

# Pig Pluck Heart dissection

Before starting your dissection, please read the following and initial:

1. You must respect the specimen that you are dissecting on.
2. Dissection is *NOT* about mutilating and cutting up your specimen, it is *ABOUT* learning how the actual specimen looks like in relations to what we have learned in class.
3. Whatever dissection you do, you should always respect and treat it as a privilege that you have a specimen to operate on. Anyone caught fooling around will *NOT* be tolerated and will be asked to forfeit their dissection privileges.

Your name: \_\_\_\_\_ Your initials: \_\_\_\_\_

By signing your initials, you have confirmed that you have understood the privileges you have acquired in dissecting a specimen.

## Procedures:

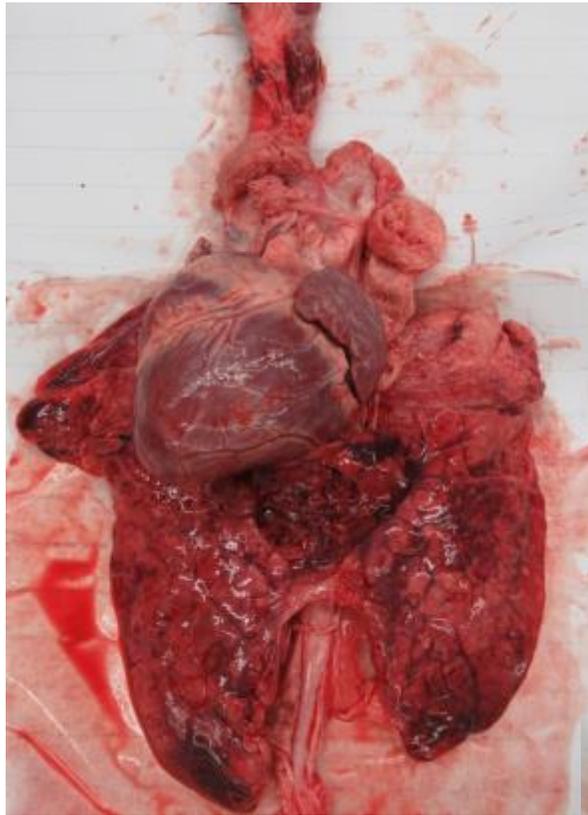
Follow the steps 1 by 1, and ask questions when you encounter something you don't understand.

Have the following materials beside you:

- A labeled heart diagram
- Your blood flow through the heart diagram
- Gloves
- Pencil for a group member to sketch out what you see
- Paper towels
- Newspaper or large chart paper
- Dissection utensils (probe, scissors, tweezers, scalpel)
- Garbage bag

Step 1:

Lay your pig pluck on the newspaper/chart paper with the apex (pointy end) of the heart point down, and above the lungs.



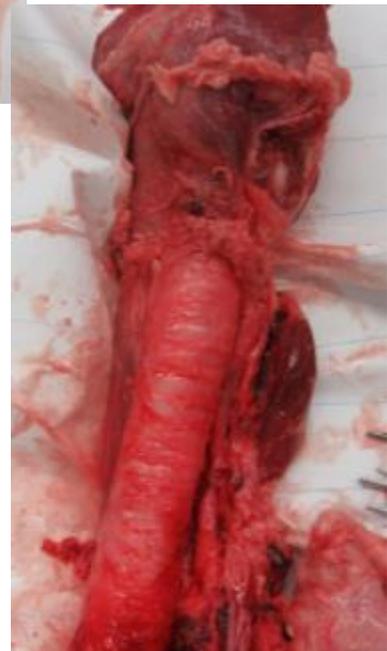
Observe the textures of the various in the circulatory/respiratory such as lung tissue vs heart tissue.

Locate the trachea:

Observe the rigidity of the trachea. Trachea is formed by **rings** of cartilage and it is about 1 inch in diameter.

Insert a tubing (used in Bunsen Burner) down the trachea, and have a student inflate the lungs. This is what happens when you inhale.

