

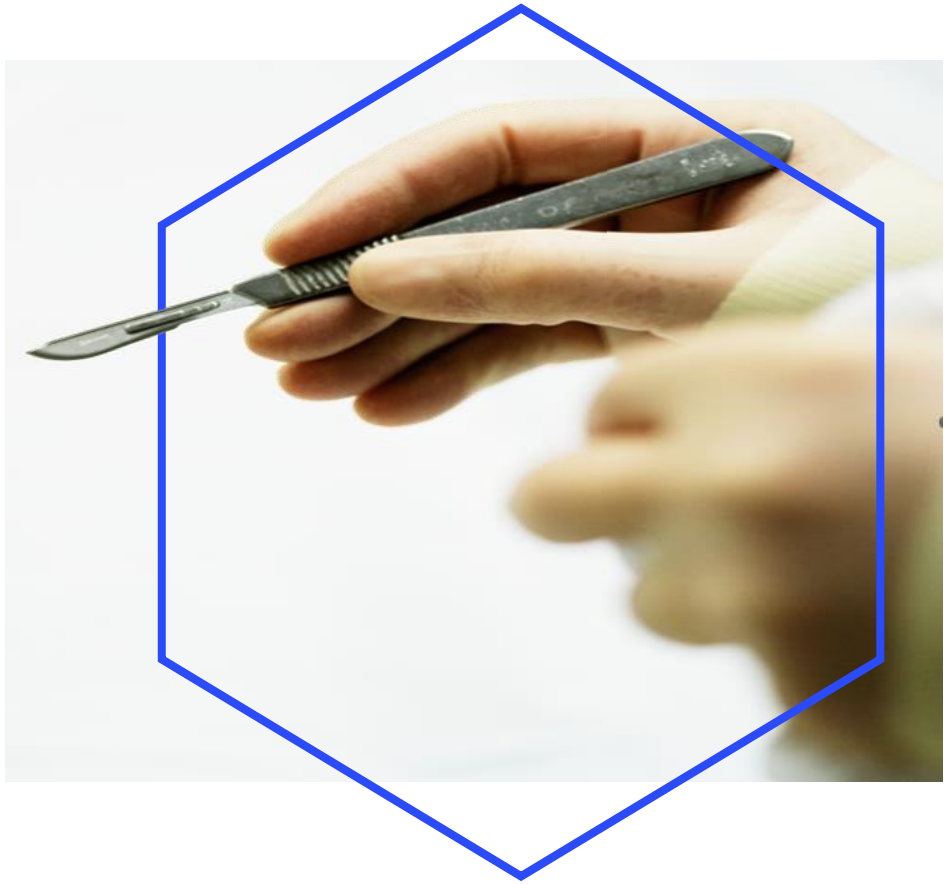
Avoid the Rat Race!

Carolina's Perfect Solution® Rat Dissection

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Objectives

- **Conduct a rat dissection.**
- **Examine rat anatomy while relating structure to function.**
- **Experience Carolina's Perfect Solution® specimens.**



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Building Toward TEKS Science Concepts

TEKS

- **112.42.C.12.A:** Analyze the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals.

Explore Dissection Resources

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Carolina's Perfect Solution® Specimens

Quality

- Superior preservation
- Superior tissue color and texture

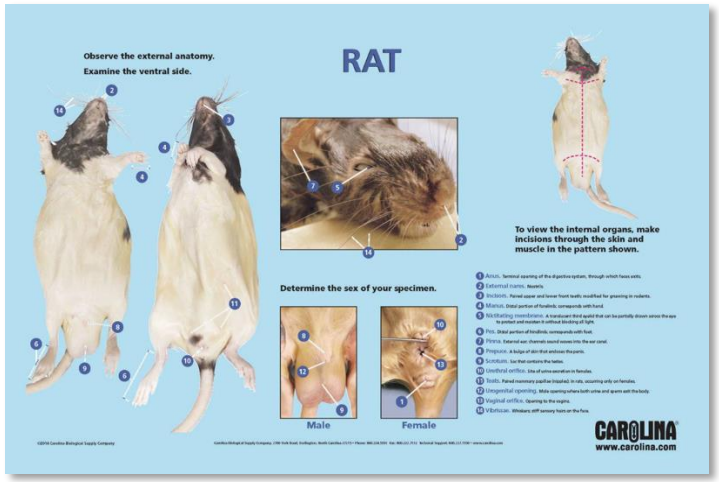
Safety

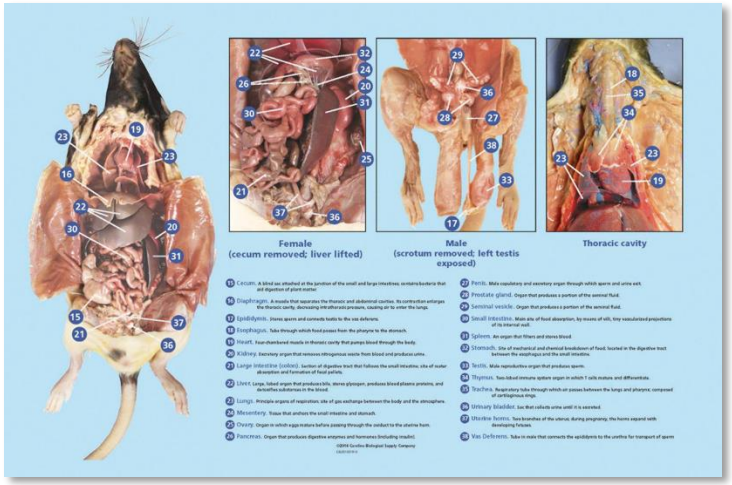
- No dangerous off-gassing
- No formalin odor

CAROLINA UNLEASH LEARNING

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Carolina® Dissection Mats





- Clear, concise dissection instructions
- Detailed, color photographs
- Labeled internal and external structures with definitions
- Cost-effective
- Reusable—wipe clean

PLEASE DO NOT TAKE THESE MATS!

We need these for future workshops.

