

Liver, Spleen, and Pancreas

Anatomy Practical

By Dr. Shima

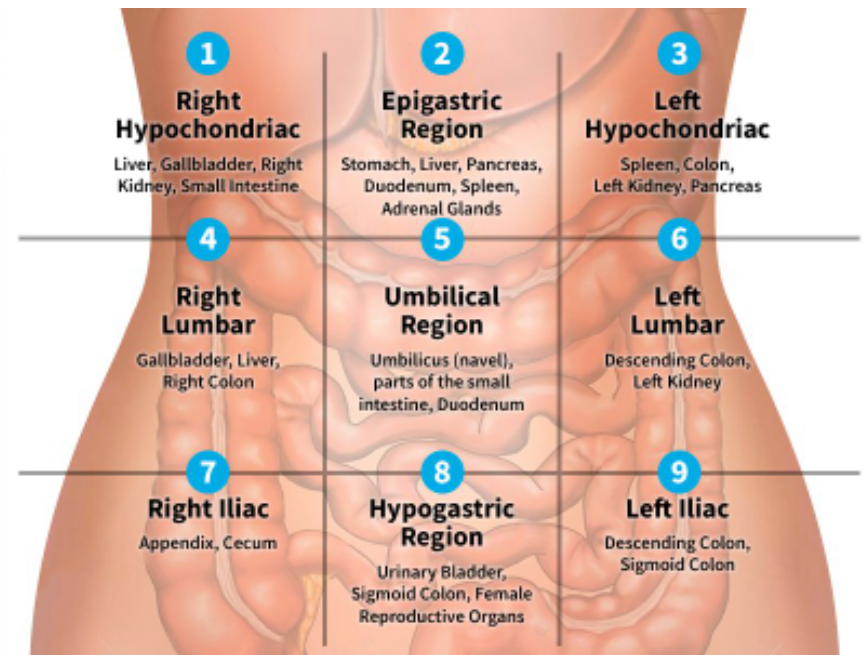
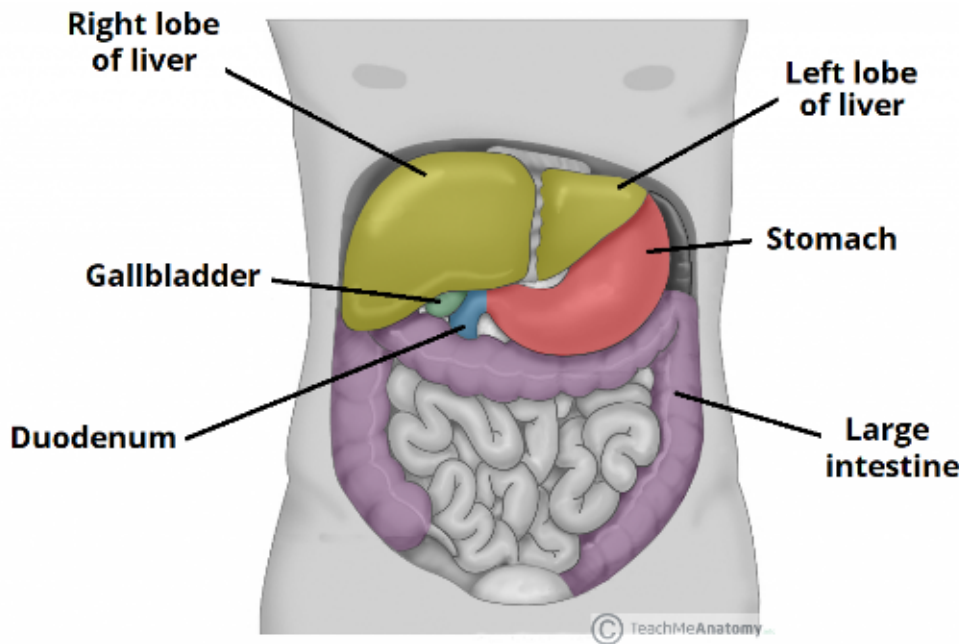
Anatomy Department

College of Medicine

King Saud University

ANATOMY OF THE LIVER

Anatomical Position: right hypochondrium, epigastrium, and the left hypochondrium



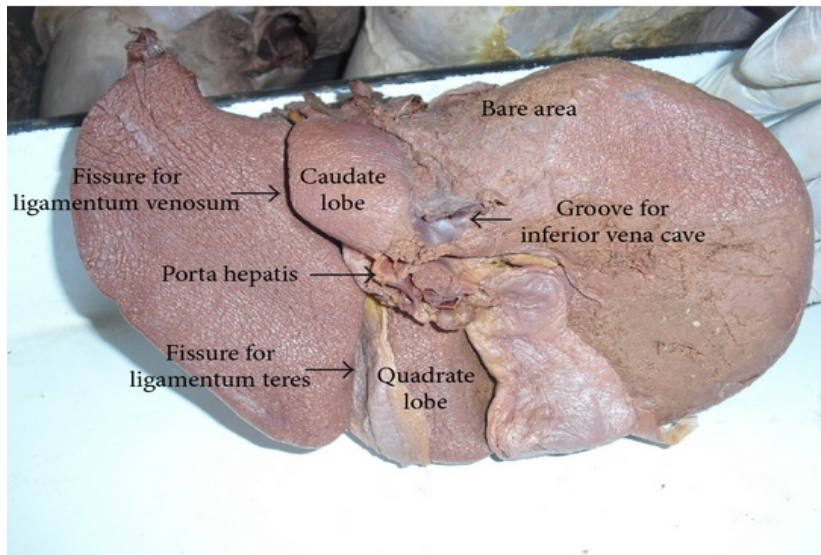
Shape of the Liver

It is wedge- shaped, has three surfaces:

