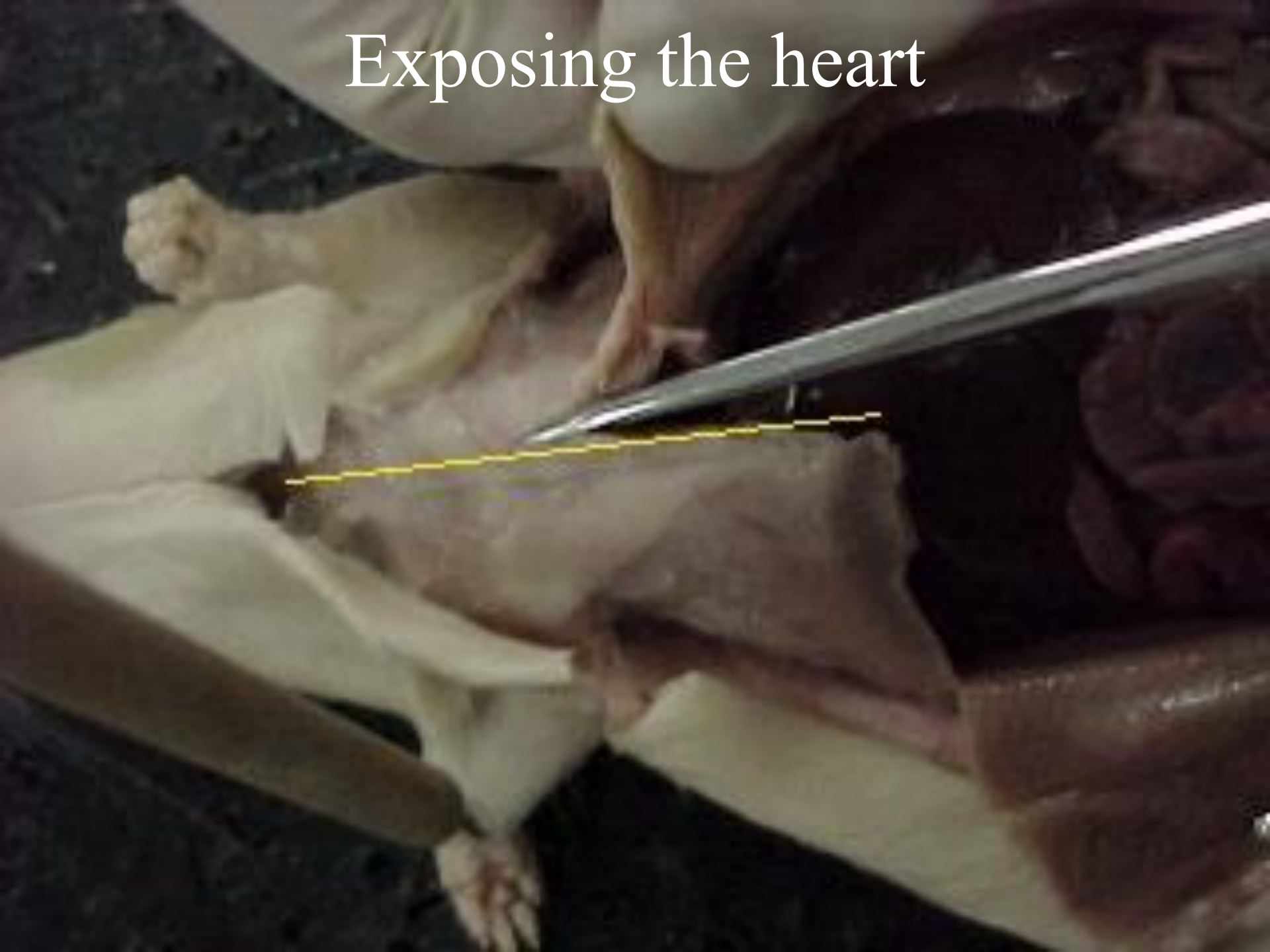
Rat Dissection

Abdominal Incision

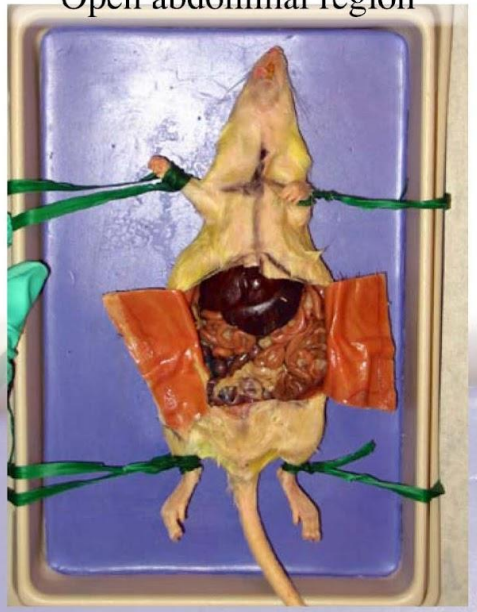
Peel the skin back

Exposing the heart

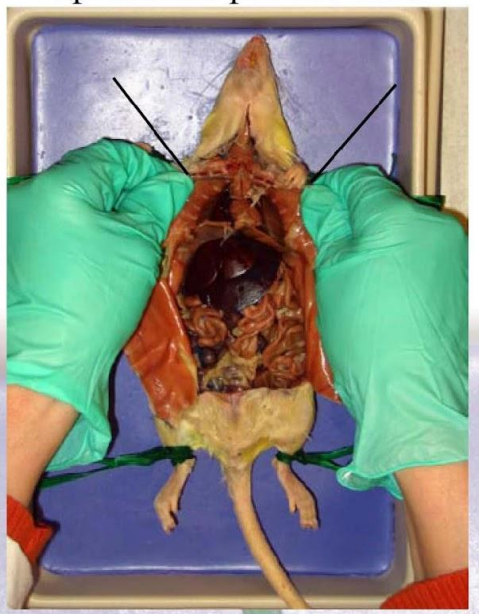


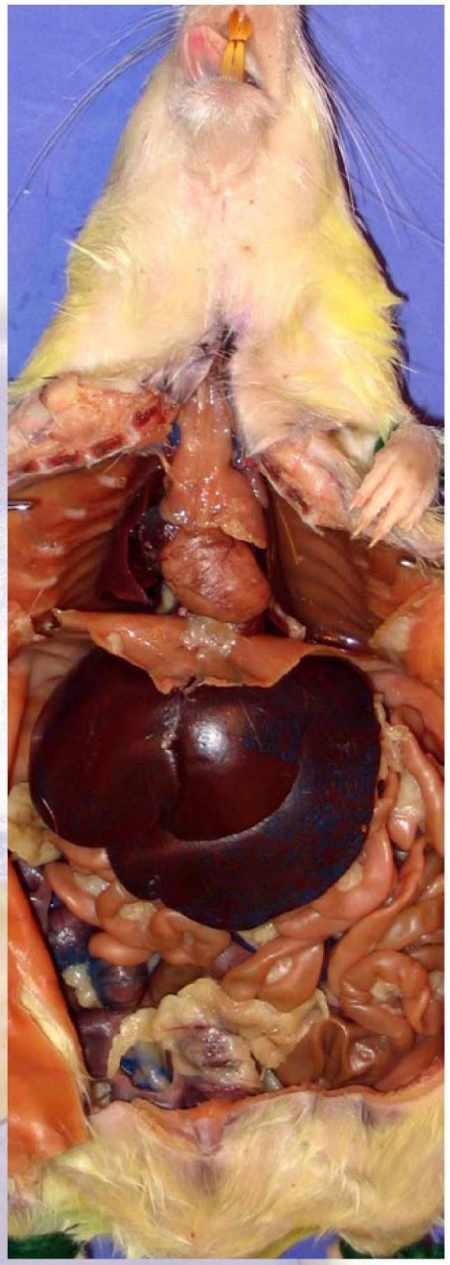
Tie legs back, looping the cord under the tray

