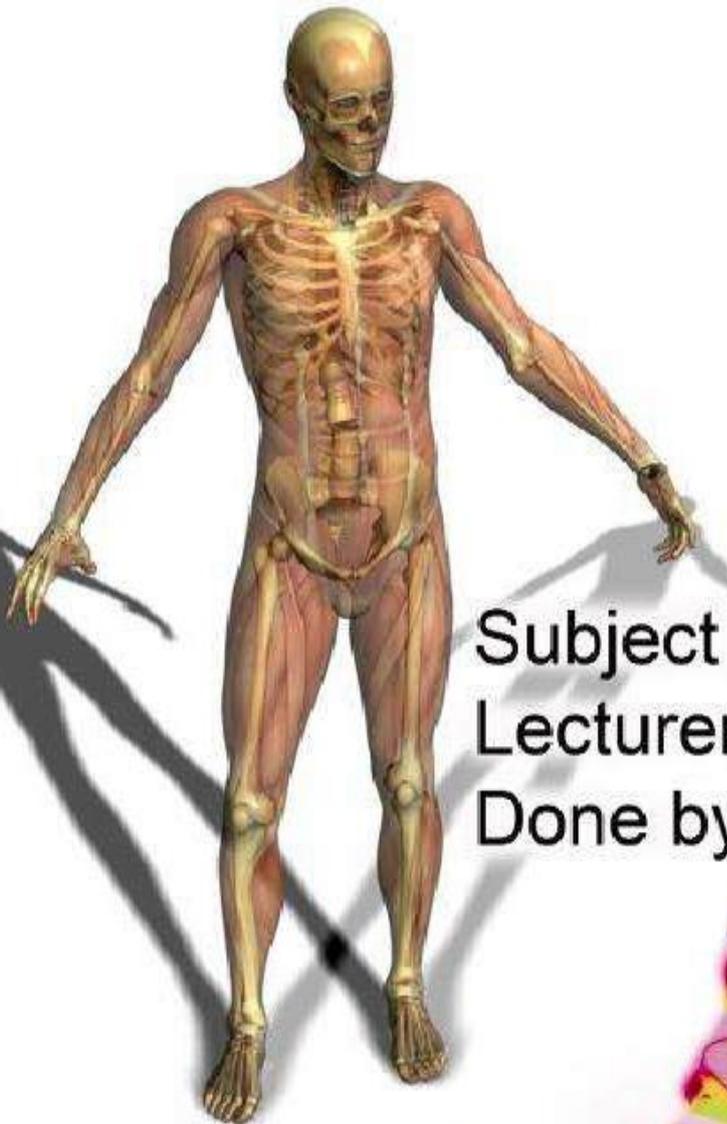




# ANATOMY

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Sheet



Subject : *Introduction to Anatomy*

Lecturer : *Maher T. Hadidi*

Done by : *Hadeel ALi Alzoubi*

lecture # : *37 the last one XD* Date : *May-5th-2013*

# Spleen and Pancreas

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## Spleen

The largest lymphoid gland in the body, located below left dome of the diaphragm, it is completely intraperitoneal except its hilum and it is obliquely situated; its axis is along the left 10<sup>th</sup> rib.

We can find Spleen by the 10<sup>th</sup> left rib.

## Parts of spleen

**2 poles:** upper pole and lower pole.

**2 surfaces:**

-Diaphragmatic convex parietal surface related to the 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> rib and intercostals spaces in between.