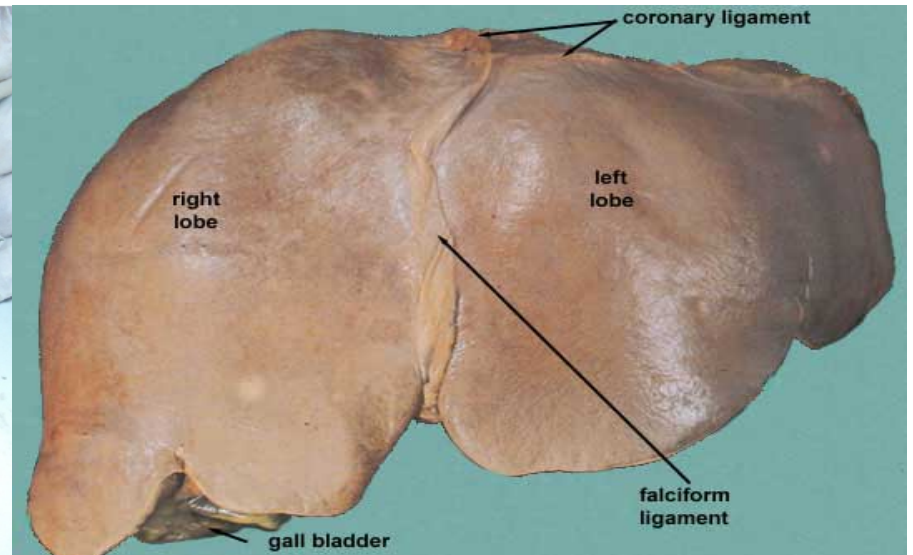
1. Diaphragmatic surface (antero-superior).
2. Visceral surface (postero-inferior).
3. Lateral right surface.

Liver is formed of two lobes, right and left.

The right lobe is further divided into a quadrate lobe and a caudate lobe.



Visceral Surface

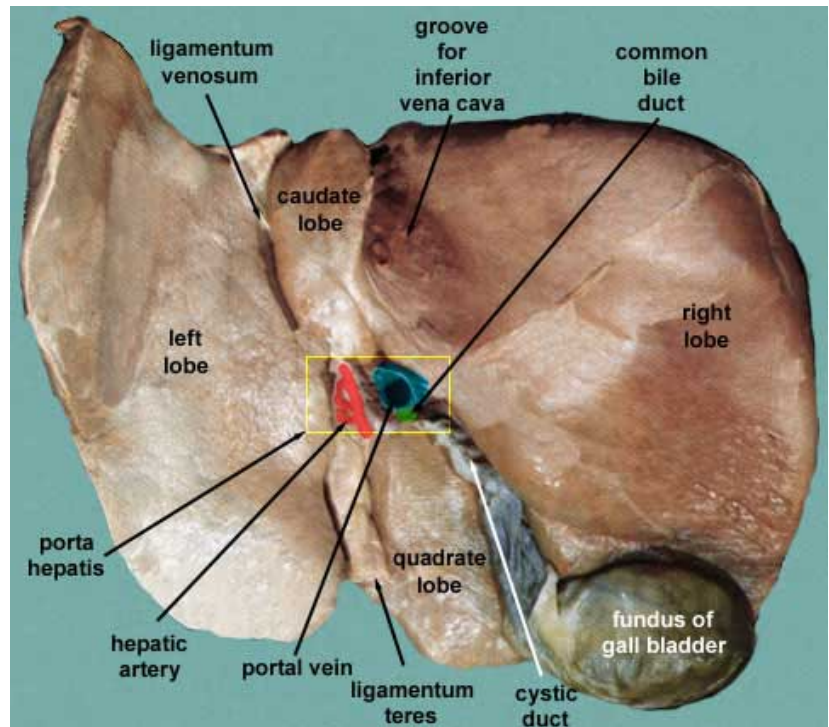


Diaphragmatic Surface

Porta Hepatis (Hilum of the Liver)

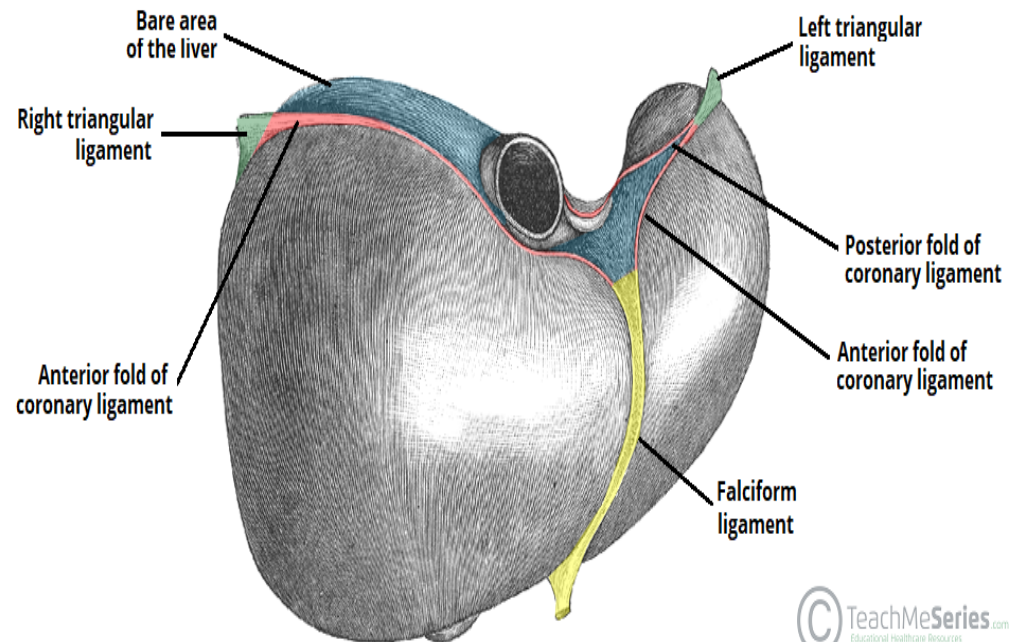
Structures passing through the porta hepatis include:

- Right and left hepatic ducts
- Right and left branches of the hepatic artery
- Right and left branches of the portal vein
- Sympathetic and parasympathetic nerve fibers
- Lymphatics



