

**•ANATOMY OF
THE LARGE INTESTINE**

***Dr. Ahmed Fathalla
Ibrahim***

***Dr. Jamila El-
Medany***

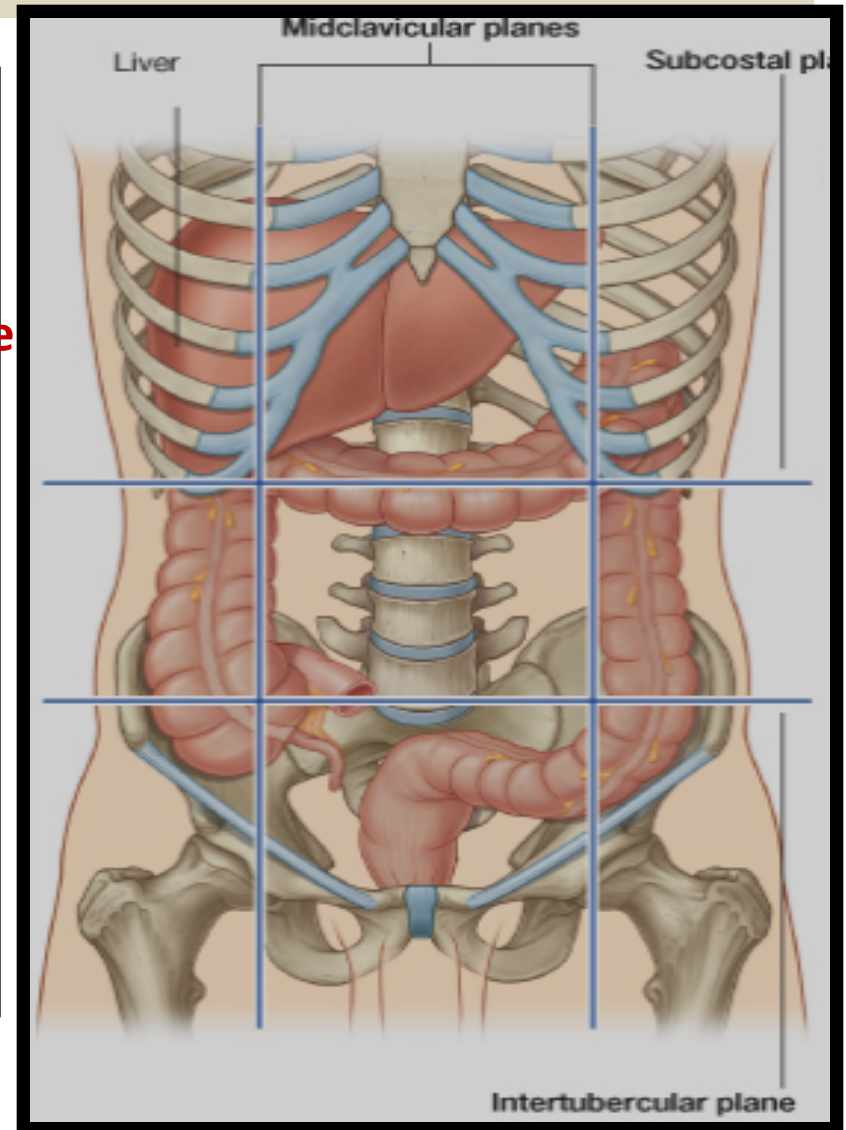
OBJECTIVES

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.***

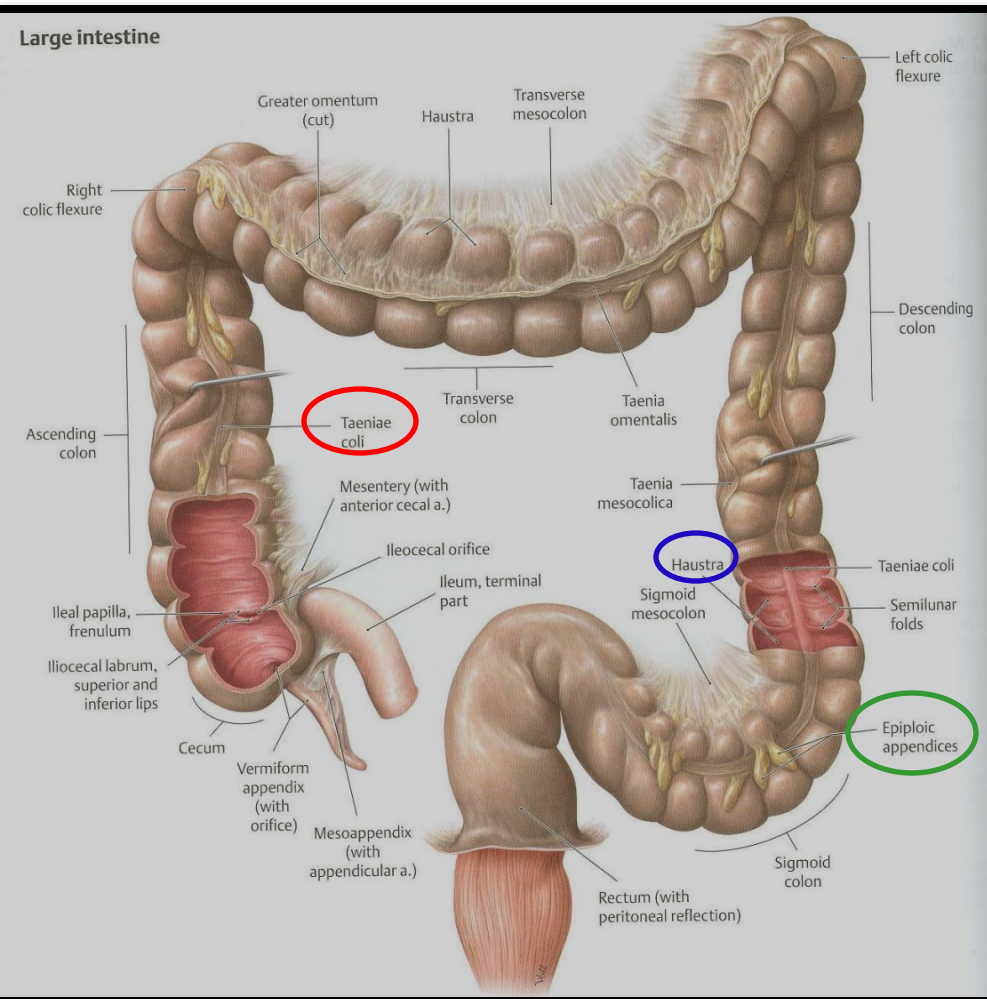
Parts of Large Intestine

- 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

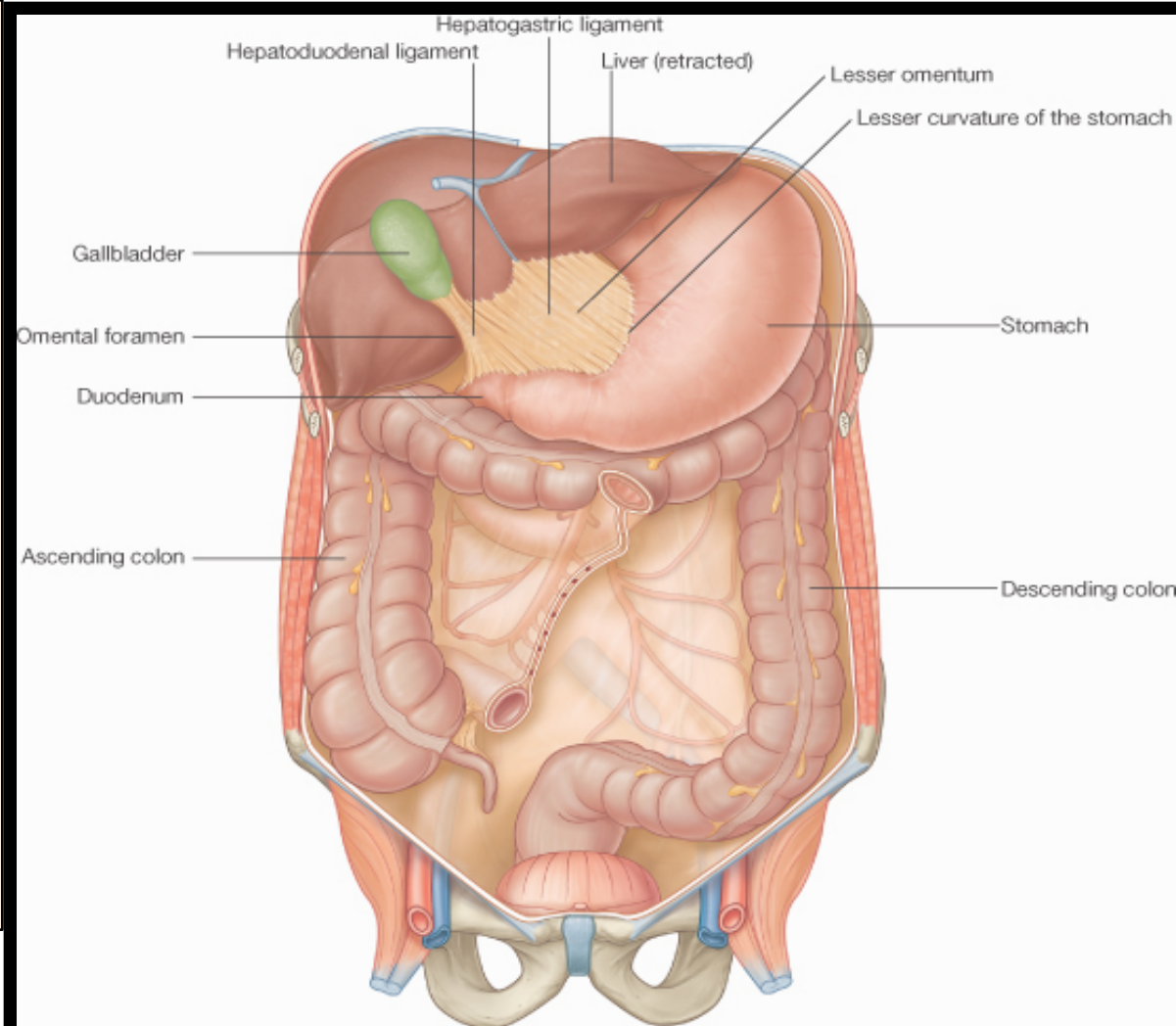