CAROLINA
UNLEASH LEARNING

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Dissection Preparation Tips

- **Organize your dissection area:**
  - Take out your dissection tray
  - Put blue absorbent pad under the dissection tray
  - Lay out your instruments
    - Scissors
- **Use appropriate personal protective equipment:**
  Apron, gloves, safety goggles



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Safety Issues

- **Personal protective equipment**
  Apron, gloves, safety goggles
- **Dissection tools**
  Be diligent with sharp tools



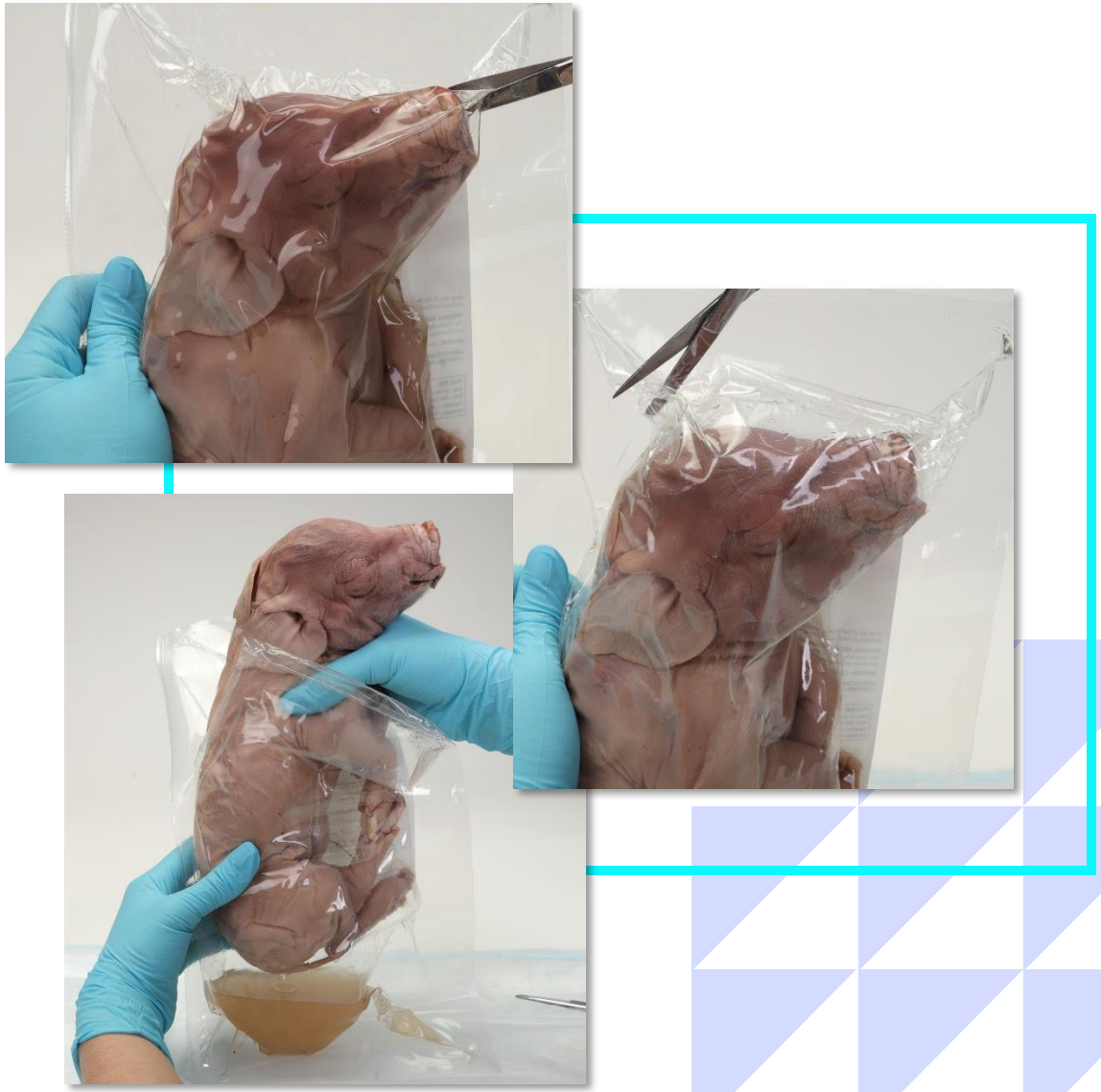
Safety Tip
If you are not using an instrument, set it down!



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Teacher Tip

1. At the anterior of the specimen, locate an area where there is excess plastic.
2. Force any fluid out of the area to prevent spills.
3. Cut a small hole in the excess plastic. This will allow the fluid to drain to the bottom of the bag.
4. Continue to cut around the anterior of the specimen until you can easily remove the specimen from the bag.
5. Keep bag upright until we come over to collect the fluid and bag.