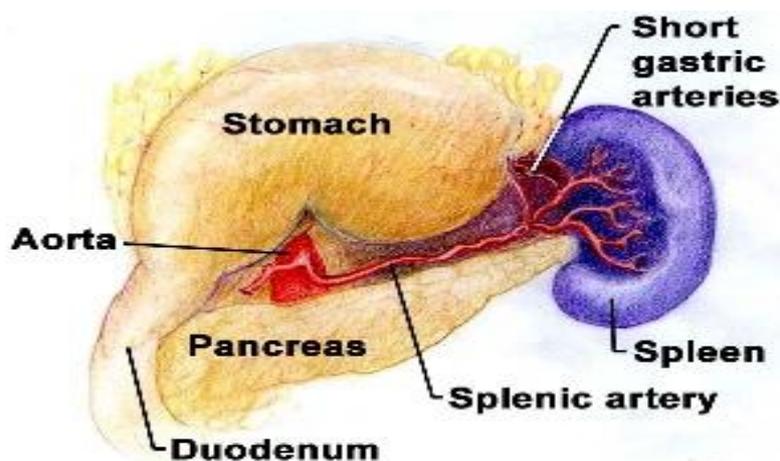
\*fracture in any of these ribs will affect the spleen and injured spleen will affect the surrounding structures.

-Visceral concave surface: related to stomach, splenic angel (highest point of transverse colon and common site for gases collection which may affect or compress the spleen) and left kidney.

Enlargement of spleen (those who suffer from *schistosomiasis*) affects mainly stomach and surrounding structures.

**2 borders:** superior notched border and inferior smooth rounded border.

Notched border that has elevations and depressions represents spleen development process.



# Spleen and Pancreas

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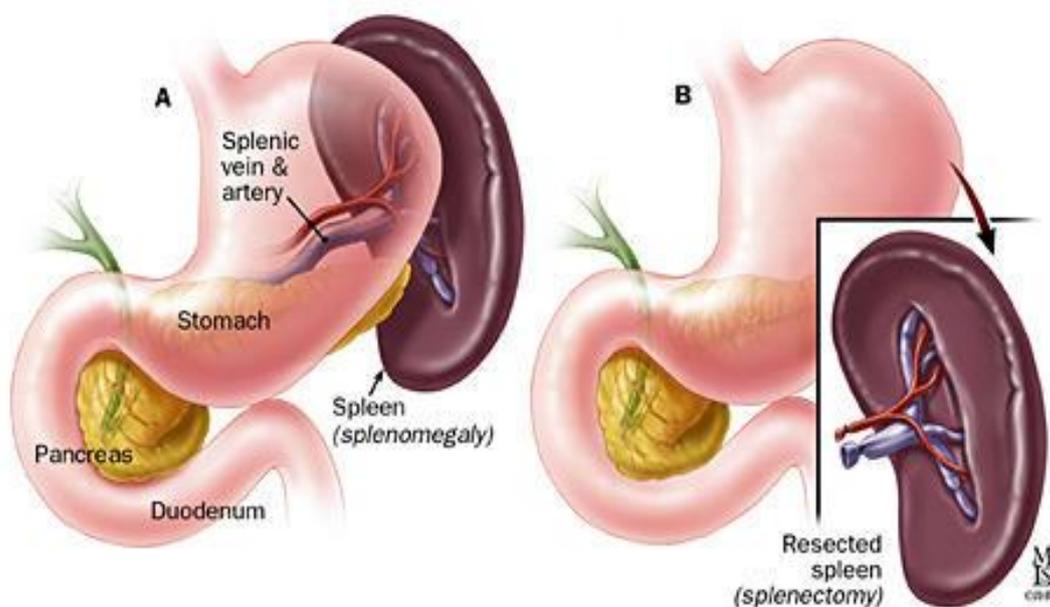
## Function of spleen

-storing extra red blood cells RBC.

-storing old RBCs (to recycle them)

if spleen is injured, it should be removed (because it's a storage of extra RBCs so when having a bleeding, spleen squeezes itself to power RBCs within the blood stream and once spleen is injured it squeezes itself so all of its blood is brought outside – all or none).

Indication of splenectomy: presence of hemoglobin in plasma due to anemia (RBCs which are stored in spleen are broken).



**The arterial supply** of spleen is Splenic artery which is the largest branch of celiac trunk.

## Venous drainage

Spleen drains its blood through splenic vein, which receives drainage of inferior mesenteric vein then continues and behind the neck of pancreas it receives Superior mesenteric vein, which goes to portal vein.

