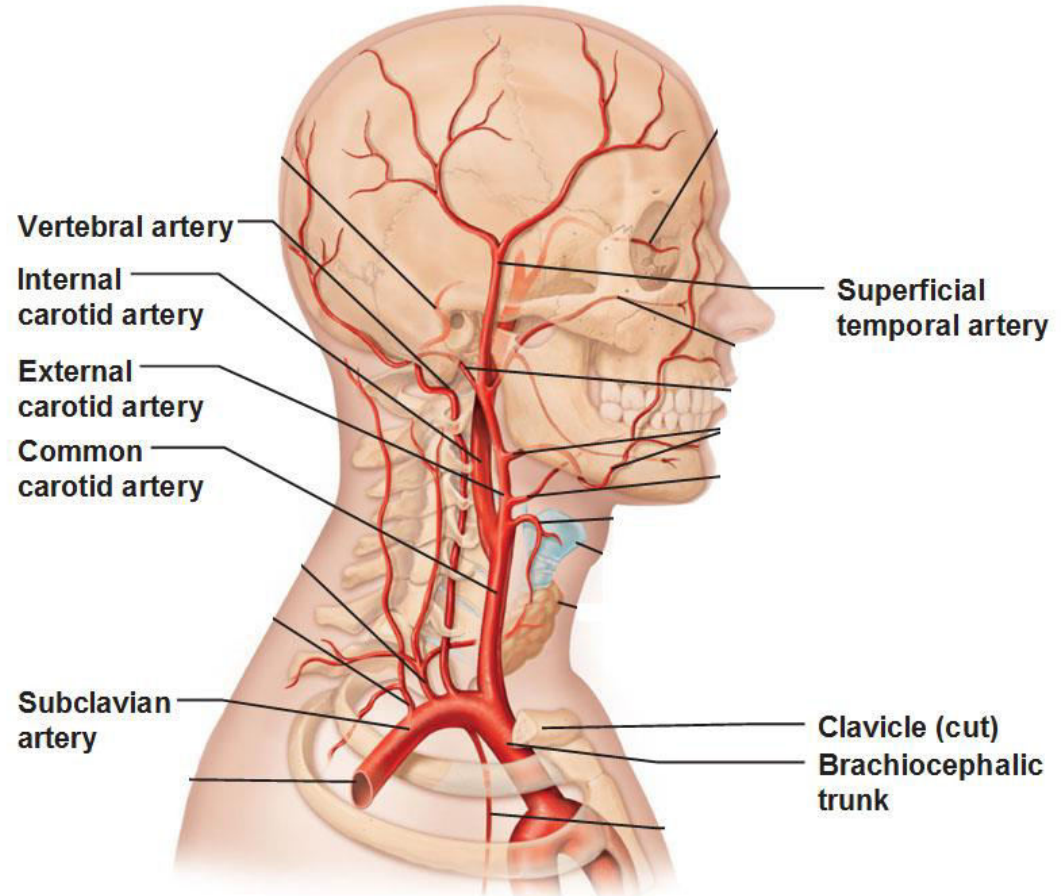
The Aorta and its Thoracic Branches



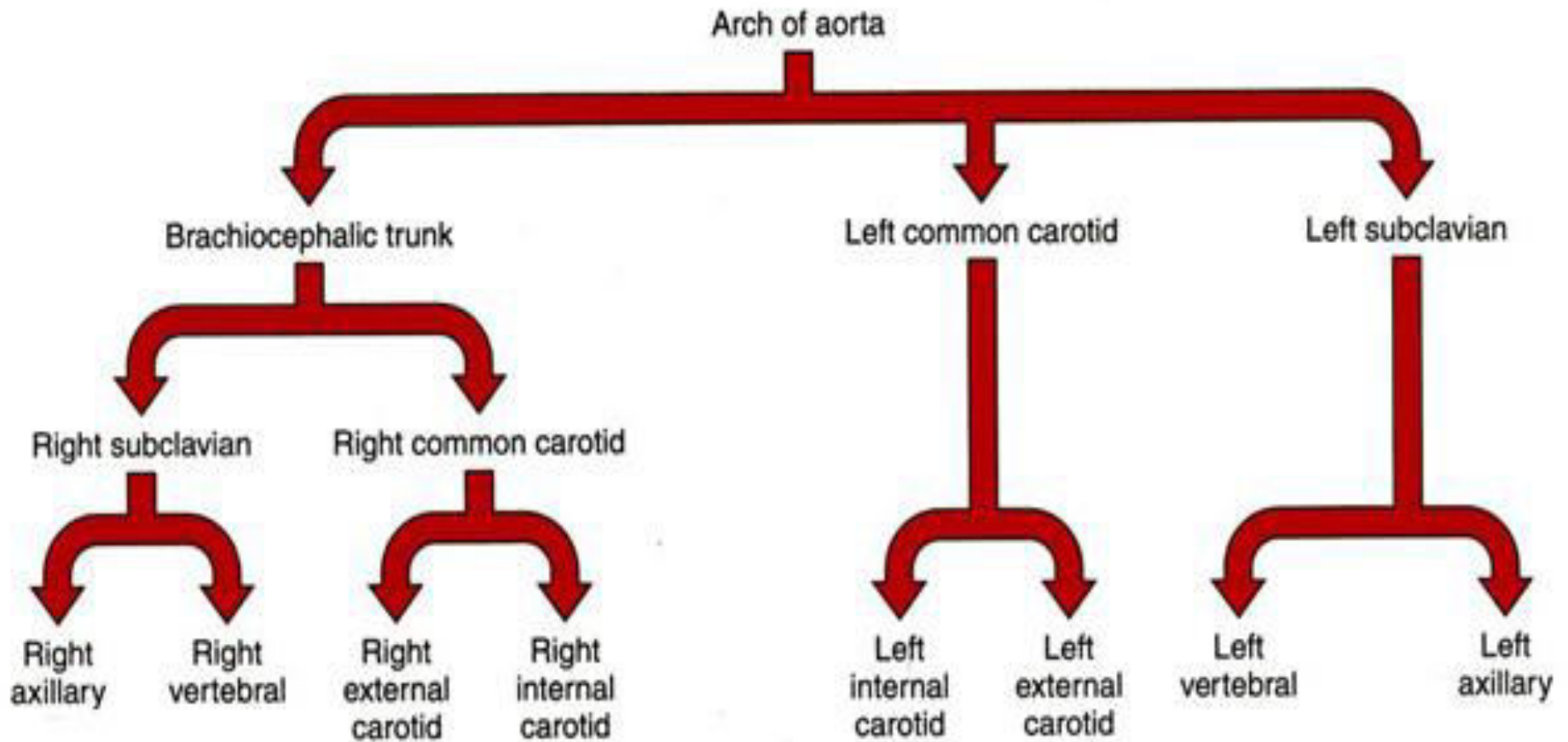
Common carotid artery

- **Common carotid artery divides into:**
 1. **External carotid artery**, which supplies skin and muscles of the head & neck.
