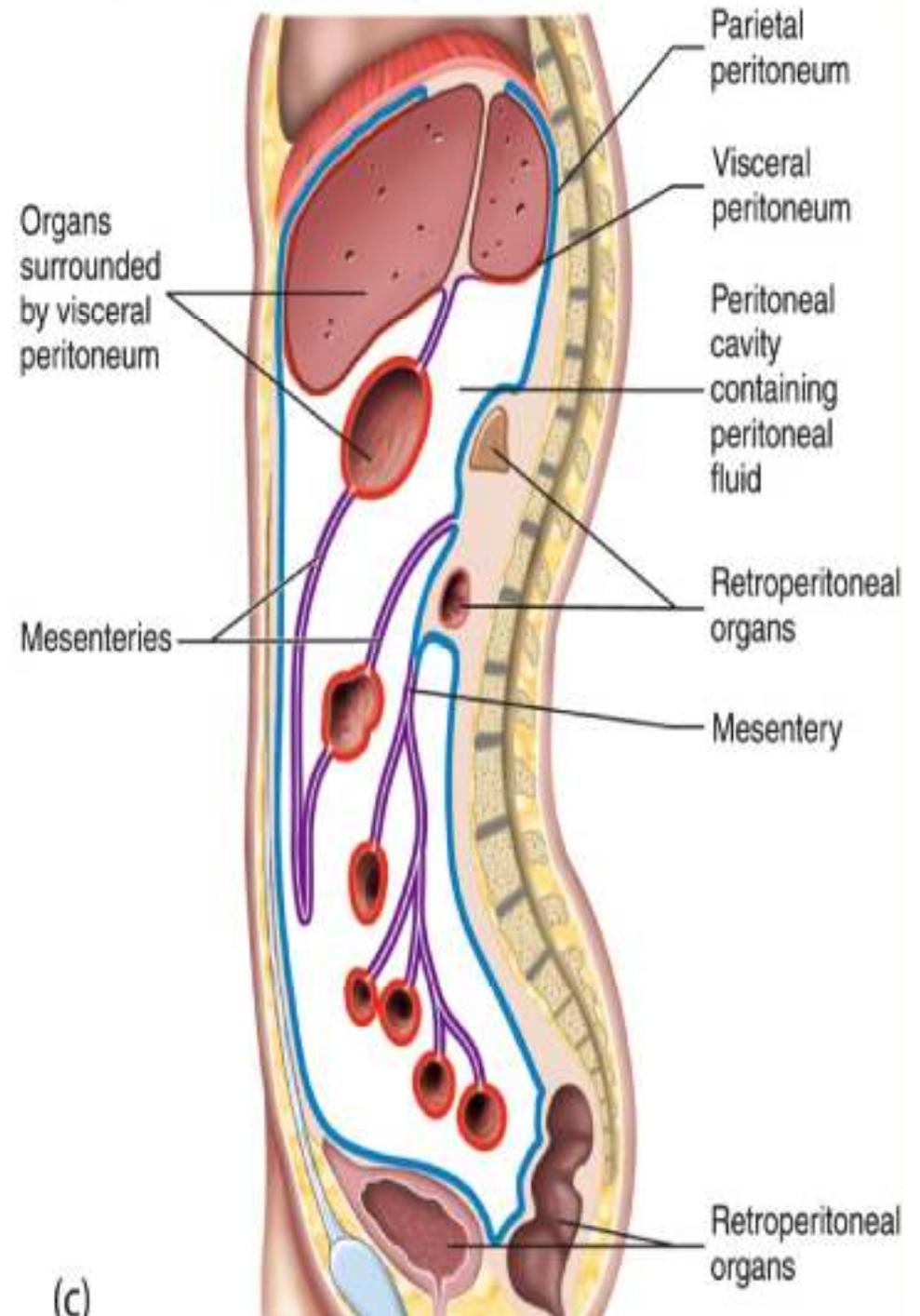


Abdominal Cavity

Peritoneum

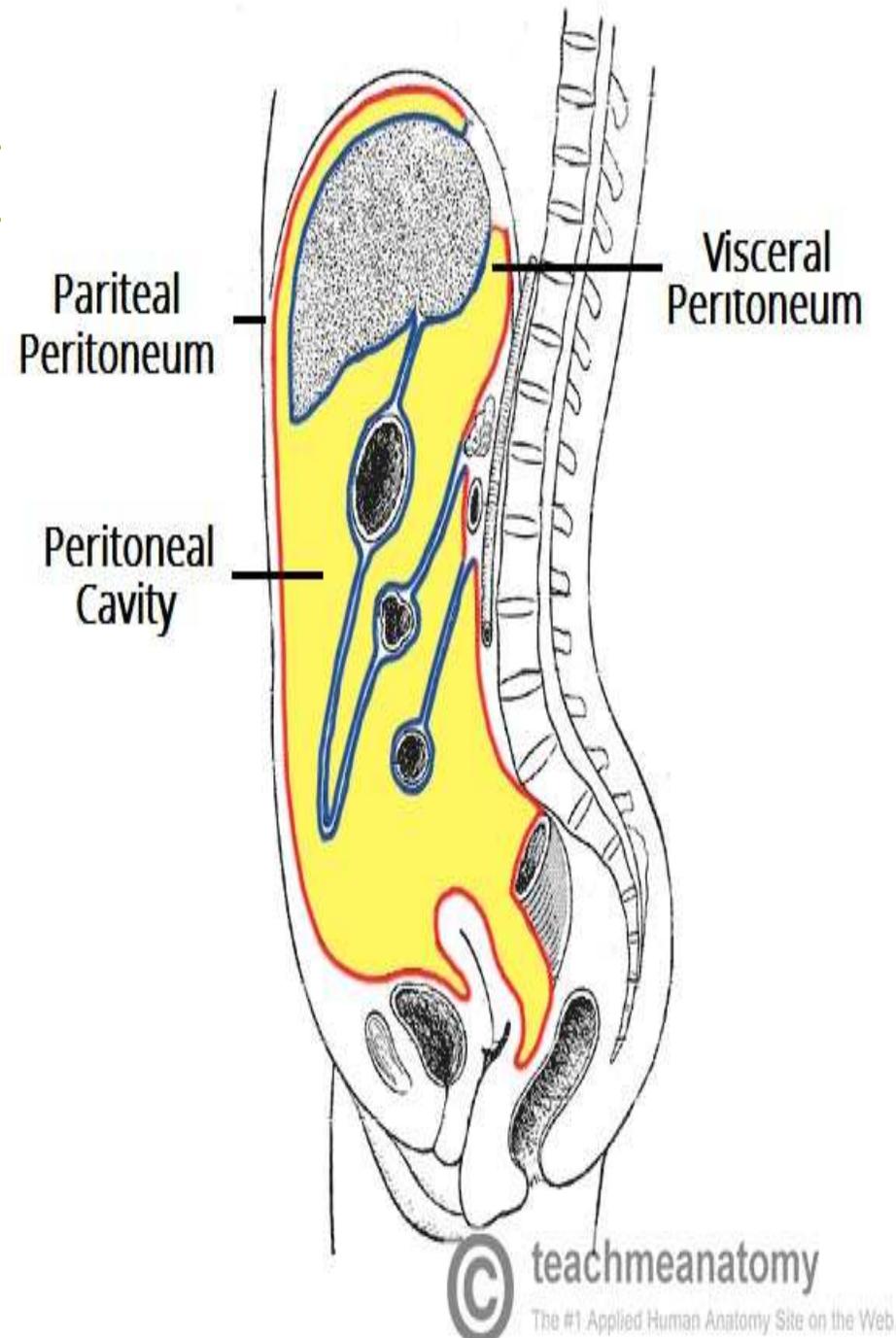
Peritoneum:

Def . : It is a thin serous membrane that lines the walls of the abdominal and pelvic cavities and clothes the viscera .



Layers of the peritoneum:

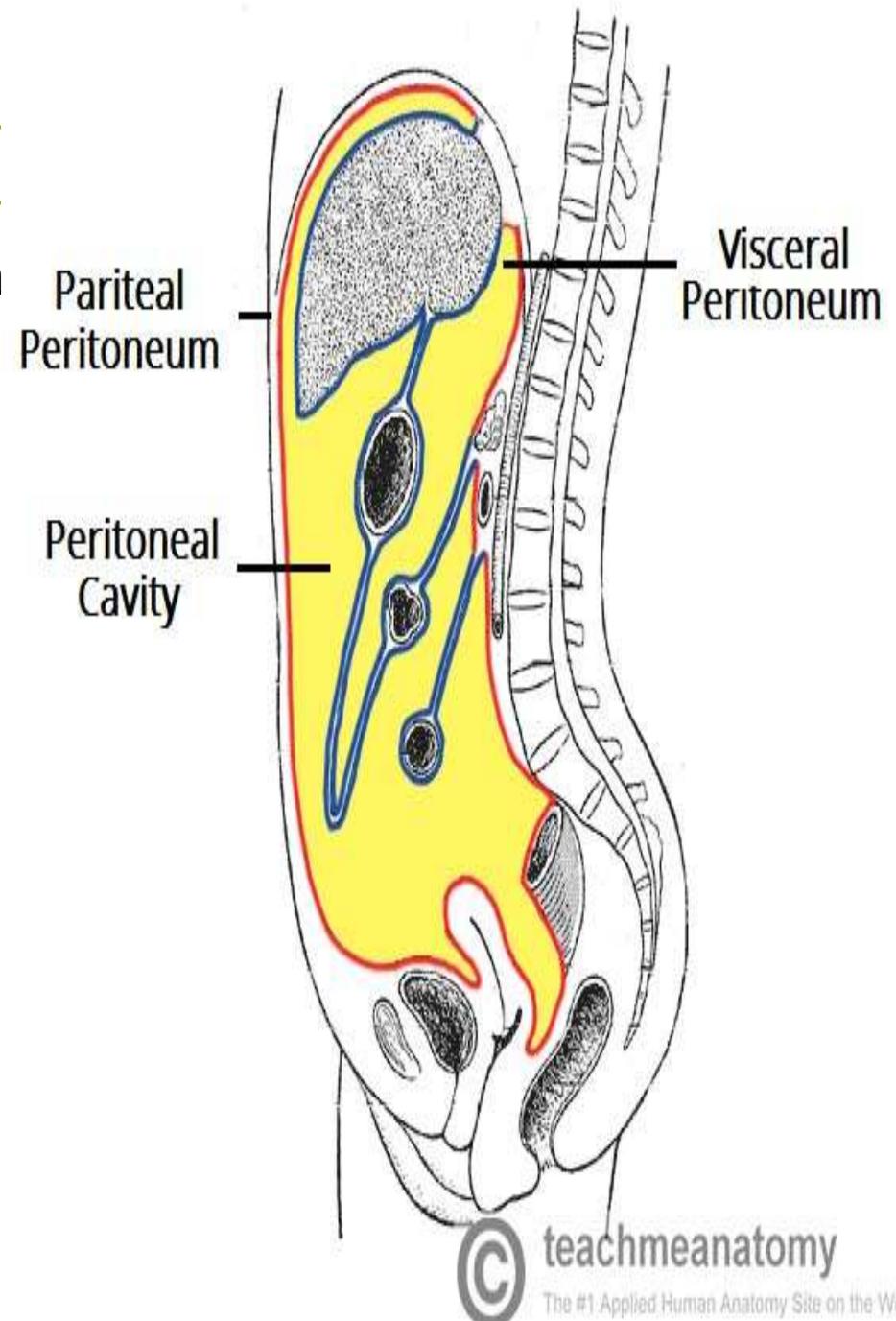
- 1. Outer Layer (Parietal Peritoneum) : lines the walls of the abdominal and pelvic cavities.**
- 2. Inner Layer (Visceral Peritoneum) : covers the organs inside abdominal cavity.**



Peritoneal Cavity:

D.: It is a potential space between parietal & visceral peritoneum.

