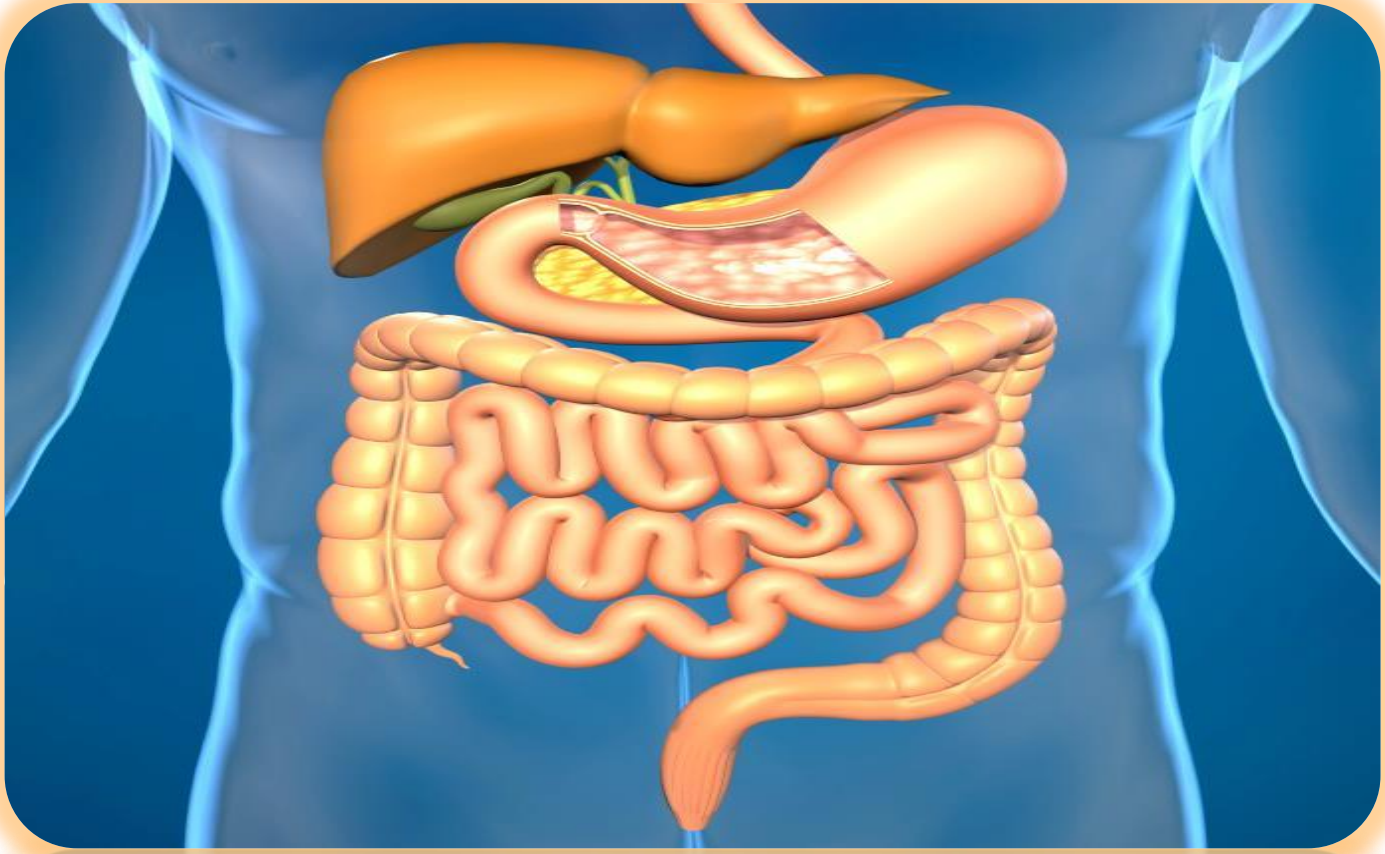
G.I.T



Anatomy Team Leaders:
Fahad AlShayhan & Eman AlBediea

Case 1:

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.

1. **In which abdominal regions the liver lies?** (2marks)

Right & left hypochondrium and epigastrium

2. Enumerate 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.

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

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

4. Where the hepatic veins terminate? (2marks)

In the Inferior vena cava.

Case 2:

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? (2 marks)

Hepatic artery

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

Right hepatic artery.

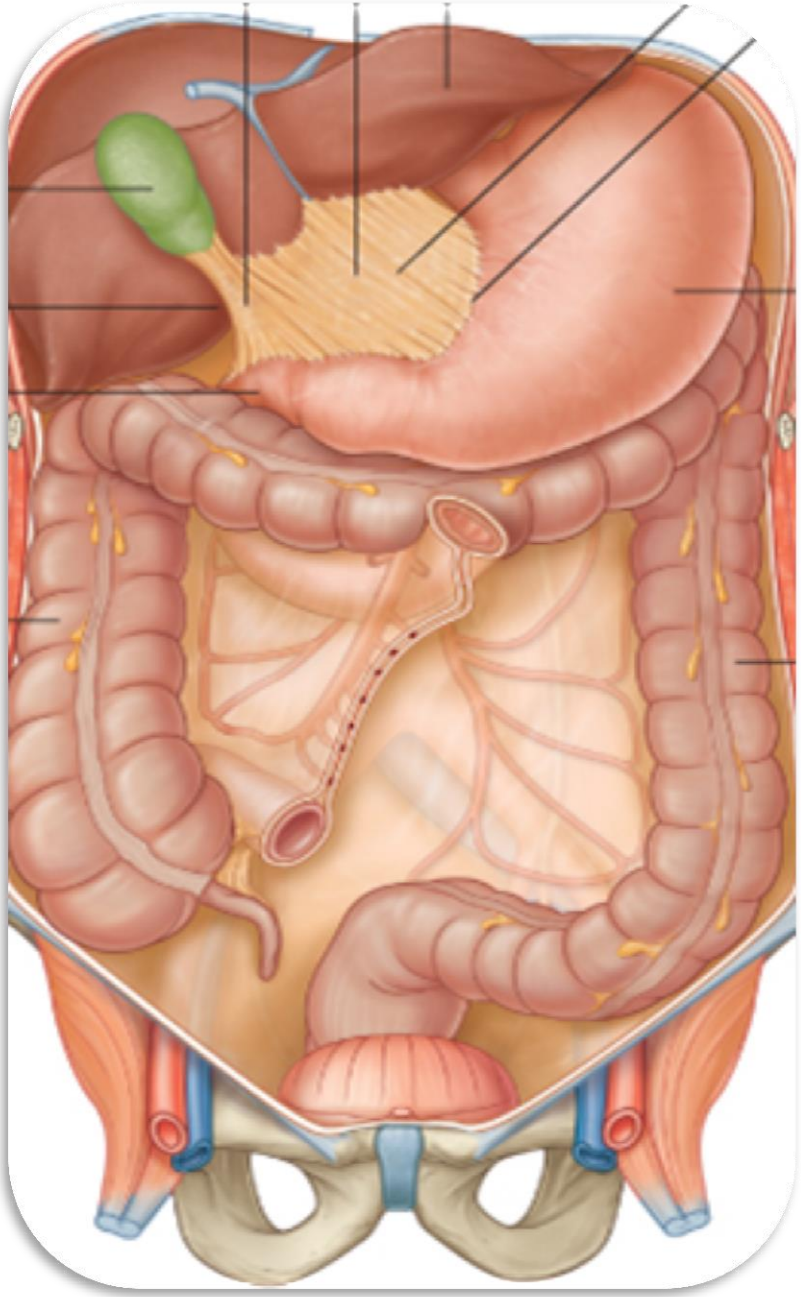
What are the other structures that runs in the free margin of the lesser omentum? (4 marks)

- **Bile duct .**
- **Portal vein .**

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.



Case 3:

A 48-year- old man has lost 10 kilos over the last 3months 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.

From where the arterial supply of the **body** of the pancreas comes from? (3 marks)

- Splenic artery.

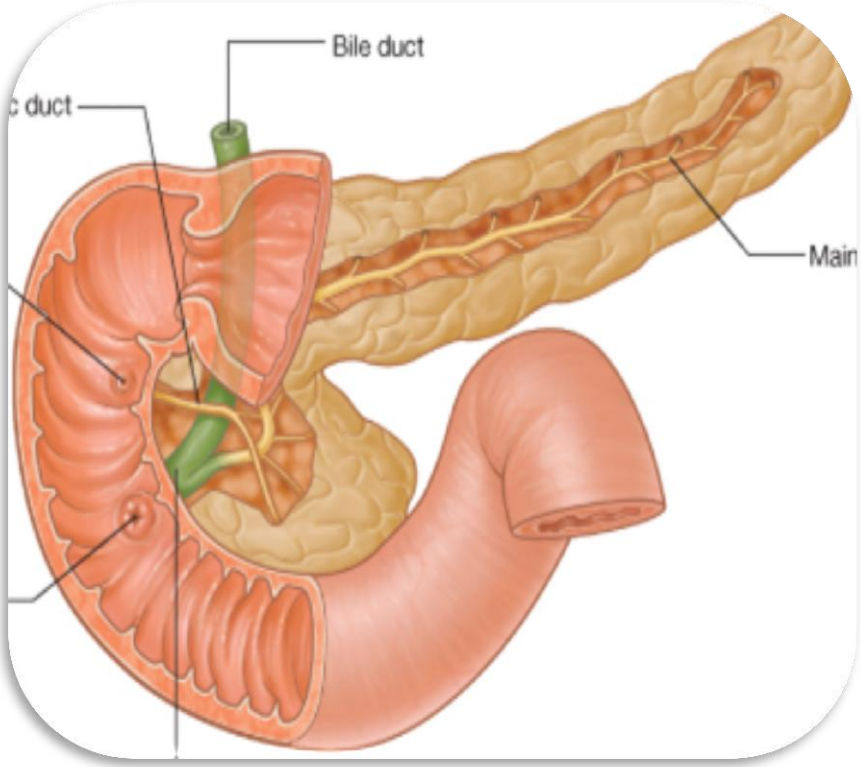
Where the main pancreatic duct opens? (3 marks)

Major duodenal papilla in 2nd part of duodenum.

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

1-Superior pancreaticoduodenal artery >> from gastroduodenal >> of hepatic >> of celiac artery.

2- Inferior pancreaticoduodenal artery >> from superior mesenteric artery



Case 4:

A 52-year-old woman undergoes an open abdominal cholecystectomy. During surgery her doctor inserts his index into the epiploic foramen..

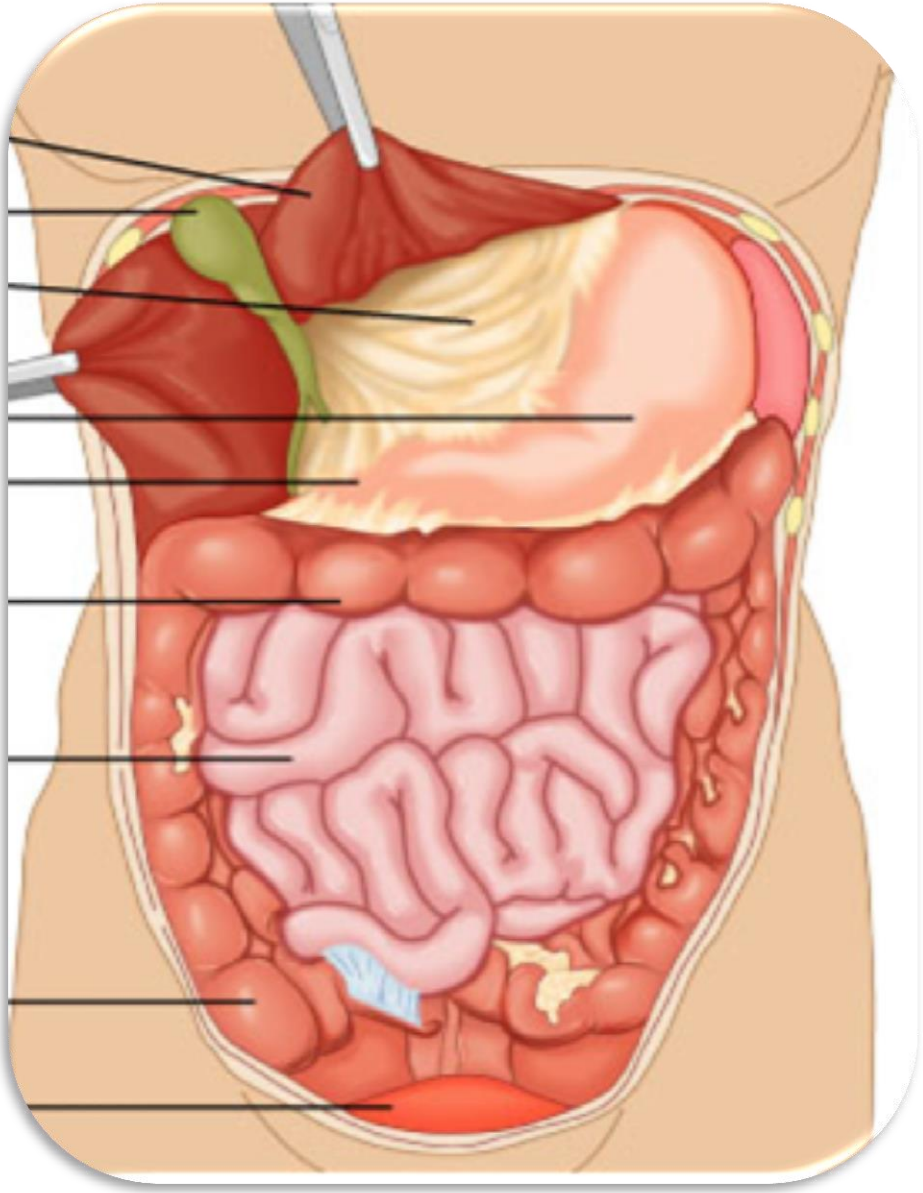
Enumerate the 4 boundaries of the epiploic foramen? (2.5 marks each)

1.**Superior**: caudate process of caudate lobe of liver.

