

THE BLOOD SUPPLY OF GIT
Coeliac Trunk

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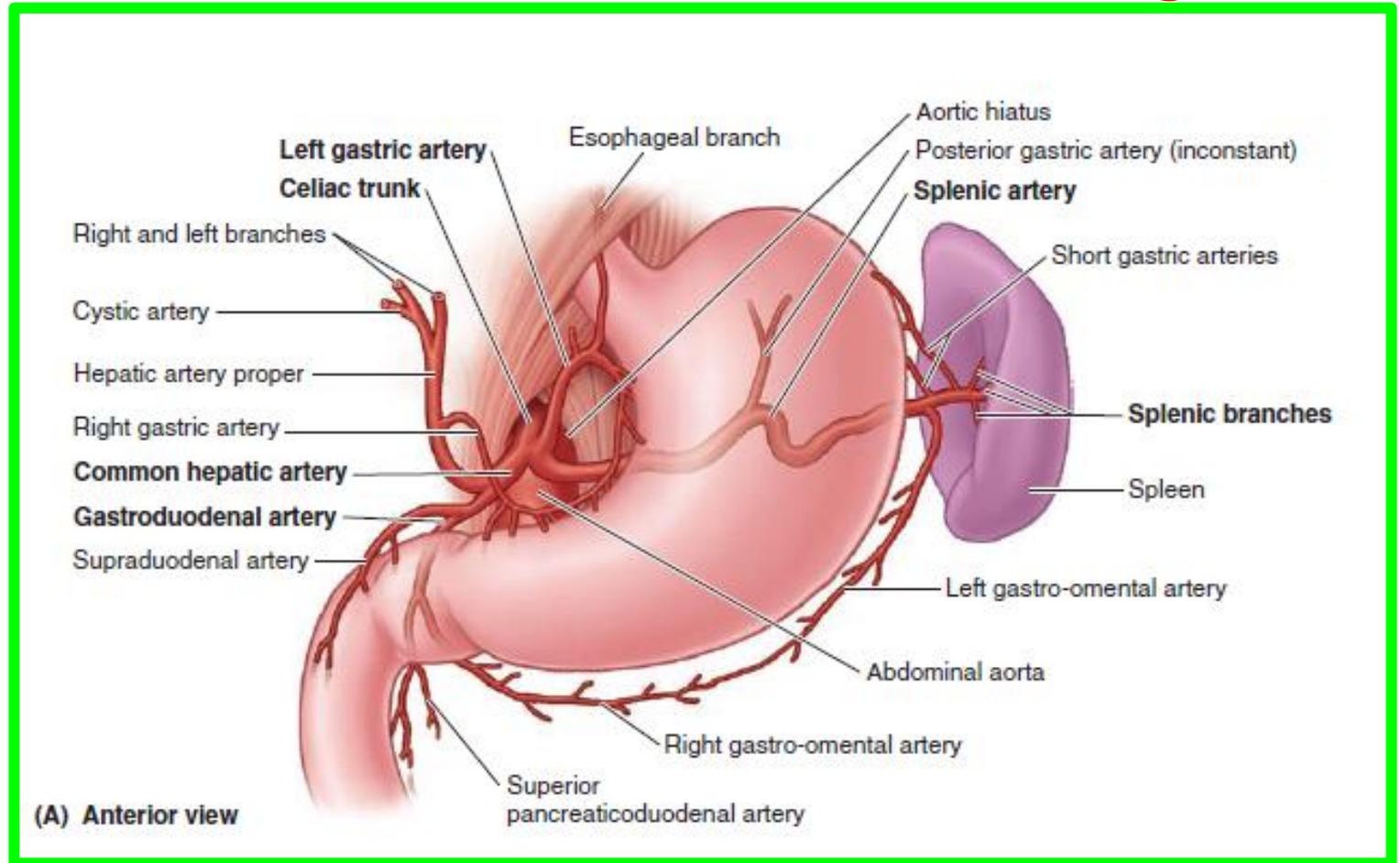
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Coeliac Trunk

□ This is the artery of the foregut.

** **Origin:** from the front of the abdominal aorta at the level of the **T12**.

** **Course:** it is a very short and wide arterial trunk, about **one cm long**.



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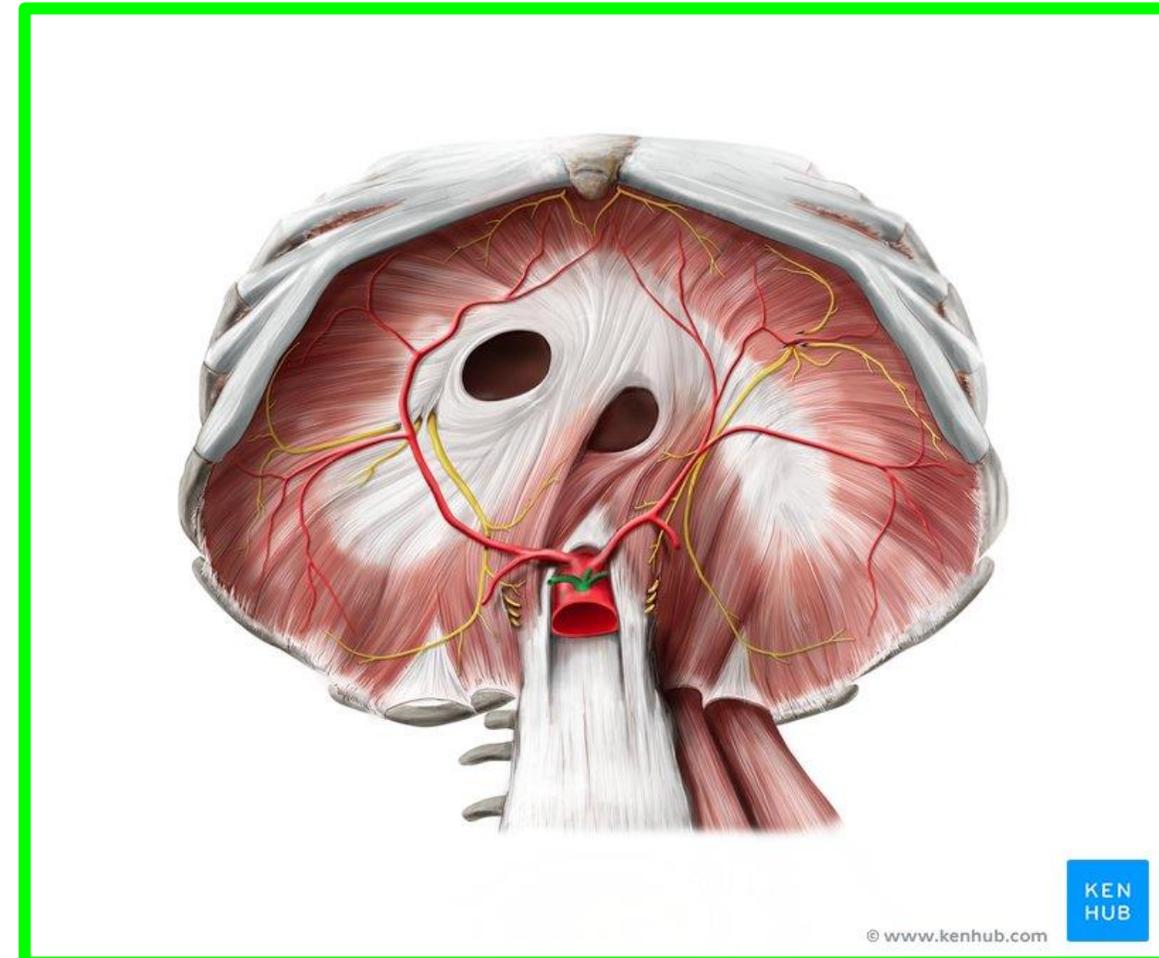
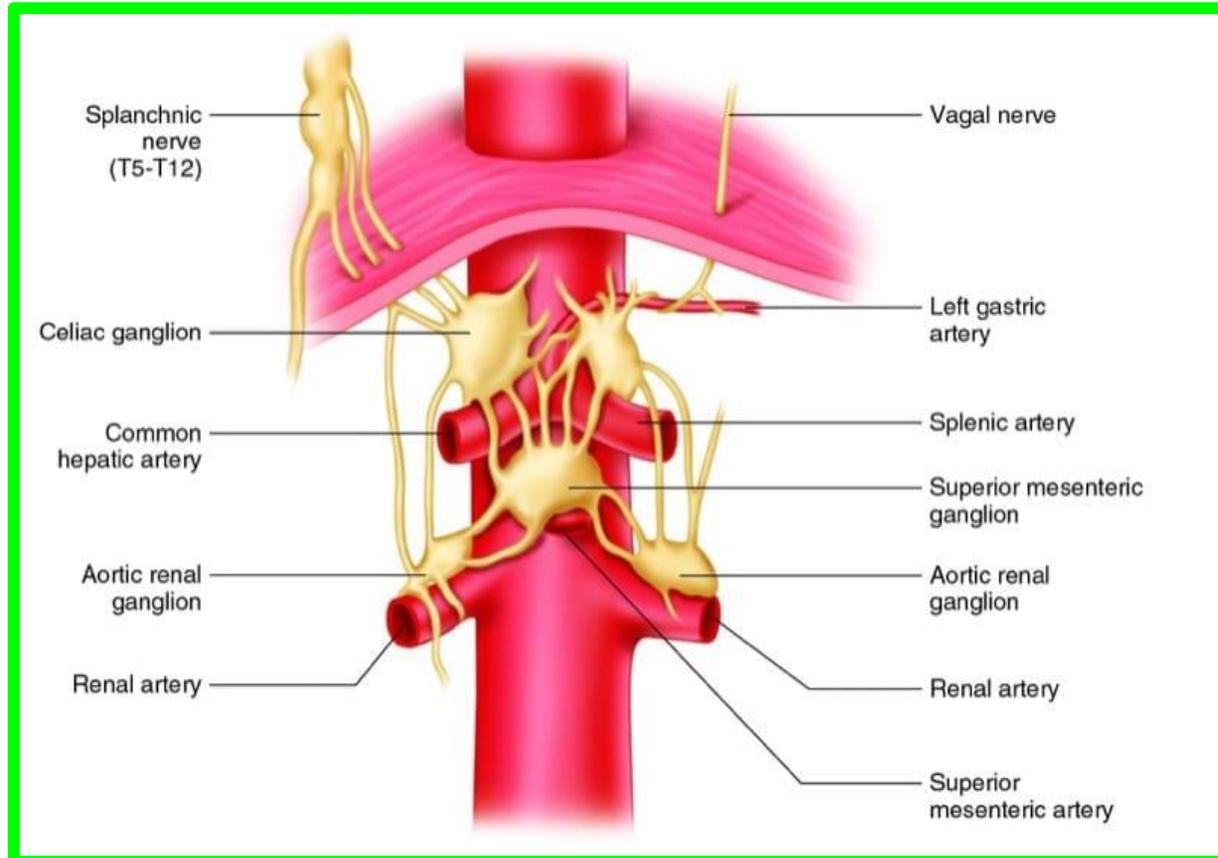
Coeliac Trunk