Open abdominal region



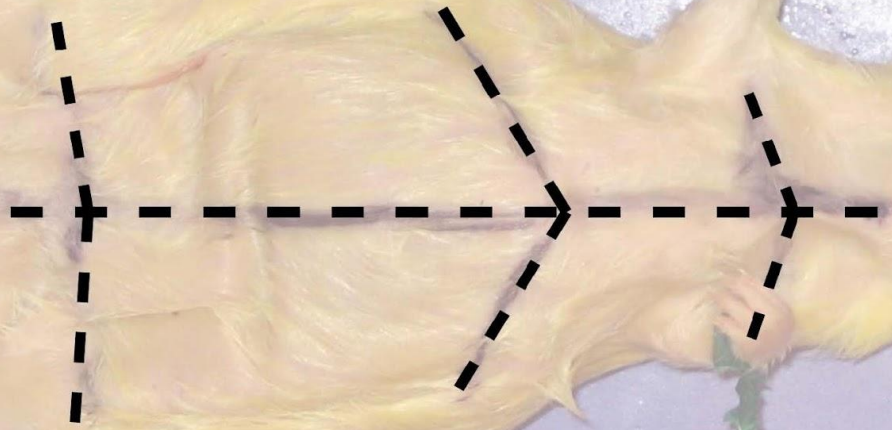
Spread and pin fore limbs





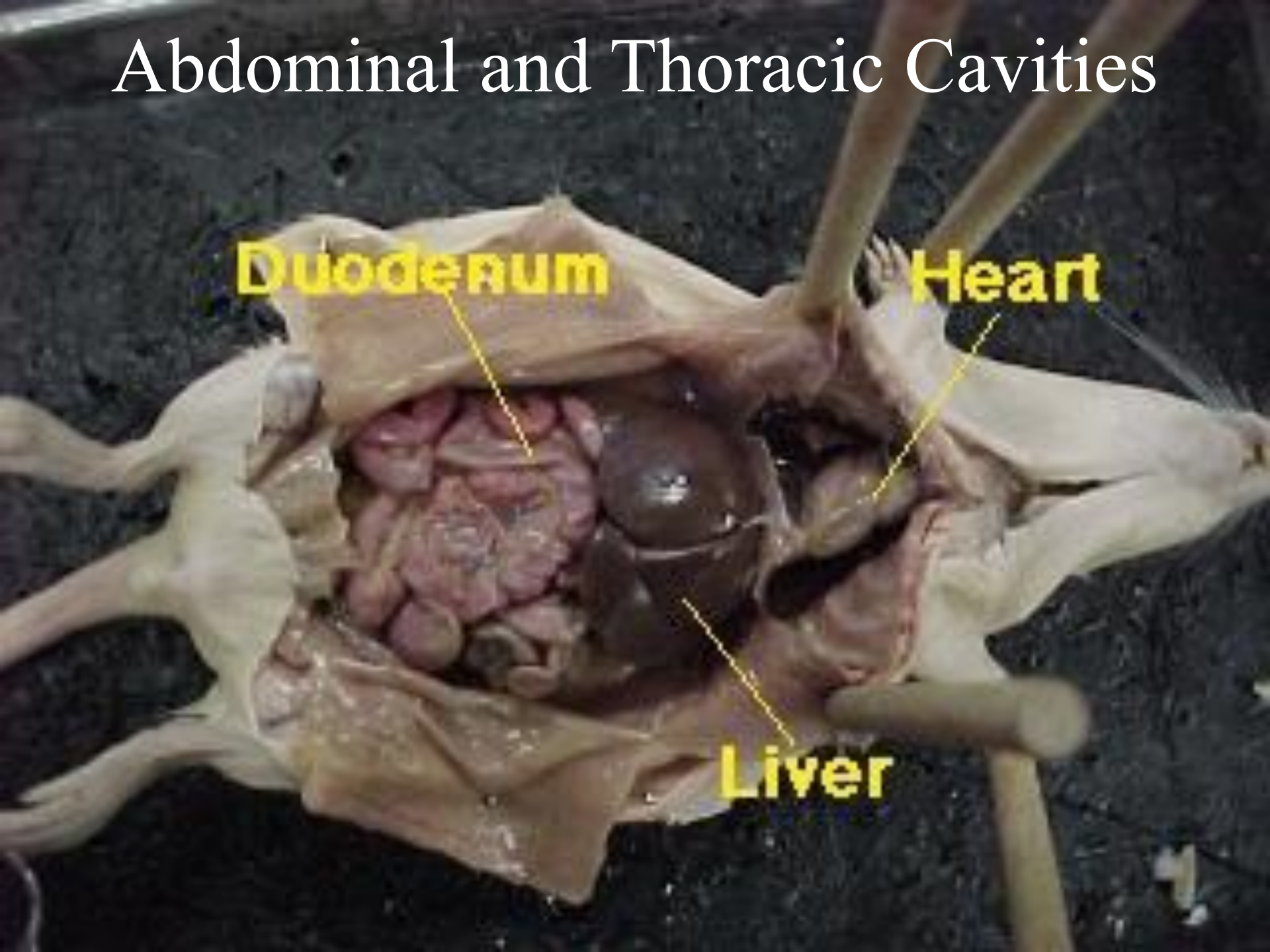
Thoracic and Abdominal Cavities

Incision Guide



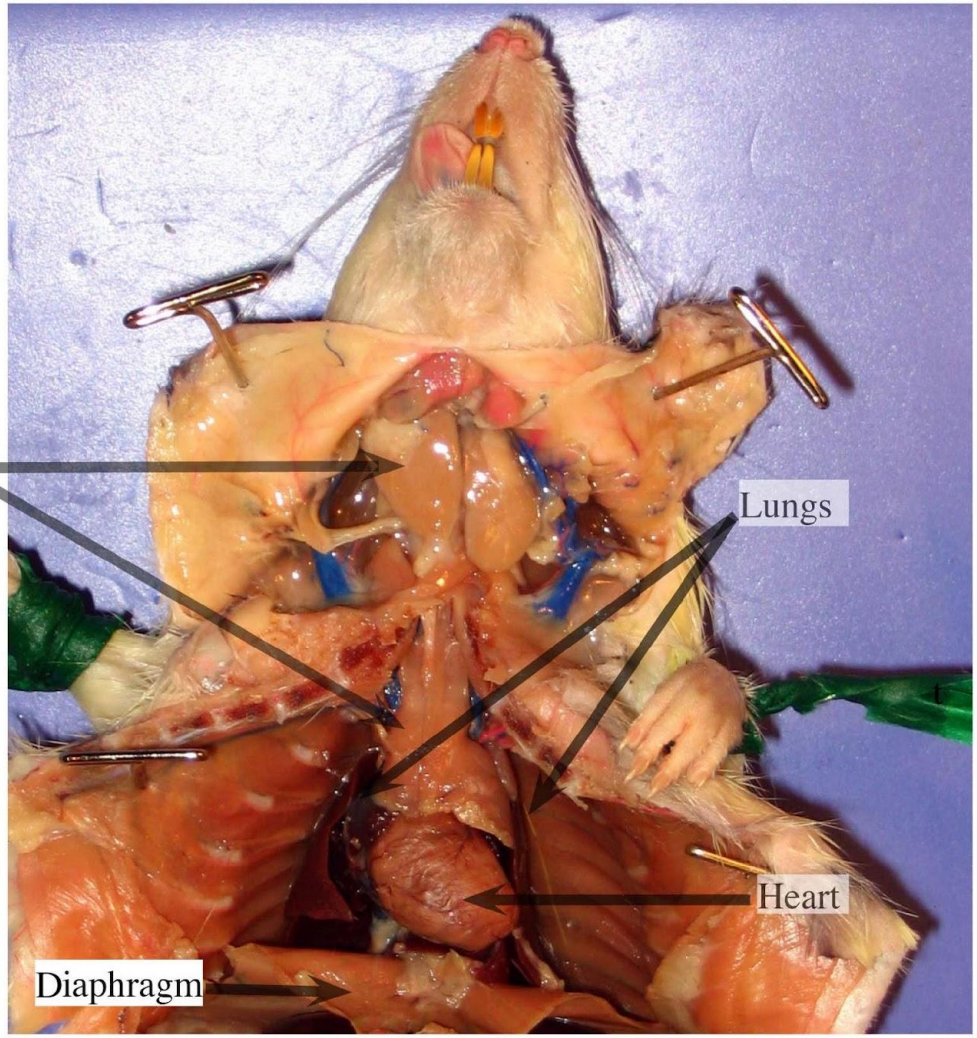
Take the time to identify the following organs and structures;
diaphram
heart
thymus
lungs
Next, carefully open the region superior to the thymus, exposing the trachea and esophagus. Use the picture on the following page as a guide.

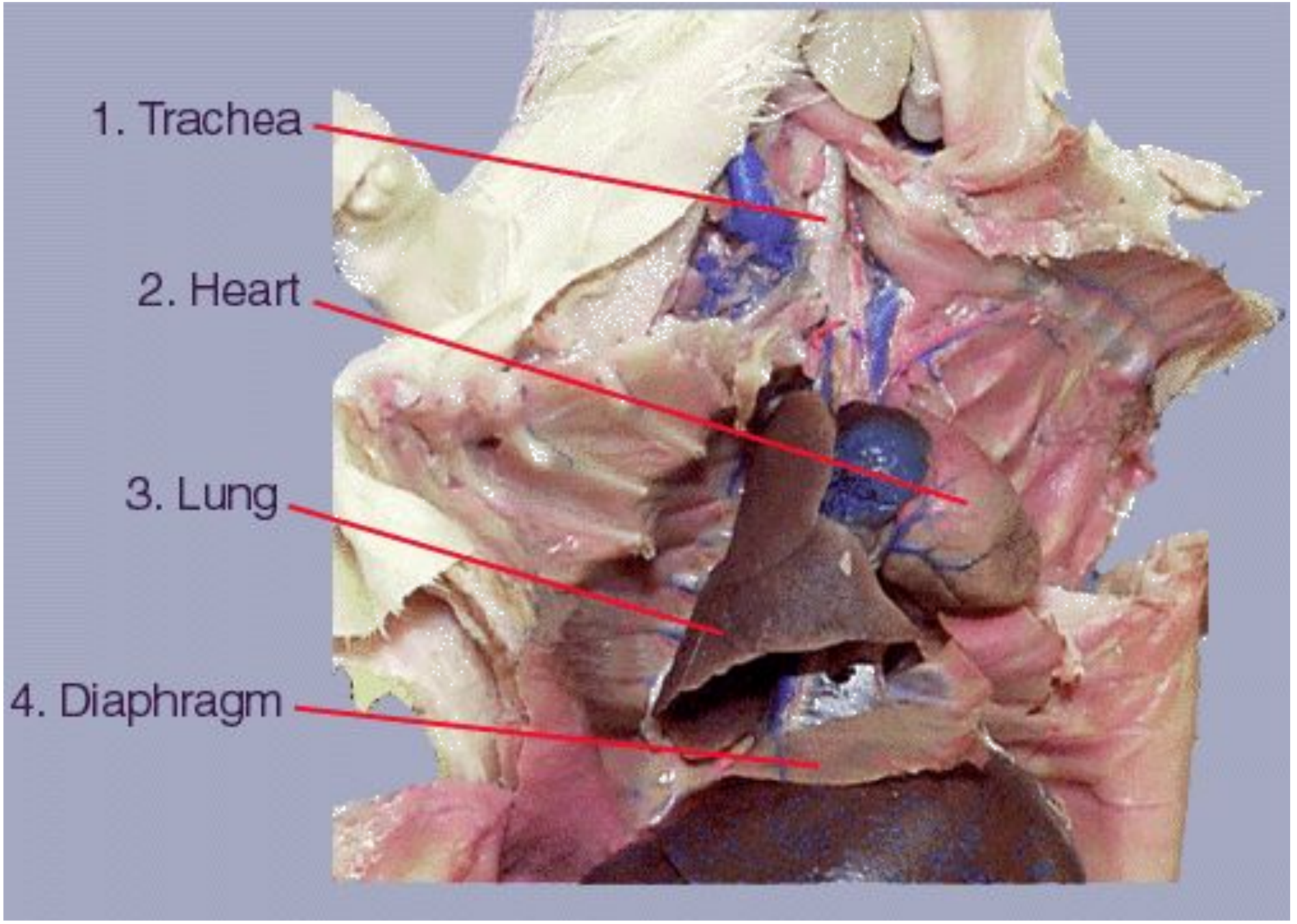
Abdominal and Thoracic Cavities



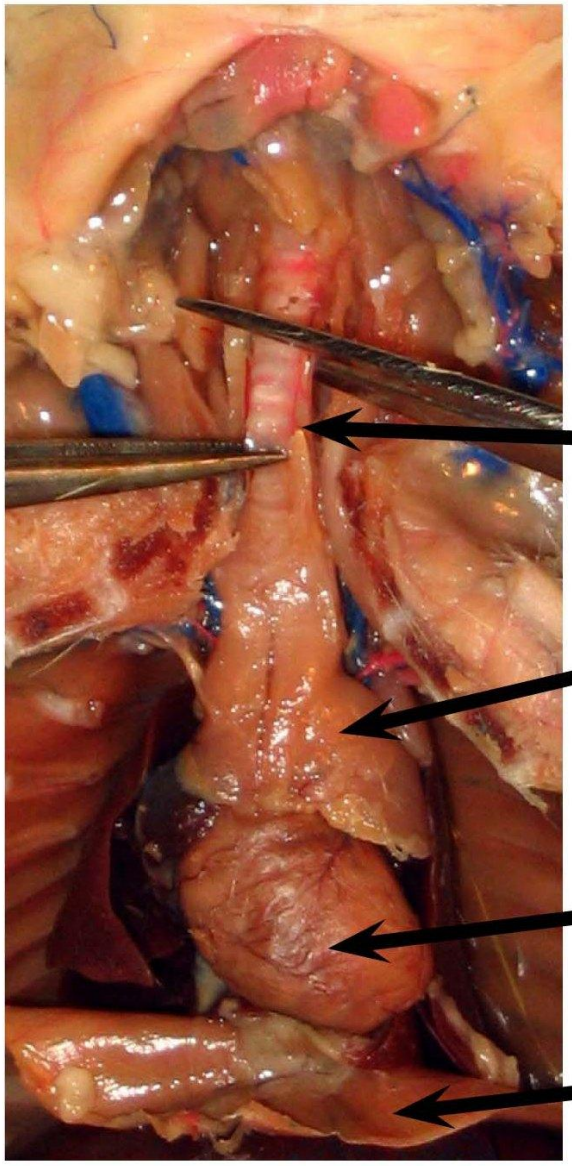
1 Make Sure your incisions are superficial. Only cut deep enough to remove the skin without damaging the organs beneath. Pin the skin back, exposing the cervical area.

2 Locate the thymus, then carefully remove the thymus to expose the ribbed trachea. After locating the trachea, clip it with a scissors, being sure not to sever the esophagus directly below. This will expose the esophagus.