2.**Inferior**: 1st part of duodenum.

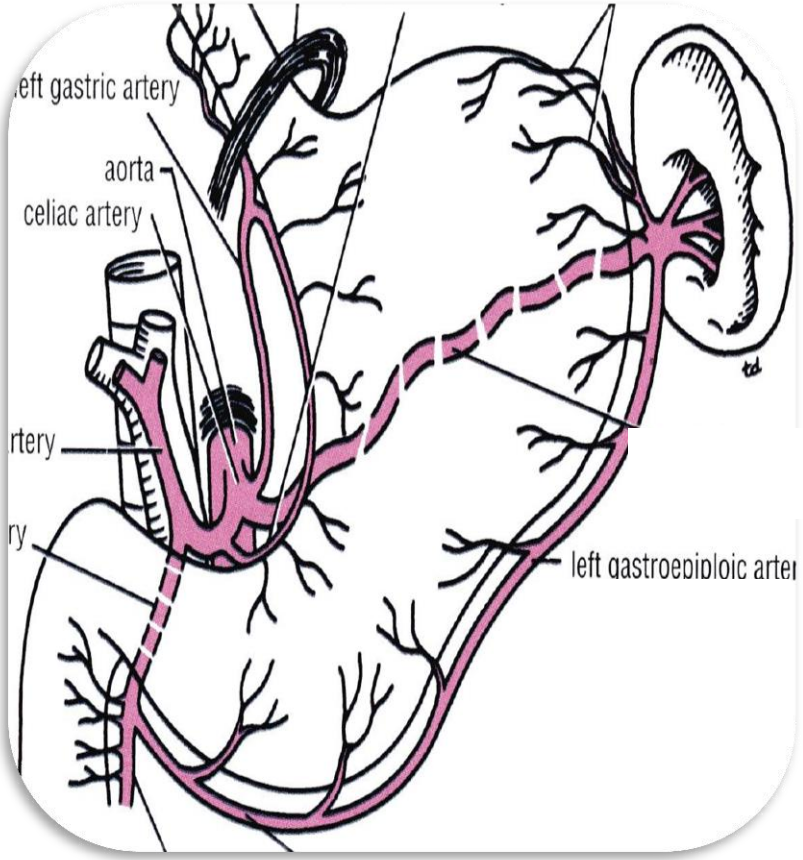
3.**Anterior**: free margin of lesser omentum.

4. **Posterior**: Peritoneum covering the IVC.



Case 5:

- During splenectomy the surgeon ligates the splenic artery at the hilum of the spleen.
- **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.
- **Which ligament the surgeon carefully dissects to ligate the splenic vessels?** (3marks)
- Lienorenal ligament (Lieno = spleen)
- **Which part of the pancreas is endanger is such operation?**
- Tail of the pancreas. (4 marks)



Case 6:

IDENTIFY:- (1mark each)

1. Transverse colon.

2-Left (splenic) flexure.

3-Teniae Coli

4-Sigmoid or pelvic colon.

5-Appendix.

6-Ascending colon.

7-Right (hepatic) flexure.

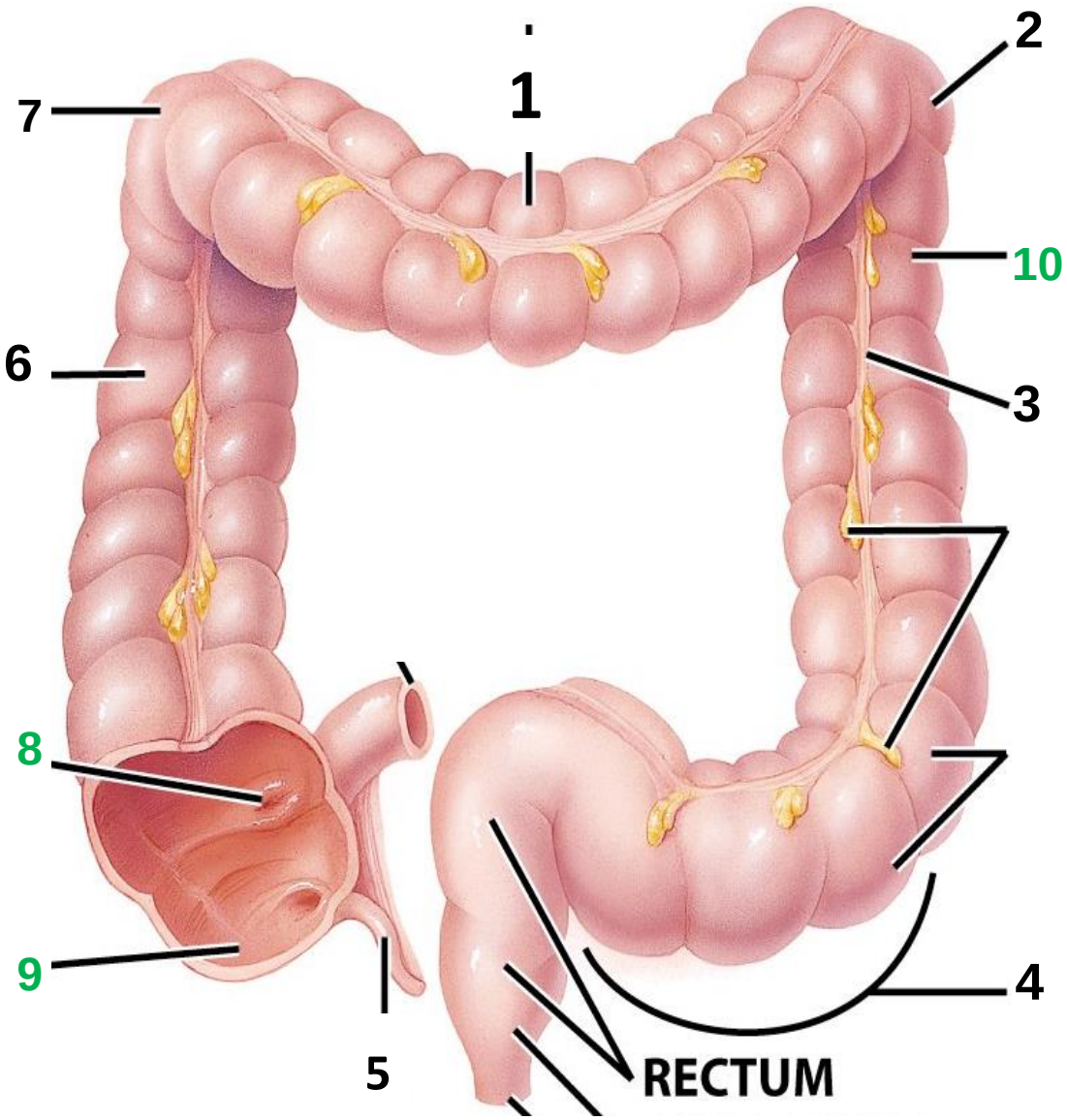
8- ileocecal opening .

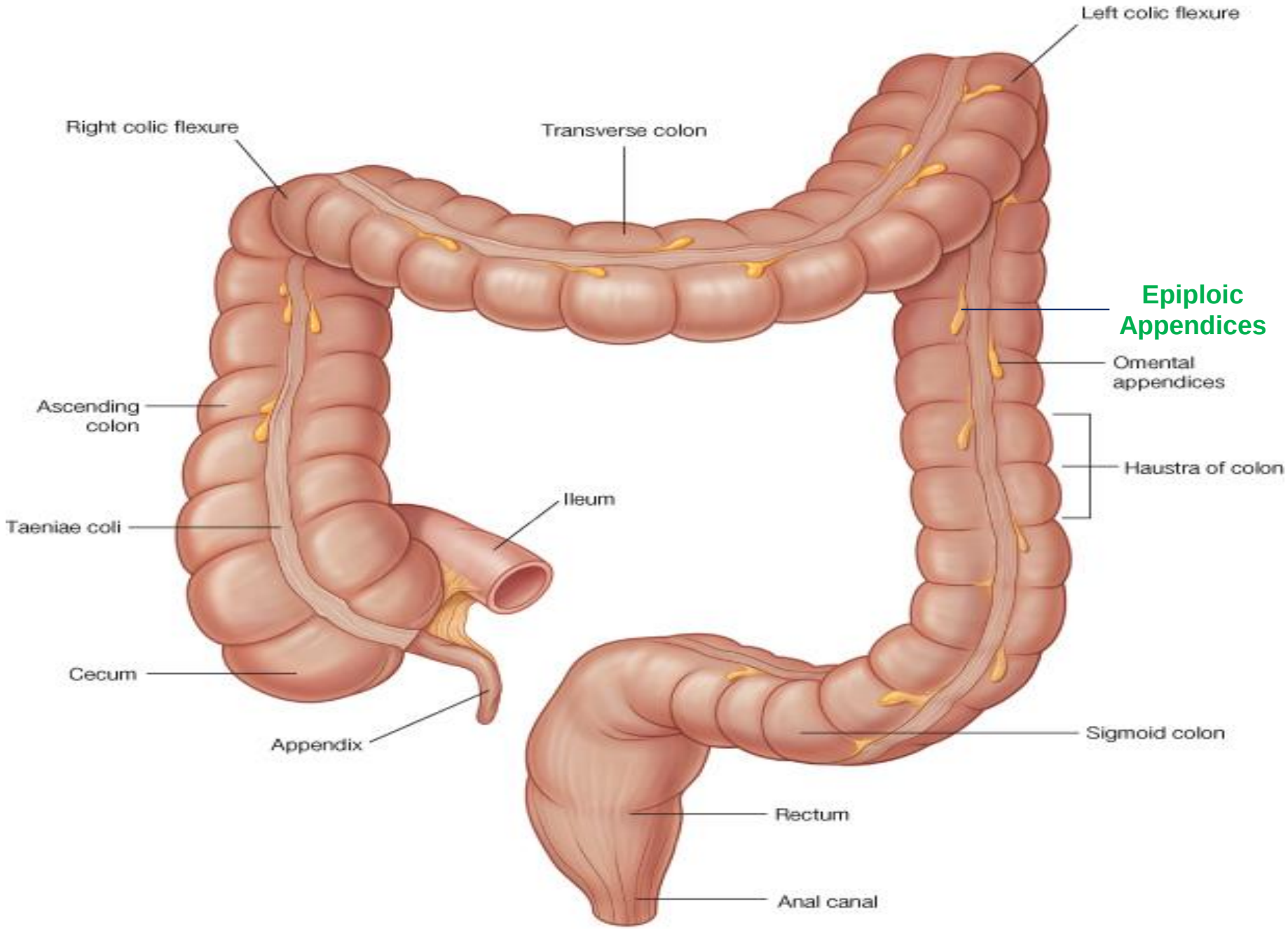
9- opening of appendix .