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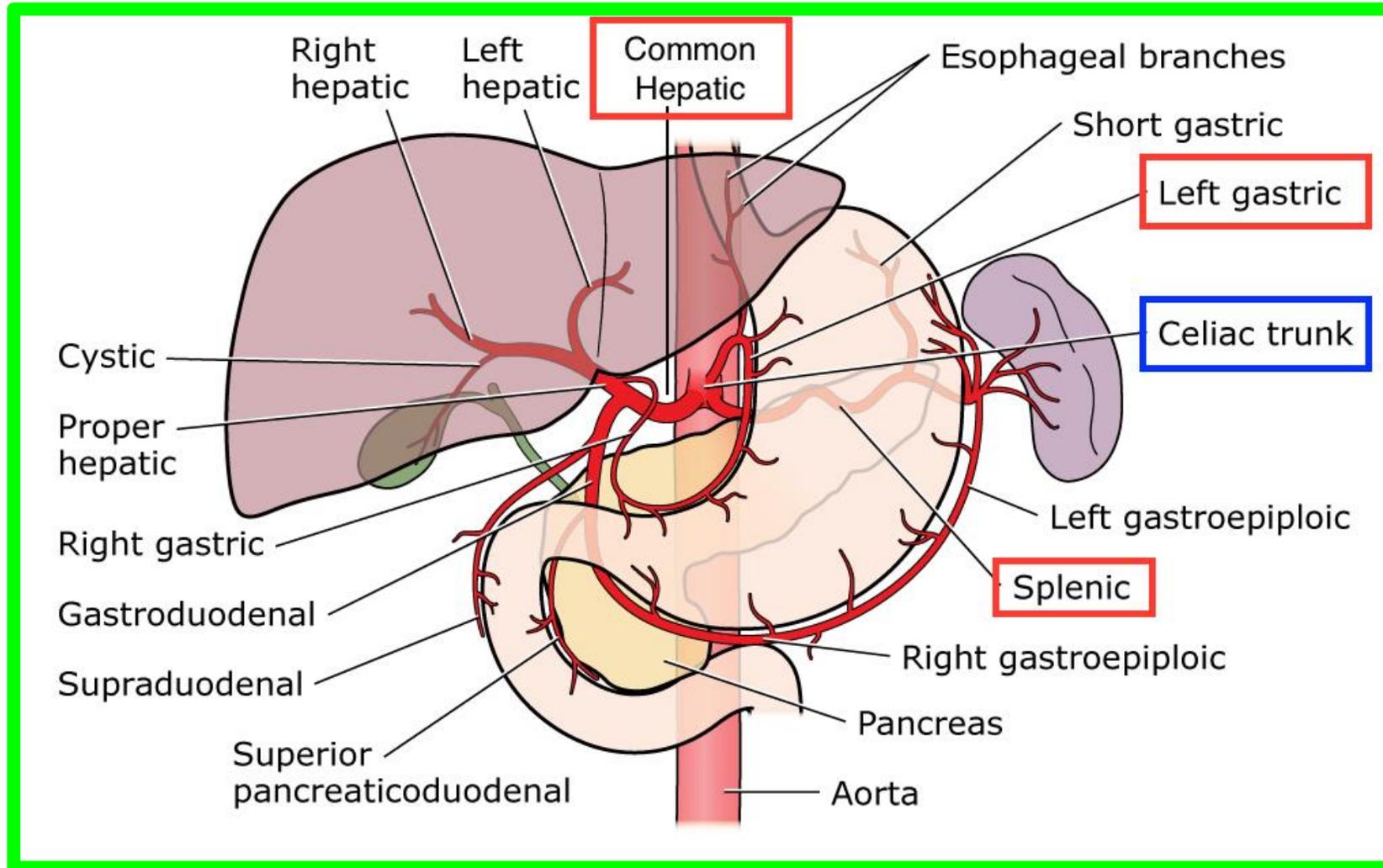
** Relations:

- ❖ On the right side: 1) Right crus of diaphragm 2) Right coeliac ganglion.
- ❖ On the left side: 1) Left crus of diaphragm. 2) Left coeliac ganglion.
- ❖ Anteriorly: lesser sac.



Coeliac Trunk

**** Branches:** 1. **Left gastric artery.** 2. **Common Hepatic artery.** 3. **Splenic artery.**



Coeliac Trunk

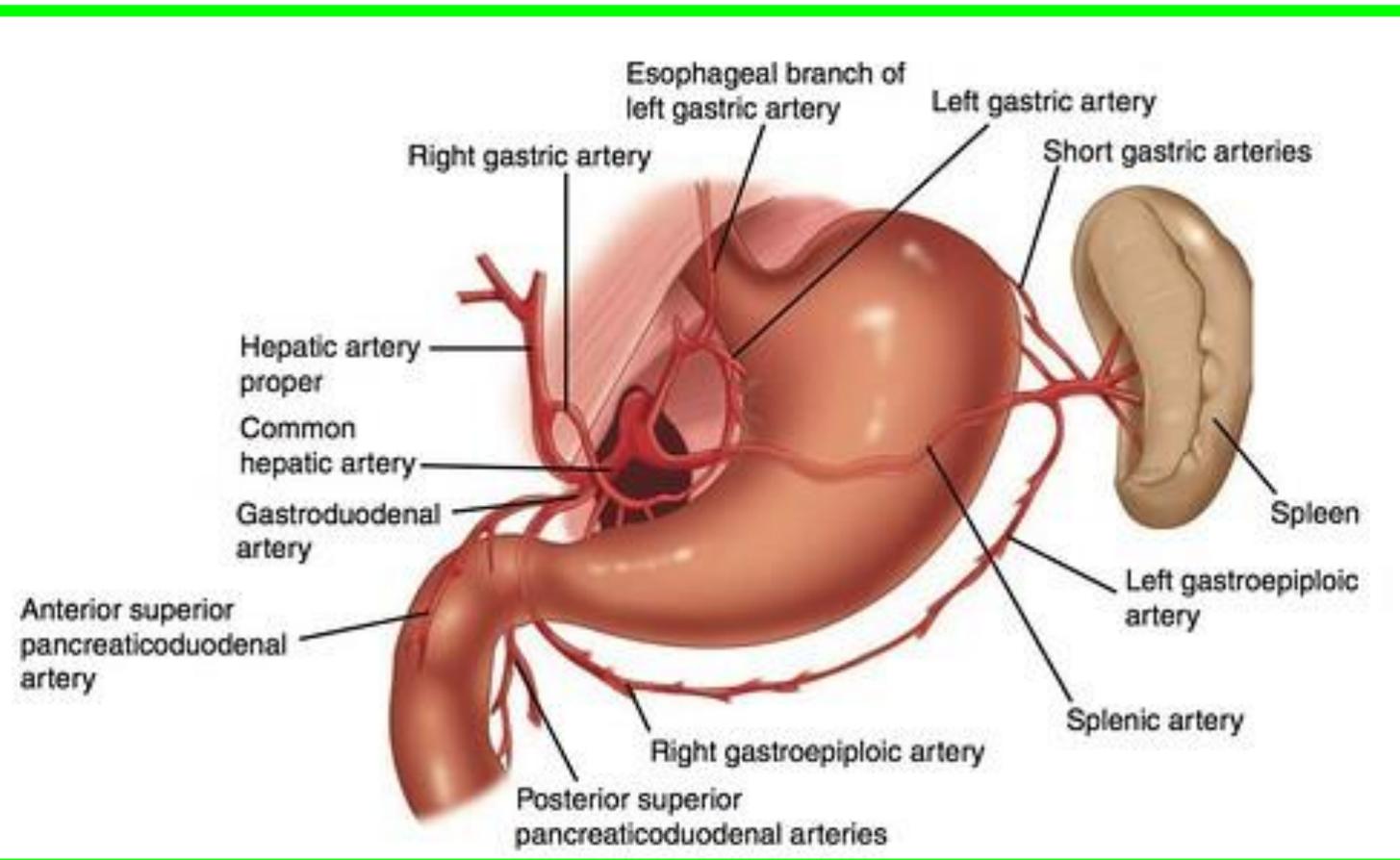
1. Left Gastric Artery

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**** Origin:** this is the smallest branch of the coeliac trunk.

**** Course:** it ascends upwards and to the left behind the lesser sac to reach the lower end of the esophagus.

✓ Then, it descends along the lesser curvature of the stomach between the two layers of the lesser omentum.



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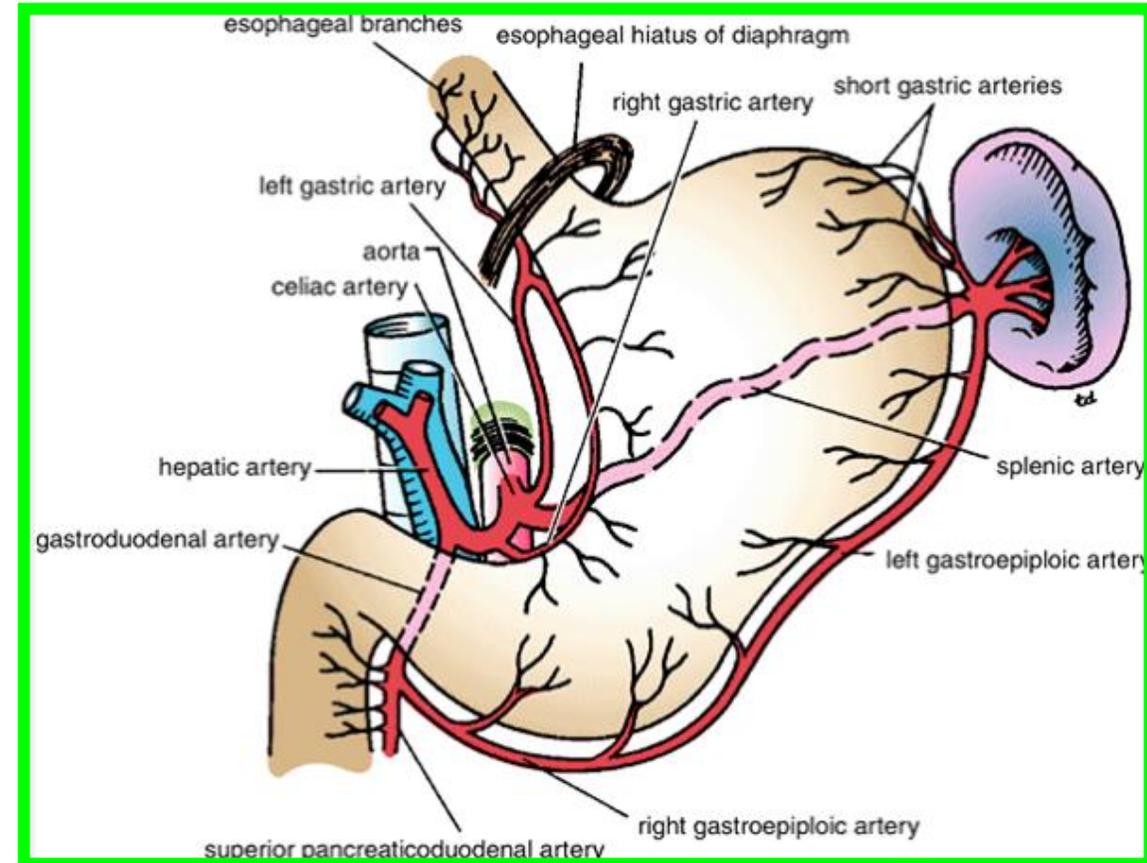
Coeliac Trunk

1. Left Gastric Artery

**** Ends:** by anastomosing with the right gastric artery.

**** Branches:**

1. **Esophageal branches** to the lower end of the esophagus.
2. **Gastric branches** to both surfaces of the stomach.



