•ANATOMY OF THE LARGE INTESTINE

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OBJECTIVES

At the end of the lecture, students should:

- **List the different parts of large intestine.**
- **List the characteristic features of colon.**
- **Describe the anatomy of different parts of large intestine regarding: *the surface anatomy, peritoneal covering, relations, arterial & nerve supply.***

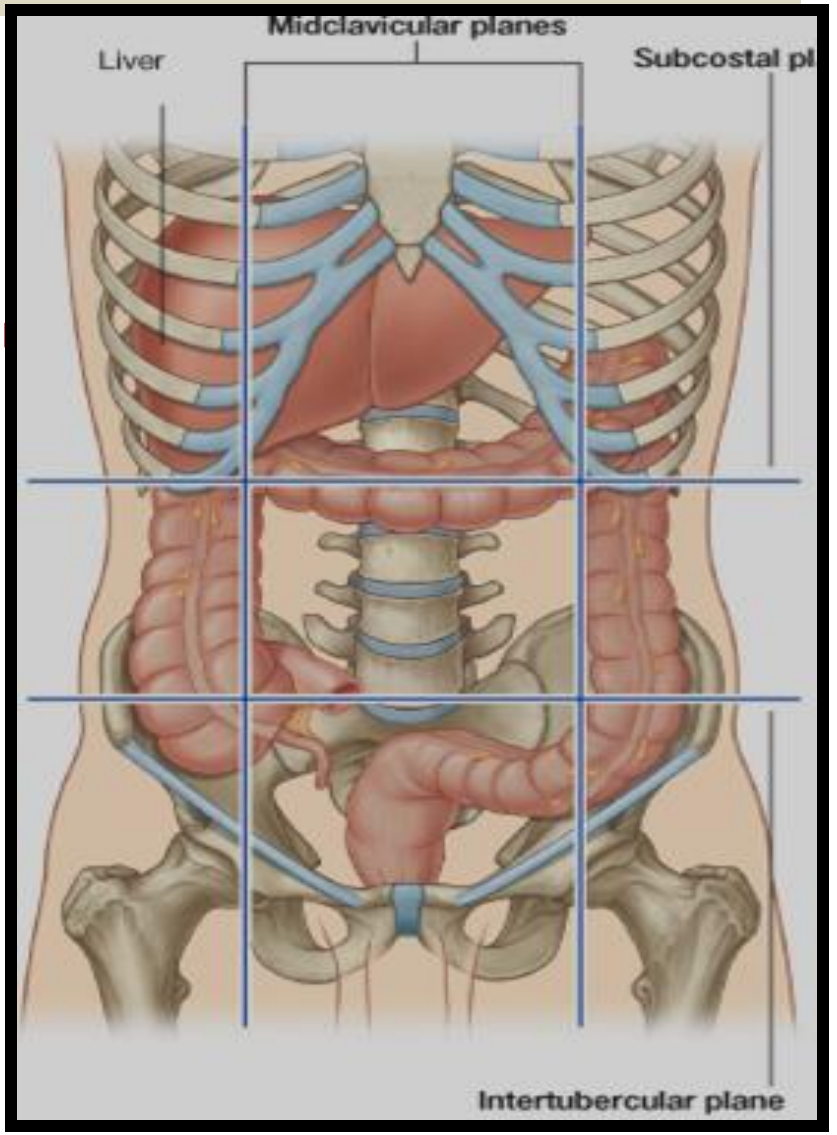
Parts of Large Intestine

- CECUM
- APPENDIX
- ASCENDING COLON
- TRANSVERSE COLON
- DESCENDING COLON
- SIGMOID COLON
- RECTUM
- ANAL CANAL

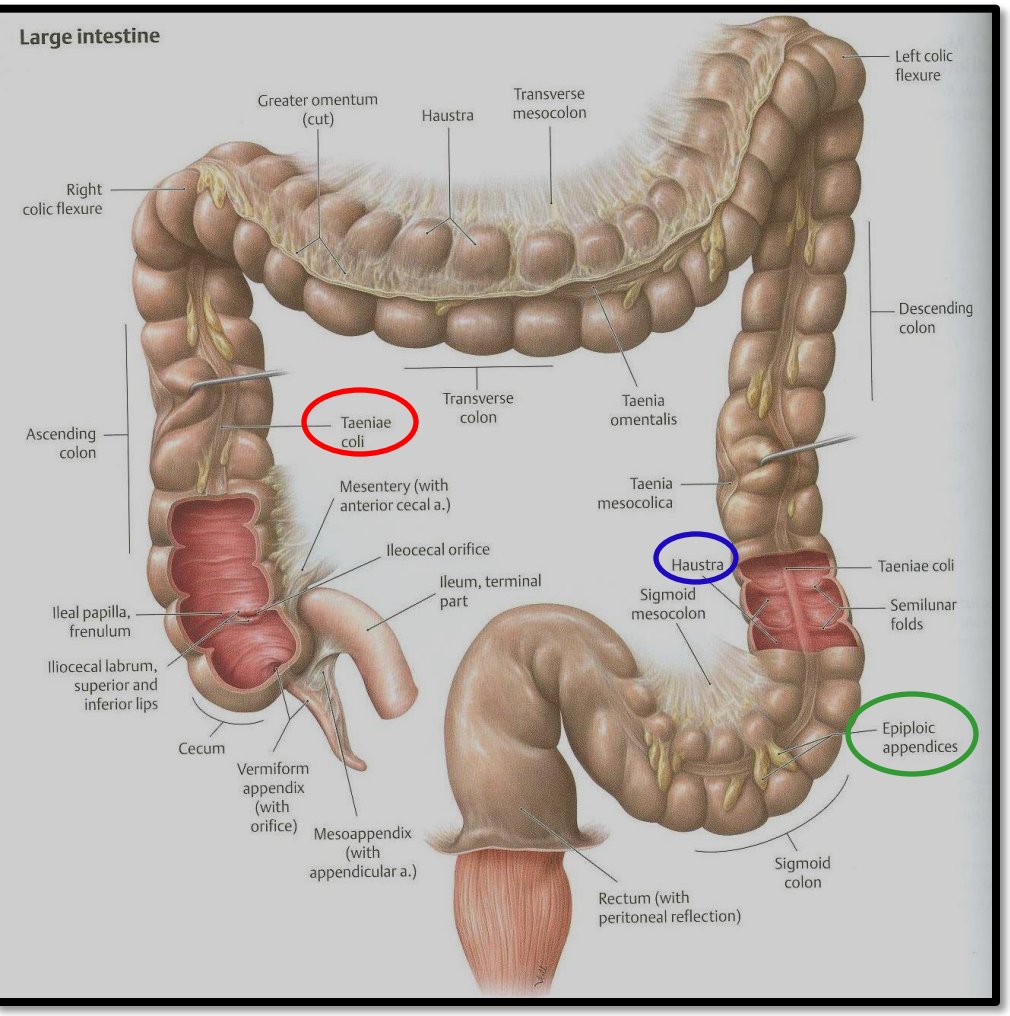
Abdomen

Pelvis

Perineum