 2. **Internal carotid artery**, which supplies brain

Arteries of the head and neck, right aspect



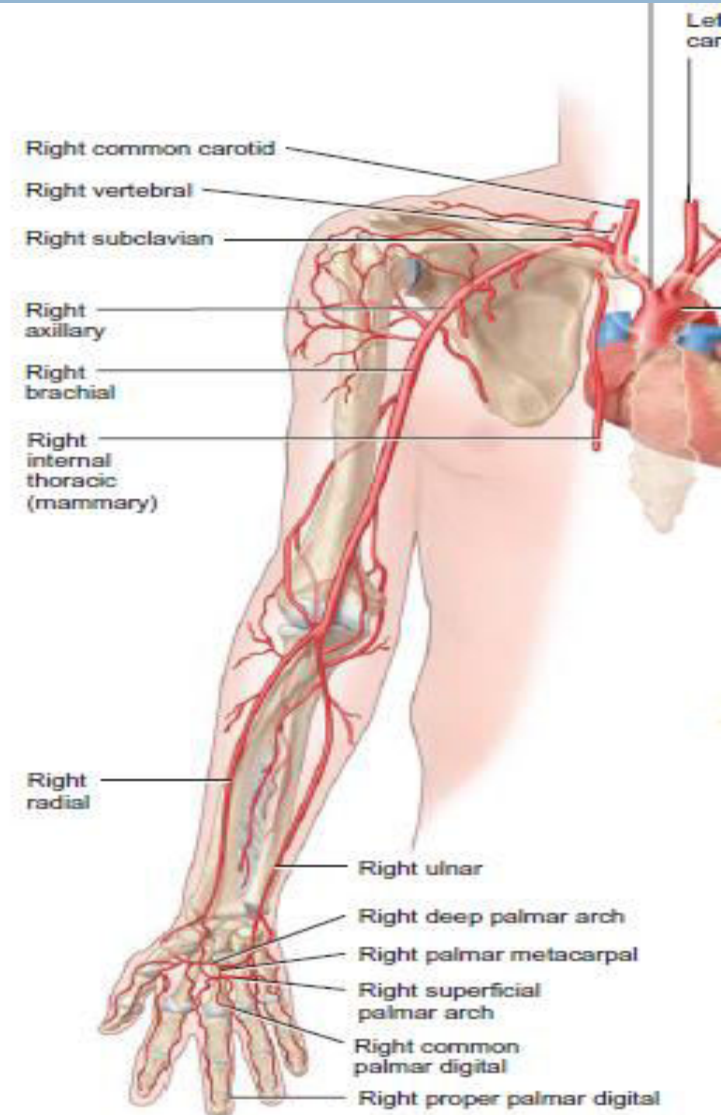
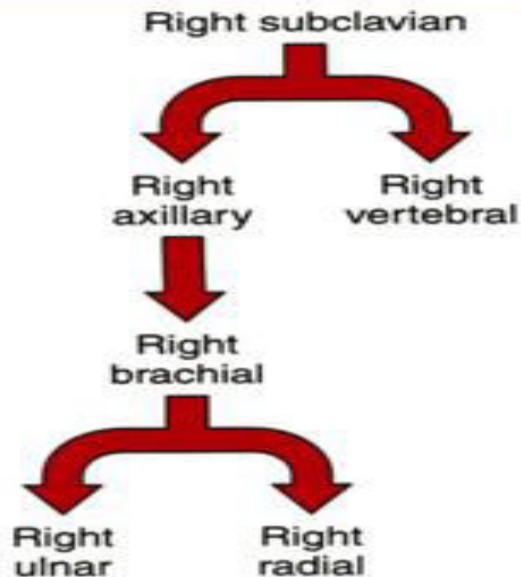
Arch of aorta