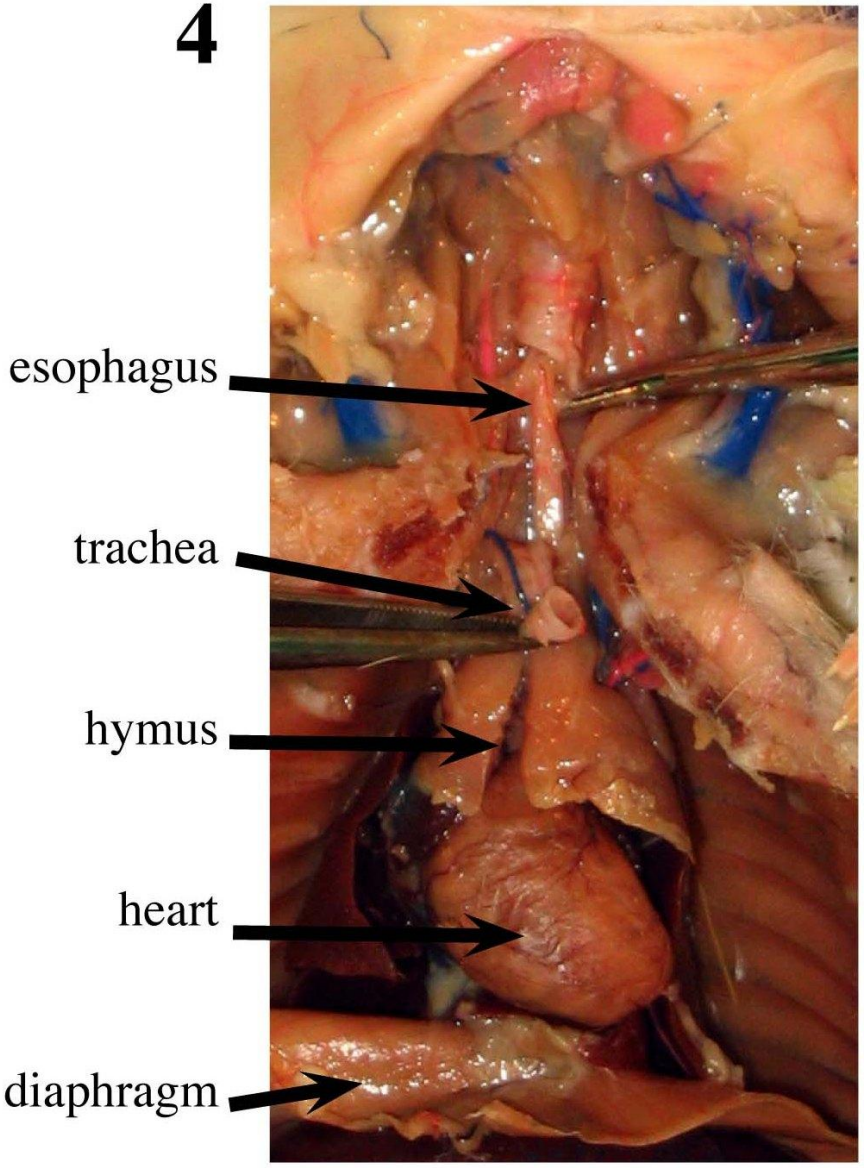


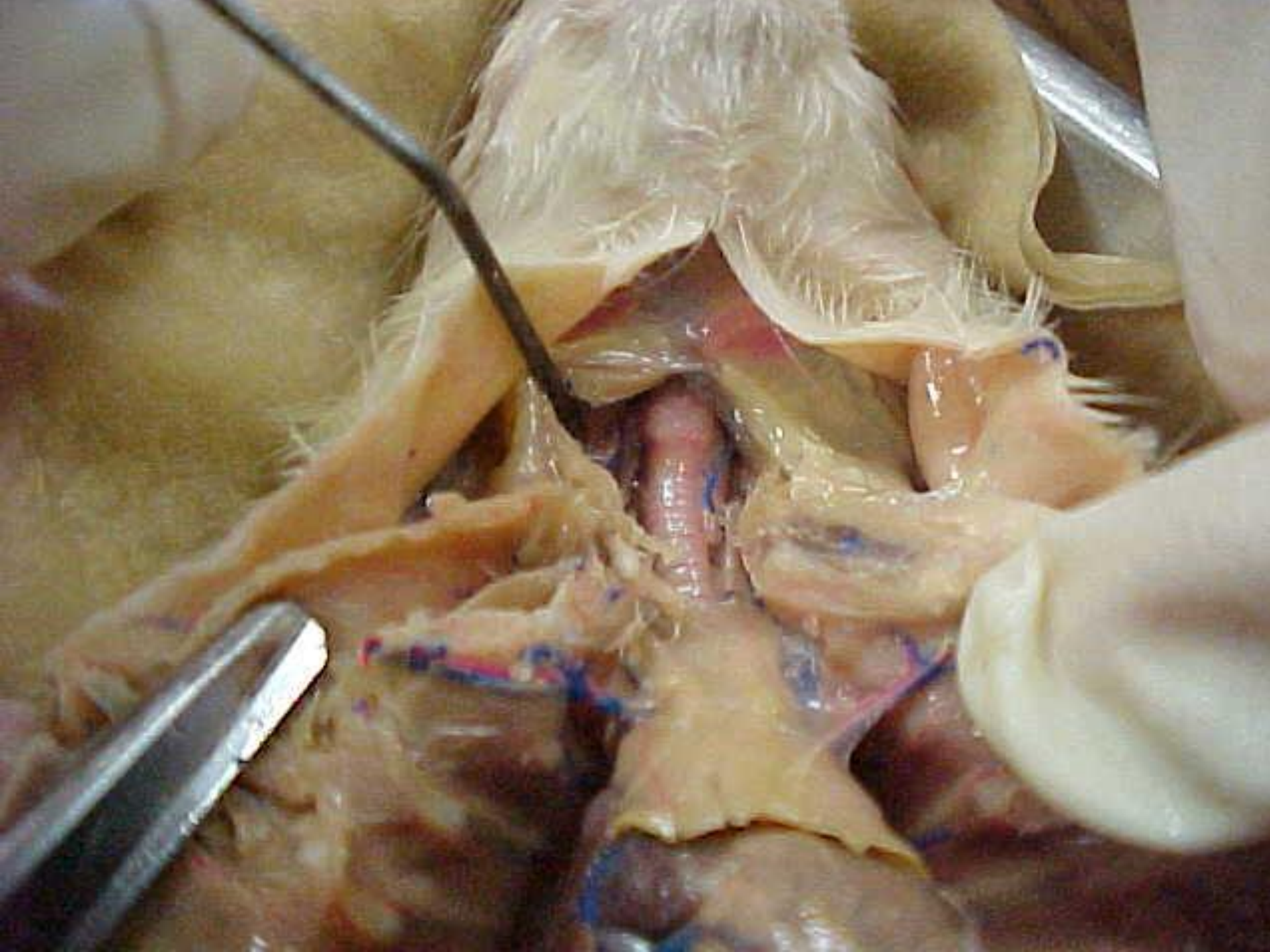

1. Trachea
2. Heart
3. Lung
4. Diaphragm

3

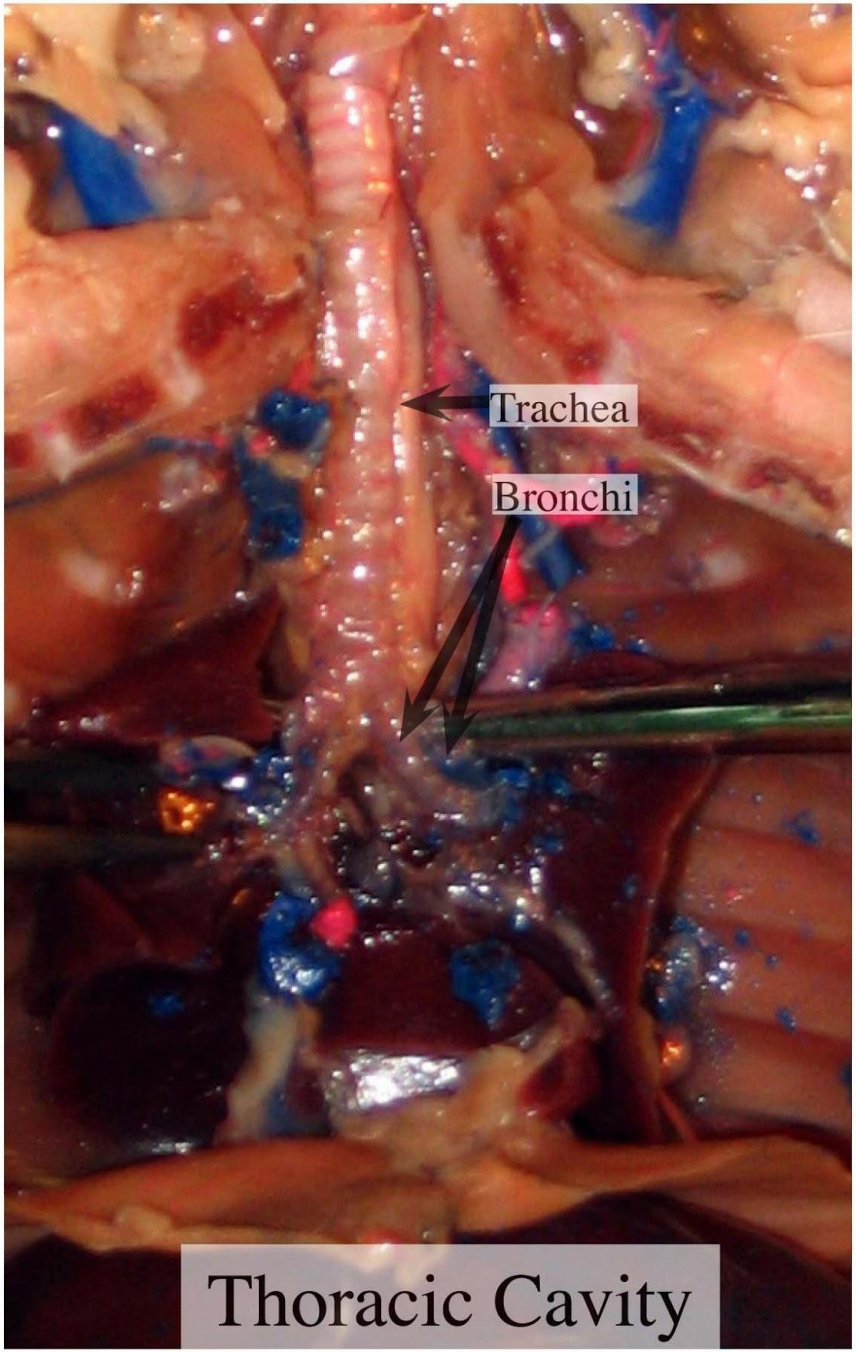

trachea
thymus
heart
diaphragm

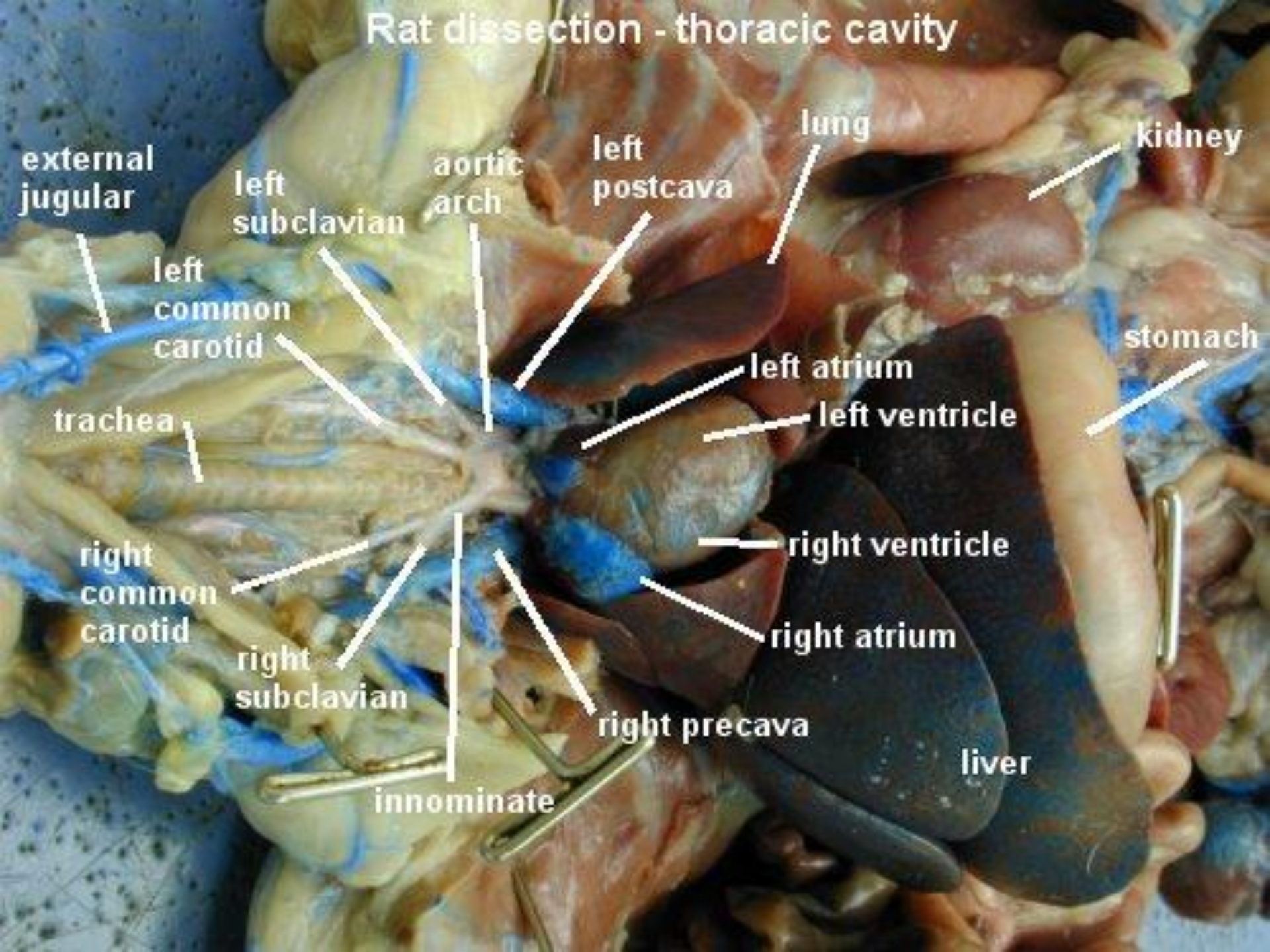
4


esophagus
trachea
hymus
heart
diaphragm

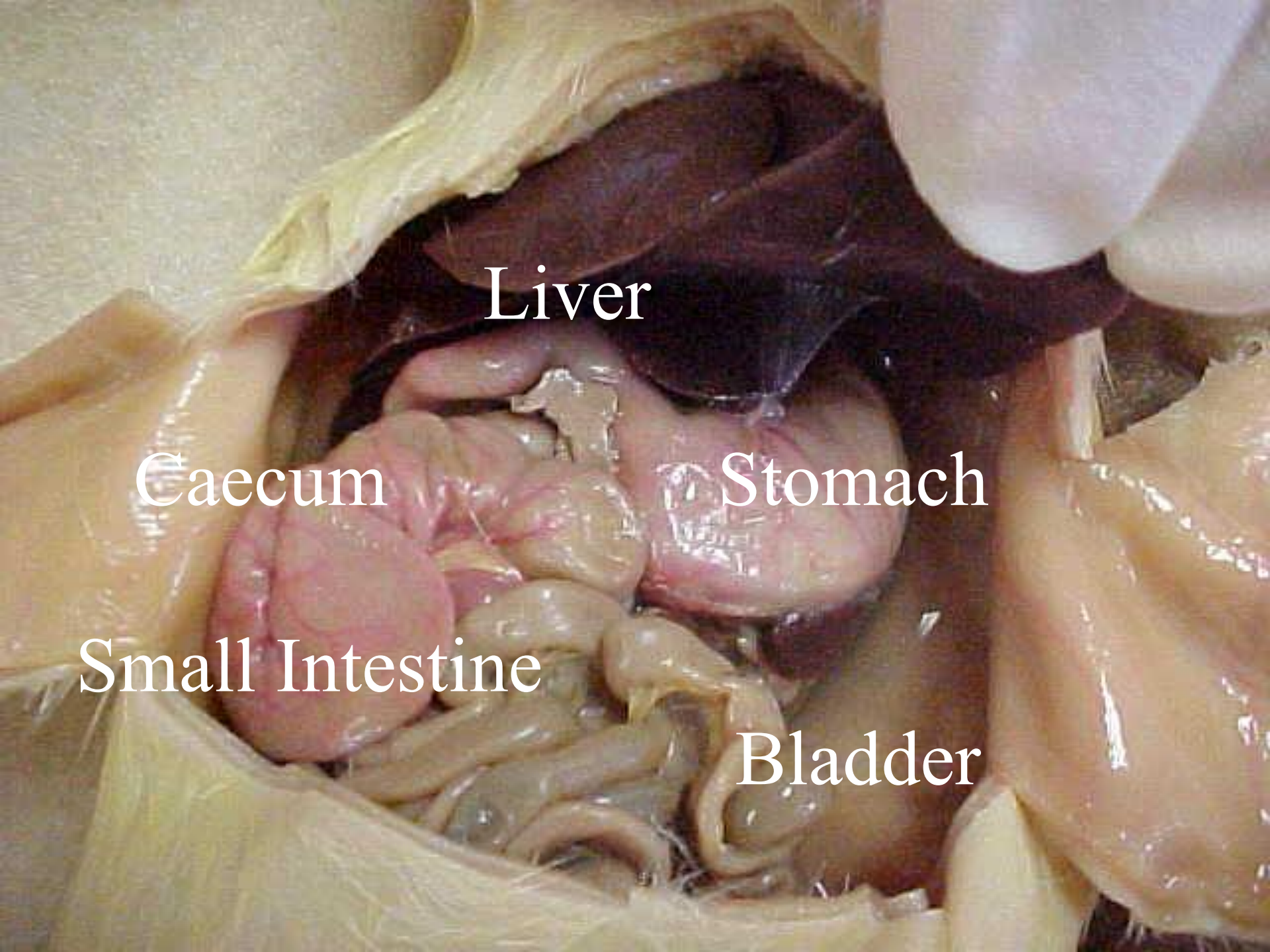


You can then locate the superior vena cava (blue) as you remove the heart, exposing the trachea as it splits to become the bronchi on the way into the lungs.