It is filled with peritoneal fluid which is pale, yellow viscous contain leukocytes .



Classification of abdominal viscera:

1) Intraperitoneal structures:

It is almost totally covered with visceral peritoneum.

1. Stomach.

2. 1st part of duodenum , Jejunum , ileum

3. Cecum, appendix, transverse colon

4. Sigmoid colon , upper 1/3 of rectum

5. Liver, spleen.

6. uterus, fallopian tube, ovaries.

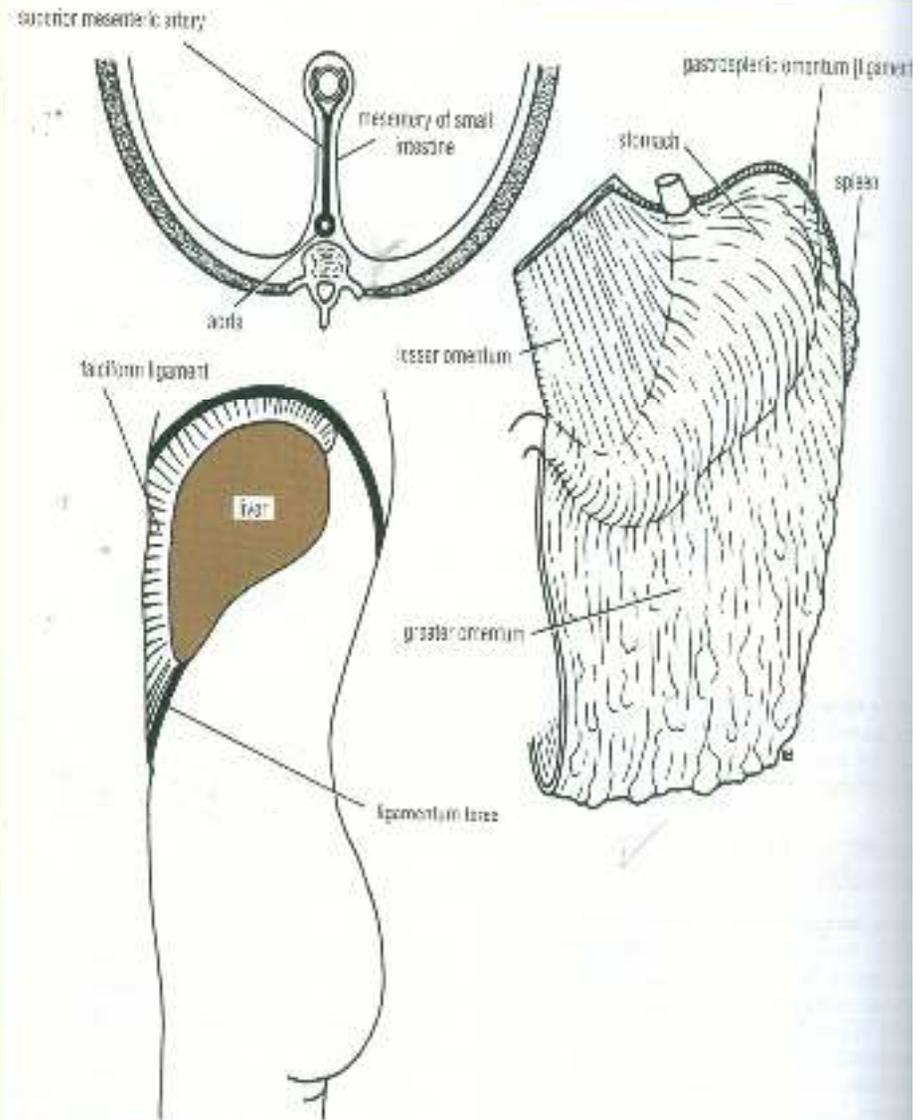
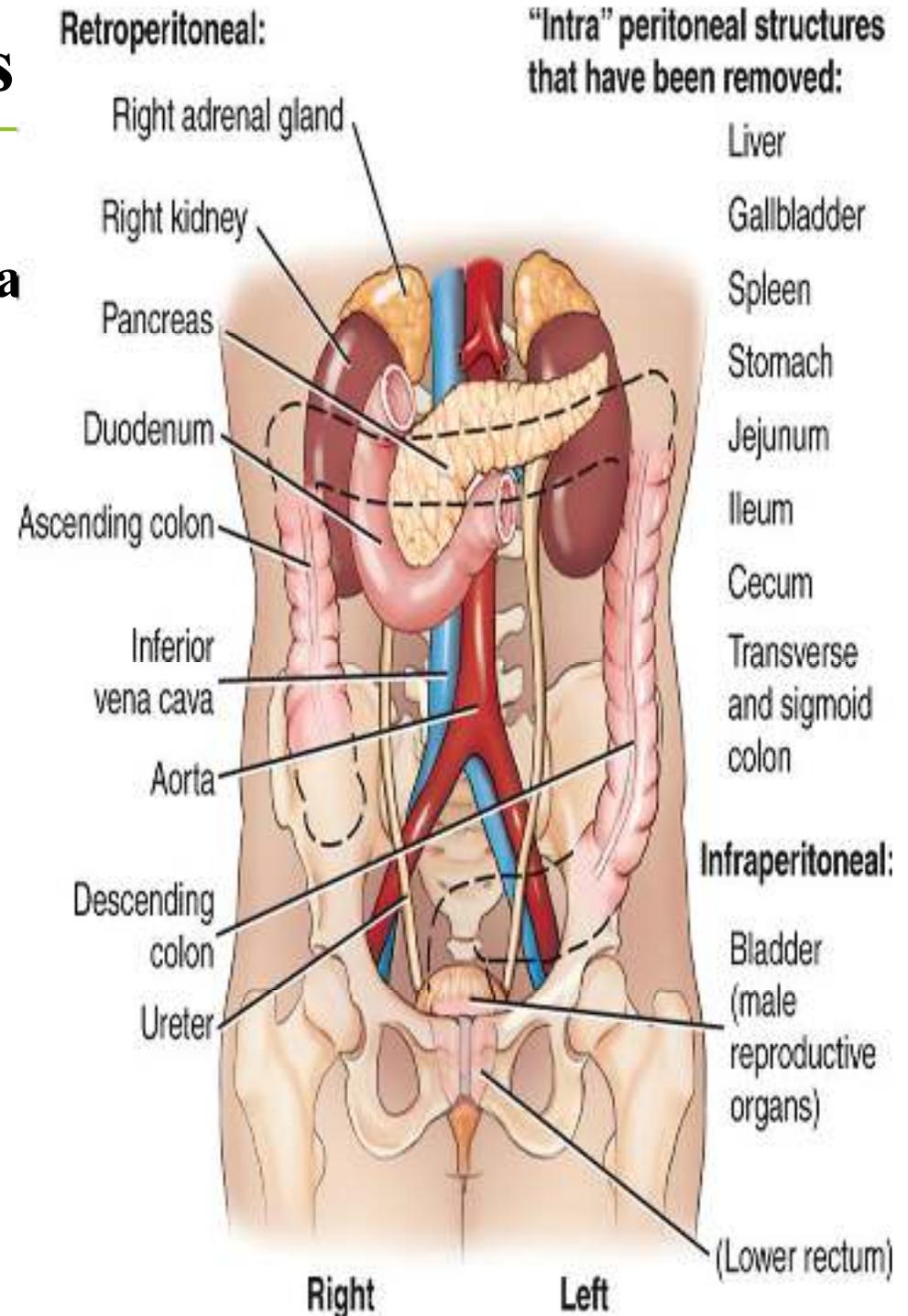


Figure 5-6 Mesentery of the small intestine, the omenta, and the falciform ligament. Note that the right edge of the greater omentum has been cut to show the layers of the peritoneum.

2) Retroperitoneal organs

lie behind the peritoneum and only partially covered with viscera peritoneum.

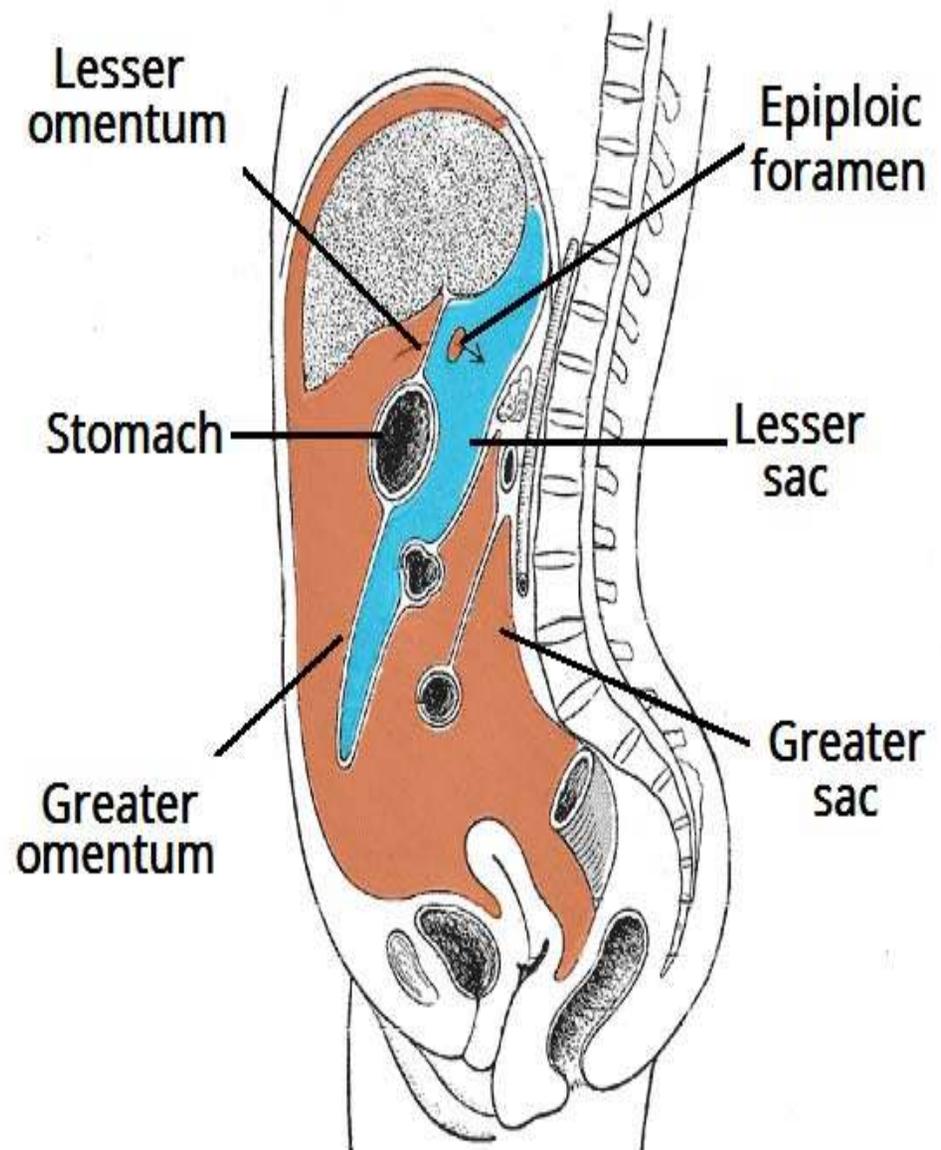
1. Rest of duodenum.
2. Ascending colon
3. Descending colon
4. Rectum: middle 1/3 & lower 1/3
5. Pancreas
6. Kidneys, suprarenal glands, ureters, Urinary Bladder.
7. Aorta, IVC, renal & gonadal vessels.