10- Descending colon.

What is the level of <u>the beginning of the rectum</u>?

<u>S3</u> (infront of 3rd sacral vertebra).
(3marks)





Case 7:

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.**

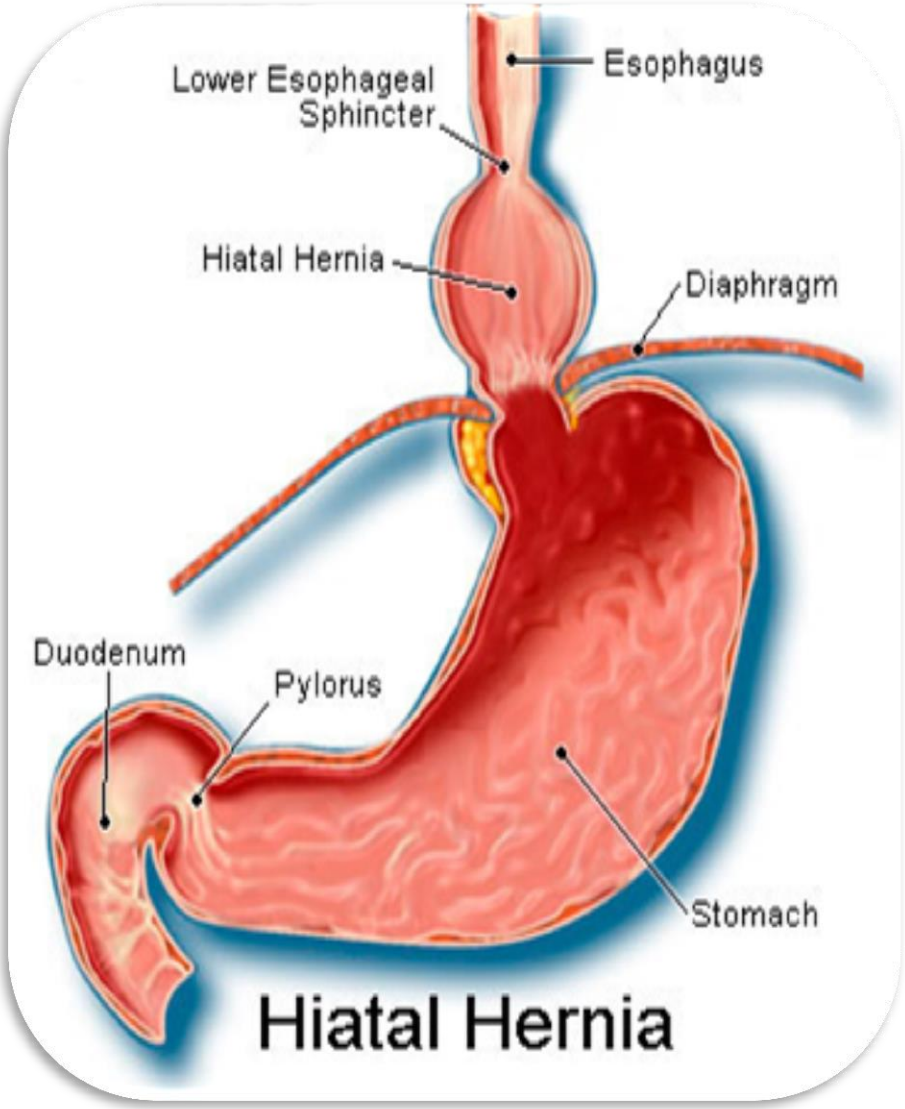
What structure is at great risk of injury during surgical repair in this case?

(2 marks).

Vagus nerve.

Enumerate 2 other structure that pass through the esophageal opening of the diaphragm? (1.5 marks each).

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



Case 8:

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

What is the most common site of the appendix? (2marks)

Retrocecal.

List other 4 sites for presence of the appendix. (1 mark each).

1- Subcecal.

2-Pelvic.

3-Preilial.

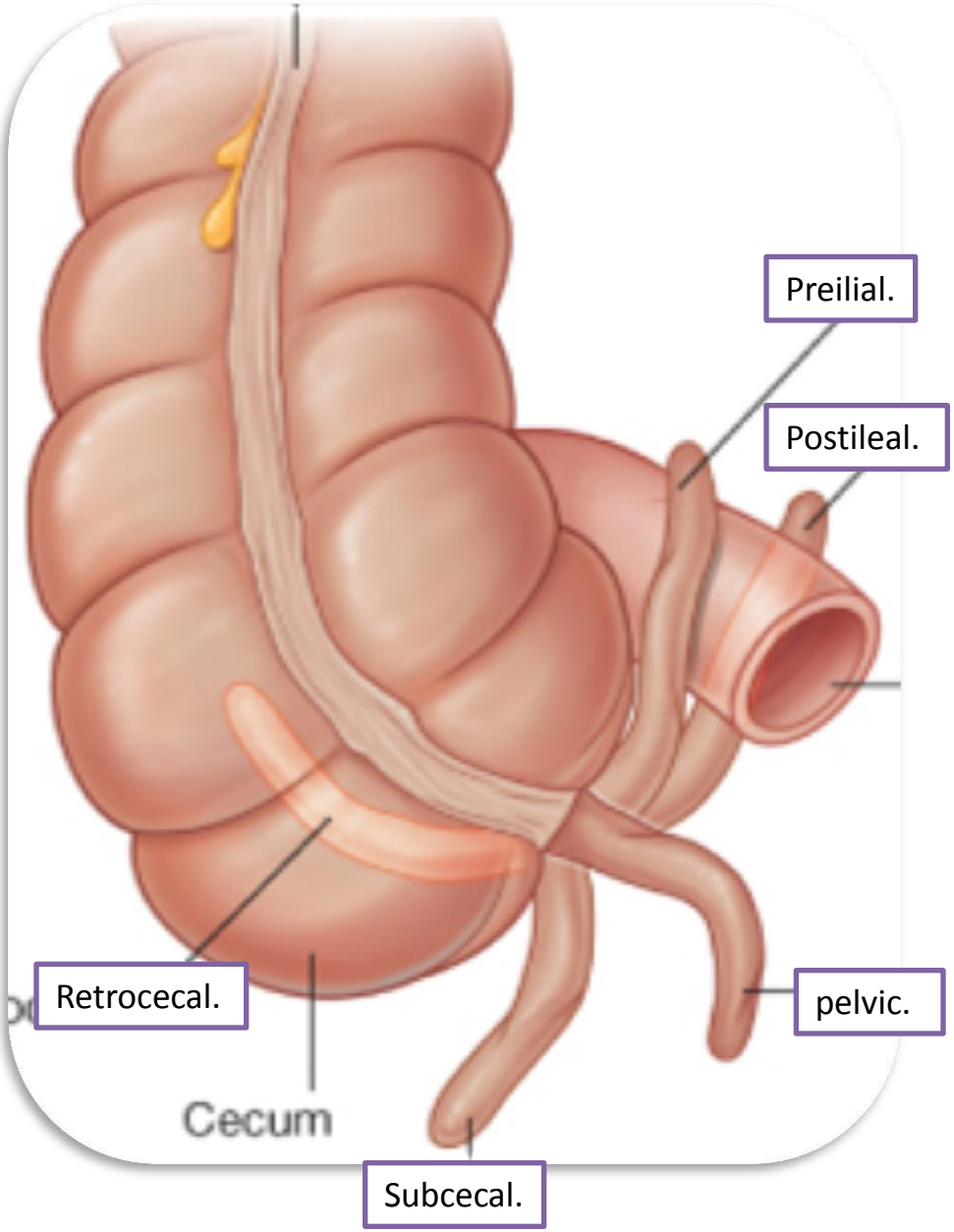
4-Postileal.

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

Appendicular artery.

From where this artery arises? (2marks)

Ileocolic of Superior mesenteric artery.



Case 9:

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 infront 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.

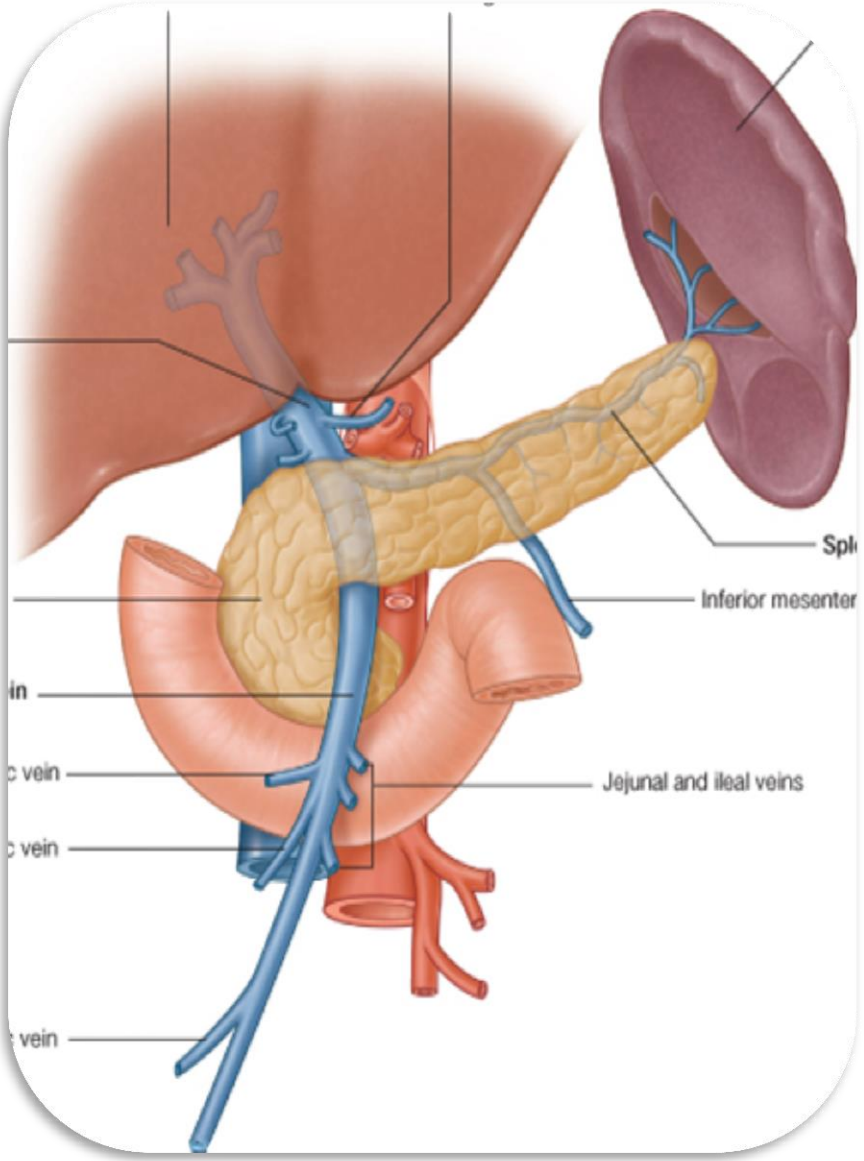
- **What is the cause of bleeding in this case? (2marks)**

Esophageal varices.

- **List 2 other site of portosystemic anastomosis. (2marks)**

1-Lower part of anal canal.

2-Anterior abdominal wall.



Case 10:

Identify the structures related to the labeled impressions: (2 marks each).