Characteristics of COLON
(NOT FOUND IN RECTUM & ANAL CANAL



1. Taeniae coli:

(3) longitudinal muscle bands

2. Sacculations (Haustra):

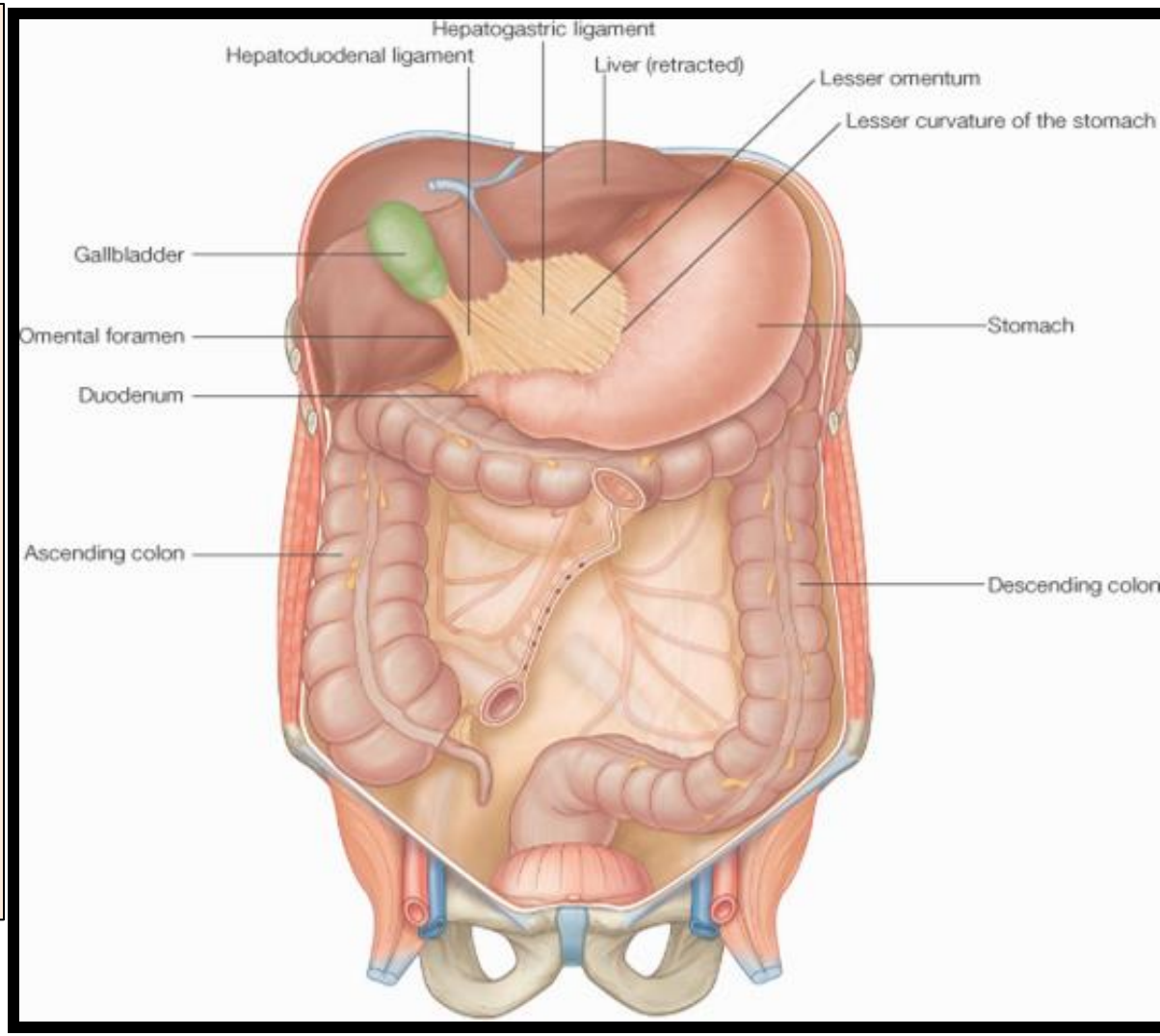
Because the Taeniae coli are shorter than large intestine

3. Epiploic Appendices :

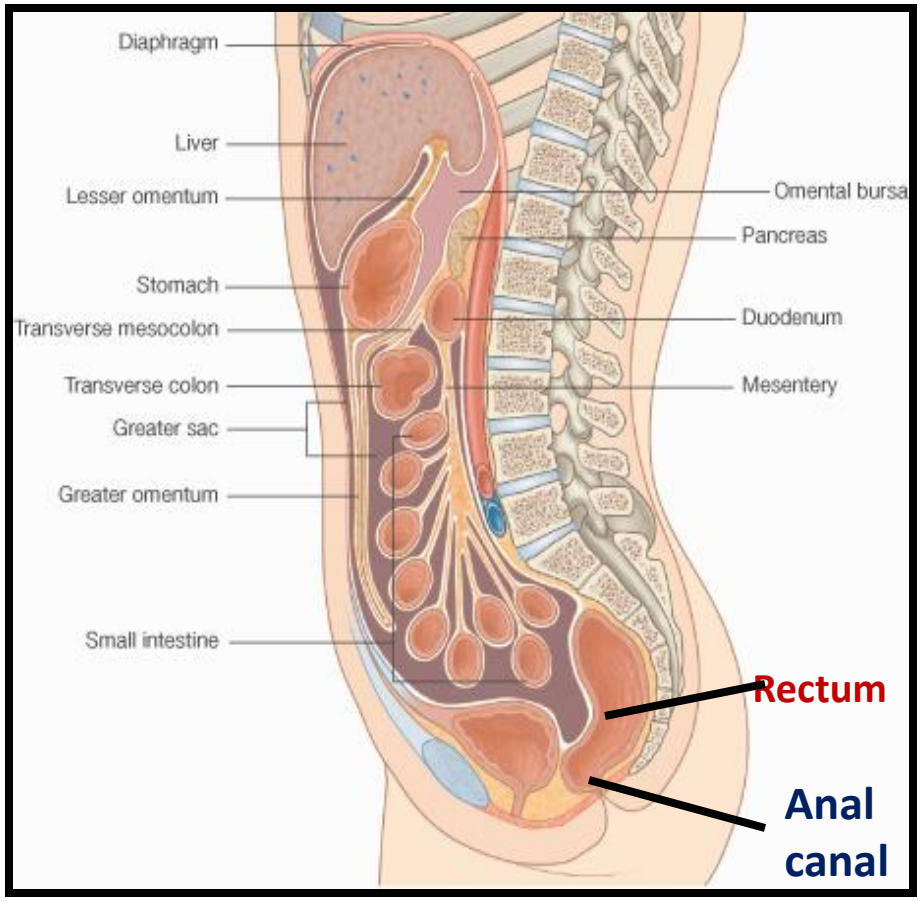
Short peritoneal folds filled with fat

Peritoneal Covering

- **PARTS WITH MESENTERY:**
  1. Transverse colon
  2. Sigmoid colon
  3. Appendix
  4. Cecum
- **RETROPERITONEAL PARTS:**
  1. Ascending colon
  2. Descending colon
  3. Upper 2/3 of rectum



Peritoneal Covering

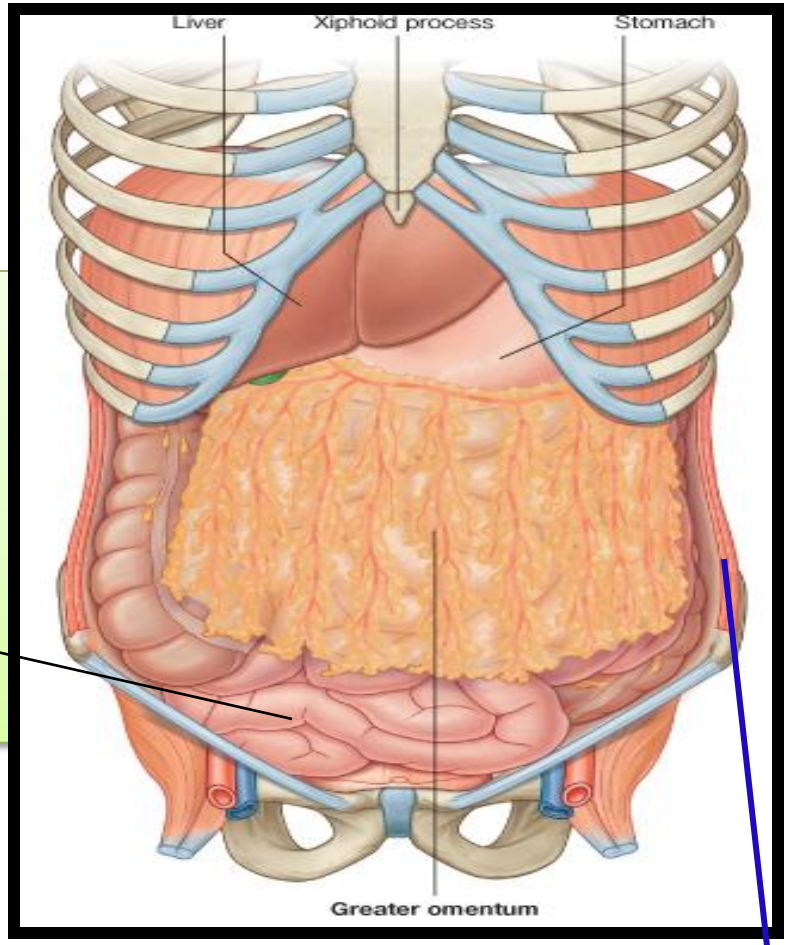


PARTS DEVOID OF PERITONEAL COVERING:

1. Lower 1/3 of rectum
2. Anal canal

Anterior Relations of (CECUM – ASCENDING & DESCENDING COLONS)

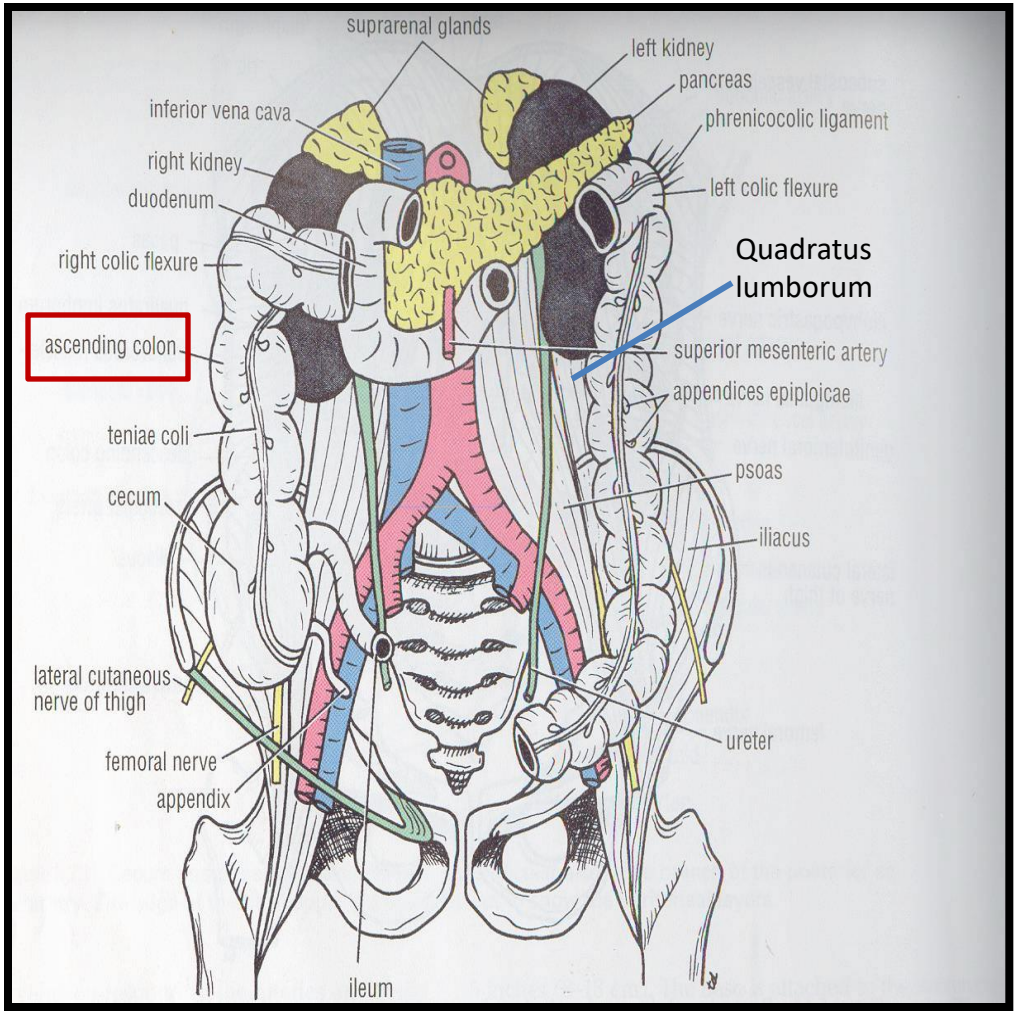
- Greater omentum
- Coils of small intestine



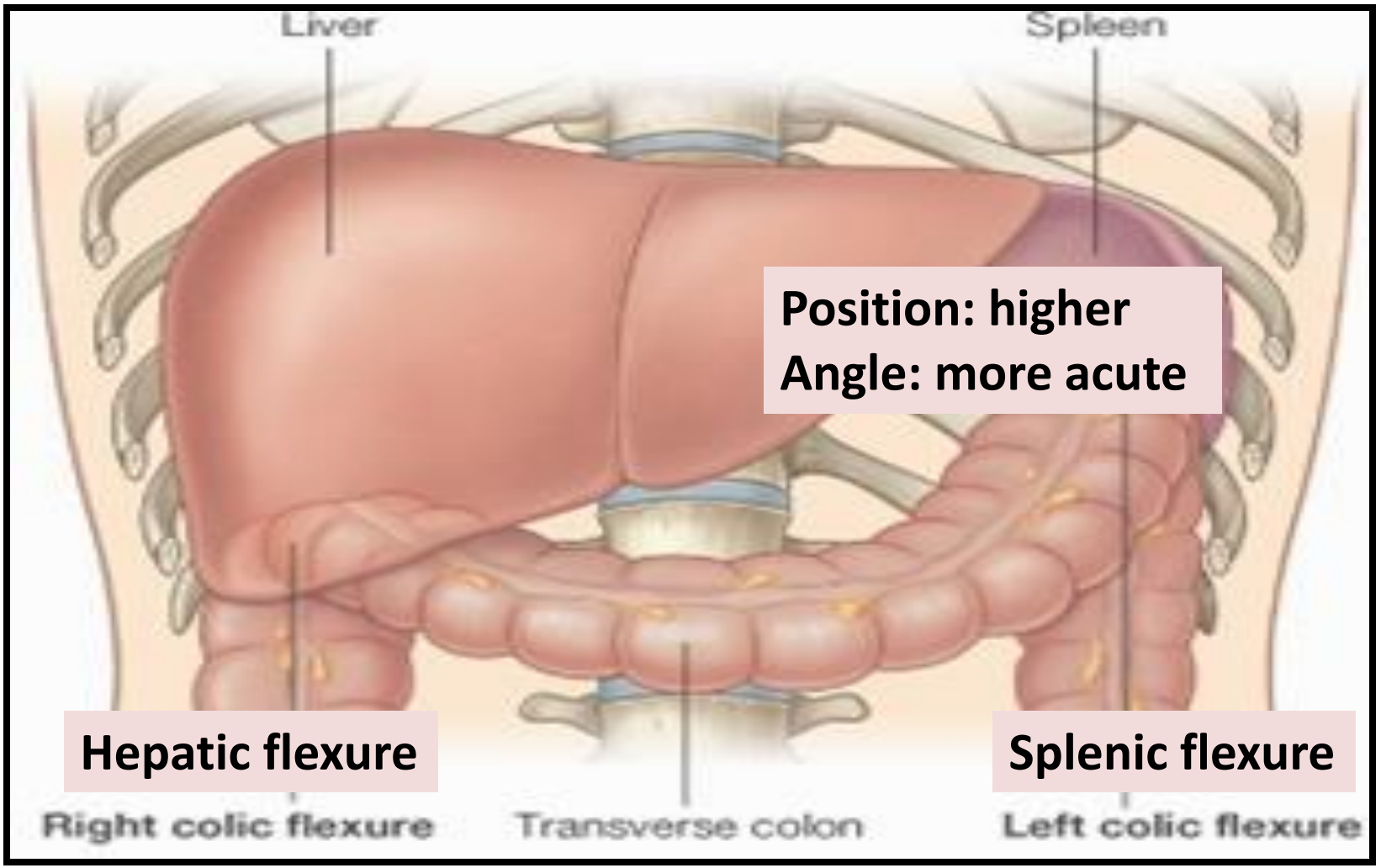
- Anterior abdominal wall

Posterior Relations (CECUM – ASCENDING & DESCENDING COLONS)

