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Practical Anatomy

GIT BLOCK

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Dr. Shama's NOTES
u can skip them ☺

Source: team434



A 57-year-old male brought to the ER where he diagnosed with perforated duodenal ulcer in the posterior wall of the first part of the duodenum.

- Which artery lies behind the ulcer in his case? (4marks)

Gastroduodenal artery.

- Enumerates 3 different organs supplied by this artery? (2marks each)

1-Stomach. 2-Duodenum. 3-Pancreas.

- IDENTIFY: (2marks each)

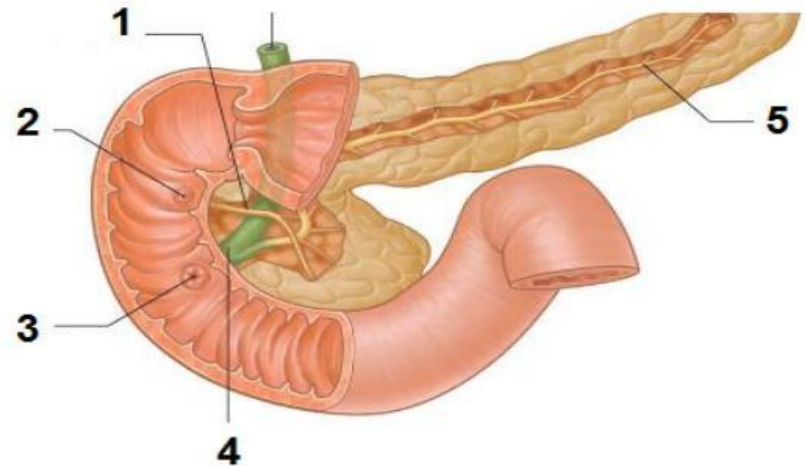
1- Accessory pancreatic duct.

2- Minor duodenal papilla.

3- Major duodenal papilla.

4- Bile duct.

5- Main pancreatic duct.



A 48-year-old man has lost 10 kilos over the last 3 months and present with upper abdominal pain that radiate to the back between the scapulae. During examination the doctor notice jaundice. CT scan reveals tumor of the head of the pancreas.

- List the arterial supply of the pancreas. (3marks)

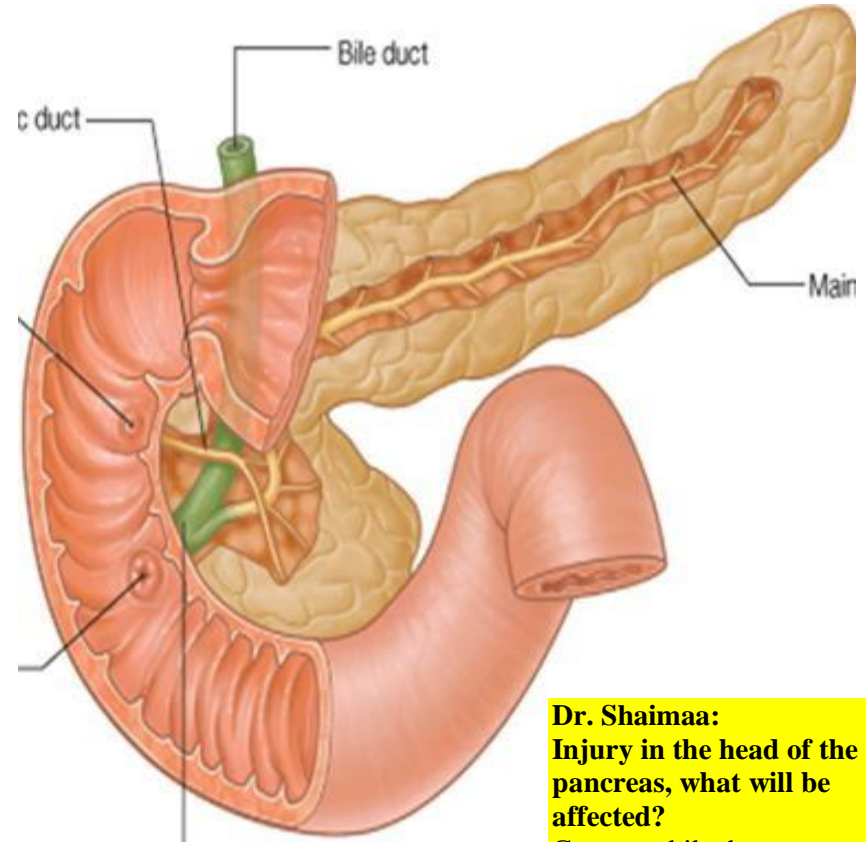
- 1-Superior pancreaticoduodenal artery.
- 2-Inferior pancreaticoduodenal artery.
- 3-Splenic artery.

- Where the main pancreatic duct opens? (3 marks)

Major duodenal papilla in 2nd part of duodenum.