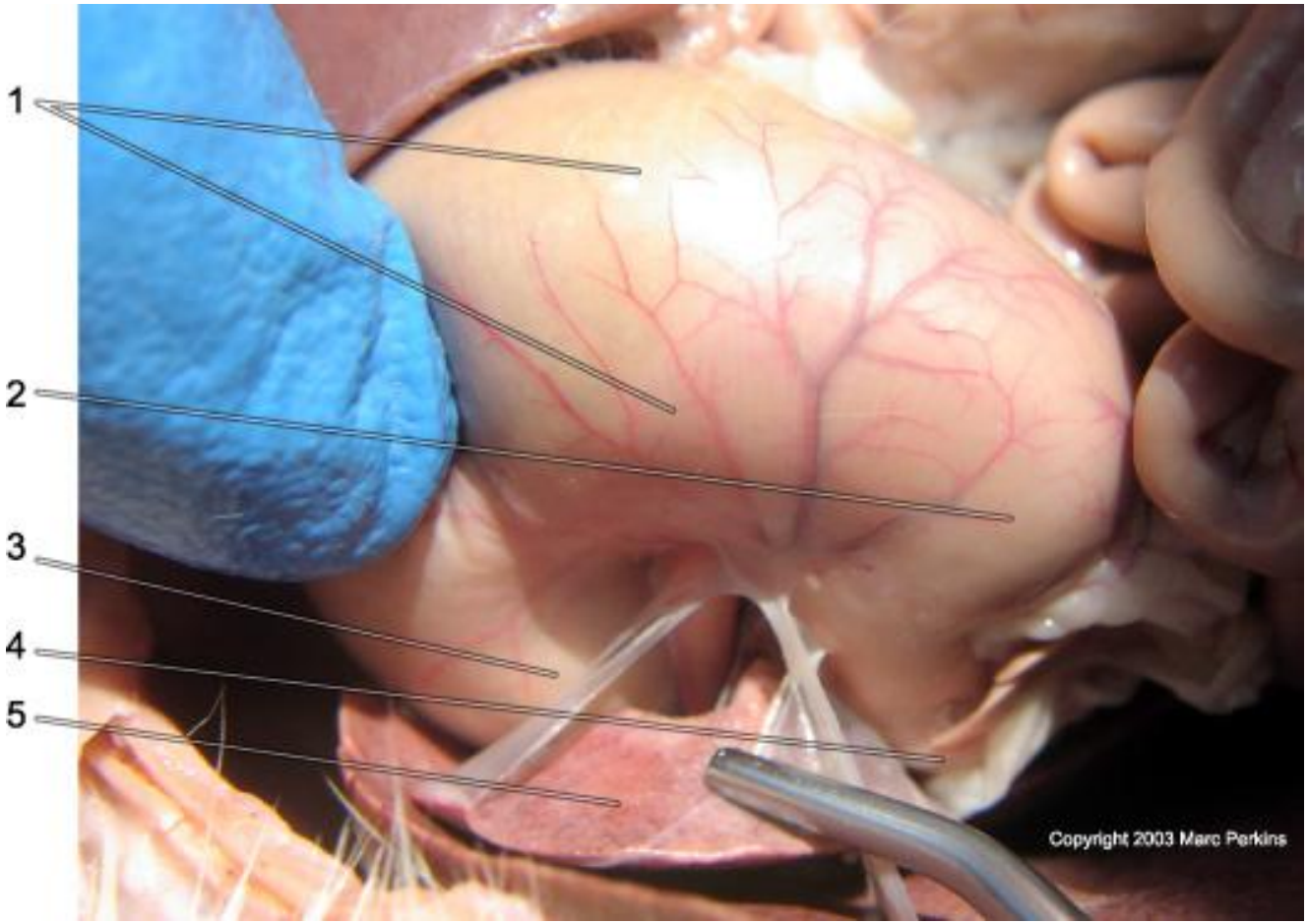



Rat dissection - thoracic cavity
external jugular
left subclavian
aortic arch
left postcava
lung
kidney
left common carotid
stomach
left atrium
trachea
left ventricle
right ventricle
right common carotid
right atrium
right subclavian
right precava
liver
innominate

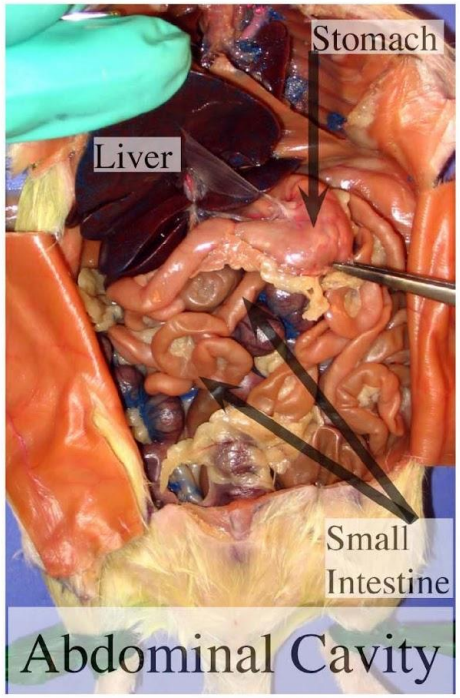

Liver
Small Intestine
Caecum

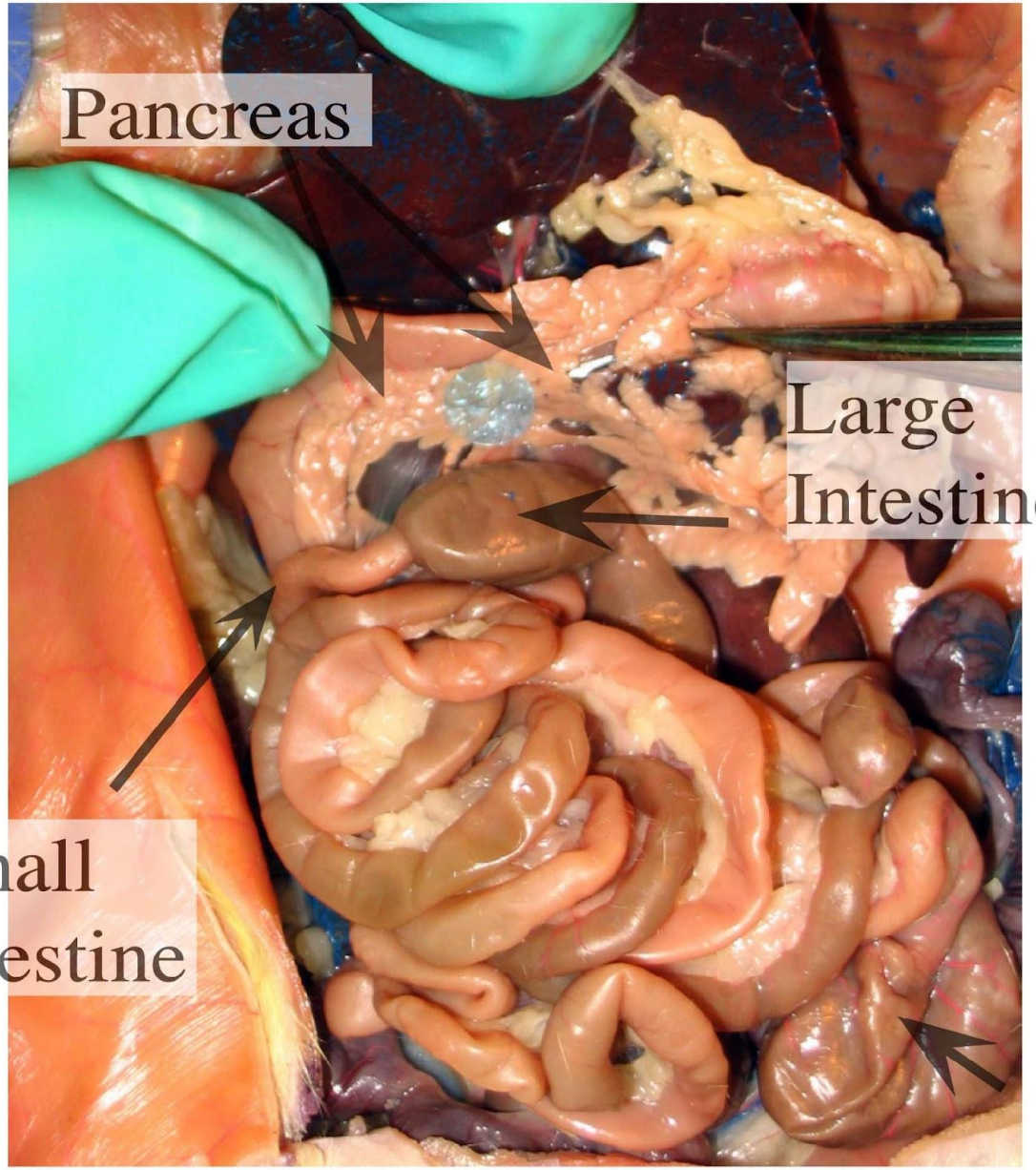

Liver
Caecum
Stomach
Small Intestine
Bladder

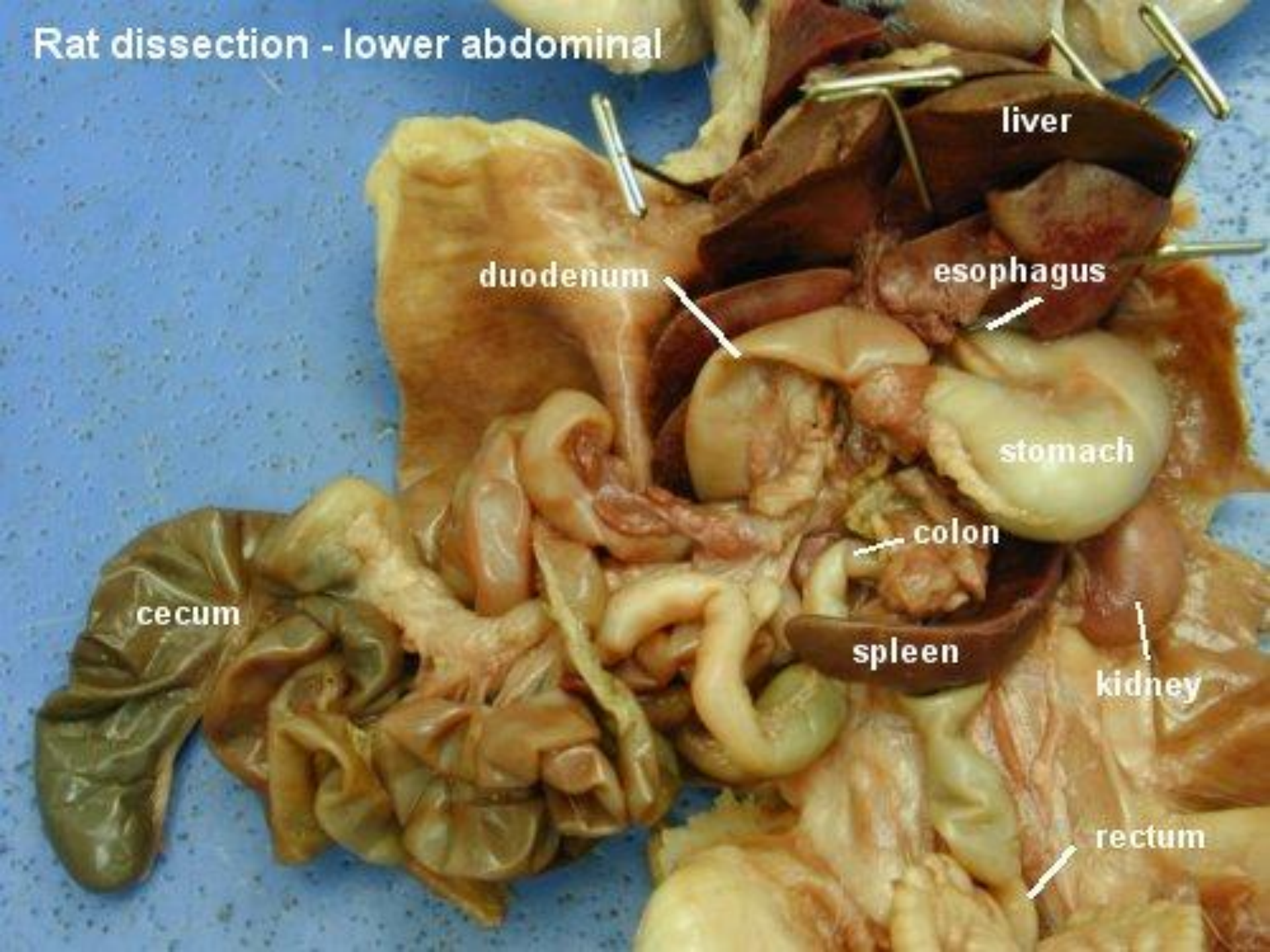
1. Stomach Body
2. Pylorus
3. Fundus
4. Pyloric Sphincter
5. Liver