Branches of the subclavian artery

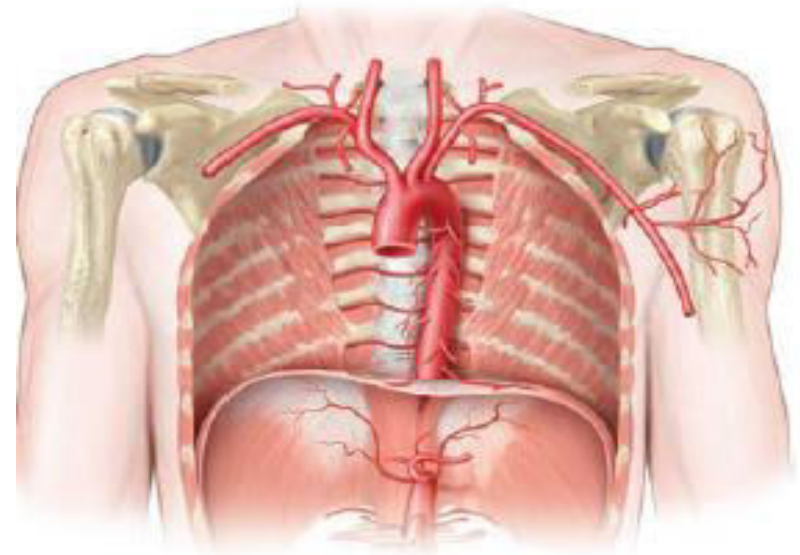
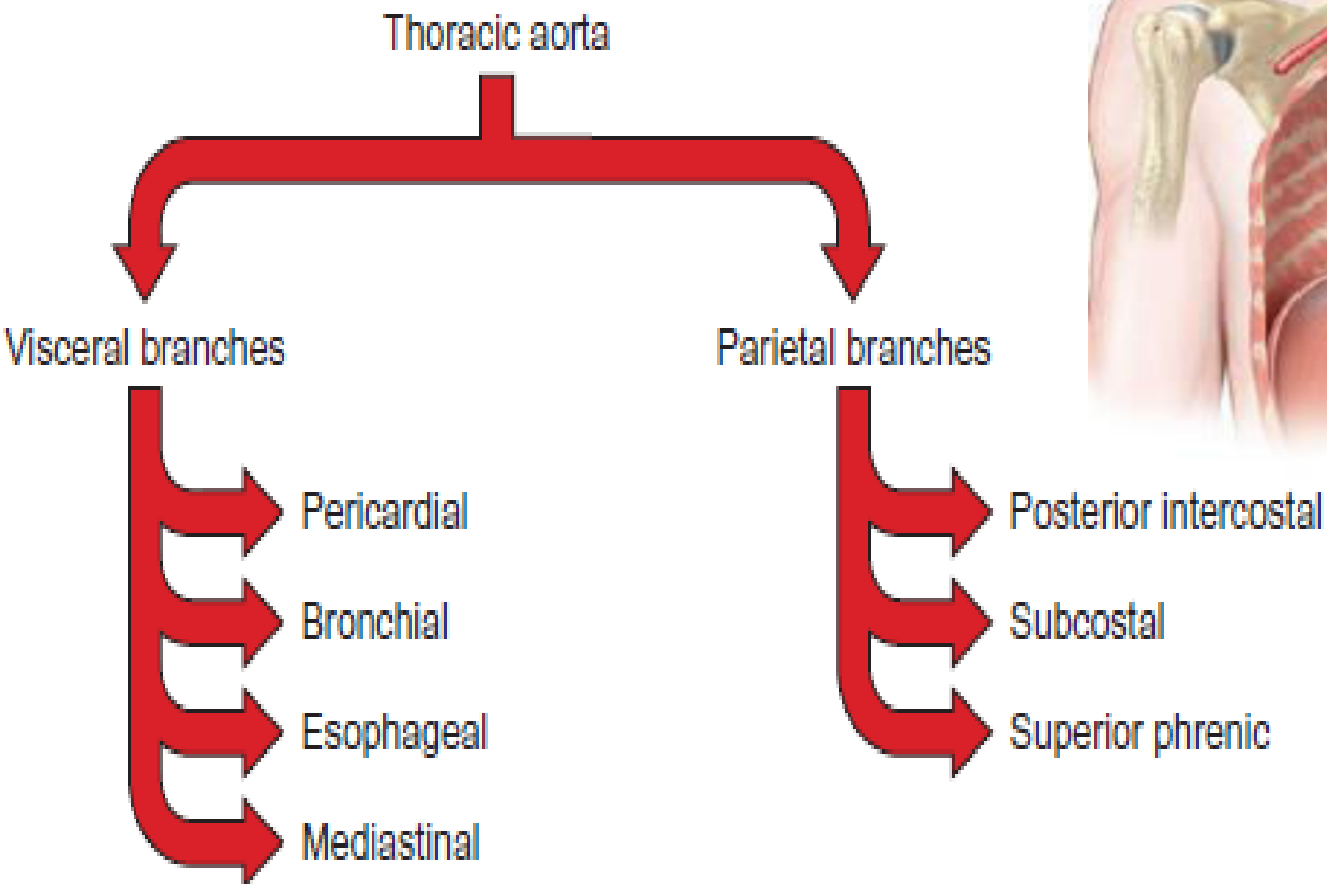
1. Vertebral artery: supplies part of the brain
2. Axillary artery
3. Brachial artery
4. Radial artery
5. Ulnar artery