Did your lungs inflate? \_\_\_\_\_



tissues system

1 inch

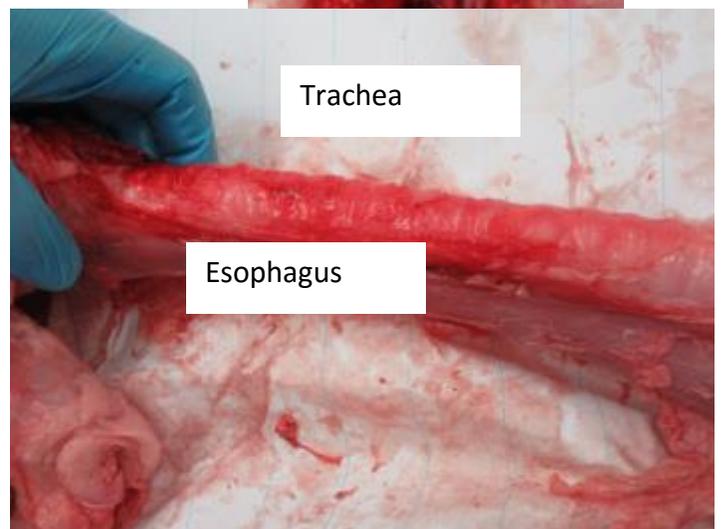
lungs.

Step 2:

With the trachea located, locate the esophagus. The esophagus should be posterior (towards the back) of the trachea.

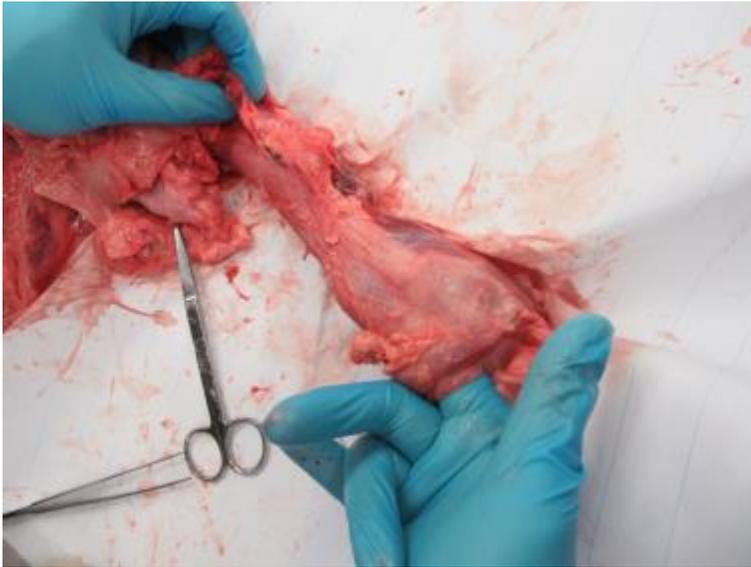
Probe the esophagus with your finger and observe the textures of the esophagus compared to the trachea.

What is the process called when food is rhythmically pushed down the esophagus? \_\_\_\_\_



Trachea

Esophagus



### Circulatory identification

*We will start with the right atrium first and follow the blood flow from the right atrium all the way around and out the aorta.*

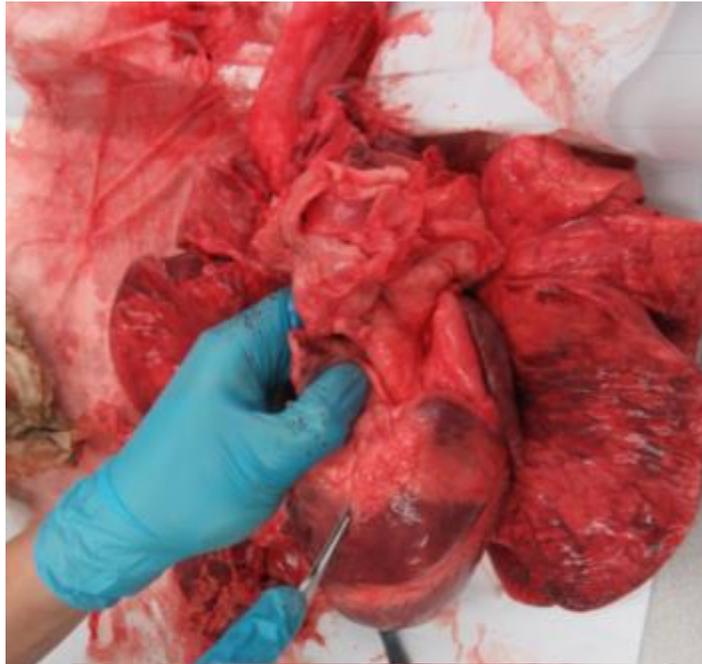
*Locate the right atrium. The right atrium is the auricle sticking out from the main structure, like a little ear.*

