

Anatomy of Liver

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liver

The liver is the largest gland in the body. It is situated obliquely on the abdominal surface of the diaphragm. Its highest point is in the level of the right kidney. Its lowest point is on the left side, usually about three or four inches (8 to 10 cm) from the abdominal floor, the greater part of the liver lies to the right of the median plane.

The red brown color, the average weight is about 5 kg in the horse (4.5 to 5.5 kg) in ox, 100 grams in sheep and weight in the dog usually about 3 percent of body weight, the liver has two surfaces and four borders.

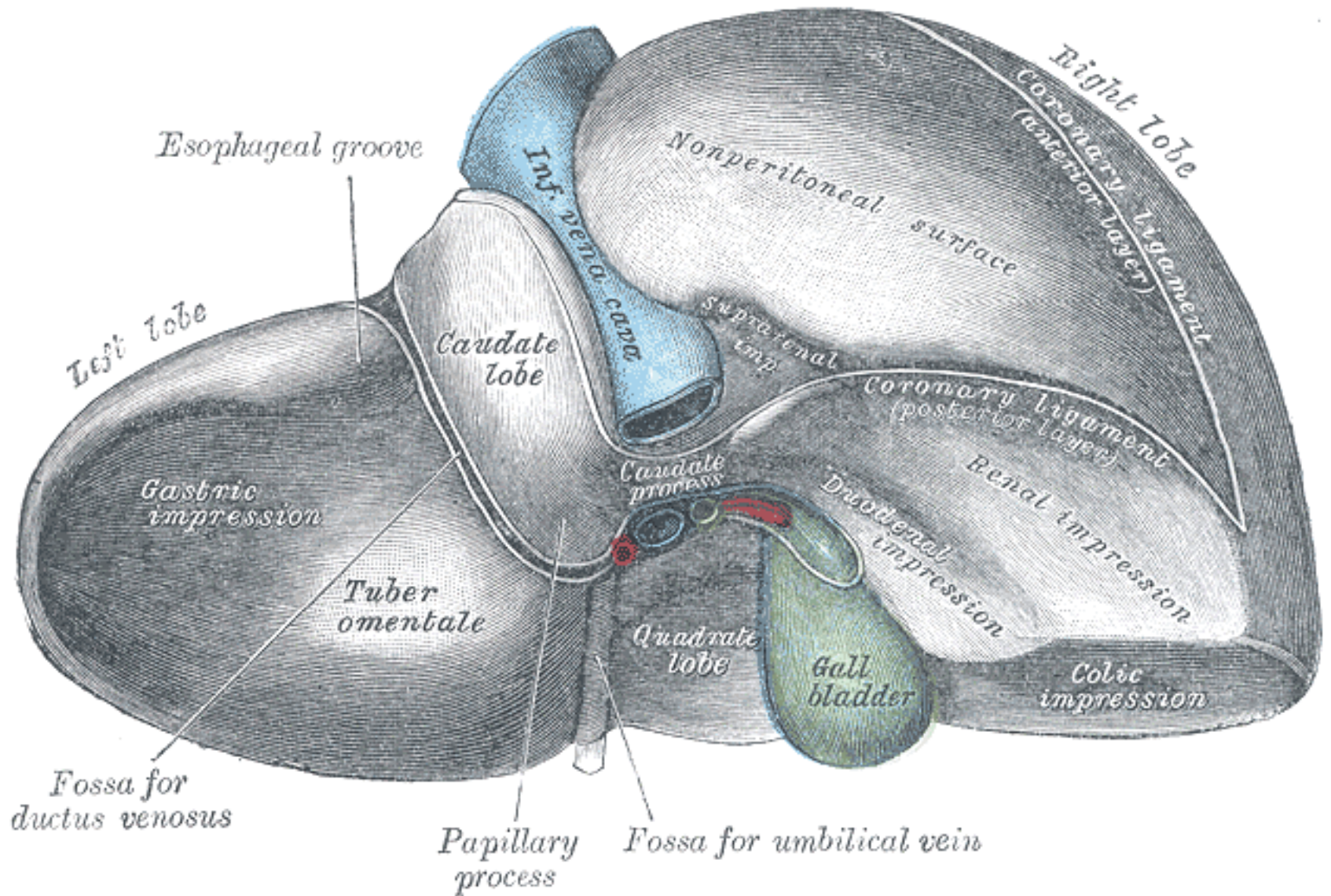
A – diaphragmatic ((parietal)) surface, is strongly convex and lies against the diaphragm. It presents a sagittal groove (sulcus vena cava) in which the caudal vena is embedded.

