The University Of Jordan
Faculty Of Medicine

GASTROINTESTINAL TRACT

DR. MAHA ELBELTAGY

ASSOCIATE PROFESSOR OF ANATOMY AND HISTOLOGY

THE UNIVERSITY OF JORDAN

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Abdominal cavity

Boundaries :

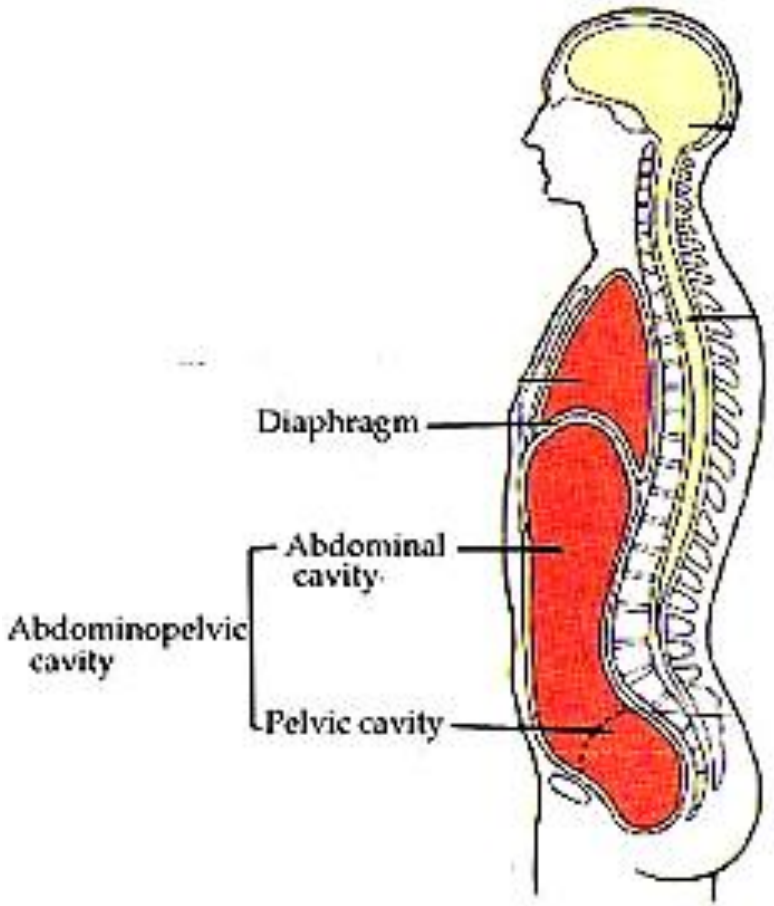
Superiorly: the diaphragm.

Inferiorly: the pelvic cavity

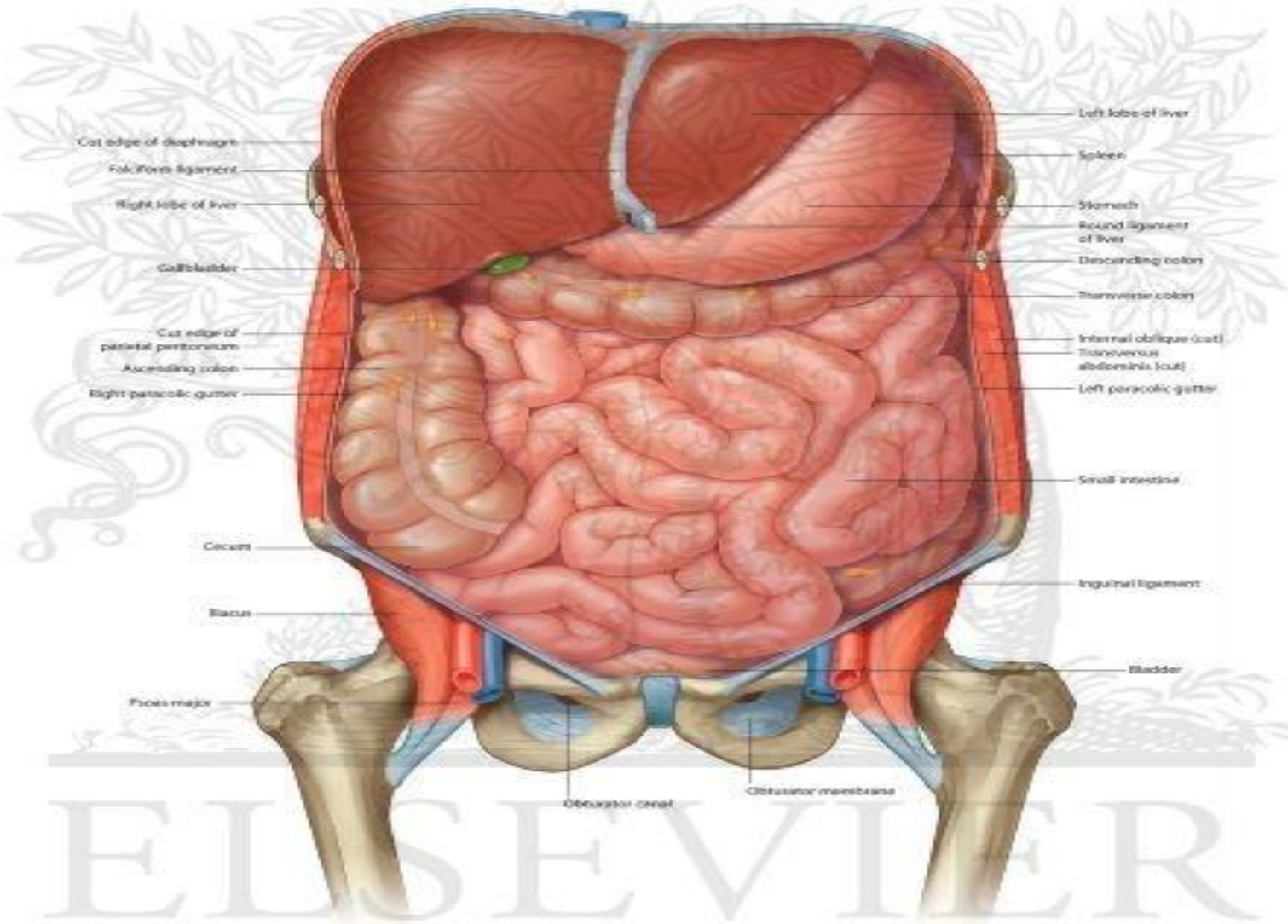
Anteriorly: Anterior abdominal wall muscles.

Posteriorly: the lumbar vertebrae and abdominal wall muscles.

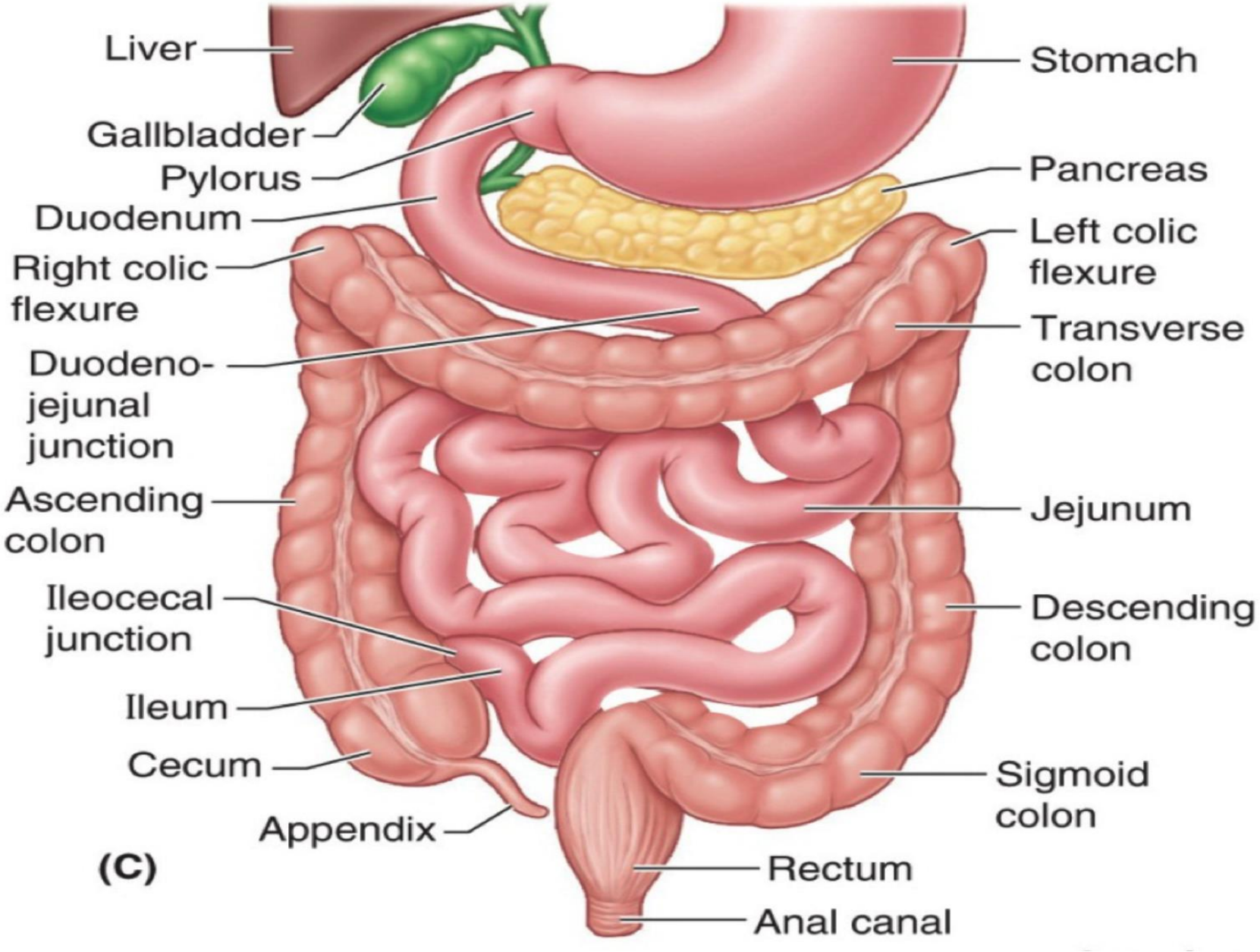
Laterally: the lower ribs and parts of the muscles of abdominal wall