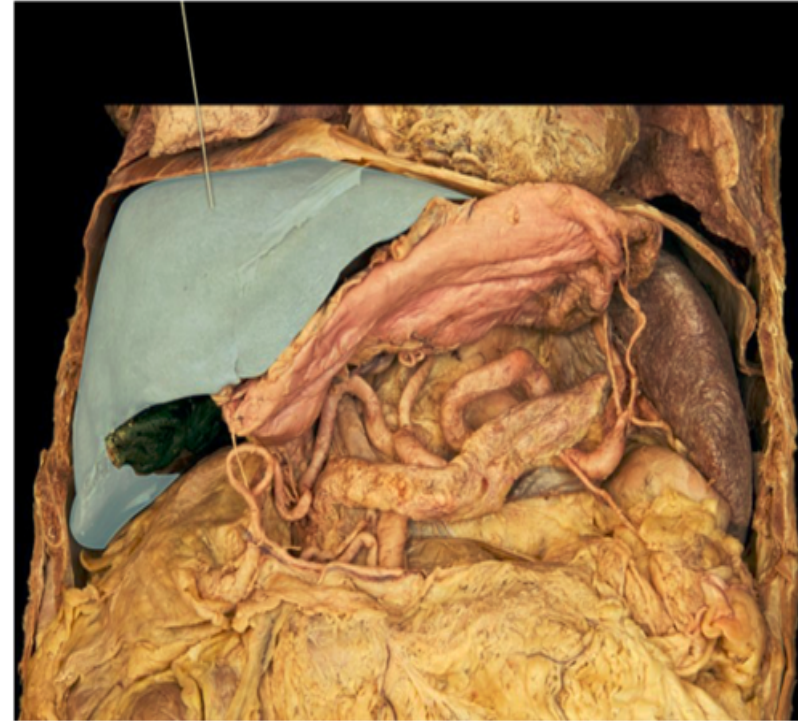
Ligaments of the liver

- 1) Falciform ligament.
- 2) Coronary ligament.
- 3) Right triangular ligament.
- 4) Left triangular ligament.

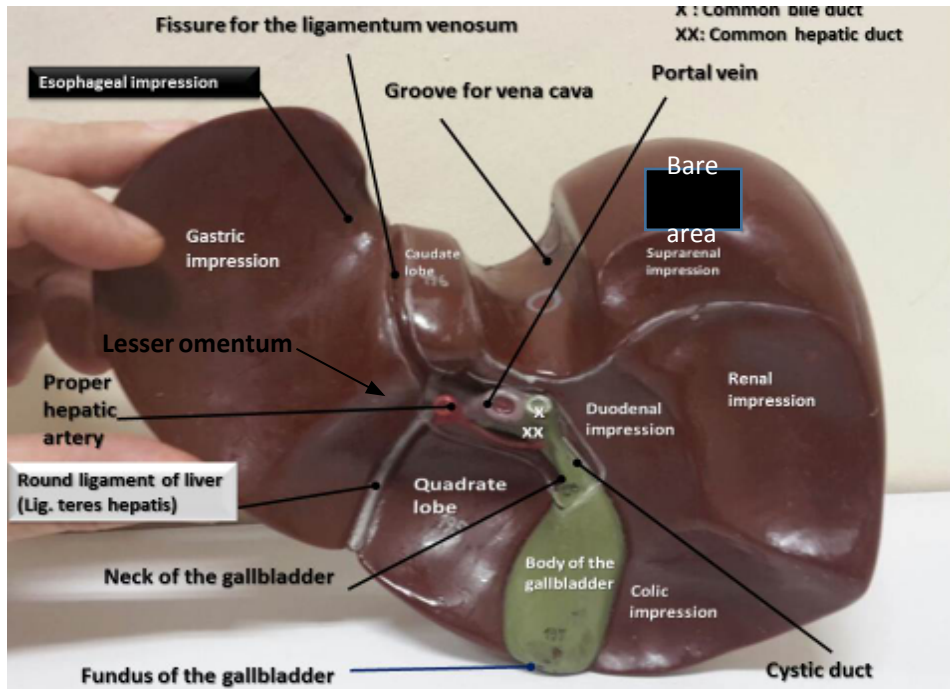


Relations of the Liver

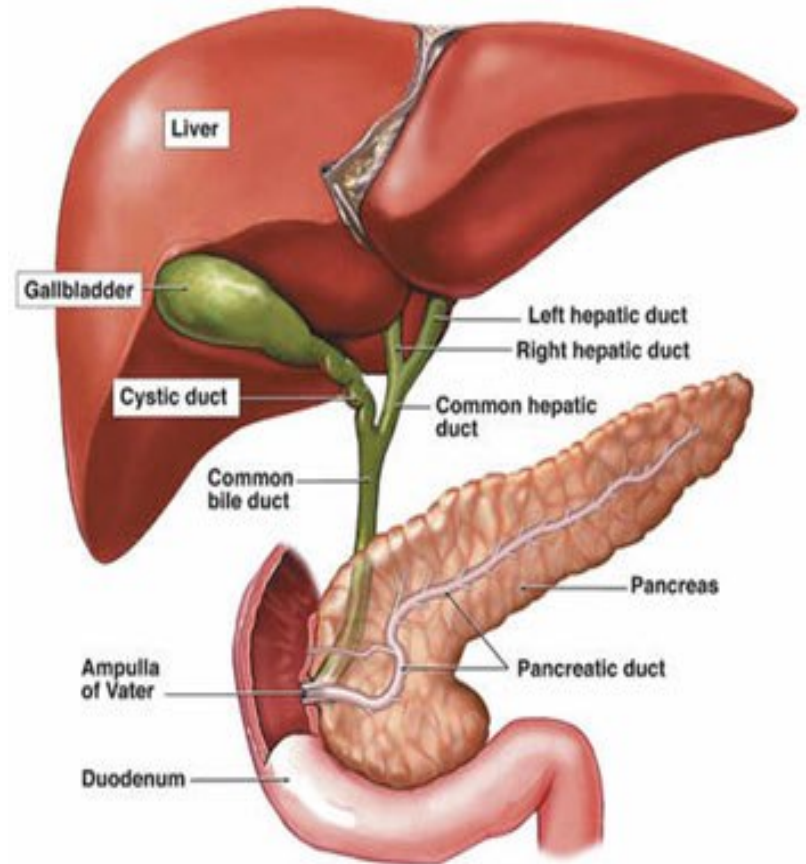
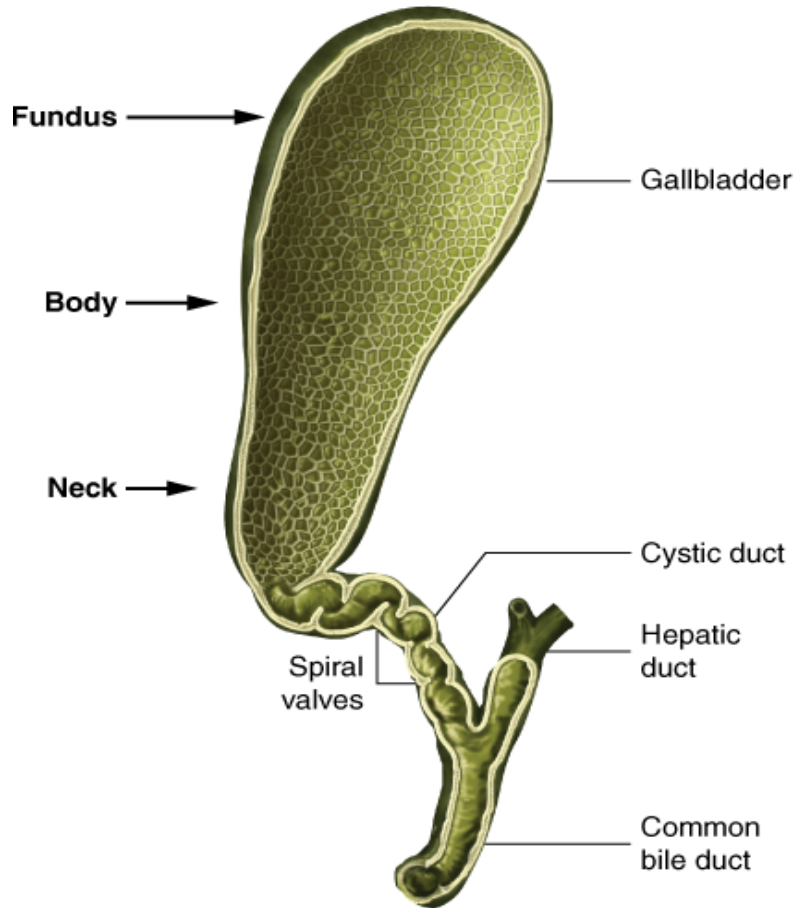
Anterior	Diaphragm, anterior abdominal wall
Superior	Diaphragm separating it from: <ul style="list-style-type: none"> • Base of right lung and pleura • Base of pericardium • Part of left lung and pleura
posterior	Diaphragm, right suprarenal gland, IVC, esophagus
Inferior	Fundus of the stomach, Porta hepatis, Fossa for gall bladder, Lesser omentum (omental tuberosity), pylorus and first part of duodenum, hepatic flexure, right kidney
Right lateral	Diaphragm separating it from: <ul style="list-style-type: none"> Right ribs from 7-11 Right costodiaphragmatic recess of pleura