liver

B – visceral surface is concave and irregular. It present the following features:

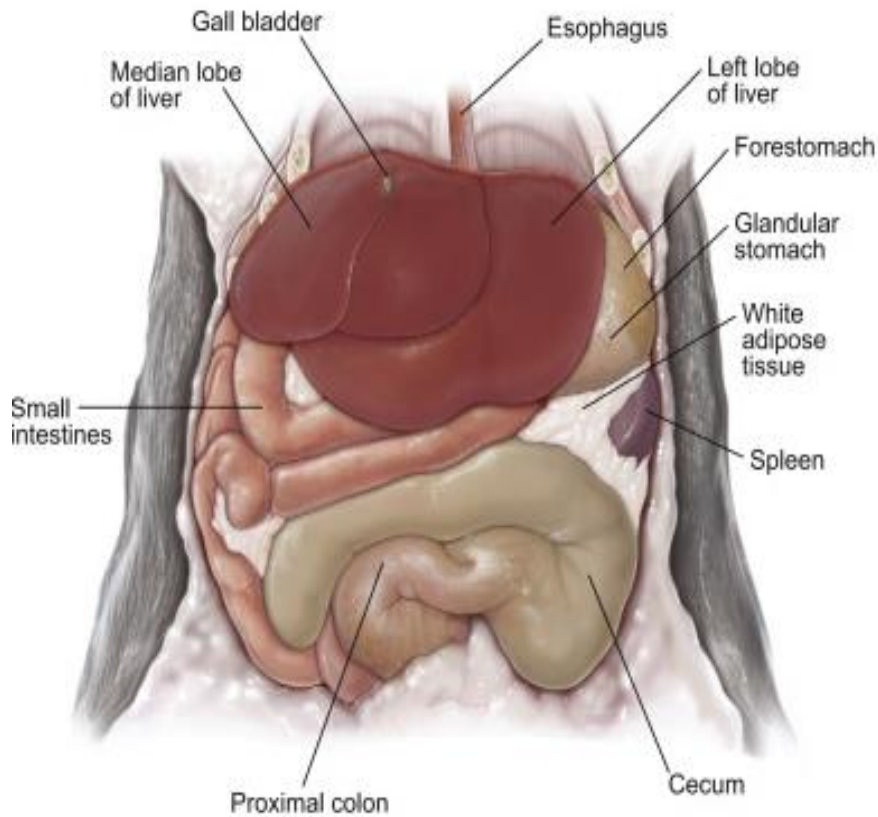
- 1) portal fissure (porta hepatis) contain the portal vein , hepatic artery , hepatic plexus of nerves enter , hepatic duct and lymph vessels leave the liver.
- 2) gastric impression concave and contact with stomach.
- 3) duodenal impression.
- 4) colic impression.
- 5) cecal impression.