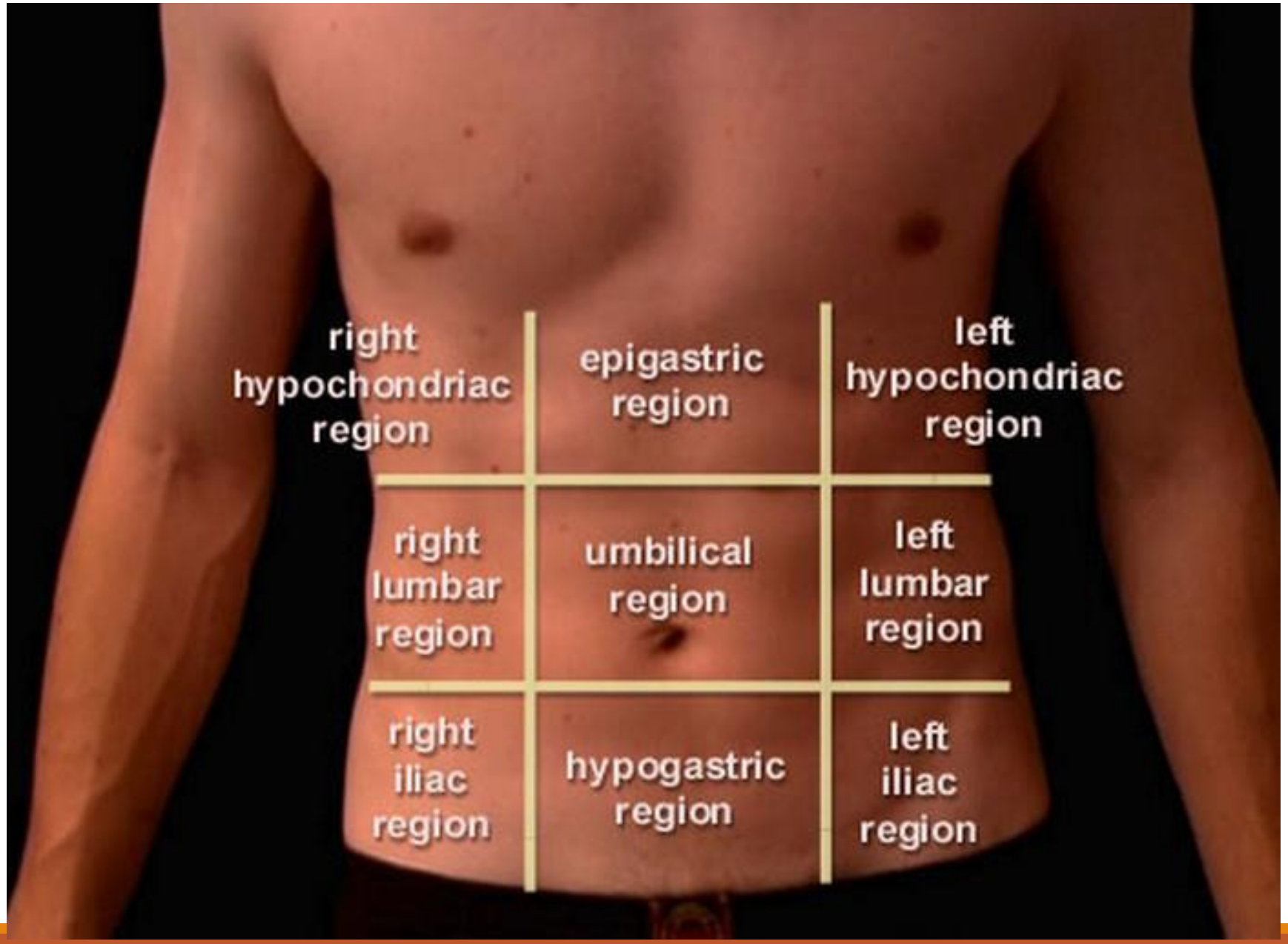


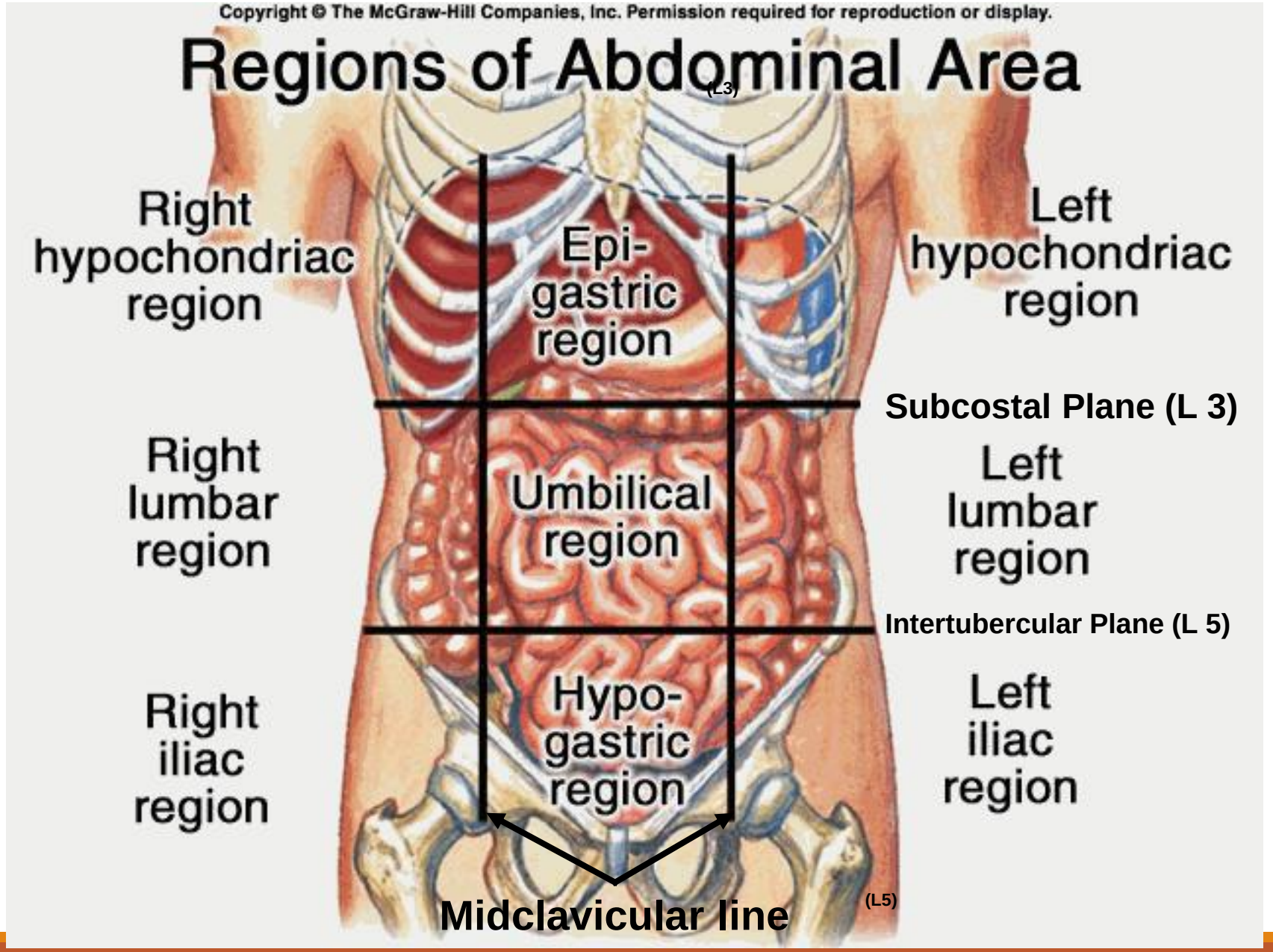
Abdominal viscera



Abdominal viscera (greater omentum removed)


Liver
Gallbladder
Pylorus
Duodenum
Right colic flexure
Duodeno-jejunal junction
Ascending colon
Ileocecal junction
Ileum
Cecum
Appendix
(C)
Stomach
Pancreas
Left colic flexure
Transverse colon
Jejunum
Descending colon
Sigmoid colon
Rectum
Anal canal


right hypochondriac region
epigastric region
left hypochondriac region
right lumbar region
umbilical region
left lumbar region
right iliac region
hypogastric region
left iliac region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Regions of Abdominal Area
(L3)
Right hypochondriac region
Epi-gastric region
Left hypochondriac region
Subcostal Plane (L 3)
Right lumbar region
Umbilical region
Left lumbar region
Intertubercular Plane (L 5)
Right iliac region
Hypo-gastric region
Left iliac region
Midclavicular line
(L5)

THE PERITONEUM

Peritoneum is a serous membrane, which lines the abdominal cavity and is reflected over the viscera.
The peritoneum has two layers; ***parietal and visceral,*** with peritoneal cavity in between.

The *parietal layer* lines the ***interior of the anterior and posterior*** abdominal walls, the lower surface of the diaphragm.

The *visceral layer :* surrounds the ***abdominal viscera .***

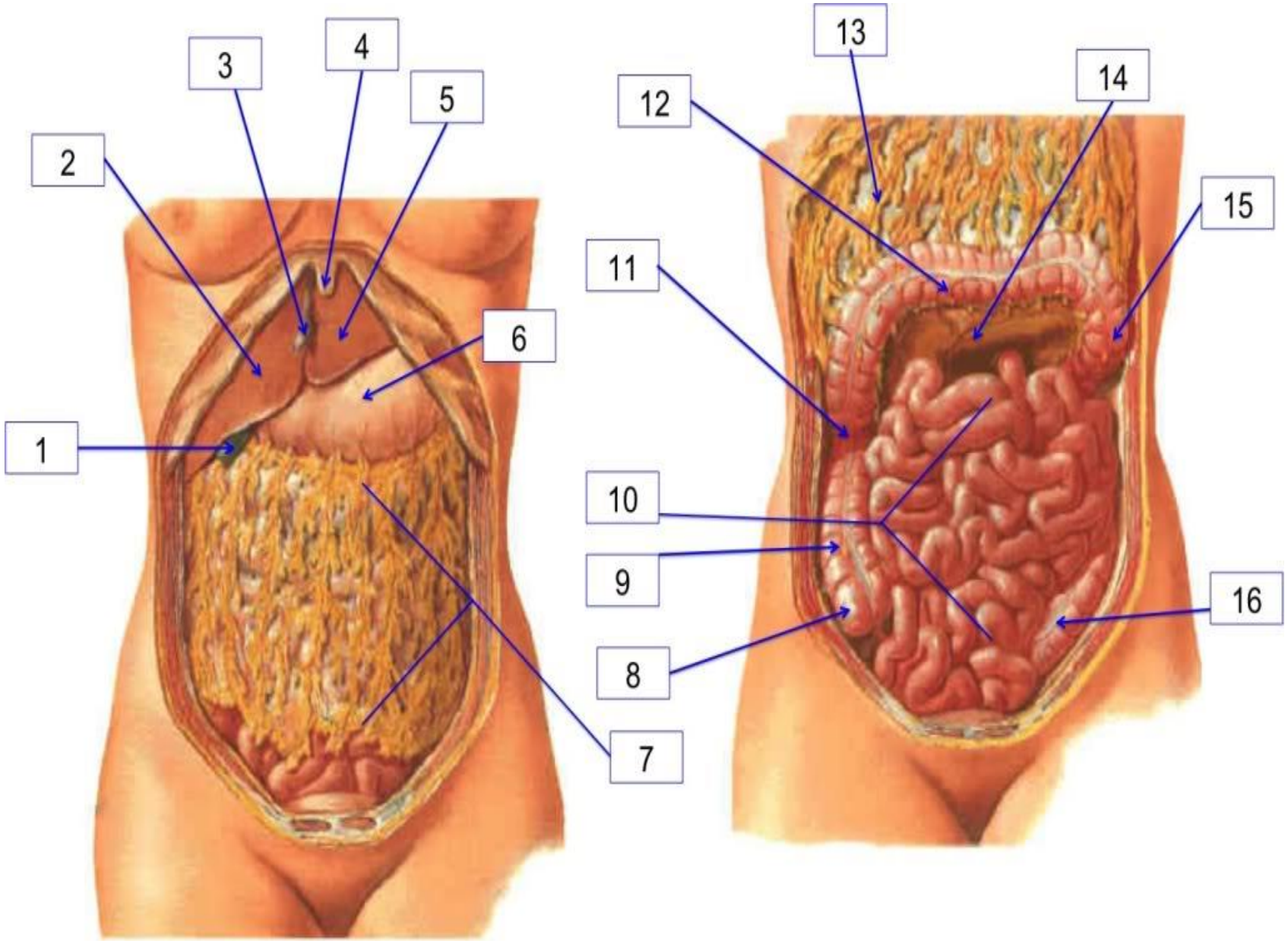
Peritoneal folds

In the stomach,:
the fold is named omentum ***(lesser and greater OMENTUM)***

In the small intestine,:
it is named ***MESENTERY.***

In the large intestine,:
it is named ***MESO (mesoappendix, transverse mesocolon, sigmoid mesocoton).***