Peritoneal Cavity subdivisions:

1) The Greater Sac:

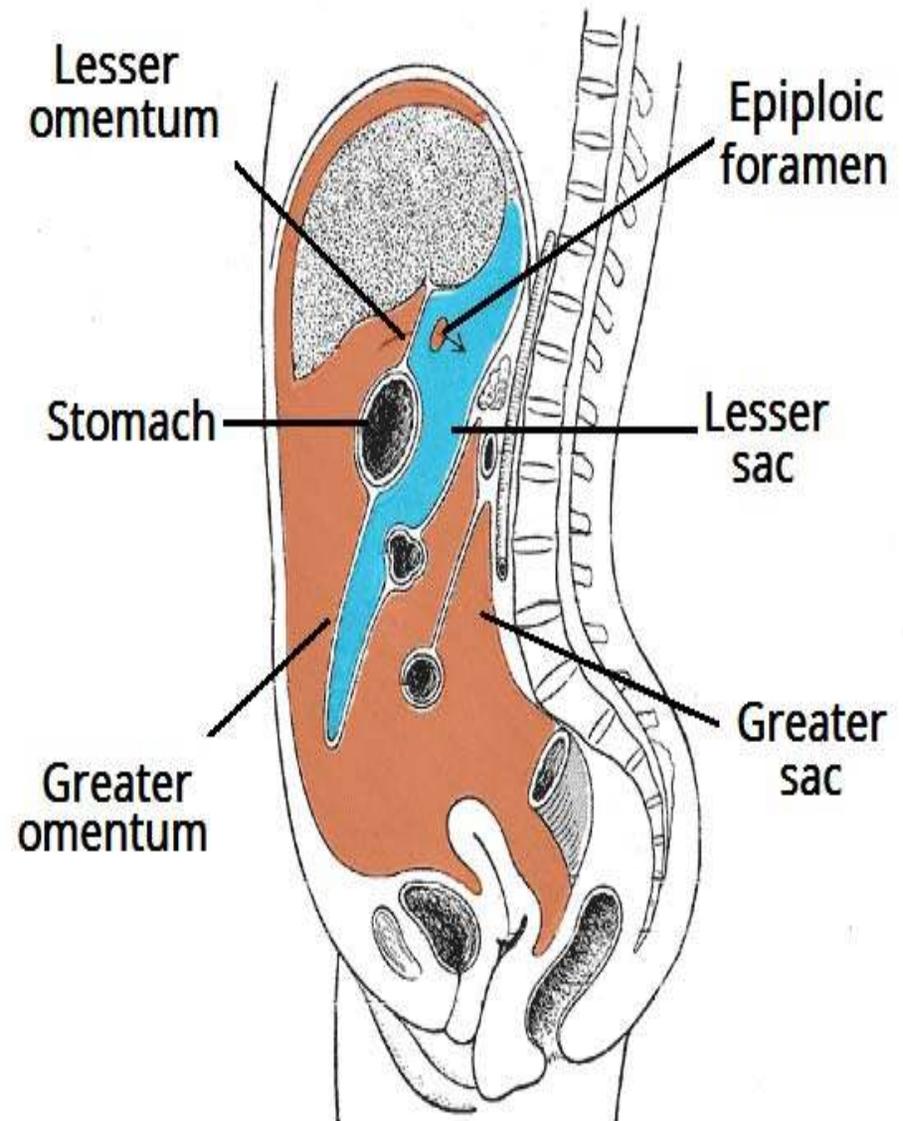
It is the main compartment and extends from the diaphragm down into the pelvis.

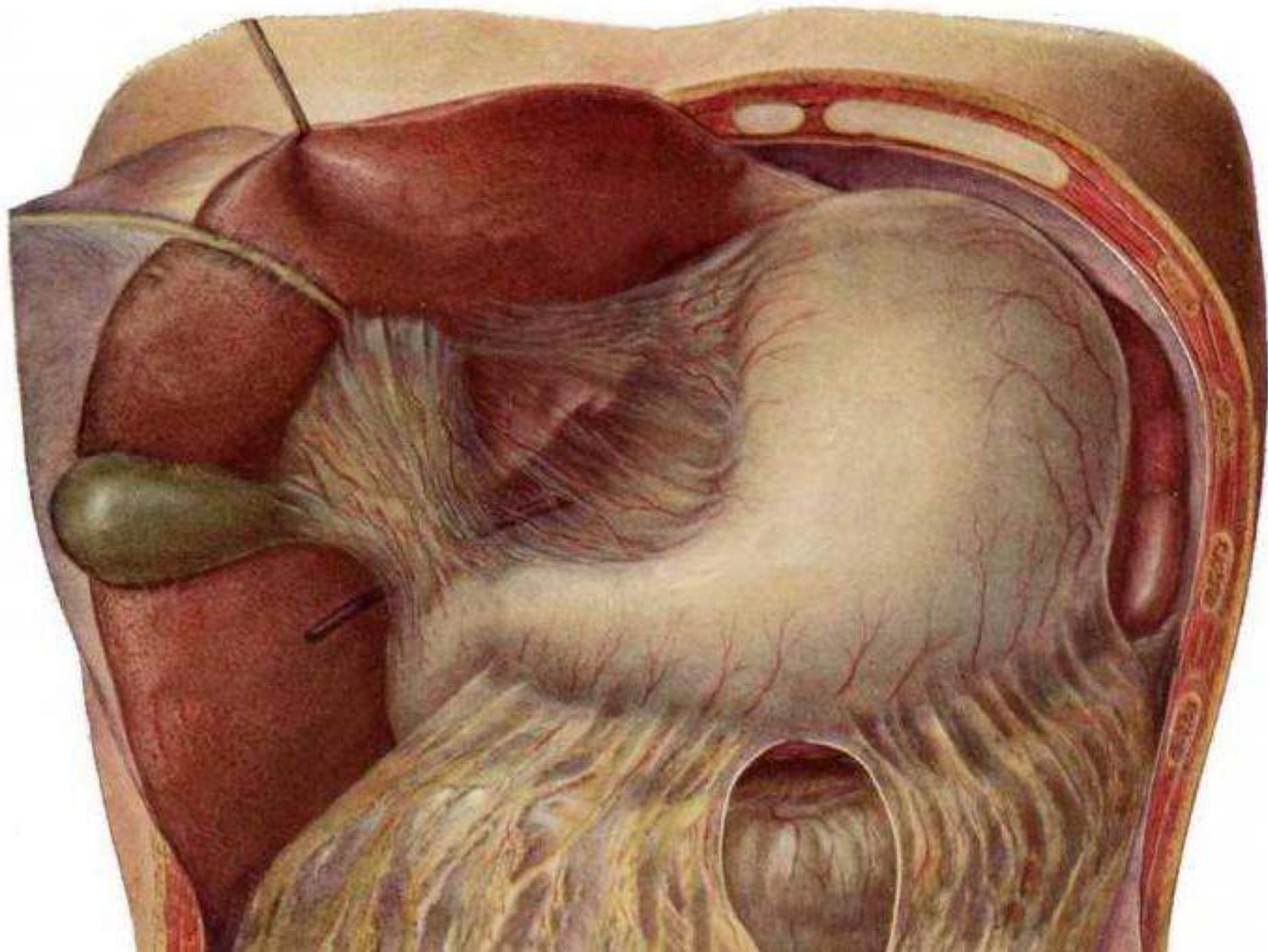


2)The lesser sac(Omental Bursa):

Def: a pouch situated behind lesser omentum and stomach and in front of posterior abdominal wall .

It extends upward as far as the diaphragm and downward between the layers of the greater omentum.





The Epiploic Foramen or opening of the lesser sac :

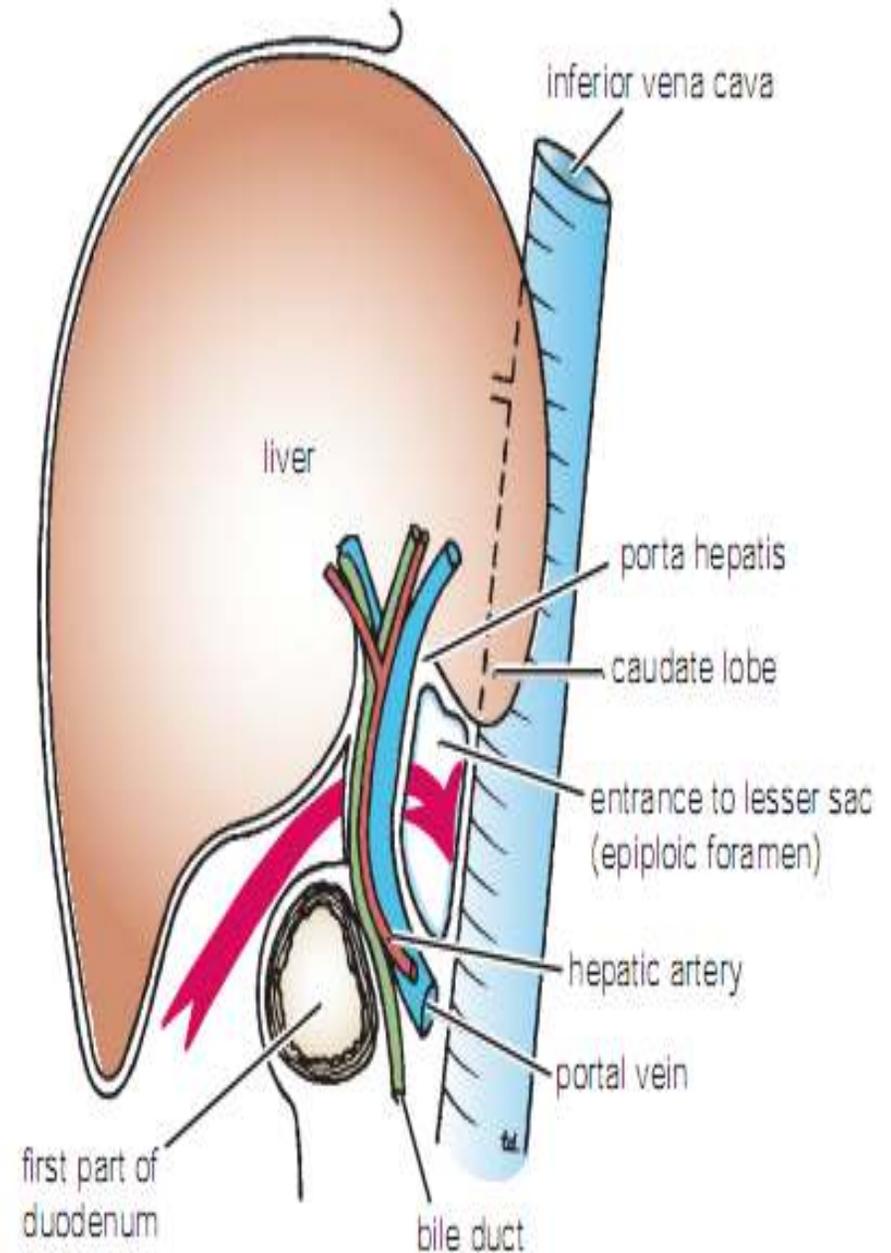
is an oval window the greater & lesser sacs communicated with one another.