# Spleen and Pancreas

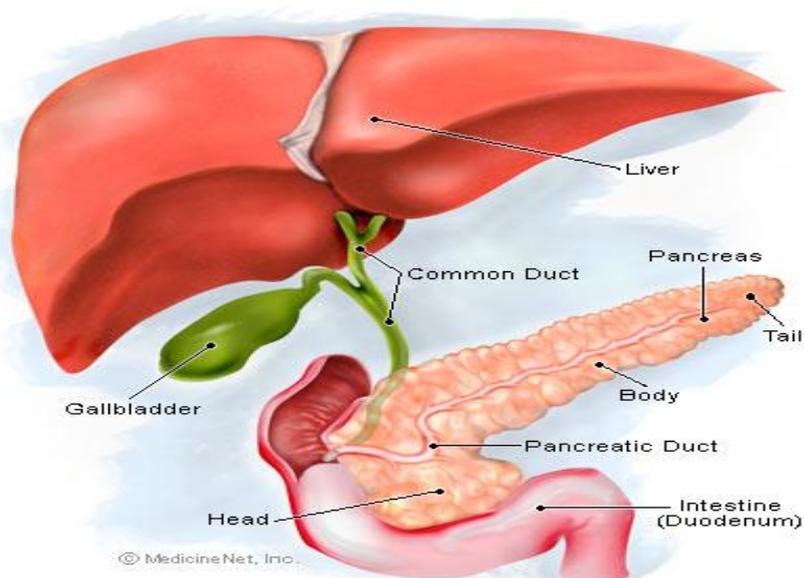
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## Pancreas

- Comma shaped.
- Obliquely oriented crossing midline, extending from the second part of duodenum to hilum of Spleen.
- About 15 cm long.
- Complex retroperitoneal Endocrine and Exocrine gland.
- Located in the hypogastric and left hypochondriac regions.

## Parts of Pancreas

- Head: Embraced by duodenum.
  - Neck: Portal veins forms behind it.
  - Body: Longest part.
  - Tail: Reach hilum of the spleen.
  - Ducts: Exocrine secretion convey to 2<sup>nd</sup> part of duodenum via two ducts: Main duct (goes down and merges with common bile duct to open into 2<sup>nd</sup> part of duodenum) and Accessory duct.
- \* Secretion of pancreatic duct is important in digestion of proteins.