- From where the arteries supplying the duodenum originate? (4marks)

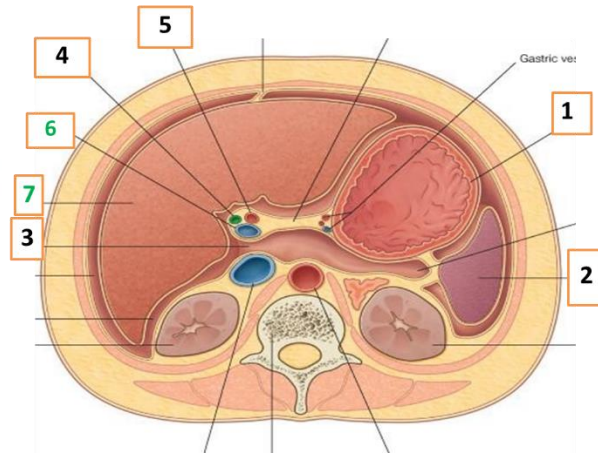
- 1-Superior pancreaticoduodenal artery from: gastroduodenal or hepatic of celiac artery.
- 2-Inferior pancreaticoduodenal artery from: superior mesenteric artery.



Dr. Shaimaa:
Injury in the head of the pancreas, what will be affected?
Common bile duct.

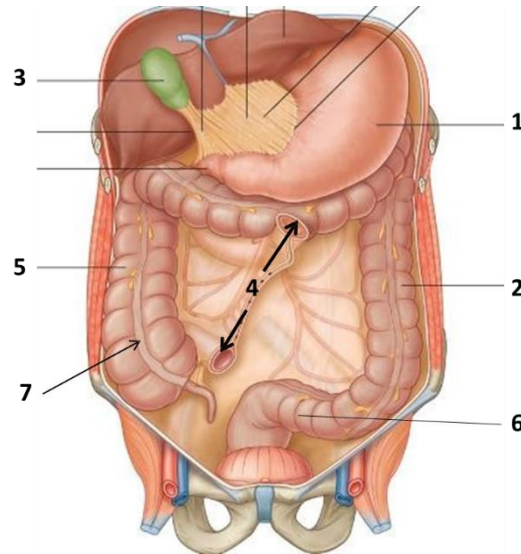
• IDENTIFY: (2marks each)

- 1- Stomach.
- 2- Spleen.
- 3- Opening into lesser sac (epiploic foramen).
- 4- Bile duct.
- 5- Hepatic artery.
- 6- Portal vein.
- 7- Liver.



• IDENTIFY:

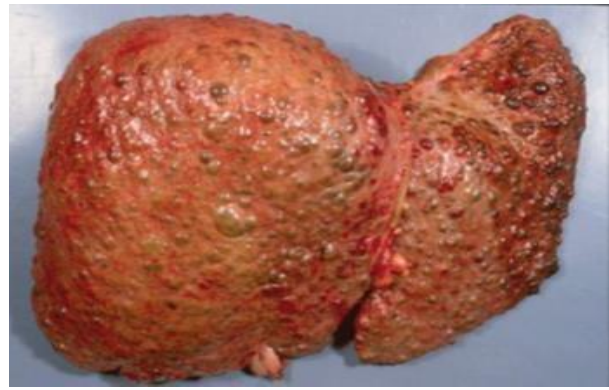
- 1- Stomach.
- 2- Descending colon.
- 3- Gall bladder.
- 4- Root of the mesentery.
- 5- Ascending colon.
- 6- Sigmoid colon
- 7- Teniae coli.



Q(Posterior relations of the stomach)stomach bed consist of:

- Left crus of diaphragm.
- Left suprarenal gland.
- Part of left kidney
- Spleen.
- Splenic artery.
- Pancreas.
- Transverse mesocolon.
- Transverse colon.
- Lesser sac.

A 52-year-old man has been unwell, he always feels tired. The doctor noticed that he is jaundiced. Abdominal examination showed splenomegaly, ascitis, caput medusa and increased abdominal girth. Investigations revealed chronic liver cell failure.



- In which abdominal regions the liver lies? (2marks)
Right & Left hypochondrium and epigastrium.

- Enumerates the contents of the porta hepatis in order (from anterior to posterior)? (2marks)

From anterior to posterior:

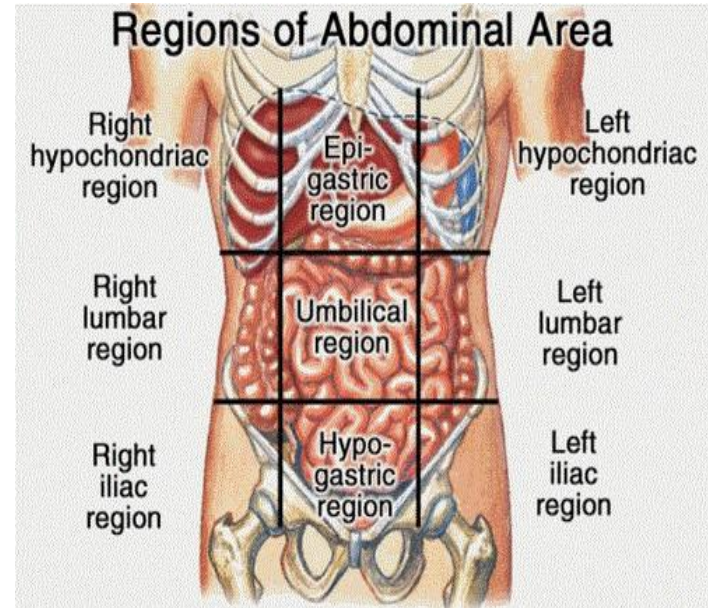
2 hepatic ducts, 2 hepatic artery & 2 branches of portal vein.

- From where the liver receives its blood supply? (4marks)

Hepatic artery (30%) portal vein (70%).

- Where the hepatic veins terminate? (2marks)

In the Inferior vena cava.