Supply upper limb



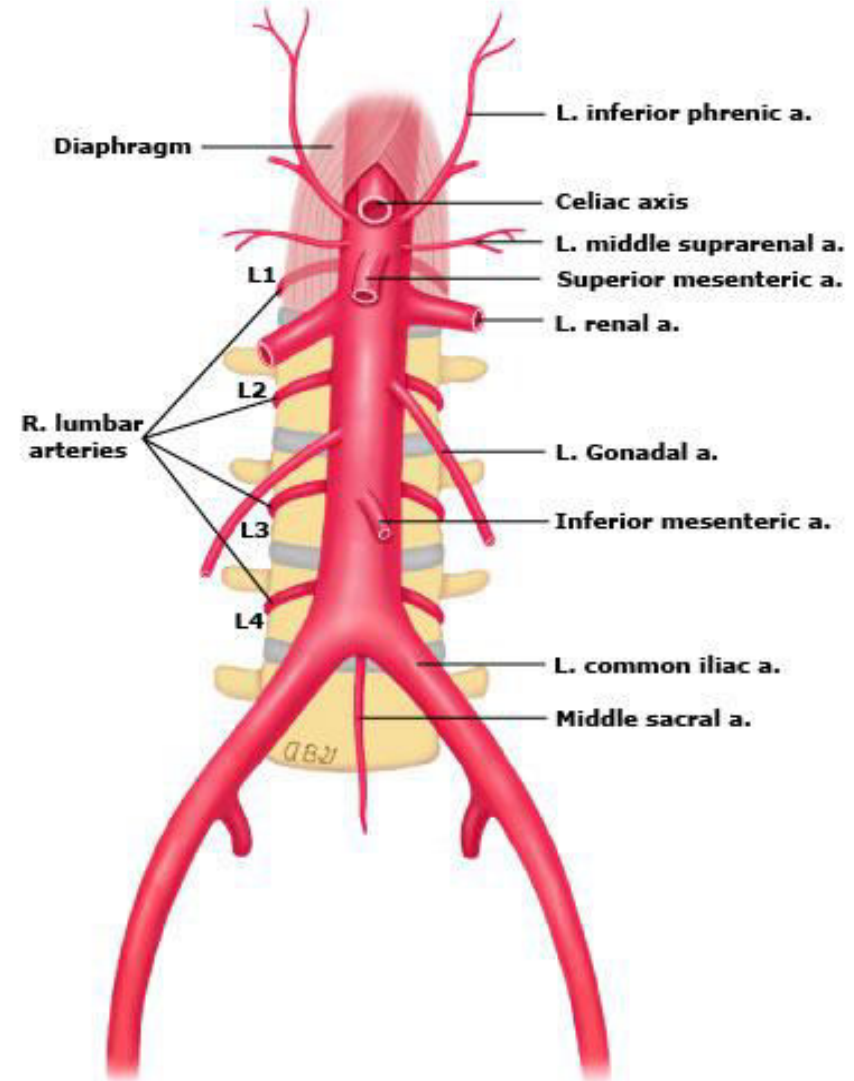
Branches of the thoracic aorta

SCHEME OF DISTRIBUTION

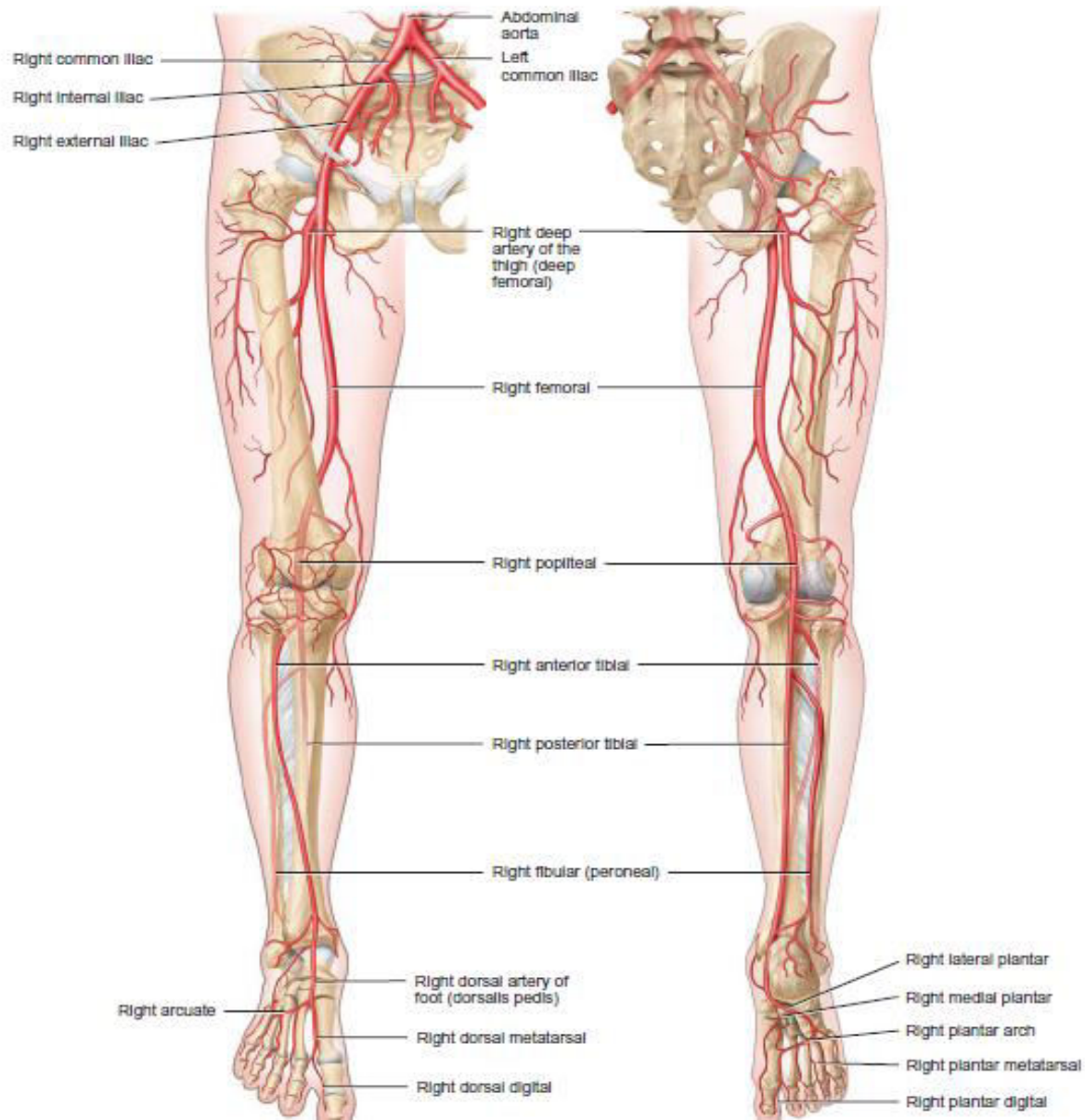


Branches of the abdominal aorta

1. **Celiac trunk:** for liver, spleen & stomach.
2. **Superior mesenteric artery** for small intestine
3. **Inferior mesenteric artery** for large intestine.
4. **Renal arteries** for kidneys
5. **Gonadal arteries** for testis and ovaries.
6. **Common iliac arteries** for pelvis and lower limbs.
7. **Lumbar arteries** for the muscles of the abdomen and wall of the trunk.



Common iliac artery



□ The common iliac arteries are the final branches of the abdominal aorta and each one divides into:

1. **Internal iliac artery** which supplies the pelvic organs like urinary bladder
2. **External iliac artery**, which enters the thigh to become **femoral artery**; which supplies thigh.

At the knee the femoral artery becomes the **popliteal** artery which then divides into:

1. Anterior tibial artery which terminates as dorsalis pedis artery.
2. Posterior tibial artery

A decorative horizontal bar at the top of the slide, consisting of an orange square on the left and a blue rectangle on the right.

Main veins of the systemic circulation

Introduction

- In limbs there are two types of veins:
 1. Deep: most of the deep veins follow the course of the major arteries and their names are identical.
 2. Superficial: visible under skin
- The veins drain into venae cavae which open into the right atrium:
 1. **Superior vena cava** drains upper limbs and head & neck.
 2. **Inferior vena cava** drains lower parts of the body.