# Spleen and Pancreas

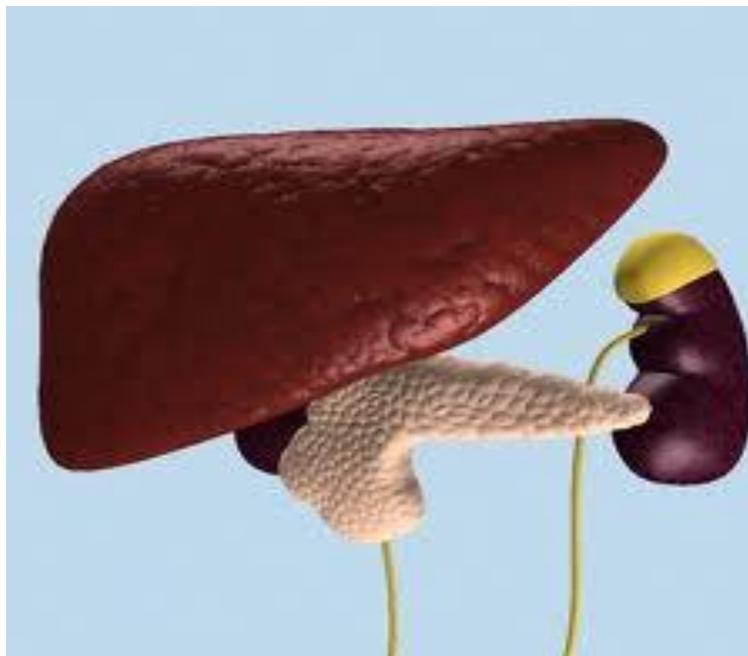
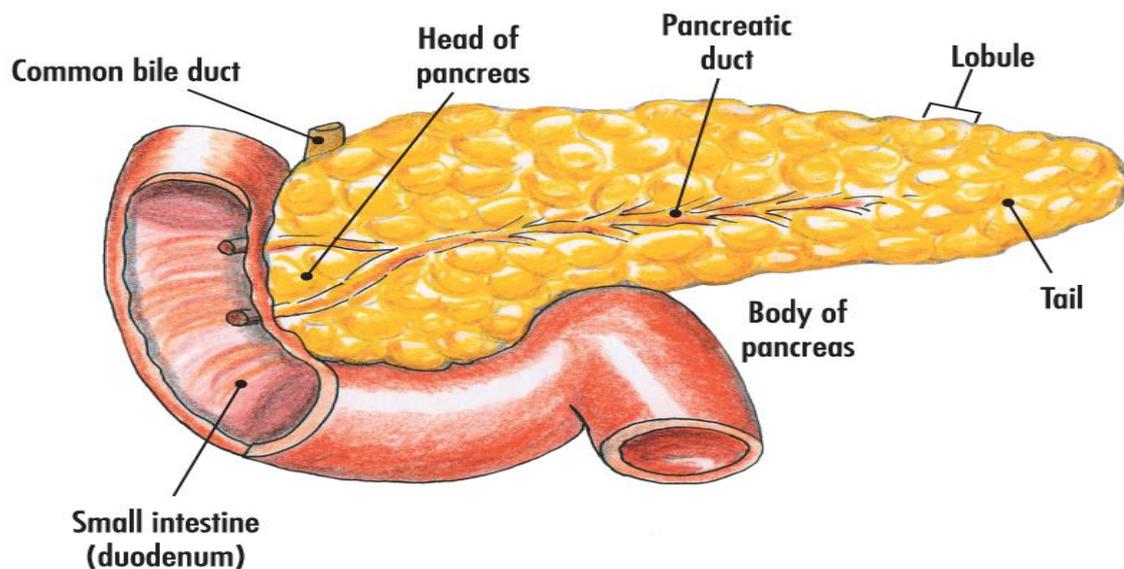
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\***Endocrine:** Hormones are secreted into blood directly.

\* **Langerhans islands** have two types of cells (alpha and beta), beta cells secrete insulin which lowers the sugar level in the body and alpha secretes glucagon which increases the sugar level.

\***Exocrine:** hormones are secreted into blood via ducts.

\***Portal Hypertension:** blood starts to accumulate in the vein and does not enter the liver because of the death of cells in liver, liver becomes less functional and blood goes down in the veins reaching Rectum and cause Hemorrhoids.



# Spleen and Pancreas

## A Message from the Correction Team

مرحبا زملائي،  
أود أن أهنئكم بنهاية هذا الفصل الدراسي ، كان فصلا جميلا ، خصوصا بعد أن  
دخلنا إلى عالم الطب  
ها نحن نكاد نطوي أول صفحات مشوار الطب، و كلنا أمل و إصرار و عزيمة  
على إثبات ذاتنا لكل من حولنا ، أشكر كل فرد منكم ، فكلنا اخوة ، نتعاون و  
نتشارك في كل شيء ، و دعوني بهذه المناسبة أن أشكر زملاءنا في لجنة الدفعة  
على جهودهم و تعبهم طوال الفصل ، لقد تحملوا المسؤولية و أتقنوا المهمة، ألا و  
هم:

(1) مهند سعادة

(2) طارق تل

(3) مالك عليوة

(4) مالك أبو أصبع

و أيضا دعوني أشكر زملائي الذين كتبوا الشيتات، و باقي زملائي في ال  
Correction Team لأنهم قاموا بواجبهم على أكمل وجه ، و نعتذر عن أي  
خطأ غير مقصود سقط سهوا في أي (شيت). أشكر أعضاء ال Correction

Team و هم:

(1) عمر ماجد

(2) ألاء القضاة

(3) عصام بسيسو

(4) طارق خريسات

(5) هديل الزعبي

(6) فريد الحلثة

(7) رند العرامين

و كل عام و أنتم بخير  
زميلكم،

عصام بسيسو