During cholecystectomy a resident damage the cystic artery before clamp is probably placed. The assistant surgeon applied pressure on the free margin of the lesser omentum, to stop bleeding.

- Which artery runs in the free margin of the lesser omentum? (2marks)

Hepatic artery.

- From which artery, the cystic artery usually arises? (2marks)

Right hepatic artery.

- What are the other structures that runs in the free margin of the lesser omentum? (4marks)

Bile duct. **hepatic artery**

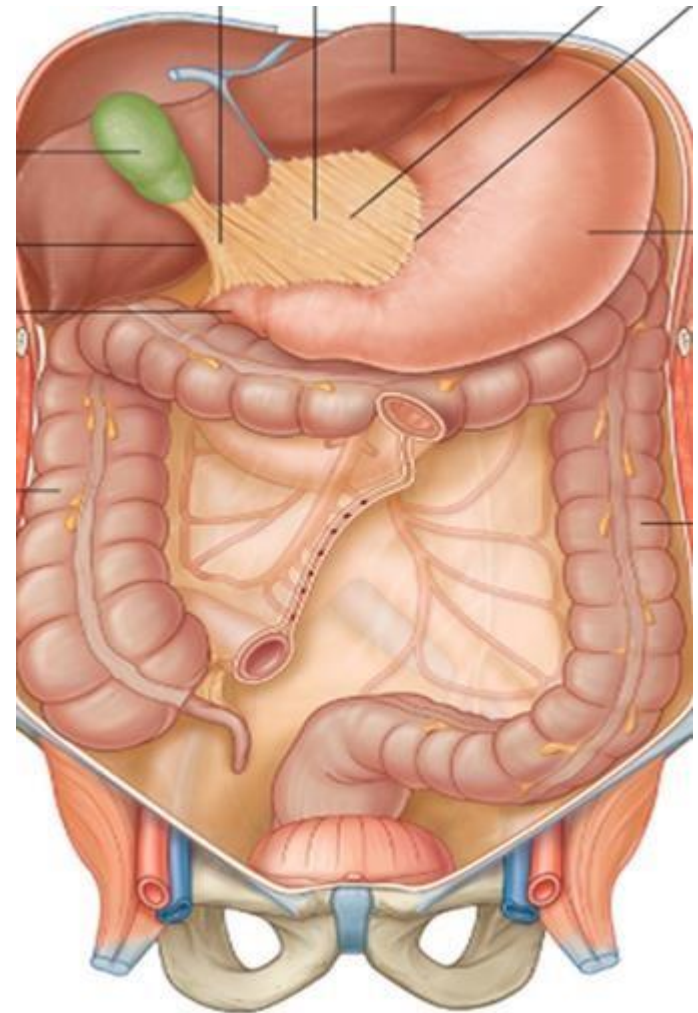
Portal vein. **lymphatics**

hepatic plexus

- Enumerate 2 other structures that run in the lesser omentum along the lesser curvature of the stomach. (2marks)

1-Right gastric vessels.

2-Left gastric vessels.



A 52-year-old woman undergoes an open abdominal cholecystectomy.

During surgery her doctor inserts his index into the epiploic foramen..

Enumerate the 4 boundaries of the epiploic foramen?

(2.5 marks each)

1. **Superior:** caudate process of caudate lobe of liver.
2. **Inferior:** 1st part of duodenum.
3. **Anterior:** free margin of lesser omentum & hepatic artery
4. **Posterior:** Peritoneum covering the IVC.

Types of peritoneal folds :

- **Omenta** : attached the stomach to another viscus

-lesser omentum: Contents between the two layers of the lesser omentum :

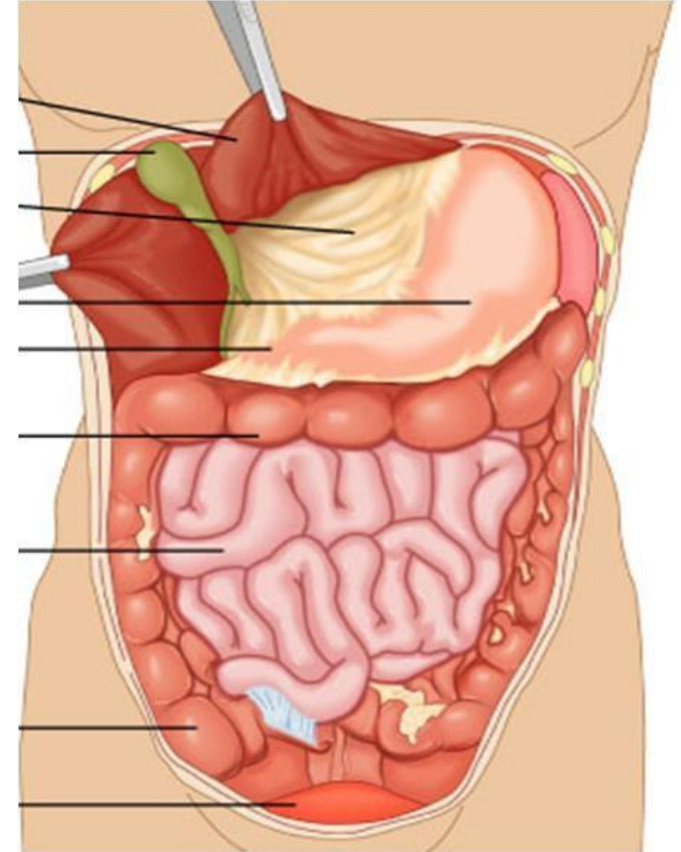
Close to the right free margin, are the hepatic artery, common bile duct, portal vein, lymphatics, and hepatic plexus of nerves.