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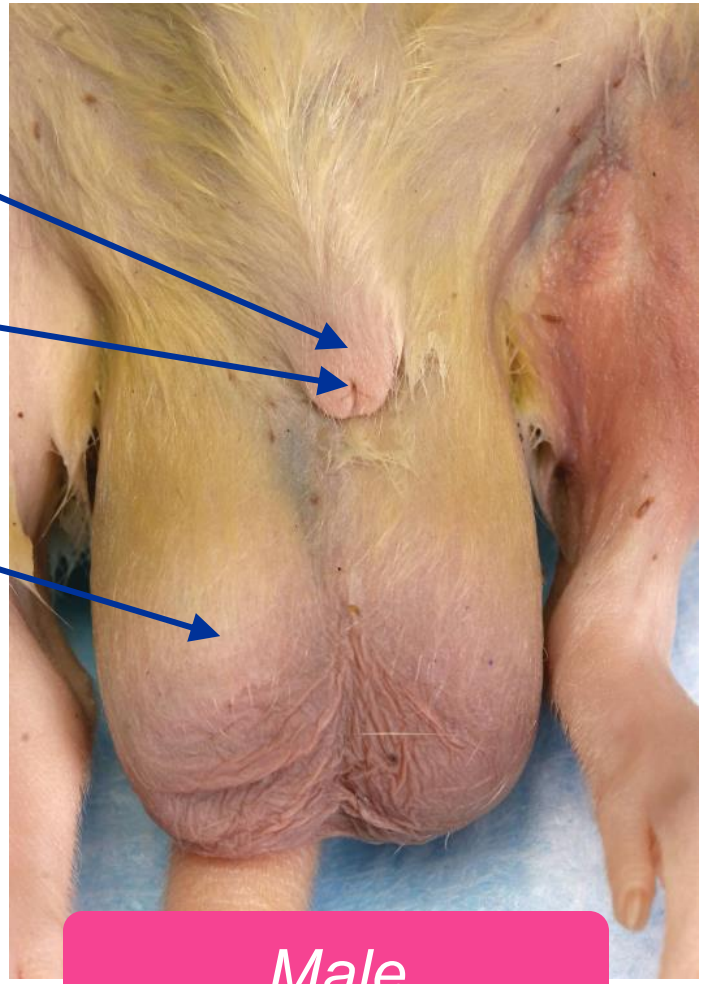
Phenomenon: The Lab Rat



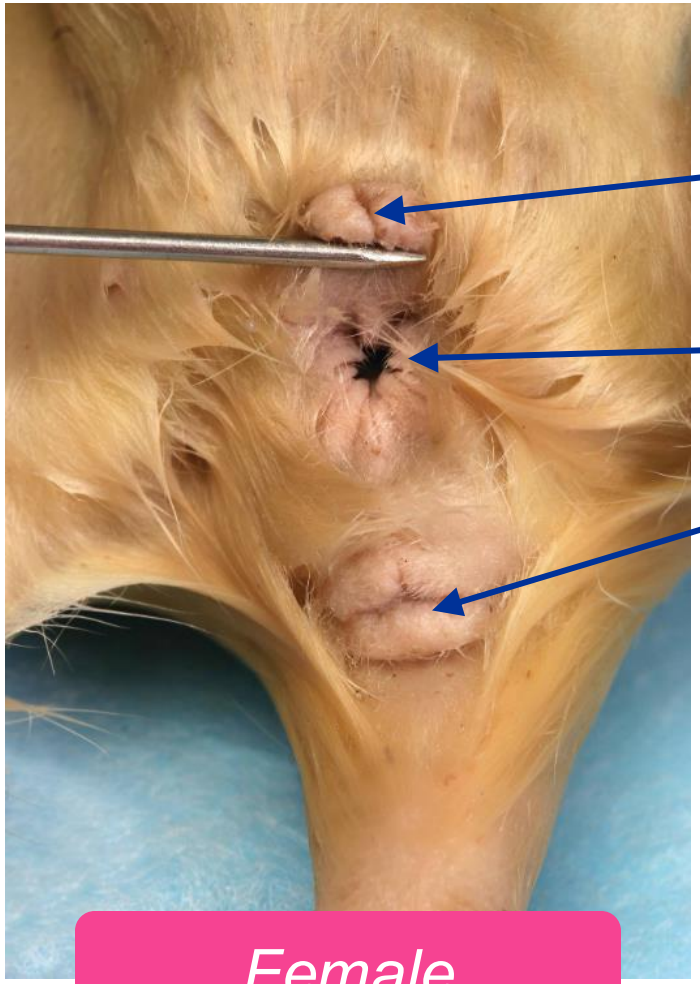
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External Anatomy

Determine the sex of your specimen.



Male



Female

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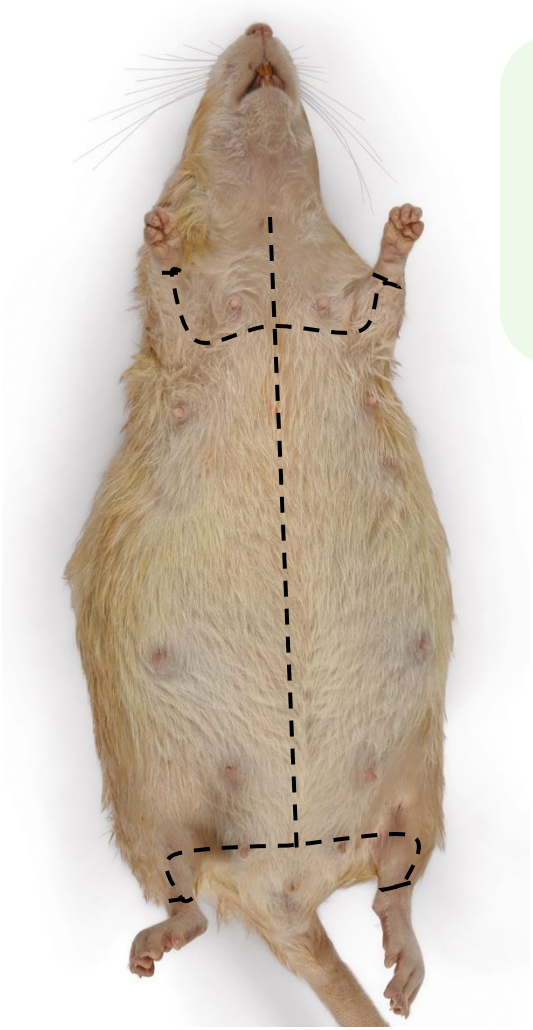
External Anatomy

Locate the structures below on your rat specimen.



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Love the Skin You're in!