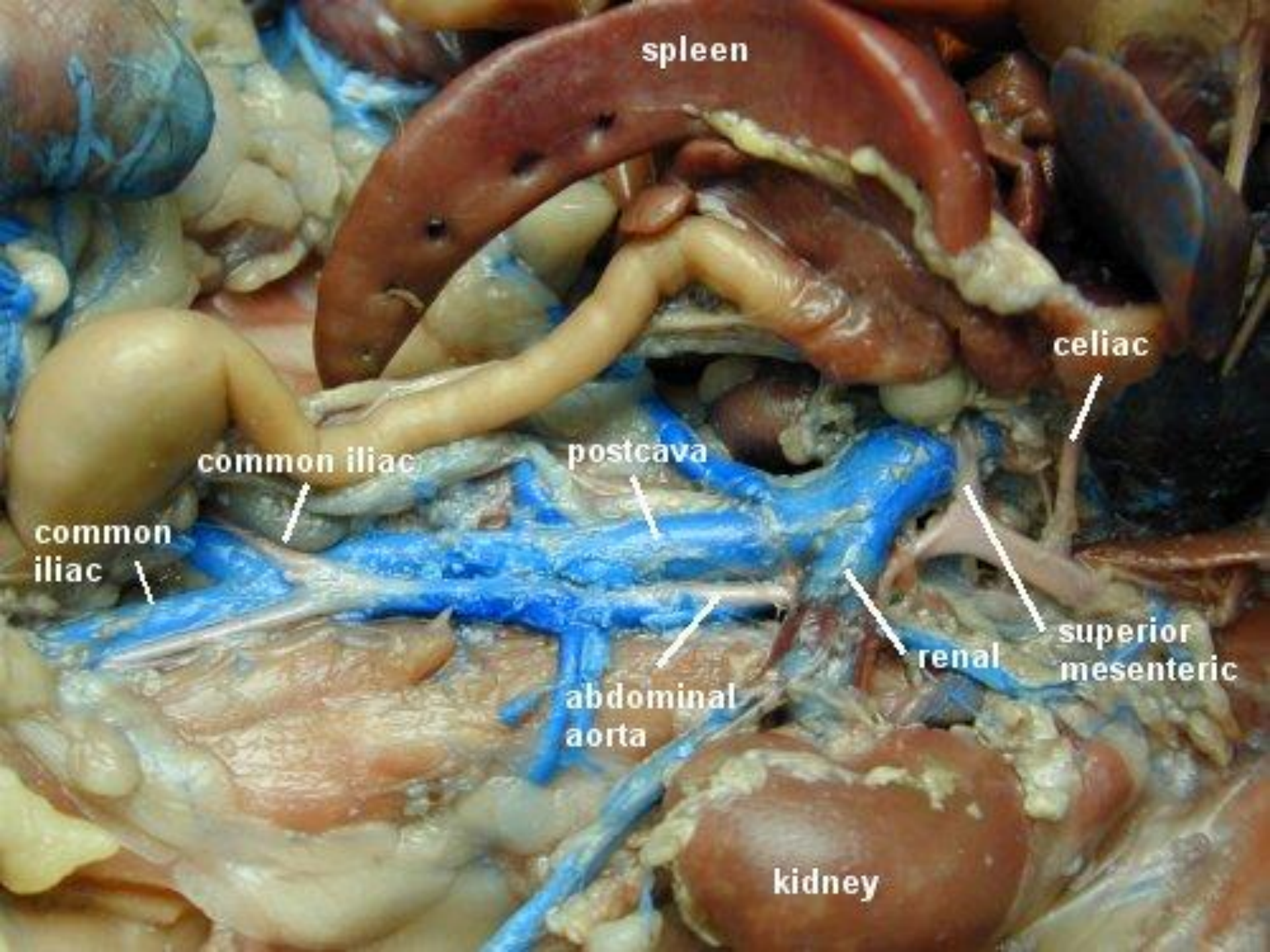
Follow the digestive tract.
-oral cavity
-esophagus
-stomach
-small intestine (pull to reveal the mesentary)
-cecum
-large intestine
-rectum
-anus






Rat dissection - lower abdominal
liver
duodenum
esophagus
stomach
colon
cecum
spleen
kidney
rectum


Kidney


spleen
celiac
common iliac
postcava
common
iliac
renal
superior
mesenteric
abdominal
aorta
kidney