At the attachment to the stomach, run the right and left gastric vessels.

-greater omentum:Contents : the anastomosis between the right and left gastroepiploic vessels.

- **Mesenteries.**

- **Ligaments.**



A heavy smoker 50-year old man has an upper abdominal pain and heartburn that on and off for several months. 2 weeks ago he vomited dark blood. Gastroscopy examination revealed peptic ulcer.

1) Identify (1 mark each)

- A. Cardiac orifice
- B. Pylorus.
- C. Fundus.

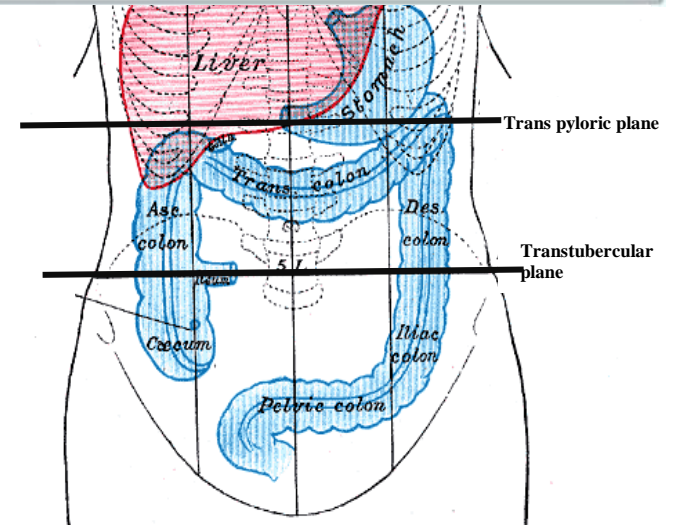
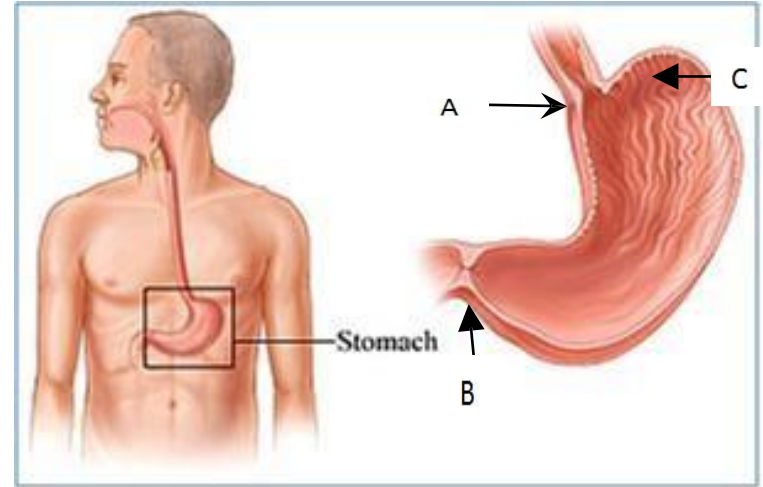
2) What is the surface Anatomy of each of these 3 areas?

(1 mark each) (not important)

- A. Left seventh costal cartilage 2.5 cm. from the sternum , (T10).
- B- Transpyloric plane 1 cm. to the right of the middle line, at the level of L1.
- C. Left fifth intercostal space a little below the apex of the heart.

3) List 4 arteries supplying the stomach. (4 marks)

- 1. Left gastric.
- 2. Right gastric.
- 3. Left gastroepiploic.
- 4. right gastroepiploic.
- 5. Short gastric



During splenectomy the surgeon ligates the splenic artery at the hilum of the spleen.

1) Improper placement of the ligature may lead to damage of which part of the stomach? (3marks)

•Fundus or left part of greater curvature of the stomach.

2) Which ligament the surgeon carefully dissects to ligate the splenic vessels? (3marks)

•Lienorenal ligament (Lieno = spleen)

3) Which part of the pancreas is endangered in such operation? (4 marks)

•Tail of the pancreas.

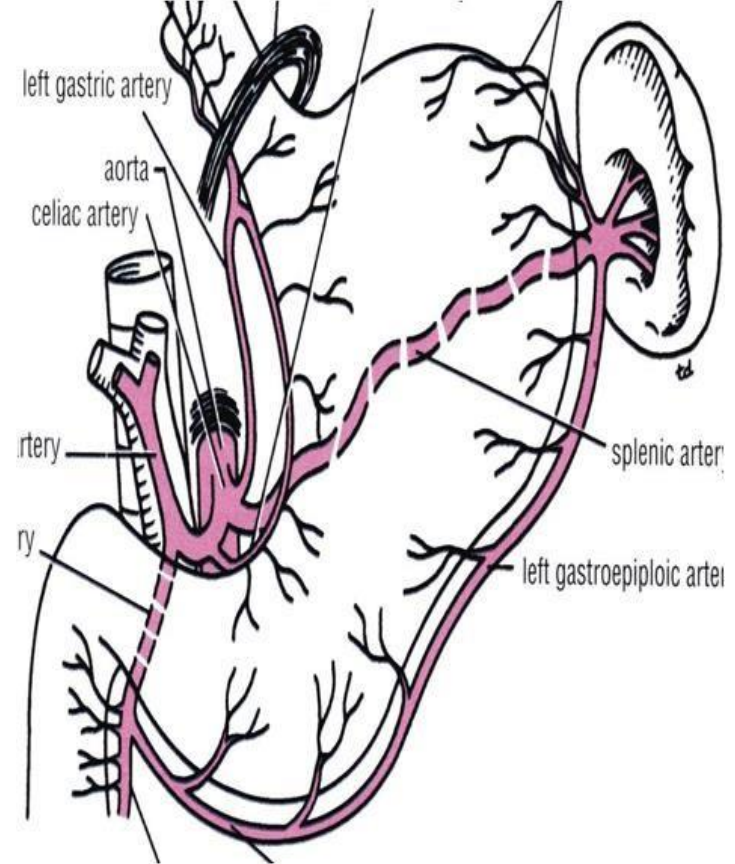
Relation of the spleen:

Anteriorly: Stomach, tail of pancreas, left colic flexure & left kidney

Posteriorly: **Diaphragm**, that separates it from the **left pleura** (left costo-diaphragmatic recess), **left lung & 9, 10 & 11 ribs**

Inferiorly: Left colic flexure.

Medially: Left kidney



The hilum of the spleen is the point of attachment for the gastrosplenic ligament, lienorenal ligament, and the point of insertion for the splenic artery and splenic vein

IDENTIFY:(1mark each)

1. Transverse colon.

2-Left (splenic) flexure.

3-descending colon.(teniae coli is also correct)

4-Sigmoid or pelvic colon.

5-Appendix.

6-Ascending colon.

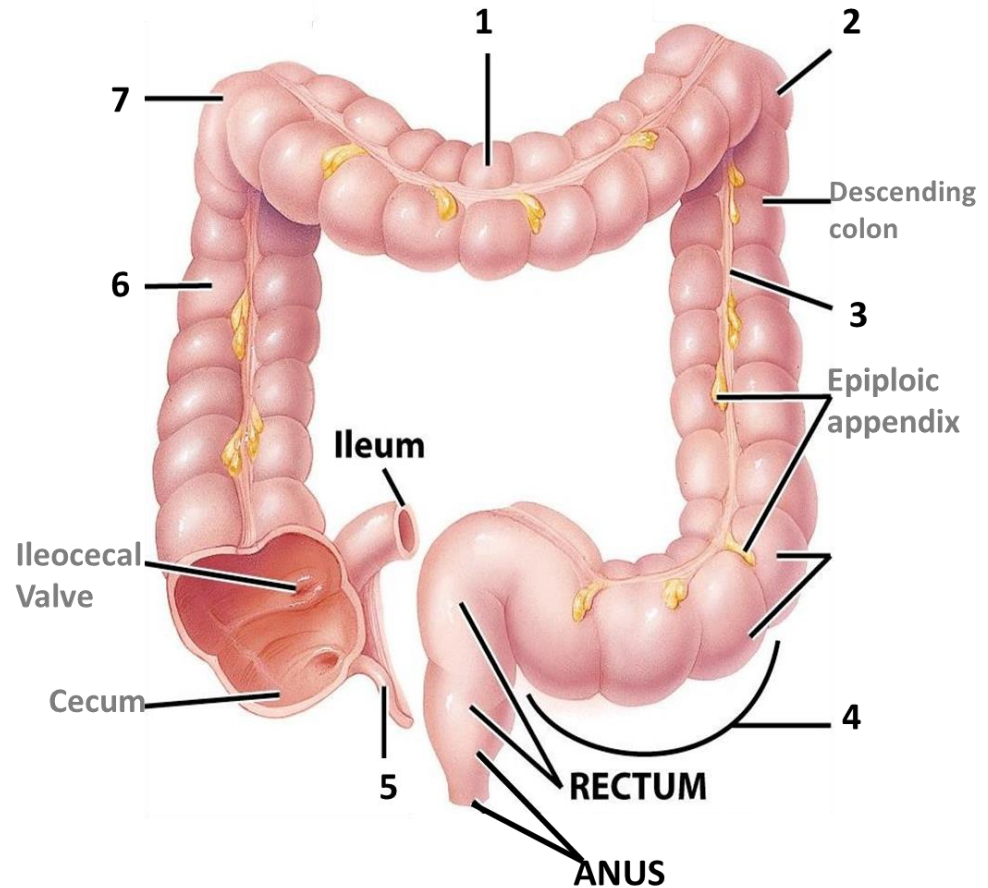
7-Right (hepatic) flexure.

