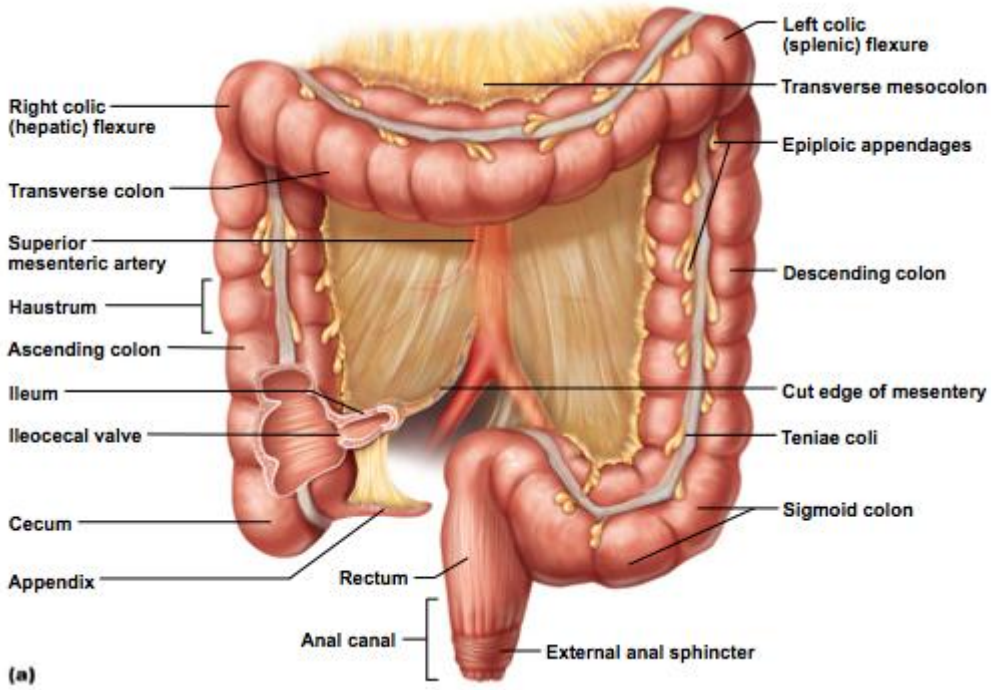
Anatomy

● Sheet ○ Slide

number	4
Done by	Doaa Kotkot
Correction	Abdullah Nimer
Doctor	Mohammad Al- Muhtaseb

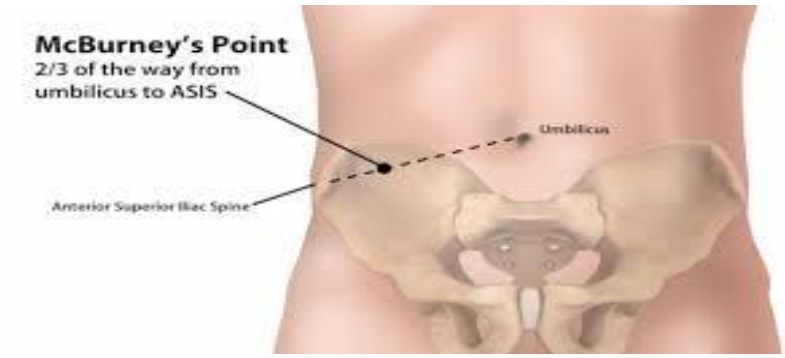
Large intestine



Cecum

The first part of large intestine is the cecum and present in the right iliac fossa. There are two things that open into the cecum.

The first thing is ileum; through the ileocecal junction which is a physiological sphincter (there is no thickening in the inner circular layer) prevents cecal contents from returning back into the ileum.



The second thing is the appendix which usually presents in the retrocecal recess (retro means behind) and have a mesentry that helps in movement. We can find its position by different ways, firstly at the end of tinea coli (3 bands of longitudinal smooth muscle; which make the saculation of the colon) we find the base of appendix. The second way is **Mc burney's point** (the point wich divides the line between ASIS and umbilicus into two medial thirds and lateral third), the incision is parallel to the inguinal ligament. The only thing we can do to a patient with aopenicitis is appendictomy.