- **Cecum:**
  1. Psoas major
  2. Iliacus
- **Ascending colon:**
  1. Iliacus
  2. Quadratus lumborum
  3. Right kidney.
- **Descending colon:**
  1. Left kidney
  2. Quadratus lumborum
  3. Iliacus

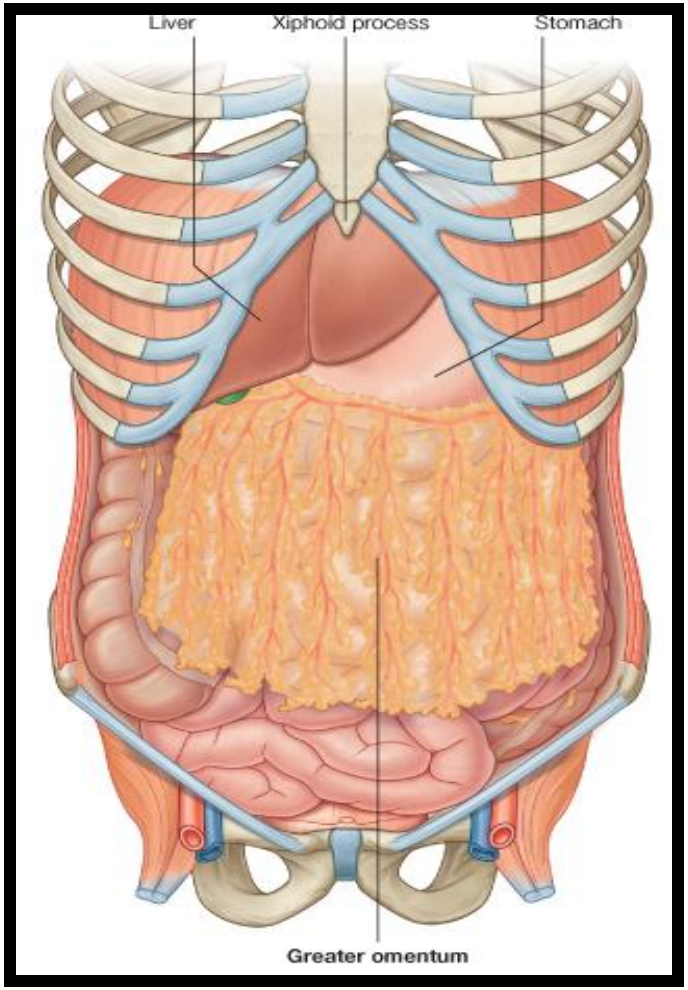


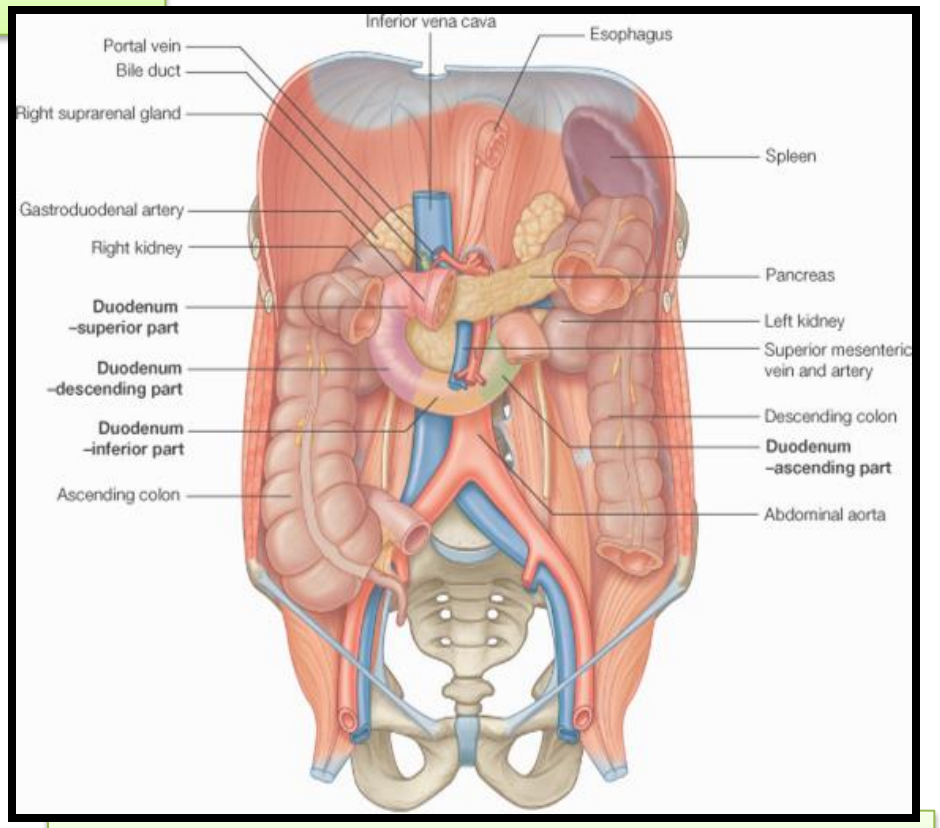
COLIC FLEXURES



Relations of Transverse Colon

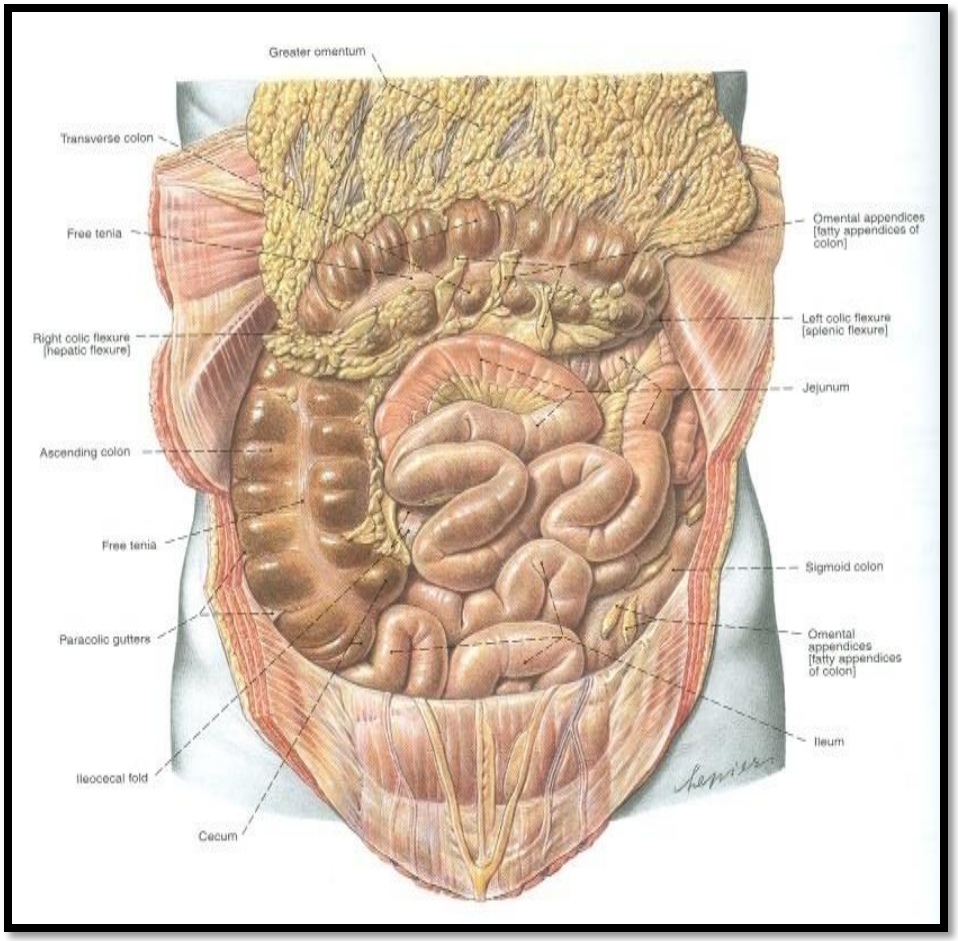
Anterior: greater omentum, anterior abdominal wall