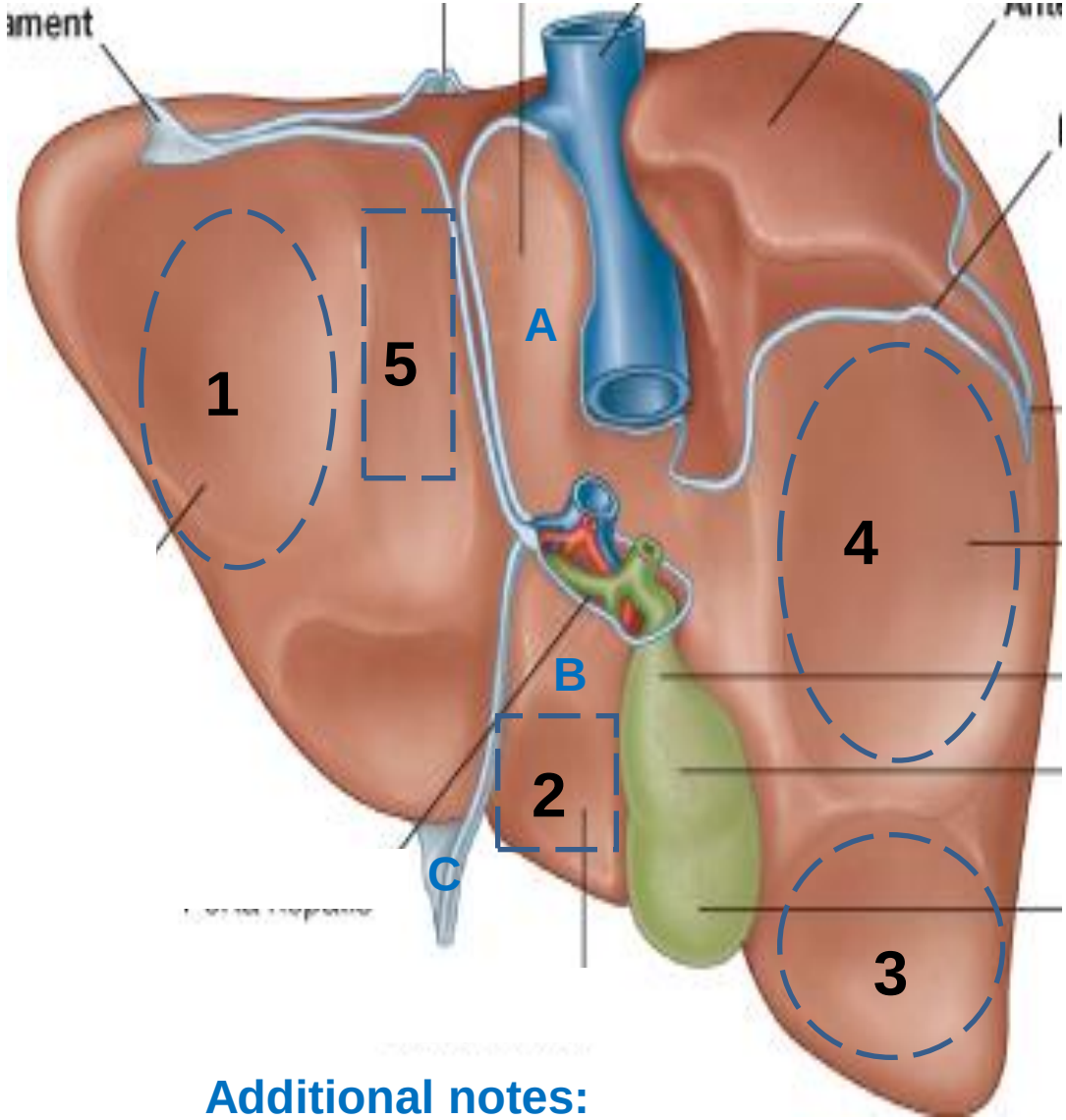
1-Gastric (stomach).

2. Transverse colon.

3. Right colic flexure.

4. Renal (right kidney).

5. Esophageal .



Additional notes:

A- Caudate lobe

B- Quadrate lobe

C- Round ligament

Case 11:

A 58-year- old woman with a history of hyperlipidemia came to the ER with sever abdominal pain, nausea and vomiting.

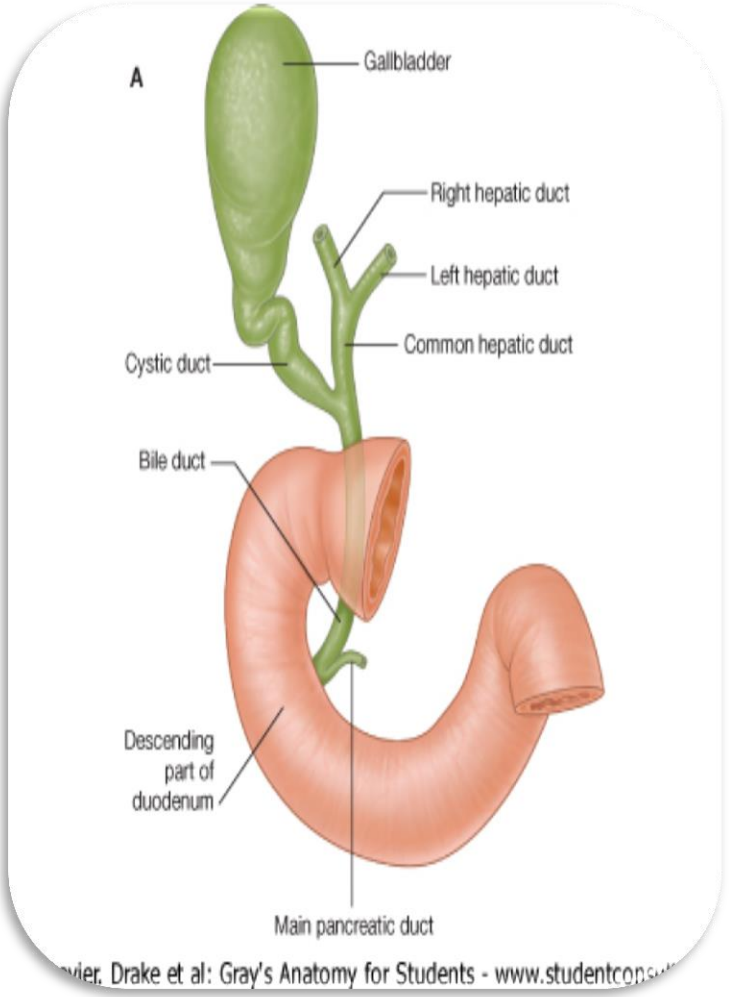
After radiological imaging she is diagnosed with advanced atherosclerotic plaque narrowing the main blood vessel supplying the embryological midgut and its derivatives.

What blood vessel is most likely affected? **(5 marks).**

Superior mesenteric artery.

Enumerate only 2 of its branches? **(2.5 marks each).**

1. Right colic.
2. Middle colic.
3. Iliocolic.
4. Inferior pancreaticoduodenal.
5. Jujenal and ilial branches.

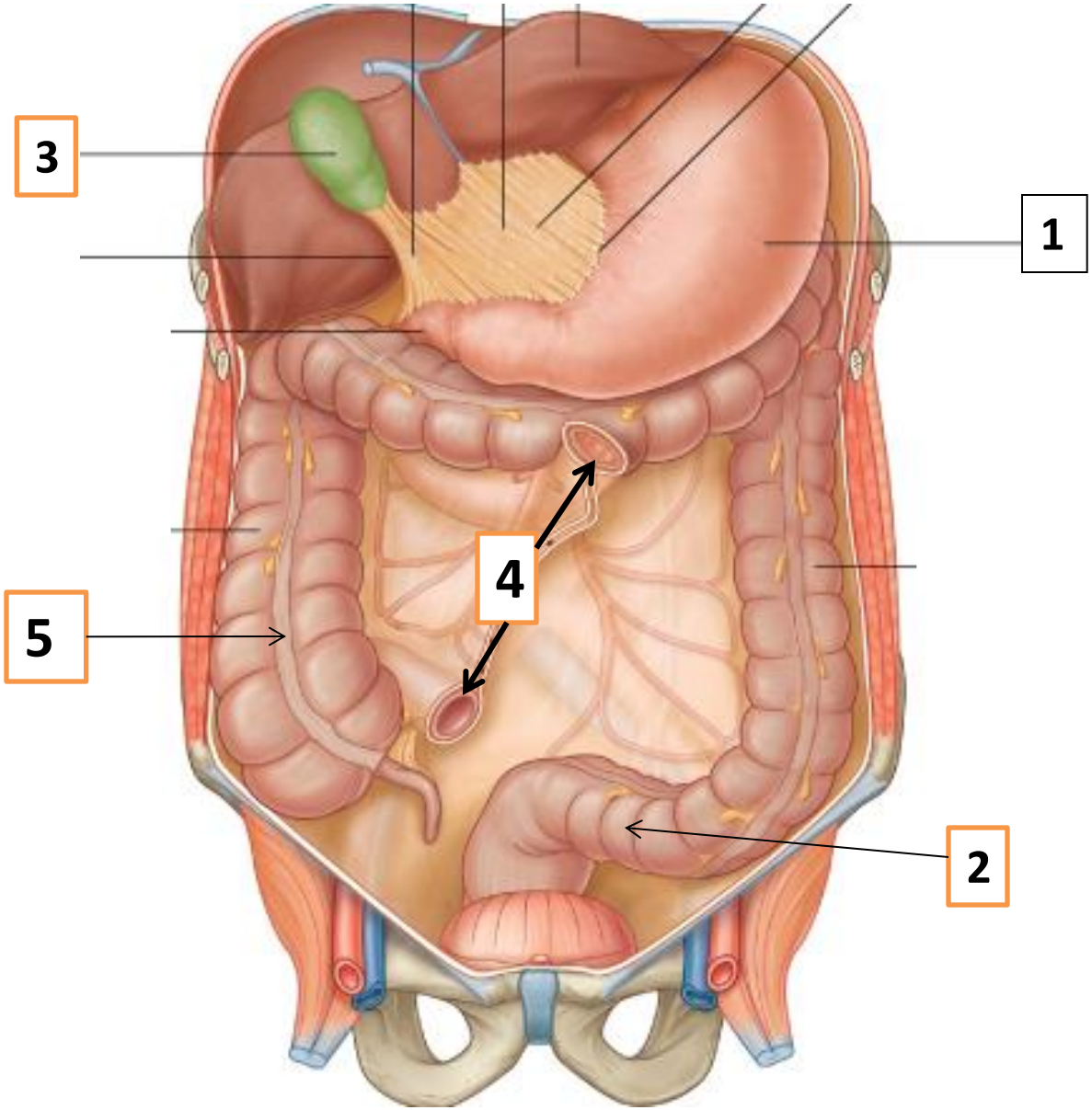


Case 12:

- 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?
- Gastroduodenal artery.
- Enumerates 3 different organs supplied by this artery?
- Stomach
- Duodenum.
- Pancreas

Case 13:

- **IDENTIFY:**
- 1- Stomach.
- 2- Sigmoid colon.
- 3- Gall bladder.
- 4- Root of the mesentery.
- 5- Teniae coli



Case 14:

- **IDENTIFY:**

(2 marks each)

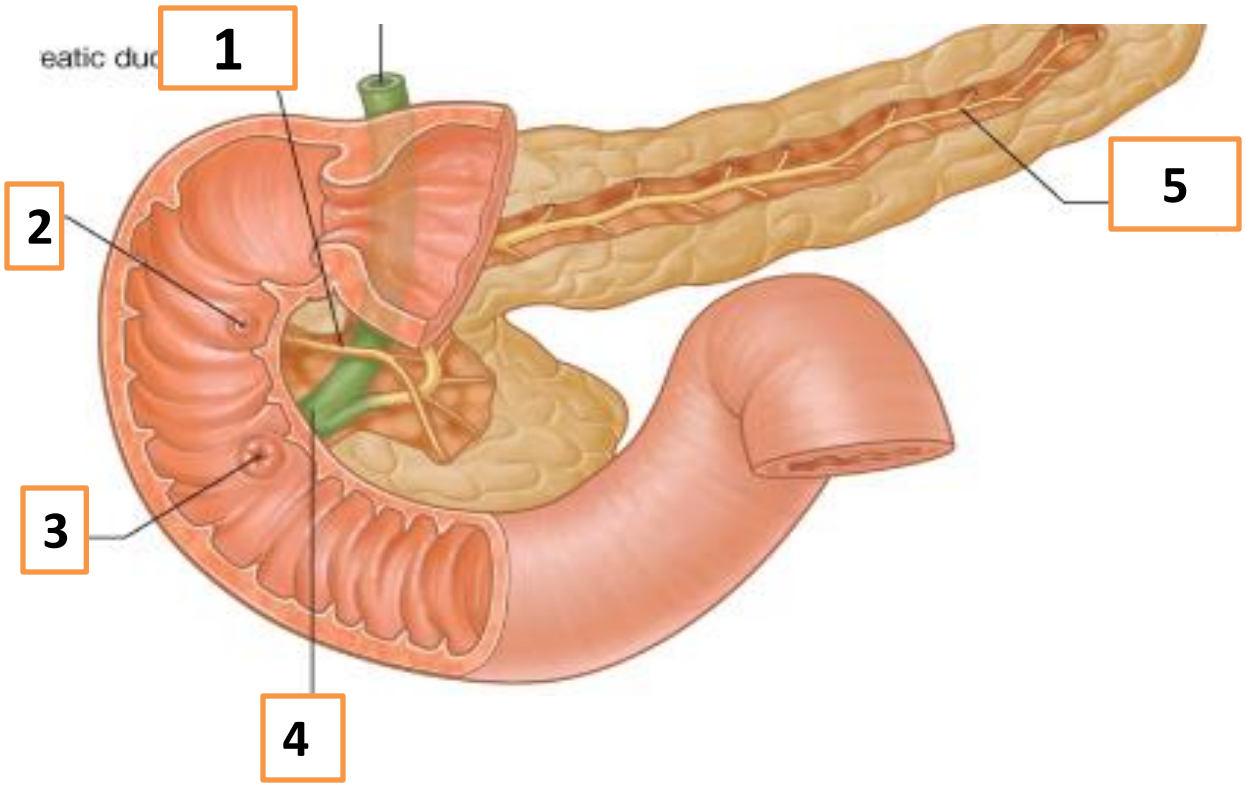
1 - Accessory pancreatic duct.