Why is common to have a gangrene in the appendix?!

Because there is only one blood supply which is appendicualr artery.

Ascending colon

It is retroperitoneal (the peritoneum cover its anterior surface so it is fixed in its position. and the two sides)

It is five inches length

There is saculation (due to tinea coli) and appendices.

Its end is the rt. Hepatic flexure then continue as a transverse colon

Transverse colon

Fifteen inches in length

Intraperitoneal :

- Aanteriorly: Greater omentum which originate from the greater curvature of the stomach, descends as two layers and ascends also as two layers to attach to the transverse colon.

- Posteriorly: mesocolon which attach to the anterior surface of pancreas.

There are Saculation, appendices and tinea coli.

At its end we have the Lt.colic flexure or splenic flexure which continue as descending colon.

Descending colon

Retroperitoneal

10 inches in length.(longer than the ascending; so the relations will be more)

Ends as sigmoid colon which has a mesentry

POSTERIOR Relations of ascending and descending colon:

Psoas and iliacus muscles

Kidney and ureter

Nerves that come out from psoas major muscle:

Ascending colon: Ilioinguinal and iliohypogastric nerves

Descending colon: Ilioinguinal and iliohypogastric nerves + femral nerve and lateral cutaneous nerve of the thigh

Iliolumbar ligament

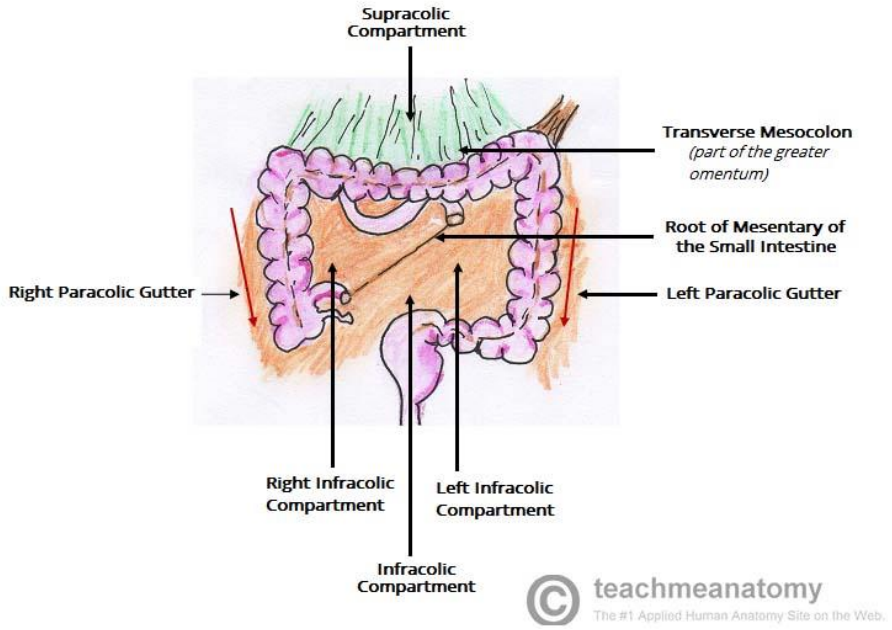
Because the ascending and descending colon are retroperitoneal (peritoneum fixes them from both sides), there is a space in the righ and in the left we call it **paracolic gutter**.

The right gutter is open into subphrenic space (between the liver and diaphragm) and morrison poutch (hepatorenal poutch)

Falciform ligament of the liver divides subphrenic space into right and left. If the pateint has abcess in the iliac region due to appendicitis for example when the patient is lying down, it is easy for the abcess to spread throgh the right gutter and to reach the right subphrenic space because there is no barrier.

Note: the diaphragm is anterior, superior and posterior to the liver.

In the **left gutter** there is phrenicocolic ligament (between the



diaphragm and the left colic flexure) which makes a barrier so if there is abcess in the lft iliac region it will not reach the left subphrenic.