In the liver and spleen :
the folds are named ***LIGAMENTS.***


1
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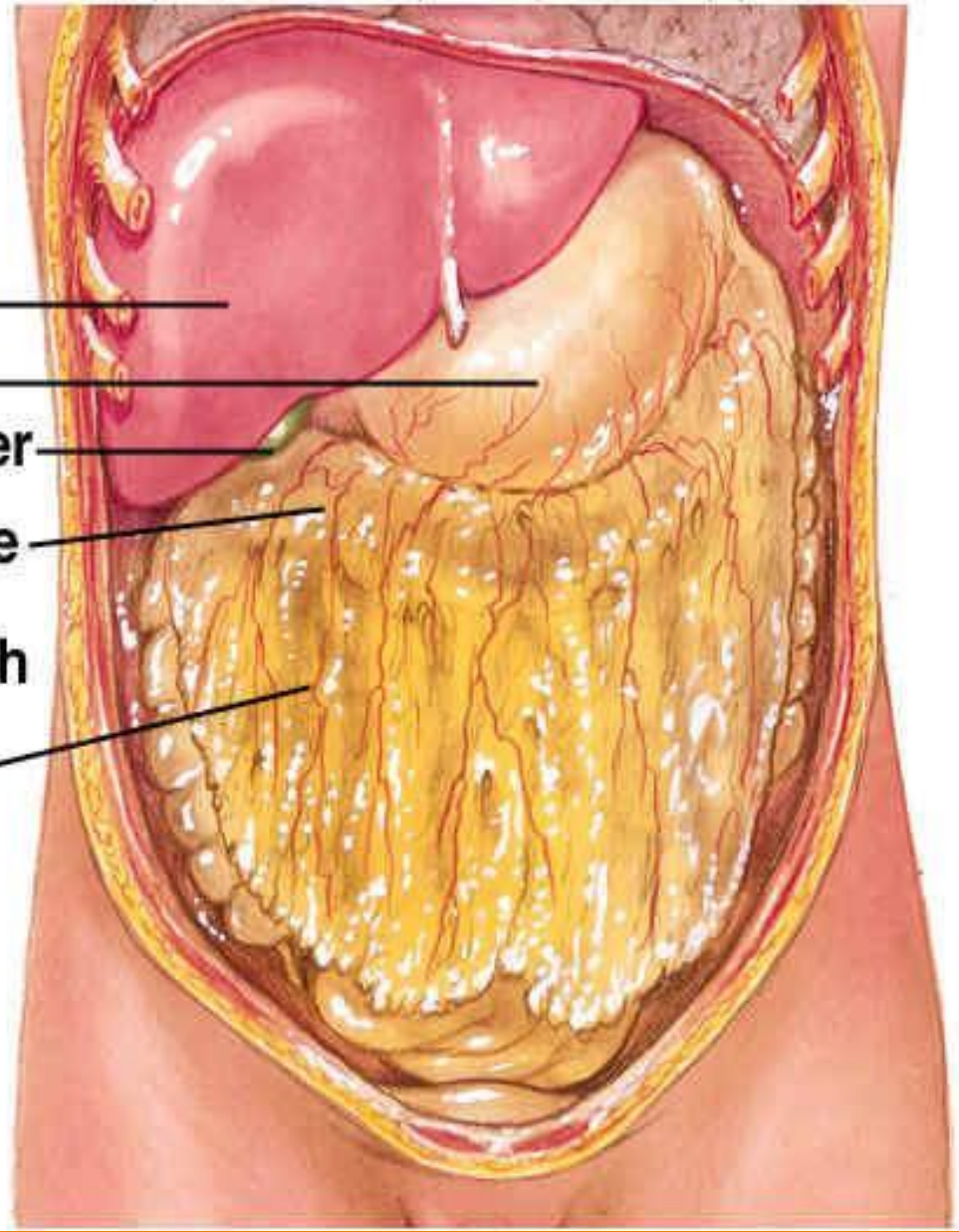
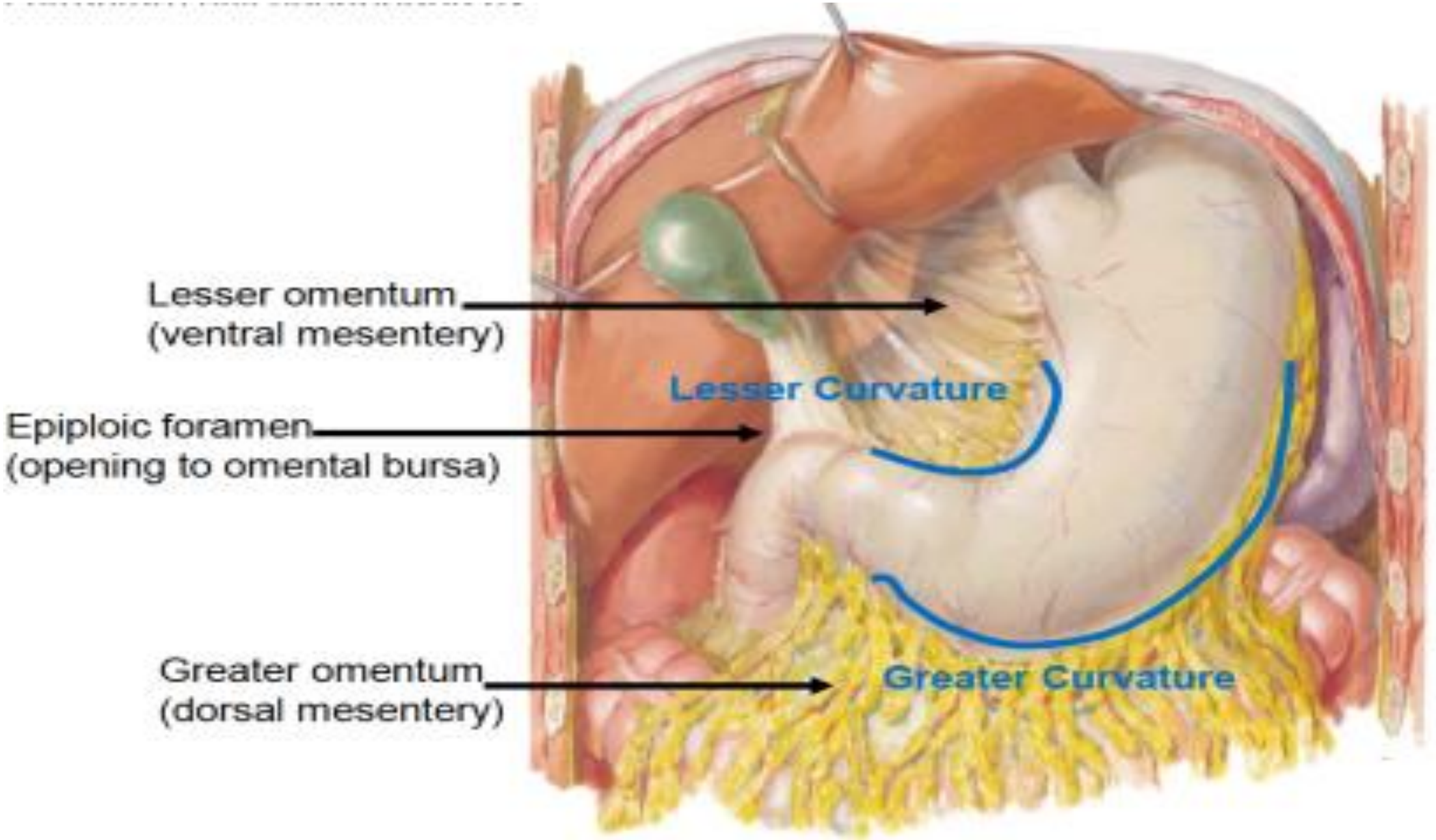
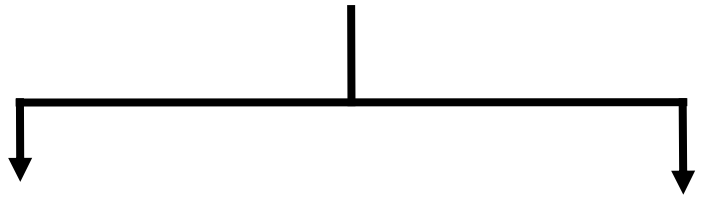
Greater Omentum




Lesser omentum
(ventral mesentery)
Epiploic foramen
(opening to omental bursa)
Greater omentum
(dorsal mesentery)
Lesser Curvature
Greater Curvature

THE DIGESTIVE SYSTEM



- **DIGESTIVE TUBE**
- **The mouth cavity.**
- **The pharynx.**
- **The esophagus.**
- **The stomach.**
- **The small intestine.**
- **The large intestine.**

