

Lab 7 Notes:

Circulatory System, Part I: Circulatory Vessels

Shark (pp. 175-190)

Read the section on the circulatory system in the shark (chapter 21, pp. 175-190). Look at the dissected sharks and the shark head models. You are only responsible for the circulatory vessels listed in the notes below – be able to identify them on both the specimens and the models, and know their respective functions.

Significant Circulatory Vessels of *Squalus*

Arteries and Branches (red latex)

- Ventral aorta
 - Afferent branchials
 - Trematic/Collector loops
 - Pretrematic branch
 - Posttrematic
 - Hypobranchial artery
 - Pericardial artery
 - Coronary arteries
 - Hyoidean artery
 - Paired dorsal aortae (converge posteriorly to form the single dorsal aorta)
 - Stapedial artery
 - Internal carotid artery
 - Efferent branchial arteries
 - Dorsal aorta
 - Subclavian artery
 - Coeliac artery
 - Iliac artery
 - Femoral artery

Veins and Tributaries (blue latex)

- Inferior jugular veins
 - Anterior cardinal sinuses
- Subclavian vein
 - Lateral abdominal vein
 - Intersegmental veins
- Posterior cardinal sinuses

Cat (pp. 386-410)

Read the section on the circulatory system in the cat (chapter 39, pp. 386-410 only). We will cover the first part of chapter 39 (heart anatomy) and the respiratory system next week. You are only responsible for the circulatory vessels listed on the handout; find them in your cats and look at the specimens of other groups as well to get an idea of the variation, which can be substantial. Pages 388 and 389 will likely be very useful in identifying the vessels in the cats. Notice how the vessels are not always symmetrical, especially the arteries anterior to the heart branching from the aortic arch.

Significant Circulatory Vessels of *Felis*

Arteries (red latex)

Dorsal aorta
Coronary artery
Brachiocephalic artery
 Common carotid arteries
 Right subclavian artery
 Axillary artery
 Subscapular artery
 Brachial artery
Left subclavian artery
 (branches as on right)
Coeliac artery
Anterior/cranial mesenteric artery
Posterior/caudal mesenteric artery
Adrenolumbar artery
Renal artery (may be doubled on each side)
Lumbar artery (2 or more leave aorta dorsally)

External iliac artery
Femoral artery

Caudal artery
Internal iliac artery

Veins (blue latex)

Anterior vena cava
Coronary vein
Azygous vein

Brachiocephalic veins
 External jugular vein
 Transverse scapular vein
 Transverse jugular vein
 Anterior facial vein
 Posterior facial vein
Subclavian vein
 Subscapular vein
 Axillary vein
 Brachial vein
Posterior vena cava
 Hepatic portal vein (injected yellow)

Adrenolumbar vein
Renal vein (may be doubled/tripled on each side)

Lumbar veins (2 or more drain into posterior vena cava
 from dorsum)

Common iliac vein
 External iliac vein
 Femoral vein
 Internal iliac vein
Caudal vein (tributary to only one common
 iliac, usually on the right)