Relations (Impressions) of the Liver

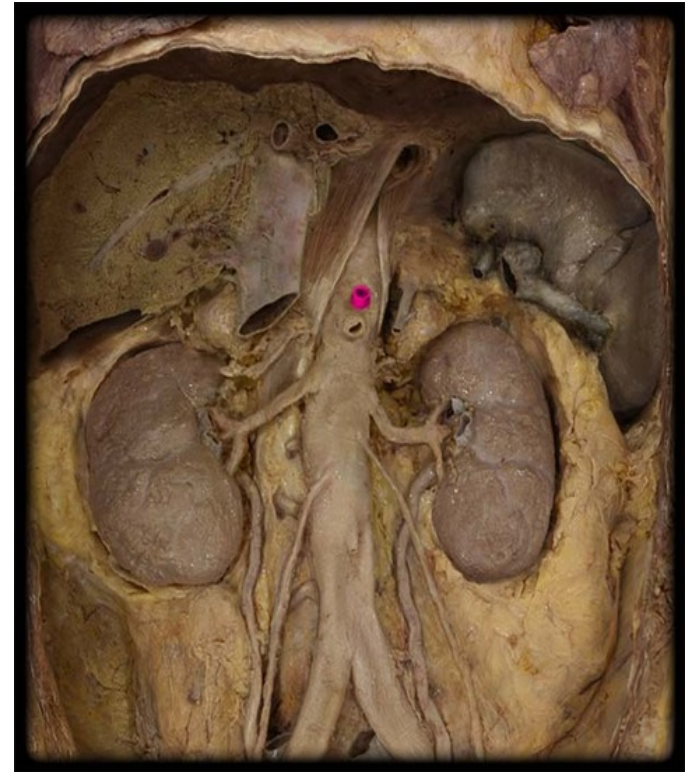
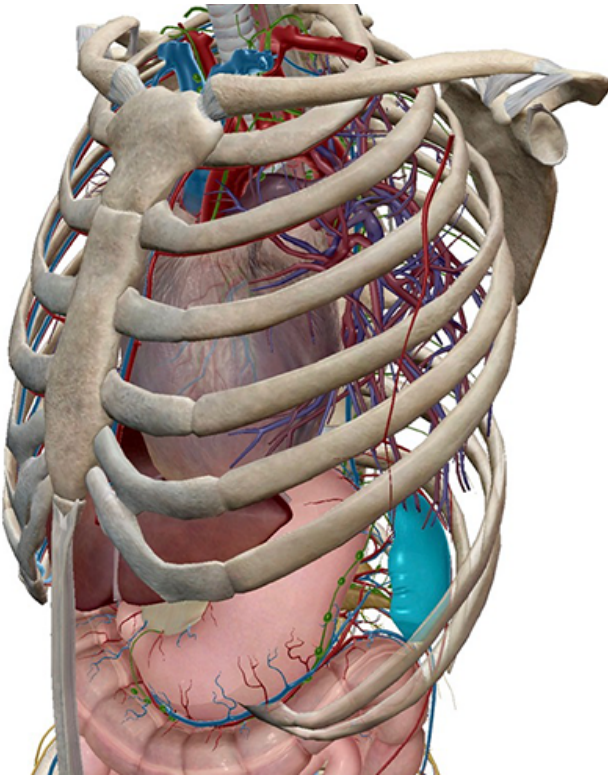


Biliary System



ANATOMY OF THE SPLEEN

Anatomical Position: in the left hypochondrium, deep to 9, 10 & 11 ribs.
Its Long axis lies along 10th rib.



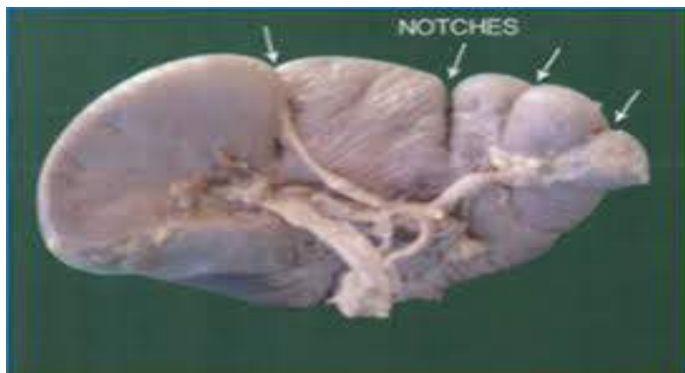
Anatomical Structure of the Spleen

Surfaces

- Diaphragmatic surface (convex)



- Visceral surface (concave)