DIGESTIVE GLANDS

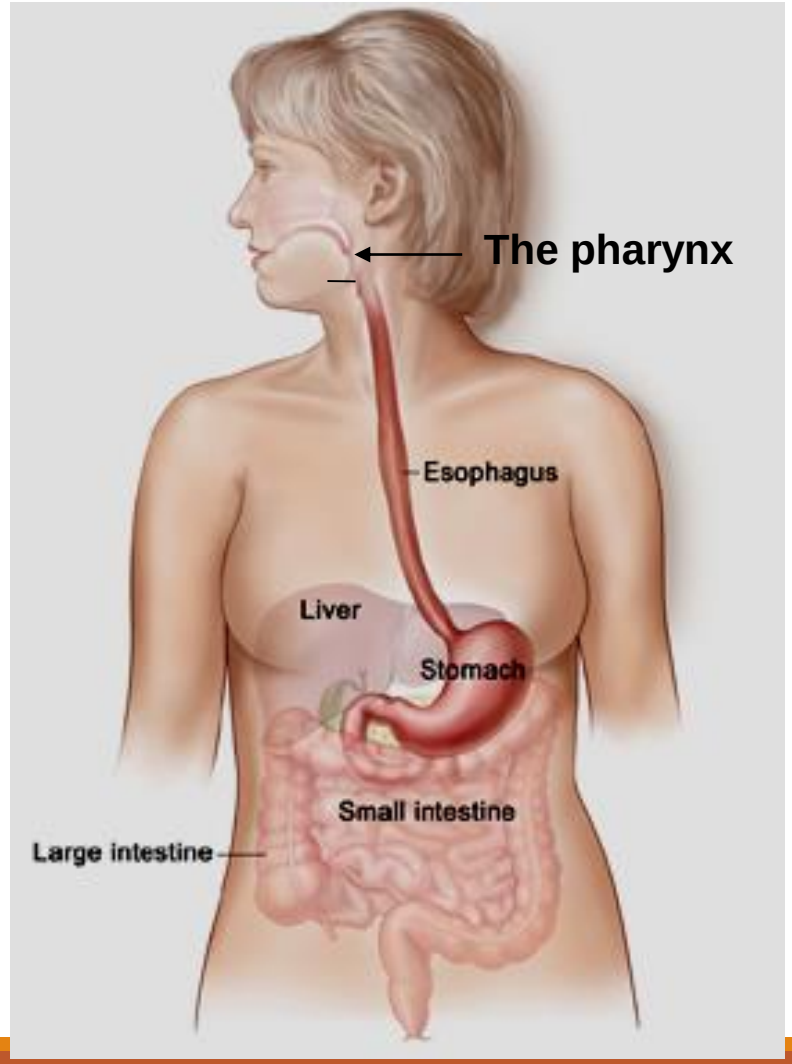
*** The salivary glands.**

*** The liver.**

*** The pancreas.**

The esophagus

- It is a muscular tube about 25 cm in length.
- It connects the pharynx with the stomach.
- It begins in the neck at the level of the 6th cervical vertebra, descends in the neck, thoracic cavity & in the abdomen.



The stomach

- It is widest part of the digestive tube.
- It lies in epigastrium, left hypochondrium & umbilical regions
- **It has 2 ends:**

Cardiac end:

- Connected with the esophagus.

-It lies 1 inch to left of the midline

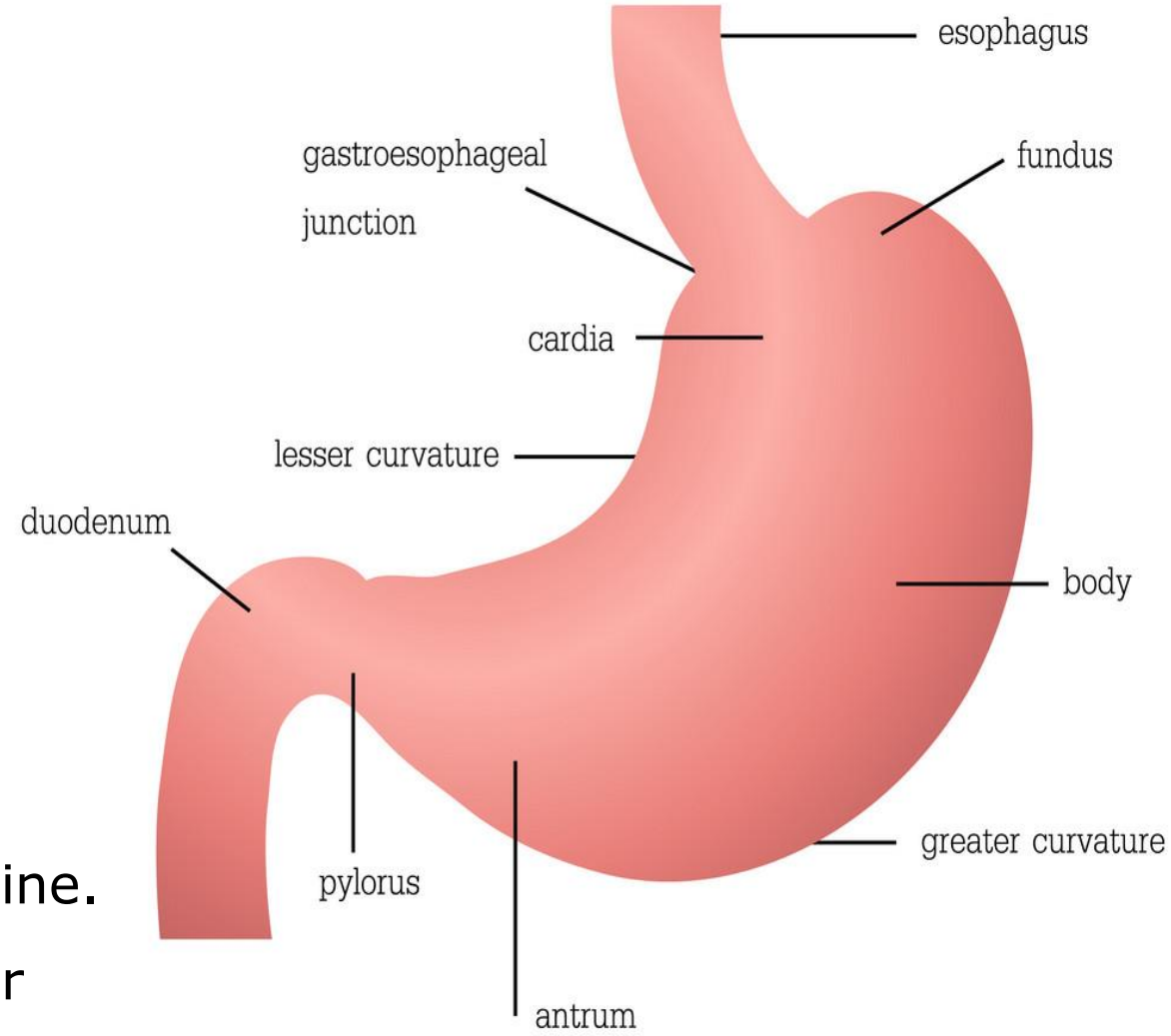
-It is guarded by physiological sphincter

Pyloric end:

- Connected to the duodenum.

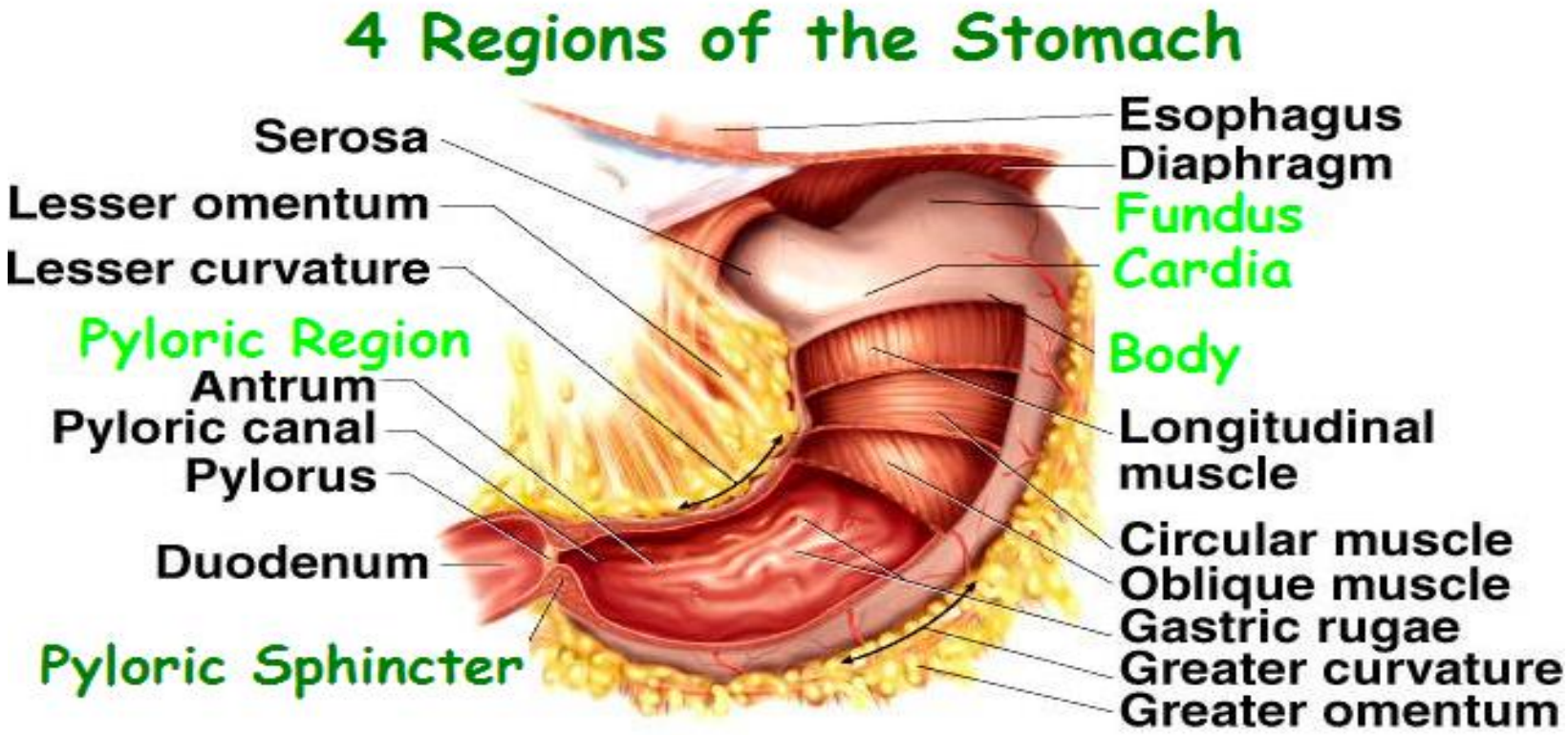
- It lies ½ inch to the right of the midline.