2 - Minor duodenal papilla.

3 - Major duodenal papilla.

4 - Bile duct.

5 - Main pancreatic duct.



* Be carful about the location of the arrow .

HORIZONTAL SECTION IN THE ABDOMEN LOOKING FROM BELOW

Case 15:

- **IDENTIFY:**

(2marks ach)

1- Stomach

2- Spleen

3-opening into lesser sac.

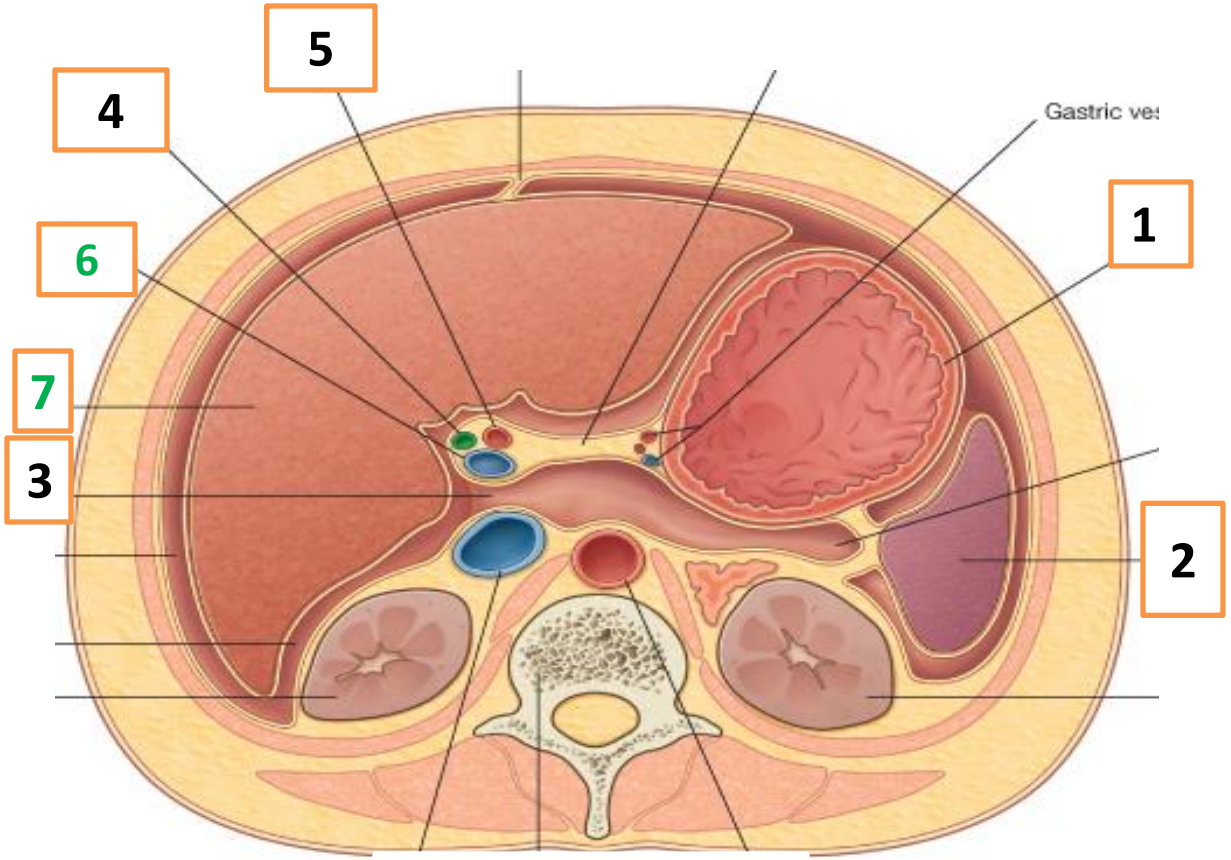
(epiploic foramen).

4-Bile duct

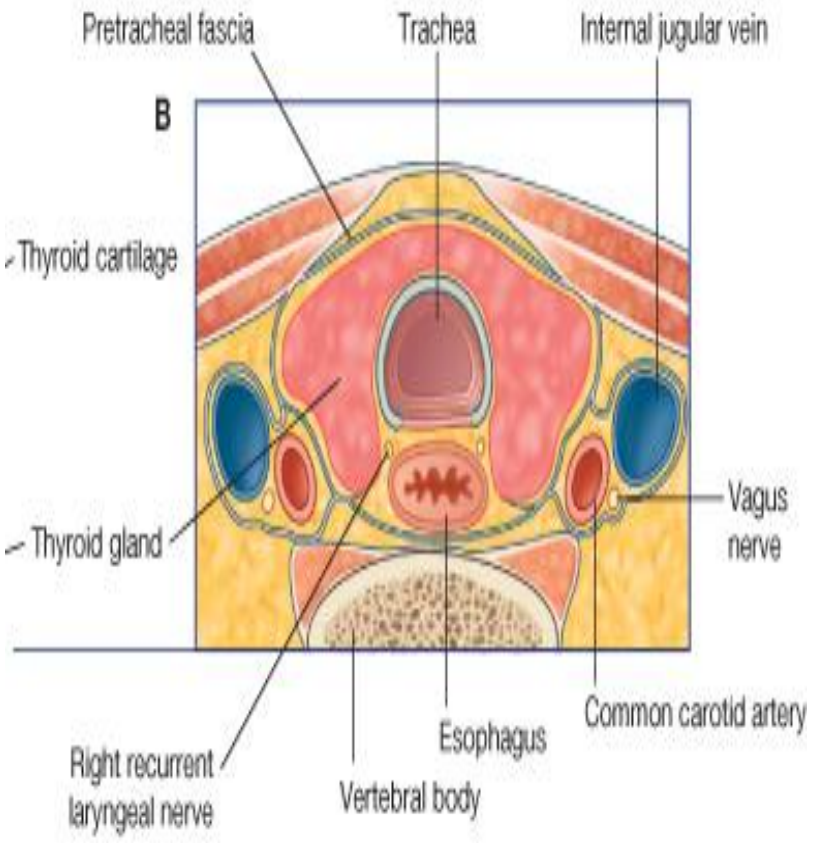
5- hepatic artery.

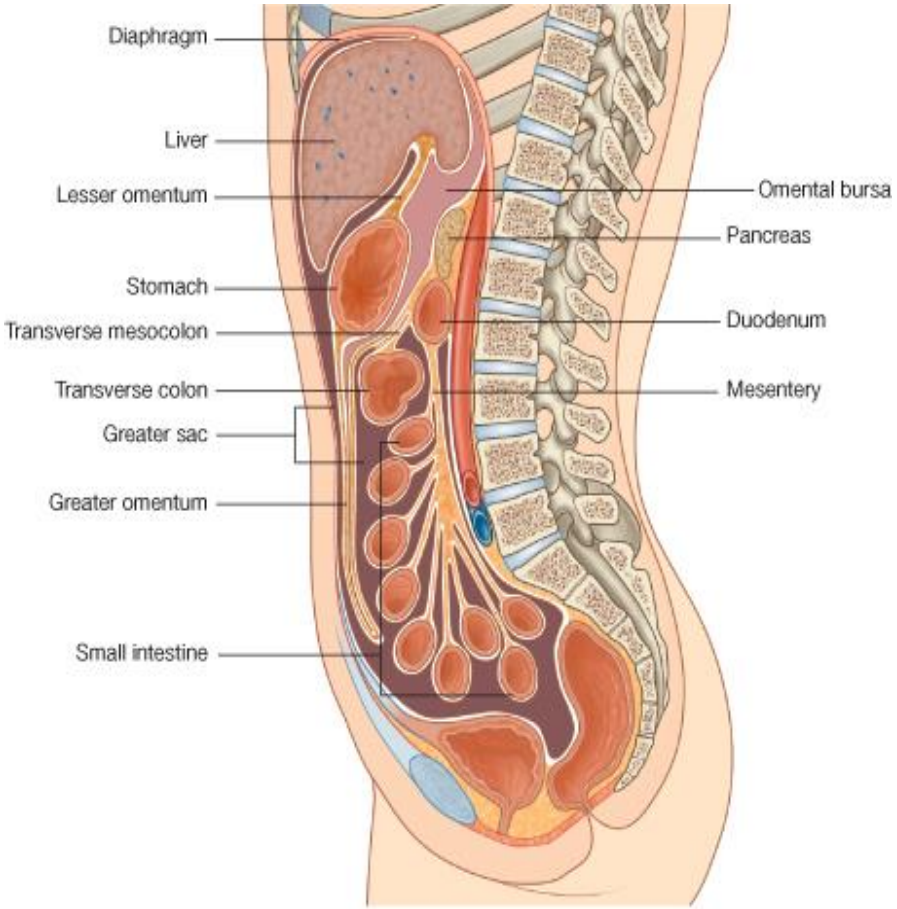
6- portal vein .

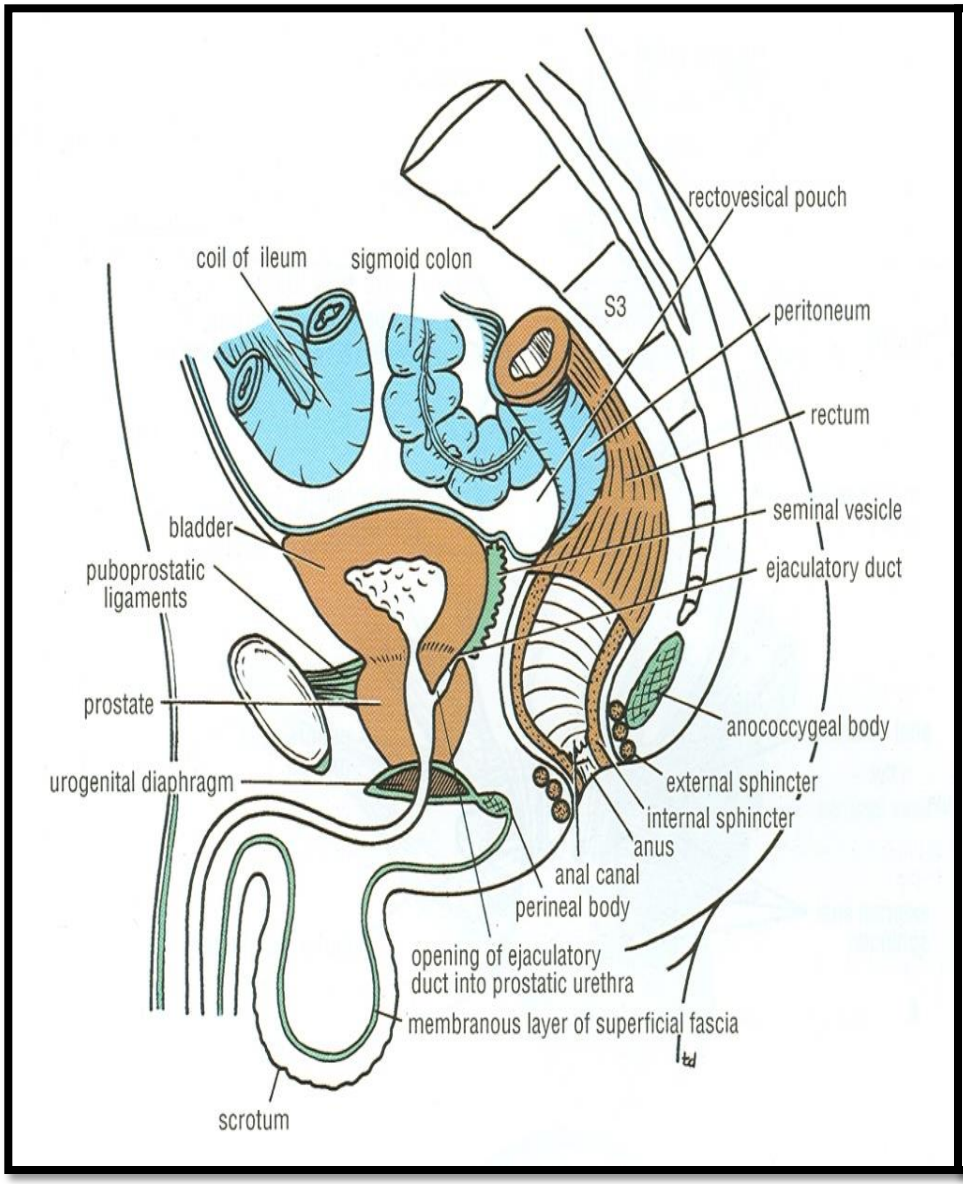
7- liver .