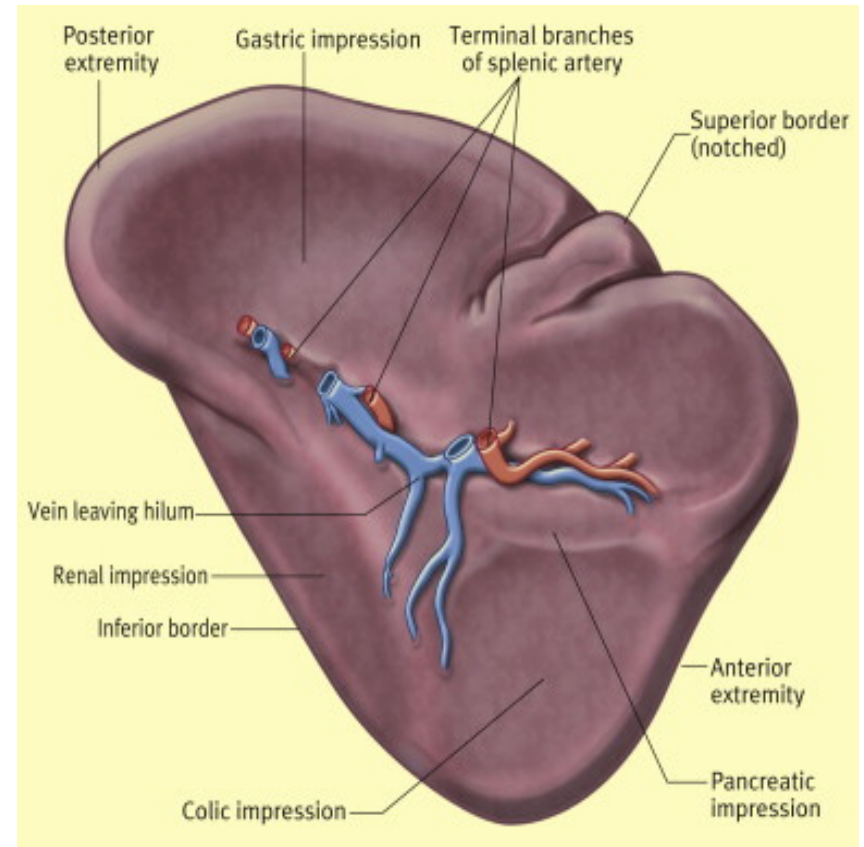


Borders

- The superior (anterior or lateral) border is notched.
- The inferior (posterior or medial) border is rounded

Relations of the Spleen

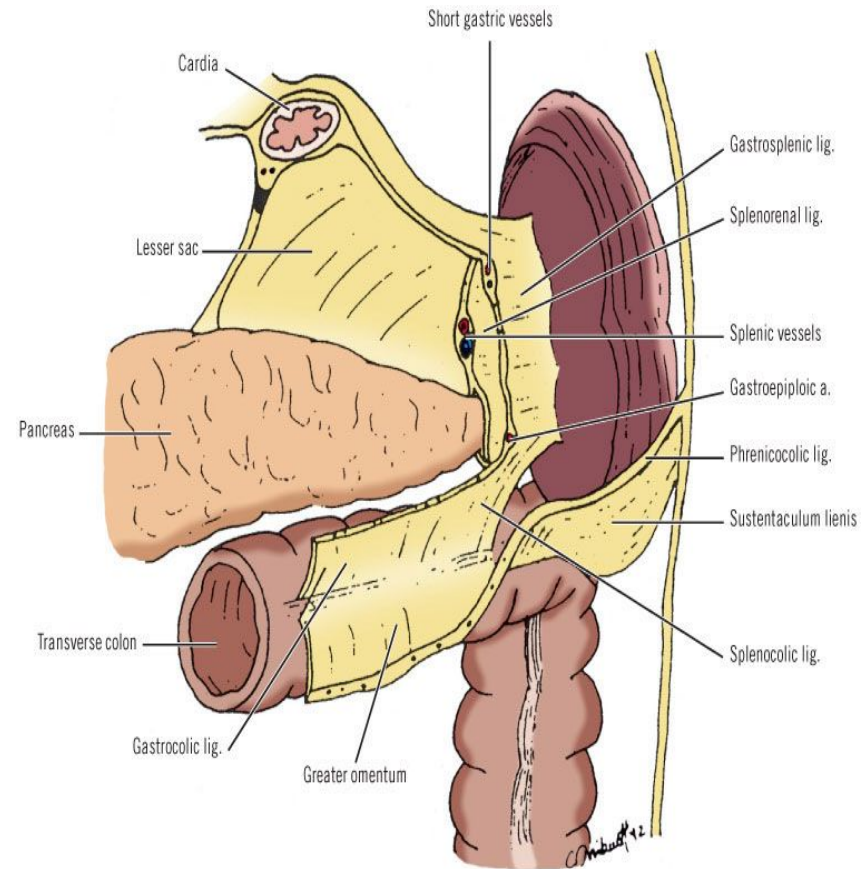
Diaphragmatic surface	Visceral surface
<p>Diaphragm which separates spleen from: left costo-diaphragmatic recess of pleura, left lung & 9, 10 & 11 ribs.</p>	<ol style="list-style-type: none"> 1. Stomach 2. Left colic flexure 3. Tail of pancreas 4. Left kidney



Peritoneal Attachments of the Spleen (Ligaments)

- Spleen is completely surrounded by peritoneum except at the hilum where its margins give attachment to:

- 1) **Gastrosplenic ligament** spleen to the greater curvature of stomach (carrying the short gastric and left gastroepiploic vessels).
- 2) **Lienorenal (splenorenal) ligament** spleen to the left kidney. (carrying the splenic vessels and the tail of pancreas).



Copyright ©2006 by The McGraw-Hill Companies, Inc.
All rights reserved.

Blood Supply of Spleen

Splenic artery: the largest branch of the celiac artery, Runs in a tortuous course along the upper border of the pancreas.

Splenic vein: leaves the hilum, runs behind the tail & body of the pancreas.

Reaches behind the neck of pancreas, where it joins the superior mesenteric vein to form the portal vein.