Peritoneal Covering

PARTS WITH MESENTERY:

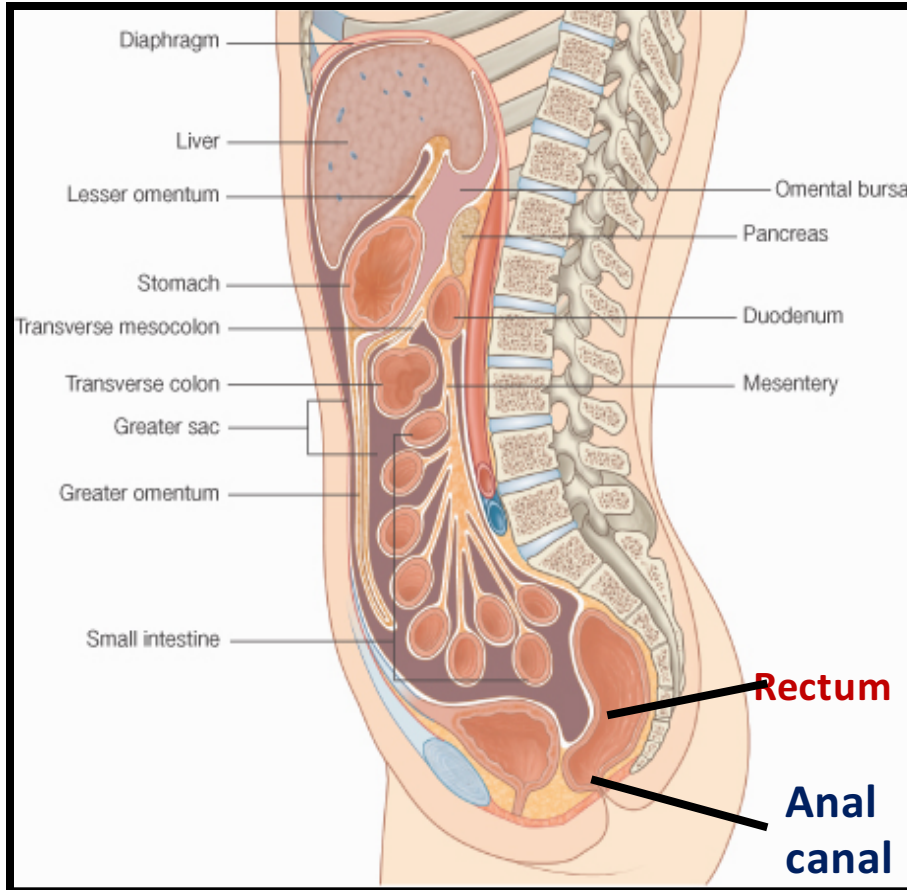
1. Transverse colon
2. Sigmoid colon
3. Appendix
4. Cecum

RETROPERITONEAL PARTS:

1. Ascending colon
2. Descending colon
3. Upper 2/3 of rectum



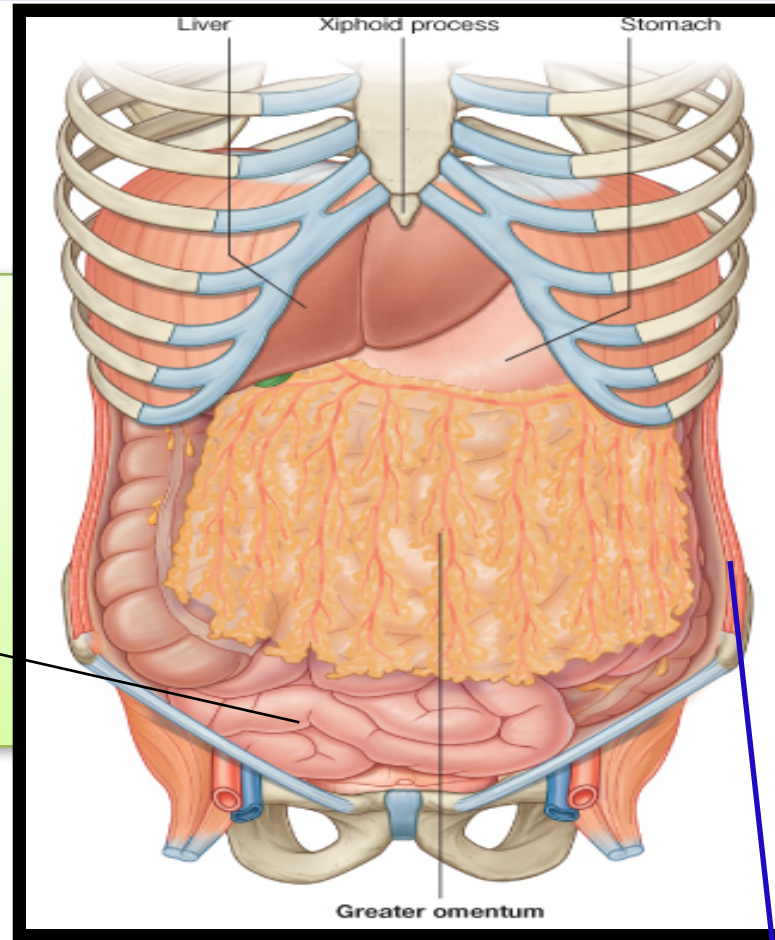
Peritoneal Covering



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:

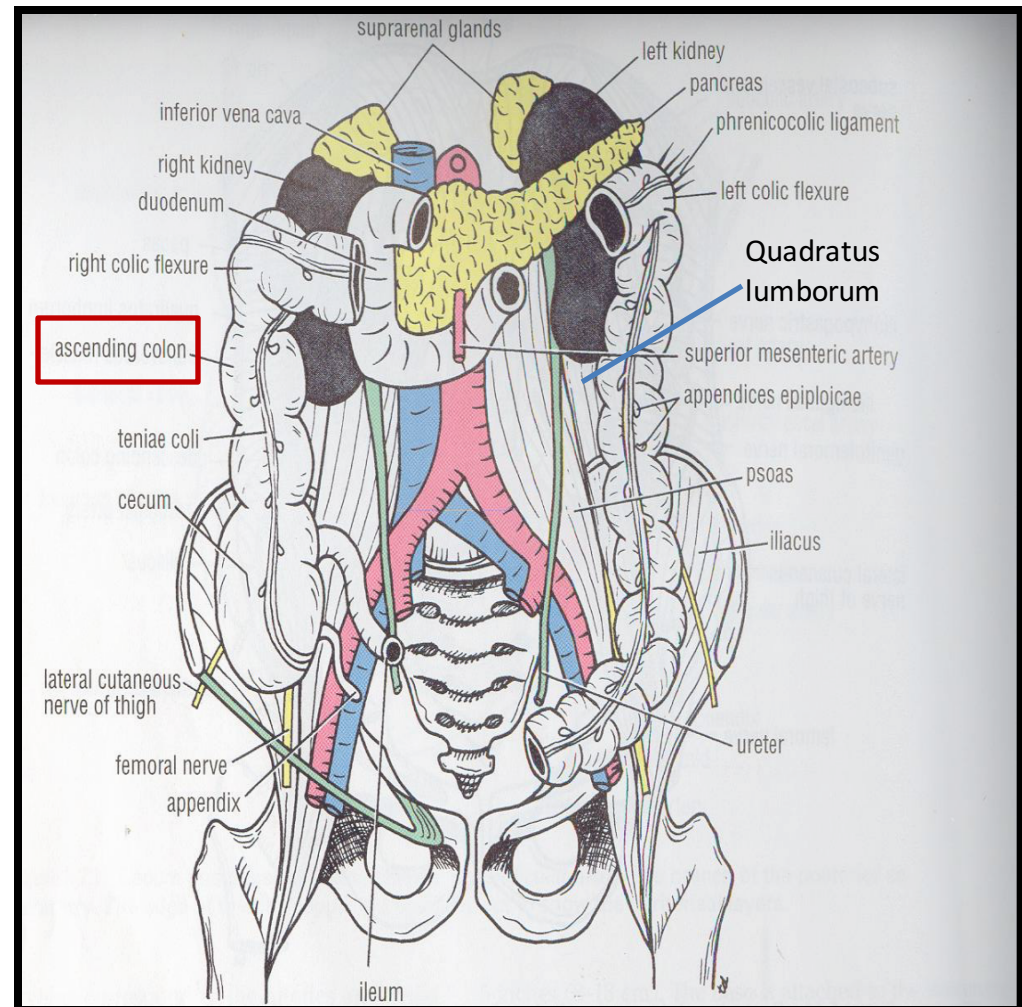
1. Psoas major
2. Iliacus

□ Ascending colon:

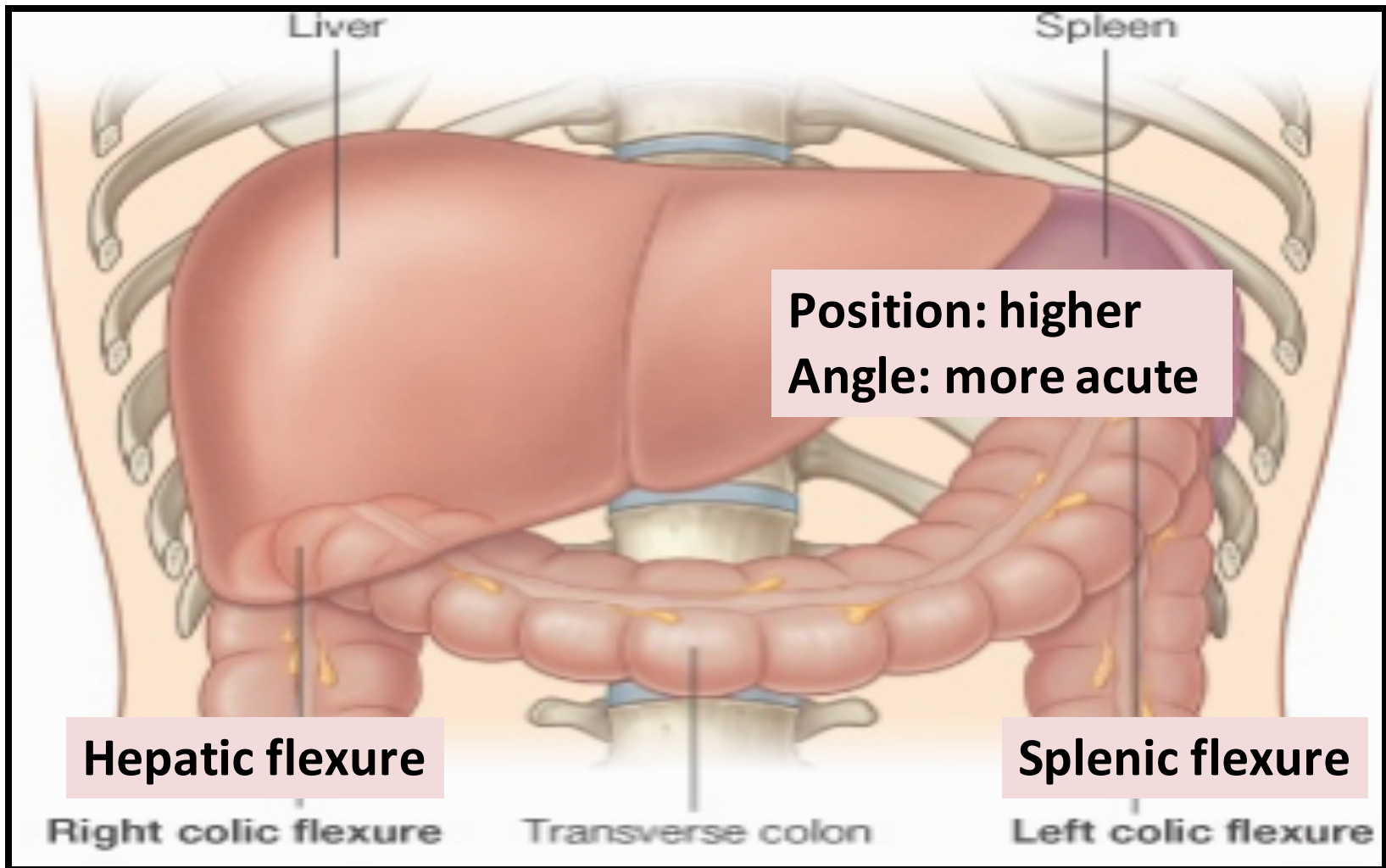
1. Iliacus
2. Quadratus lumborum
3. Right kidney.