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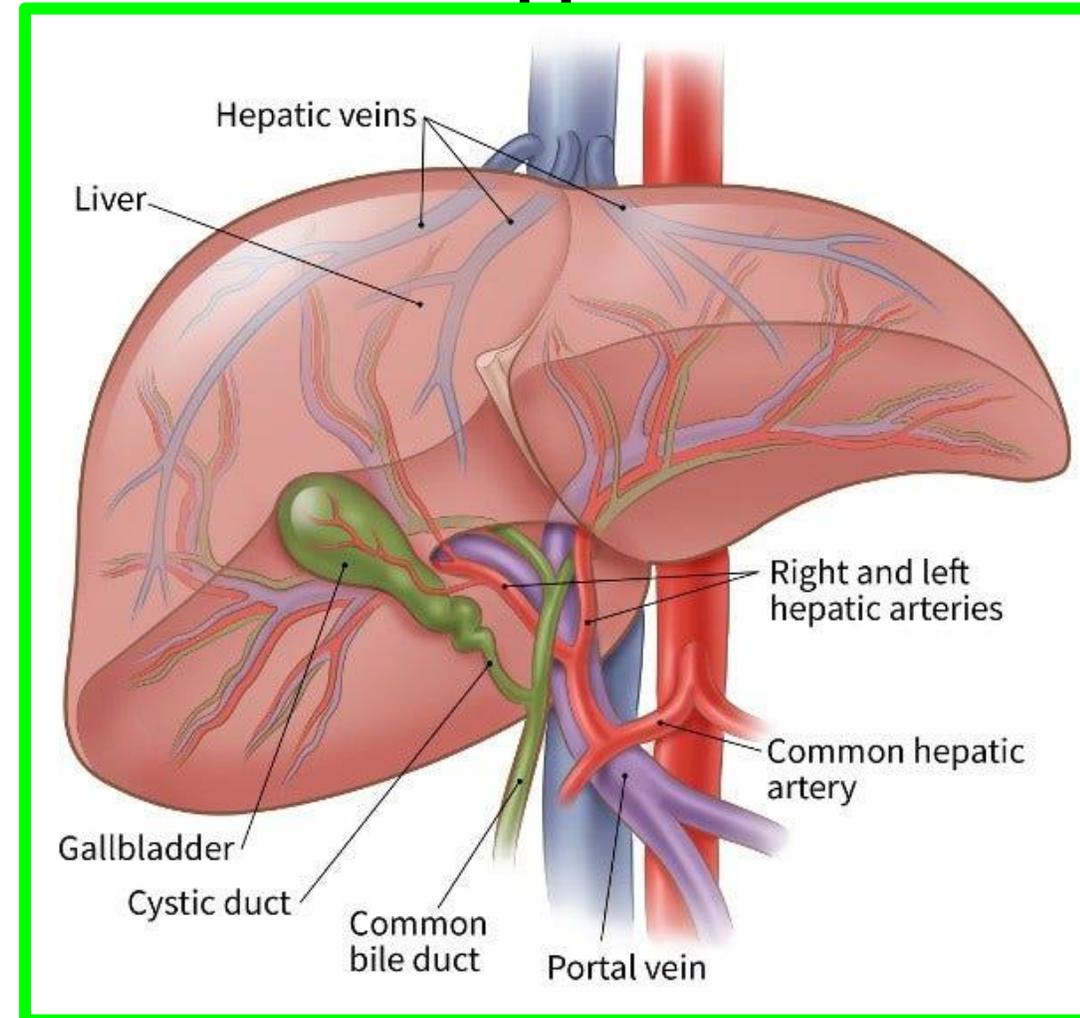
2. Common Hepatic Artery

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**** Origin:** this is the medium branch of the coeliac trunk.

**** Course:** it passes forwards and to the right to reach the upper surface of the first part of the duodenum.

✓ It ascends in the right free margin of the lesser omentum to **the porta hepatis** (**anterior** to **the portal vein** and **to the left** of **the common bile duct**).



Coeliac Trunk

2. Common Hepatic Artery

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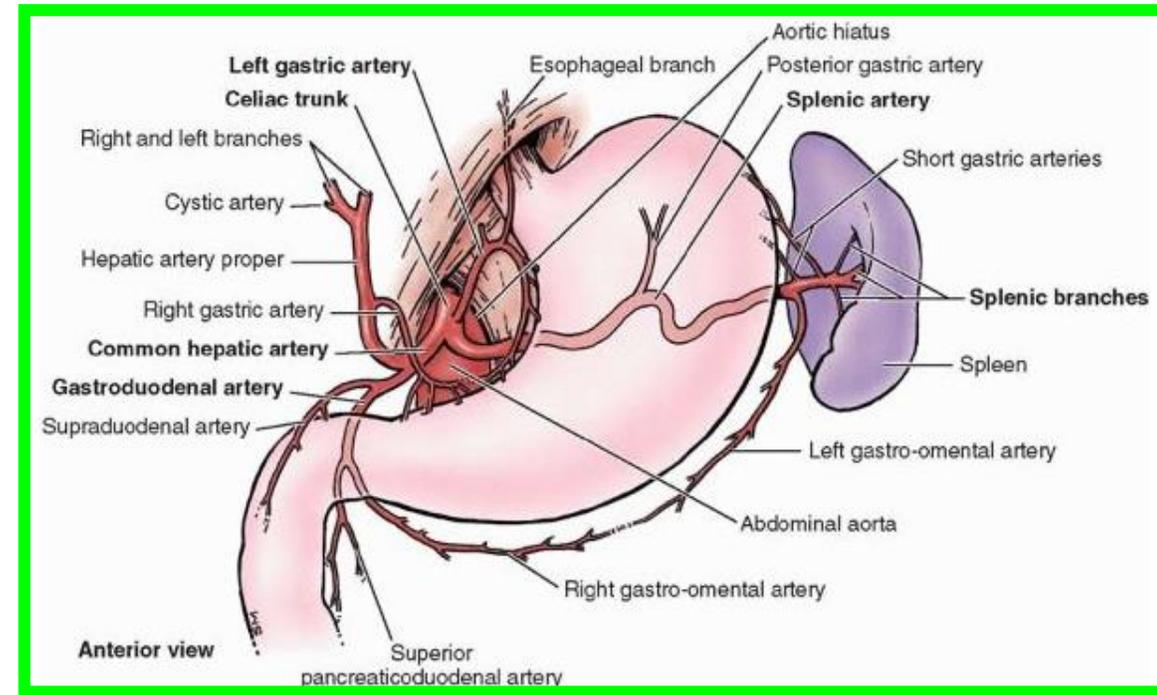
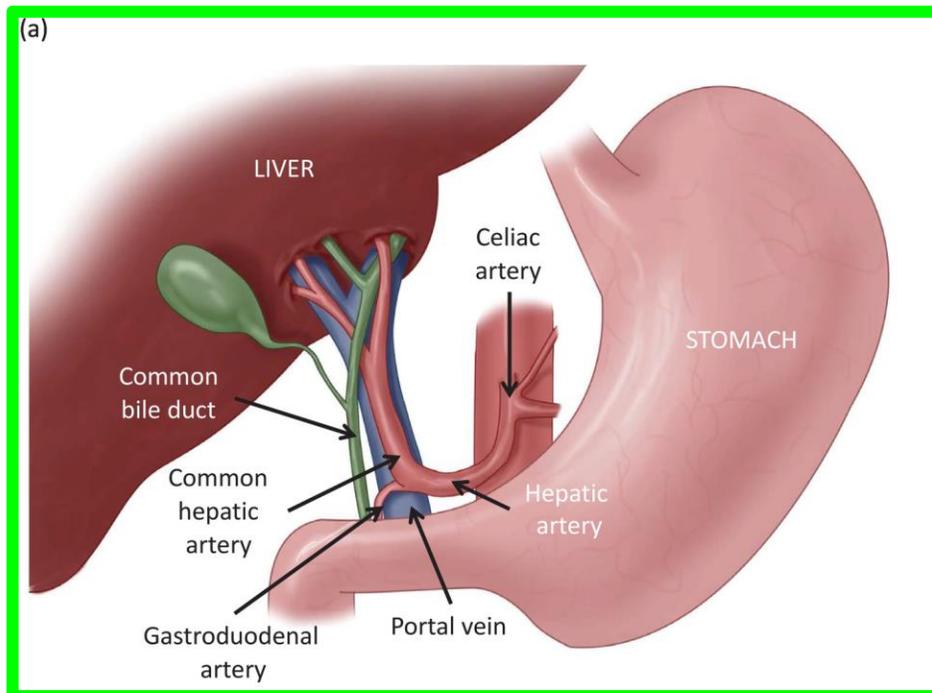
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**** Termination:** by dividing into **right** and **left hepatic branches**.

**** Branches:**

1- Right gastric artery:

- ✓ runs on the lesser curvature of the stomach.
- ✓ It supplies the duodenum and stomach.
- ✓ It ends by anastomosing with left gastric artery.