- It is guarded by anatomical sphincter (thick circular fibers)



- It has 2 surfaces: Anterior & posterior.
- <u>It has 2 curvatures</u>:

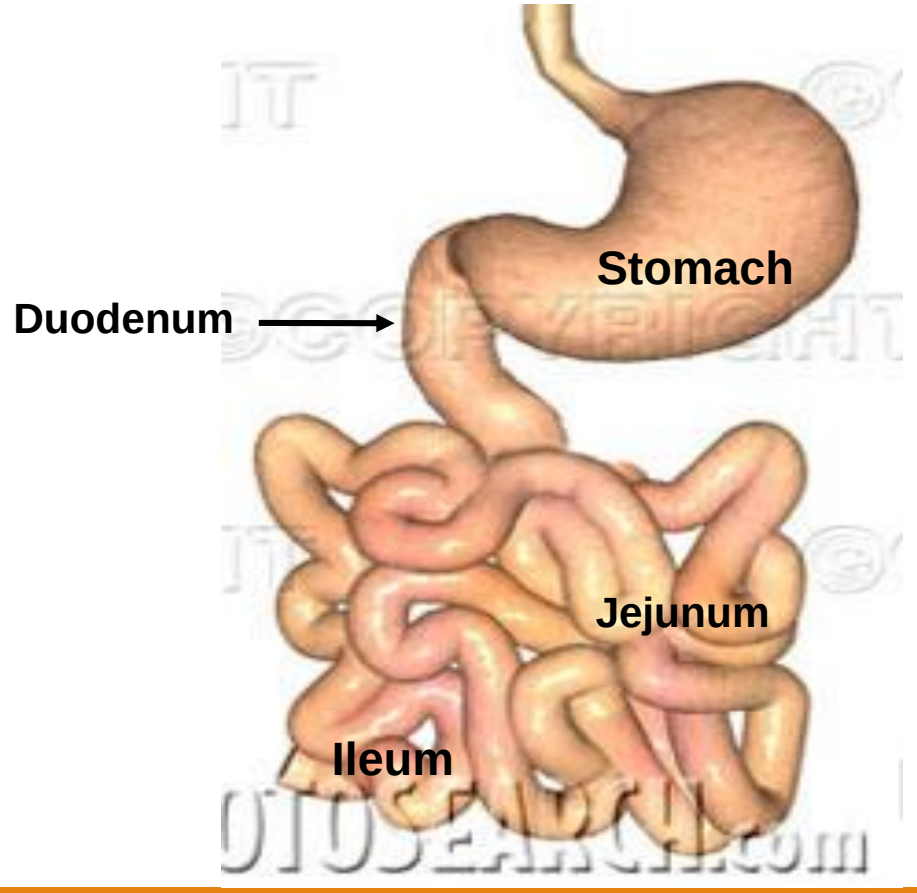
- Lesser curvature above & to the right.
- Greater curvature below & to the left.

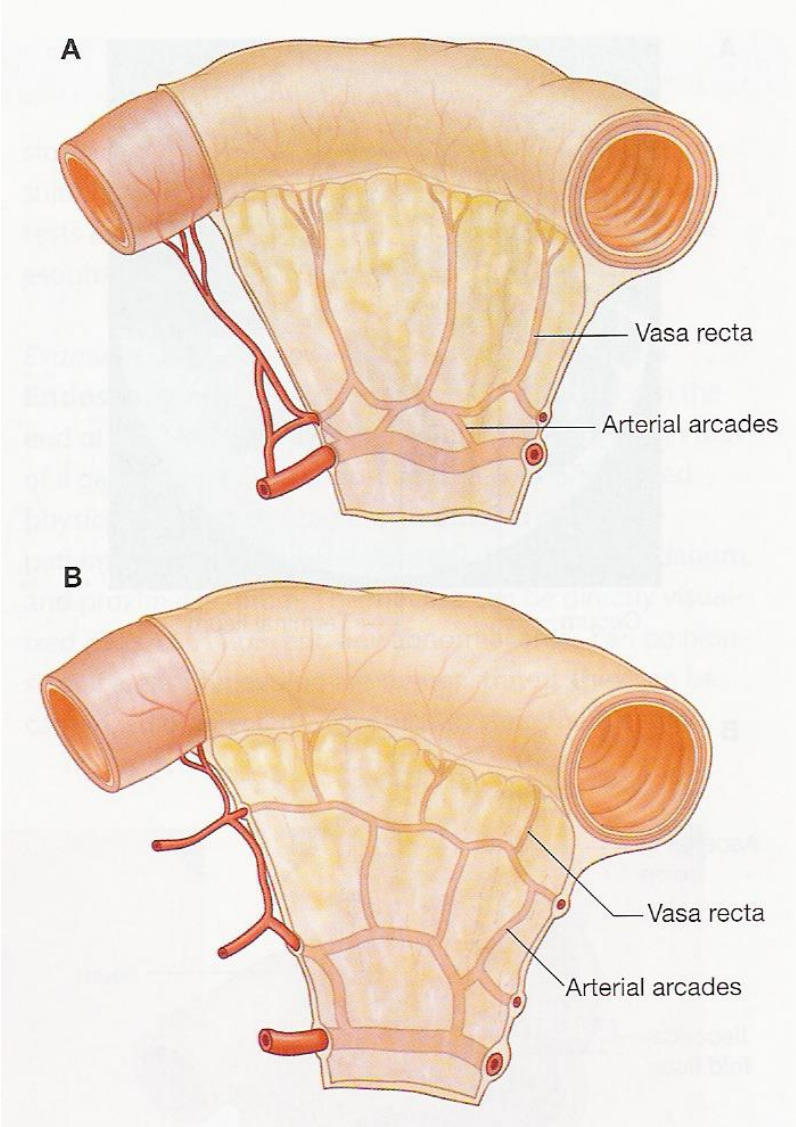


The small intestine

- It is concerned with digestion & absorption of food.
- It is divided into 3 parts:

1) The duodenum
2) The jejunum.
3) The ileum.





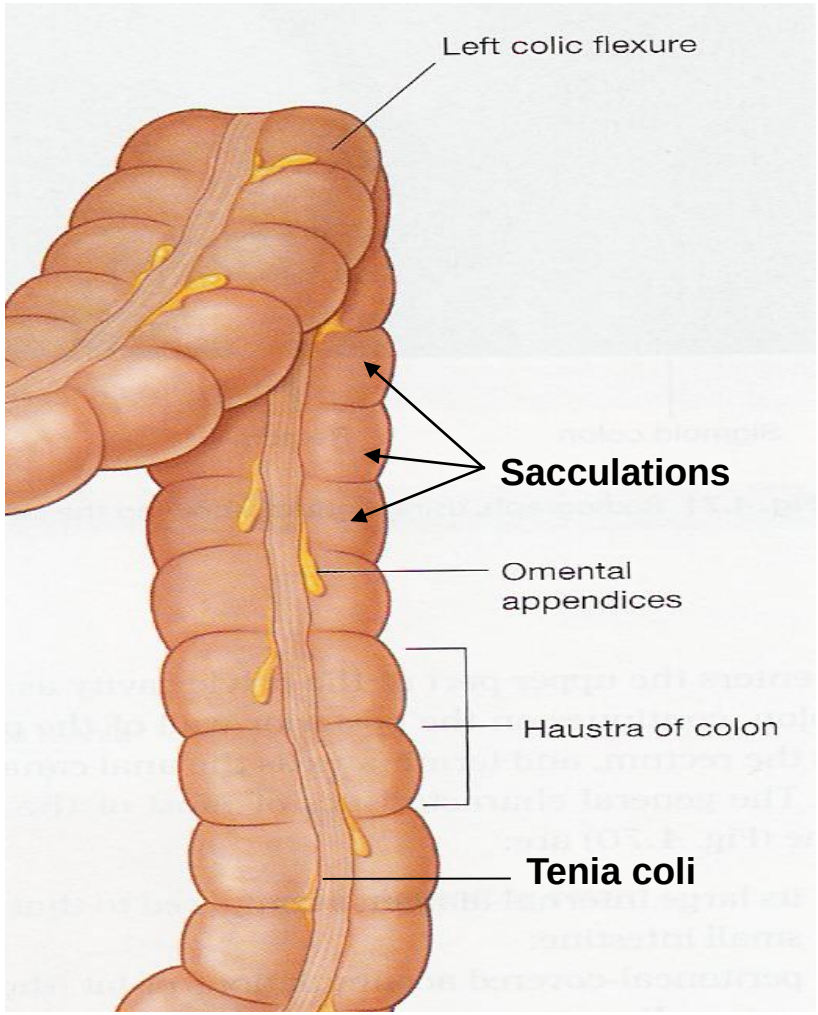
Circular folds of jejunum

Circular folds of ileum

The large intestine

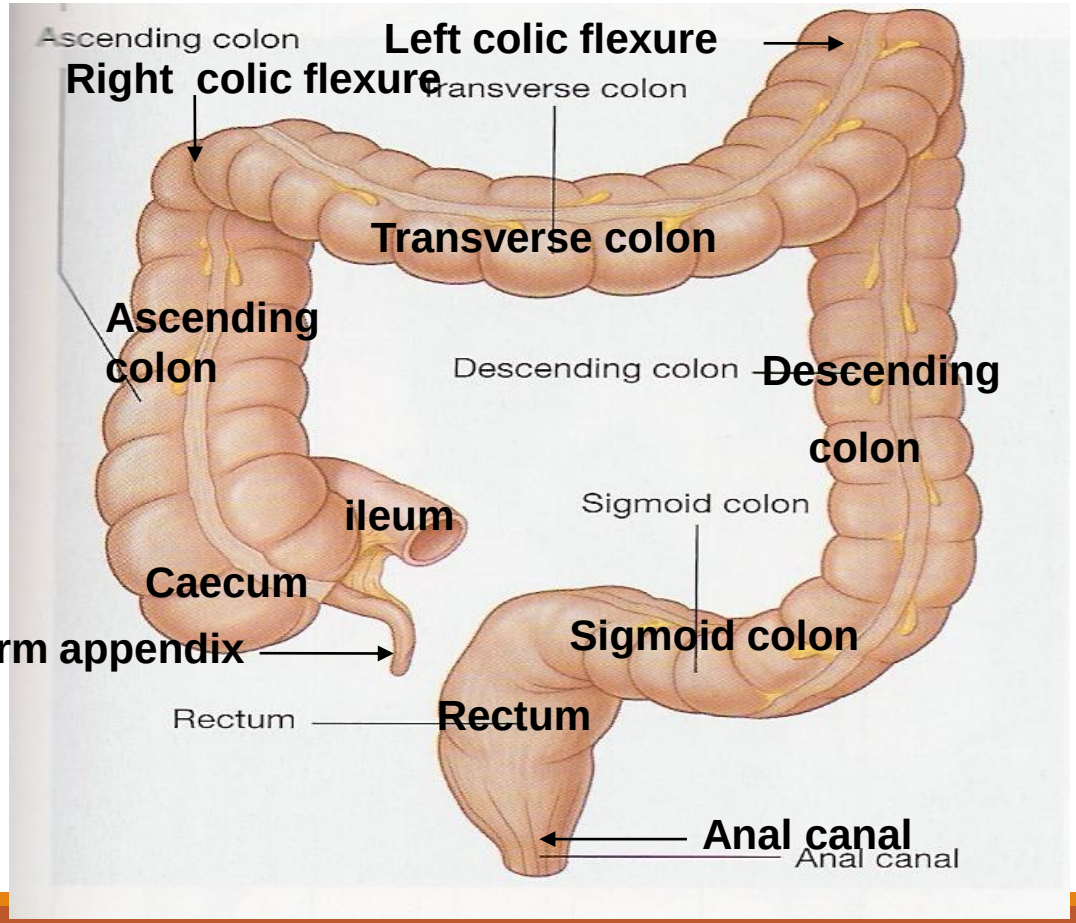
- It is concerned with absorption of water & minerals.
- It measures about 180 cm in length.
- It is characterized by the presence of:

- **Haustrations** (grooves) & **Sacculations** (it is divided into small sacs).
- **Teniae coli:** 3 muscular bands.
- **Appendices epiploicae**: small appendices filled with fat.