□ Descending colon:

1. Left kidney
2. Quadratus lumborum
3. Iliacus

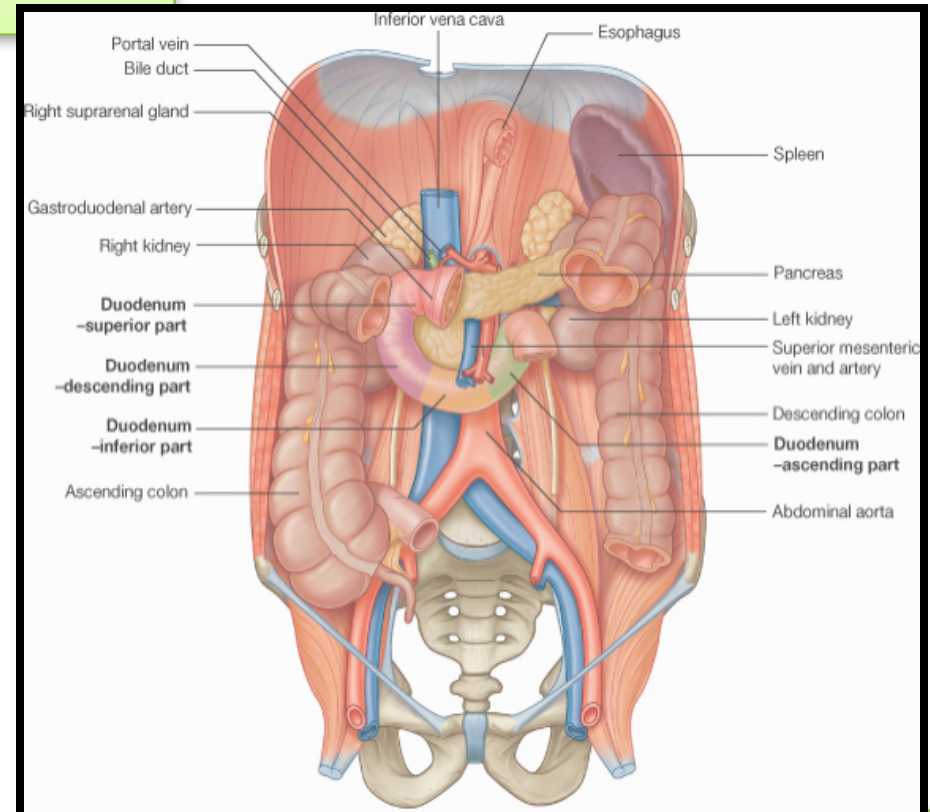
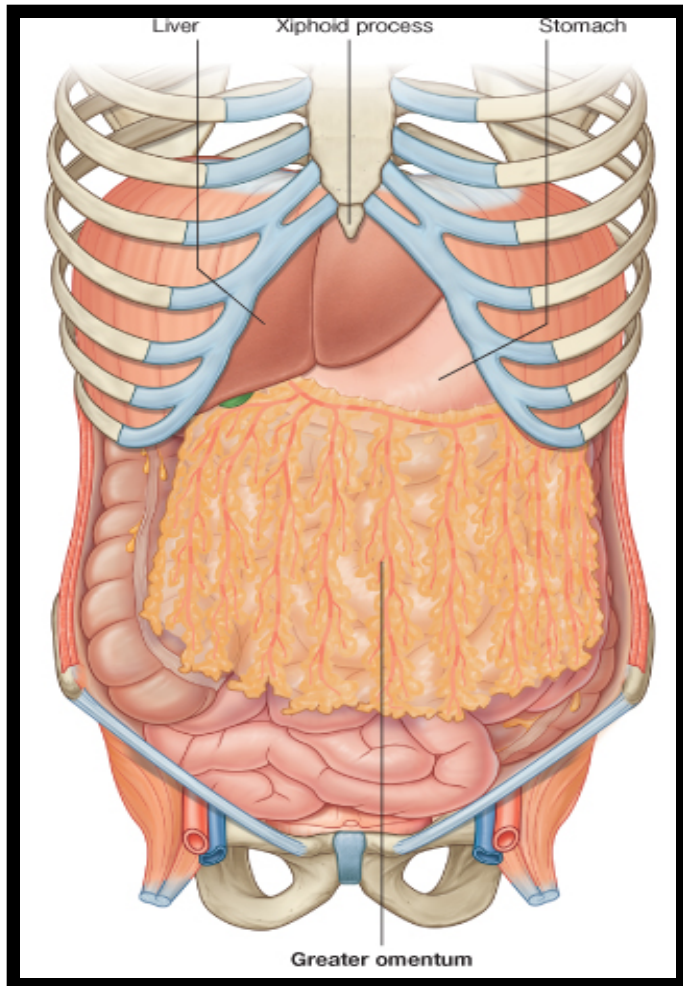