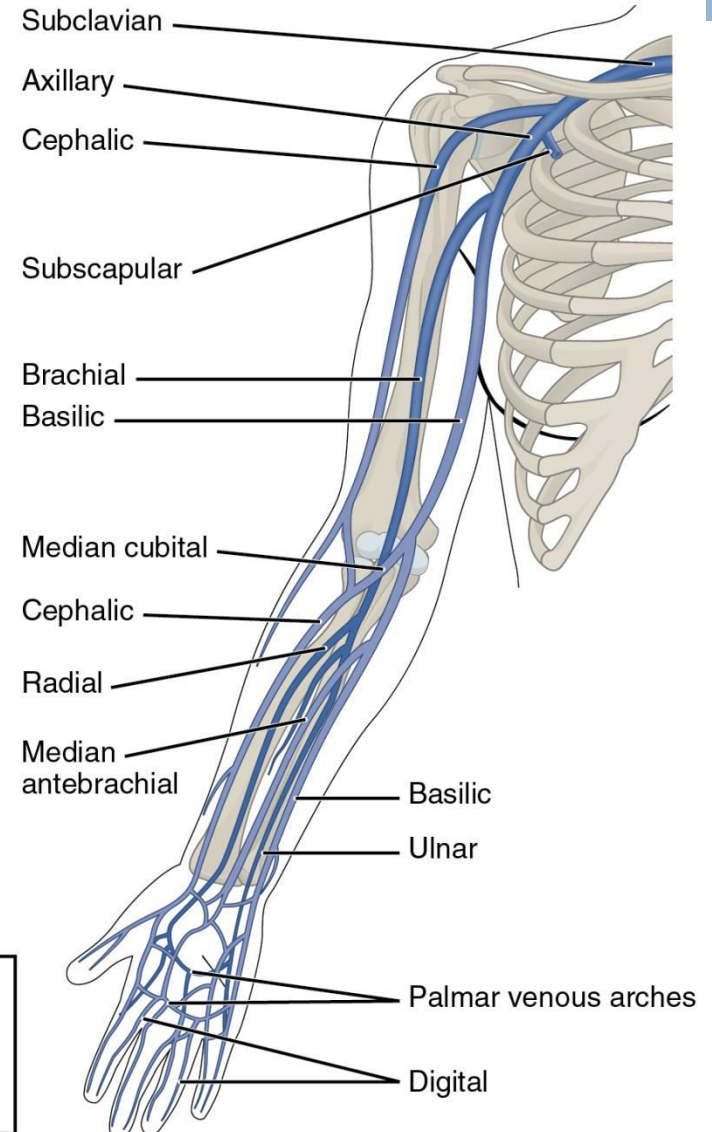
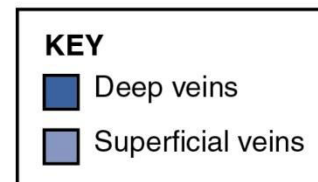
Veins draining into superior vena cava

□ Deep veins:

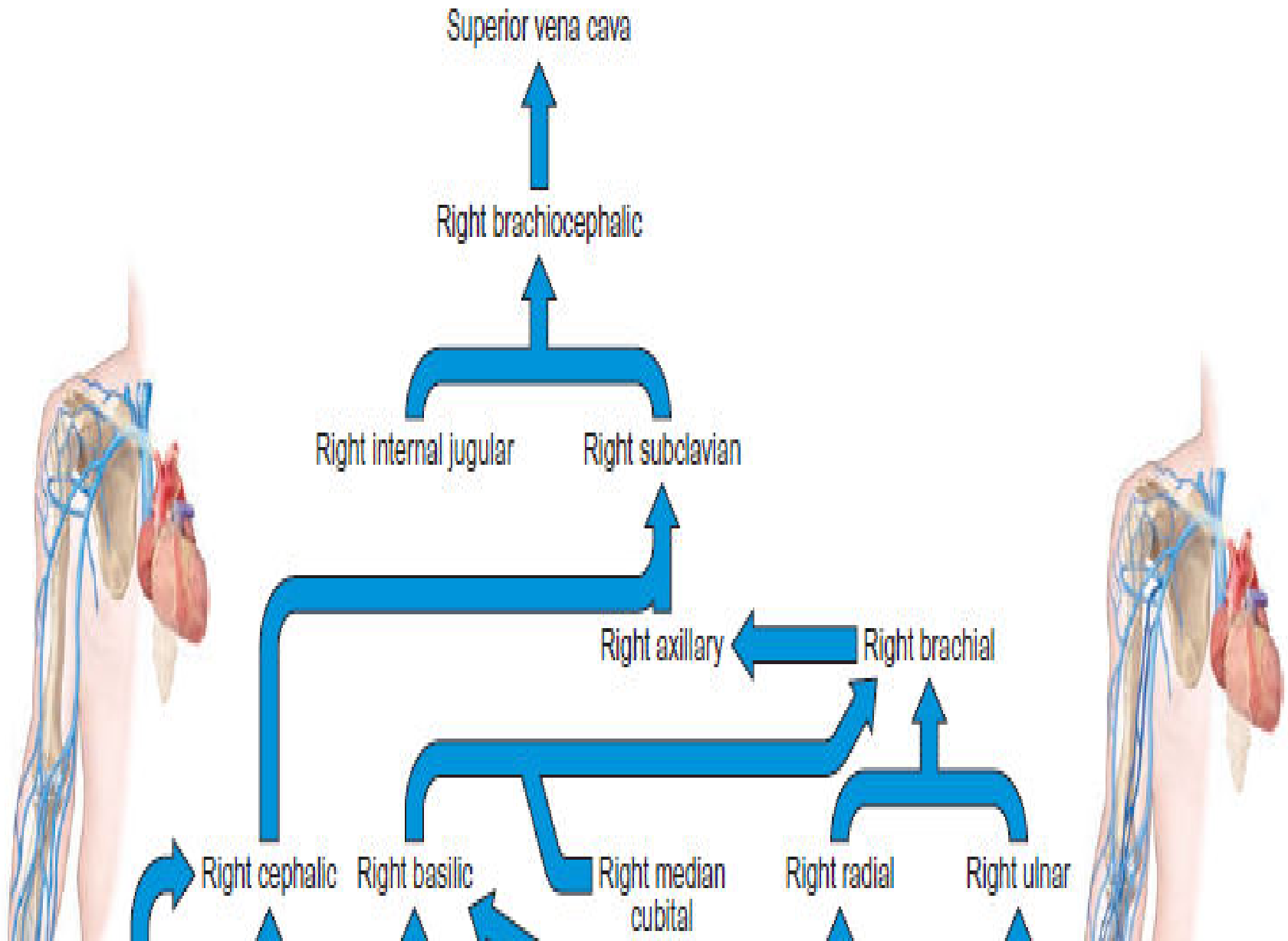
- **Radial and ulnar veins** drain the forearm
- They unite to form **brachial vein** which drains the arm and empties into **axillary vein**.