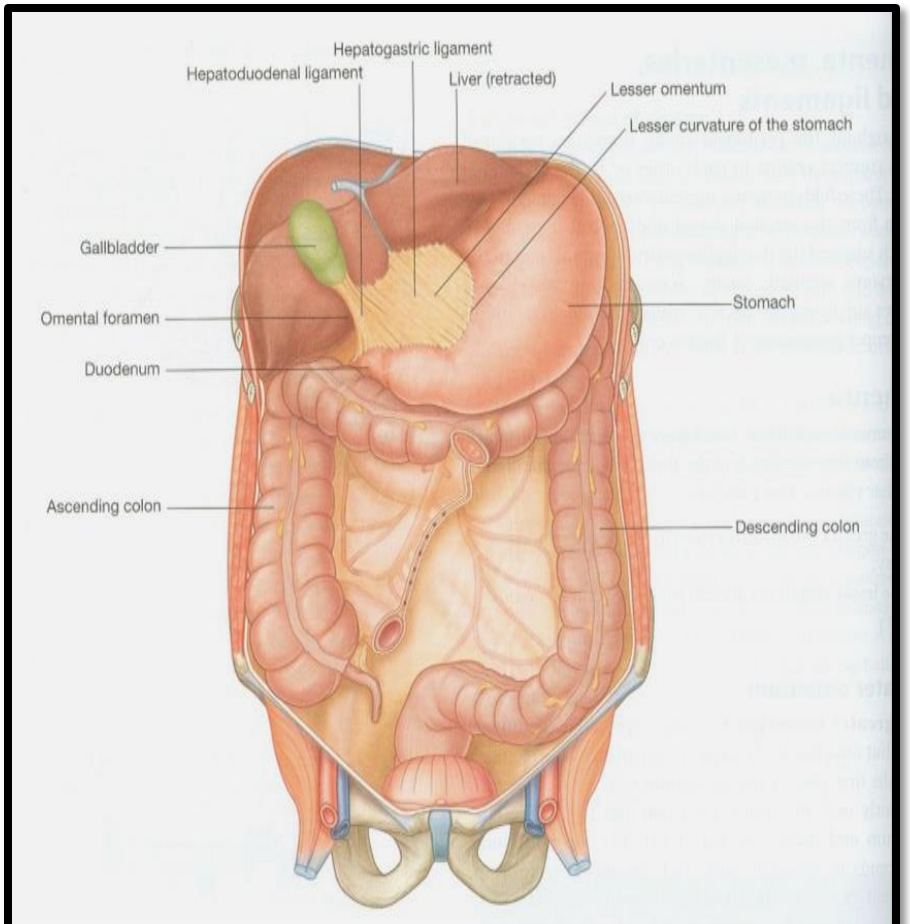


Posterior: 2nd part of duodenum , pancreas & superior mesenteric vessels.