liver

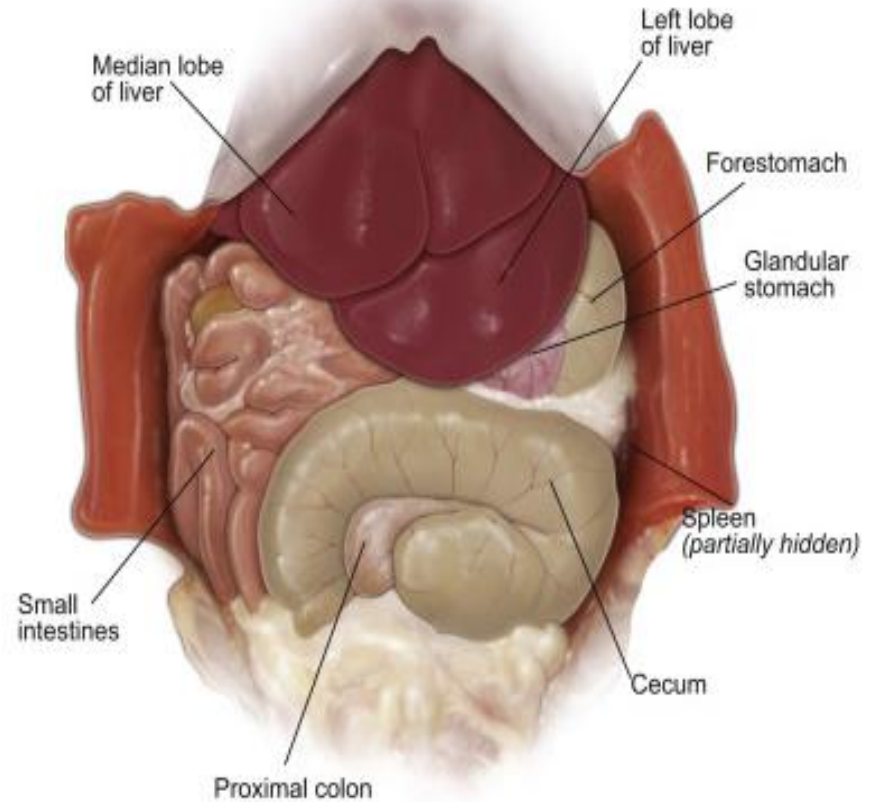


Liver

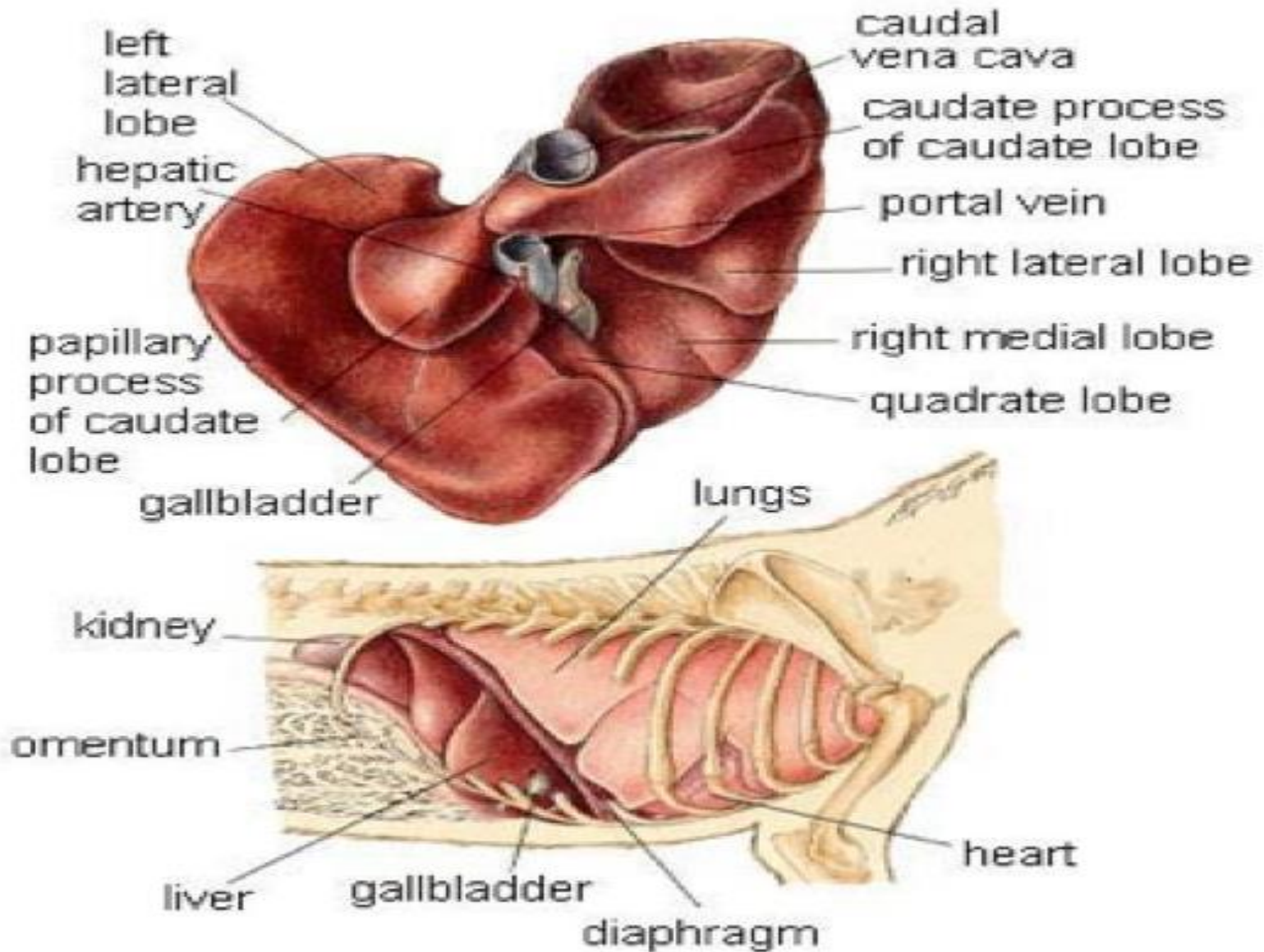
(A)



