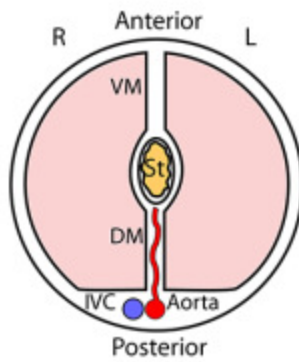
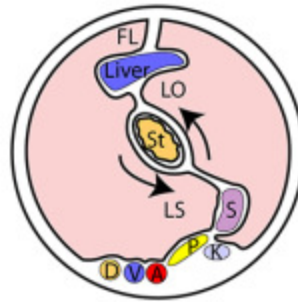


## Development of the Lesser Sac

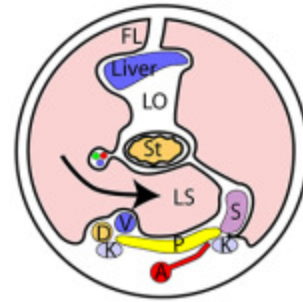


1. Fetus viewed from below. Ventral mesentery (VM) joins the stomach to anterior wall. Dorsal mesentery (DM) joins stomach to posterior wall

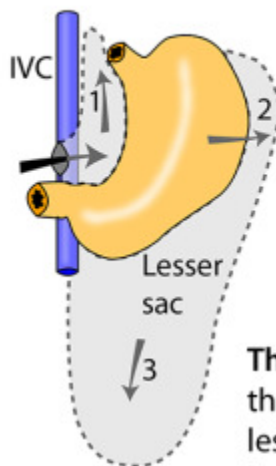
### ROTATION OF THE STOMACH AND THE FORMATION OF THE LESSER SAC



2. The stomach rotates anticlockwise. VM with developing liver in it is thrown to the right & DM with developing spleen in it to the left. Duodenum (D) is pushed retroperitoneally & pancreas is formed posterior to the developing lesser sac (LS) alongside the IVC (V) & the aorta (A). The left kidney (K) lies just posterior to the spleen



3. As the liver enlarges the remnant of the VM between it & the stomach widens to give the lesser omentum (LO) with its free edge holding the bile duct, portal veins & hepatic artery. The anterior remnant of the VM becomes the falciform ligament (FL). The stomach completes its rotation dragging the peritoneum posteriorly to give the lining of the LS. The IVC moves anteriorly to narrow the opening of the lesser sac.



The arrows indicate the direction of expansion of the lesser sac -

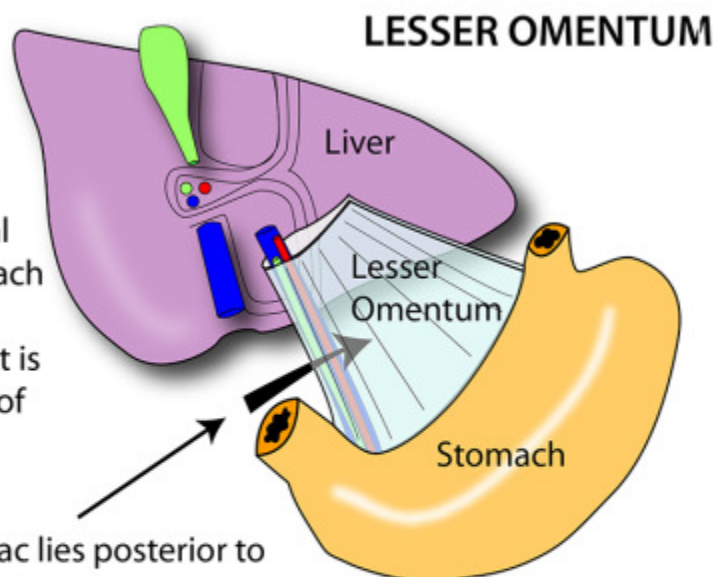
1. Up under the left lobe of the liver
2. Across to the spleen on the left
3. Down within the 2 layers of the greater omentum inferiorly

## LESSER SAC

**The lesser sac (omental bursa)** is an unpaired diverticulum from the general peritoneal cavity that lies posterior to the stomach & lesser omentum & is accessed via the foramen of Winslow. It is lined by peritoneum that was invaginated from the right side of

the stomach as the stomach rotated. It contains nothing apart from a little peritoneal fluid. **Its peritoneum covers:**