PANCREAS:

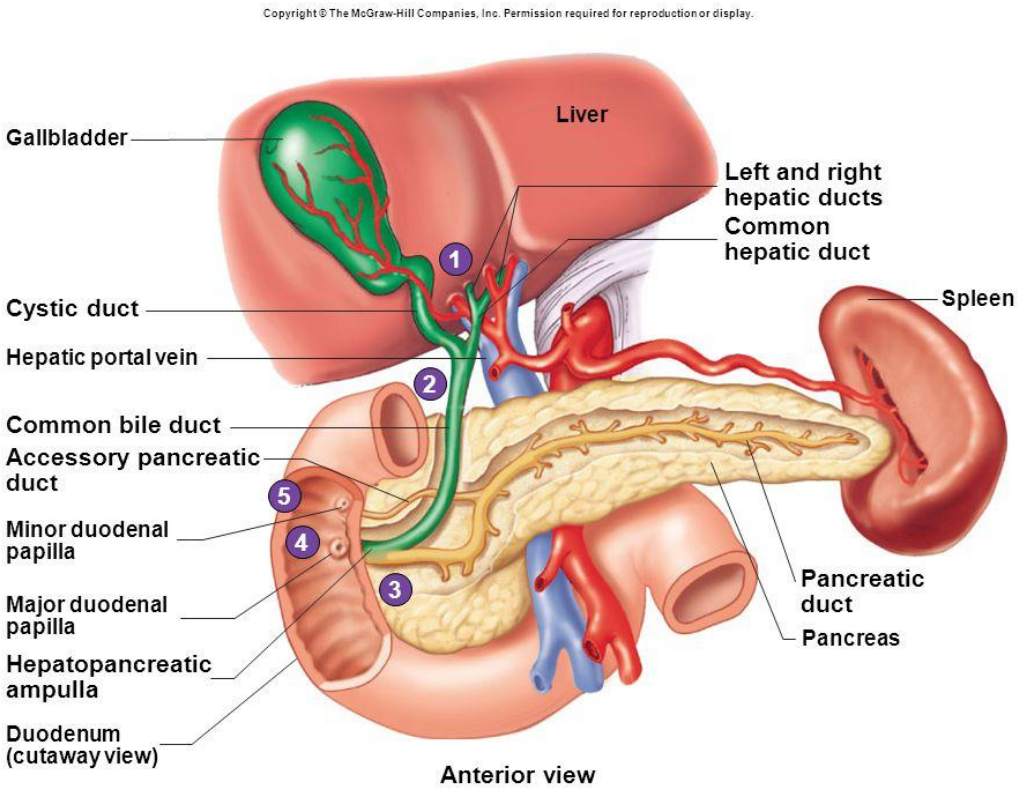
1. Head: present in the concavity of the duodenum.

2. Neck: behind it the portal vein is made by joining of superior mesenteric vein & splenic vein.

3. Uncinate process: superior mesenteric artery crosses anterior to it.

4. Tail: reach the spleen and make impression there.

REMEMBER: The root of the mesentery starts at the level of L2 (one inch to the left) and descend obliquely to end in the right sacroiliac joint.



LIVER:

Present in the right hypochondriac region and epigastric region (left lobe).

Surrounding by the diaphragm anteriorly, above and posteriorly.

It has 5 surfaces: Anterior, posterior, superior, right & visceral.

Ligament s of the liver:

Falciform ligament:

Separate the right lobe from the left lobe

Attached to the anterior abdominal wall and to the diaphragm.

Divide the superior space above the diaphragm into right and left subphrenic (the abscess reaches the right subphrenic space which is open into the right gutter).

Free border of the ligament contains **Ligamentum teres** (obliterated umbilical vein)

Coronary ligament:

the area between upper and lower layer of the coronary ligament is the bare area of liver which contract with the diaphragm to the bare area.

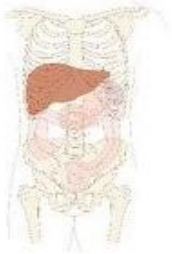
Give arise to the anterior and posterior triangular ligaments at the sides of the liver.