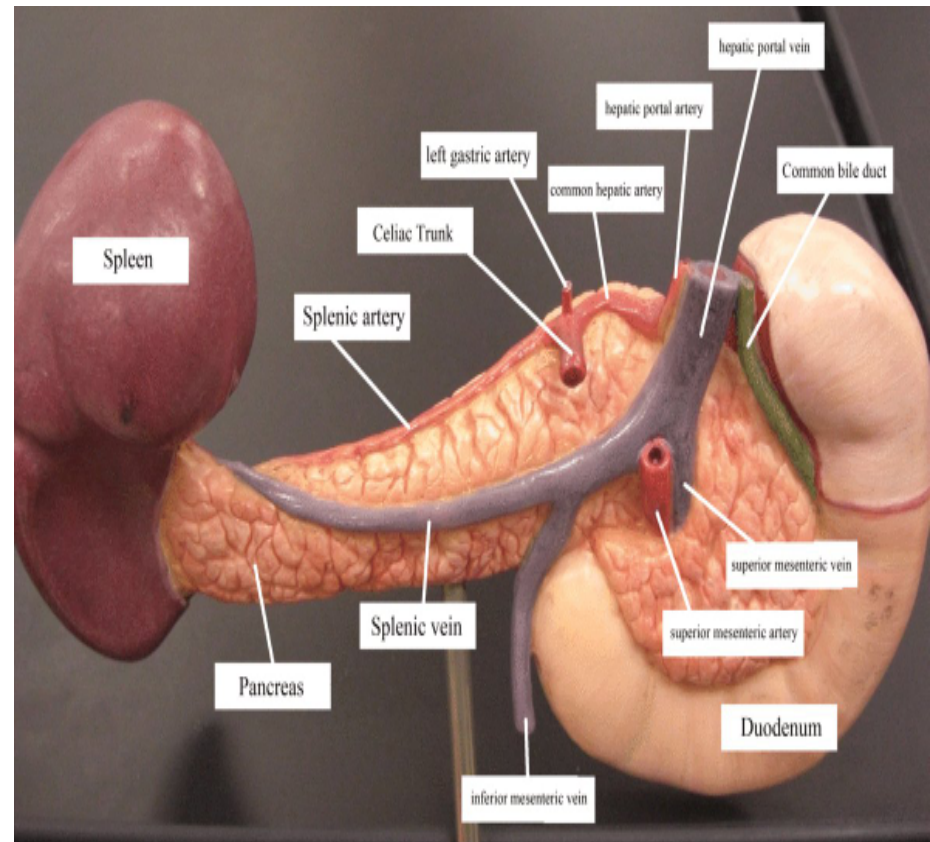
Tributaries:

Short gastric vein.

left gastroepiploic vein.

Pancreatic veins.

Inferior mesenteric vein.

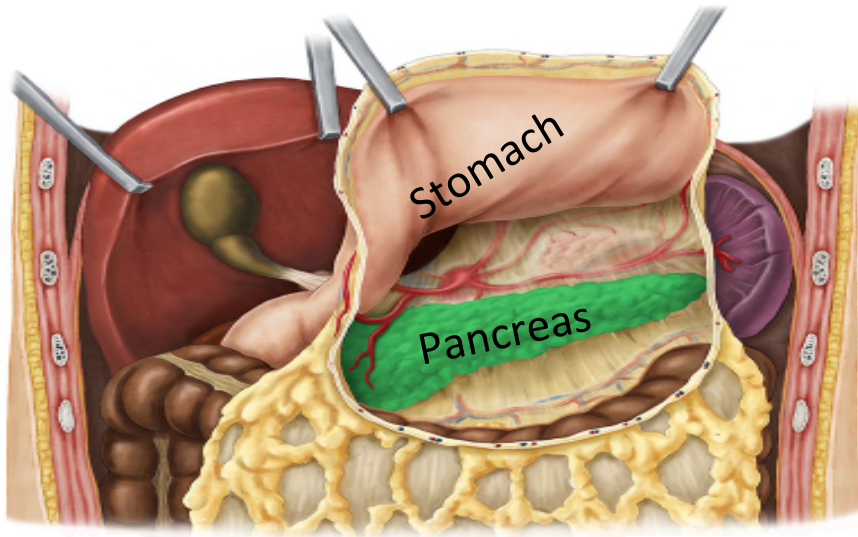


Posterior view of the abdominal viscera, showing arteries and veins around the pancreas and spleen.

ANATOMY OF THE PANCREAS

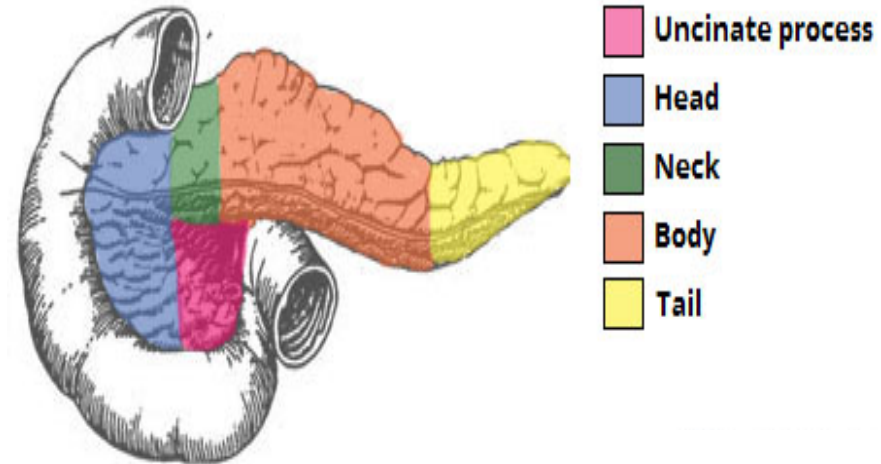
Anatomical position

It is a retroperitoneal organ, in the epigastrium and left hypochondrium regions.