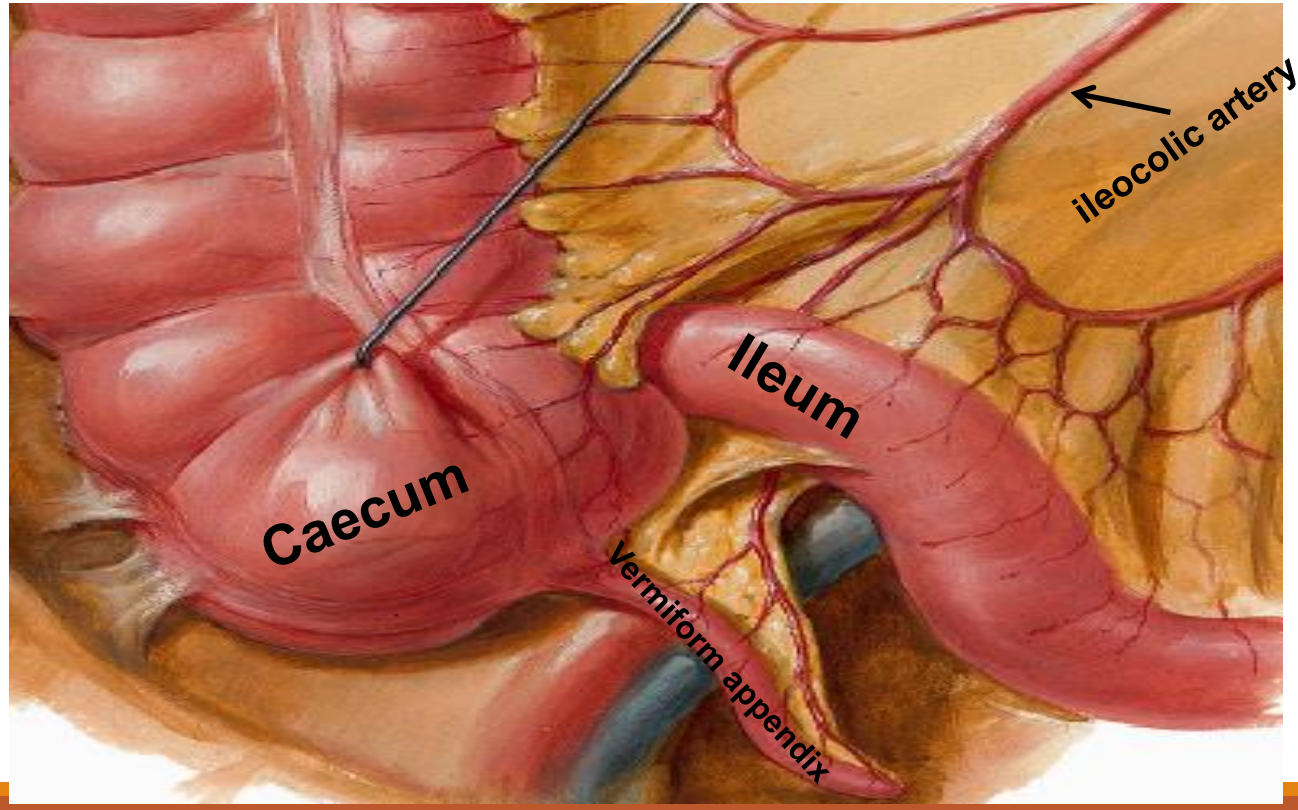
Components of the large intestine

- The caecum & vermiform appendix.
- The colon (ascending, transverse, descending & sigmoid) , Right & left colic flexures.
- The rectum.
- The anal canal



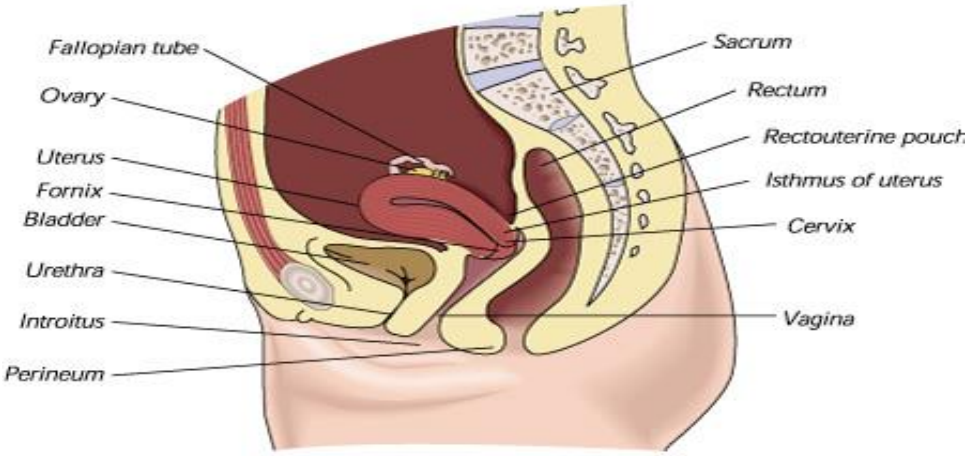
Vermiform appendix:

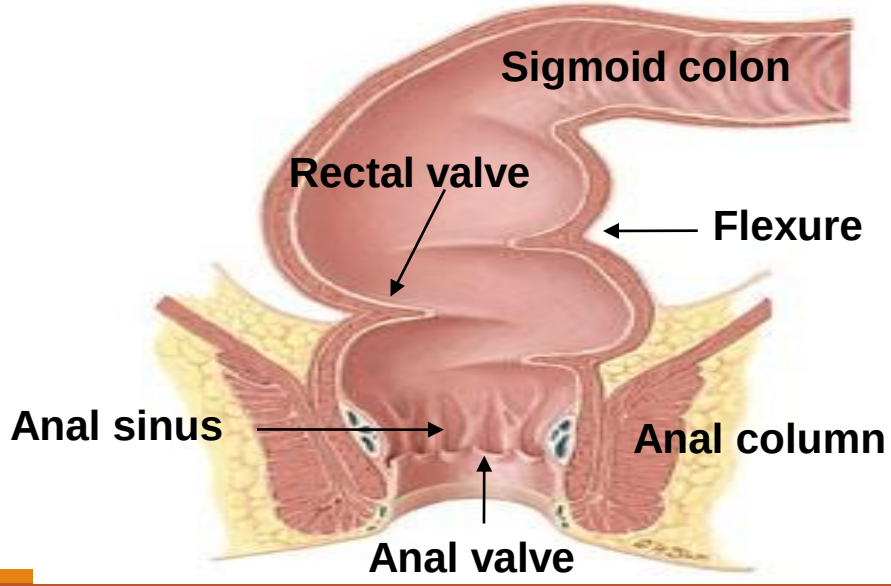
- It is attached to the Caecum about one inch below the ileocaecal junction.
- It lies in the right inguinal region.
- It has a small fold of peritoneum (mesoappendix).
- It is supplied by appendicular branch of the ileocolic artery.
- It is very rich in lymphoid follicle (Tonsil of the abdomen).



The rectum

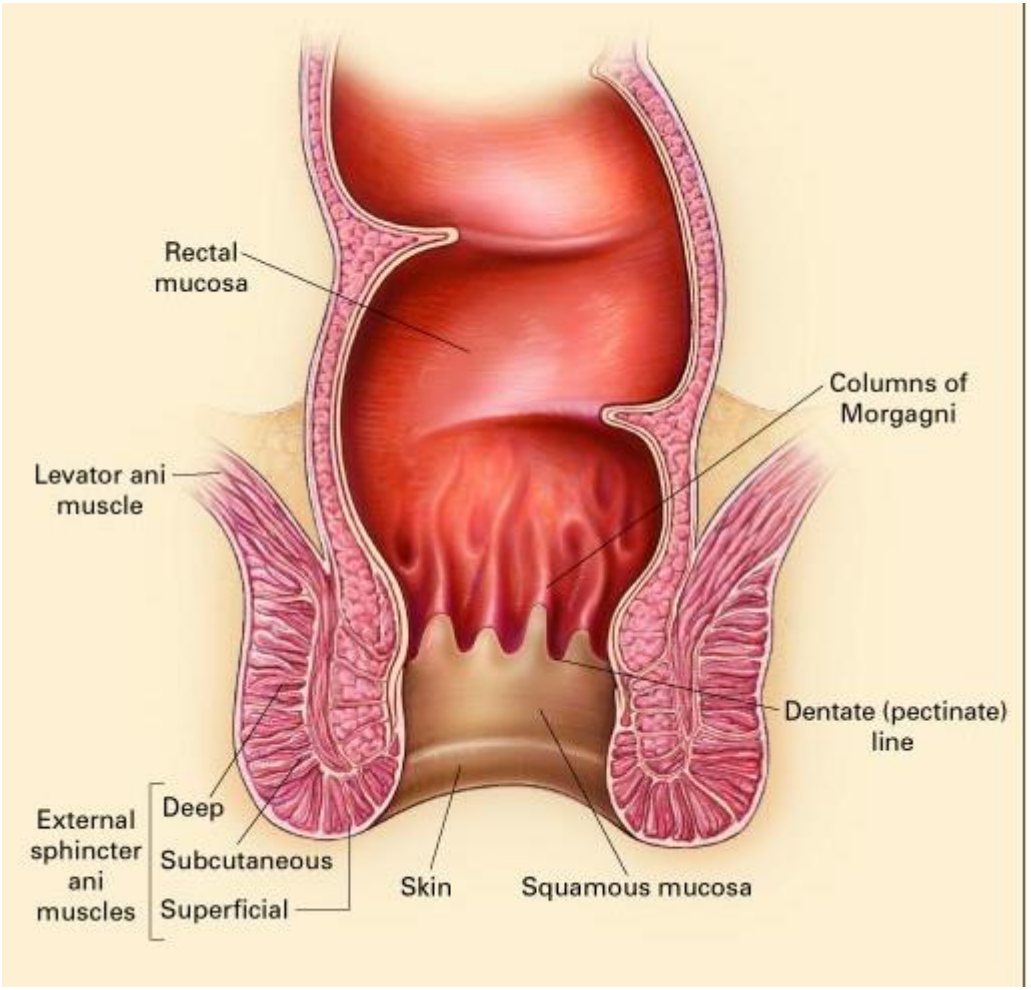
- Beginning : at the 3rd sacral vertebra as a continuation of the sigmoid colon
- Ends : 1.5 inches below & in front of the coccyx to become continuous with the anal canal.