Relations of Transverse Colon

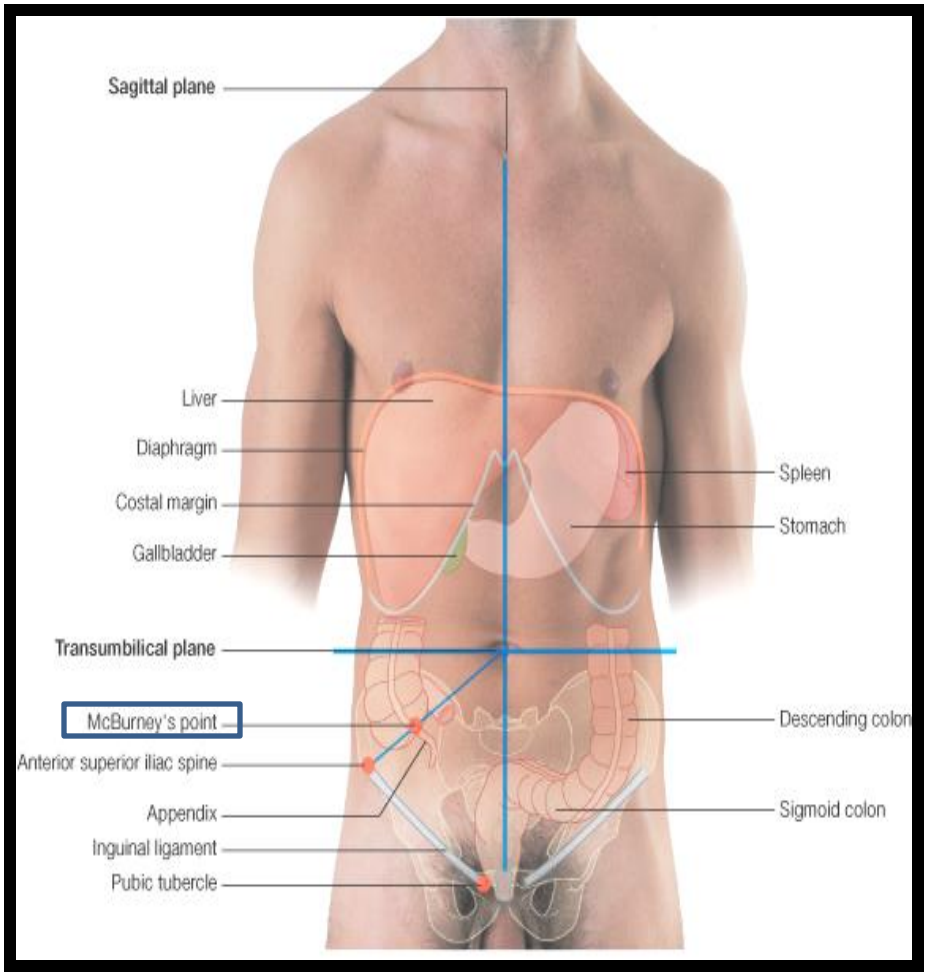


Superior: liver, gall bladder, stomach



Inferior: coils of small intestine

APPENDIX

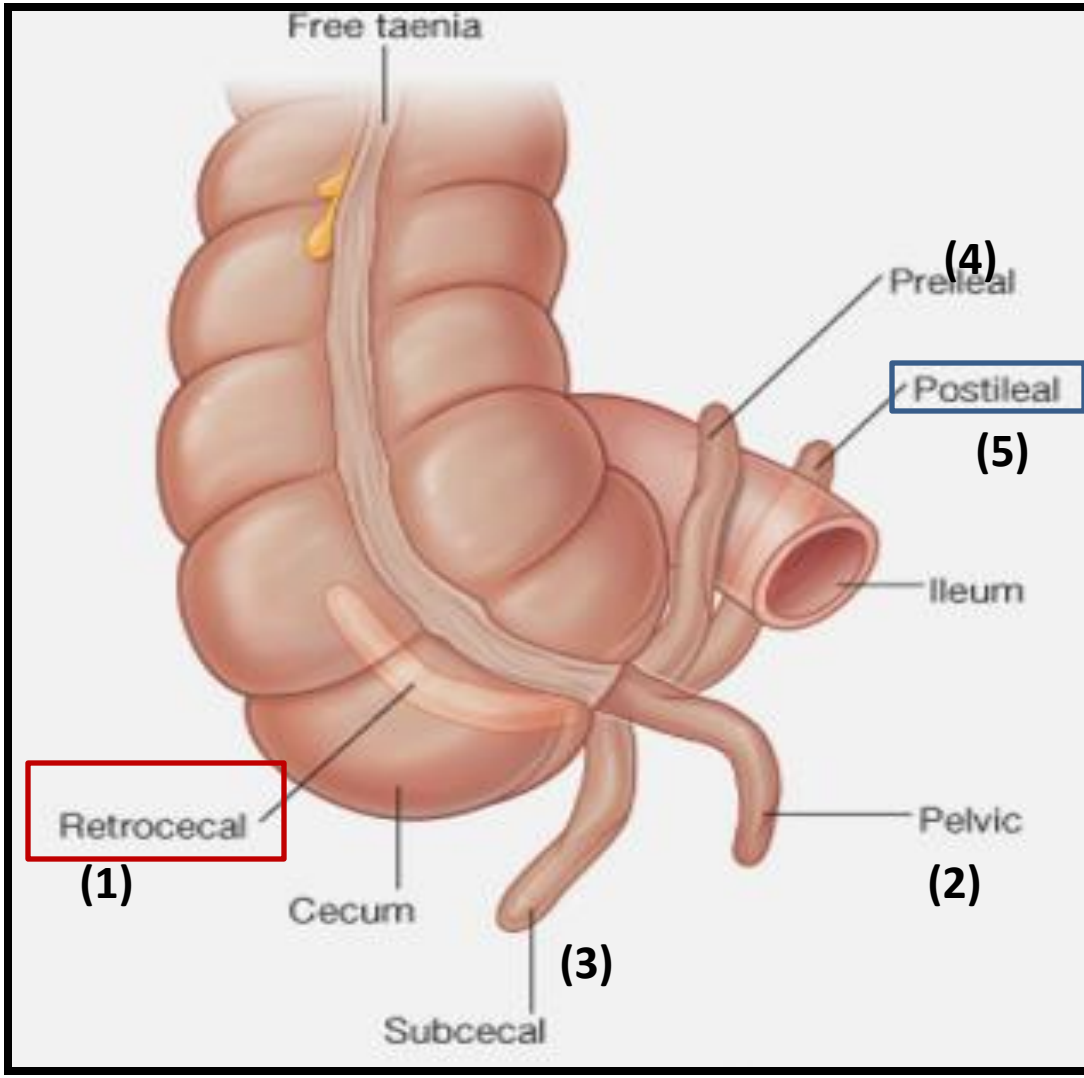


- **Surface anatomy:**
- the base of appendix is marked by **Mc'Burney's point:**
- A point at the junction of lateral 1/3 & medial 2/3 of a line traced from right anterior superior iliac spine to umbilicus

APPENDIX

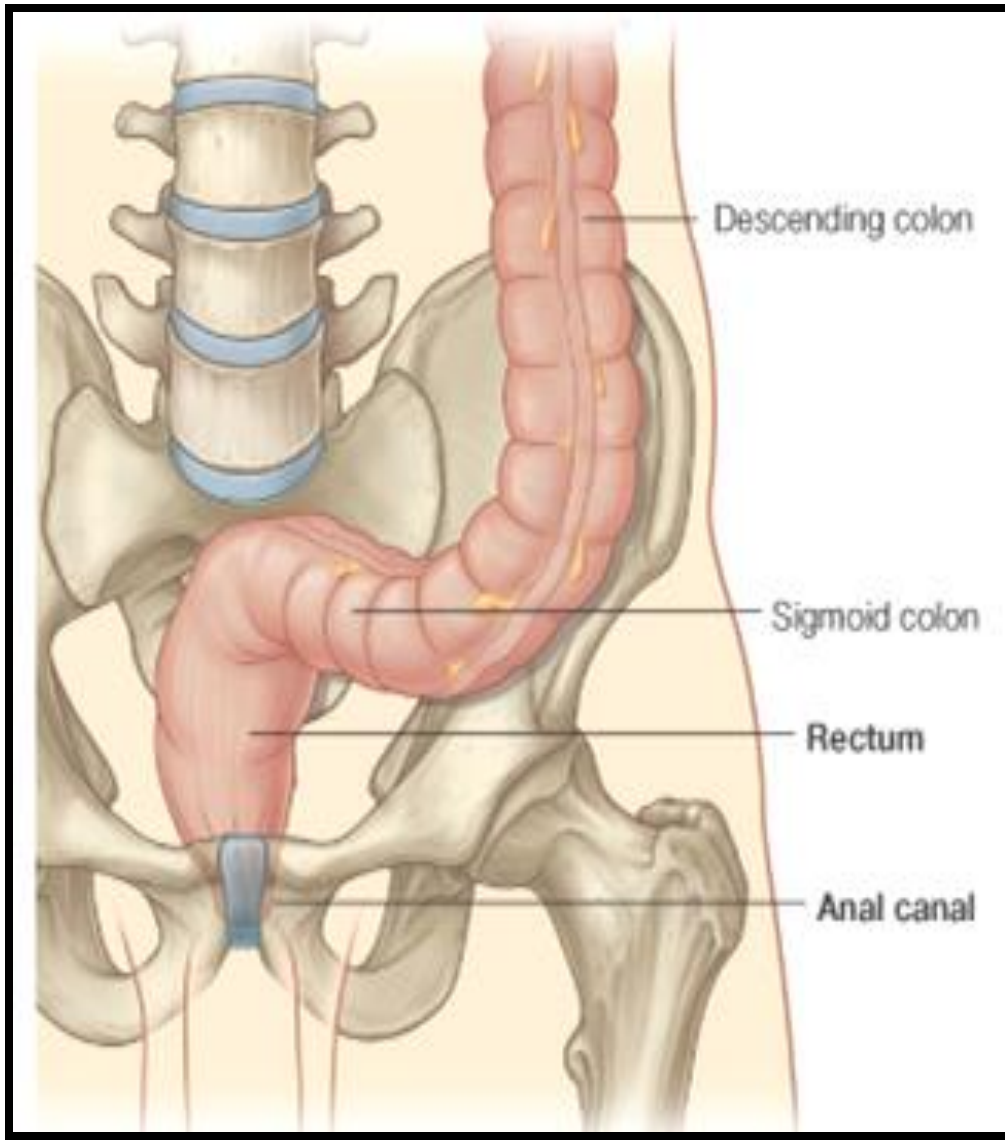
- **Opening:**
- At posteromedial aspect of cecum, 1 inch below ileo-cecal junction
- **Positions:**

1. Retrocecal :(most common)
2. Pelvic
3. Subcecal
4. Preilieal
5. Postileal: least common



RECTUM

- **Beginning:** as a continuation of sigmoid colon at level of **S3.**
- **Termination:** continues as anal canal, **one inch below & in front of tip of coccyx.** Its end is dilated to form the rectal ampulla.
- **Length:** 13 cm(5 inches)



