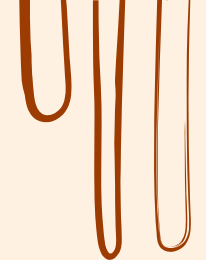




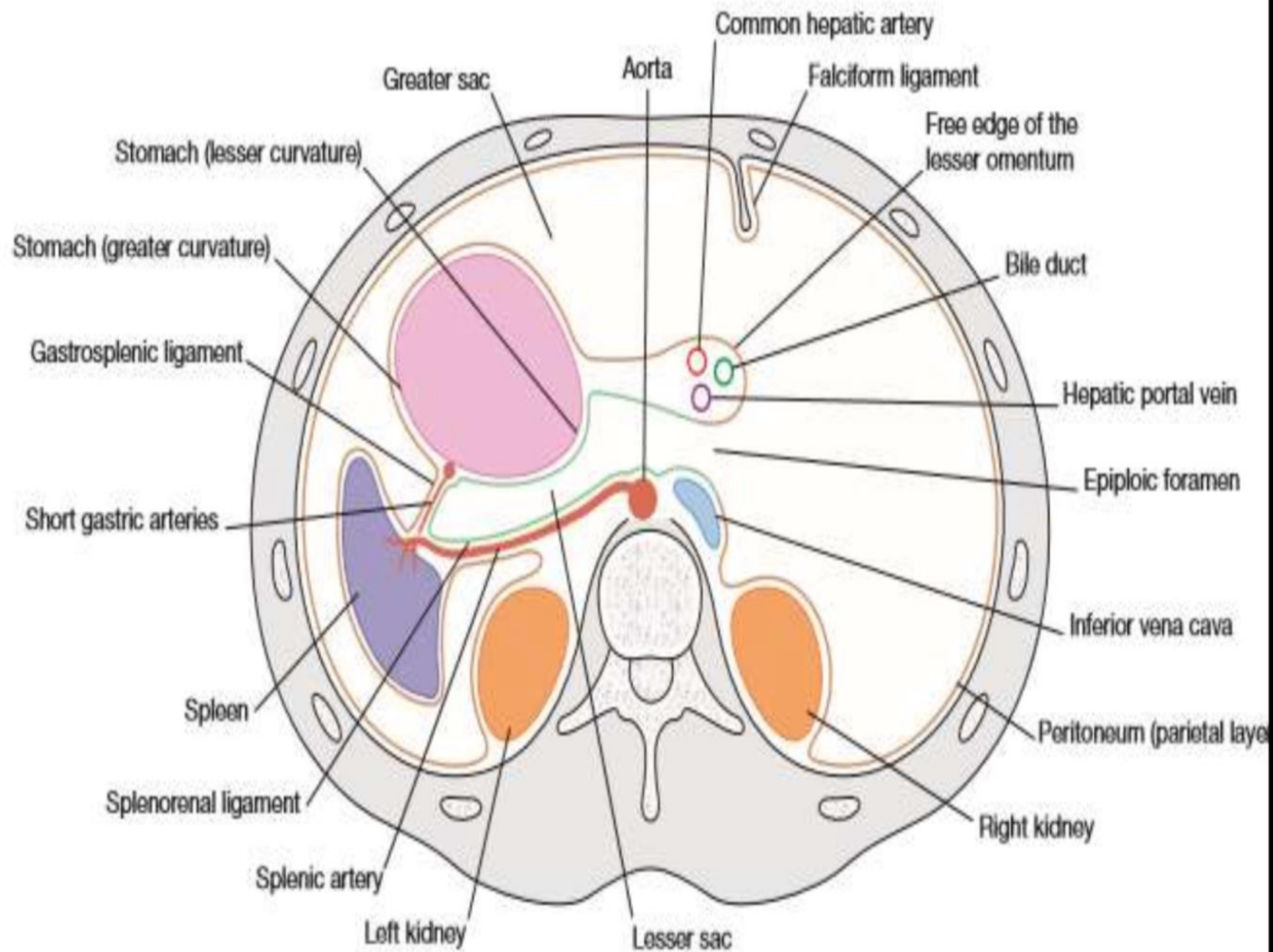