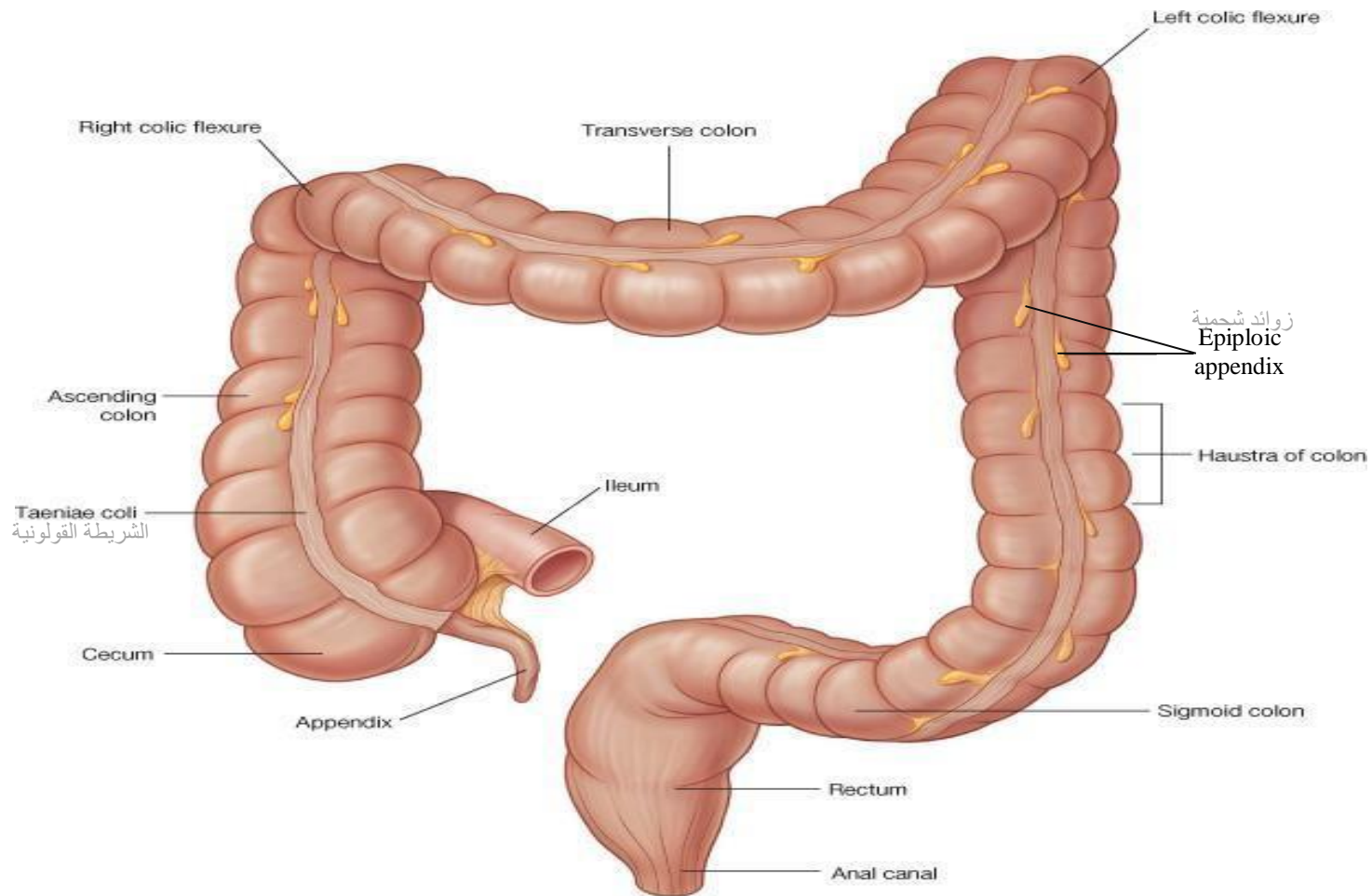
What is the level of the beginning of the rectum? (3marks)

S3 (infront of 3rd sacral vertebra).

What is the length of the rectum?

13 cm (5 inches)





A 12-year-old boy is brought to ER with a fever, nausea, and abdominal pain. Investigation revealed leukocytosis. The case is diagnosed as acute appendicitis.

• Identify the position of the appendix: (1 mark each)

1- Retrocecal.

2- Subcecal.

3- Pelvic.

4- Postileal.

5- Preileal.

• What is the most common site? (2 marks)

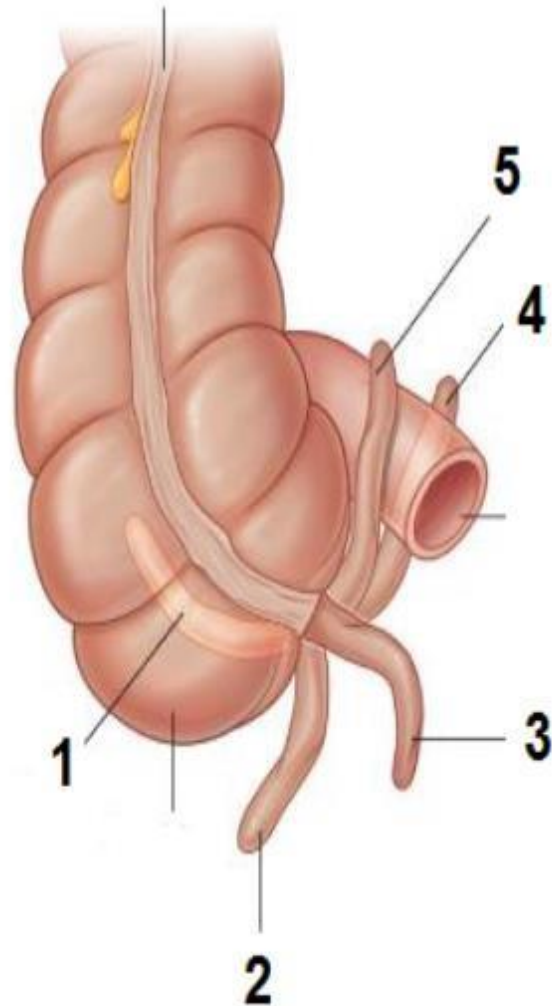
Retrocecal.

• What artery will need to be ligated during appendectomy operation? (2 marks)

Appendicular artery.