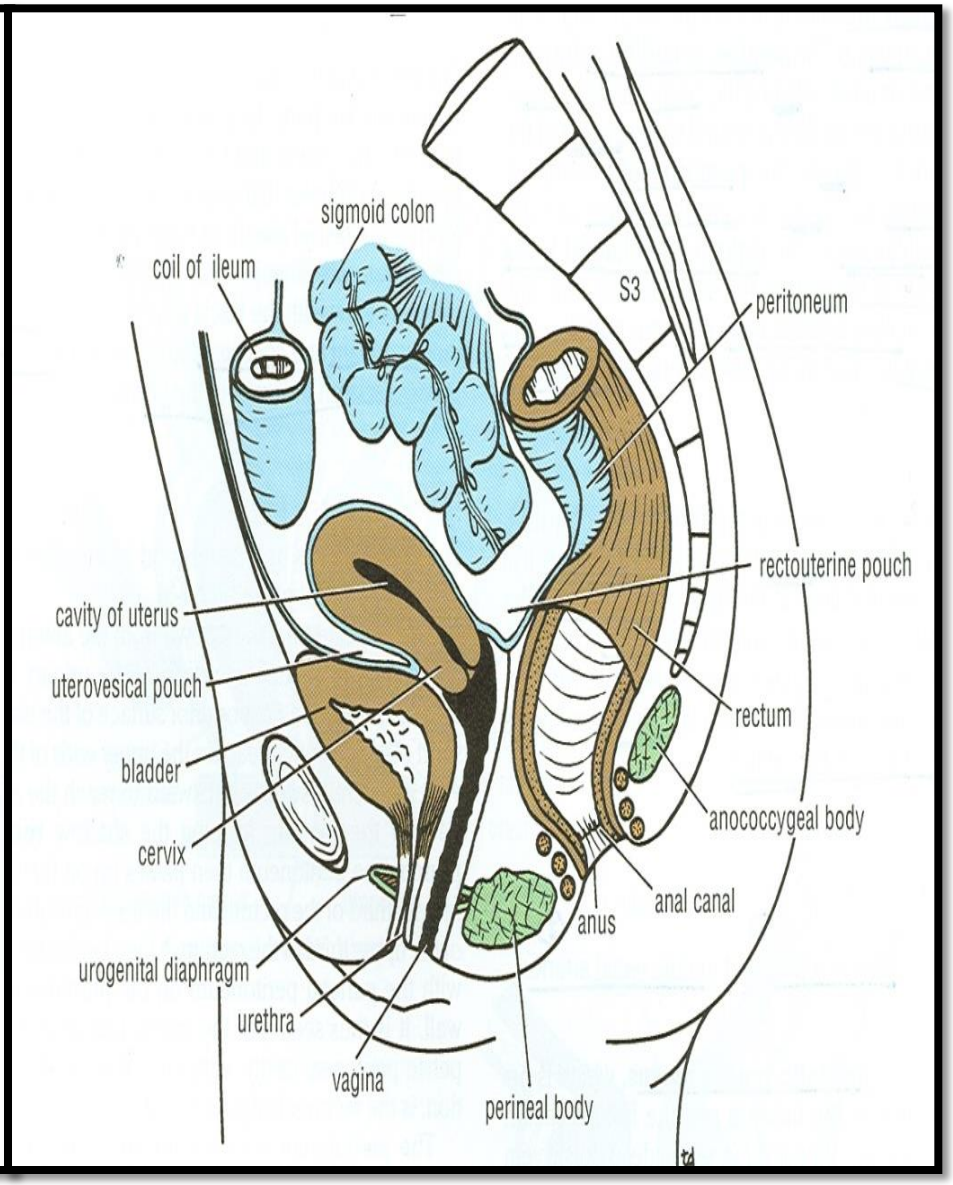


Extra Pictures

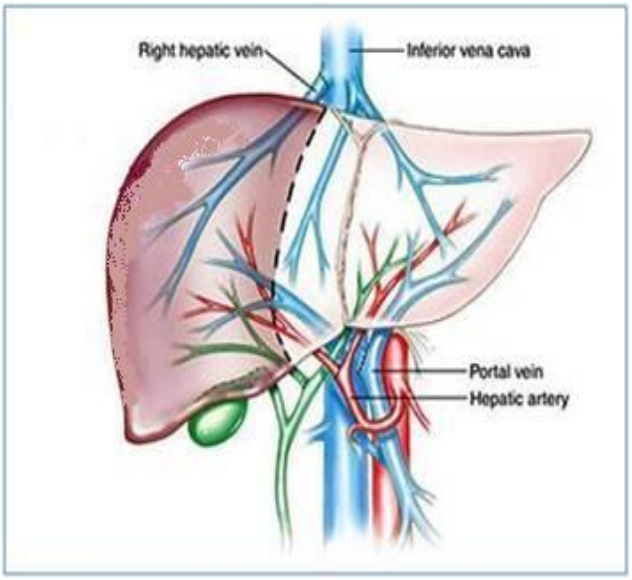


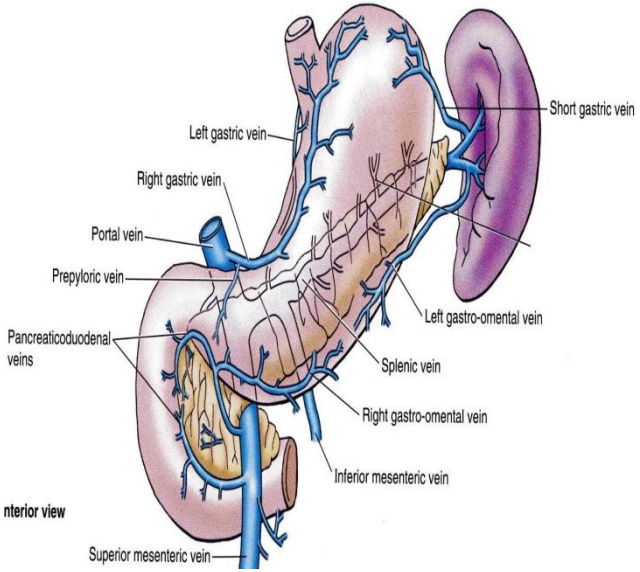


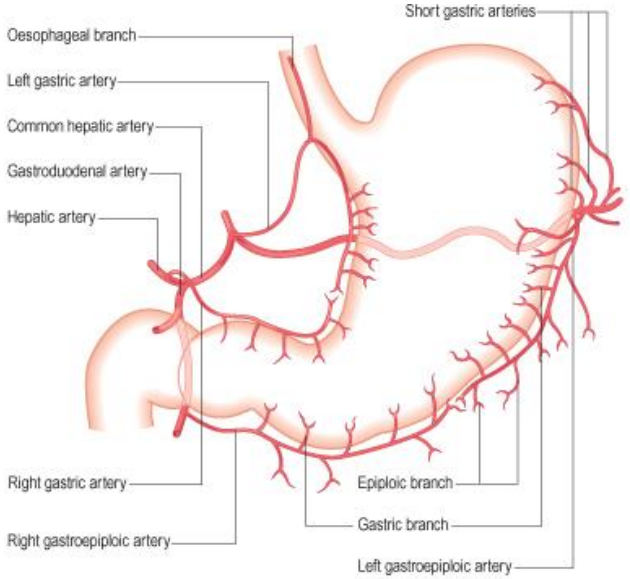

rectovesical pouch
coil of ileum
sigmoid colon
S3
peritoneum
rectum
seminal vesicle
bladder
puboprostatic ligaments
ejaculatory duct
prostate
anococcygeal body
urogenital diaphragm
external sphincter
internal sphincter
anus
anal canal
perineal body
opening of ejaculatory duct into prostatic urethra
membranous layer of superficial fascia
scrotum


sigmoid colon
coil of ileum
S3
peritoneum
rectouterine pouch
cavity of uterus
uterovesical pouch
rectum
bladder
anococcygeal body
cervix
anal canal
anus
urogenital diaphragm
urethra
vagina
perineal body

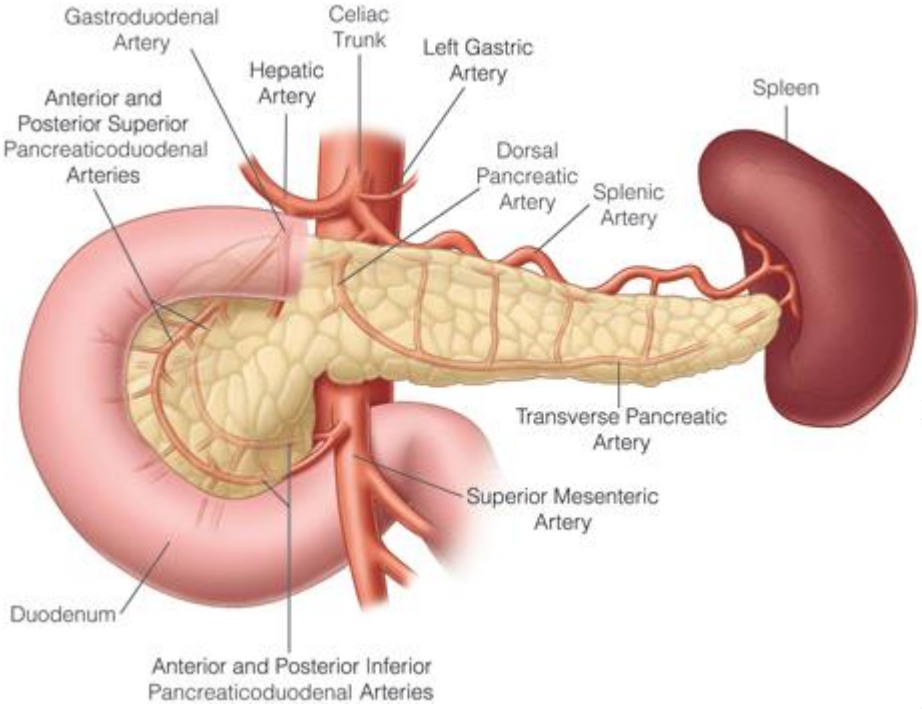
Blood Supply	Liver	Stomach
Artery	Right and left hepatic artery	1- Left gastric 2- Right gastric 3- Left gastroepiploic 4- Right gastroepiploic 5- Short gastric arteries
Vein	To the liver → Portal Vein From the liver → Hepatic vein	1- Left gastric 2- Right gastric 3- Left gastroepiploic 4- Right gastroepiploic 5- Short gastric veins