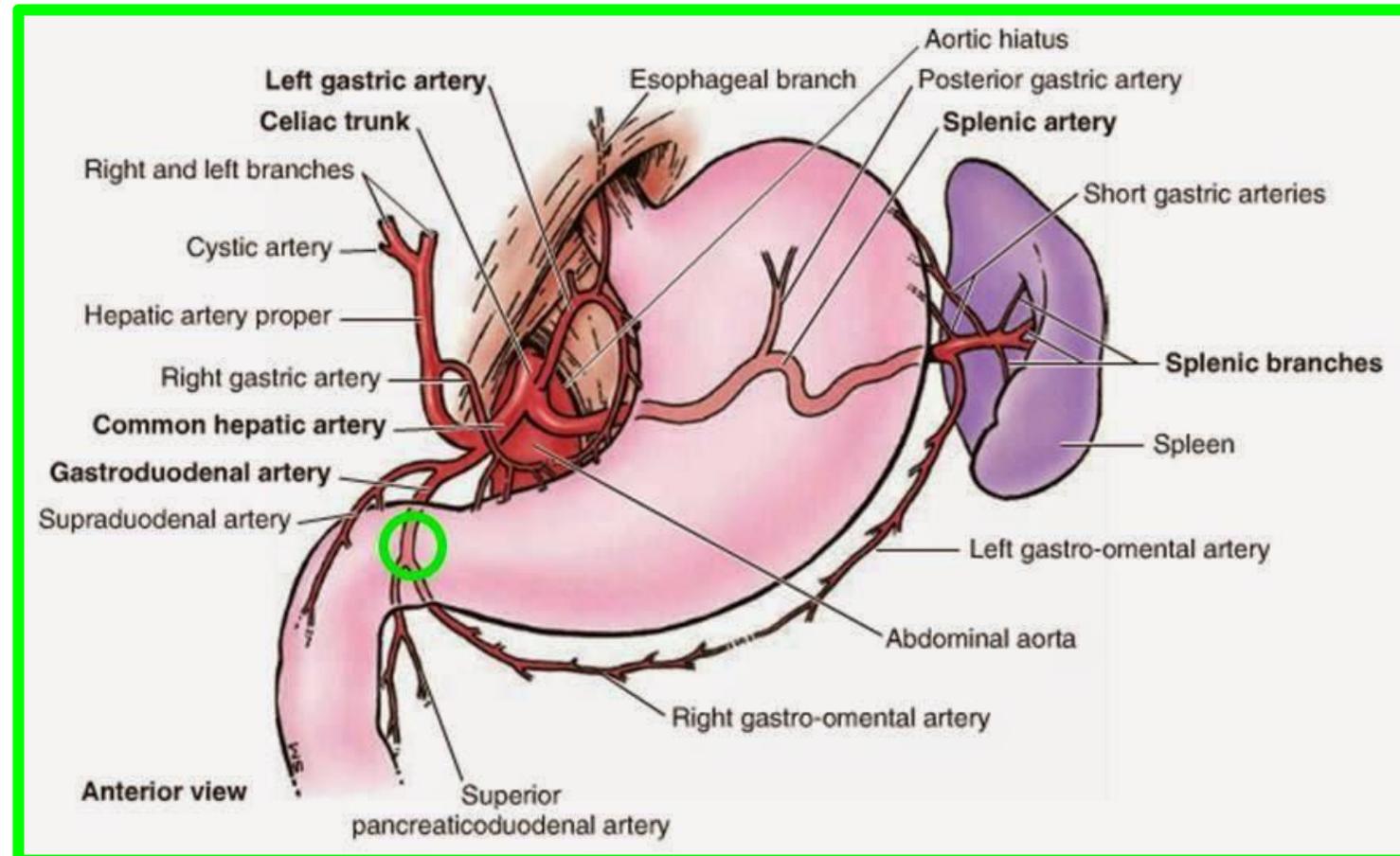


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2. Common Hepatic Artery

2- Gastroduodenal artery: descends behind the first part of the duodenum (on the left side of **the common bile duct** and in front of **portal vein**).

✓ It divides into two terminal branches



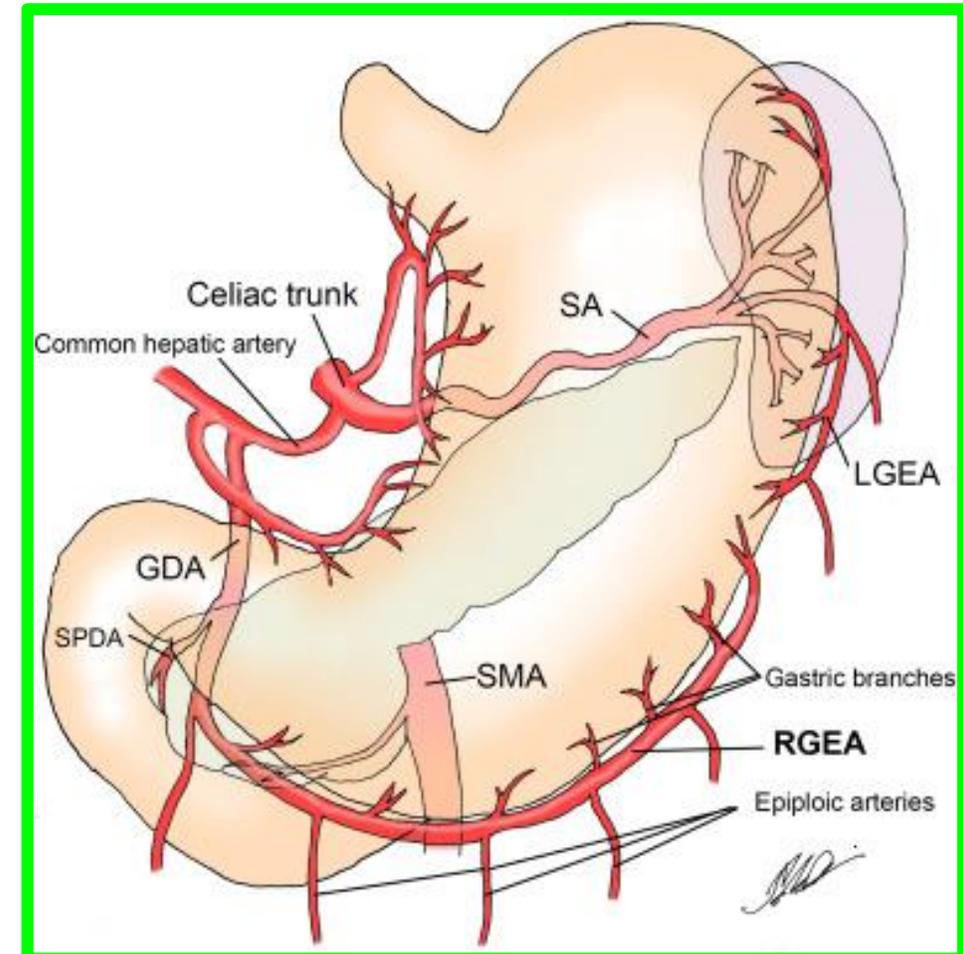
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2. Common Hepatic Artery

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2- Gastroduodenal artery:

A. **Right gastroepiploic artery** runs along the greater curvature of the stomach. It ends by anastomosing with the left gastro-epiploic artery.



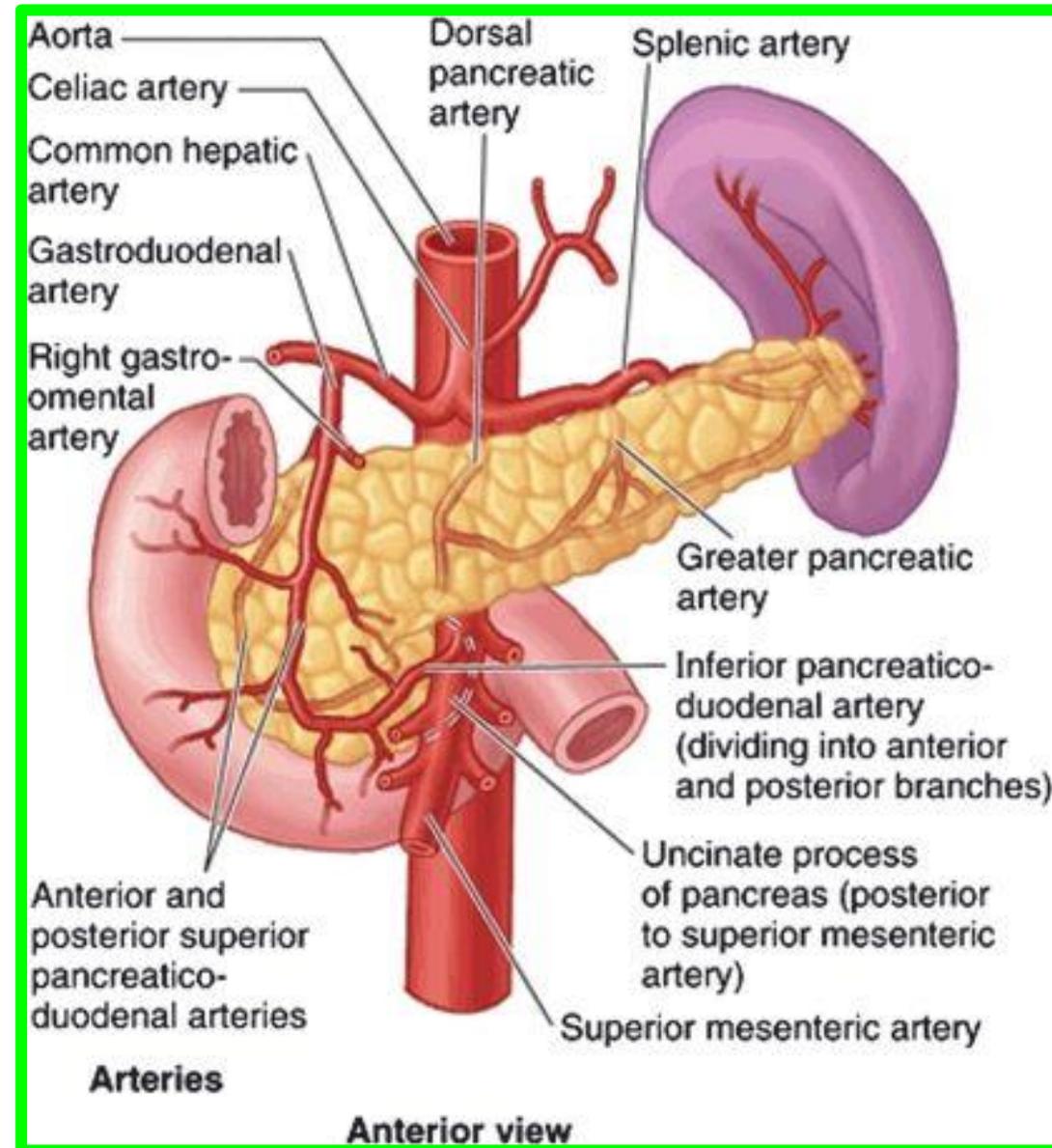
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2. Hepatic Artery