Ant.: Free border of the lesser omentum, bile duct, hepatic artery & the portal vein .

Posteriorly: Inferior vena cava.

Sup.: caudate lobe of the liver.

Inf.: 1st part of the duodenum

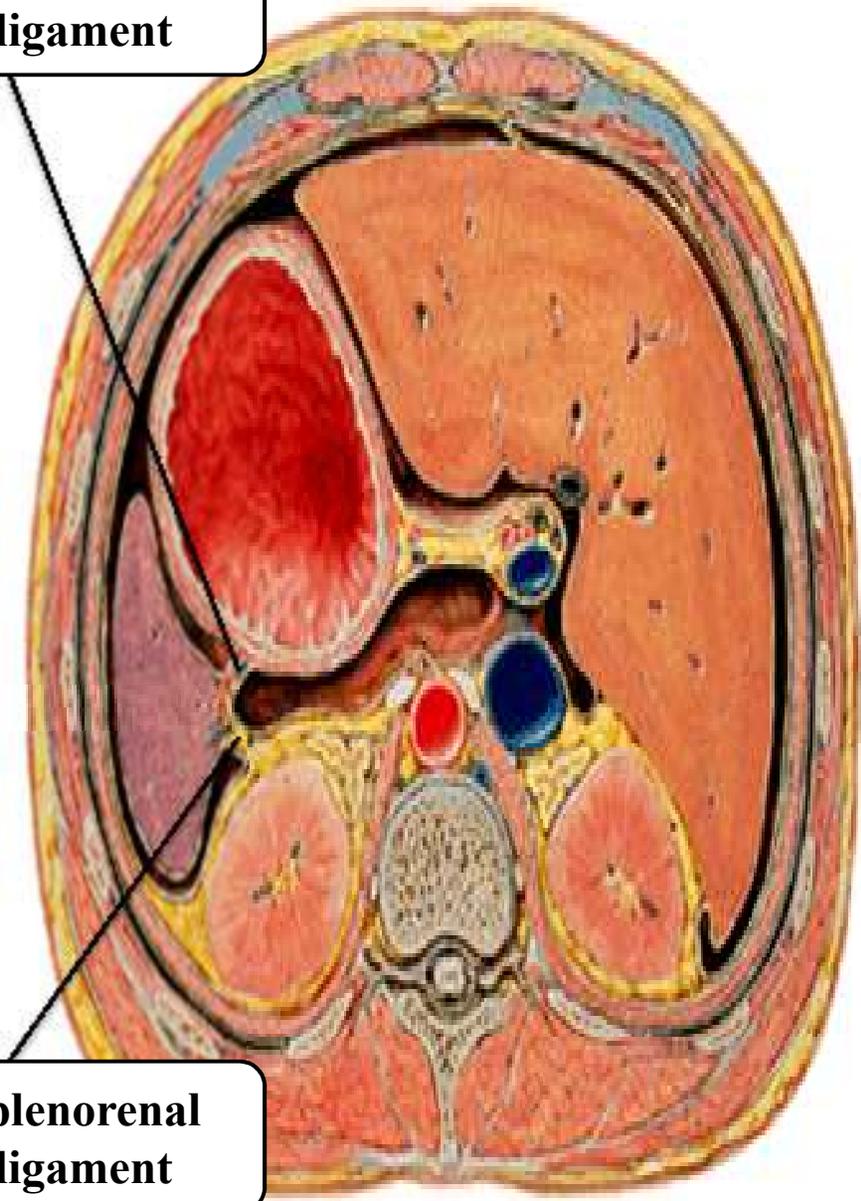


Left: spleen and its
ligament
(gastrosplenic omentum &
splenicorenal ligament)

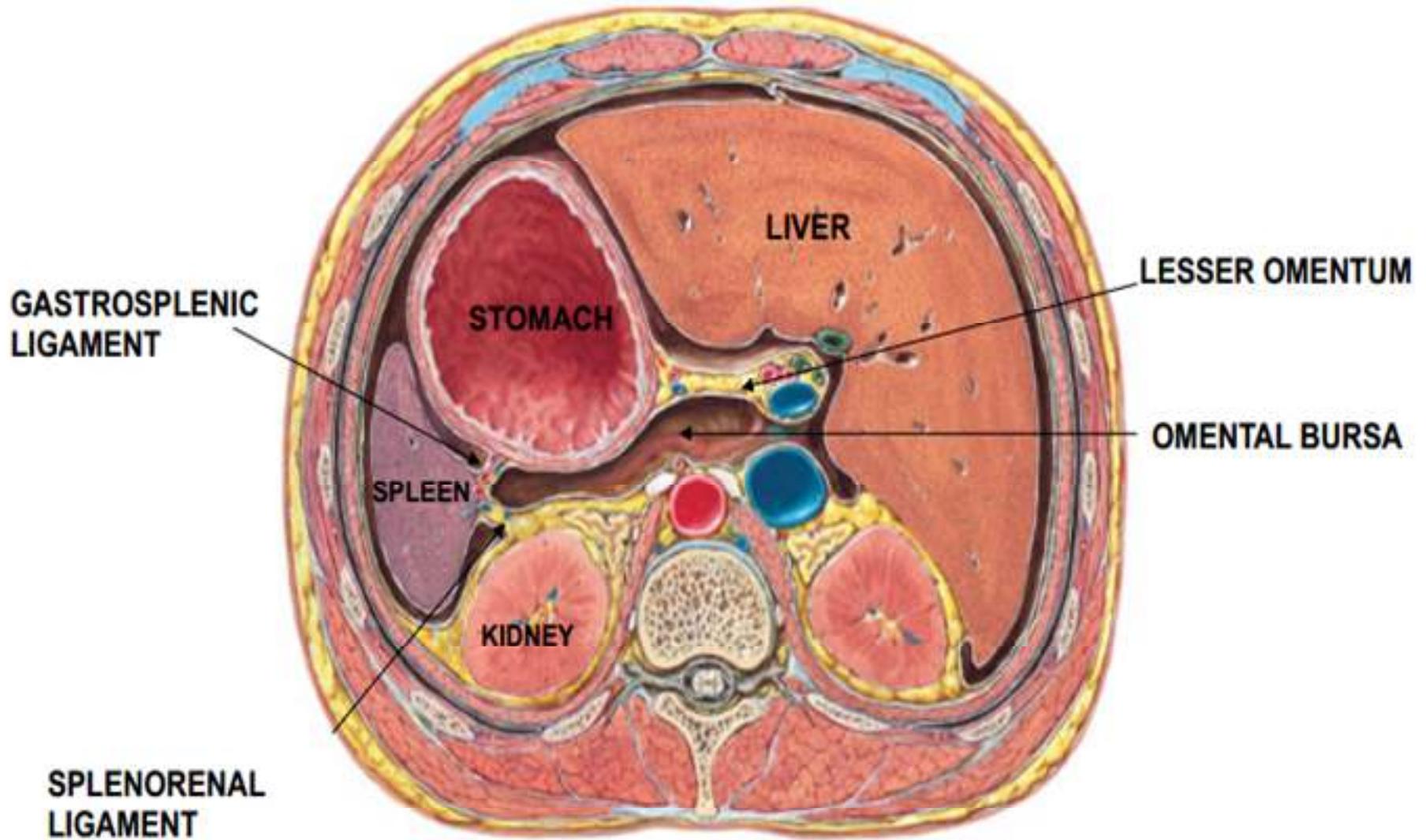
Right: margin opens into
the greater sac (the main part
of the peritoneal cavity)