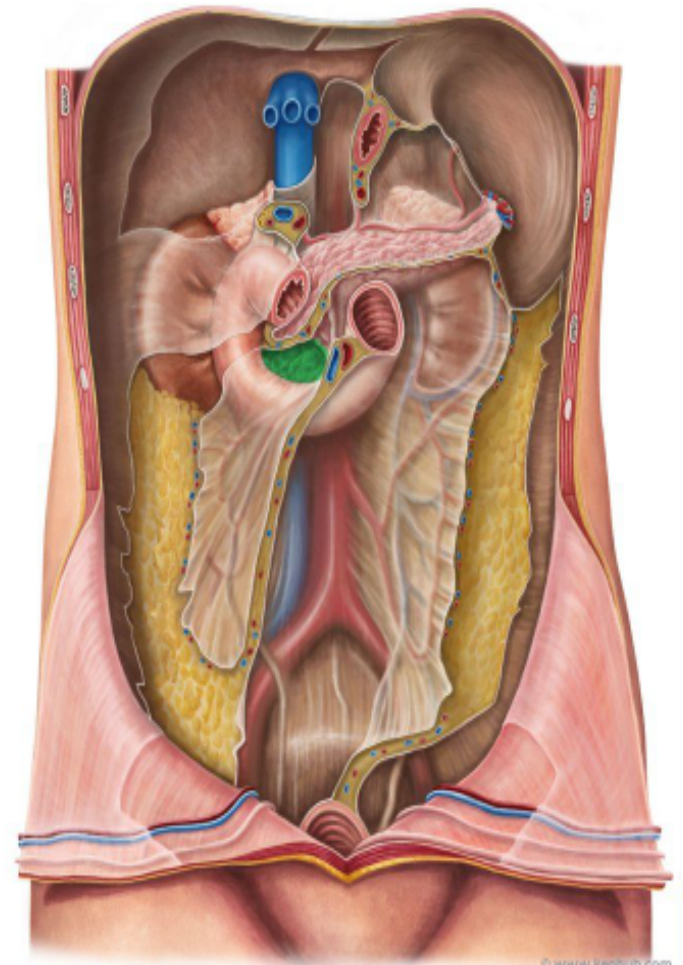
Anatomical structure

1. Head
2. Uncinate process
3. Neck
4. Body
5. tail



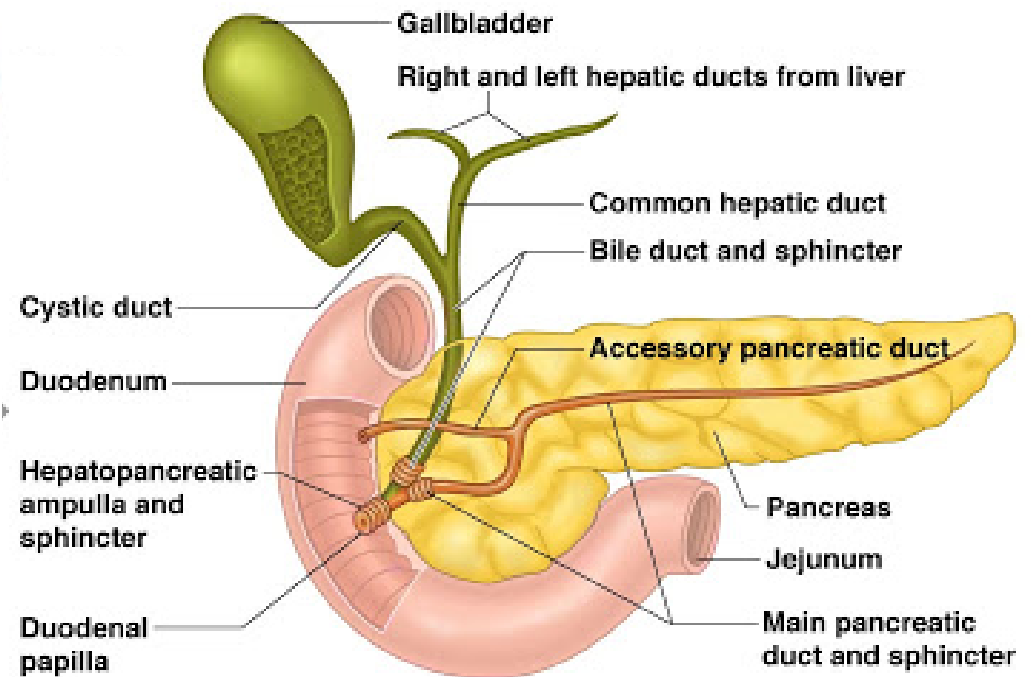
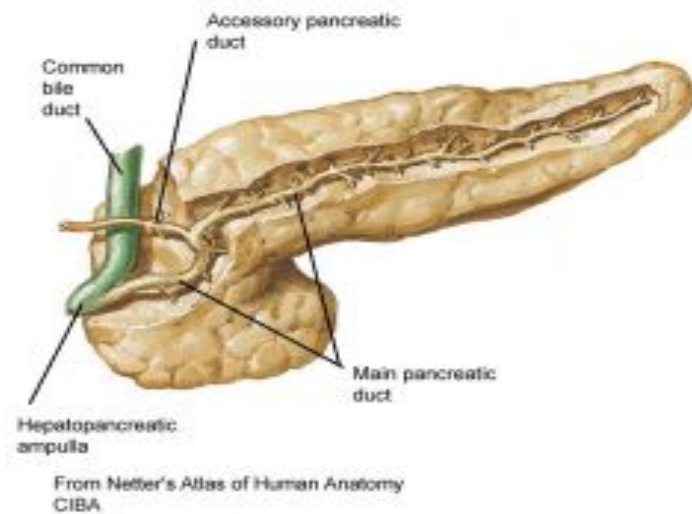
Anatomical Relations of the Pancreas

Anterior	Stomach, lesser sac (omental bursa), transverse mesocolon, superior mesenteric artery
Posterior	Aorta, inferior vena cava, right renal artery, renal veins, superior mesenteric vessels, splenic vein, portal vein, left kidney, left suprarenal gland
Superior	Splenic artery
Lateral	Spleen
Medial	Duodenum (descending and horizontal parts)