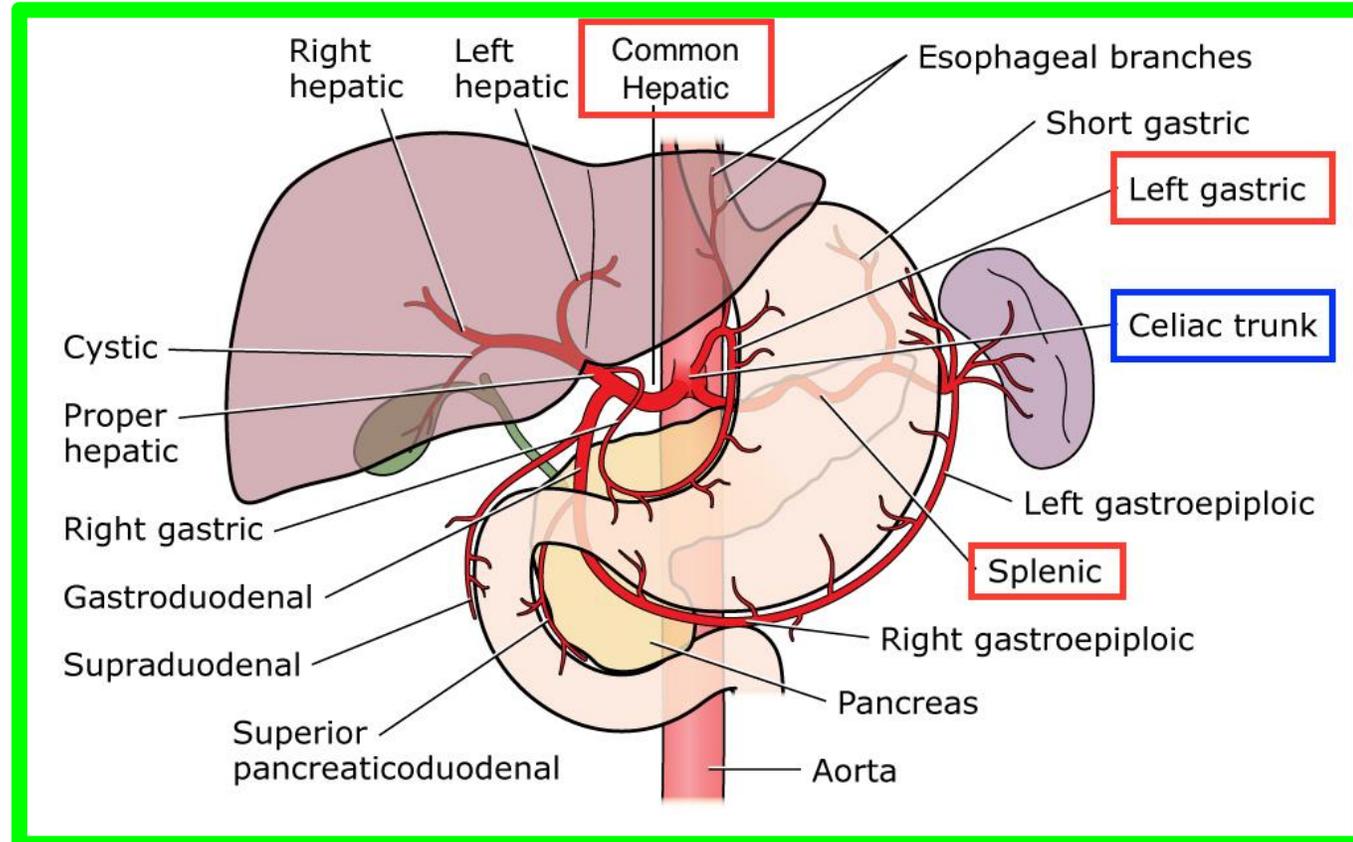
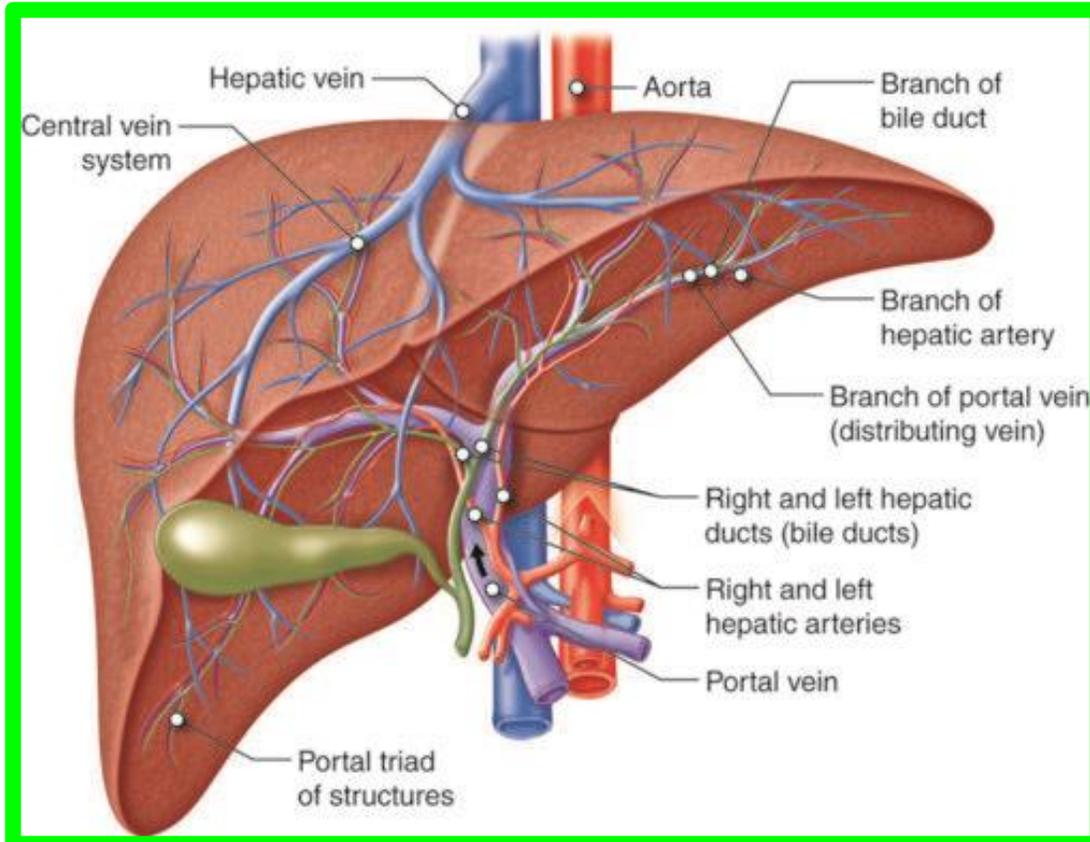
2- Gastroduodenal artery:

B. Superior pancreaticoduodenal artery:

- ✓ runs between the duodenum and head of pancreas.
- ✓ It supplies the duodenum and head of pancreas.
- ✓ It ends by anastomosing with **the inferior pancreaticoduodenal artery**



3. **Supraduodenal artery** to the first part of the duodenum.
4. **Left terminal hepatic branch** to the left lobe of the liver,
5. **Right terminal hepatic branch** to the right lobe of the liver.
6. **Cystic artery** to the gall bladder from the right hepatic branch