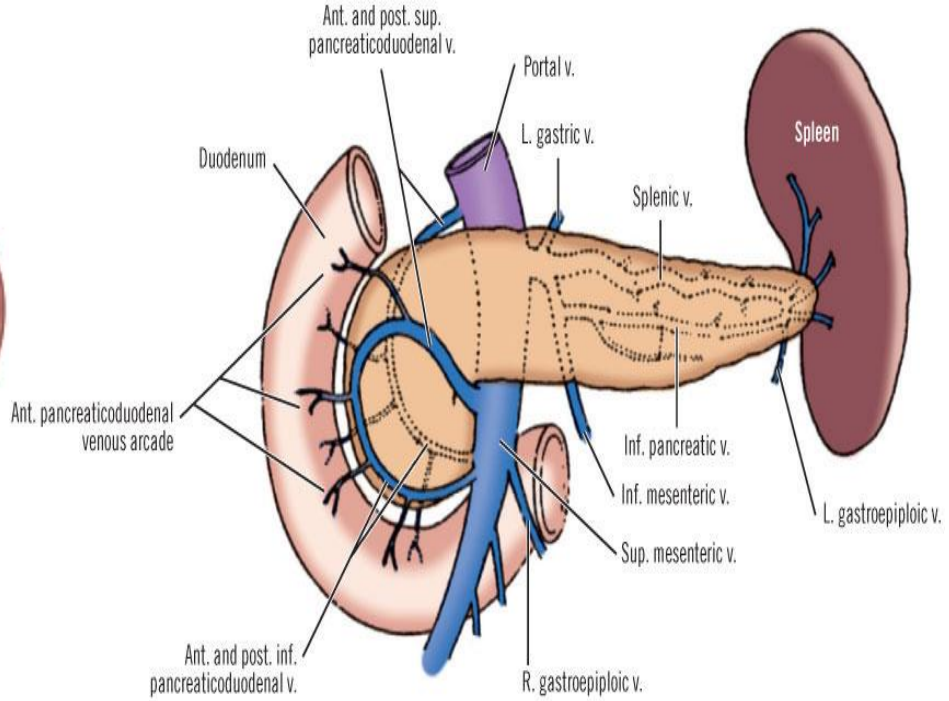






Blood Supply	Duodenum	Pancreas
Artery	1st & 2nd parts from Celiac Artery 3rd & 4th parts from Superior mesenteric	- Head & neck by Superior pancreaticoduodenal & inferior pancreaticoduodenal . - Body and tail from Splenic artery
Vein	Drain into Portal vein	- Head & neck form superior & inferior pancreaticoduodenal veins - Body and tail into splenic vein



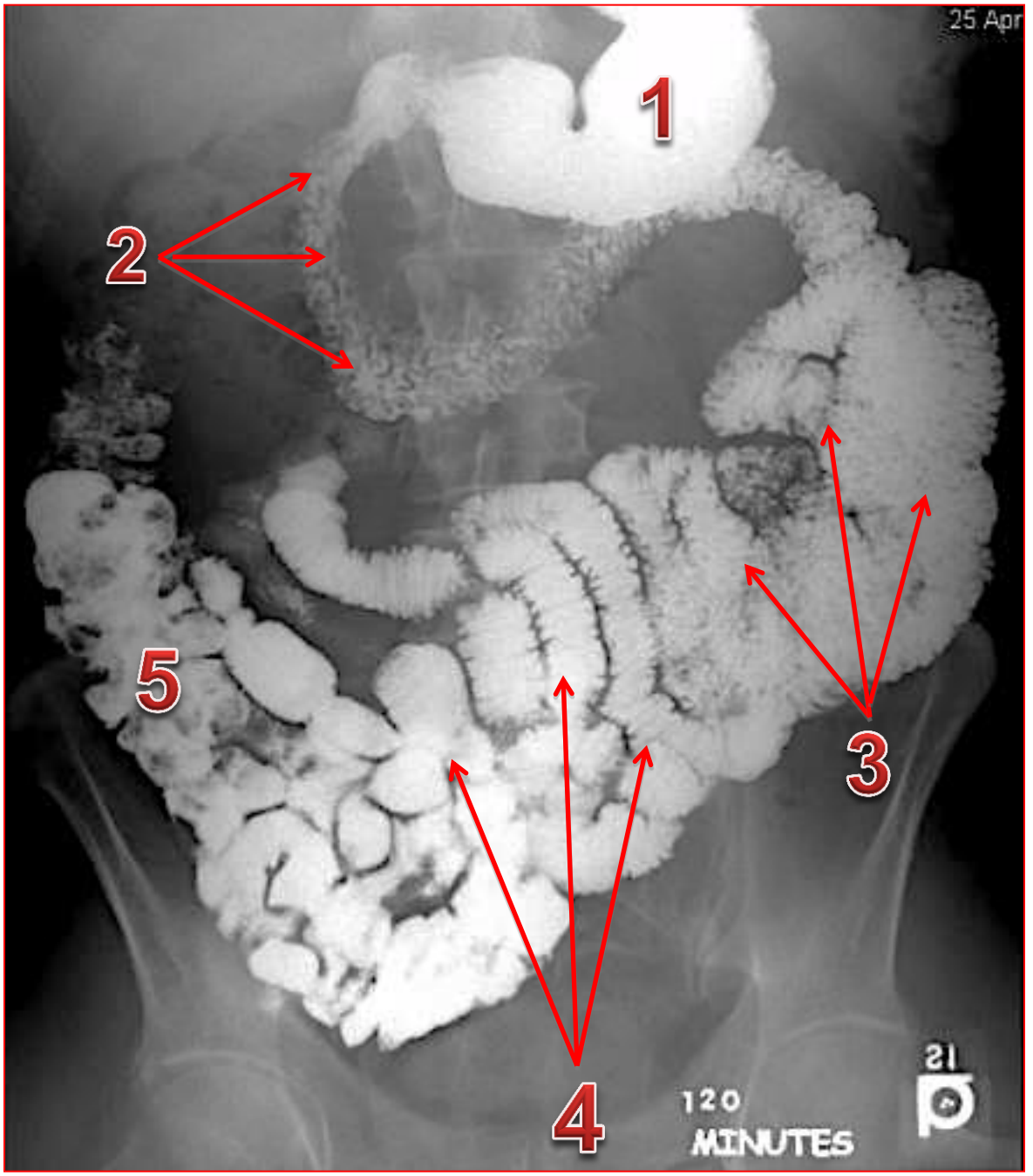


Radiology

- **The method used in this picture is barium follow through .**

1- Stomach
2- Duodenum
3- Jejunum
4- Ileum
5- Cecum

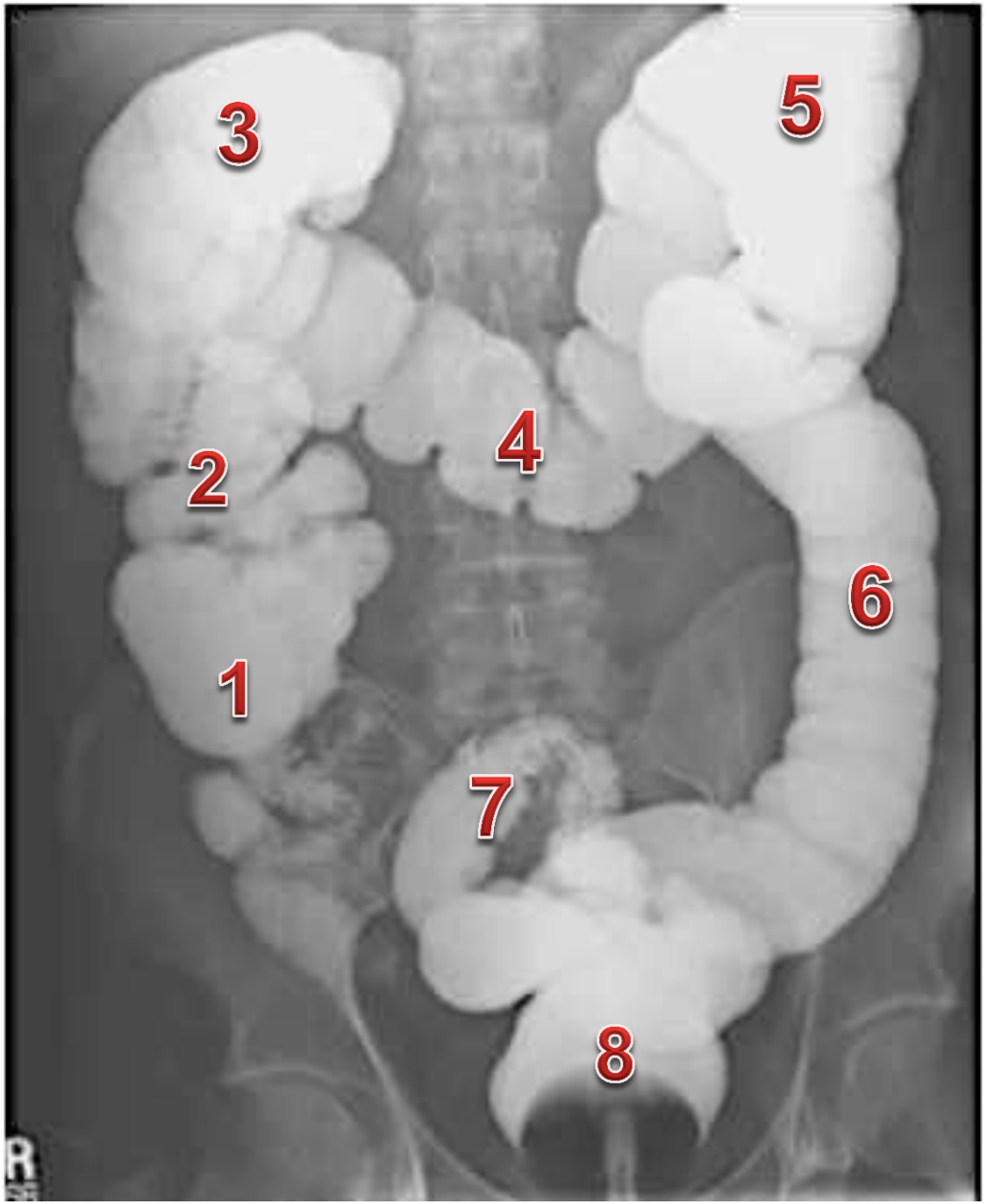
Q- What are the modalities can be used in imaging the esophagus?
CT-scan - X-Ray -Fluoroscopy



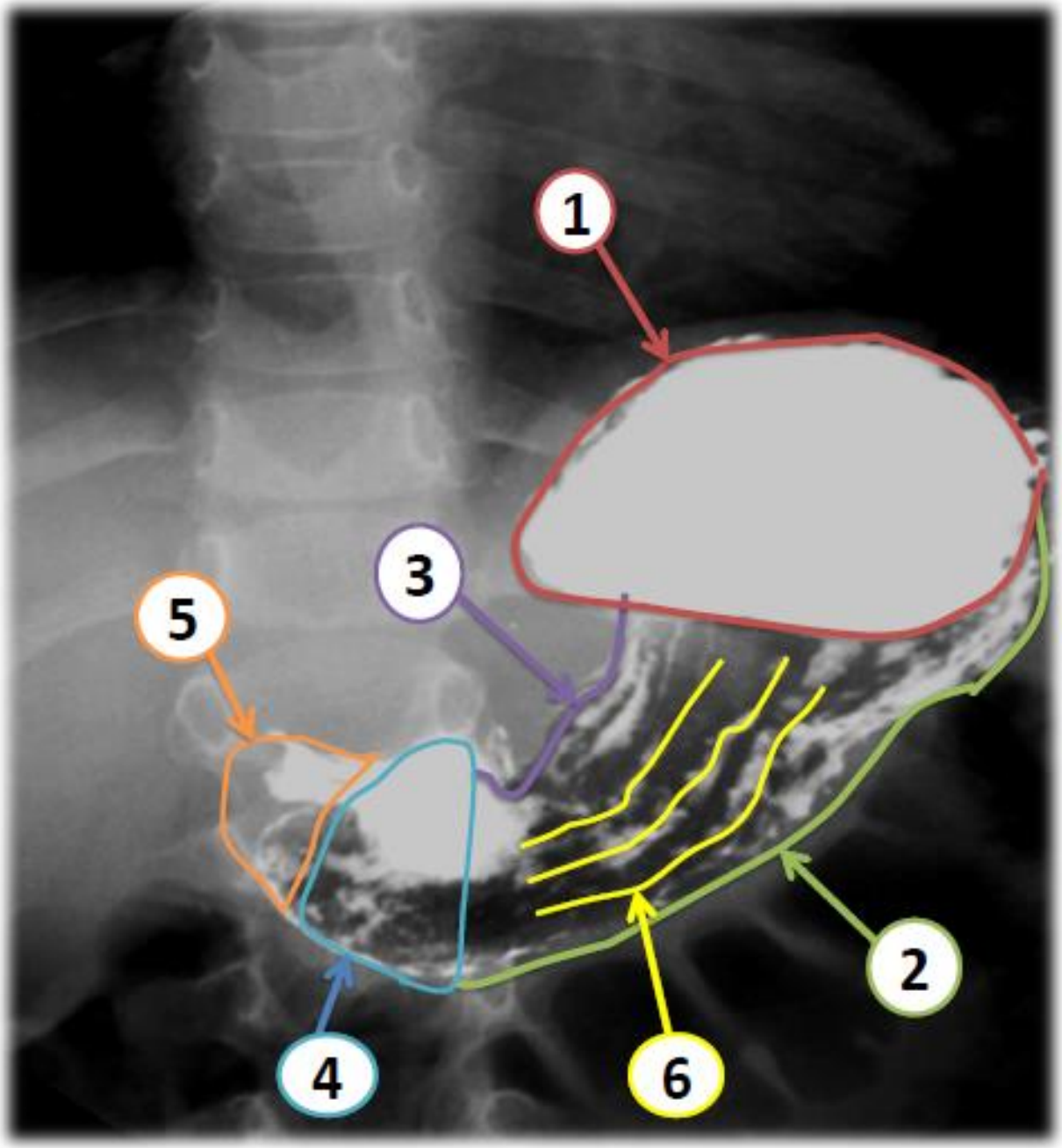
Radiology

- The method used in this picture is barium Enema .