*From the right atrium, before making any cuts, locate the vena cava that should be leading INTO the right atrium.*

*Can you locate the vena cava? \_\_\_\_\_*

*Cutting the right atrium:*

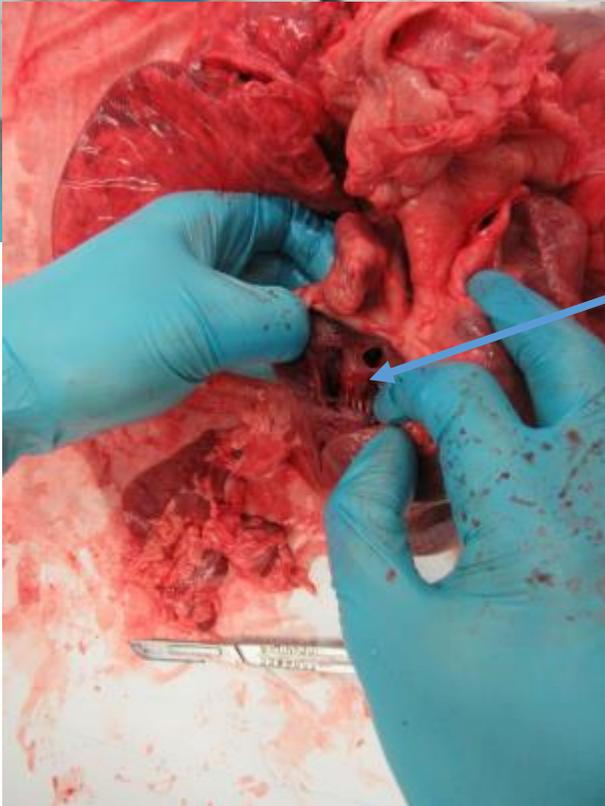
*Before making cuts, it is important for you to visual where you want to cut first. The objective of the first cut is to open up the atrium to see the valve.*



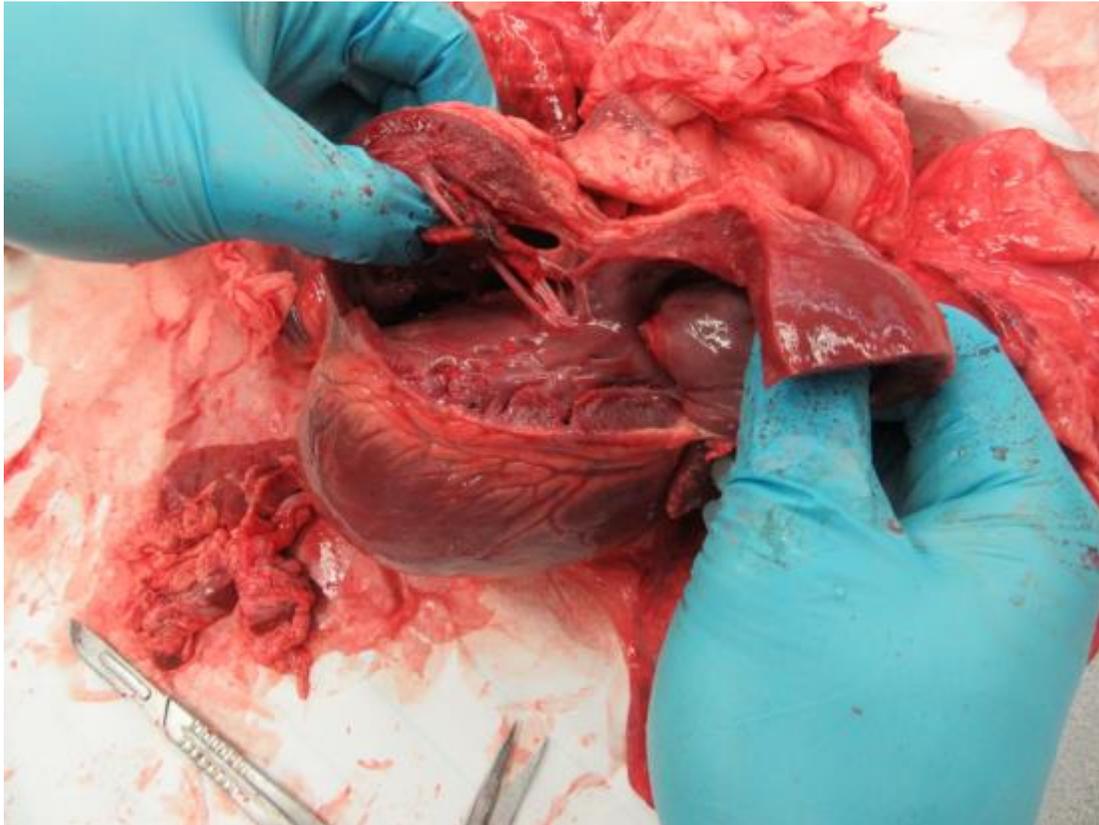
*Carefully make a cross sectional cut to “open up” the right atrium like opening up an oyster.*