• From where this artery arises? (2 marks)

Ileocolic or superior mesenteric artery.



A 46-year-old male brought to ER with hematemesis. Investigation revealed liver cirrhosis and portal hypertension.

• How the portal vein is formed? (2marks)
Union of superior mesenteric and splenic veins

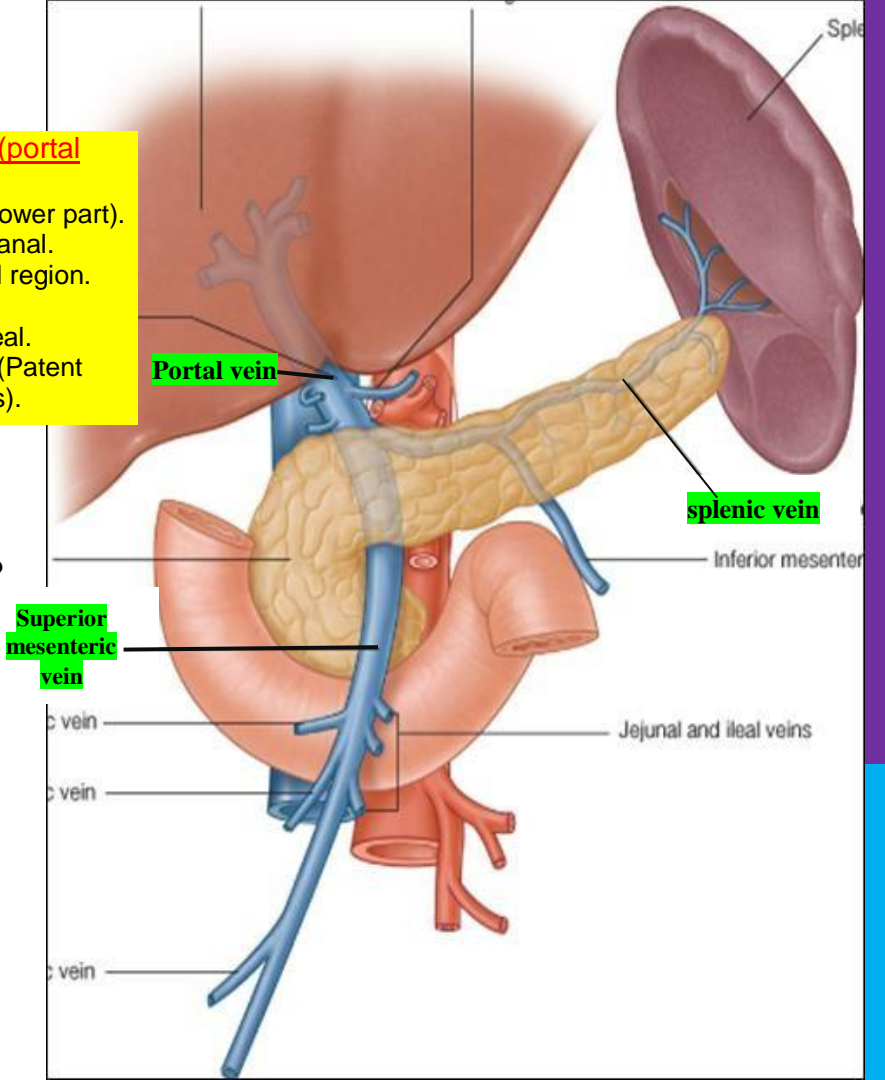
• What structure lies in front of the beginning of the portal vein? (2marks)
Neck of the pancreas.

• What structure lies behind the beginning of the portal vein? (2marks)
Inferior vena cava.

• What is the cause of bleeding in this case? (2marks)
Esophageal varices.

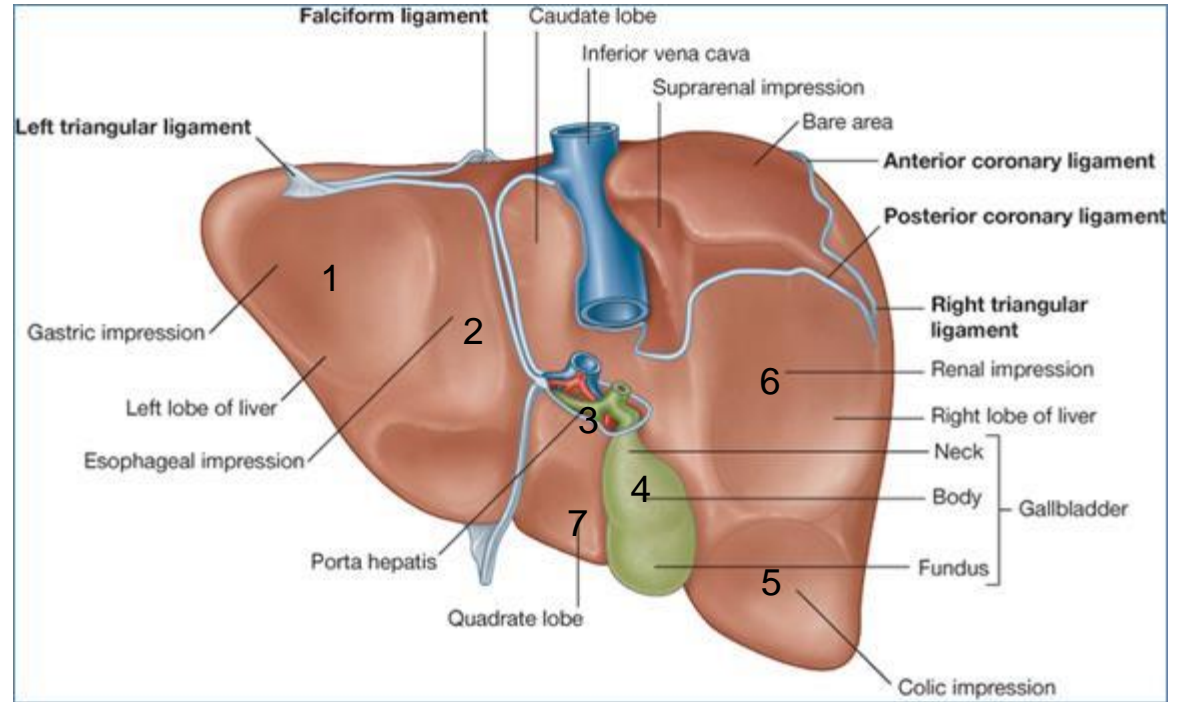
• List 2 other site of portosystemic anastomosis. (2marks)
1- upper part of anal canal. 2-Anterior abdominal wall.
 3/Esophagus 4/paraumbilical region 5/retroperitoneal
 6/intrahepatic