THE SPLEEN

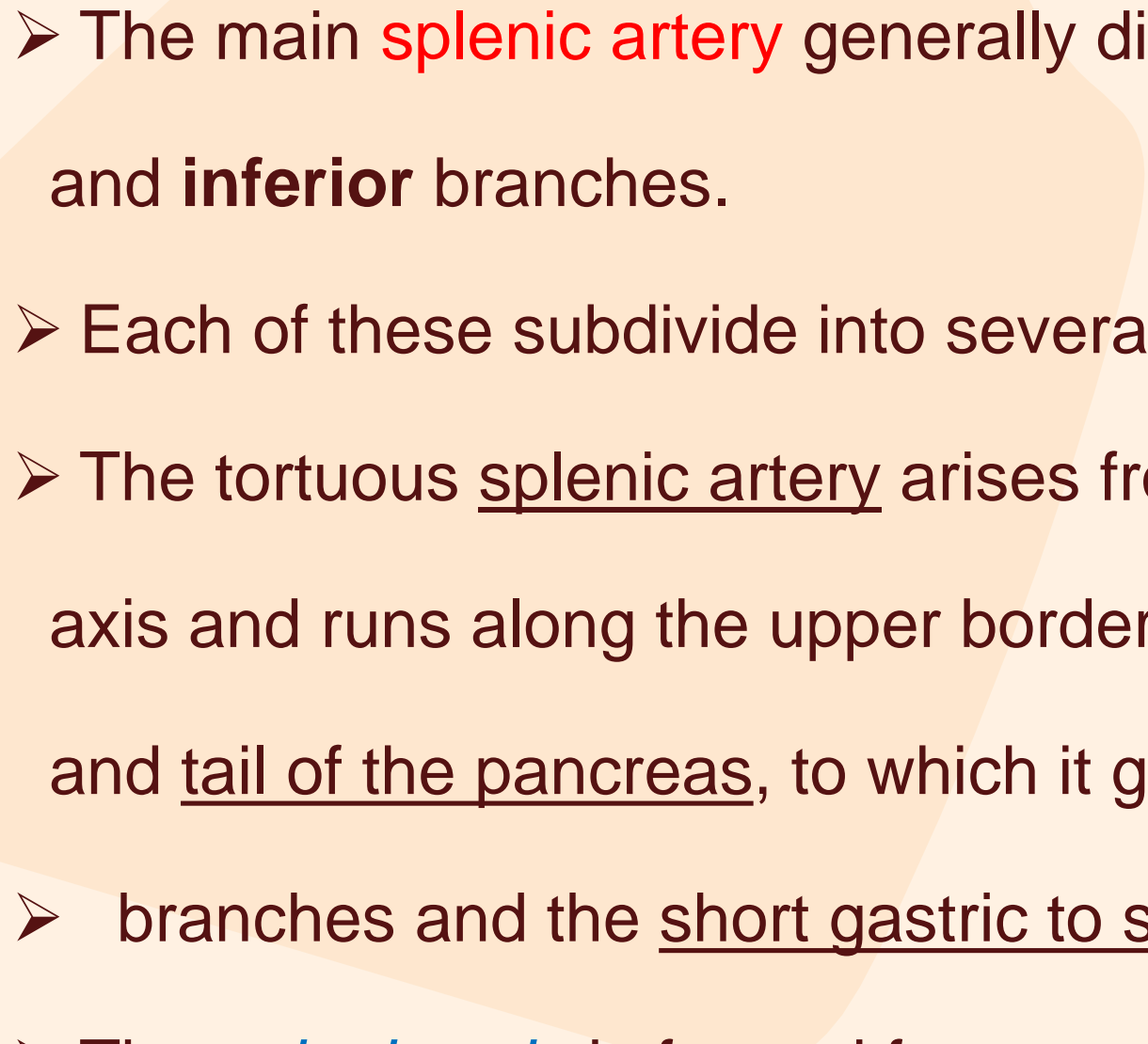
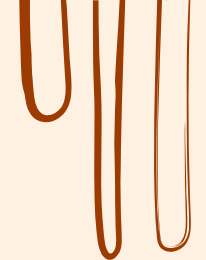