COLIC FLEXURES



Relations of Transverse Colon

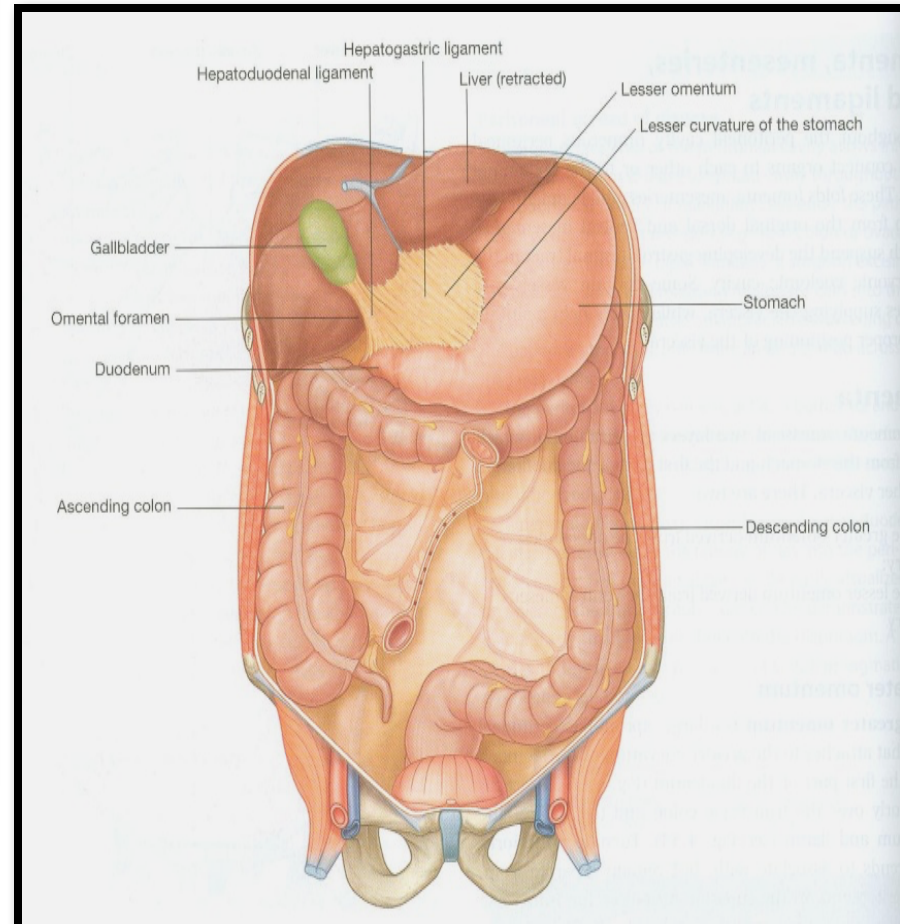
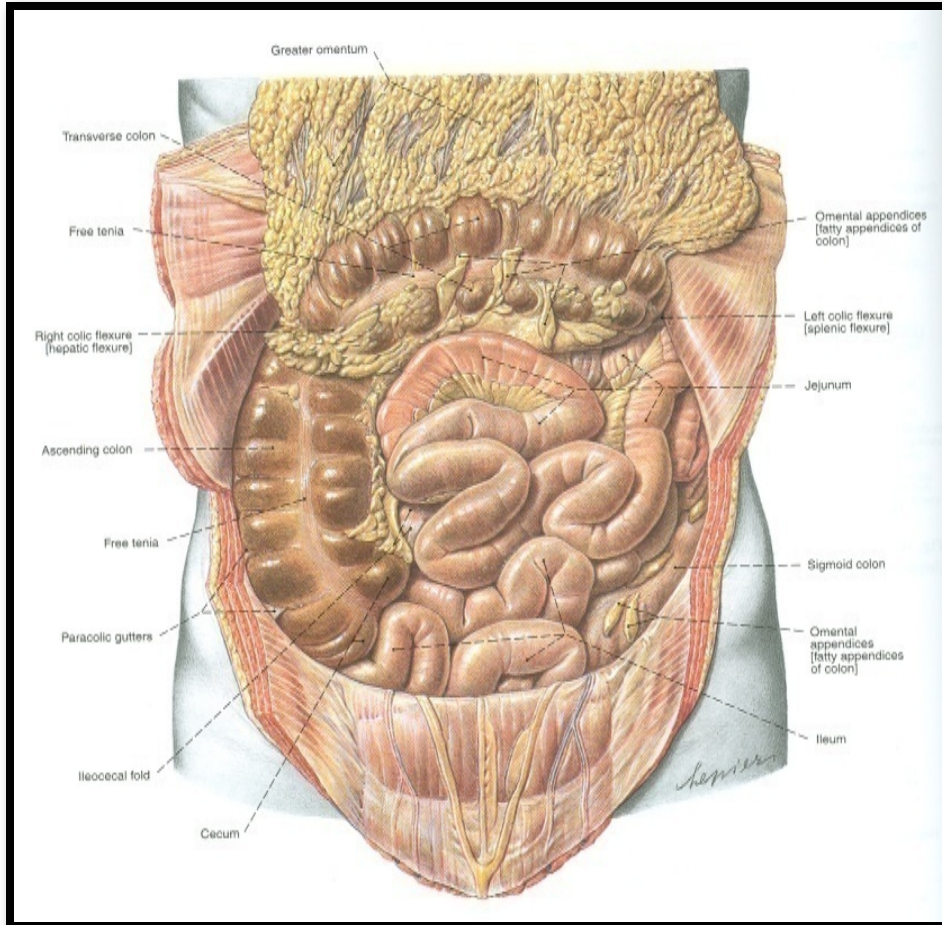
Anterior: greater omentum, anterior abdominal wall



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

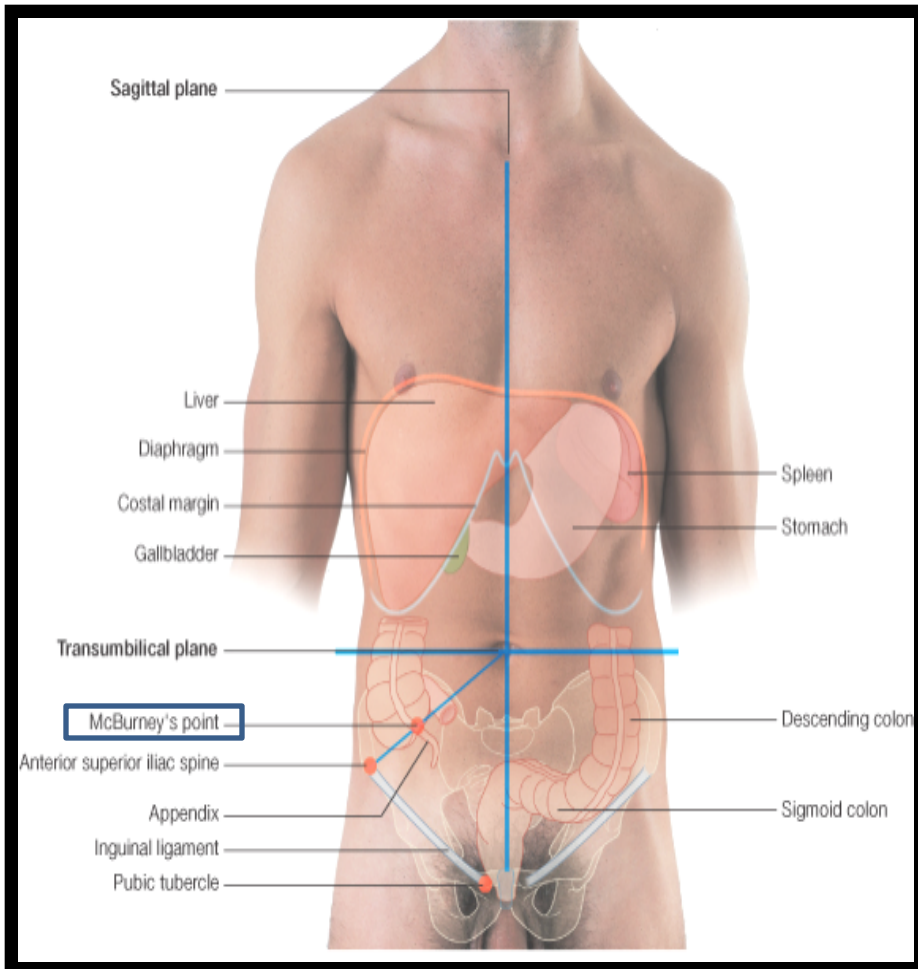
Relations of Transverse Colon

Superior: liver, gall bladder, stomach



Inferior: coils of small intestine

APPENDIX



- Surface anatomy:
- the base of appendix is marked by McBurney'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:**