Ligamentum venosum:

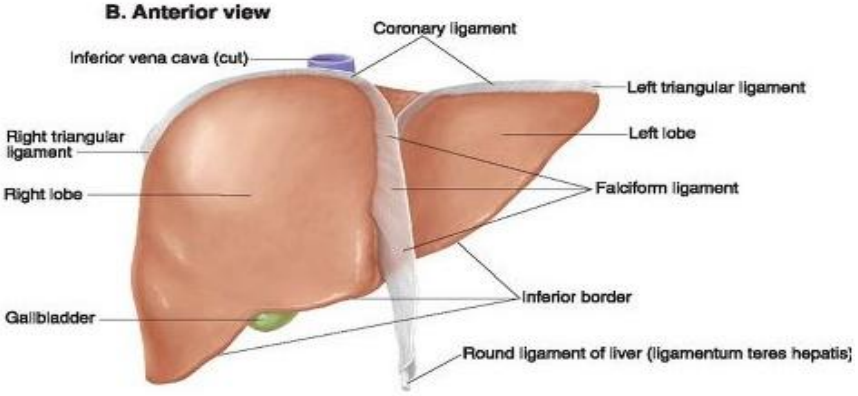
Between the caudate and left lobes.

Attached to lesser omentum.

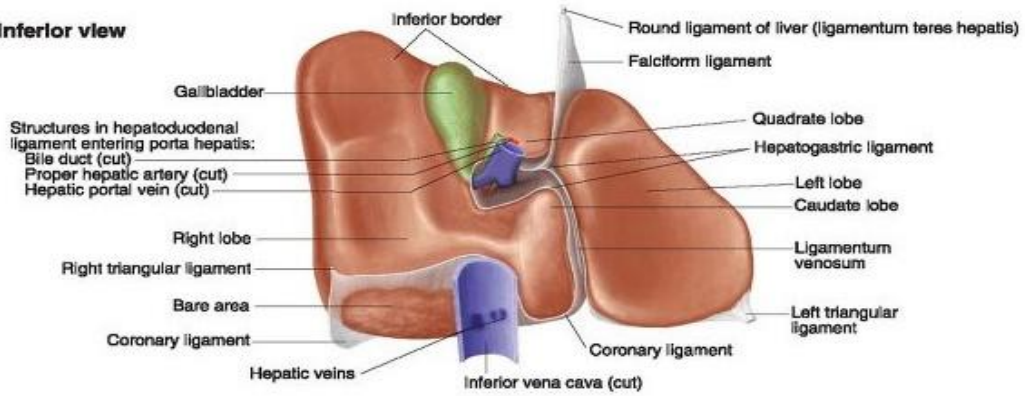
A. Orientation



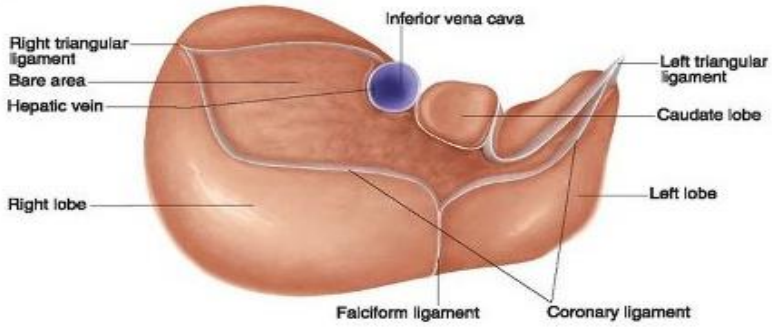
B. Anterior view



C. Inferior view



D. Superior view



GALL BLADDER:

Make impression on the liver near the caudate lobe, and that's why gangrene doesn't happen in the gall bladder; because takes its blood supply from the liver unlike the appendix which can develop gangrene because it has appendicular artery only.

Take blood supply directly from the liver.

Consisting of two parts fundus and neck in addition to the presence of cystic duct which joins the common hepatic to give the common bile duct that is open into the second part of duodenum.

*cystic duct is 4cm long whereas the common bile duct 8cm.

INFERIOR VENA CAVA:

Receives drainage from the liver by the hepatic vein.

*To distinguish between the contents of porta hepatis → the portal vein is posteriorly and it has the largest diameter whereas the hepatic artery and bile duct both are anteriorly but the opening of the hepatic artery is more circular.