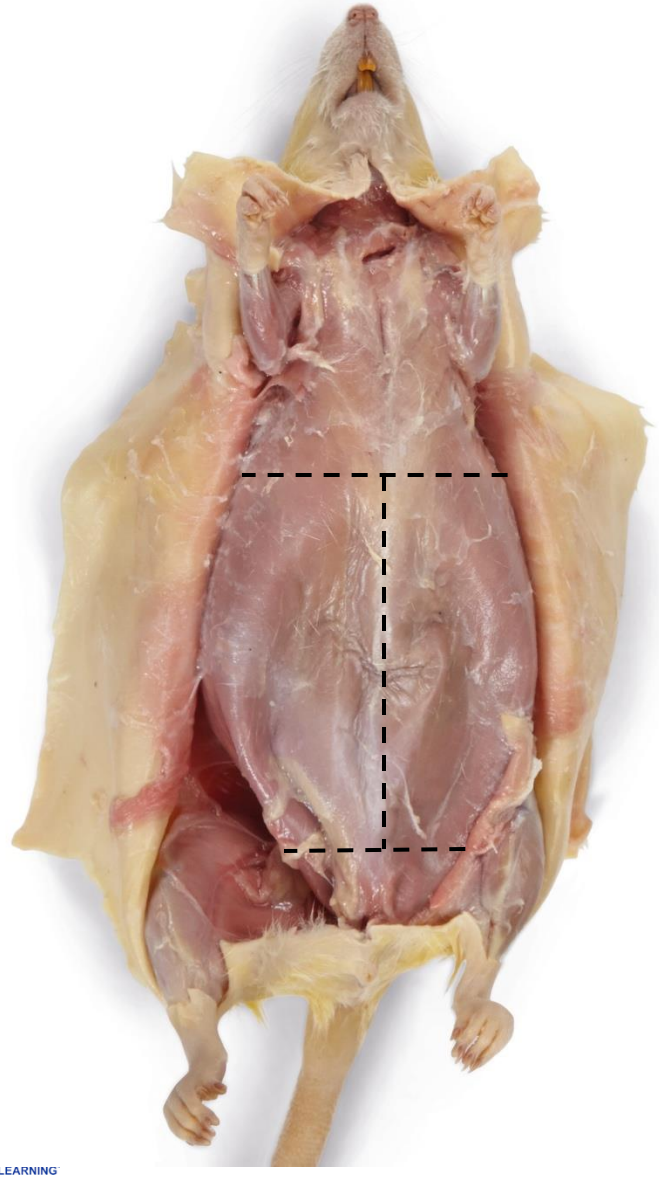
Use your scissors to make the incisions indicated by the dotted lines.

Cut through the skin ONLY.



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Opening the Abdominal Cavity



Make the incisions indicated by the dotted lines.

Begin the mid-sagittal incision near the urogenital opening and stop at the rib cage.

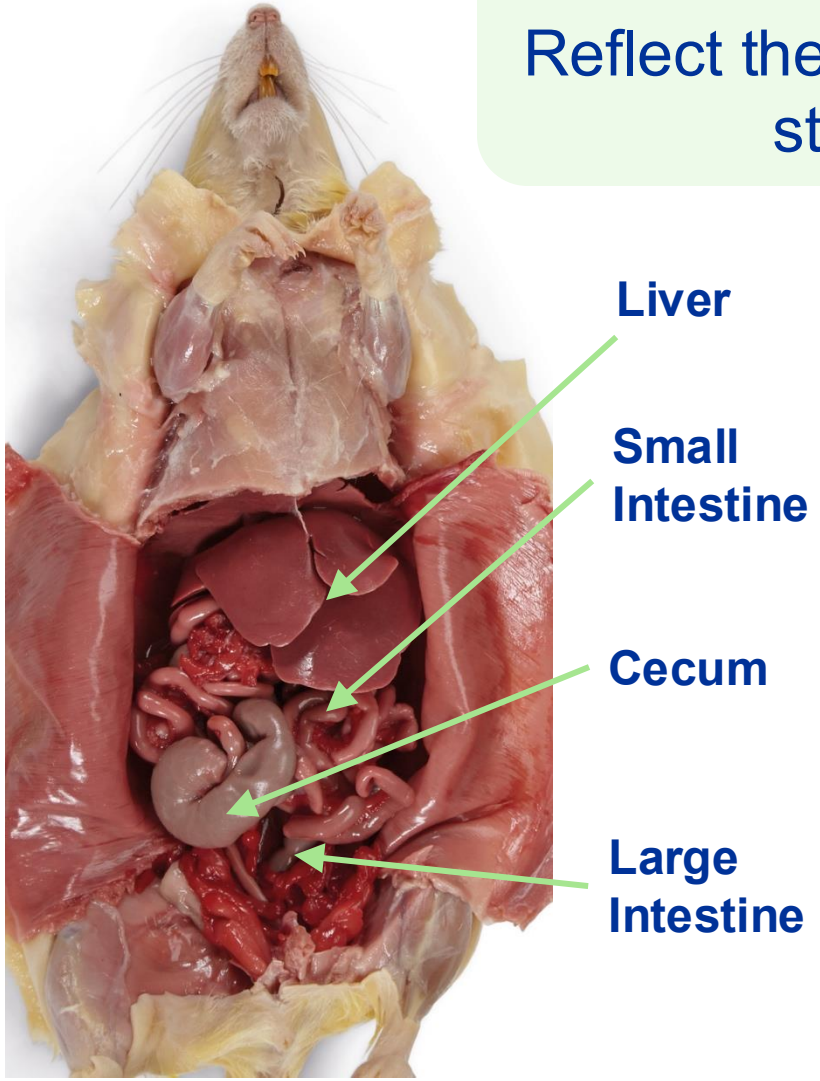
Finish with the lateral incisions.