Then locate the

-pancreas

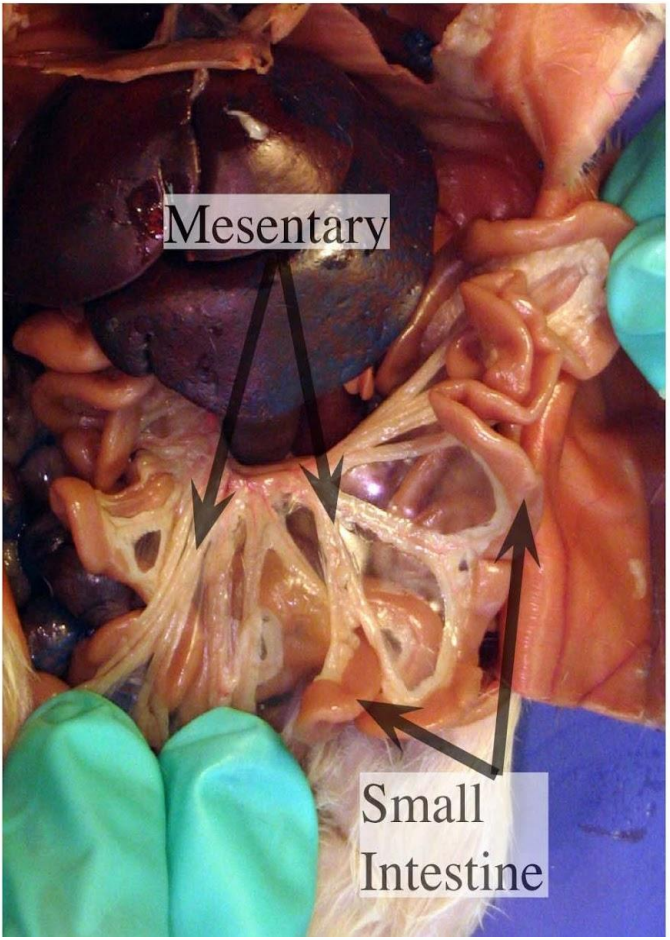
-spleen

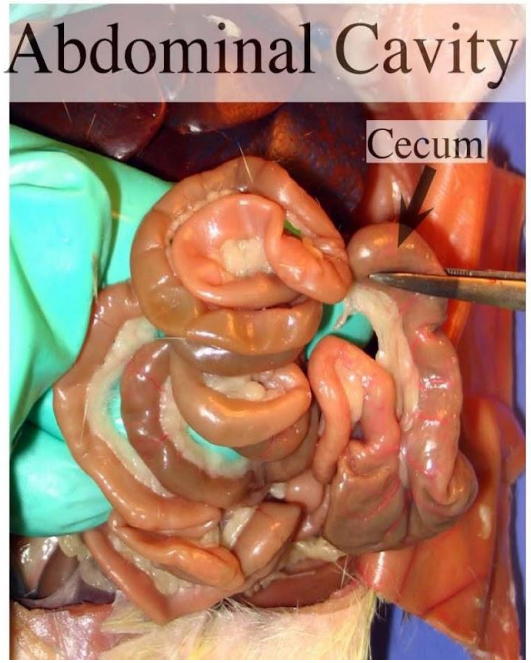
-kidney and ureter

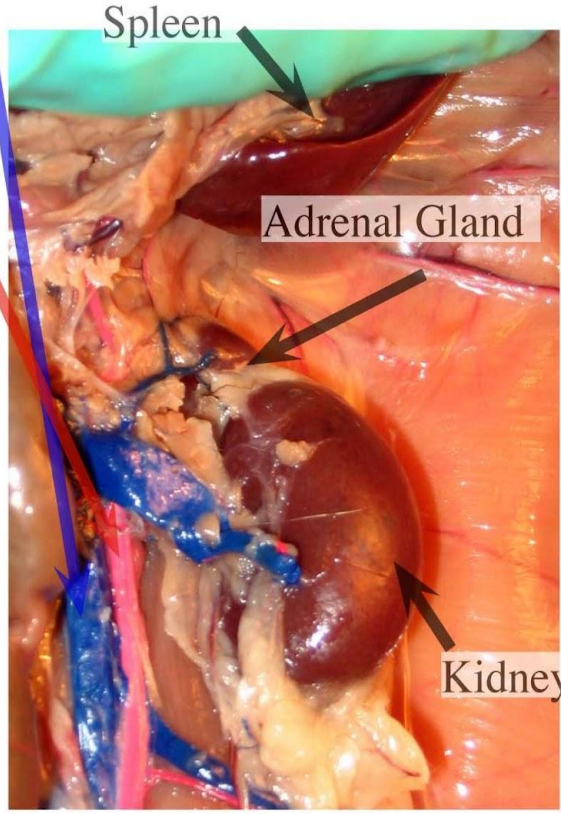
-adrenal gland

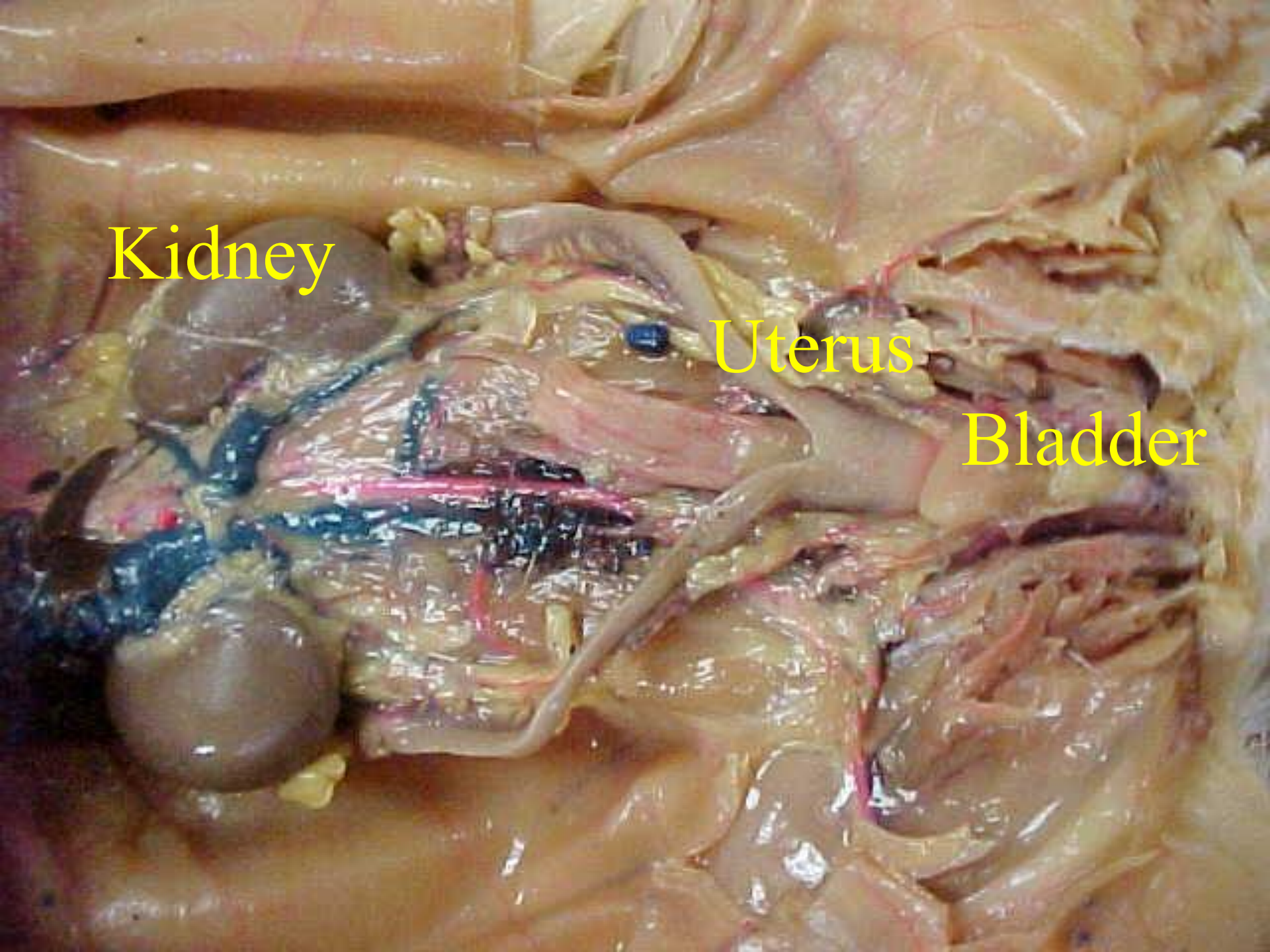
-inferior vena cava

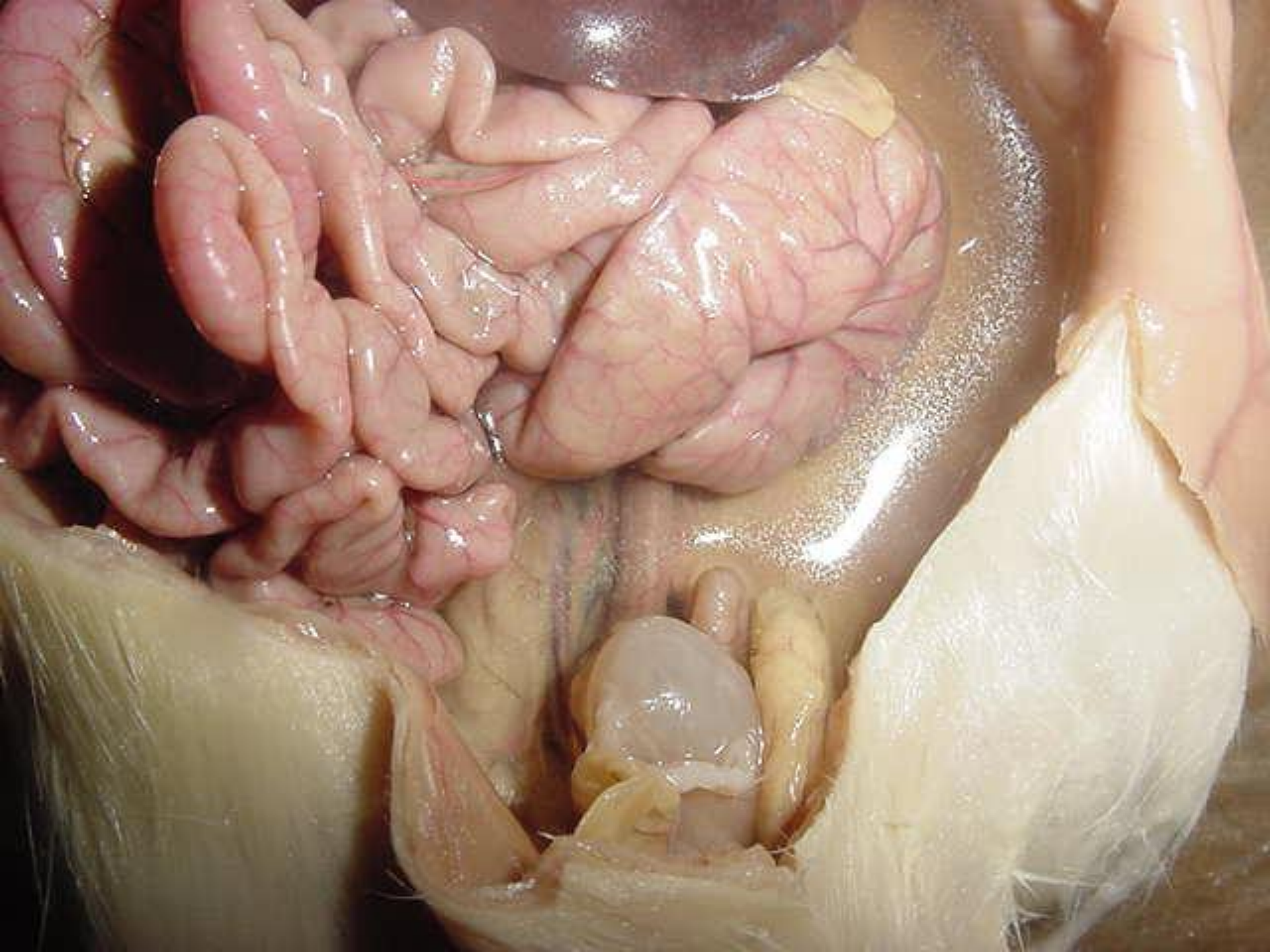
-descending aotra







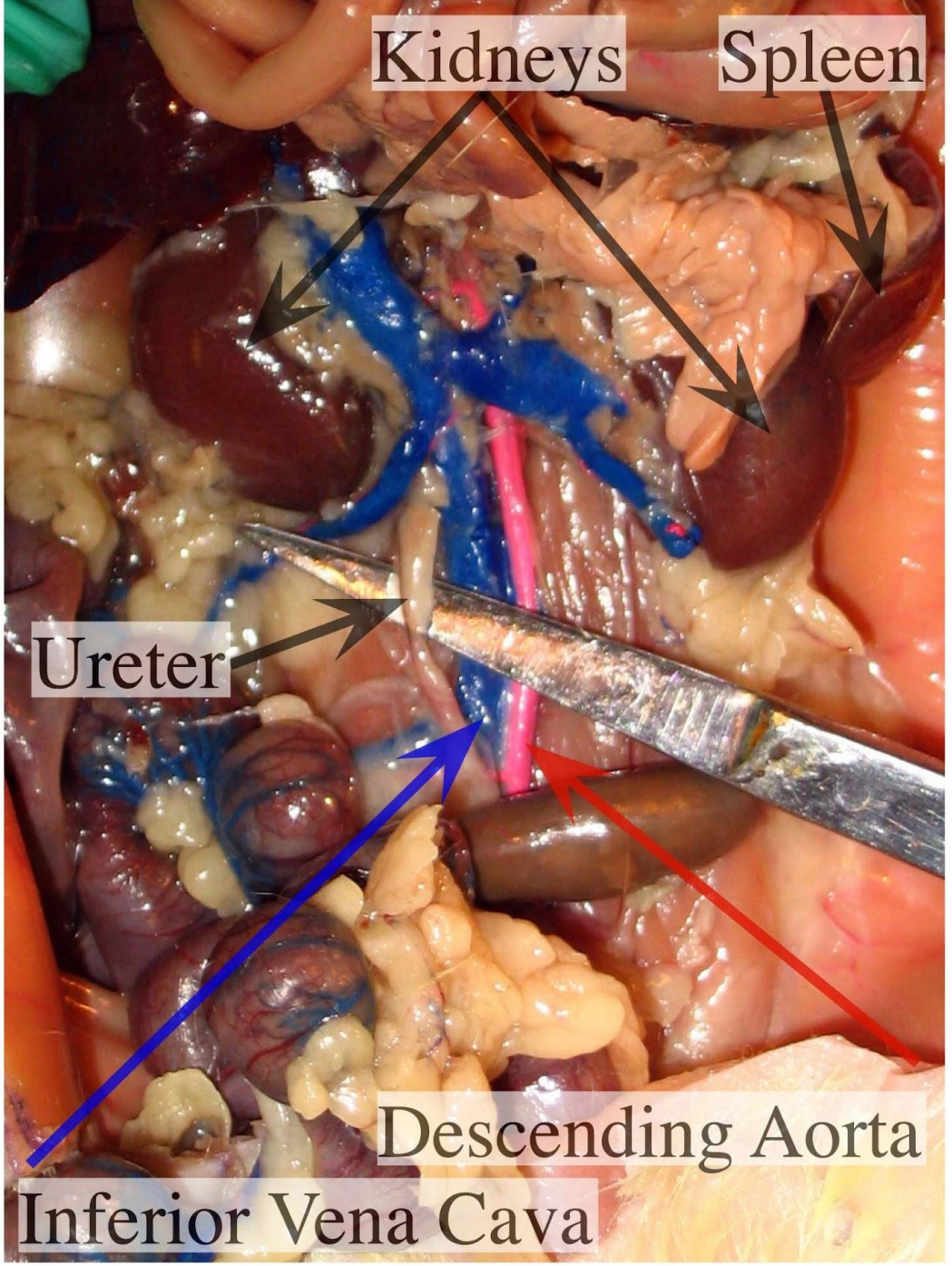

Kidney
Uterus
Bladder



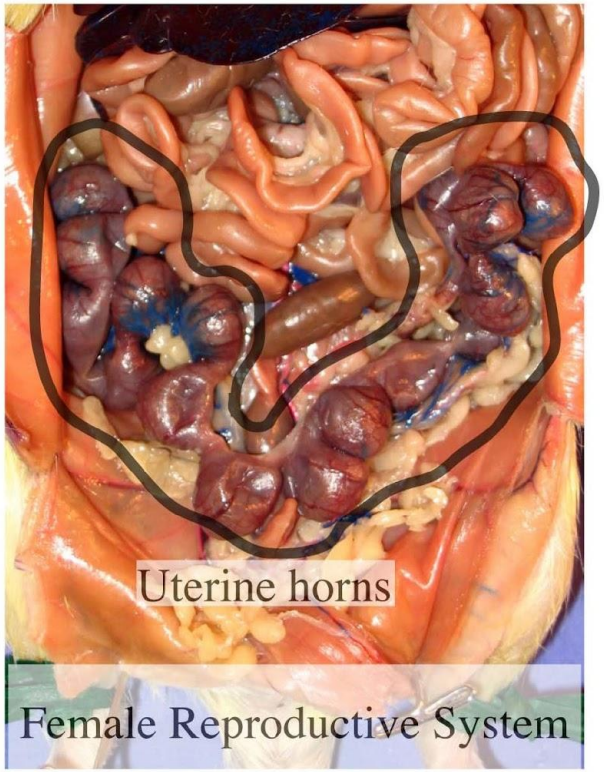
Find the remaining organs;

-urinary bladder

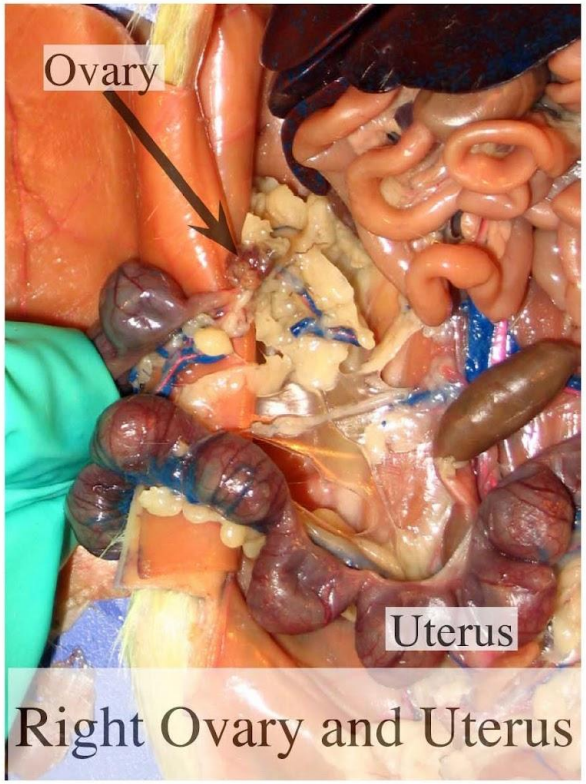
-ureter



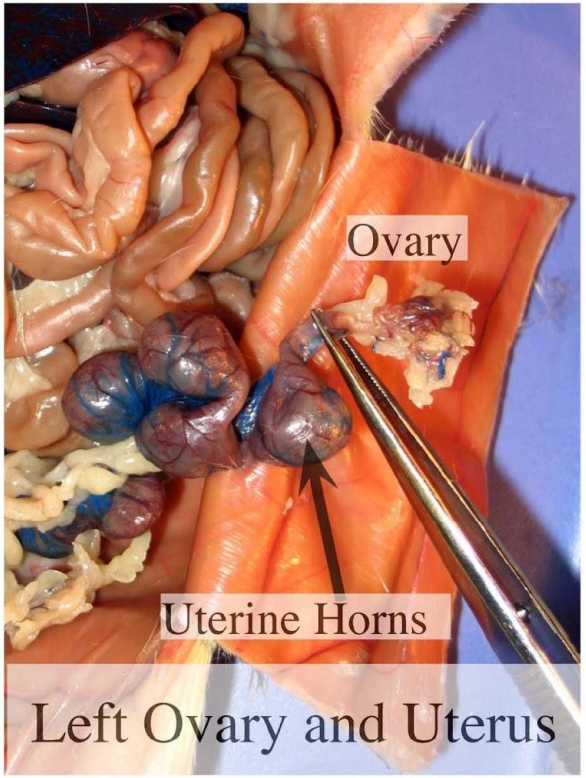
Female Rat- If you have a female rat, the reproductive organs are already exposed. Find the uterine horns and ovaries. It is not uncommon for rats (like the one used in this atlas) to be pregnant and your rat may have a litter of fetuses in the uterine horns.