(B)



liver



The borders of liver

1 – Dorsal border: thick for the most part, it presents from right to left

a – right triangular ligament.

b – rental impression.

d – esophageal impression.

e – left triangular ligament.

2 – Ventral border: thin and has

a – three deep inter labor fissures.

b – several small fissures.

c – notch for the round ligament.

3 – Right border (thin and long)

4 – Left border (thin and convex)

Ligaments of live

1 – coronary ligament: attaches it closely to the diaphragm.

2 – falciform ligament.

3 – round ligament.

4 – right lateral ligament.

5 – left lateral ligament.

6 – hepato-renal ligament.

Vessel and Nerves

1. Portal vein: enters at portal fissure.
2. Hepatic artery:
3. Hepatic vein: the blood returned from liver to posterior vena cava by hepatic vein.

Innervation:

The nerves come from the hepatic plexus, which composed of branches from the vagus and sympathetic nerves.

Lobes of liver

In equine

a – right lobe.

b – lateral lobe.

c – middle lobe.

In canine

a – left lateral lobe.

b – left medial lobe.

c – quadrat lobe.

d – right medial lobe.

e – right lateral lobe.

f – caudal lobe.

g – papillary lobe or papillary process of caudal lobe.

Gall bladder

Horses : don't have a gall bladder.

Bovine gall bladder: is located partially attached to the visceral surface of liver. It is a pear-shaped (10 to 15 cm in length).

The gall bladder store bile and concentrates bile by absorption through the folded mucosal wall.

The wall of gall bladder onsite of serous , muscular and mucous coat.

Innervation:-

Gall bladder is innervated by parasympathetic

Pancreas

It situated transversely on the dorsal wall of the abdomen. It resembles the salivary gland in appearance but it softer and lobules are mostly loosely united. It has a reddish crease color when fresh.

The average weight is about 350 gram. It is triangular in outline and description.

A – two surfaces, dorsal and ventral surface.

B – Three borders right, left and caudal borders.

C – right and left extremities.

The pancreas has two duct

1 – **pancreatic duct**: larger and formed by union of two radicals which come from the right and left extremities, passes the duodenal angle, pierces the wall of duodenum obliquely and opens into the duodenal diverticulum.

2 – **accessory pancreatic duct**: arise either from the chief duct or left radical and end on papillae in the duodenum opposite the chief duct.