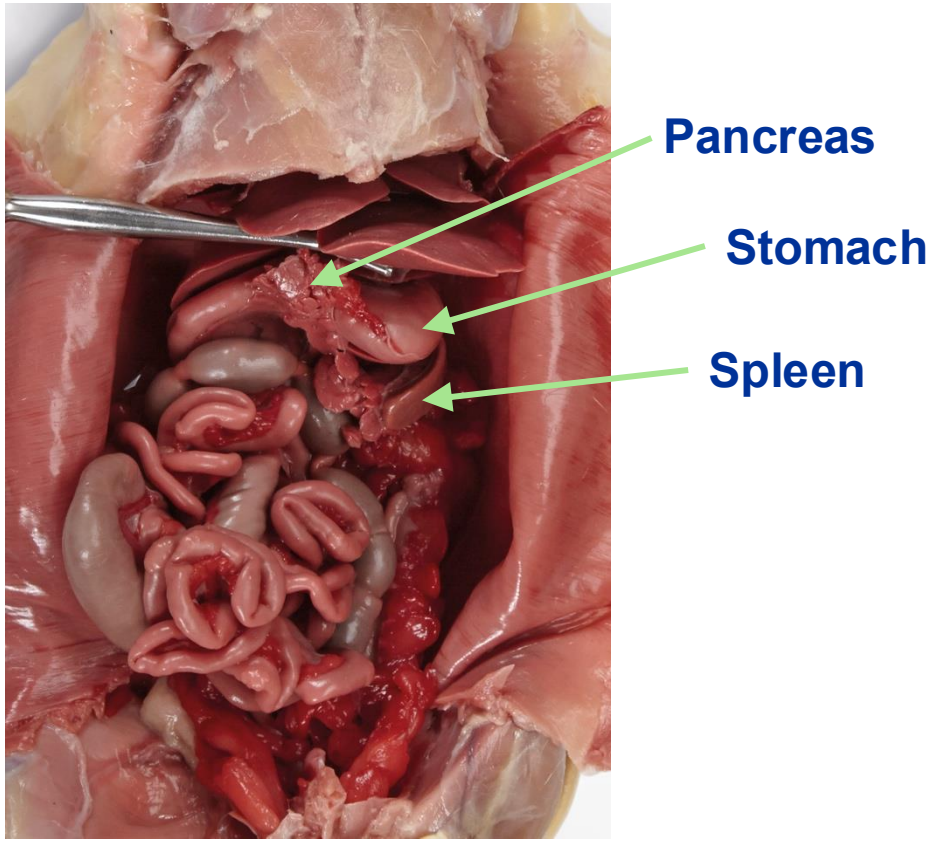
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Internal Anatomy

Locate the following structures

Reflect the liver to locate the pancreas, stomach, and spleen.



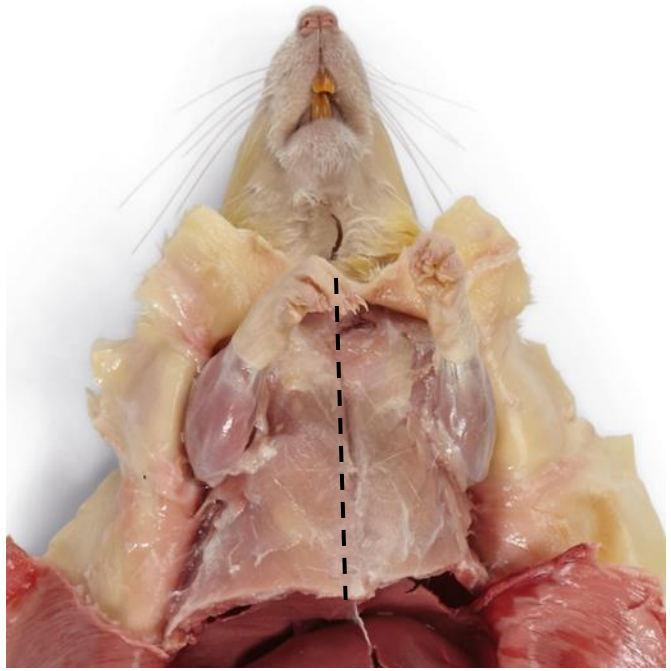


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Opening the Thoracic Cavity

Complete the mid-sagittal incision from the diaphragm to the mid-neck.

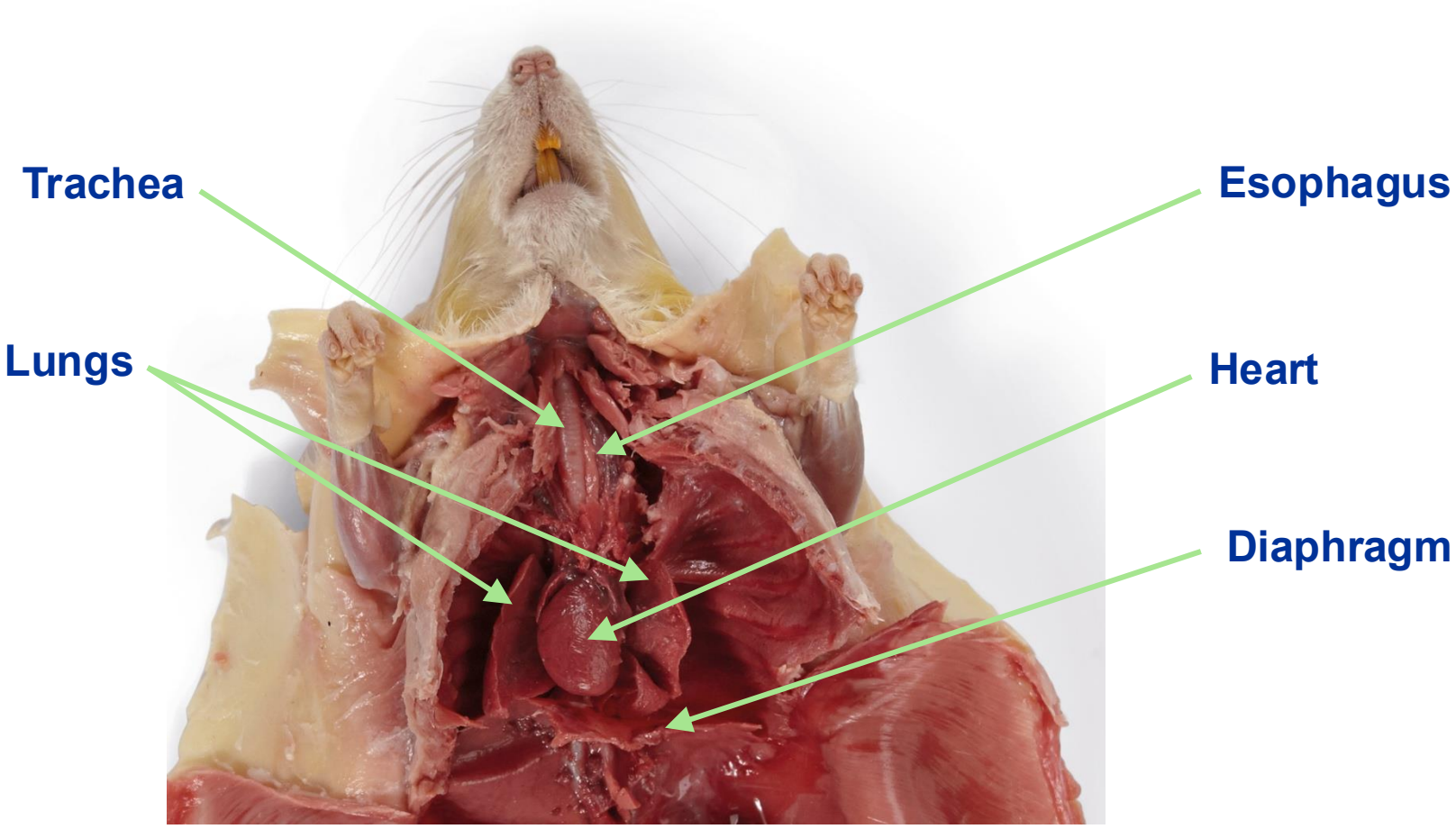
Gently spread open the rib cage with your hands.