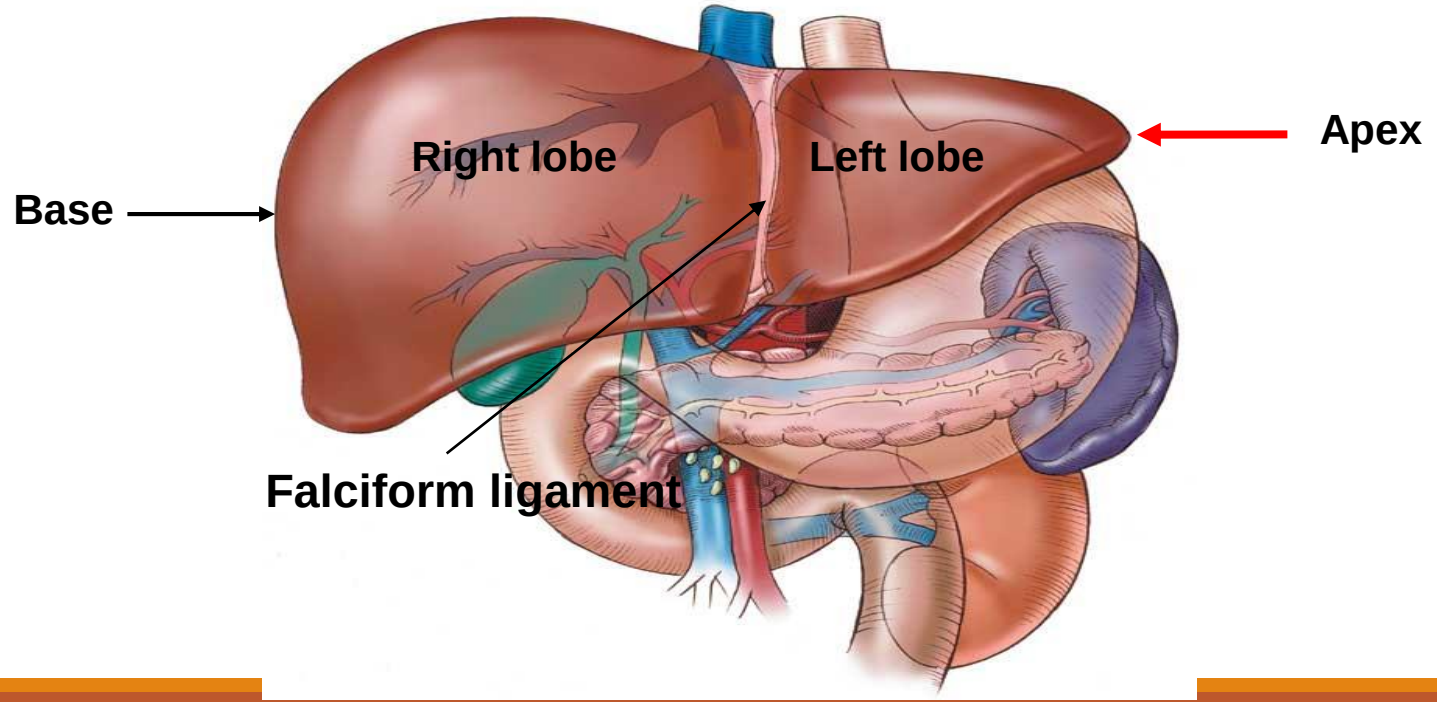
The anal canal

- It begins one inch below & in front of the coccyx & is directed downwards & backwards.
- **Its upper part** is insensitive to general sensations (supplied by autonomic fibers).
- **Its lower part** is sensitive to general sensations (supplied by somatic fibers).



The liver

- It is largest organ in the body .
- It lies in the right hypochondrium, epigastrium & left hypochondrium.
- It is pyramidal in shape with an apex (to the left), a base (right lateral surface) & 4 surfaces: anterior, posterior, superior & inferior surfaces.

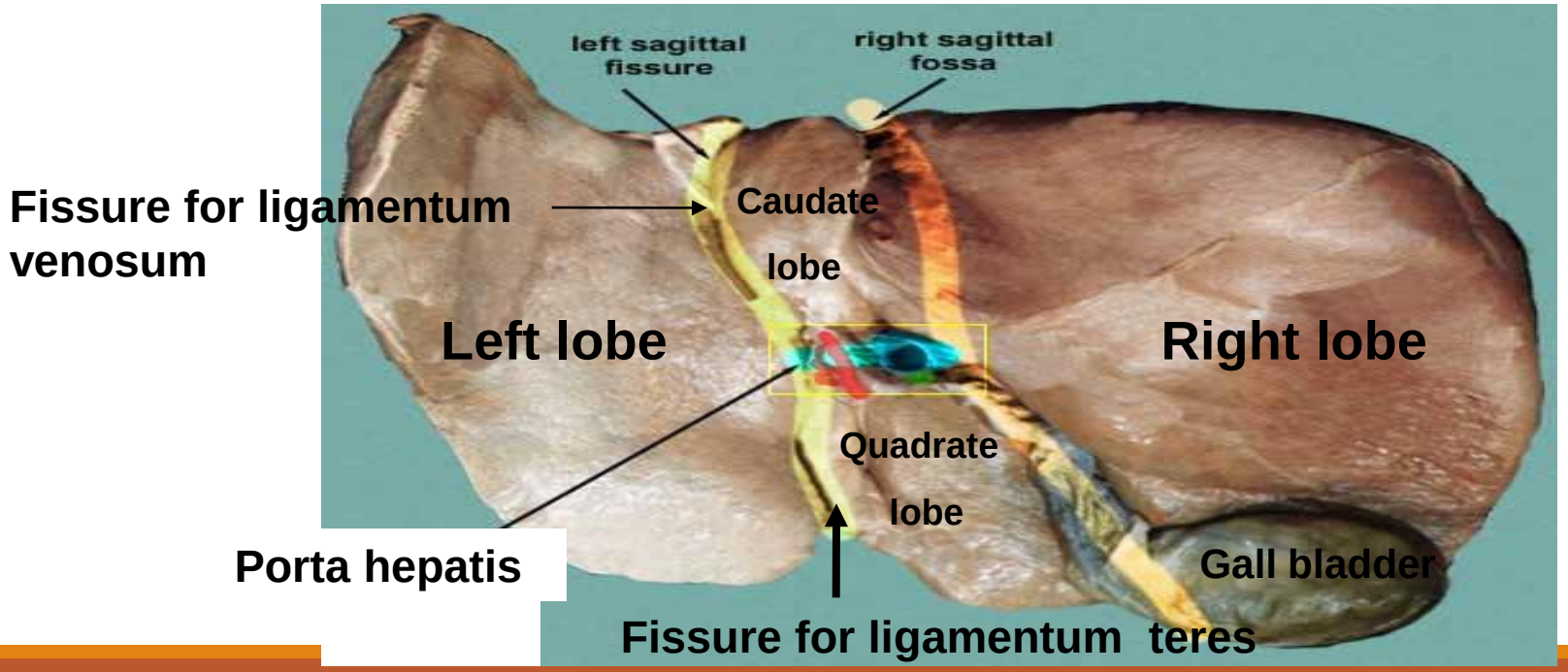


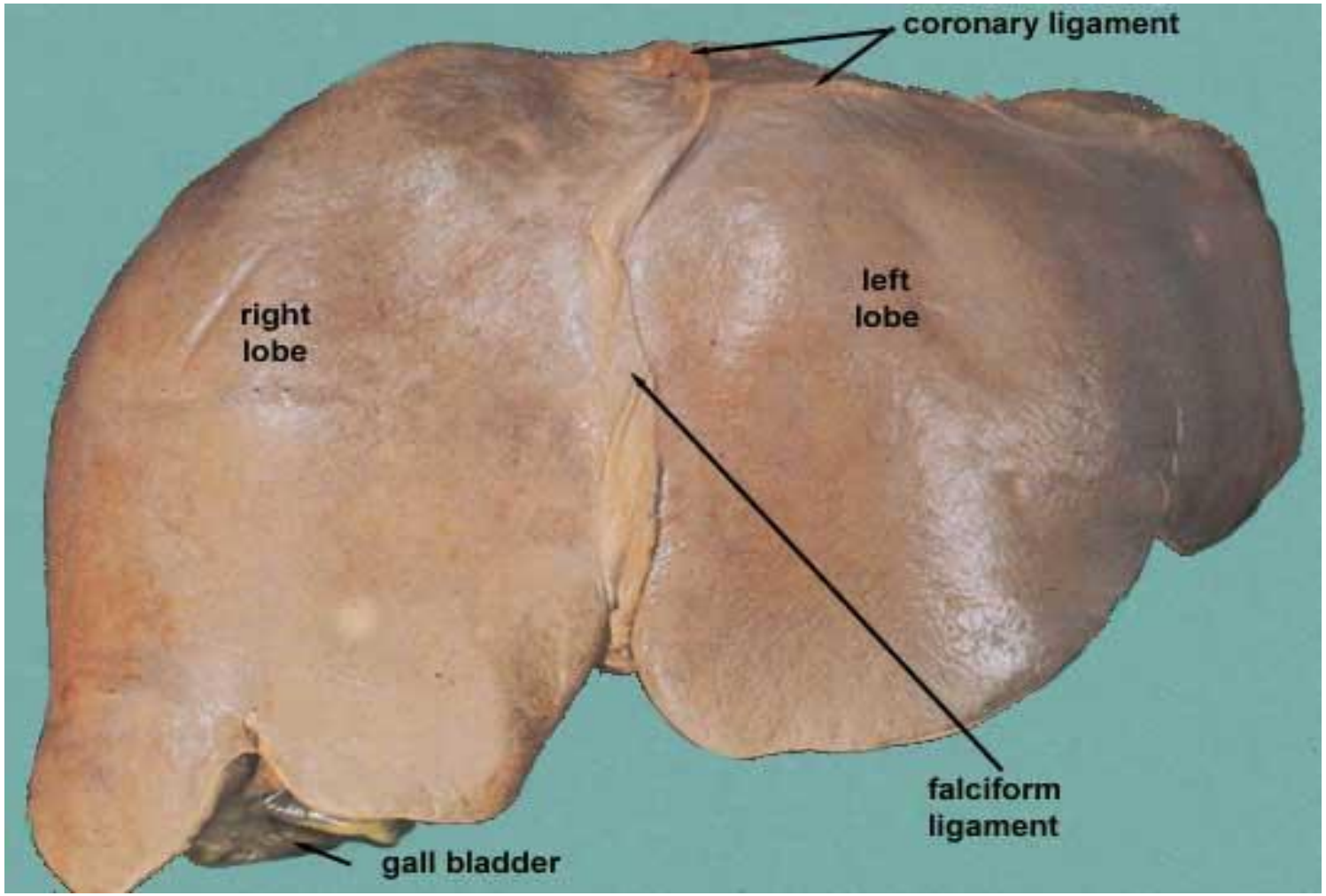
- It is divided into large right & small left lobe by the falciform ligament, fissure for ligamentum teres & fissure for ligamentum venosum.
- The right lobe contains 2 additional lobes;

  - Quadrate lobe (between the gall bladder & fissure for ligamentum teres).