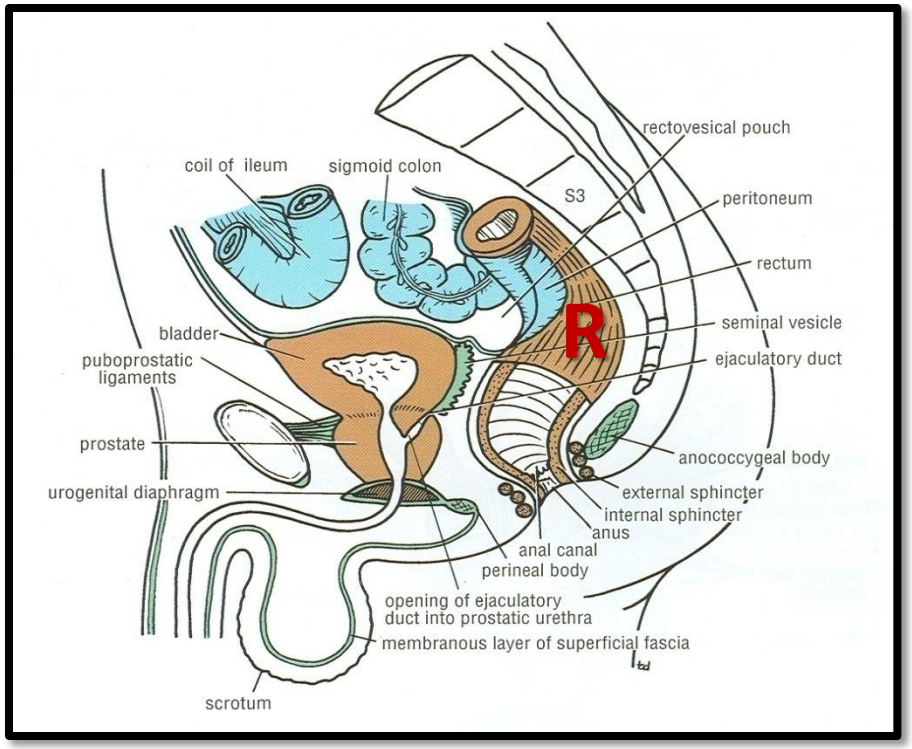
Relations of Rectum in Pelvis

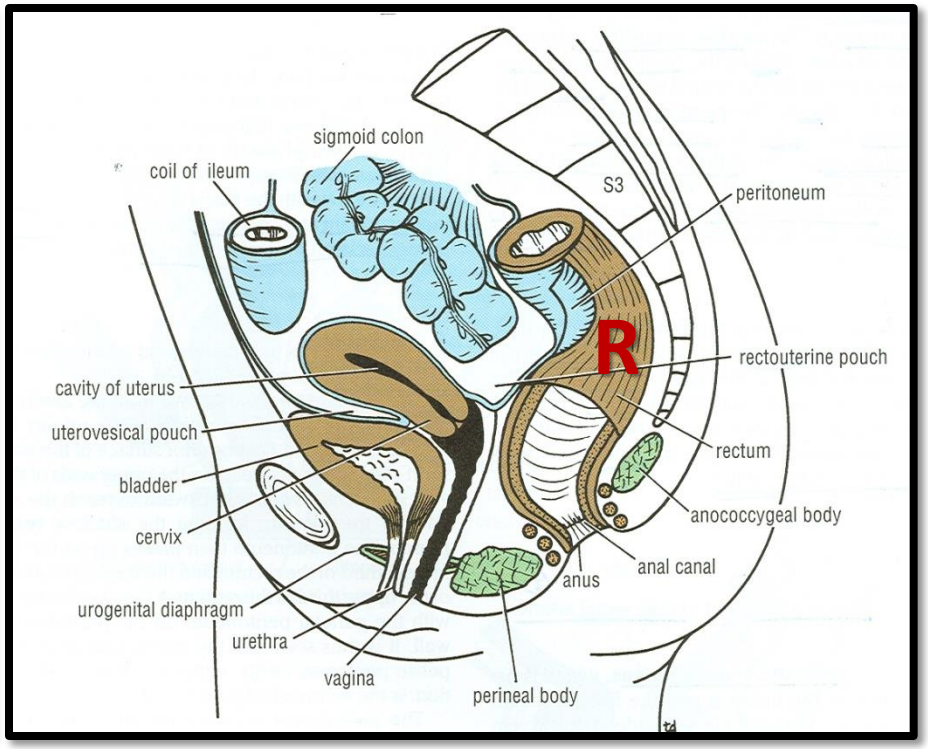
MALE PELVIS

- **Anterior:** seminal vesicles, posterior surfaces of urinary bladder & prostate gland
- **Posterior:** sacrum, sacral plexus & coccyx

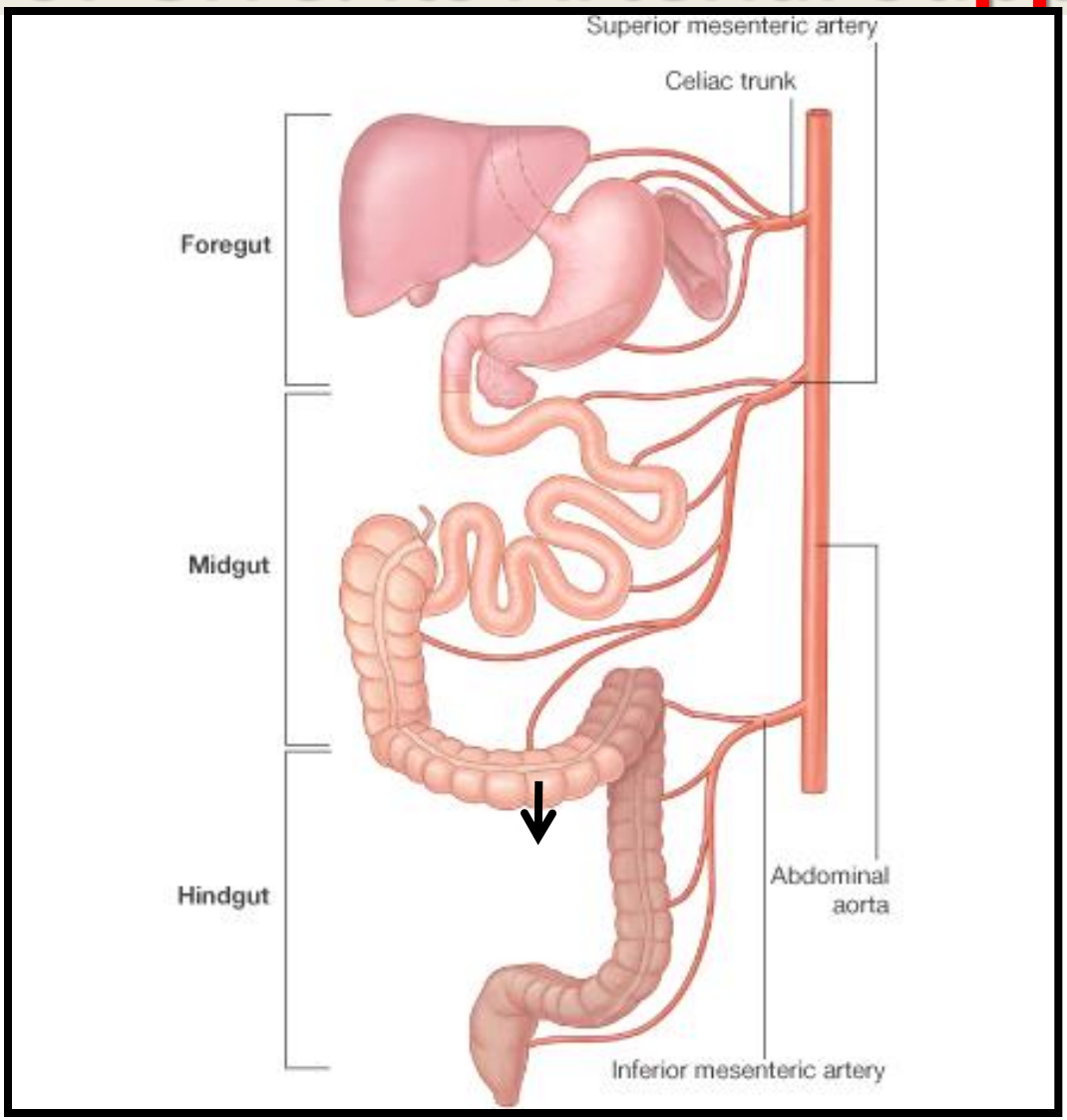
FEMALE PELVIS

- **Anterior:** posterior wall of vagina
- **Posterior:** sacrum , sacral plexus & coccyx