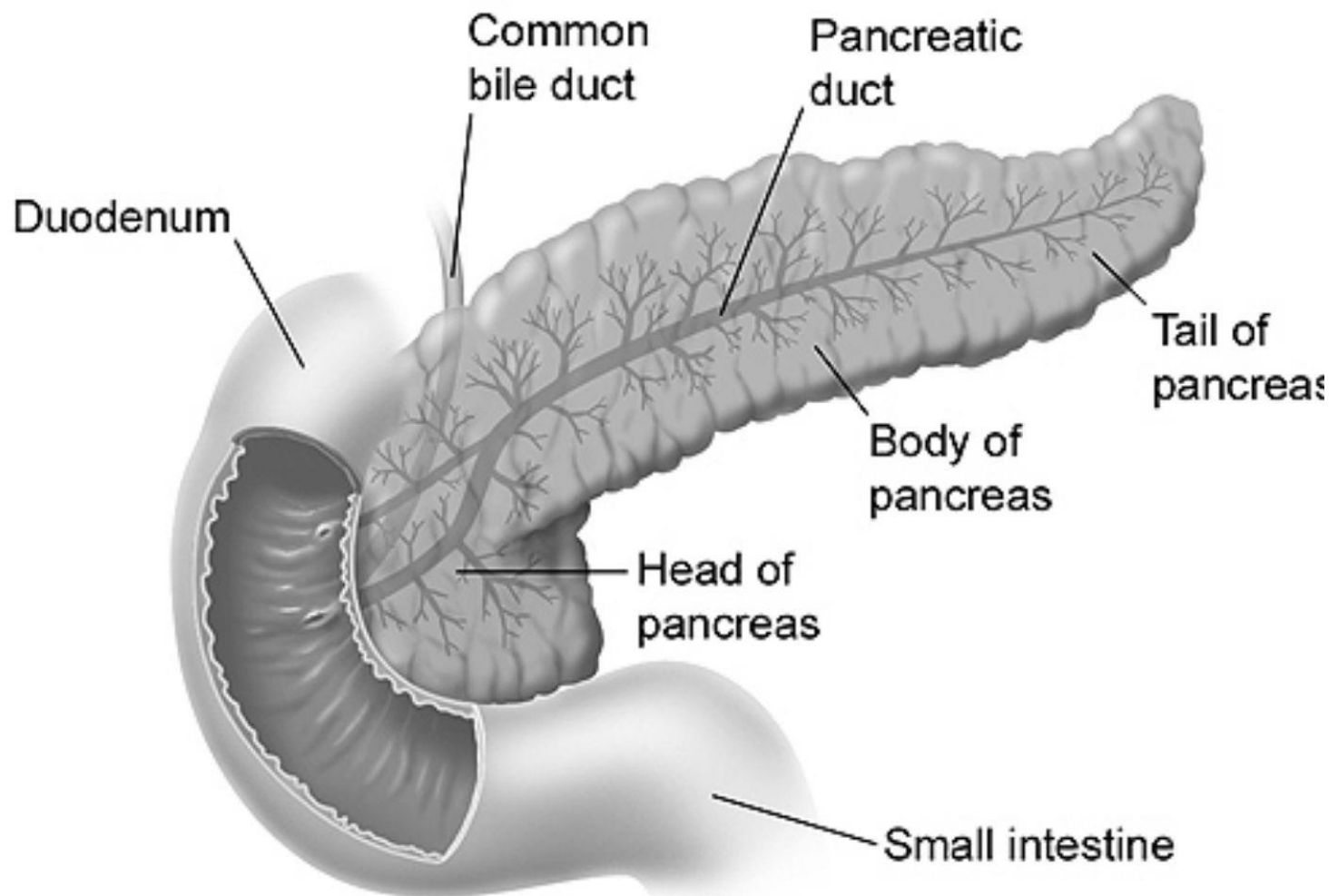
Vessel and Nerves

The pancreas receives the blood supply from the coeliac and cranial mesenteric as branches from the splenic, hepatic and superior mesenteric arteries.

Innervation:

The pancreas receives sympathetic and parasympathic supply.

Pancreas



The End