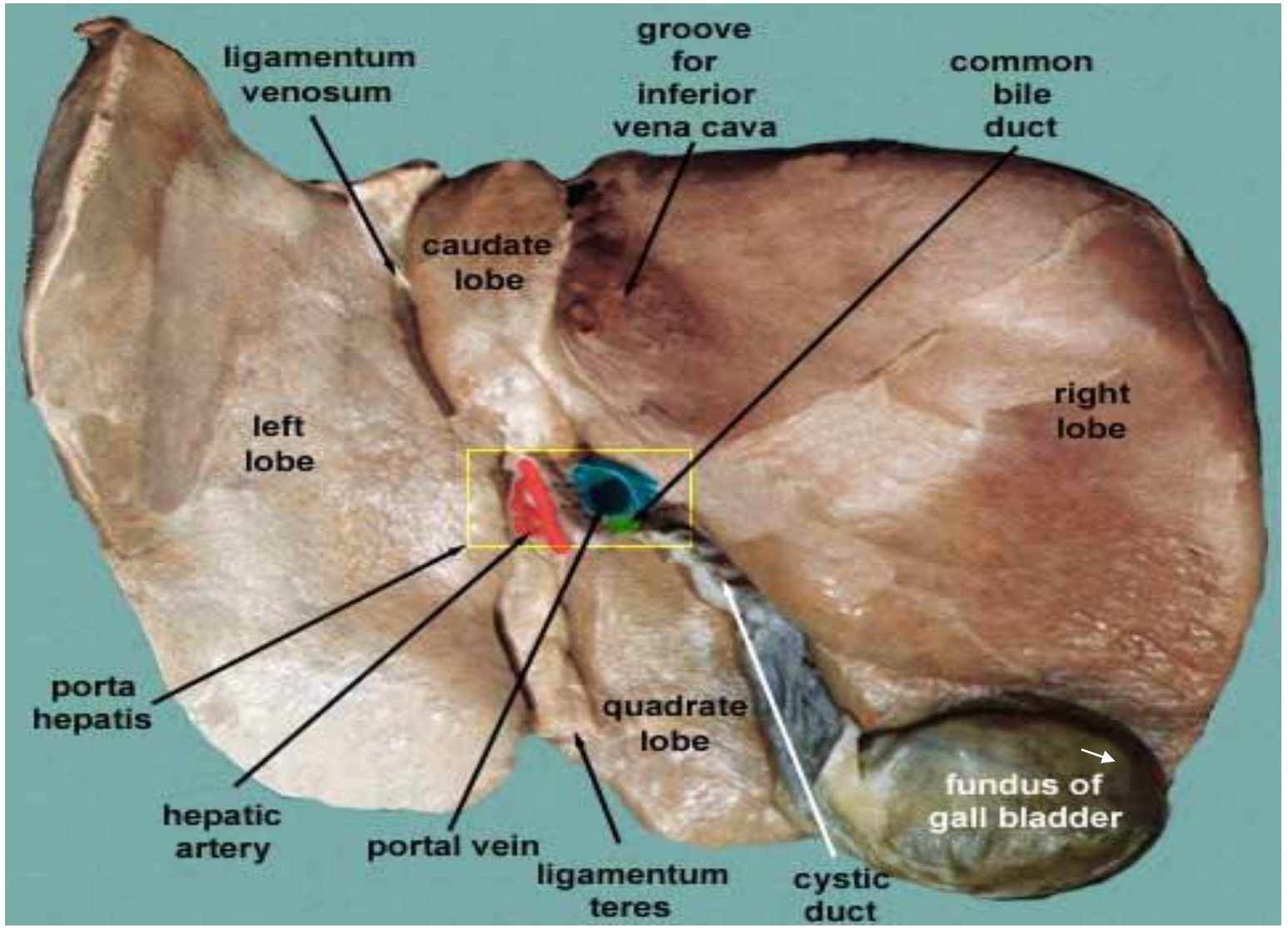
  - Caudate lobe (between the groove of IVC & fissure for ligamentum venosum).

- Porta hepatis separates the caudate & quadrate lobes from each other.





ANTERIOR SURFACE OF LIVER

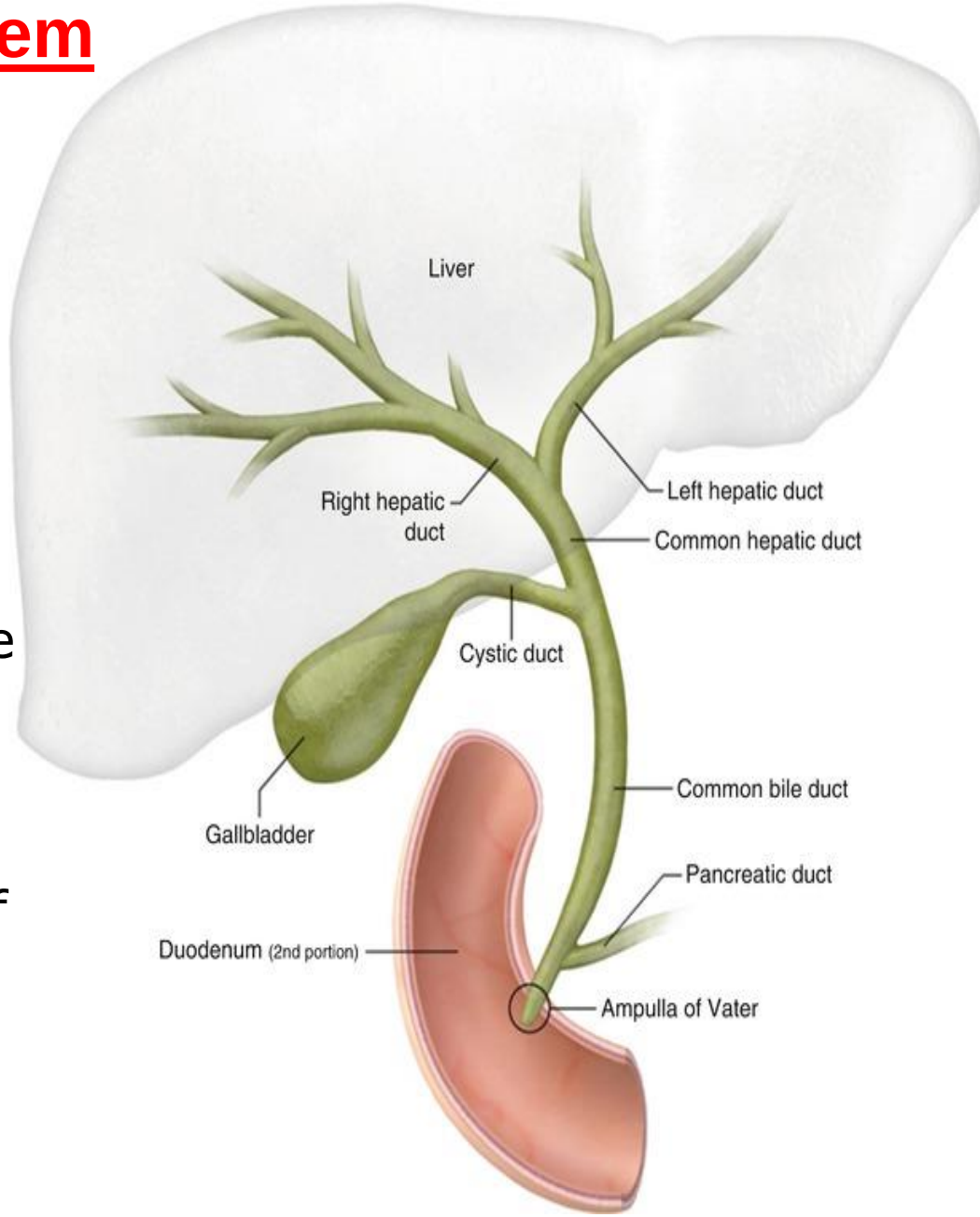


INFERIOR & POSTERIOR SURFACES OF LIVER

The biliary system

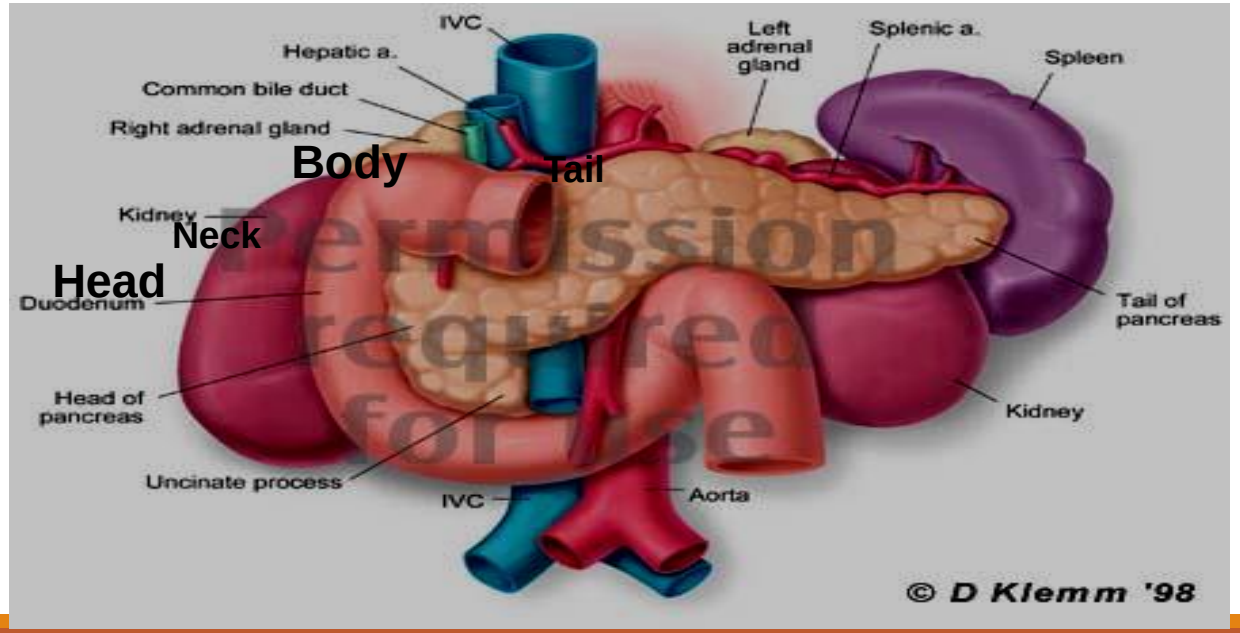
It consists of:

- Gall bladder
- Right & left hepatic ducts from the right & left lobes of the liver.
- They join to form common hepatic duct (CHD).
- CHD joins the cystic duct of the gall bladder & form together the common bile duct (CBD).
- CBD joins the main pancreatic duct forming hepato-pancreatic duct that opens in the middle of the second part of the duodenum.



The pancreas

- It is both exocrine & endocrine gland.
- The endocrine part secretes insulin & glucagon hormones which control glucose level in the blood.
- The exocrine part secretes digestive enzymes for proteins, carbohydrates & fat through the main & accessory pancreatic ducts.
- It lies on the posterior abdominal wall behind the stomach.
- It is divided into 4 parts: head, neck, body & tail.



THANK YOU