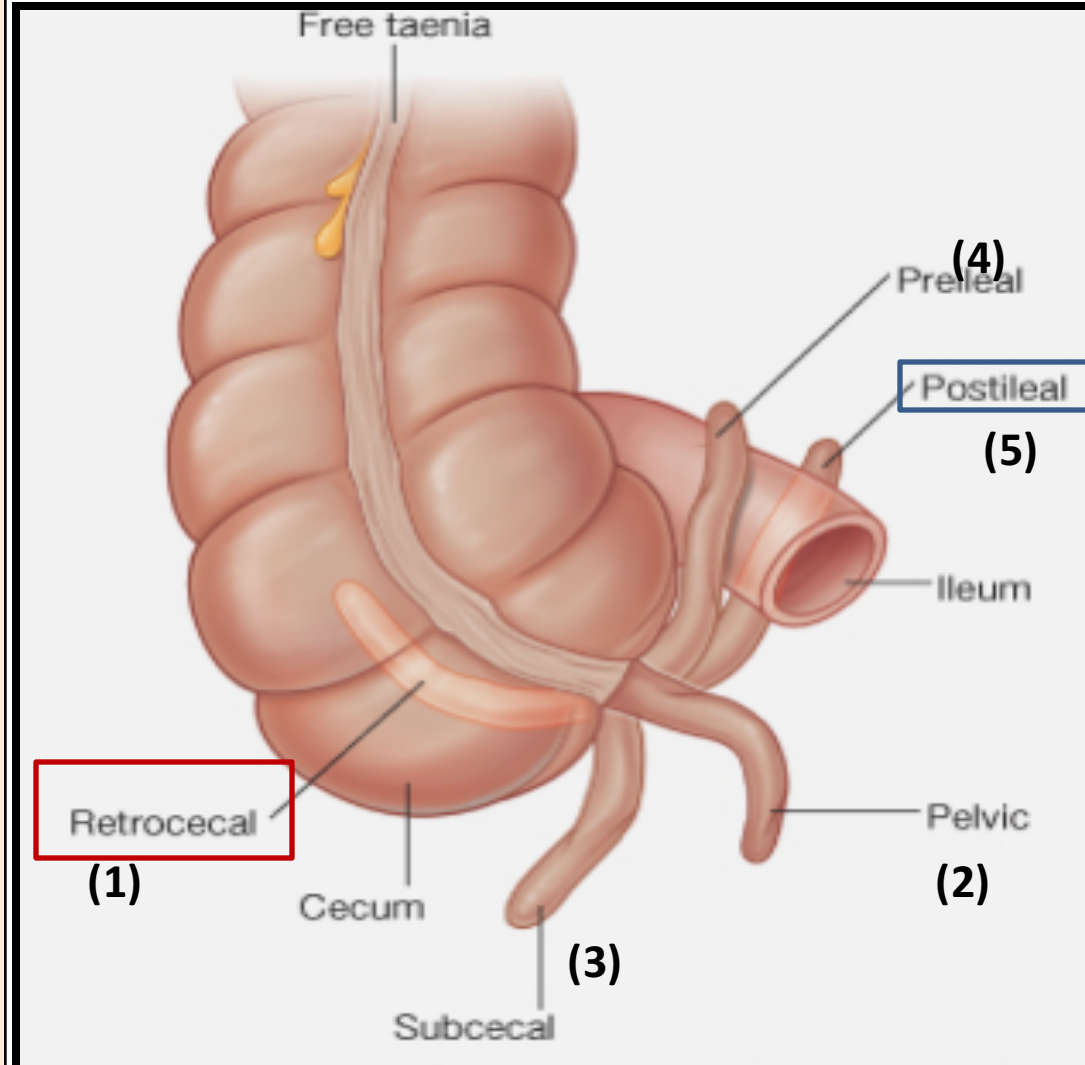
1. Retrocecal : (most common)

2. Pelvic

3. Subcecal

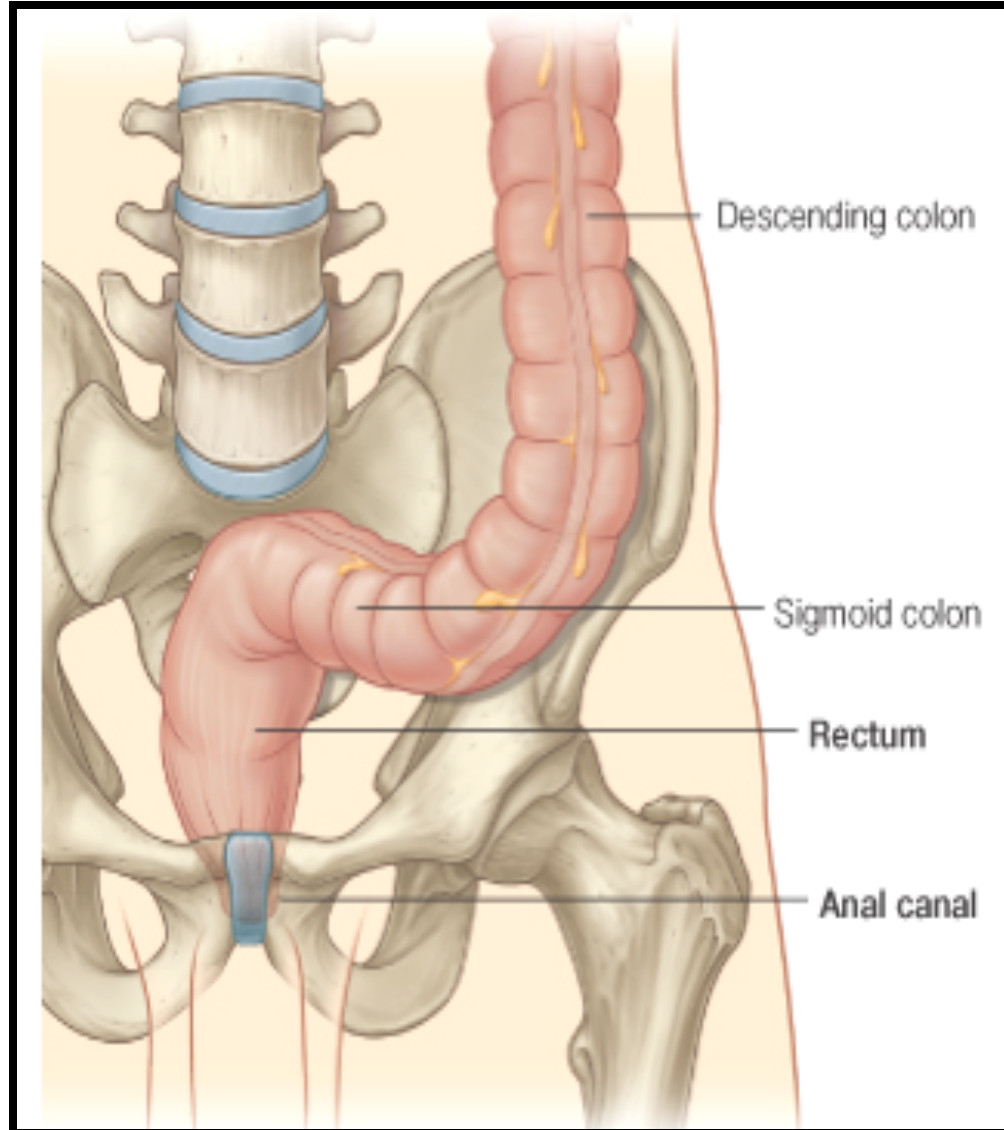
4. Preileal

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)