Pancreatic Ducts

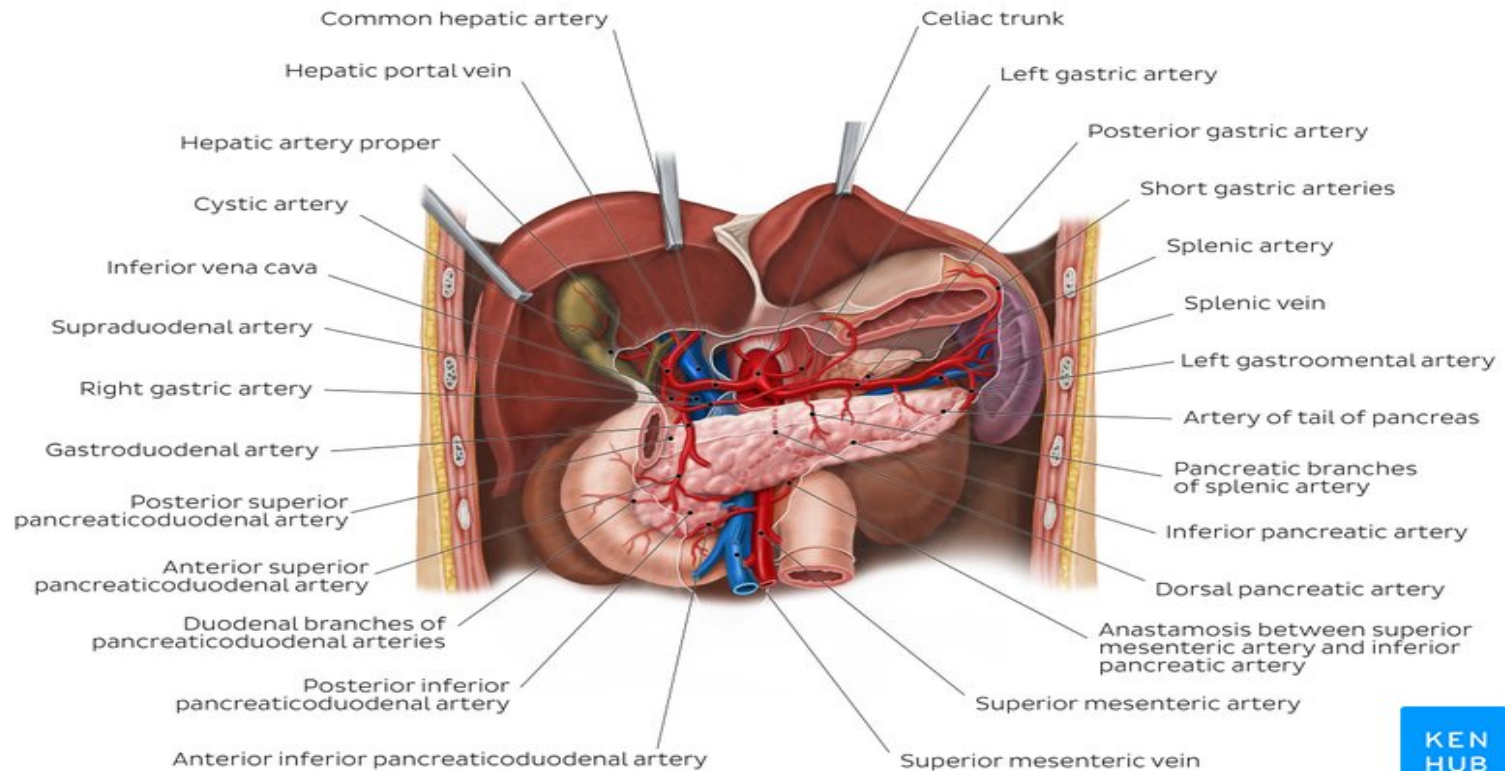
- 1) Main pancreatic duct.
- 2) Accessory pancreatic duct.



Copyright © 2009 Pearson Education, Inc., publishing as Pearson Benjamin Cummings.

Arterial Supply of Pancreas

- 1) Splenic artery.
- 2) Superior and inferior pancreaticoduodenal arteries.

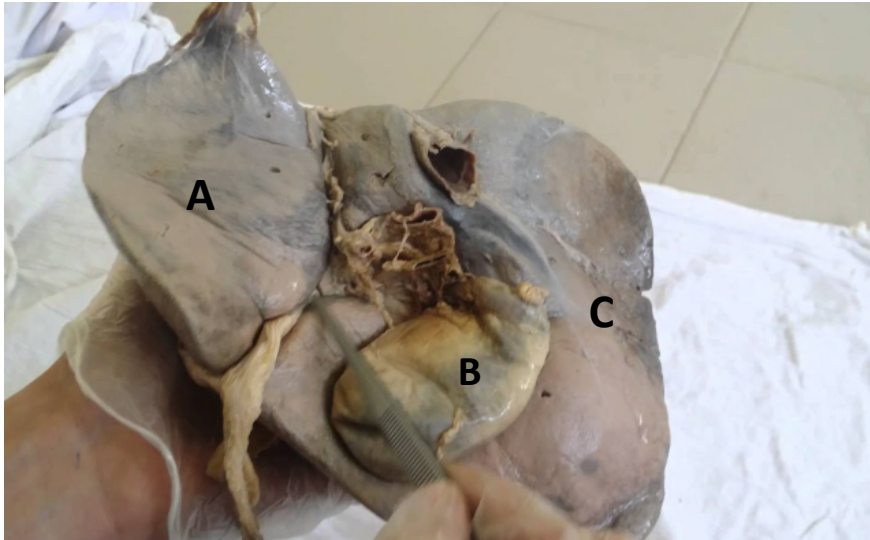


© www.kenhub.com

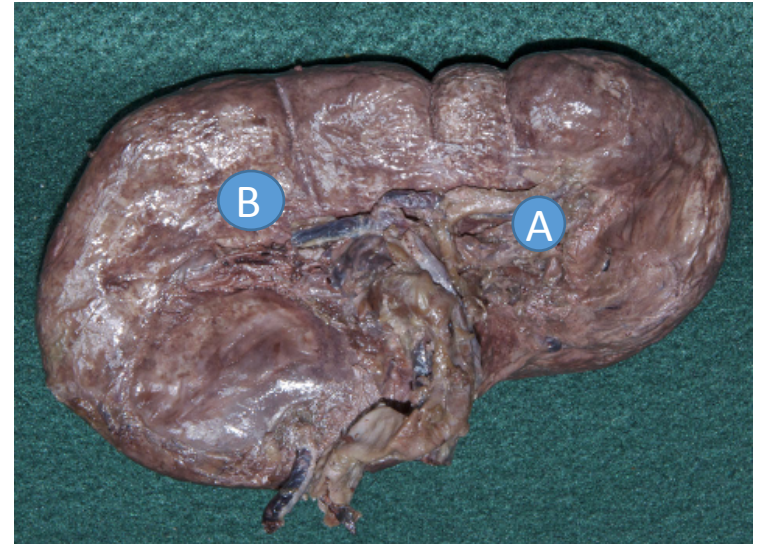


Revision

1. Identify the structure related to area (A).
2. Identify the surface anatomy of (B).
3. Identify the structure related to (C).



1. Identify the structure related to area (A).
2. Identify the structure related to area (B).



Thank You

Disclosure

Please be advised that this work is intended for non-profit purely educational purposes. We used some images from the internet and other sources. We did our best to link all images to their original sources to preserve copyrights. If you are the owner of one of those images, and you are not satisfied with our copyright level, please contact us and let us know how to make things right. We deeply appreciate your cooperation and consideration.

Contact: **anatomy@ksu.edu.sa**