*Try not to cut all the way but cut the atrium from the left side to bottom.*

*Once you have made a small cut, try to open up the flap to see if you can view the tricuspid valve between the atrium and the ventricle.*



*Once you have opened it up, you can see that there is the valve between the right atrium and right ventricle.*



*In the above, the view of atrium and ventricle.*

*diagram cut opens up the right the right*

*Once your right atrium is cut up, try probing the right atrium with your finger and see if it leads back to the vena cava.*

*Now probe with your fingers down the atrium, through the tricuspid valve, and into the right ventricle.*

*Now cut open the right ventricle by making a similar cross sectional cut as you did with your right atrium, exposing the inner linings of the heart.*

*Identify and locate the pulmonary valve.*

*Can you locate the pulmonary valve? \_\_\_\_\_*

*Probe with your fingers out of the right ventricle.*

*What are these arteries called? \_\_\_\_\_*

*If you probe far enough with your fingers, you should be able to reach to the lungs. This is where gas exchange occurs!*

### *The left side of the heart*

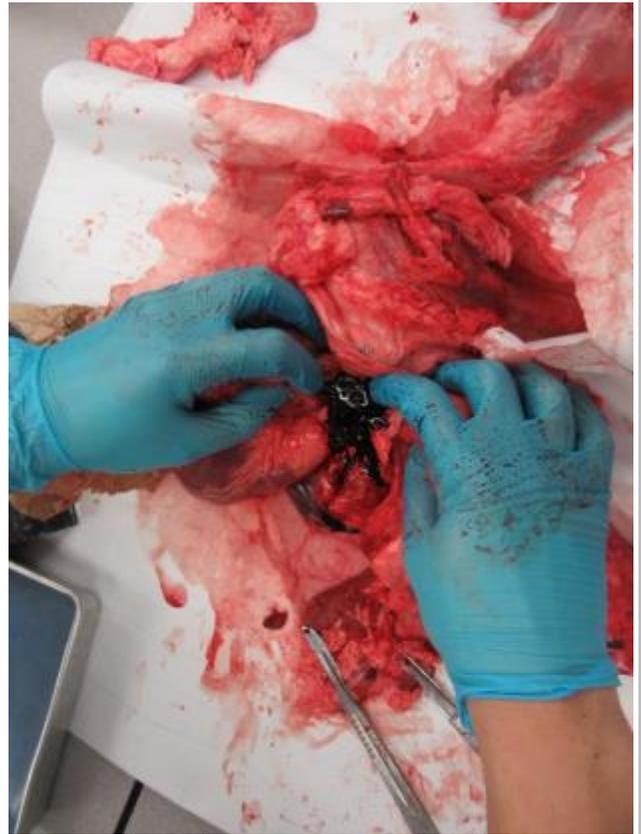
*Now that the blood has entered the lungs, it will now be oxygenated, and has to travel back to the heart via the left side.*

*It enters into the left atrium via the pulmonary vein. Can you locate the pulmonary vein? \_\_\_\_\_*

Now explore the left atrium and ventricle by carefully cutting open the left atrium.