Dilated veins: (portal hypertension)
 1: Esophagus (lower part).
 2: Upper Anal canal.
 3: Paraumbilical region. (caput medusa)
 4: Retroperitoneal.
 5: Intrahepatic (Patent ductus venosus).



• Identify the structures related to the marked impressions:

- 1.stomach and duodenum
- 2.Esophagus
- 3.lessor omentum
- 4.gallbladder
- 5.right colic flexure
- 6.right kidney and right suprarenal gland
- 7.Transvers colon



- Liver considers as intraperitoneal organ.
- **Ligaments of liver** :Falciform ligament of liver,Coronary ligament,Left and right triangular ligaments & Ligamentum teres

A 55-year-old woman develops a hiatal hernia in which the fundus of the stomach protrudes through the esophageal hiatus of the diaphragm into the thorax.

• What is the level of the esophageal opening of the diaphragm? (5 marks).

Thoracic 10.

• What structure is at great risk of injury during surgical repair in this case? (3 marks).

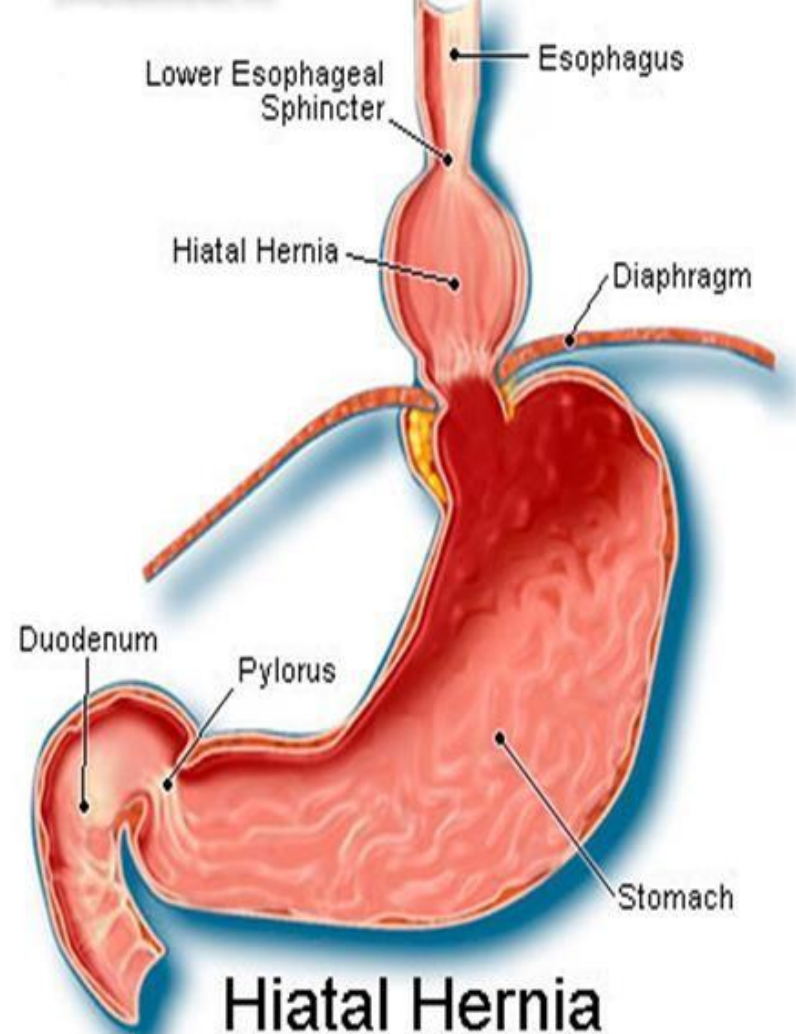
Vagus nerve.

• Enumerate 2 other structures that pass through the esophageal opening of the diaphragm? (2 marks).

1. Branches of left gastric vessels. 2. Lymph vessels

The esophagus has 3 anatomic constrictions.

- The first is at the junction with the pharynx.
 - The second is at the crossing with the aortic arch and the left main bronchus.
 - The third is at the junction with the stomach.
- They have a considerable clinical importance.





**The
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and
Thank
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