Gastrosplenic
ligament

spleno-renal
ligament



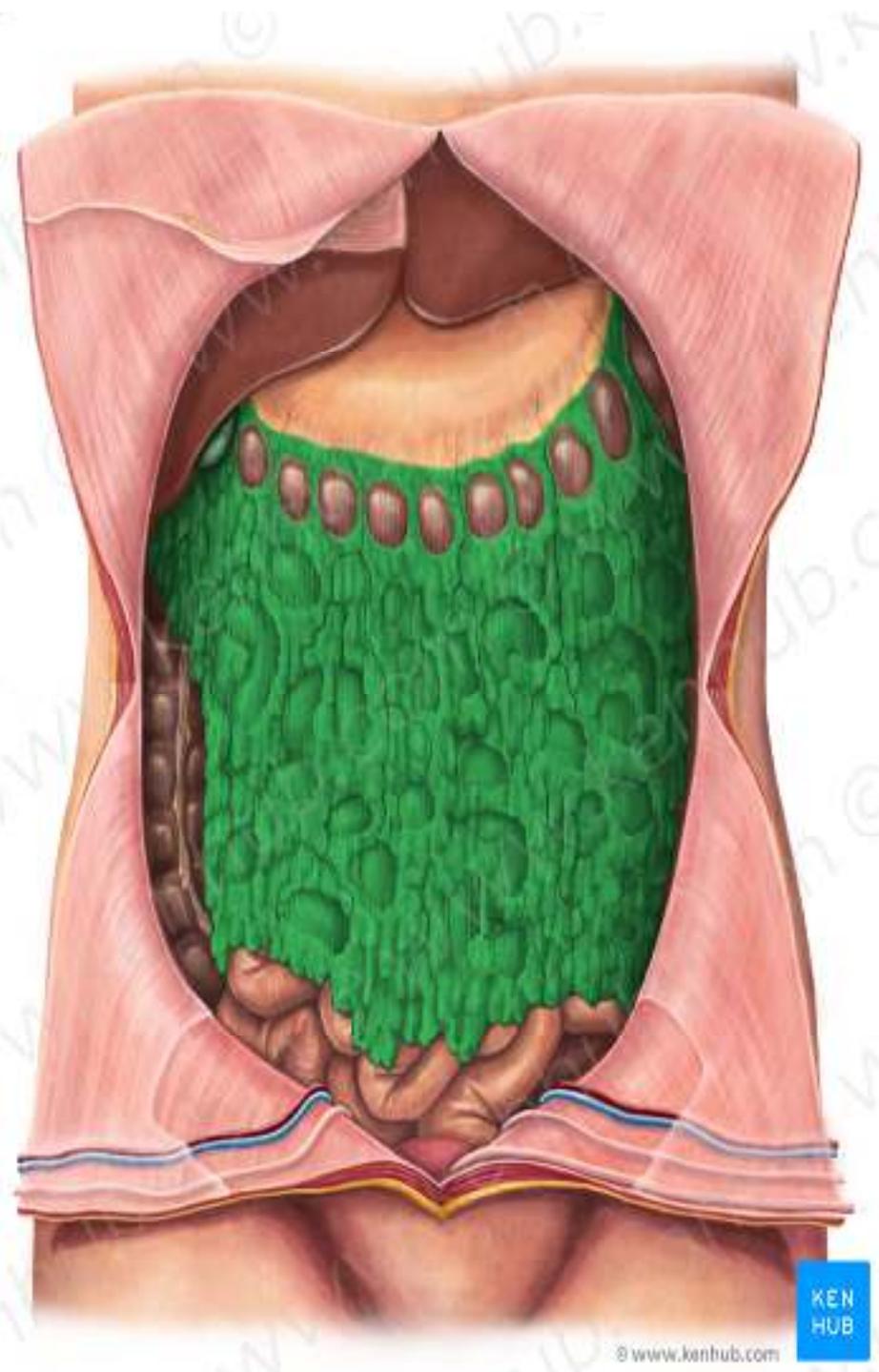
CROSSECTION OF ABDOMEN

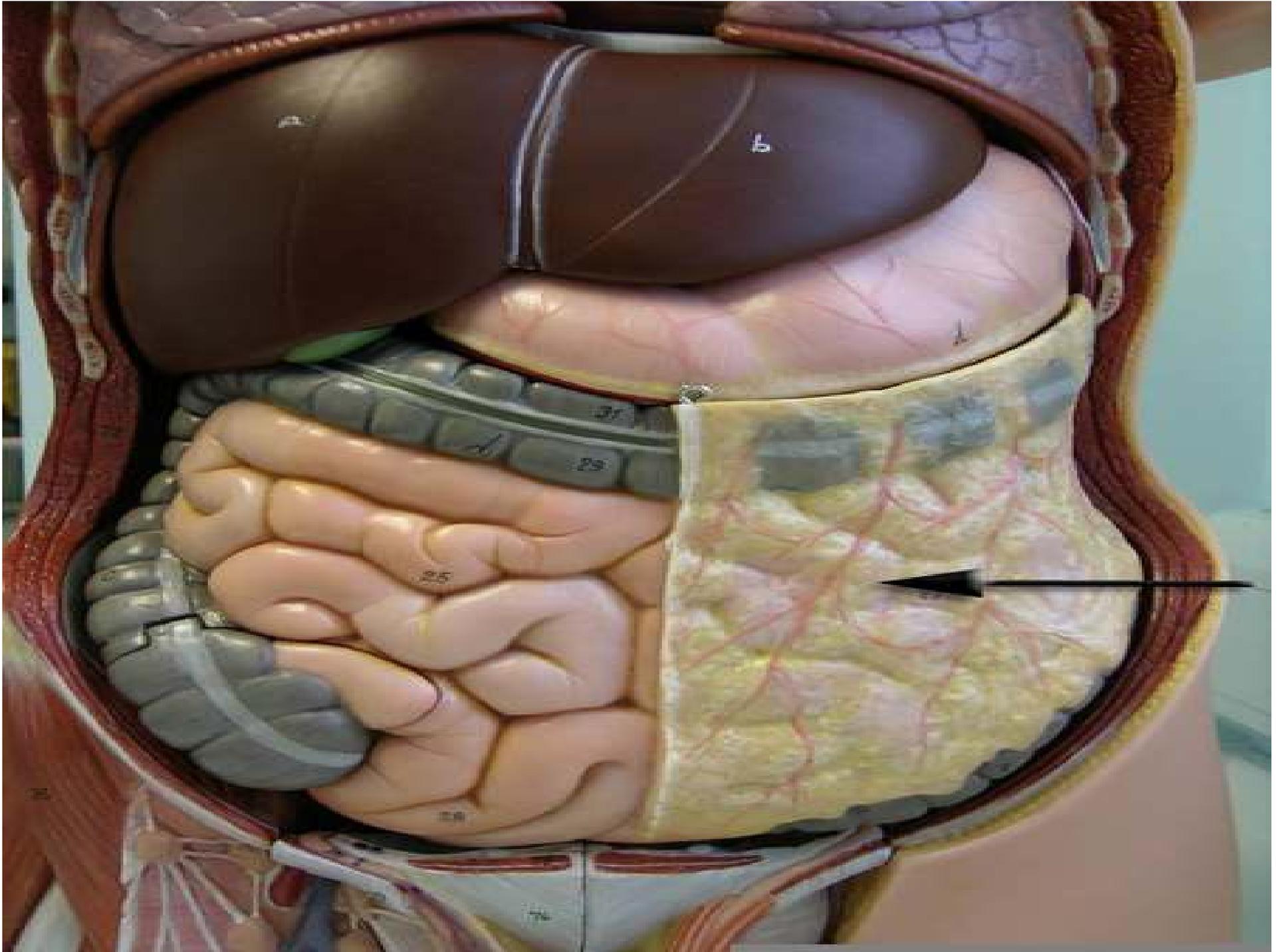


Omenta:

They are two-layered folds of peritoneum that connect the stomach to another viscus.

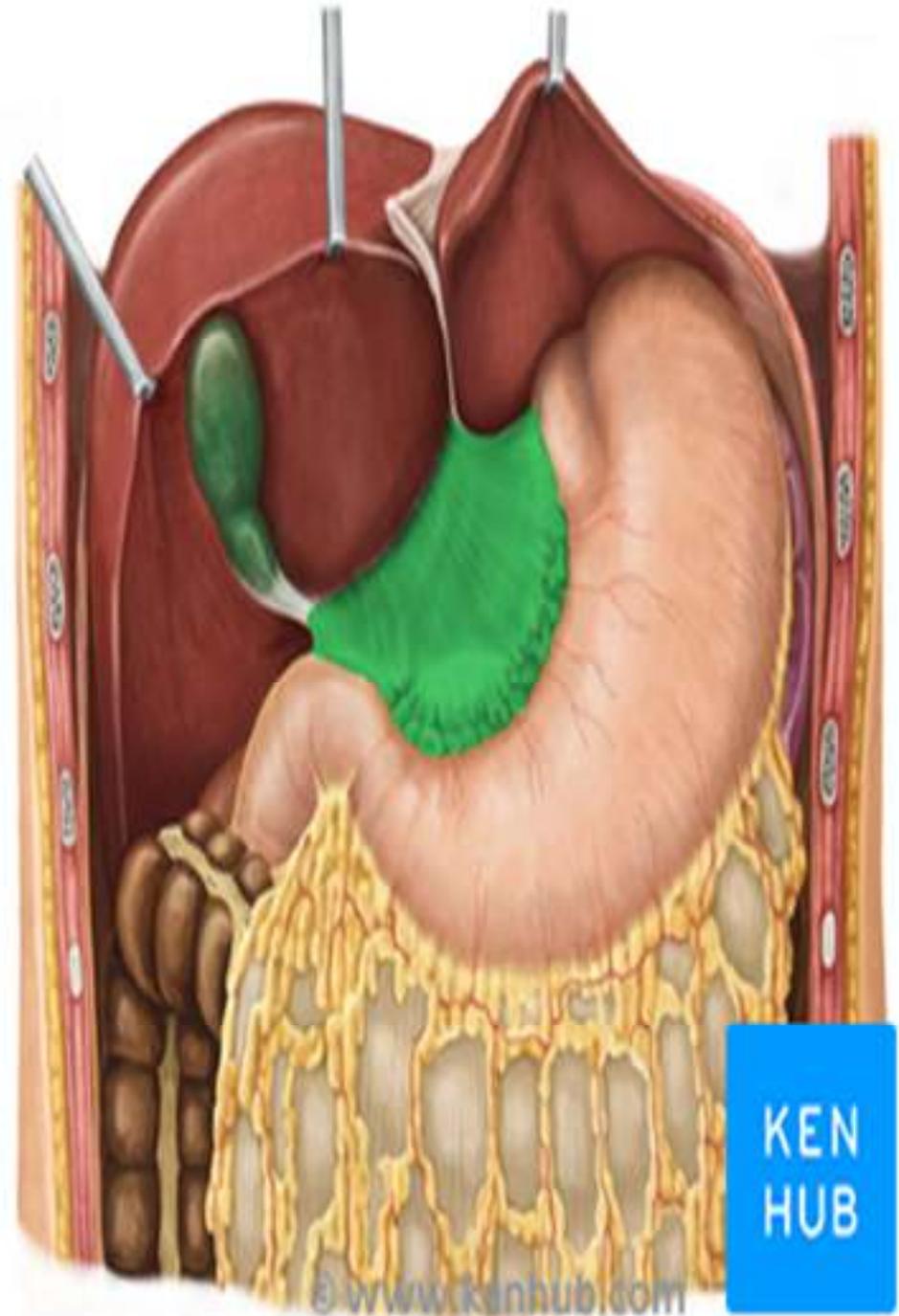
1) **Greater Omentum:** connects greater curvature of stomach to transverse colon .It hangs down like an apron in front of coils of small intestine and is folded back on itself to be attached to the transverse colon .





2) lesser omentum :

It suspends the lesser curvature of the stomach to the porta hepatis on undersurface of the liver.



Mesenteries :

They are two-layered folds of peritoneum connecting parts of intestines to posterior abdominal wall such as mesentery of small intestine, transverse mesocolon & sigmoid mesocolon .