Dr.Asraa Raihan
gynecologist

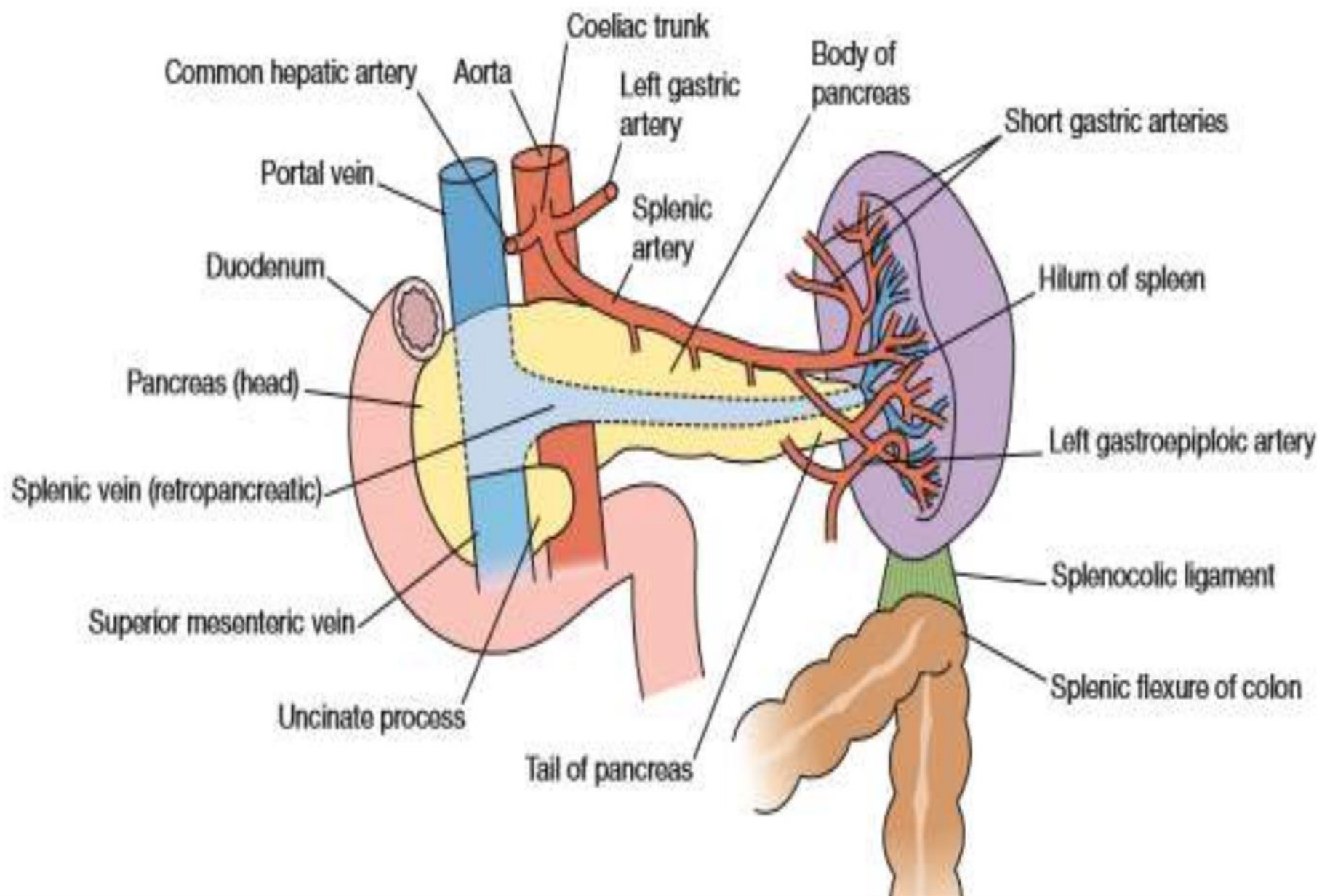


The weight of the normal adult spleen is 75–250 g and it measures up to $10 \times 7 \times 3$ cm. It lies in the left hypochondrium between the gastric fundus and the left hemidiaphragm, with its long axis lying along the 10th rib. The spleen is connected to the stomach and kidney (the gastrosplenic and the splenorenal ligaments). It is in contact with the tail of the pancreas. The lower pole extends no further than the midaxillary line. There is a notch on the inferolateral border, and this may be palpated only when the spleen is enlarged.





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- The main **splenic artery** generally divides into **superior** and **inferior** branches.
 - Each of these subdivide into several segmental branches.
 - The tortuous splenic artery arises from the coeliac axis and runs along the upper border of the body and tail of the pancreas, to which it gives small
 - branches and the short gastric to stomach.
 - The **splenic vein** is formed from several tributaries.
- 



Physiology

- The splenic parenchyma consists of white and red pulp that is surrounded by **serosa** and a **collagenous capsule** with smooth muscle fibres. The white pulp filled with *lymphocytes* and *macrophages*.
- Immunoglobulins produced in the lymphatic nodules enter the circulation.
- Abnormally shaped red cells removed from the circulation .
- The overall flow rate of blood is about 300 mL/min.



FUNCTIONS OF THE SPLEEN

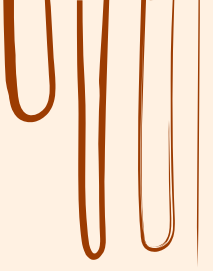
1- Immune function: The spleen contains 70.5% and 10–15% of the body's total T and B lymphocyte