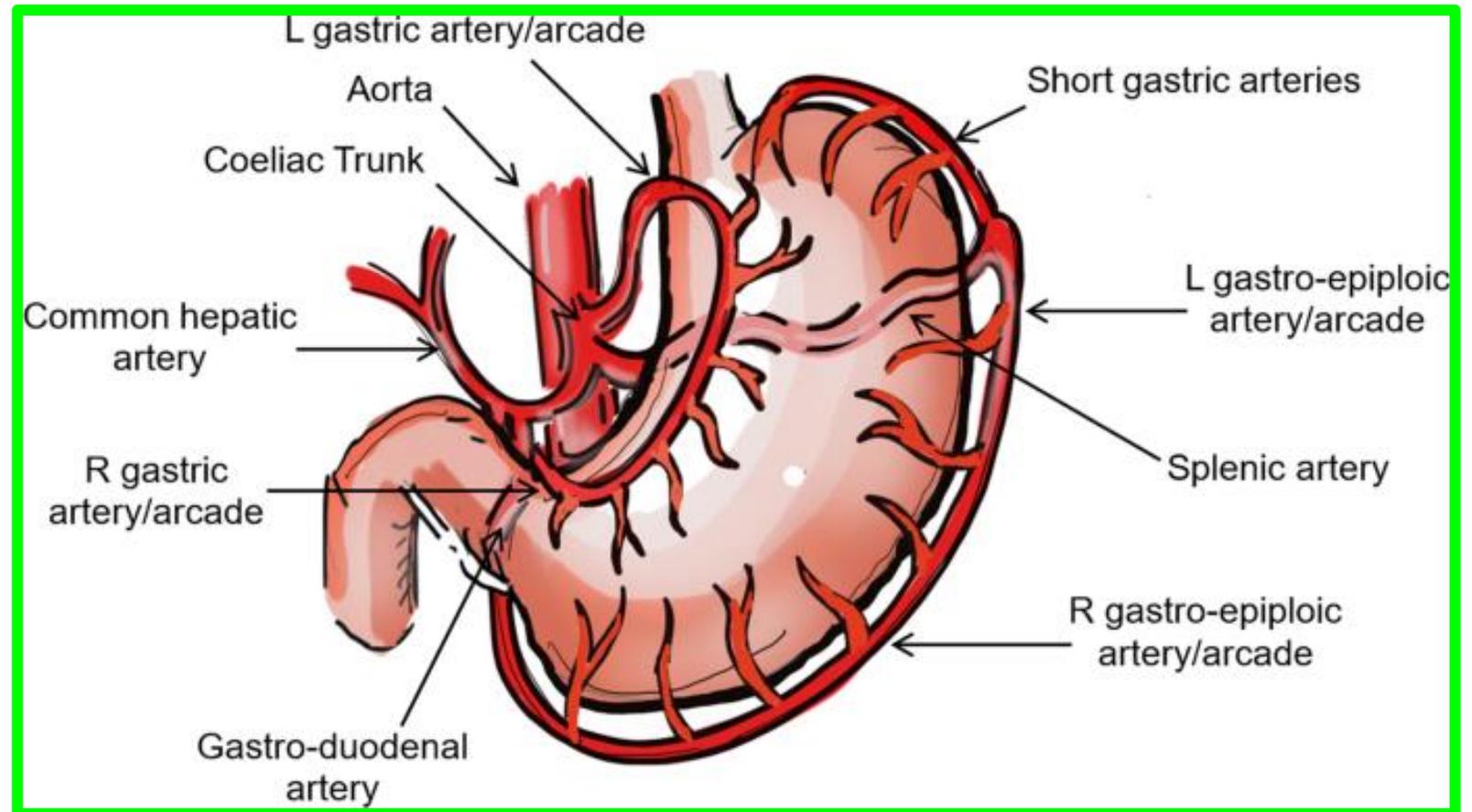


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2. Common Hepatic Artery

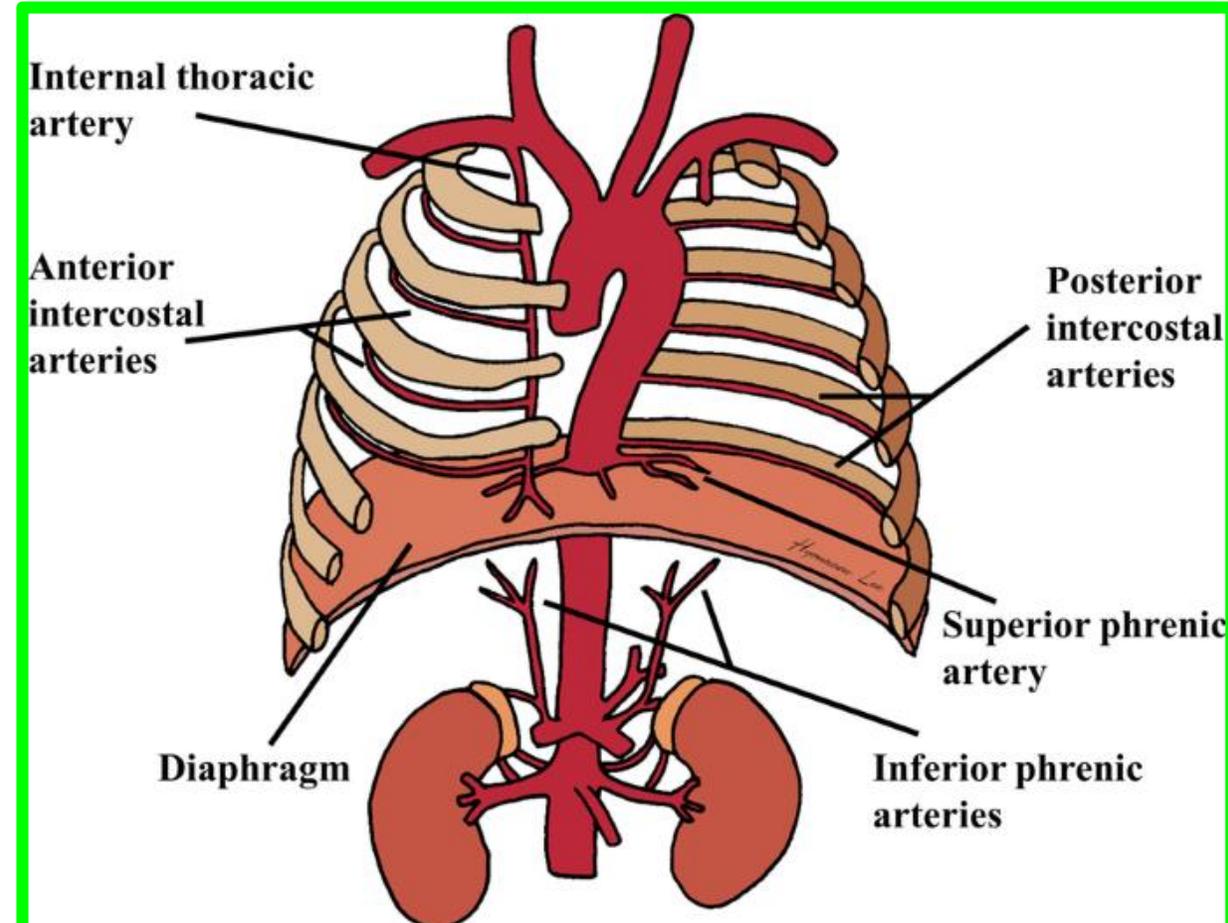
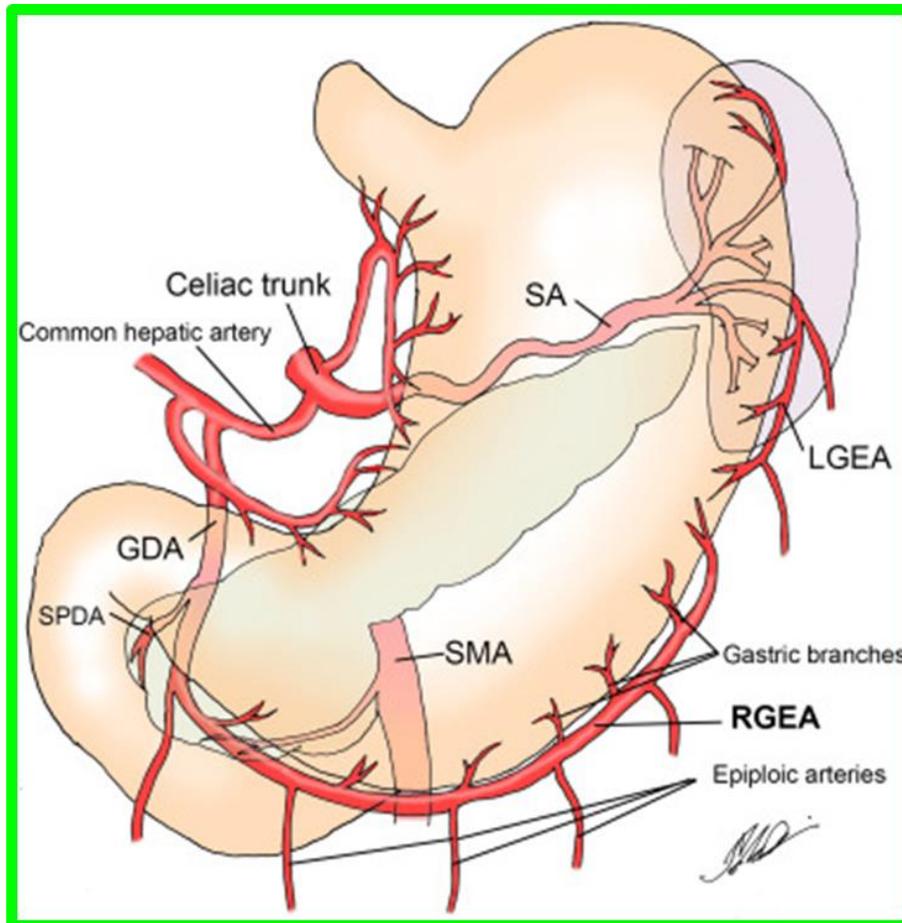
**** Applied anatomy;**

1. If the hepatic artery is ligated proximal to the origin of its right gastric branch - A collateral circulation to the liver through **Left gastric, splenic and superior mesenteric arteries.**



2. If the hepatic artery is **ligated distal to the origin of gastroduodenal branch**, **hepatic necrosis commonly occurs**.

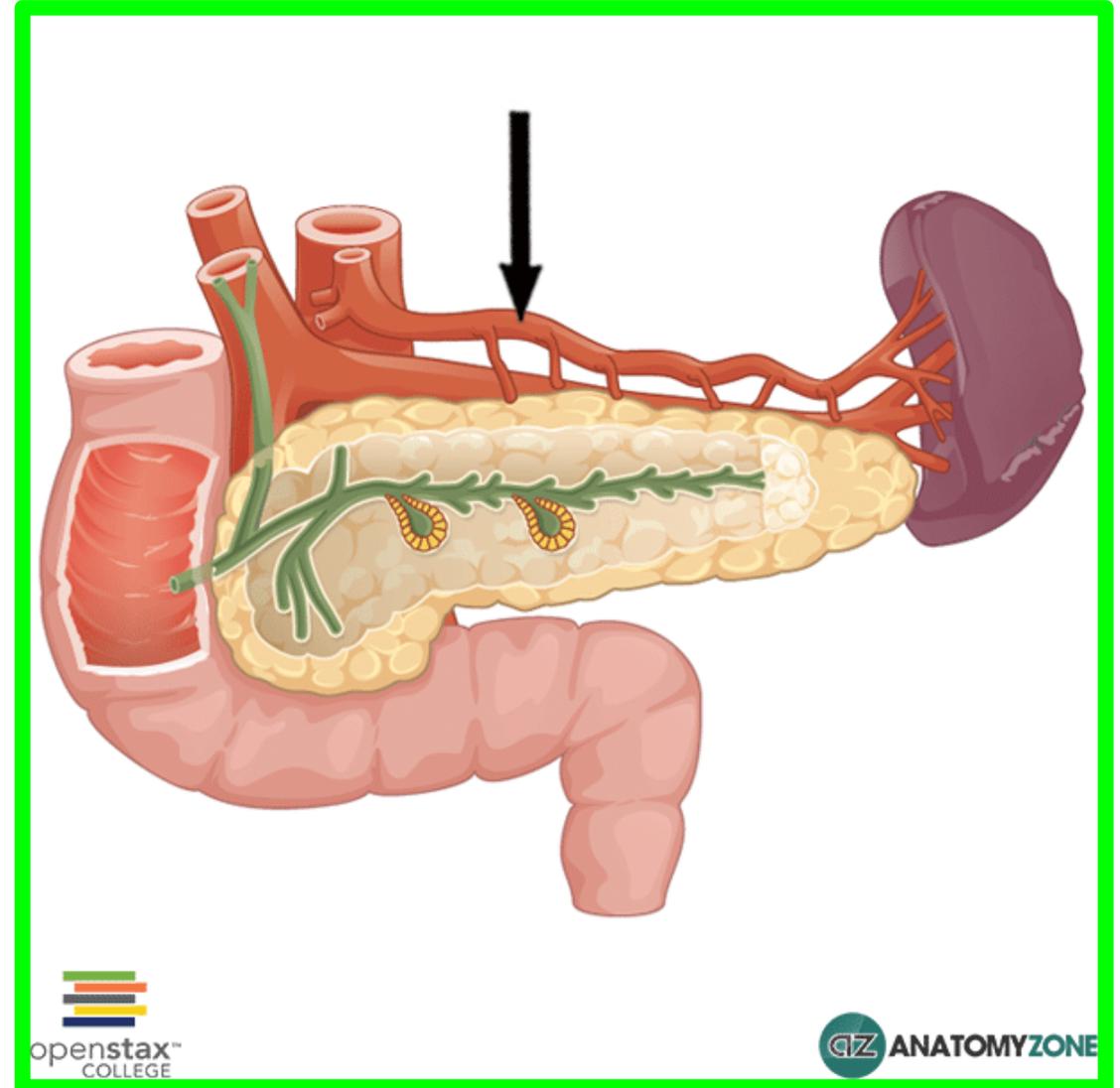
- A collateral circulation to the liver is only carried by **the inferior phrenic arteries**.