The Mesentery

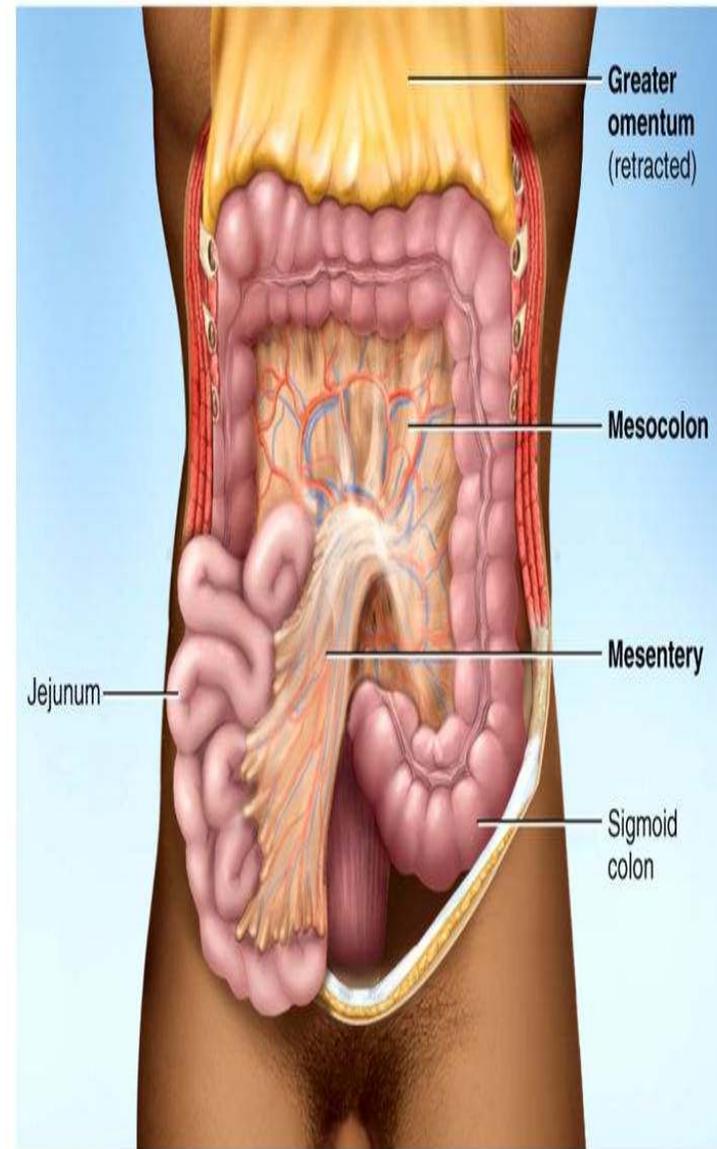
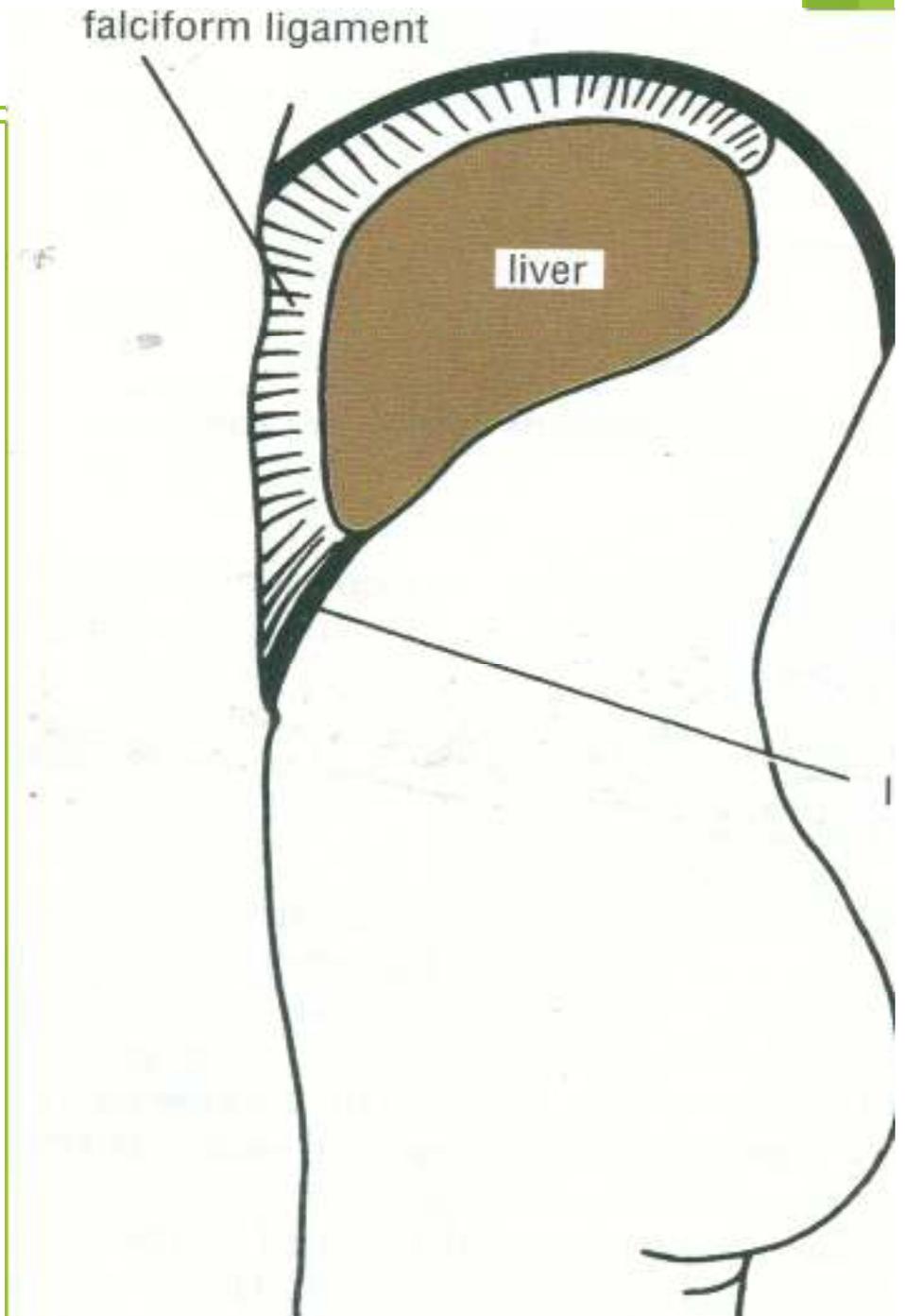


Figure from: Saladin, *Anatomy & Physiology*, McGraw Hill, 2007

Peritoneal Ligaments:

They are two-layered folds of peritoneum that connect solid viscera to abdominal walls or another structure.

1) Liver is connected to abdominal wall & diaphragm by ligaments e.g. falciform ligament.