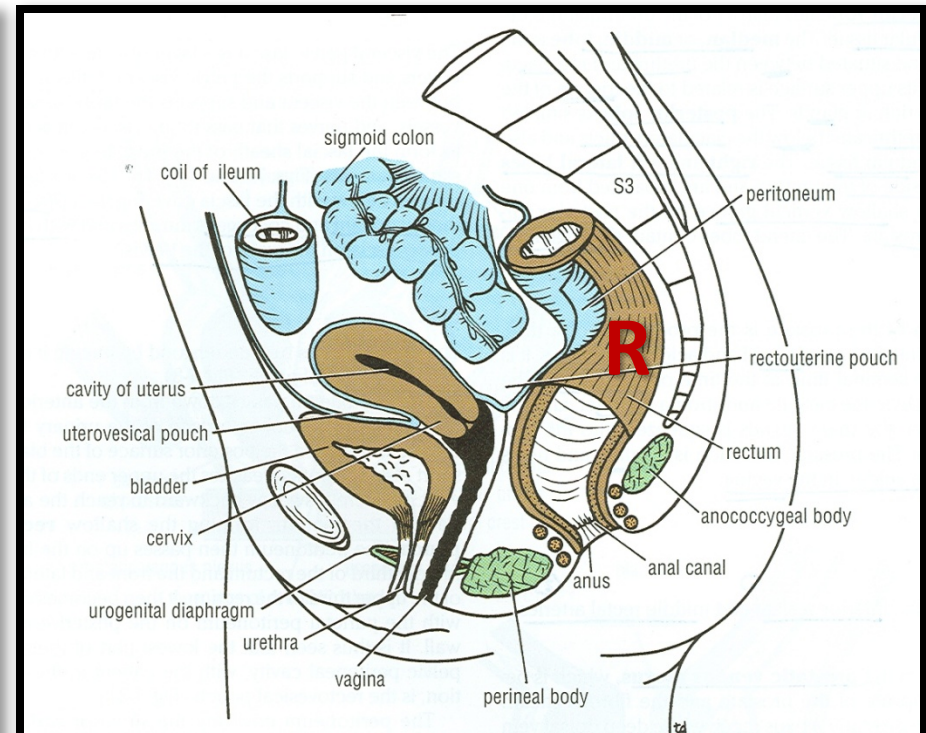
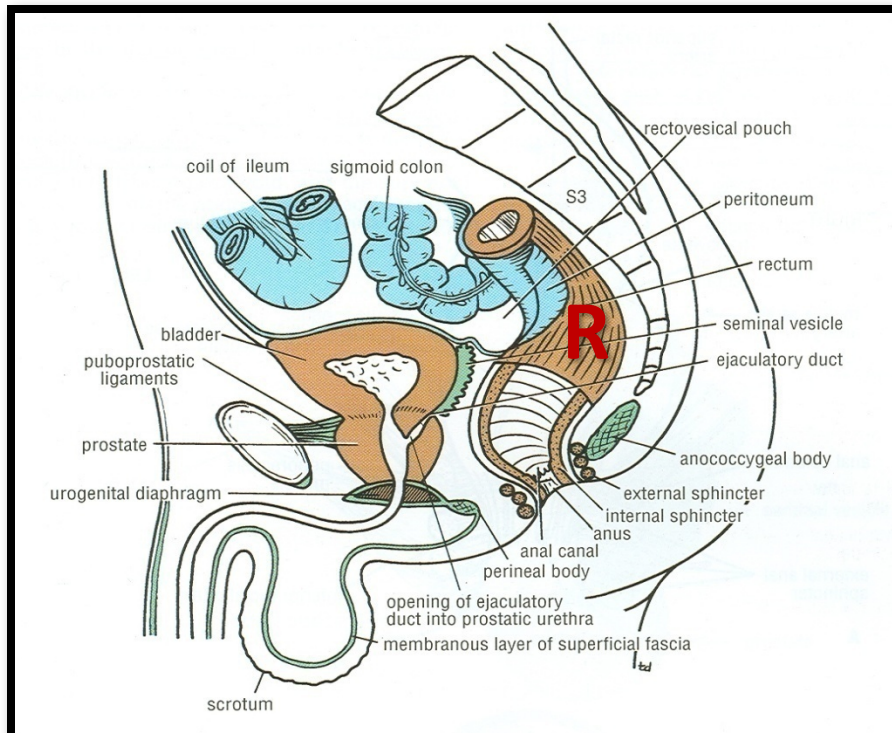
Relations of Rectum in Pelvis