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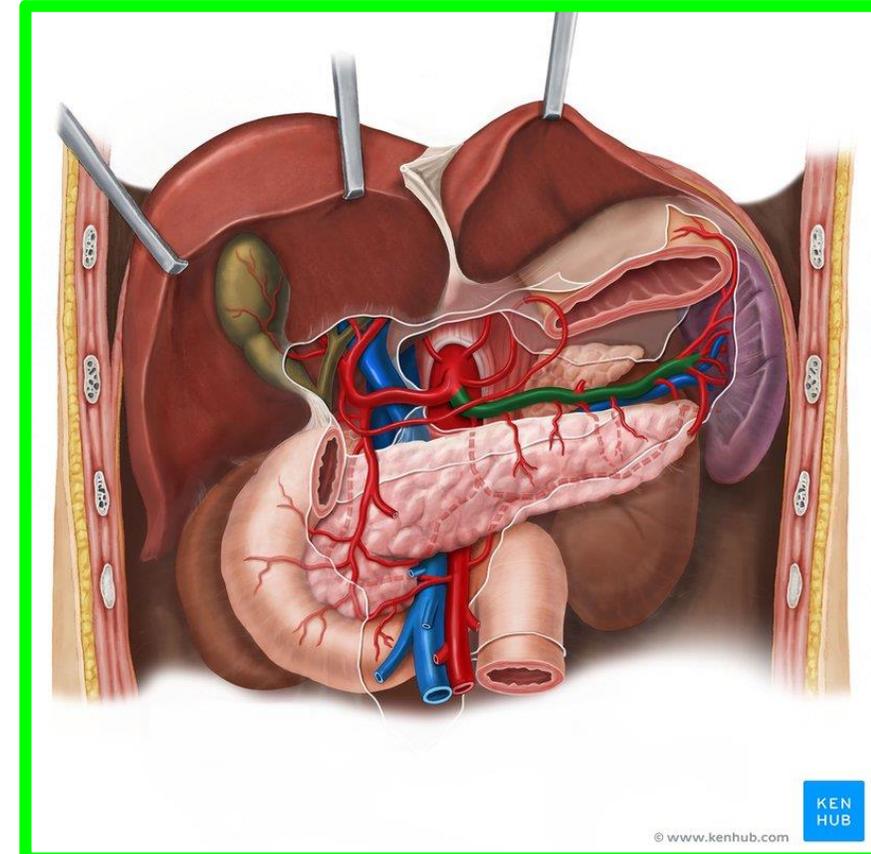
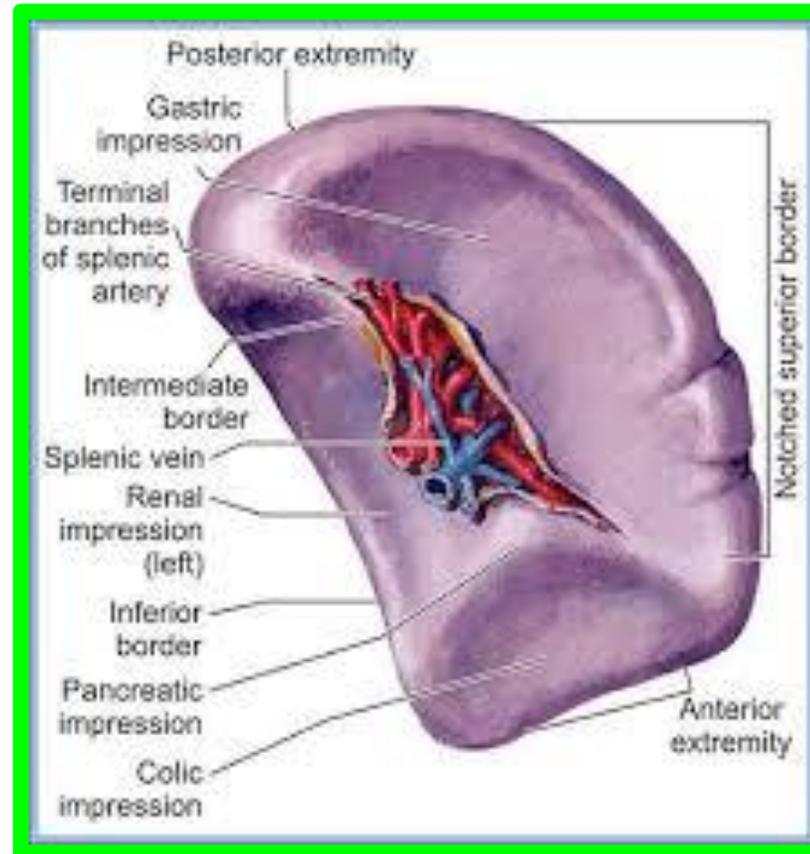
3. Splenic Artery

**** Origin:** it is the largest branch of the coeliac trunk because of the functions of the spleen.



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- ** Course:** It runs a tortuous horizontal course to the left along the upper border of the pancreas behind **the lesser sac**.
- ✓ It passes in front of the left kidney to enter into **the lienorenal ligament**.
- ✓ It ends in **the hilum of the spleen** by dividing into terminal **(5-6) splenic branches**.

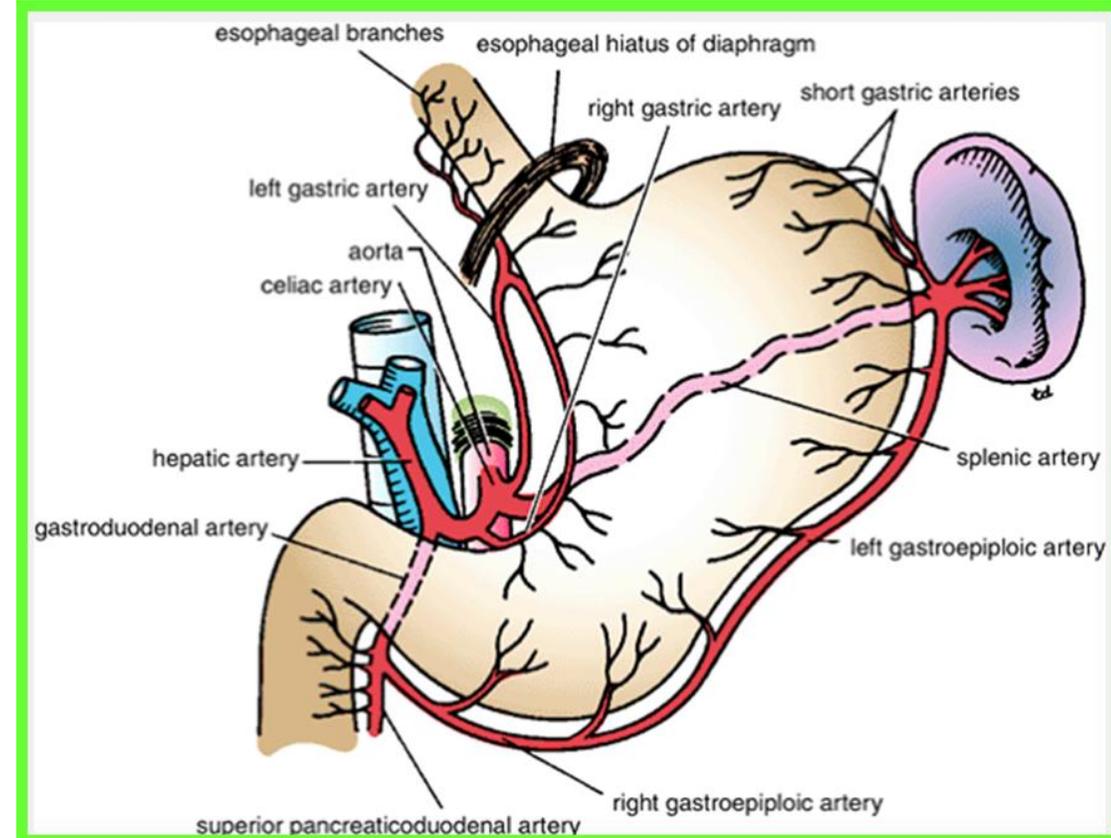
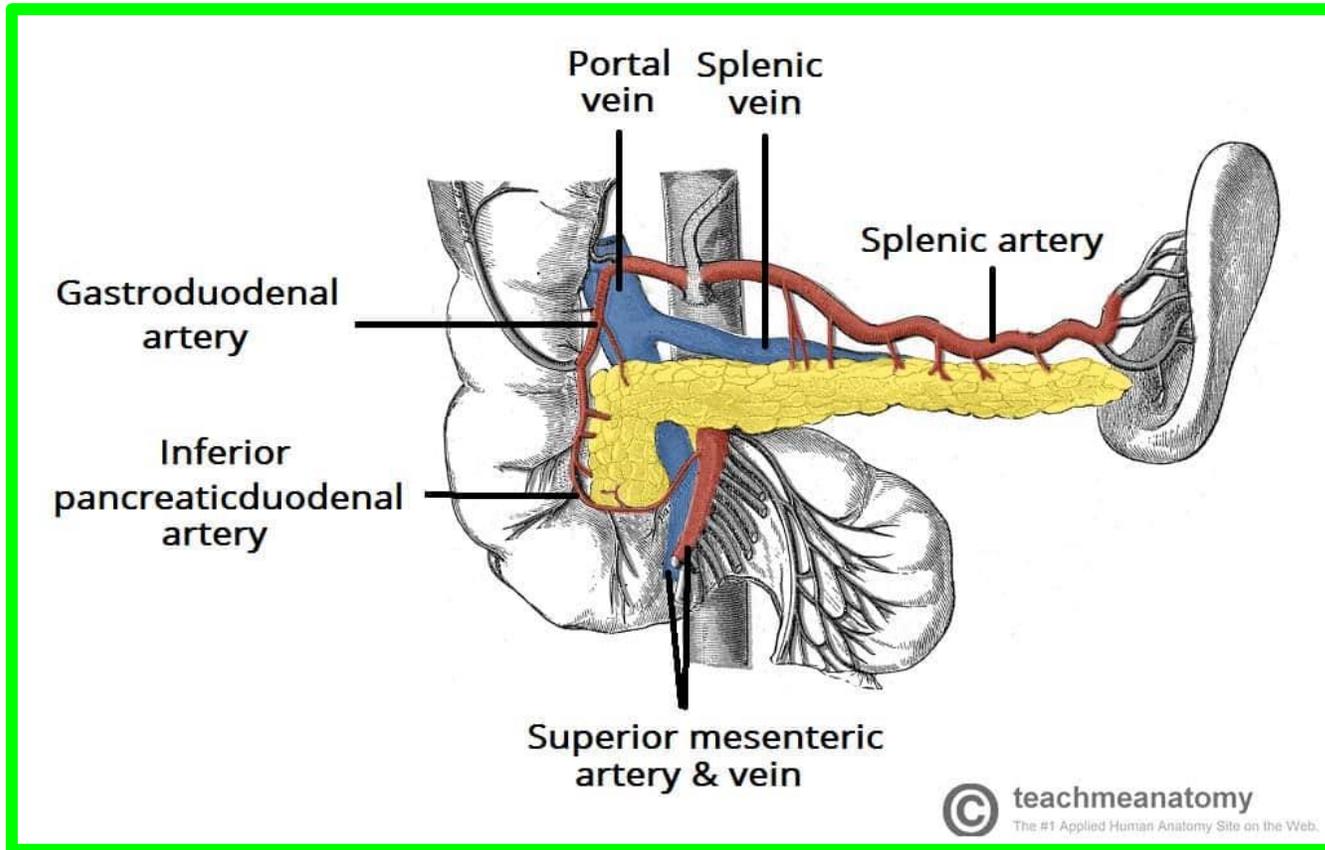


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3. Splenic Artery

** Branches

1. **Pancreatic branches:** small branches to the pancreas.
2. **Short gastric arteries** to the fundus of the stomach.