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Internal Anatomy

Locate the structures below.



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No Guts, No Glory

Remove the digestive and accessory organs from the abdominal cavity:

- Liver
- Stomach
- Pancreas
- Intestines
- Spleen

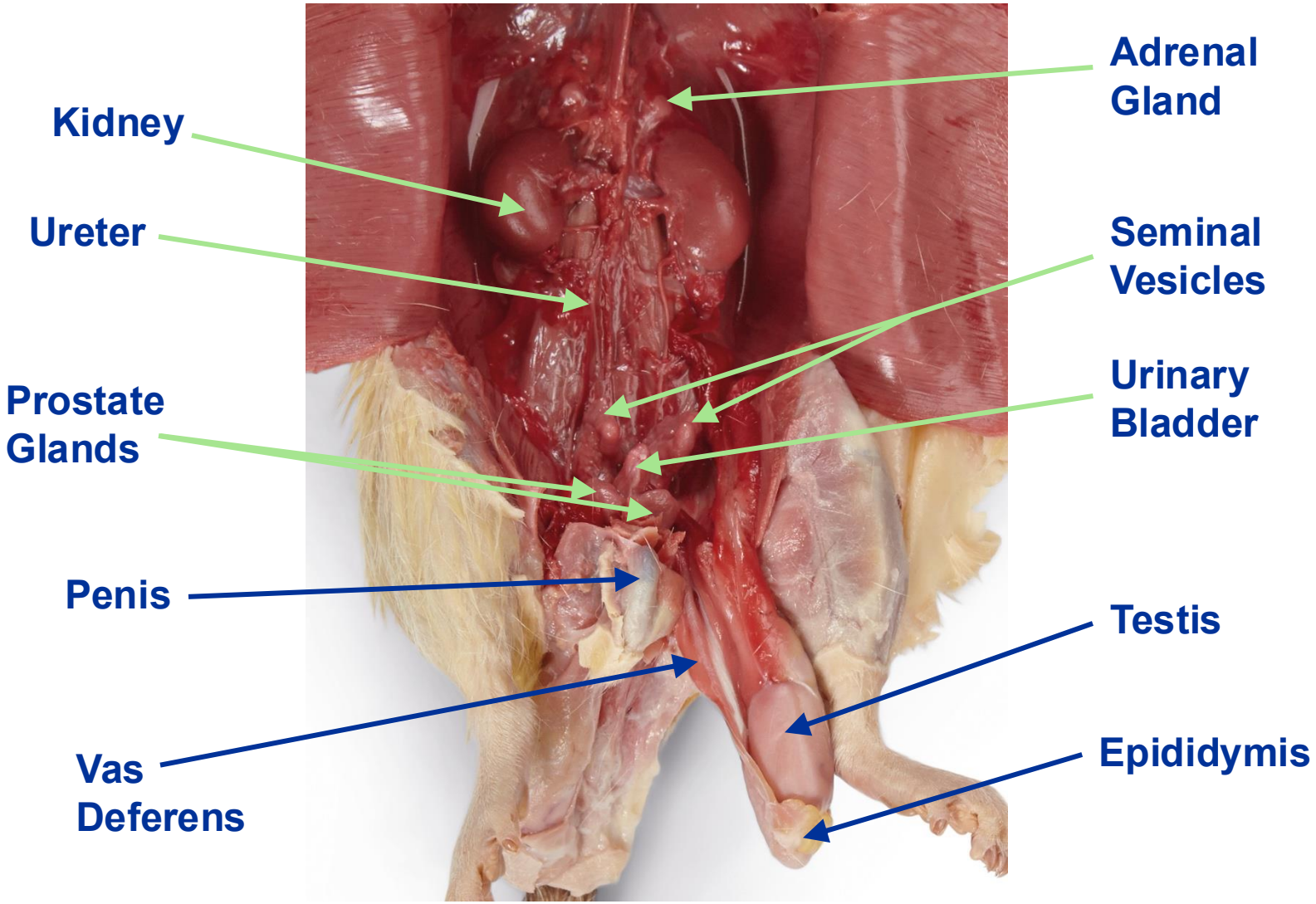
Carefully cut the mesentery holding the intestines together and stretch out.



