

Cat Dissection

Title: The Cardiovascular System Lab

Materials: shirt, gloves, paper towels, scalpel, forceps, scissors, probes, cat, colored pencils, rubber bands, drawing paper, lab manuals

Opening the Thoracic Cage

Procedure:

1. Use the illustration manual to aid in identifying the structures of the cat cardiovascular system
2. Find the **sternum** of the cat and locate the **xiphoid process** by tracing the bottom of the rib cage
3. Using the scalpel make an incision from the xiphoid process to just below the chin (Be careful not to cut too deep and damage internal organs)
4. Using scissors and your first incision as a guide, penetrate the chest cavity below the xiphoid process and cut through the sternum just below the chin (Be careful not to cut too deep and damage internal organs)
5. Carefully spread apart the walls of the thoracic cage and locate the **diaphragm** at the caudal end of the incision
6. Make a cut just superior to the diaphragm laterally and dorsally toward the spine on both sides
7. Spread apart the walls of the thoracic cage to expose the internal organs
8. Identify the heart
9. Remove CT surrounding the heart using your forceps (Be careful not to remove major blood vessels coming off of the heart)

Identification of Structures of the Heart

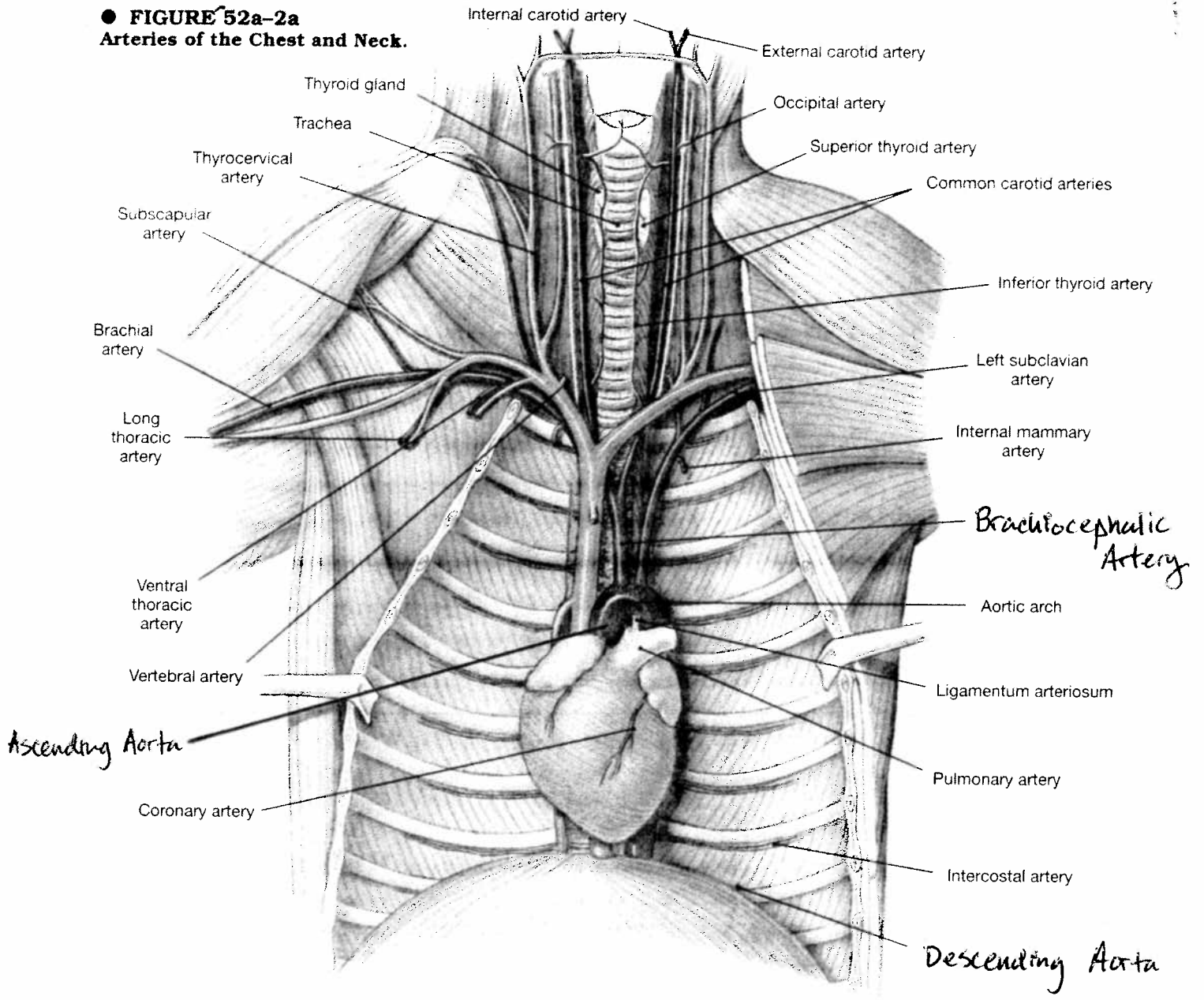
Procedure:

1. Identify the **pericardial sac**
2. Using your forceps and scalpel, make an incision through the pericardial sac from the apex to the base
3. Peel the pericardial sac dorsally
4. Identify the following structures externally:
 - **right and left atria***
 - **right and left ventricle***
 - **superior and inferior vena cava***
 - **pulmonary arteries and veins ***
 - **ascending aorta, descending aorta, and aortic arch***
 - **pulmonary trunk***
 - **brachiocephalic artery***
 - **left subclavian artery***(**Note-** arteries and veins have been color coded for you)
5. Draw an anterior external view of a heart. Be sure to label all of the structures that are * from steps 4. Use the at least $\frac{3}{4}$ of the page to draw and label the hearts. (Pay attention to detail!)

Conclusion Questions:

1. Describe the functions of each of the structures that are * in steps 4. (12 organs total)
2. Trace the path of blood through the heart starting from the inferior and superior vena cava.
3. Name the branches that come off of the aorta.
4. Describe the appearance and texture of the pericardial sac.

● **FIGURE 52a-2a**
Arteries of the Chest and Neck.



● **FIGURE 52a-3a**
Veins of the Chest and Neck.