□ Superficial veins:

- **Cephalic vein** which drains the superficial lateral aspect of the arm and empties into the **axillary vein**.
- **Basilic vein** which drains the superficial medial aspect of the arm and empties into the **brachial vein**.
- the cephalic and basilic veins are joined at the anterior aspect of the elbow to form **the median cubital vein**.

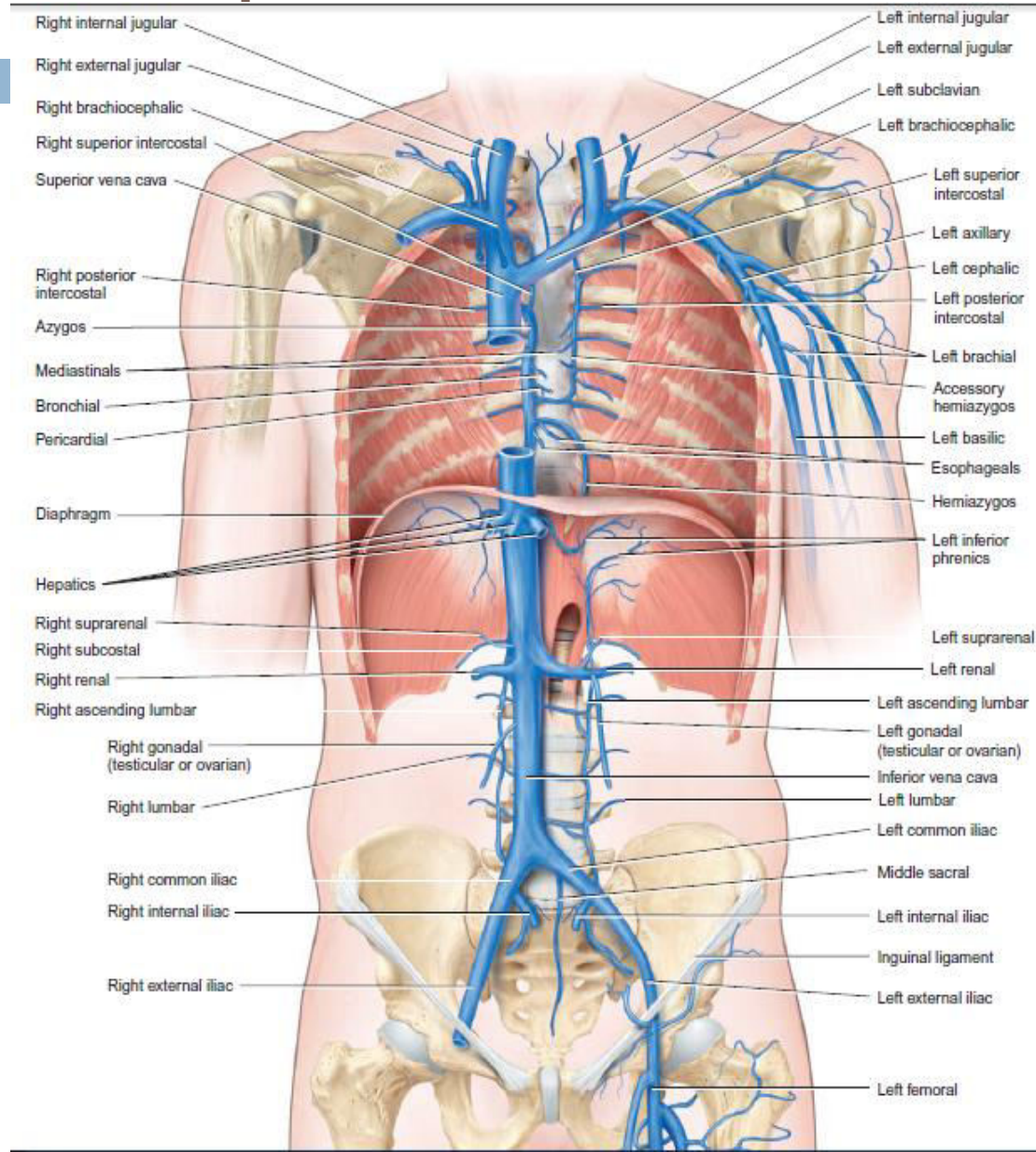


SCHEME OF DRAINAGE



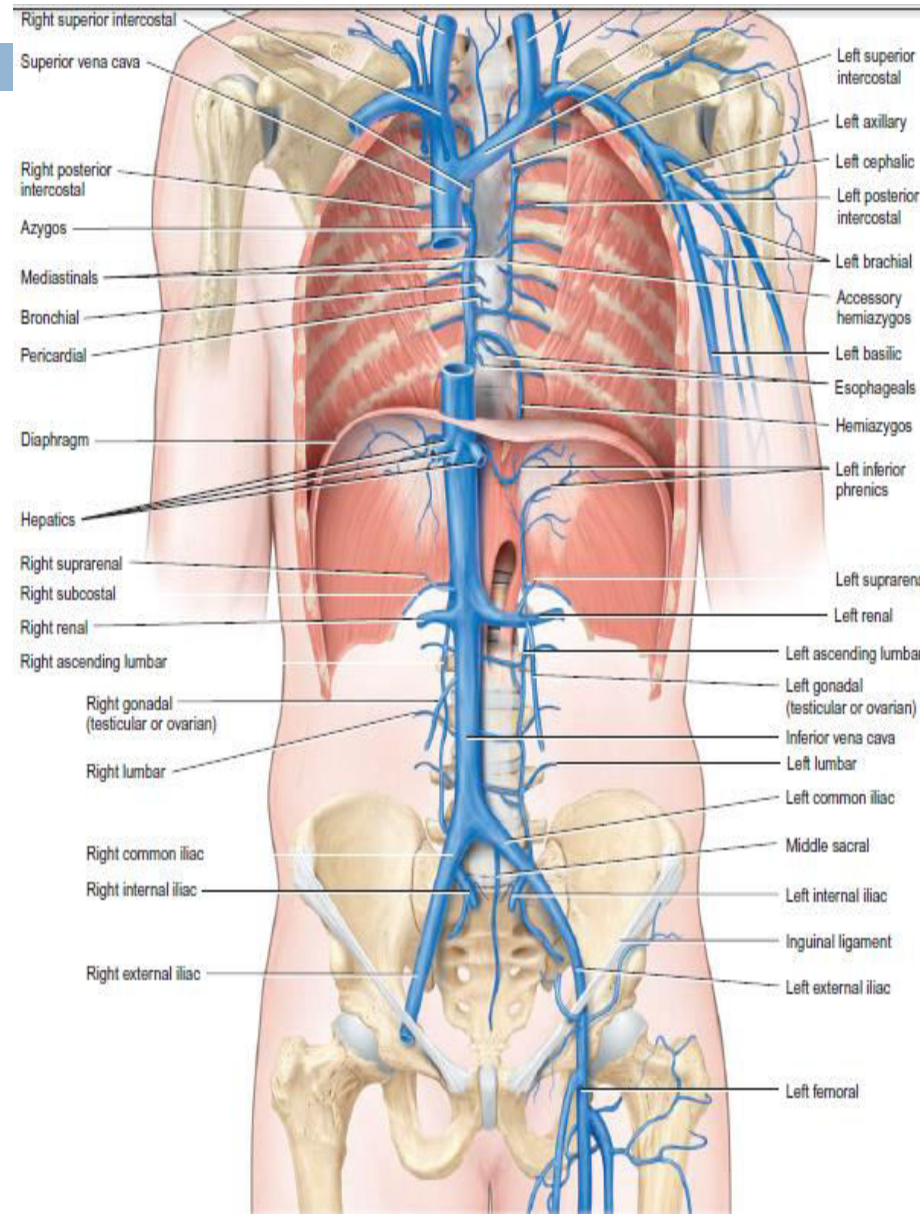
Veins draining into superior vena cava

- The **subclavian vein** receives **external jugular vein** (from head & neck) and **axillary vein** (from the arm)
- The **brachiocephalic veins** are large veins that receive blood from **subclavian, vertebral & internal jugular veins**.
- The right and left **brachiocephalic veins** joined to form the **Superior vena cava** which empties into the right atrium of the heart.
- The **azygos vein** is a single vein that drains the thorax and empties into the superior vena cava just before the superior vena cava enters the heart.



Veins draining into inferior vena cava

- The inferior vena cava is longer than superior vena cava and returns blood to the right atrium of the heart from all parts of the body below the diaphragm.



Veins draining into inferior vena cava

SCHEME OF DRAINAGE