IMPRESSIONS OF THE LIVER:

(identify the pointed impression- common question in the exam)

Esophagus

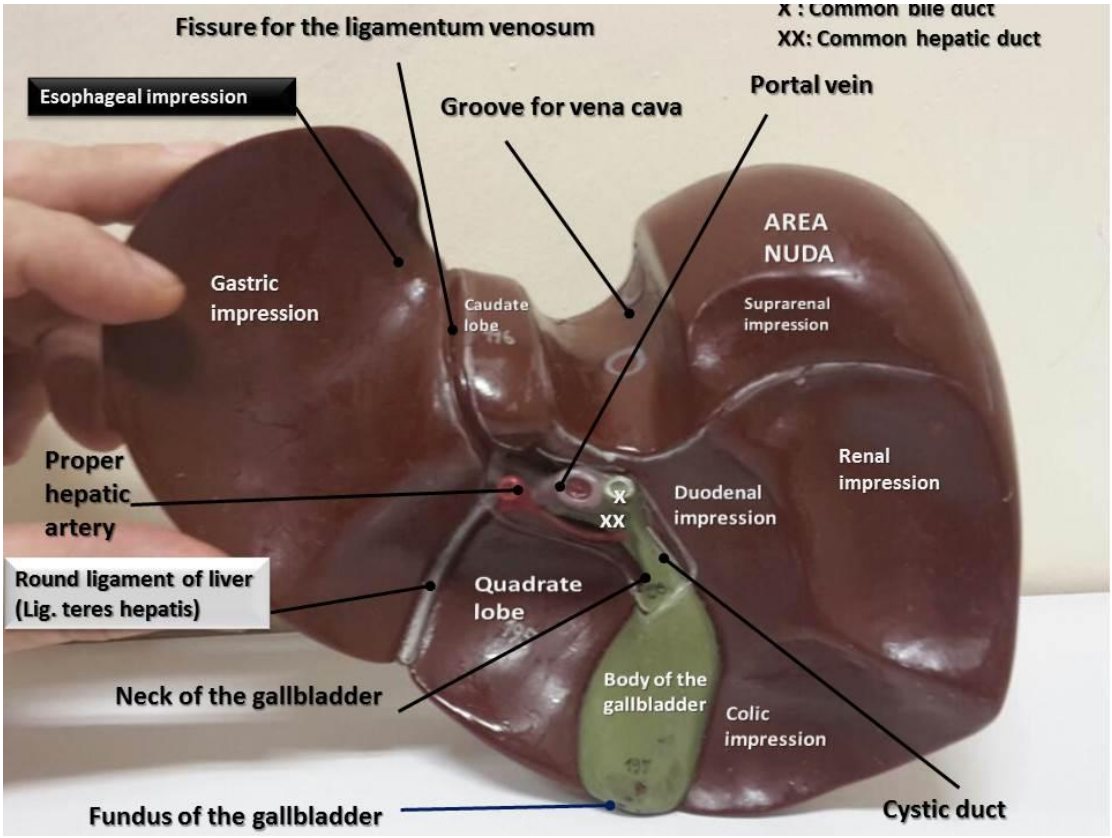
Stomach (gastric)

Pylorus

Duodenum

Right kidney and suprarenal gland

Right colic flexure and transverse colon



SPLEEN

Behind the stomach and covered by diaphragm

Lymphoid tissue

lateral boundary of the lesser sac.

It has two surfaces: **costal** (related to the costal cartilage) and **visceral**.

The upper border is lobulated whereas the lower border is rounded.

IMPRESSOINS OF THE SPLEEN:

-Renal (left kidney), below the hilum

-Gastric, above the hilum

-Colic (left colic flexure)

-Pancreas, make impression on the hilum

*Related to the 9^{th}, 10^{th} and 11^{th} ribs and the tenth ribs is parallel to the spleen so when someone has an accident and hurt his ribs we will be afraid from splenic rupture and in case we find it we must do splenectomy (we can remove it since it's a lymphoid tissue).

".What the mind can conceive and BELIEVE, it can achieve"