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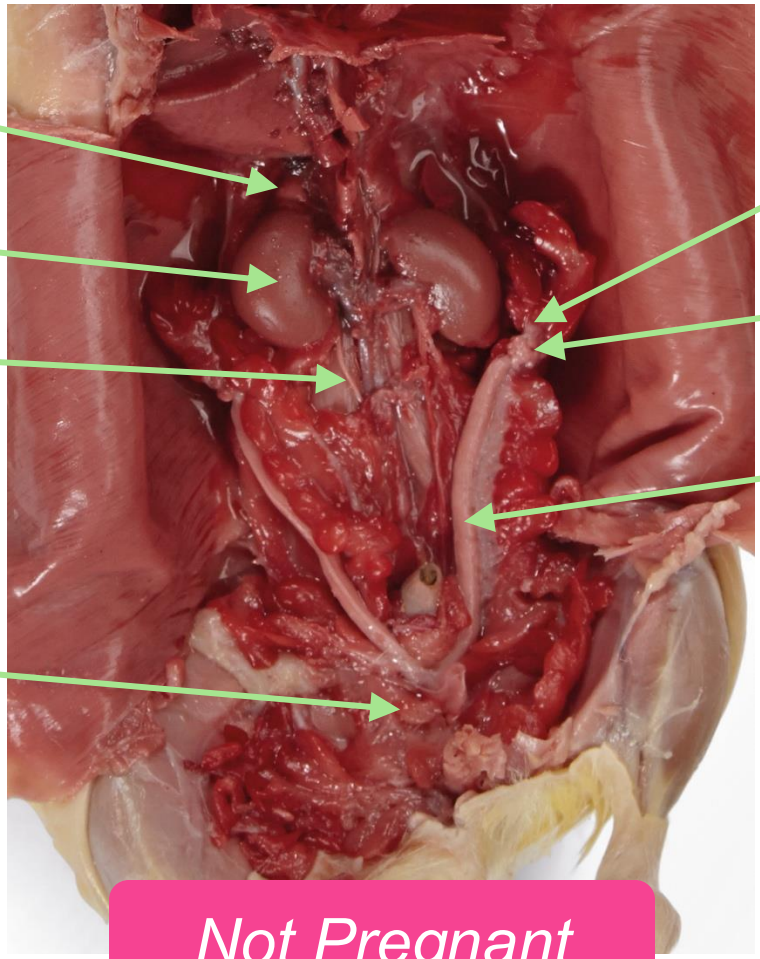
Internal Anatomy: Male

Remove the skin from the scrotum to expose the underlying structures.