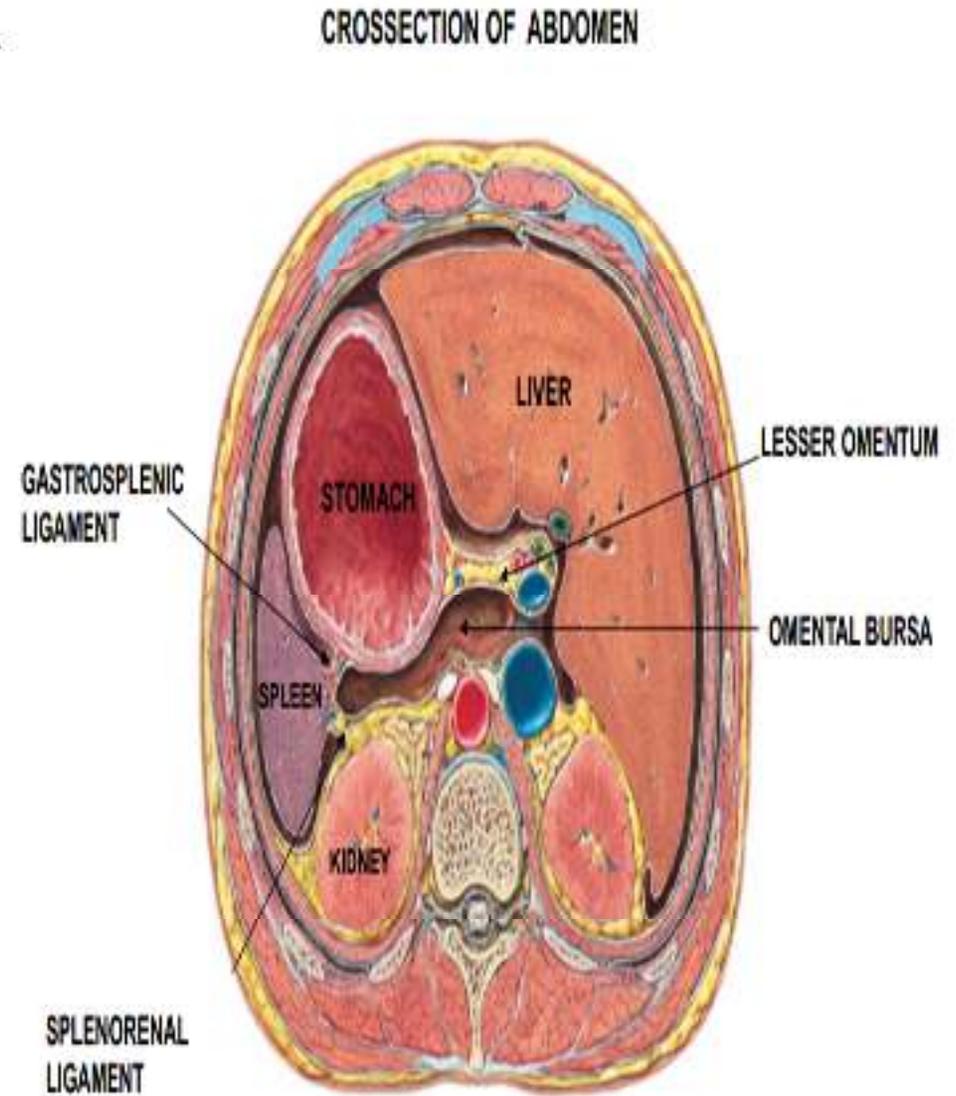


2. Leno renal ligament (splenorenal):

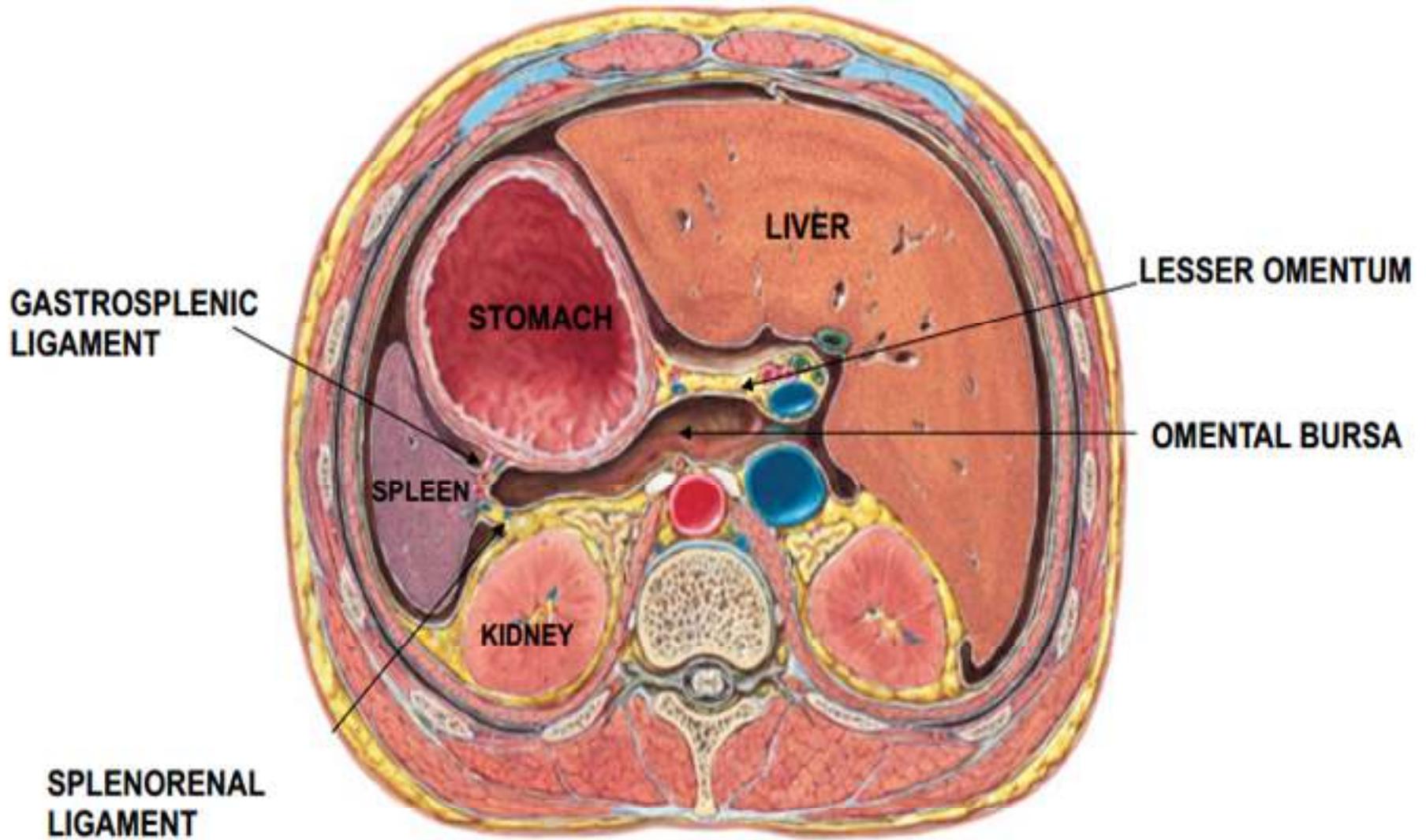
It fold of peritoneum from kidney to spleen.

3) Leno gastric ligament (gastrosplenic):

Its connects the stomach to the spleen.



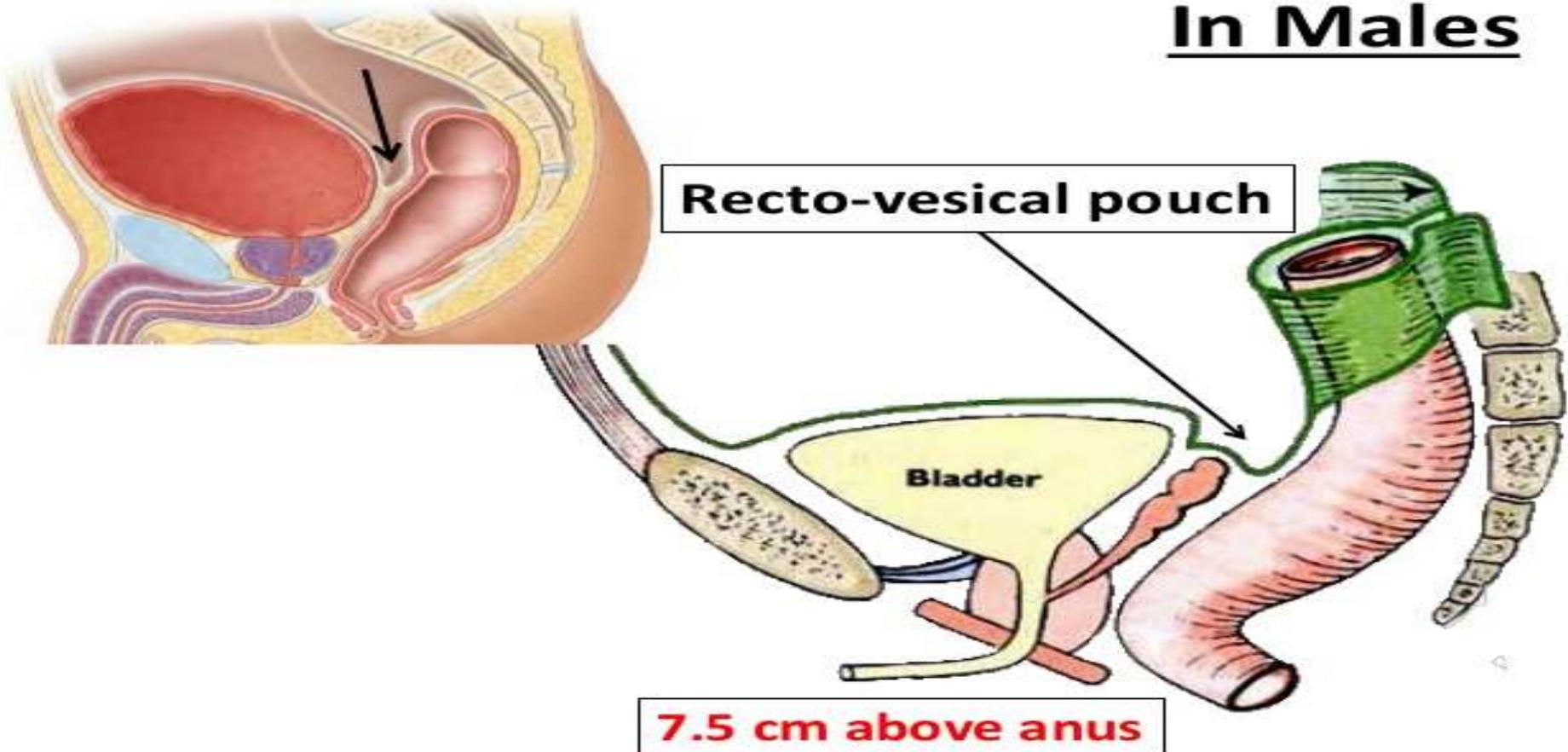
CROSSECTION OF ABDOMEN



Peritoneal pouches:

It is a pouch that form by peritoneum folds between 2 viscera e.g.

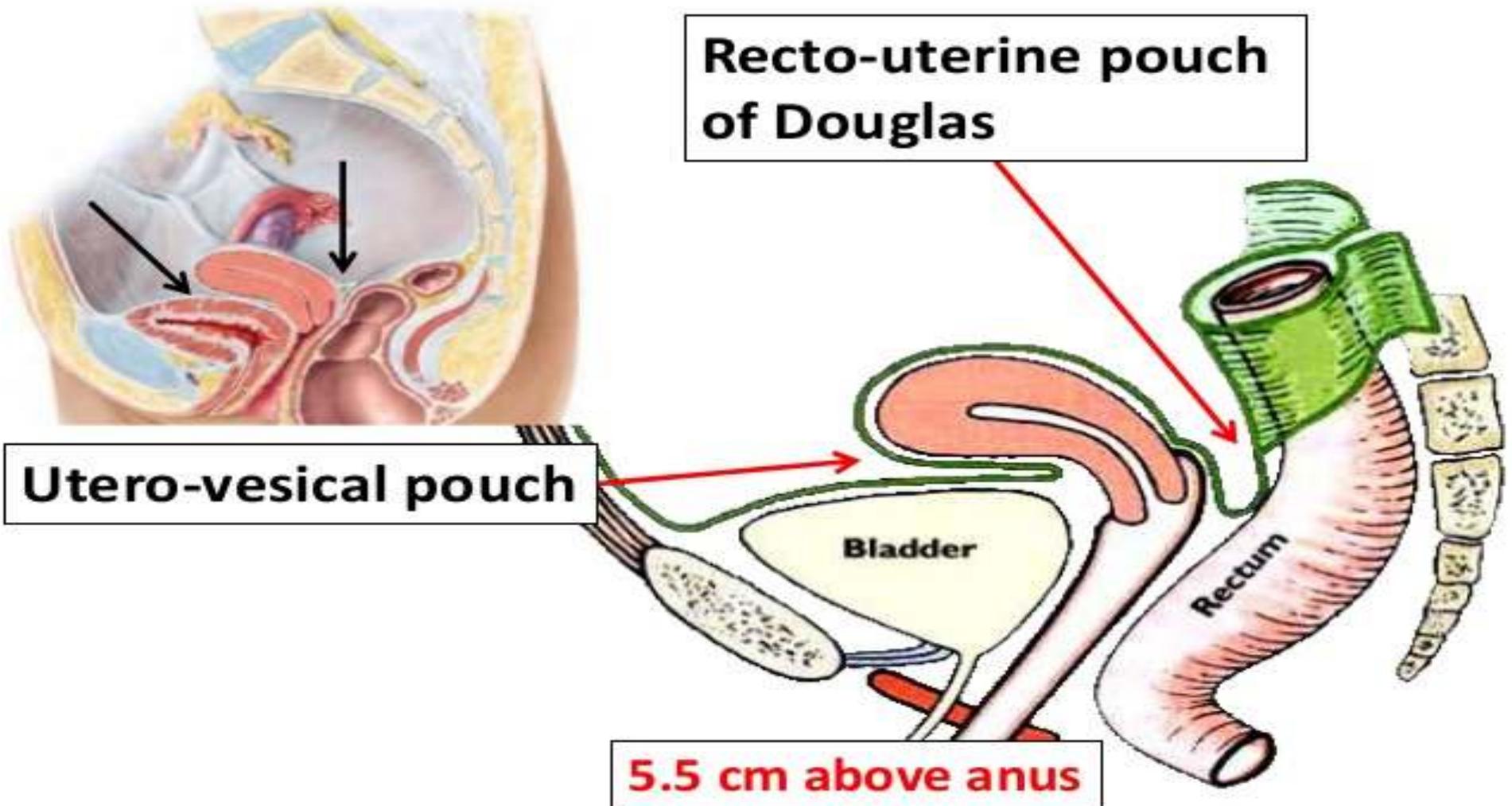
1) **Recto vesicle pouches:** Lie between rectum and urinary bladder in male.



2) **Recto uterine pouch:** Between rectum and uterus in female .

3) **Vesico uterine pouch:** Between bladder and uterus in female.