FEMALE PELVIS

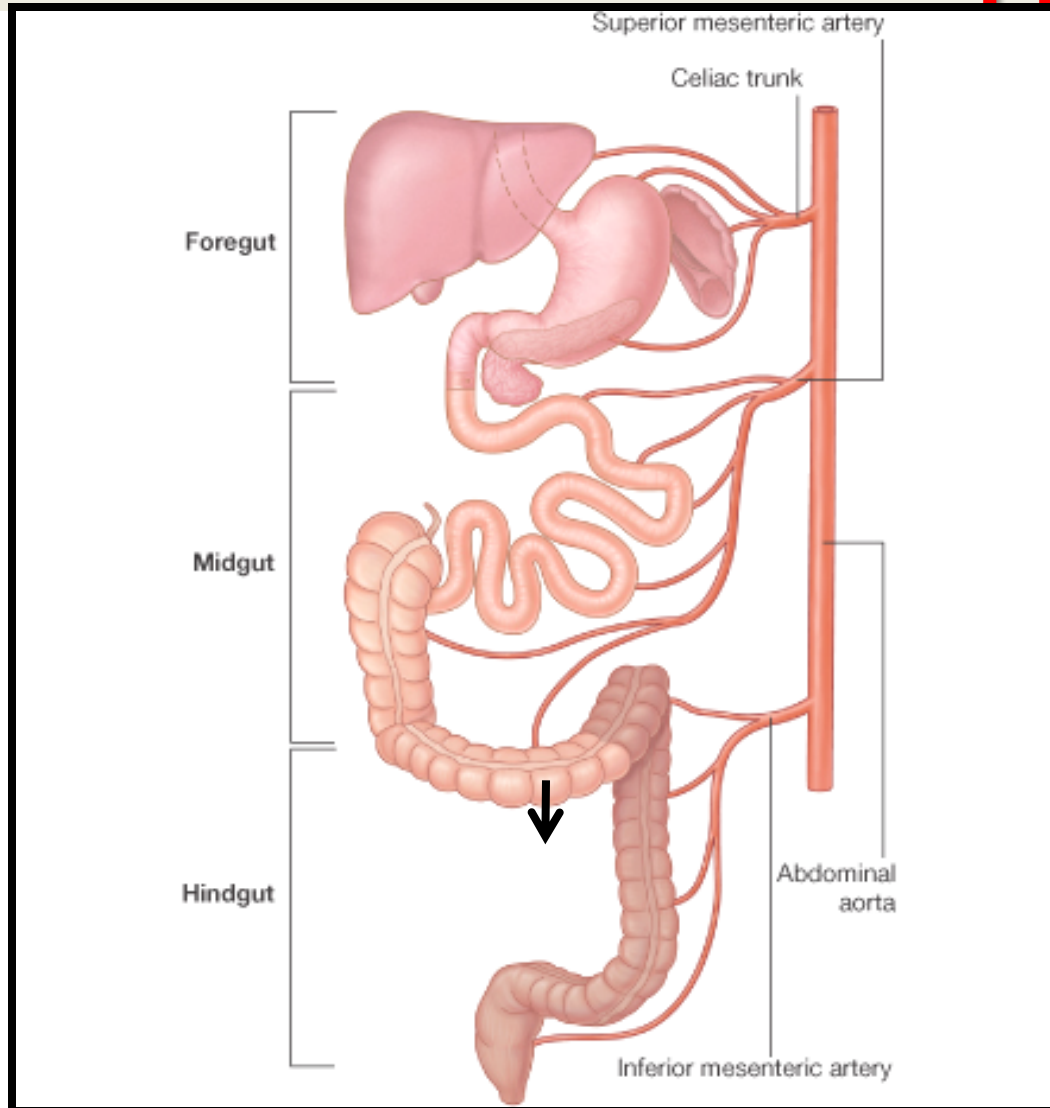
MALE PELVIS

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

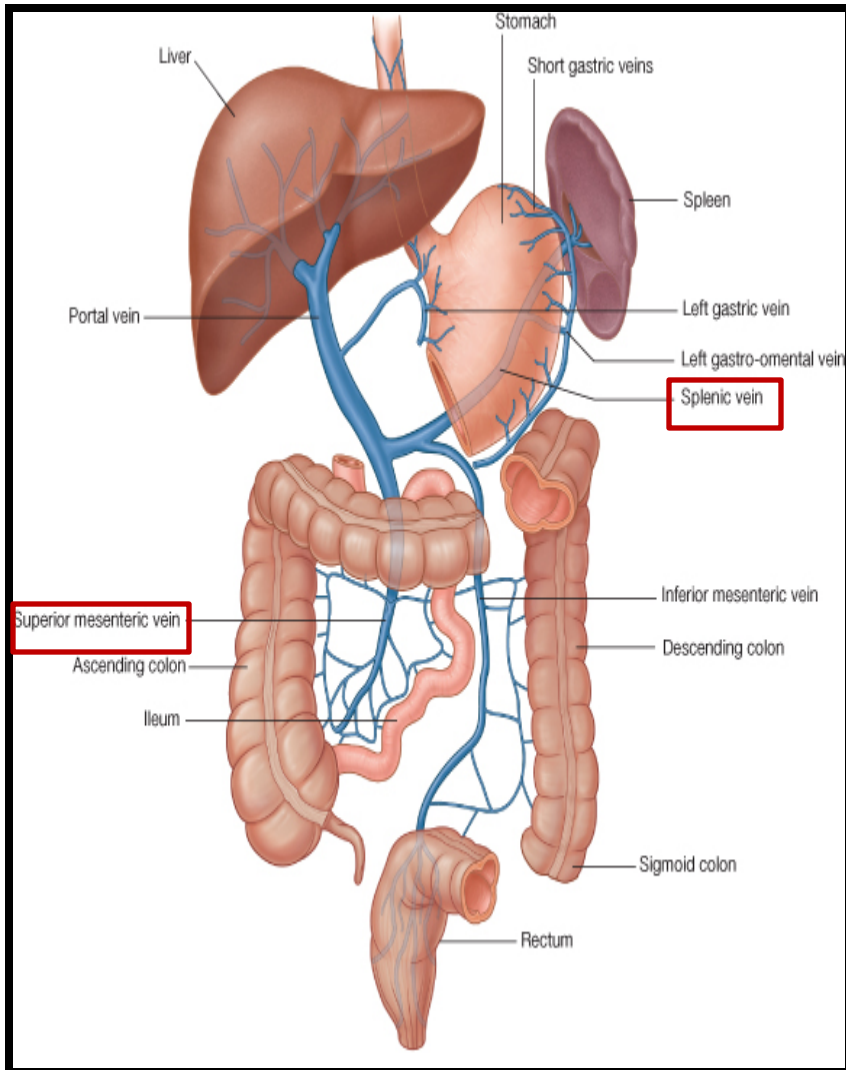
- ❑ Anterior: posterior wall of vagina
- ❑ Posterior: sacrum, sacral plexus & coccyx



Relation Between Embryological Origin of GIT & its Arterial Supply

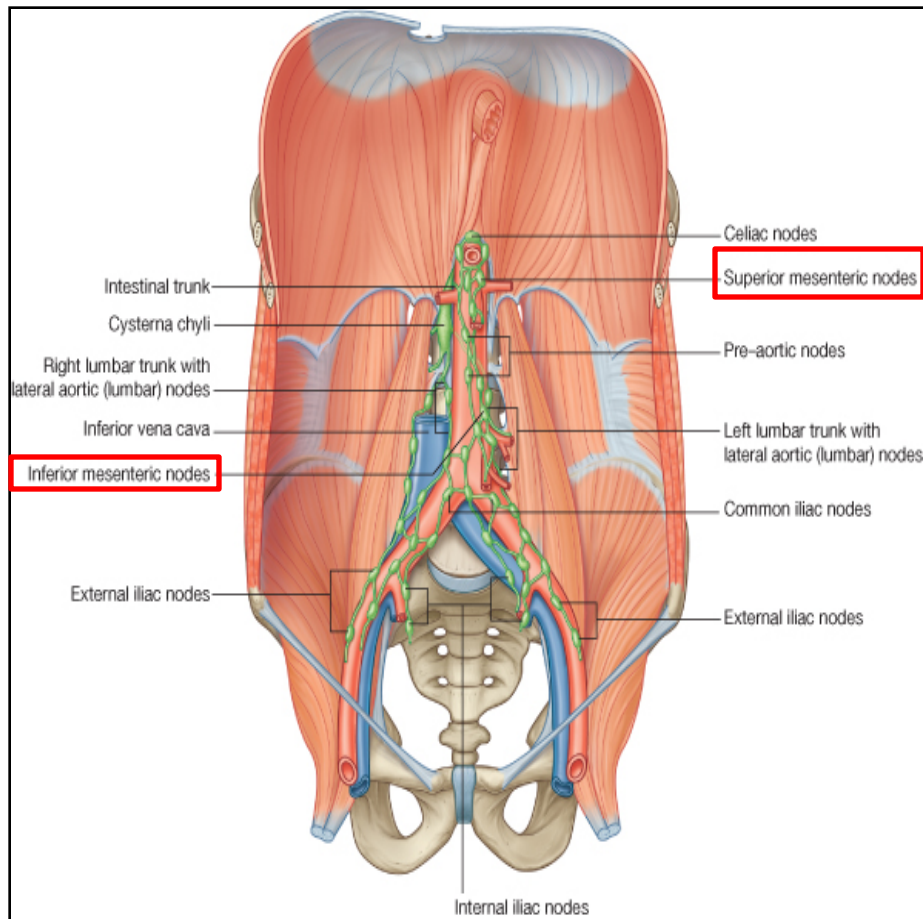


VENOUS DRAINAGE OF GIT



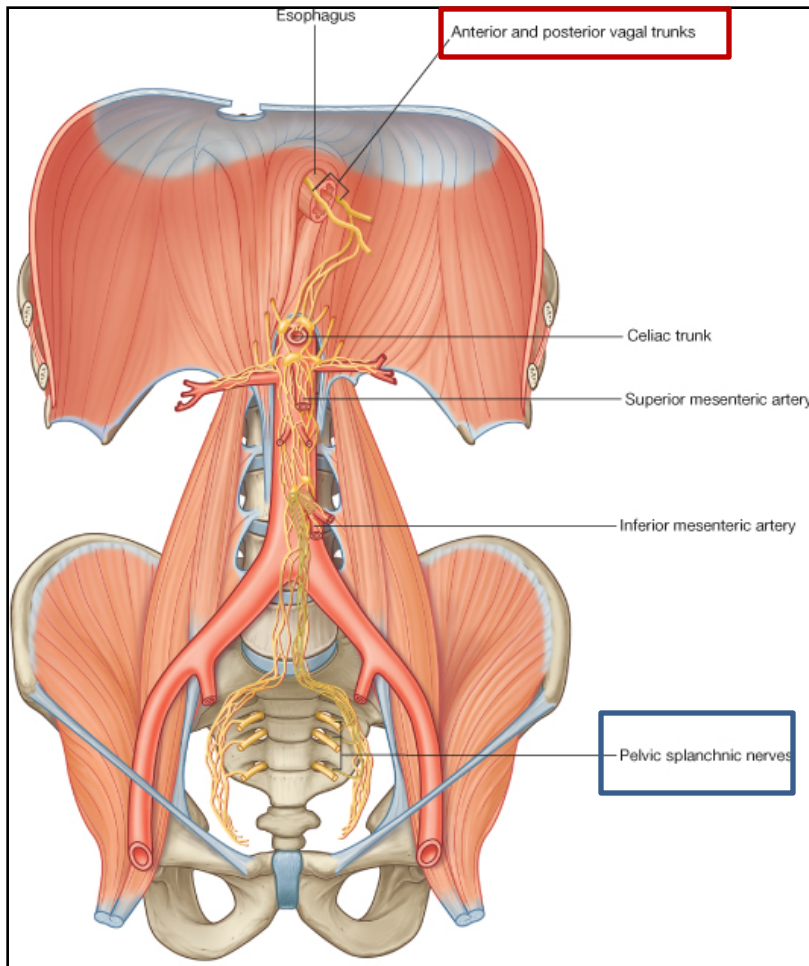
- The veins of the gut form the tributaries of the portal vein which enters the liver and drains into the **portal circulation**.

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