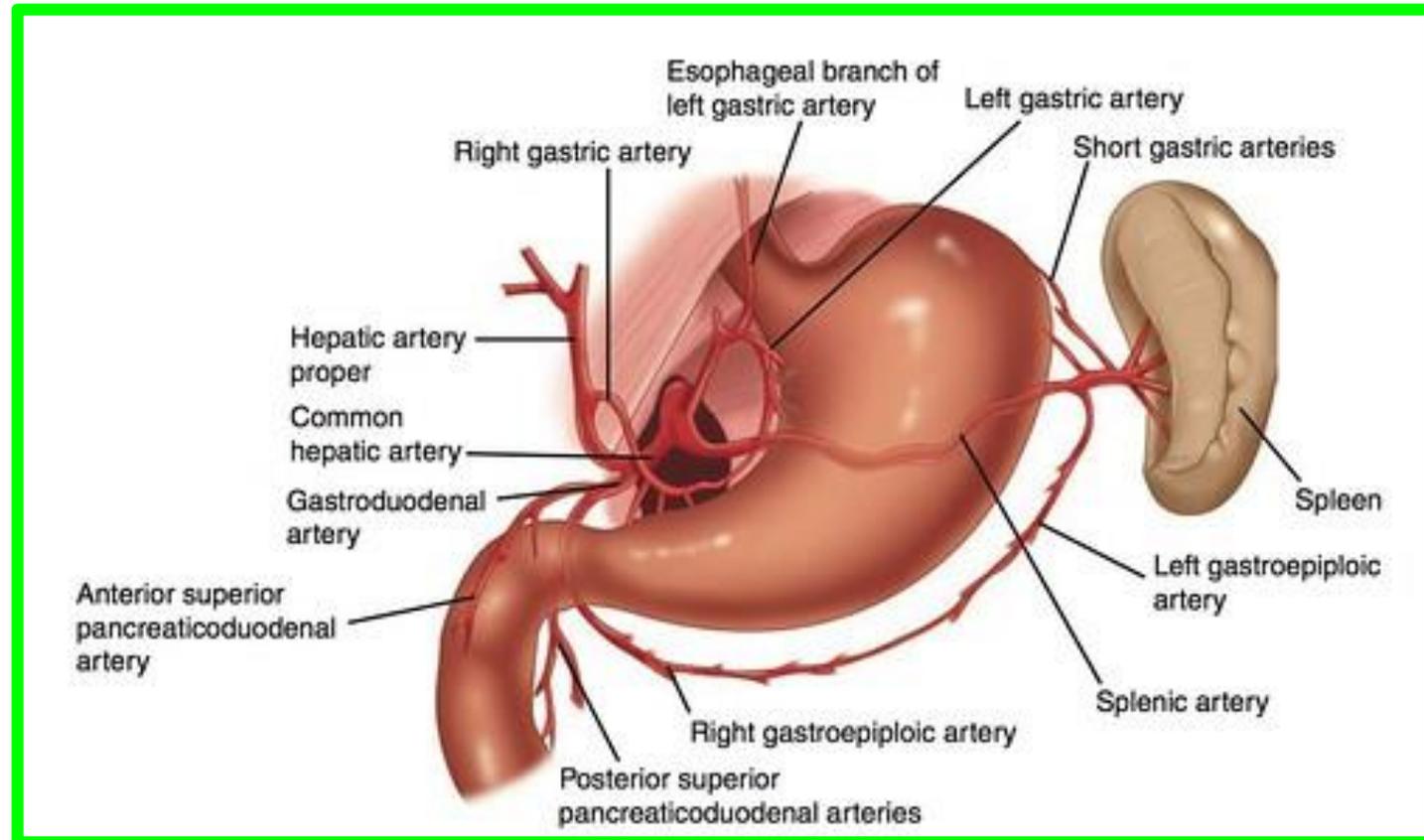


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3. Splenic Artery

** Branches

3. **Left gastroepiploic artery:** runs along the greater curvature of the stomach. It ends by anastomosing with the right gastro-epiploic artery.
4. **Terminal splenic branches (5 to 6 branches)** which pass into the hilum of the spleen.

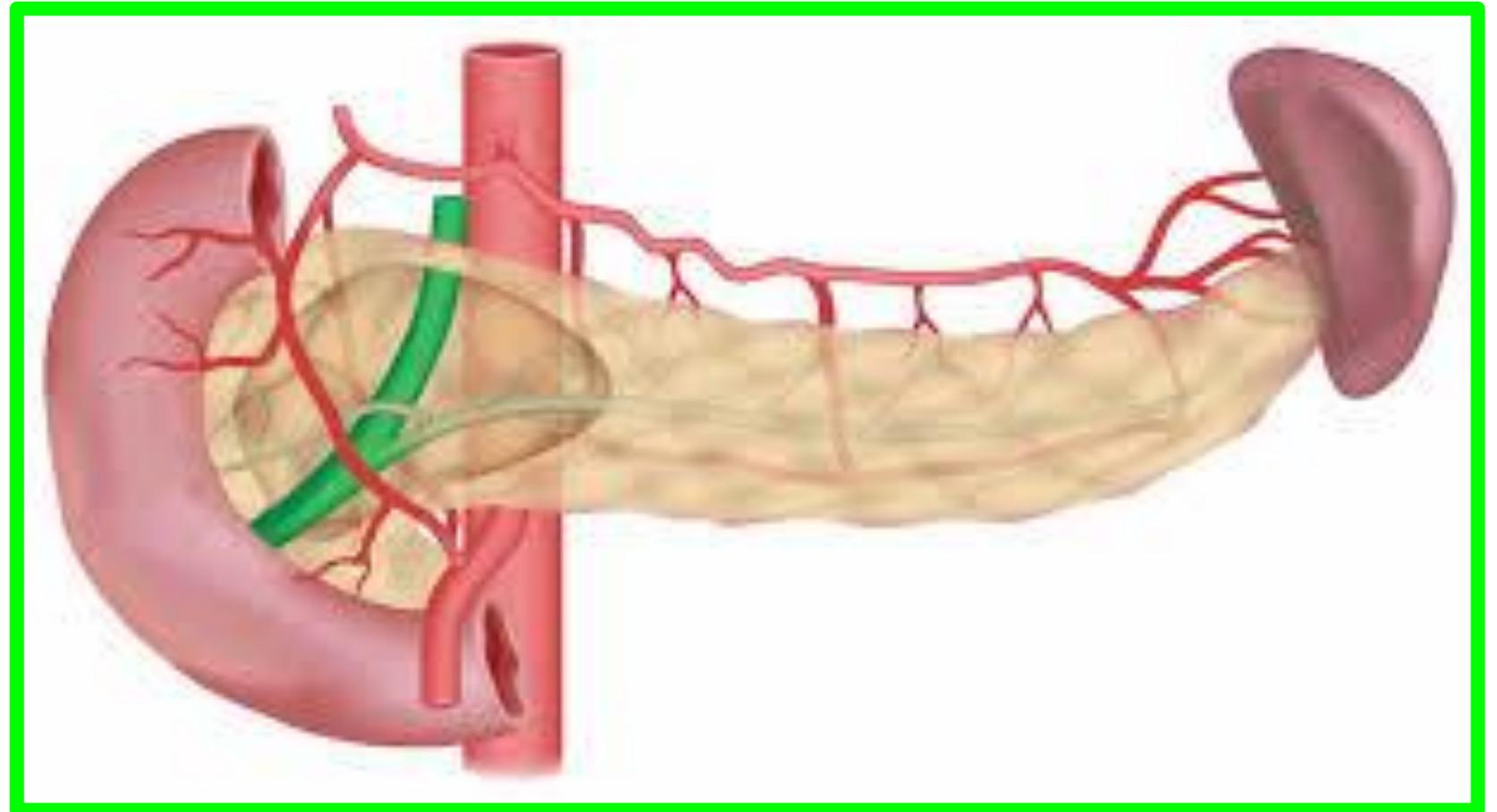


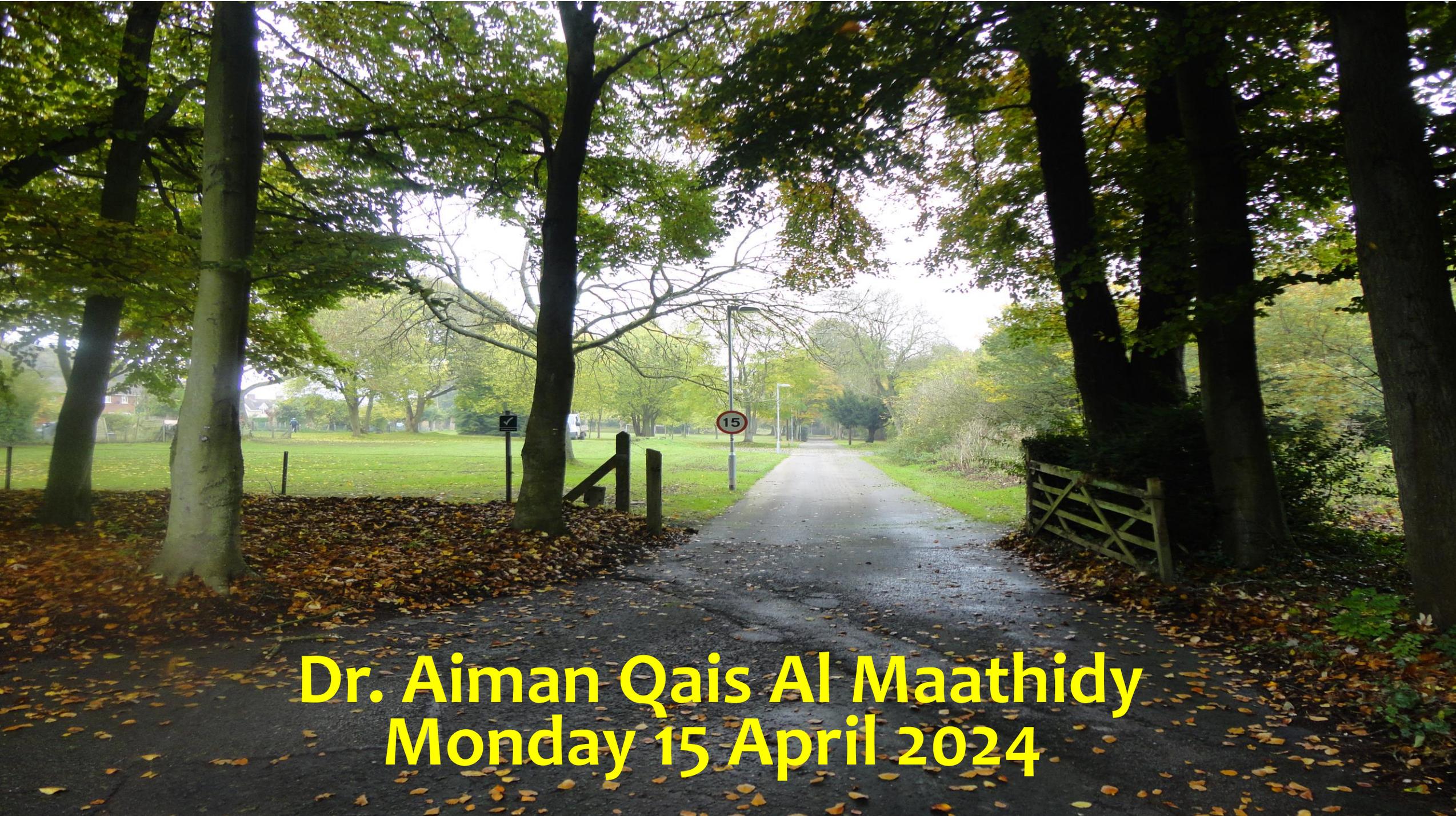
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3. Splenic Artery

Why the splenic artery is tortuous in its course?

1. Protects the artery during gastric distention and splenic enlargement.
2. Slows the rate of blood flow to the spleen.





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