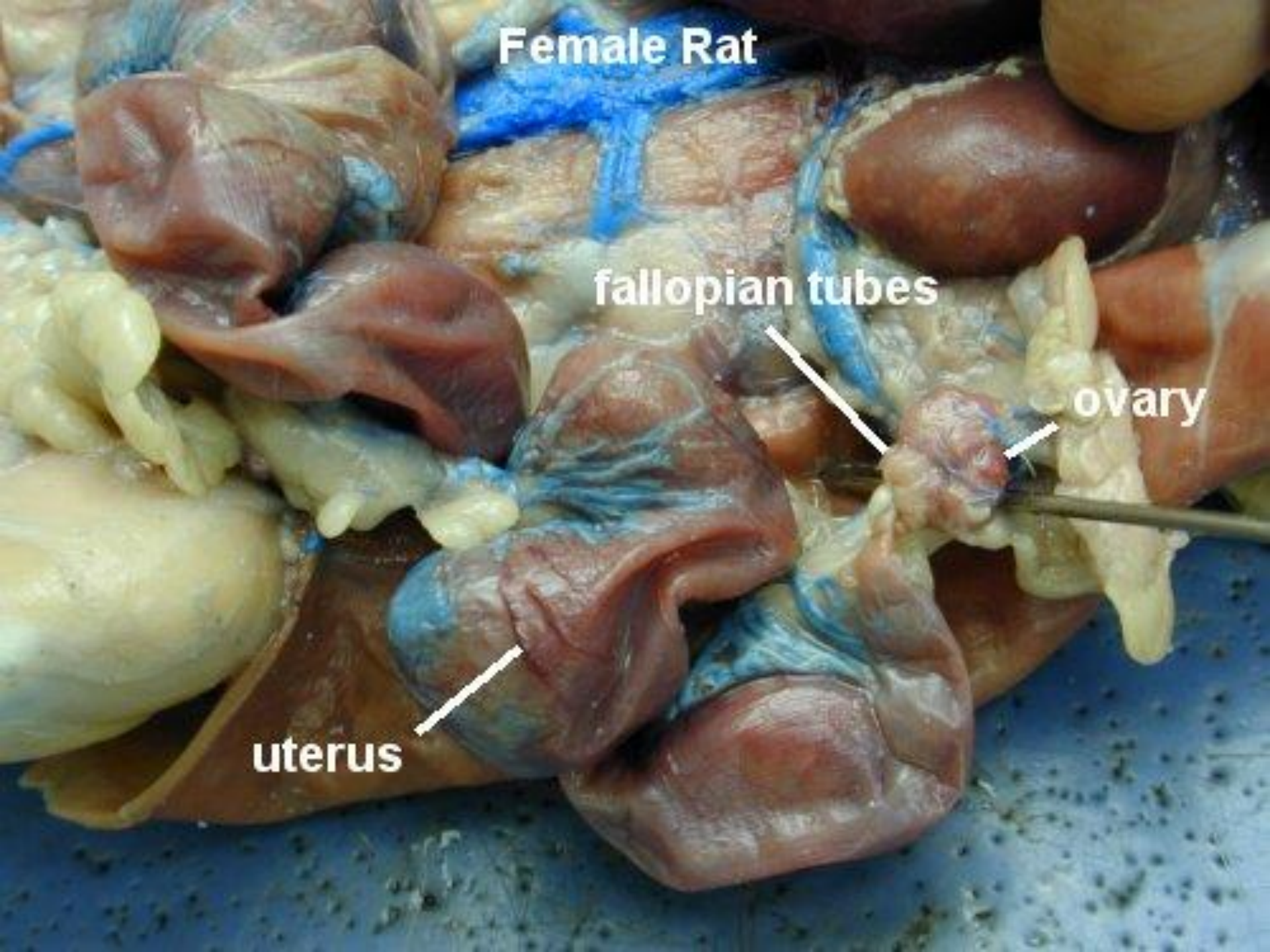
Female Reproductive System

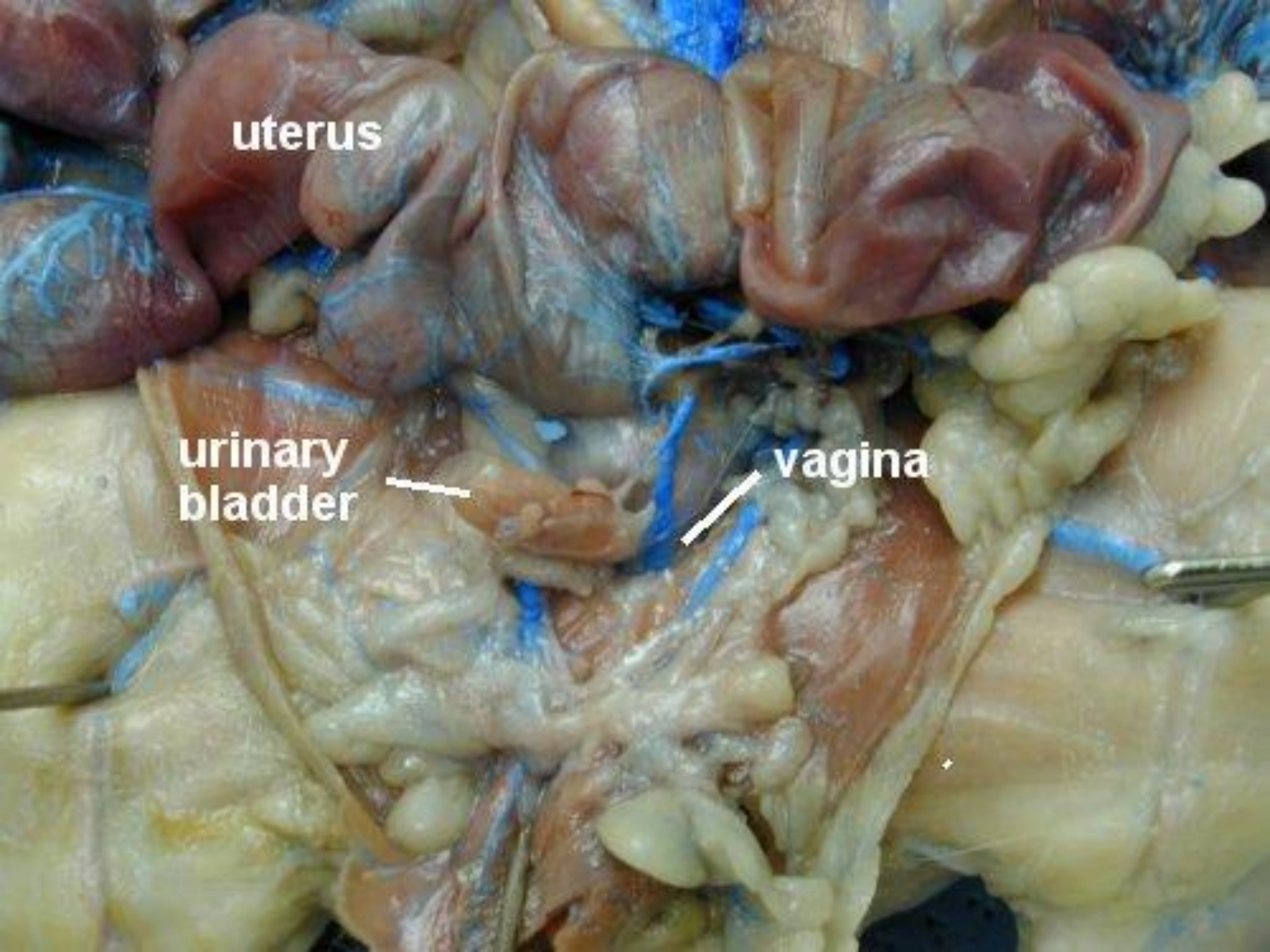


Right Ovary and Uterus



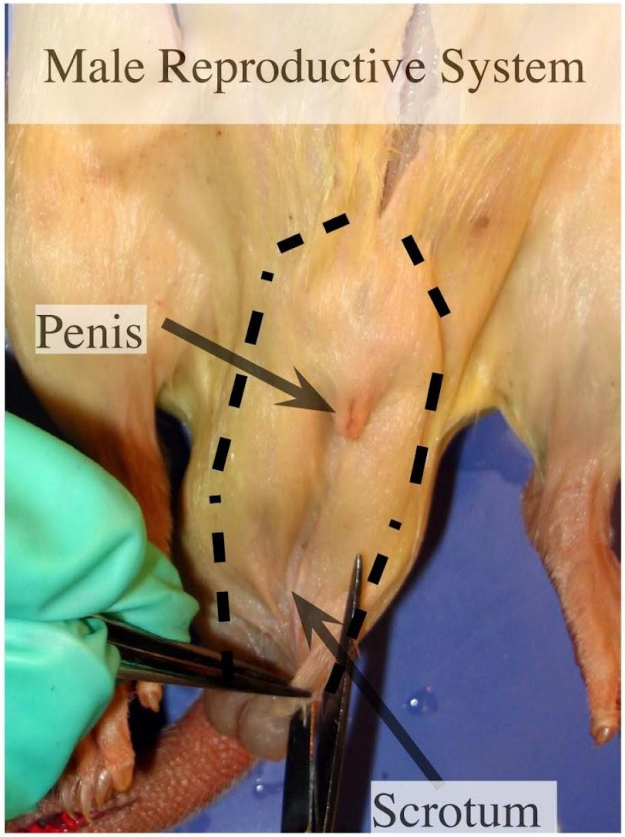
Left Ovary and Uterus

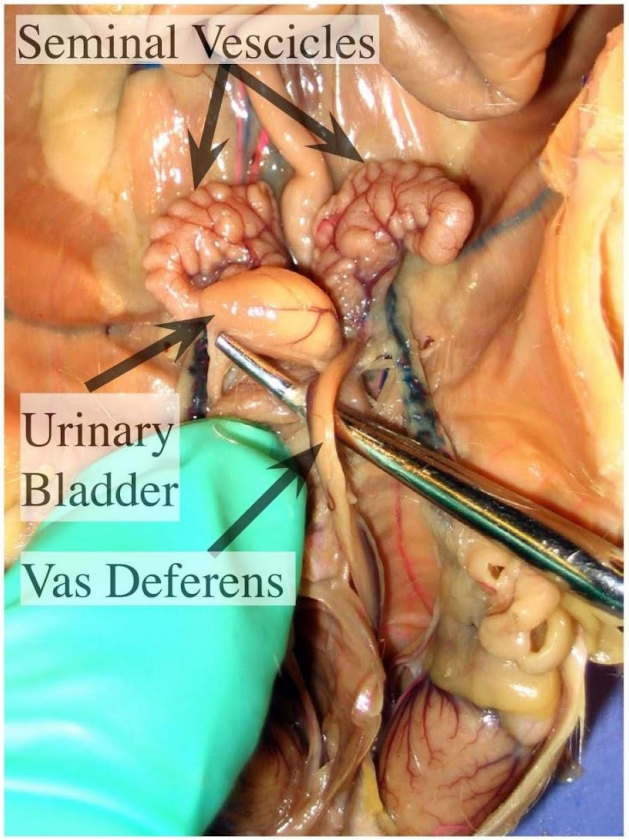

Female Rat
fallopian tubes
ovary
uterus

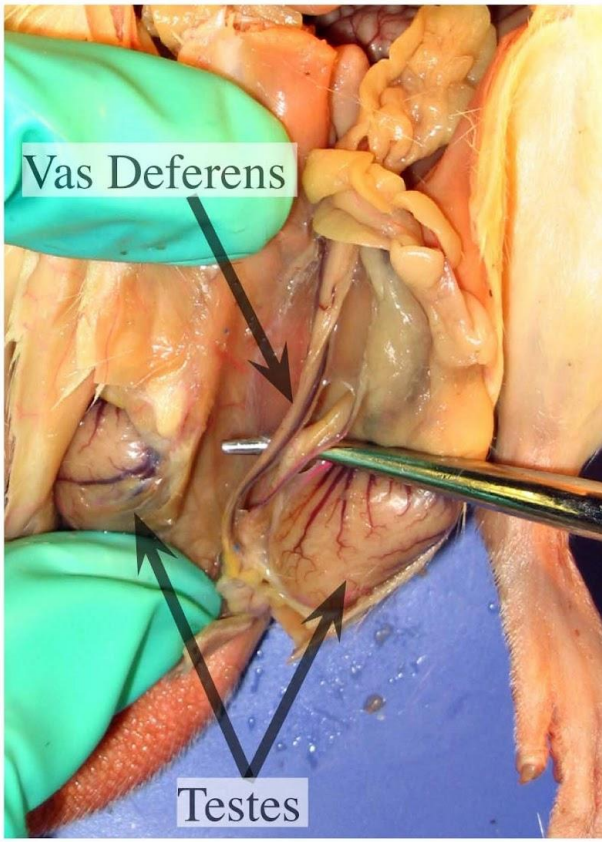

uterus
urinary bladder
vagina

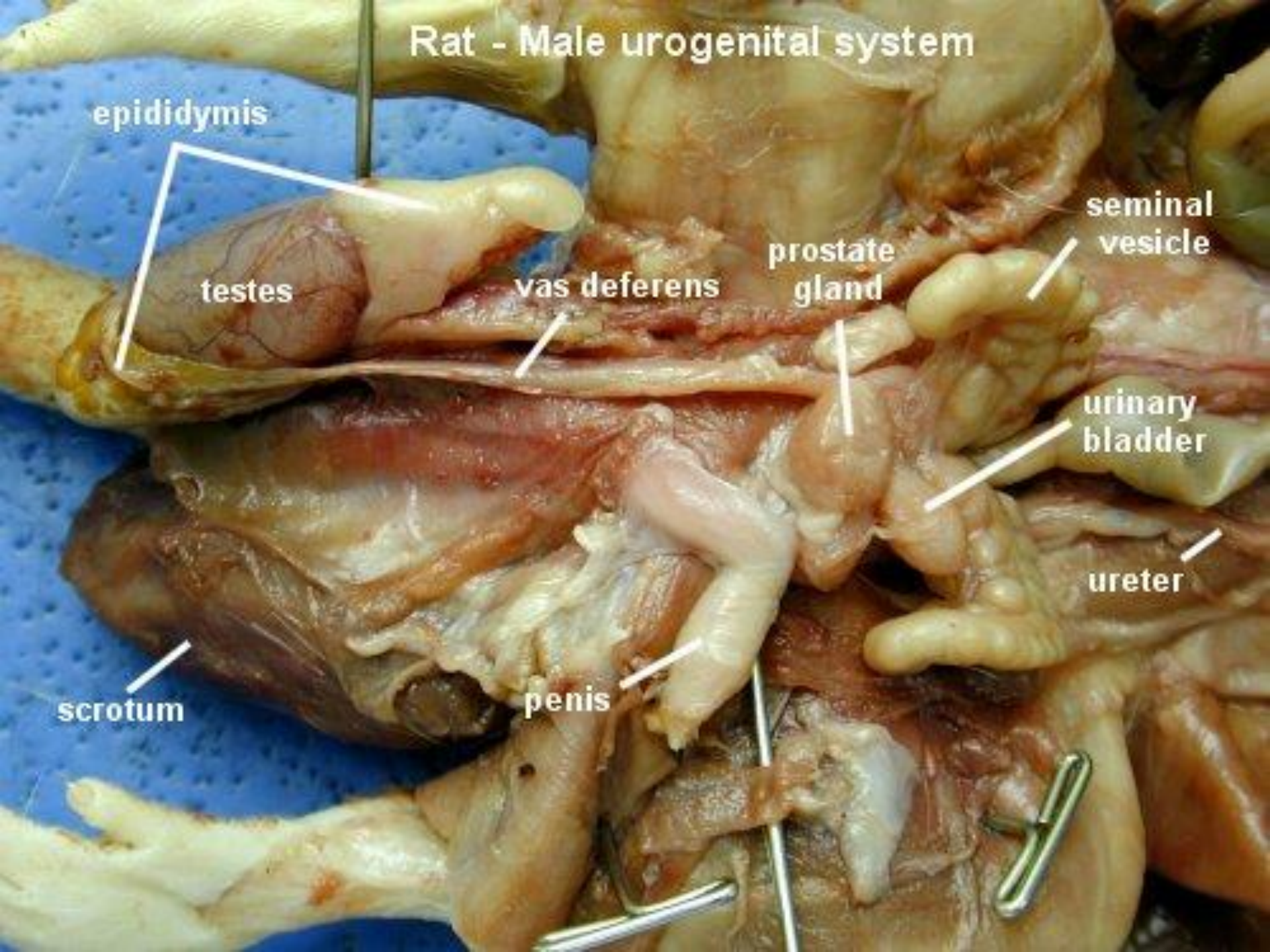
Male Rat- You will have to make two incisions as seen in the illustration on the right. Join these incisions to the incisions made in the abdominal region. This will expose the testes. Find the following;