1. Cecum
2. Ascending colon
3. Hepatic flexure
4. Transvers colon
5. Splenic flexure
6. Descending colon
7. Sigmoid colon
8. rectum

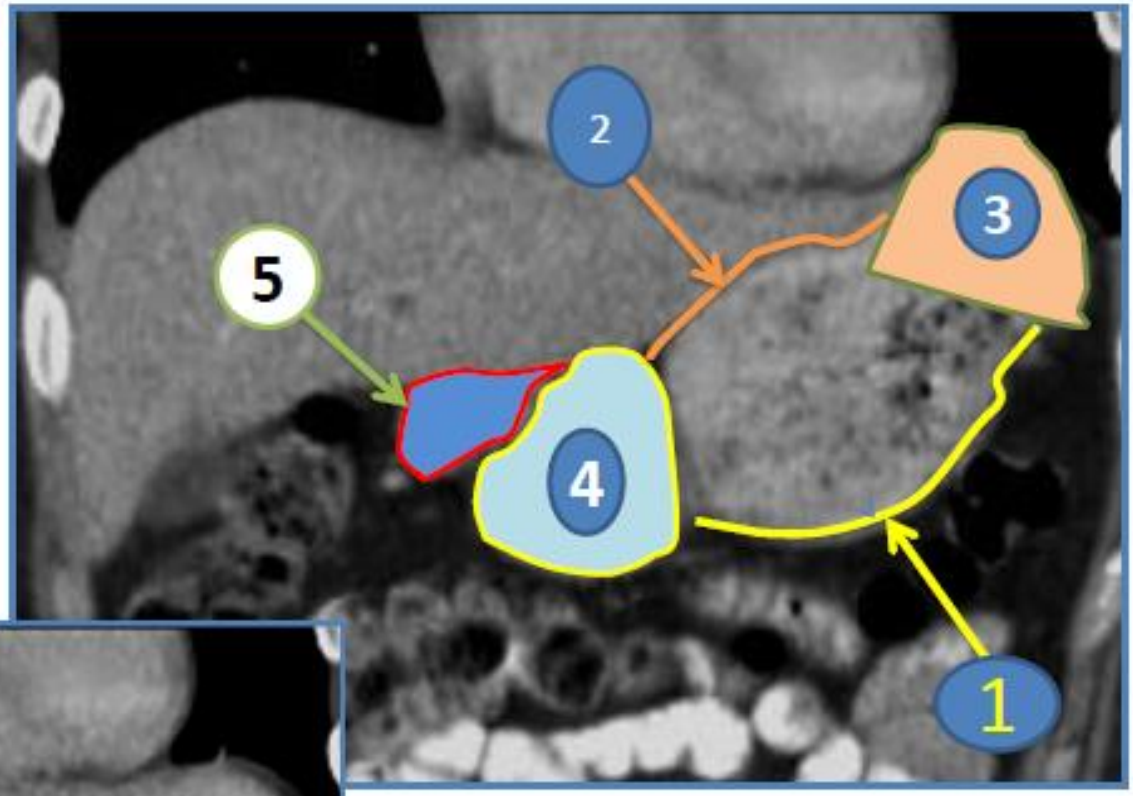


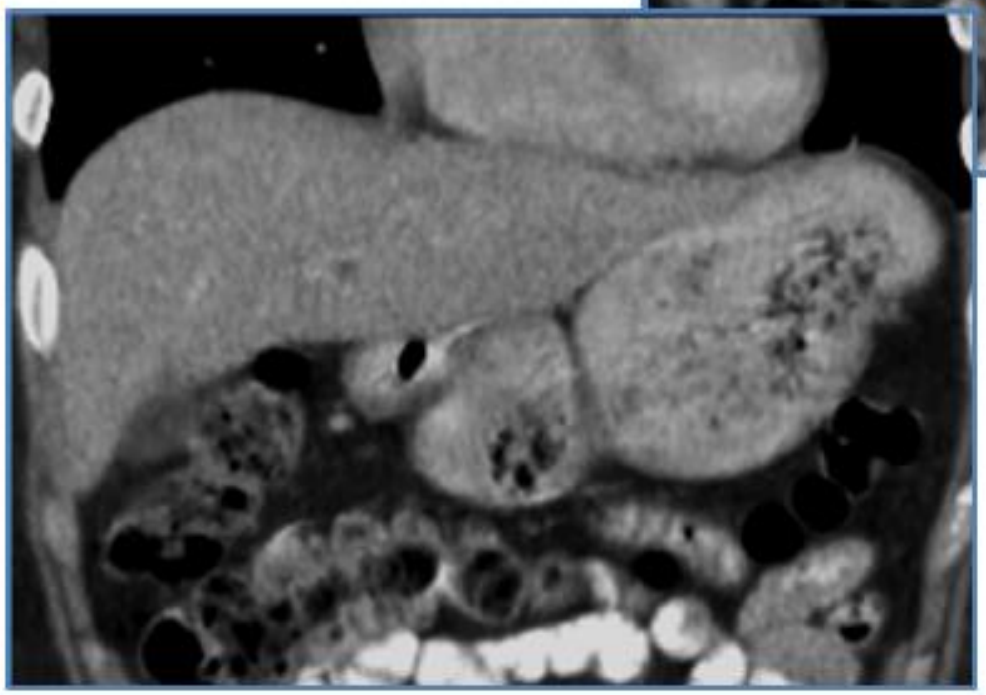
Extra



1. Stomach fundus
2. Greater curvature
3. Lesser curvature
4. Antrum
5. Pylorus
6. Mucosal folds

Extra

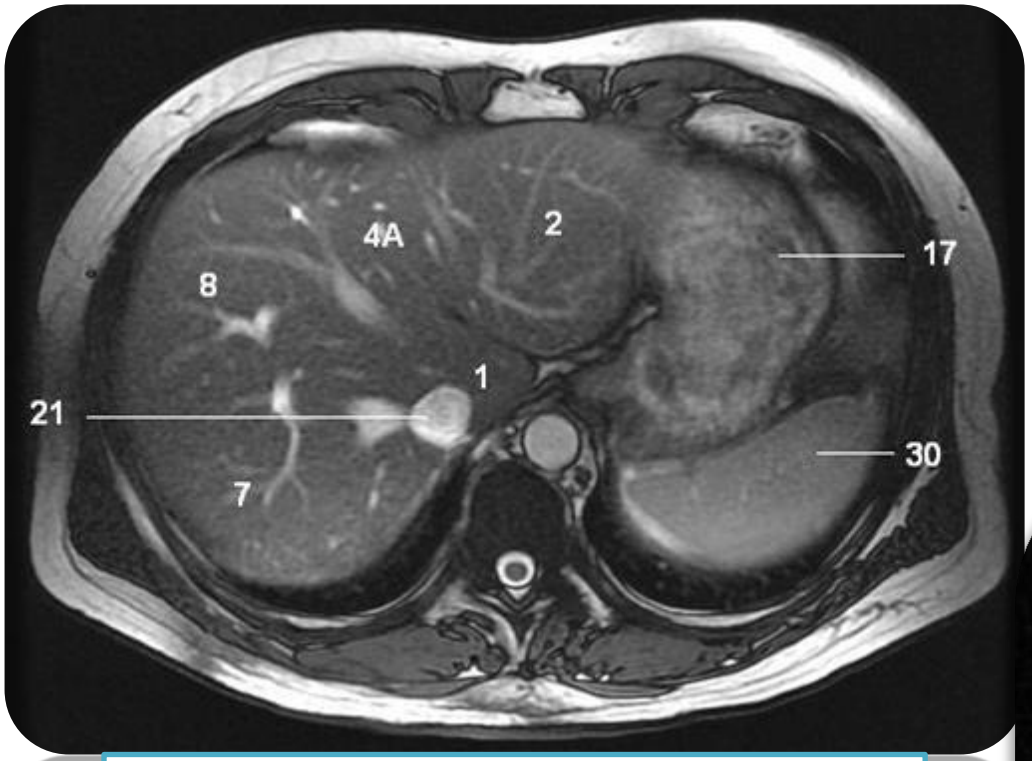




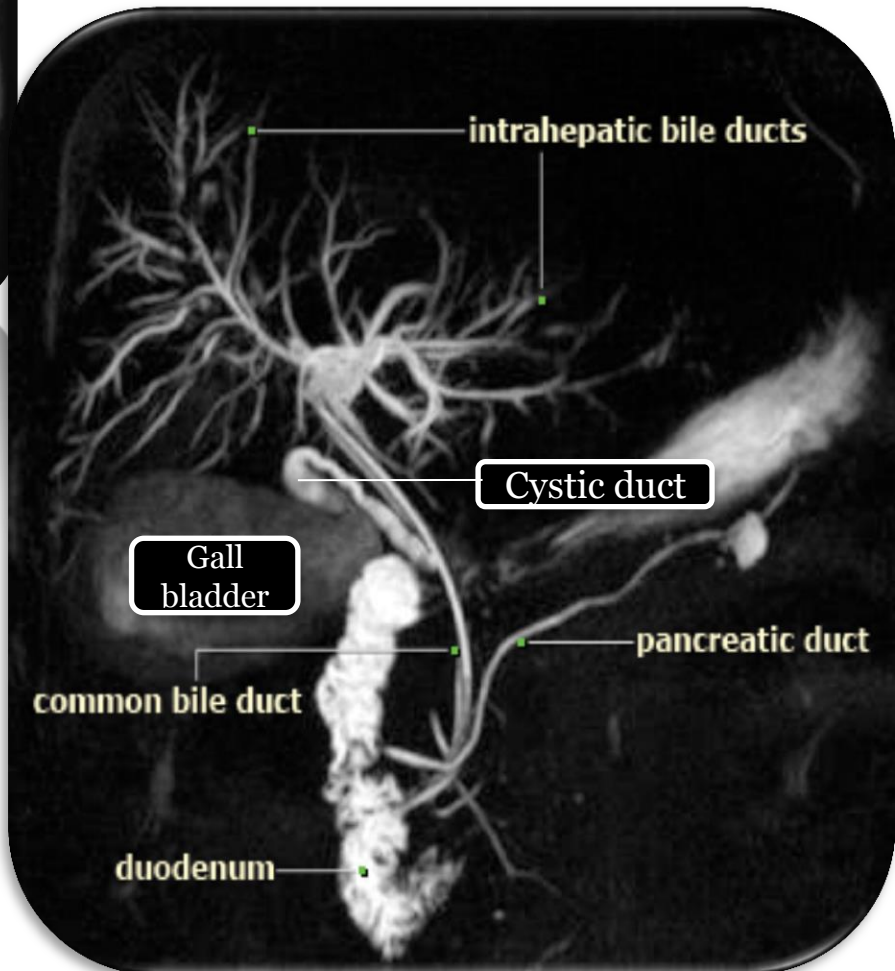
1-Greater curvature
2-Lesser curvature
3-Stomach fundus
4-Antrum
5-Pylorus

Hepatic veins

Portal vein



17-stomach 21-IVC 30-spleen
1,2,4A, 7,8 liver segments



Good Luck ☺

Anatomy Team Leaders:
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