In Females



Peritoneal Recesses:

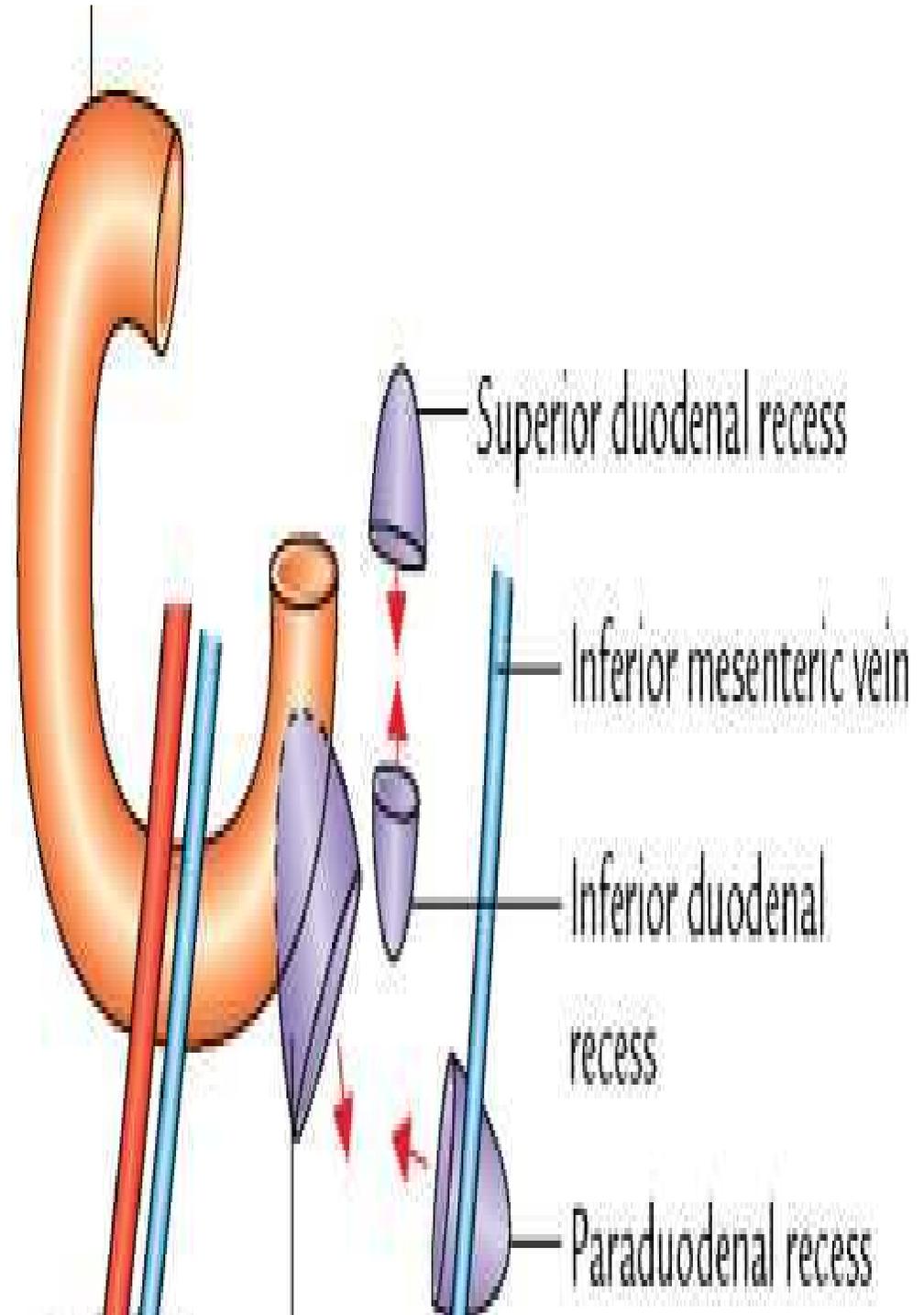
1) Duodenal Recesses:

4 small pockets like pouches of peritoneum:

- Superior duodenal recess.
- Inferior duodenal recess.
- Paraduodenal recess.
- Retroduodenal recess.

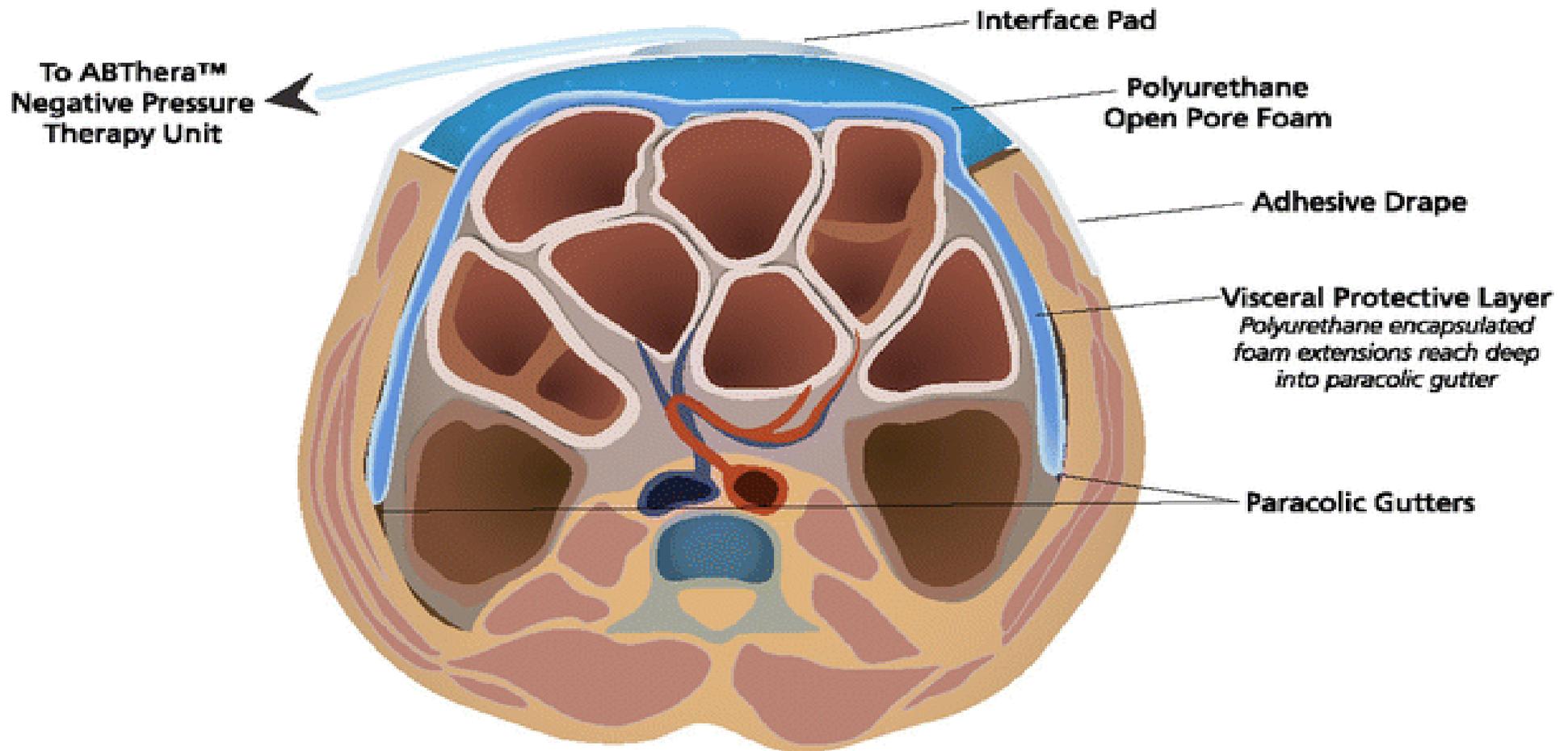
2) Cecal Recesses

3) Intersigmoid Recess



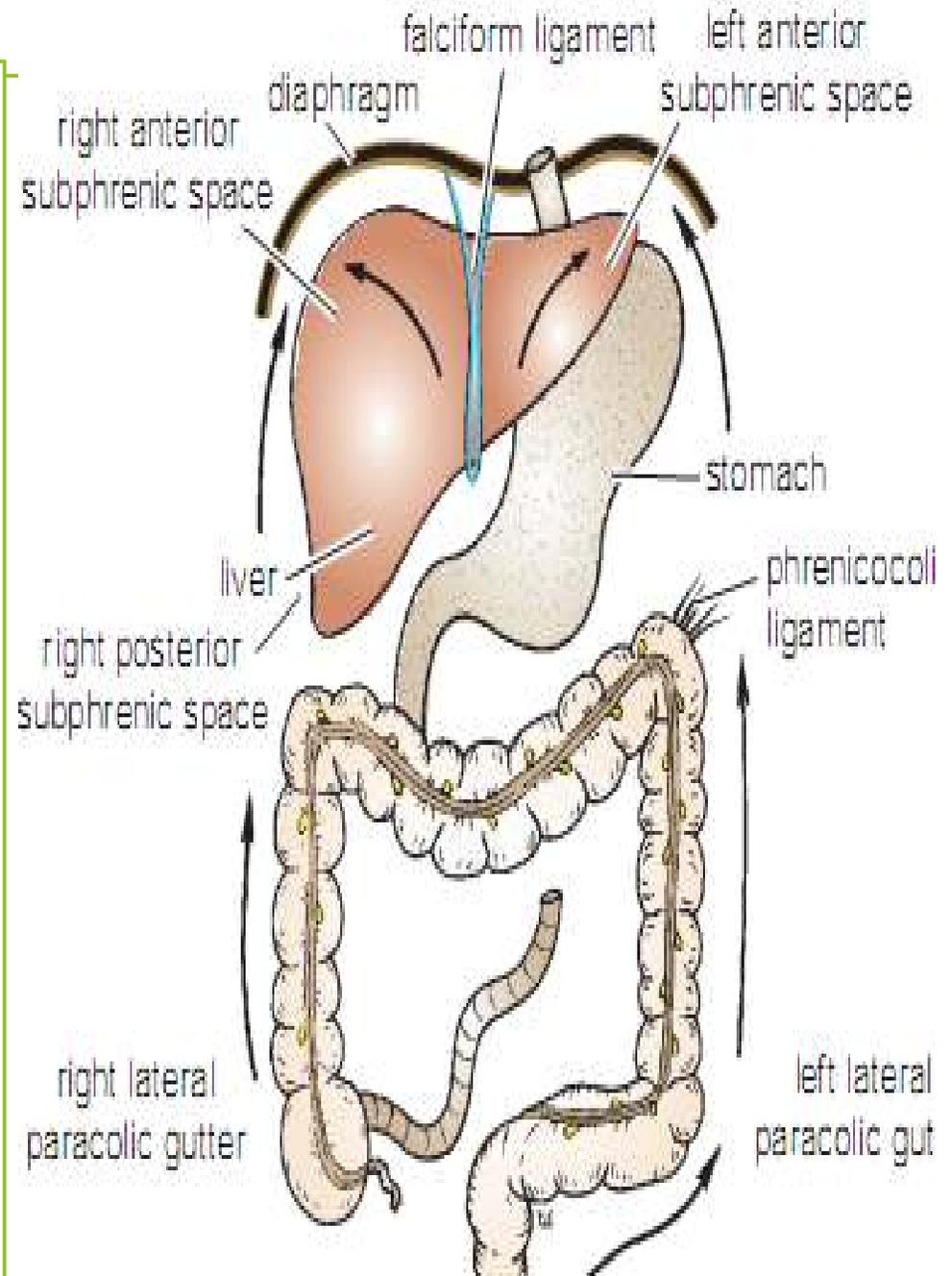
Paracolic Gutters:

The paracolic gutters it look like a space lie on lateral and medial sides of ascending & descending colons, respectively.



Subphrenic Spaces:

- 1) **The right and left anterior subphrenic spaces: lie between the diaphragm and the liver.**
- 2) **The right posterior subphrenic space: lies between right lobe of liver, right kidney & right colic flexure.**





Source: Block J, Jordanov MI, Stack LB, Thurman RJ: *The Atlas of Emergency Radiology*: www.accessemergencymedicine.com
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