There may be a pool of hardened blood found in the atrium.

Now, pry / cut open the left atrium to see if you can identify the left bicuspid valves similar to the diagram below.



You can now explore the left ventricle by making another cross sectional cut, and observe the thickness of the walls on the left ventricle.

Probe with your fingers in the left ventricle, and identify the flow into the aorta. There should be 3 separate branches that stem out of the aorta.

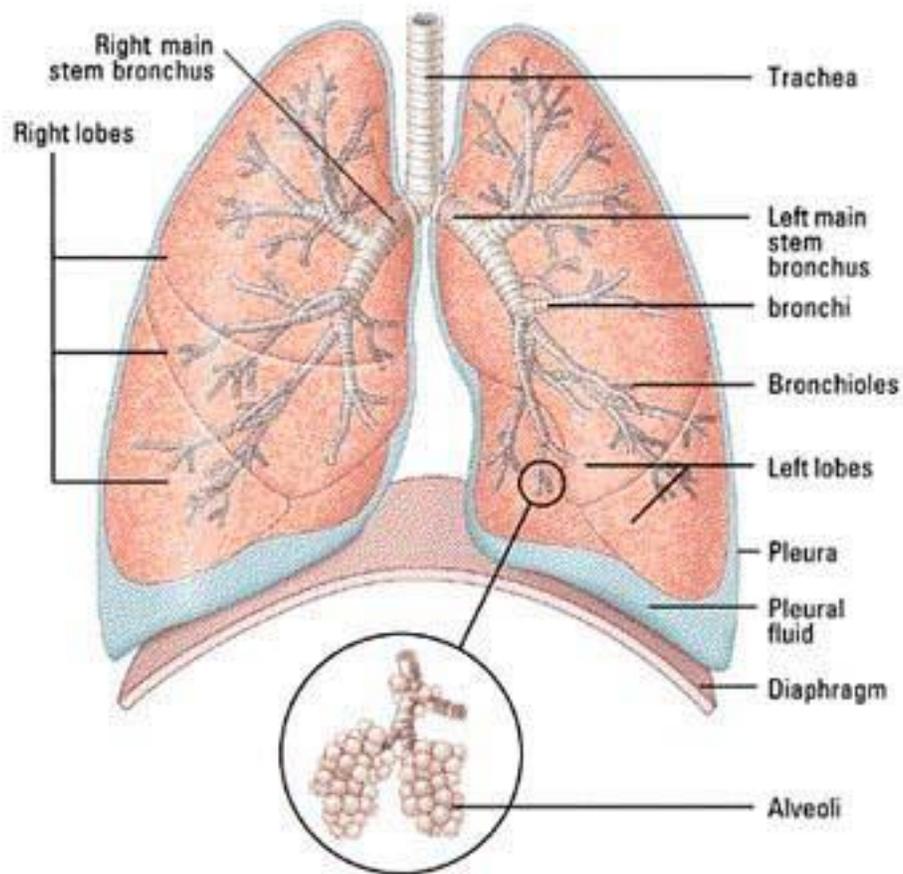
You can now open up the left ventricle to see the papillary muscles that are responsible in opening and closing the valves.

### The lungs

Make cross section cuts of the lungs to expose various connecting breathing channels such as your bronchi, and bronchioles.

Observe to see if you can see that there are 3 lobes in the right side of the lungs while 2 lobes on the left side. Why would that be \_\_\_\_\_?

# Lungs



## *CLEAN UP*

- *Wash*
- *Throw away your pluck in your garbage bag*
- *Wipe and wash down your table tops with diluted ethanol or soap.*
- *Complete your sketches for hand in*

*Congratulations!  
TIME  
your utensils*