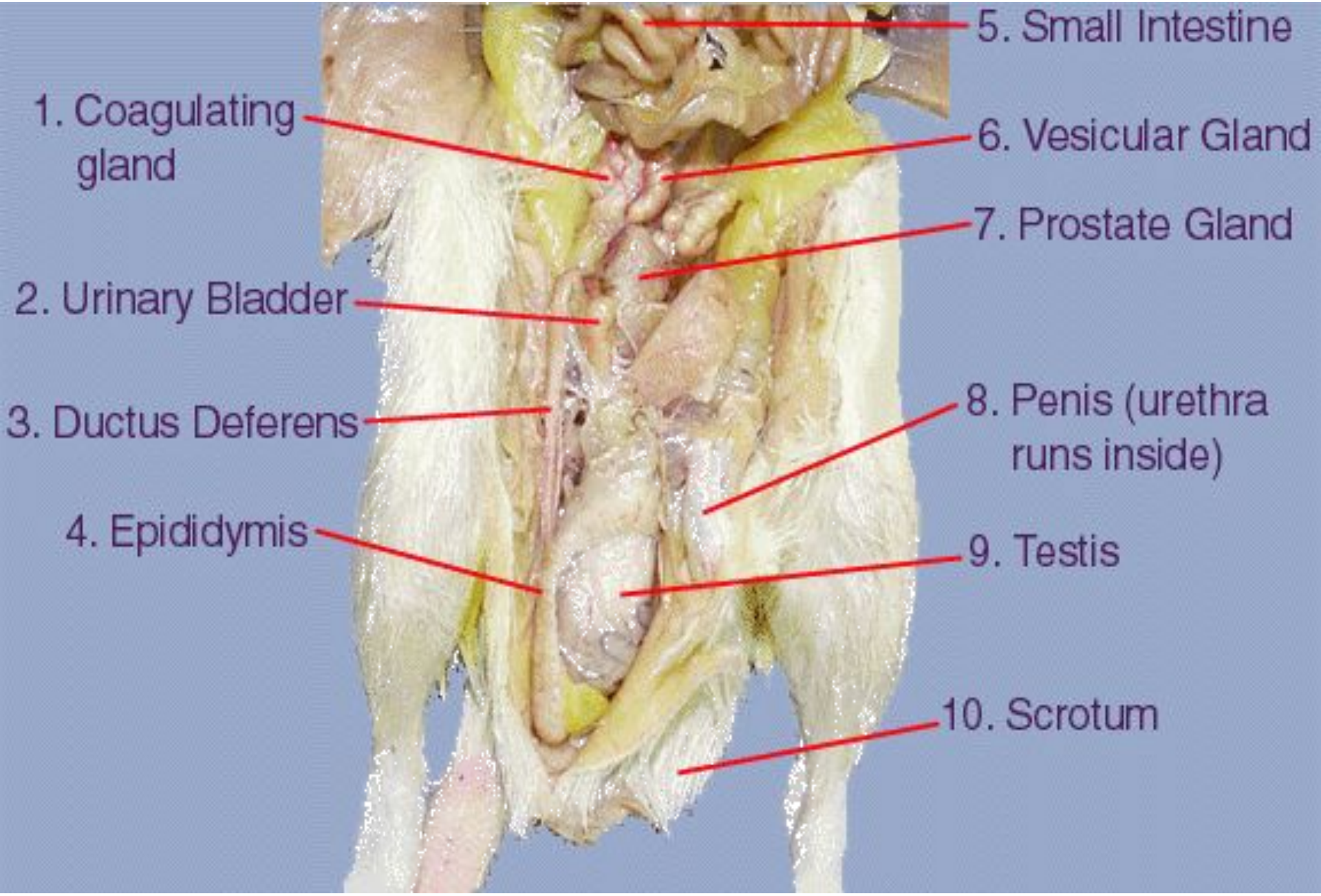
-seminal vescicles
-vas deferens
-prostate
-scrotum
-penis
-testes



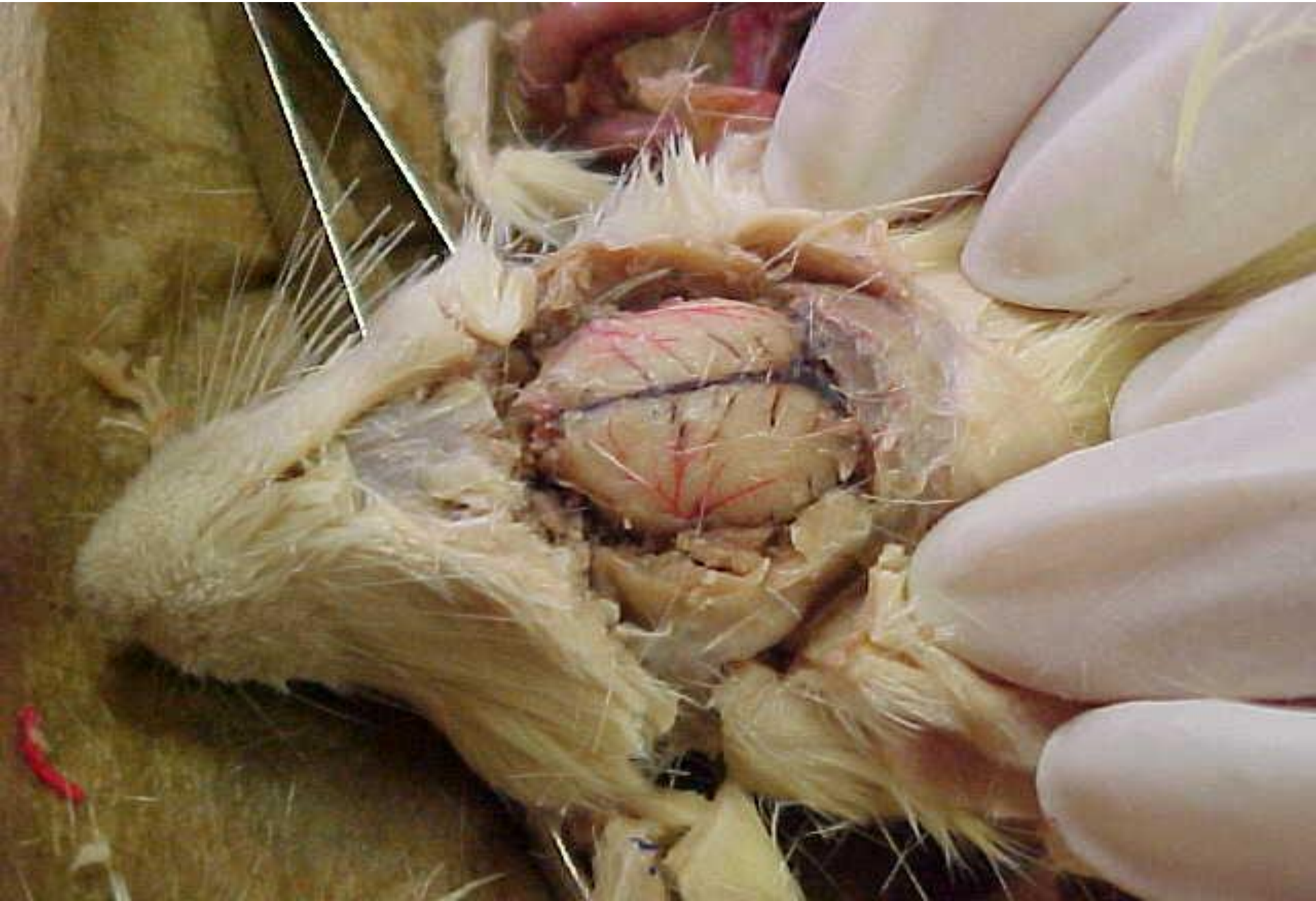


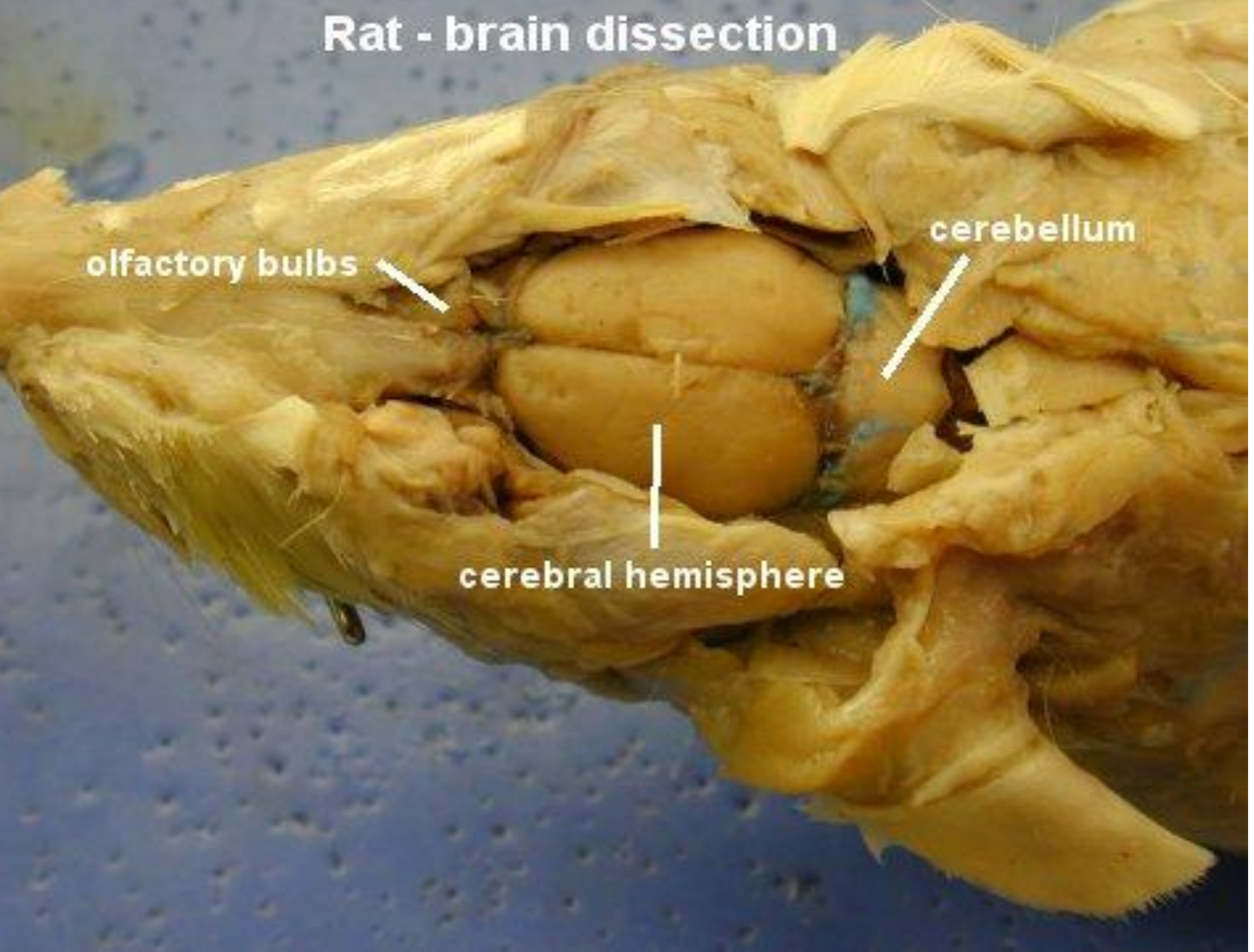



Rat - Male urogenital system
epididymis
testes
vas deferens
prostate gland
seminal vesicle
urinary bladder
ureter
penis
scrotum


1. Coagulating gland
2. Urinary Bladder
3. Ductus Deferens
4. Epididymis
5. Small Intestine
6. Vesicular Gland
7. Prostate Gland
8. Penis (urethra runs inside)
9. Testis
10. Scrotum

Brain




Rat - brain dissection
olfactory bulbs
cerebellum
cerebral hemisphere