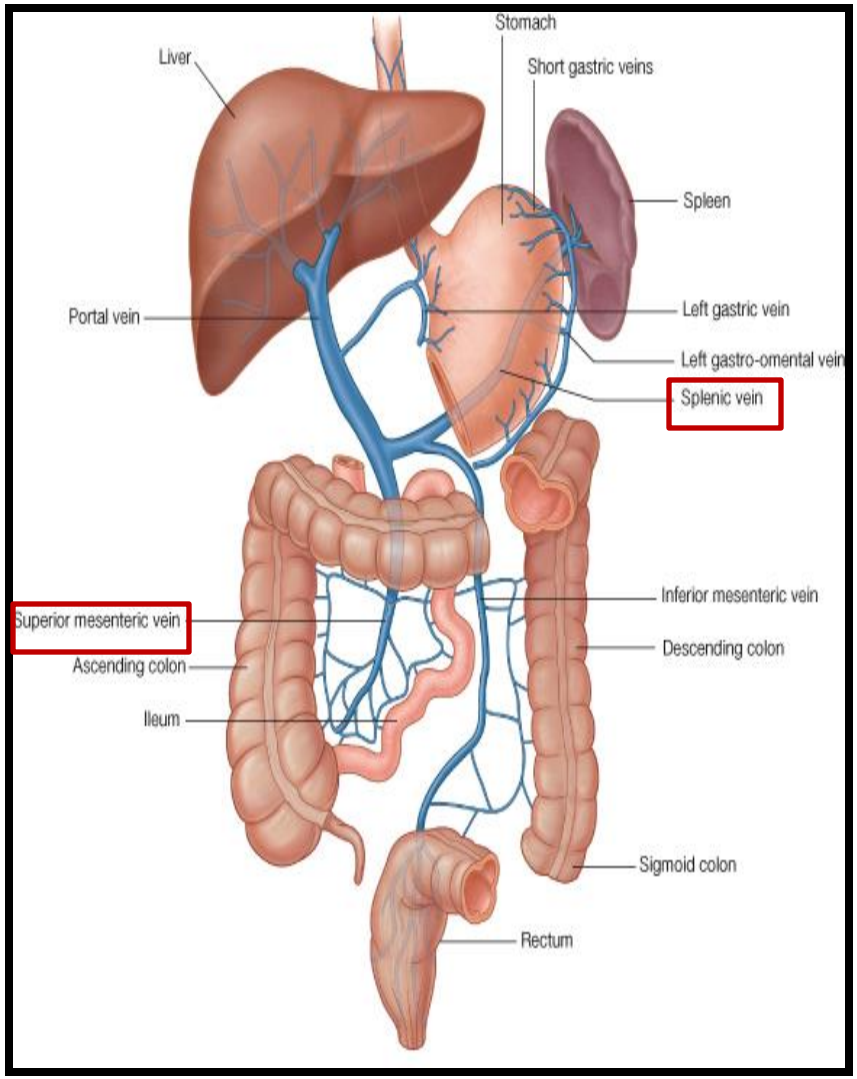




Relation Between Embryological Origin of GIT& its Arterial Supply

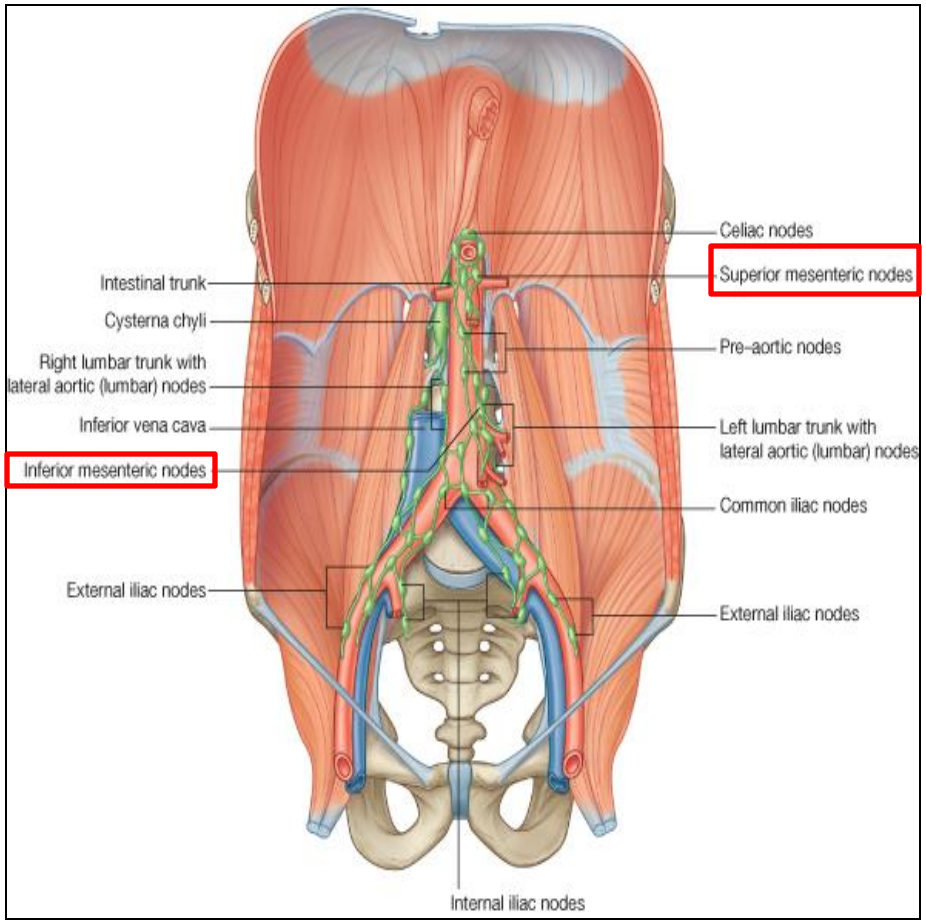


VENOUS DRAINAGE OF GIT



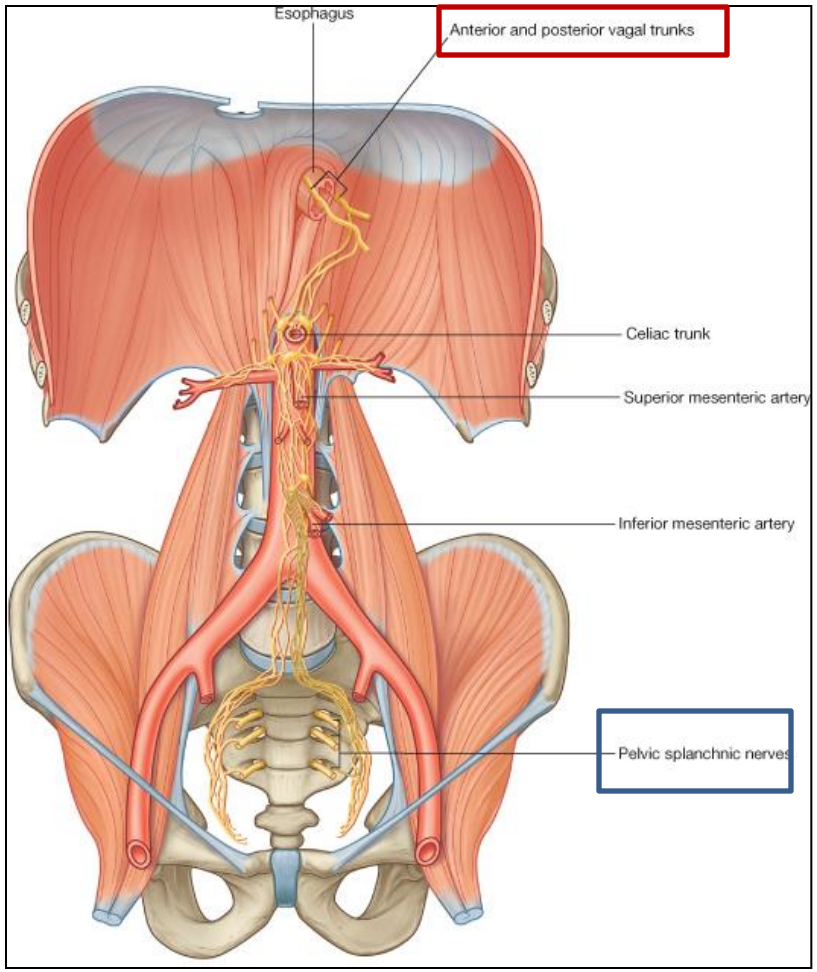
- The veins of the gut form the tributaries of the portal vein which enters the liver and drains into the **portal circulation.**

Lymph drainage of GIT



- The lymph vessels follow the arteries.
- Ultimately, all the lymph is collected at the **Preaortic lymph nodes (Superior & Inferior mesenteric).**

RELATION BETWEEN EMBRYOLOGICAL ORIGIN & NERVE SUPPLY



- **Origin:** Midgut (endoderm)
- **Nerve supply**: (Autonomic):
  - Sympathetic + Vagus
- **Origin:** Hindgut (endoderm)
- **Nerve supply**: (Autonomic):
  - Sympathetic + pelvic splanchnic nerves
- **Origin:** ectoderm (lower 1/3 of anal canal)
- **Nerve Supply:** Somatic (inferior rectal)


THANK YOU