respectively. It processes foreign antigens and is the major site of specific immunoglobulin (Ig) M production.

2- Filter function: Macrophages in the reticulum, capture cellular and non-cellular material from the blood and plasma. This will include the removal of red blood cells. Iron is removed & bacteria ,in particular, pneumococci.

3- Reservoir: Red cell mass and proportion of the blood volume.

4- Cytopoiesis: Proliferation of T and B cells and macrophages.



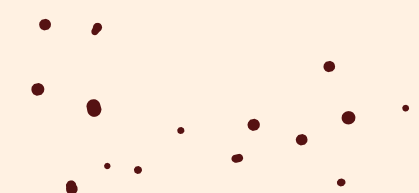
Diseases of the spleen

1- Splenic rupture due to trauma: The spleen is the most commonly injured intra-abdominal organ

followed by the liver. Splenic rupture should be considered in any case of blunt abdominal trauma, particularly when the injury occurs to the left upper quadrant of the abdomen. Vigorous resuscitation remains the key to management of blunt trauma.

Splenectomy should be performed for severe injury.

2- Splenic abscess: Splenic abscess Splenic abscess may arise from an infected splenic embolus or in association with typhoid and paratyphoid fever, osteomyelitis, and puerperal sepsis. Treatment is splenectomy



3- **Hereditary spherocytosis** is an autosomal dominant hereditary disorder characterized by the presence of spherocytic red cells. Treatment is by splenectomy.

4- **Thalassaemia** (Mediterranean anaemia) This condition results from a defect in hemoglobin .The disease is alpha, beta and gamma. Blood transfusion/splenectomy is of benefit in patients who require frequent blood transfusion.

5- **Sickle cell disease** is a hereditary anaemia. Splenic microinfarcts are common.



Thank You!