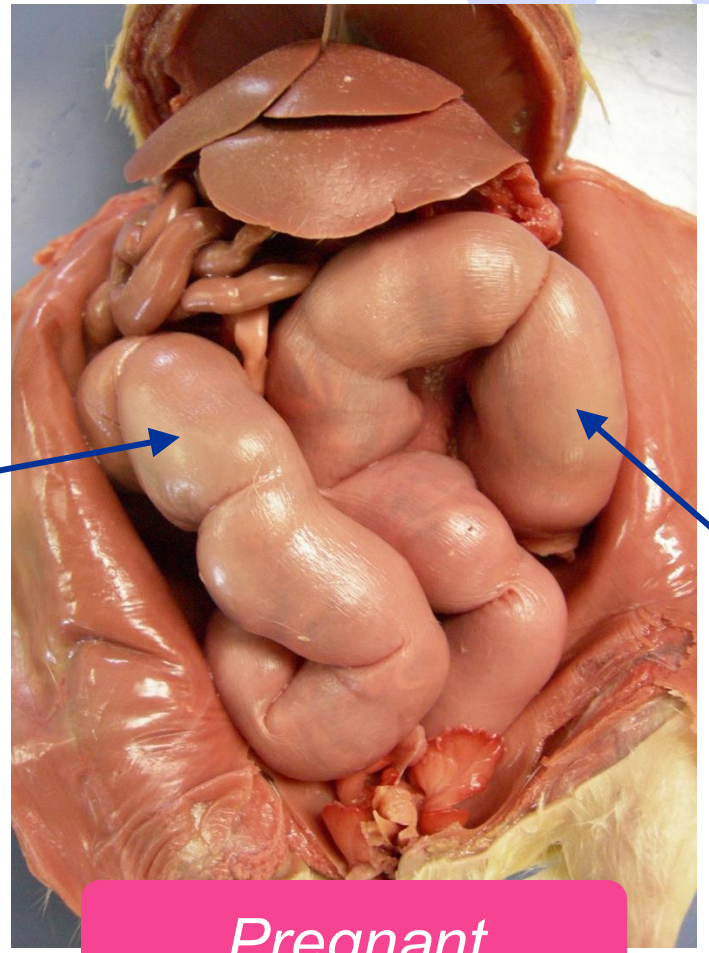


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Internal Anatomy: Female



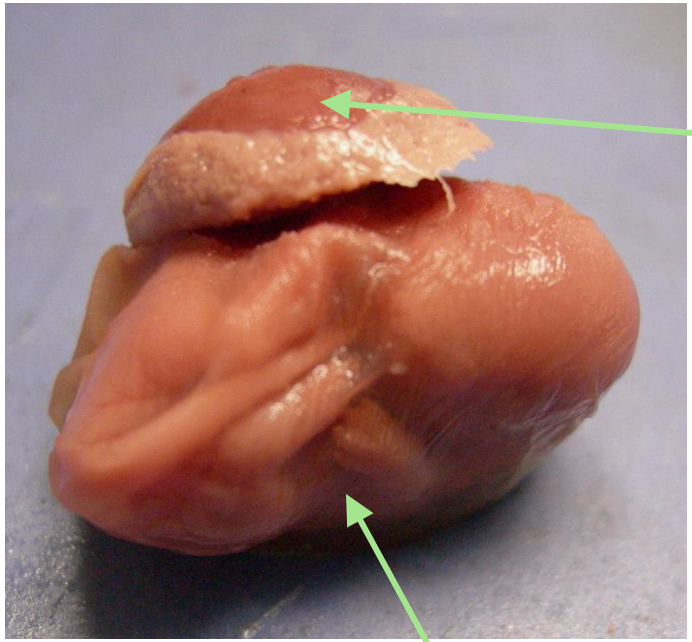
Not Pregnant

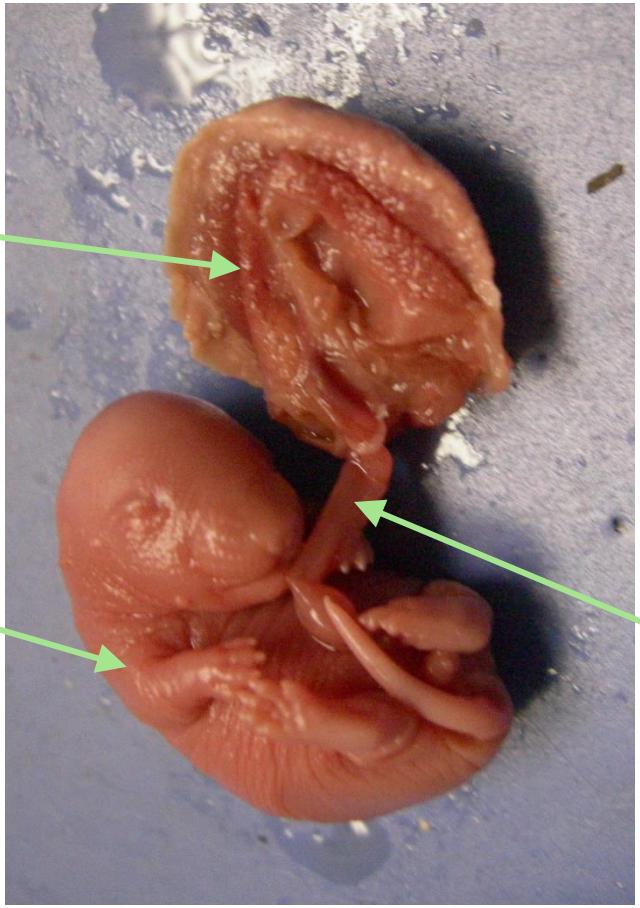


Pregnant

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Rat Embryo





Placenta

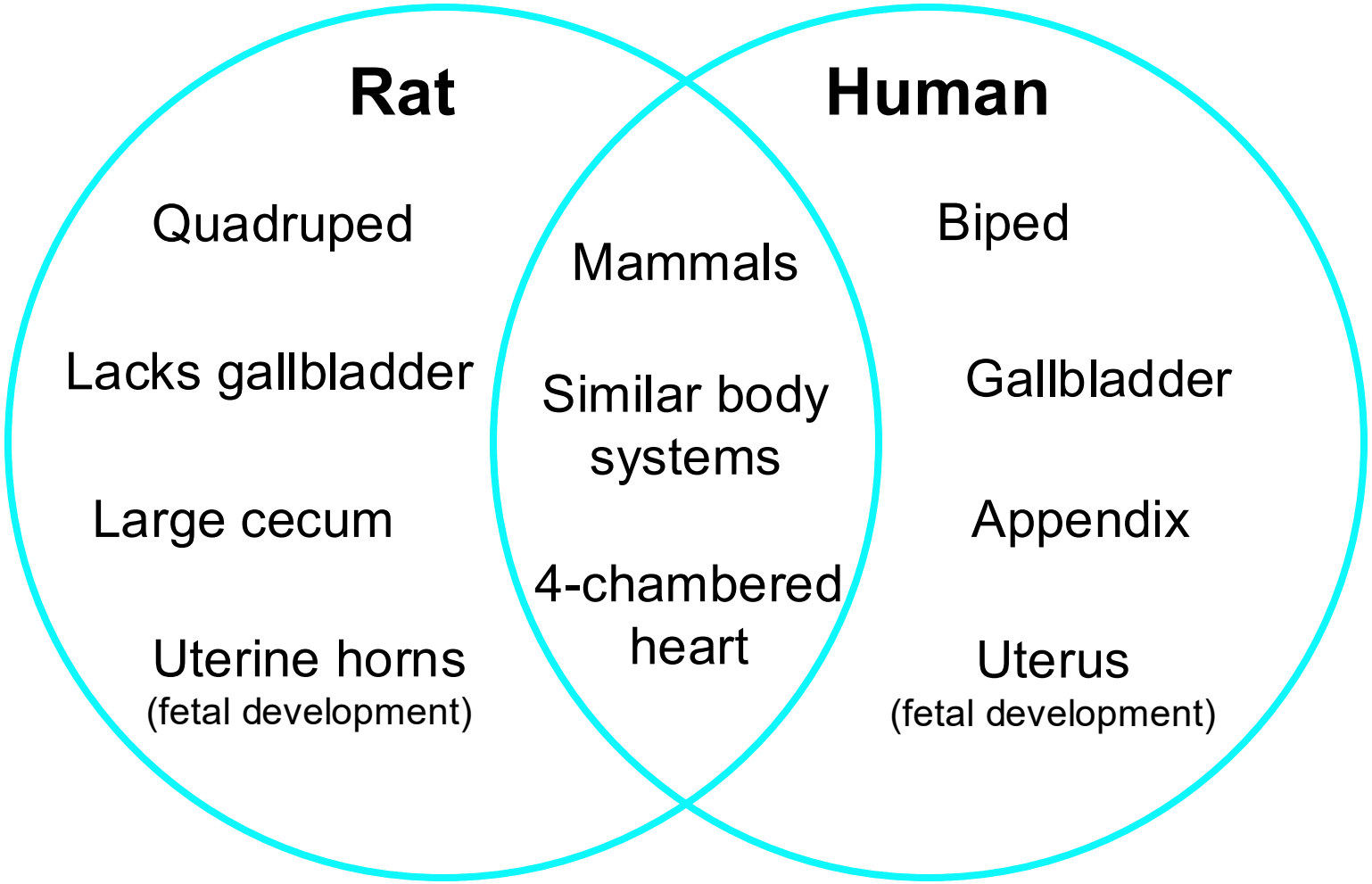
Embryo

Amniotic Sac

Umbilical Cord

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Student Artifact & Assessment



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