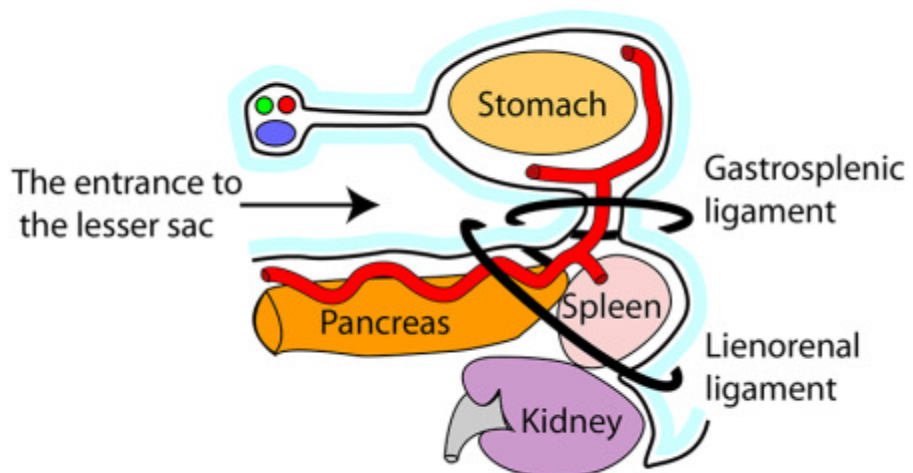
1. Inferior & posterior surface of the liver
2. Lesser omentum
3. Body & fundus of stomach & first 2.5cm of duodenum
4. Inside of greater omentum
5. Superior aspect of transverse colon
6. Upper body of pancreas
7. Left adrenal gland
8. Upper pole of left kidney
9. Right side of the spleen, gastrosplenic & lienorenal ligaments
10. Posterior to the floor are: inferior vena cava, aorta, coeliac trunk & branches
11. In its free right edge are the portal vein, hepatic artery & bile duct



The lesser omentum derives from the ventral mesentery of the stomach and runs between the stomach and the liver. It is the roof (anterior wall) of the lesser sac.

Opening of lesser sac lies posterior to the free edge of the lesser omentum in which lie the portal vein, the bile duct and the hepatic artery

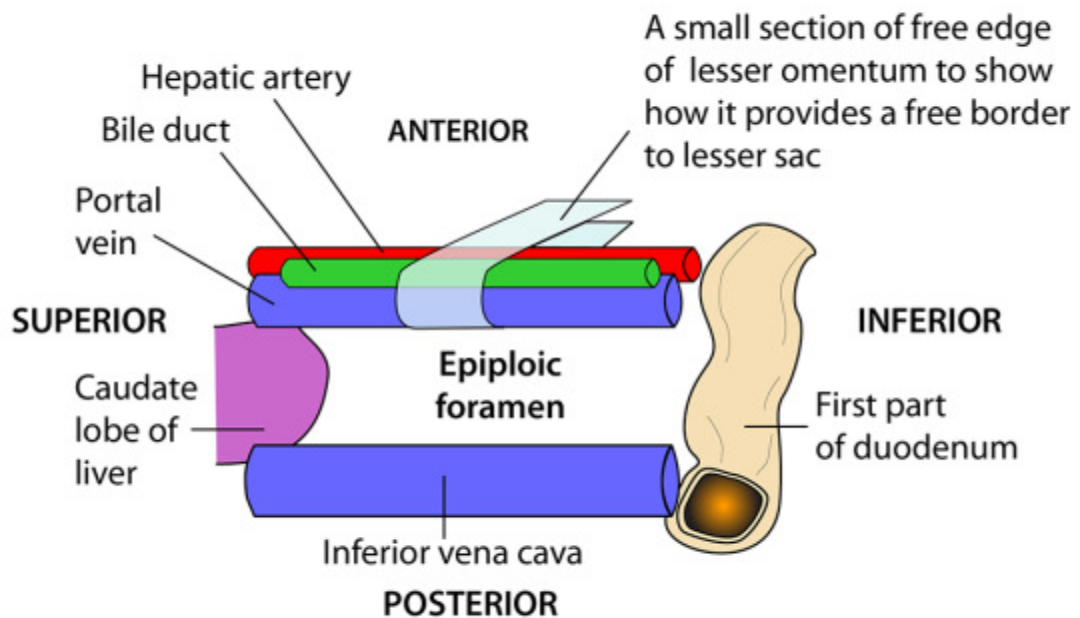
## AXIAL SECTION ACROSS FAR LEFT SIDE OF LESSER SAC



**The gastrosplenic ligament** contains the short gastric & left gastro-epiploic vessels  
**The lienorenal ligament** contains the tail of pancreas & splenic vessels)  
 The two ligaments are the remnants of the the dorsal mesentery of the stomach. The ventral mesentery is the lesser omentum and the falciform ligament

## EPIPLOIC FORAMEN

(Foramen of Winslow, Aditus to Lesser Sac)



Simplified diagram looking left into lesser sac from right side of upper abdomen