

# **•ANATOMY OF THE LARGE INTESTINE**

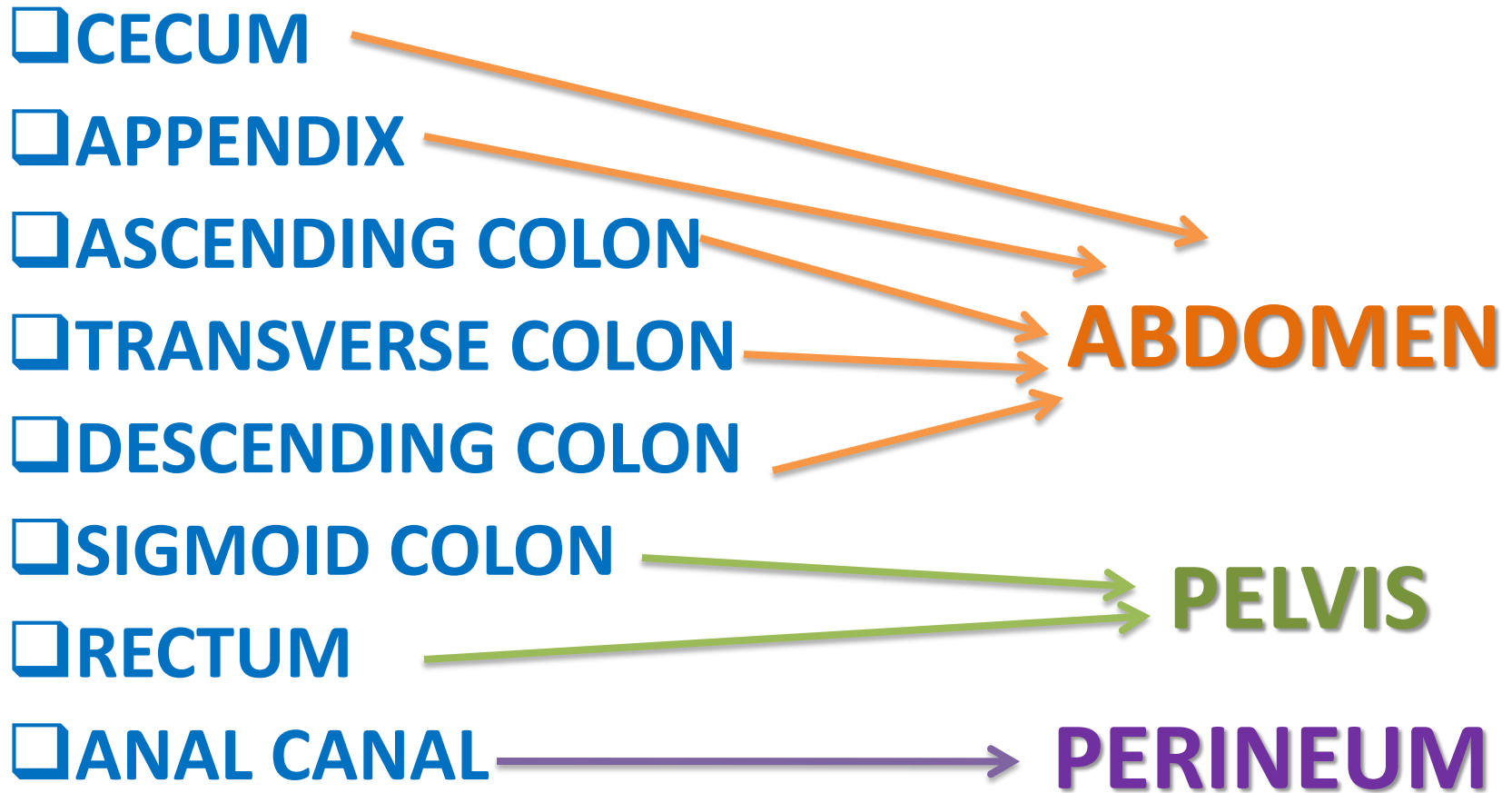
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# OBJECTIVES

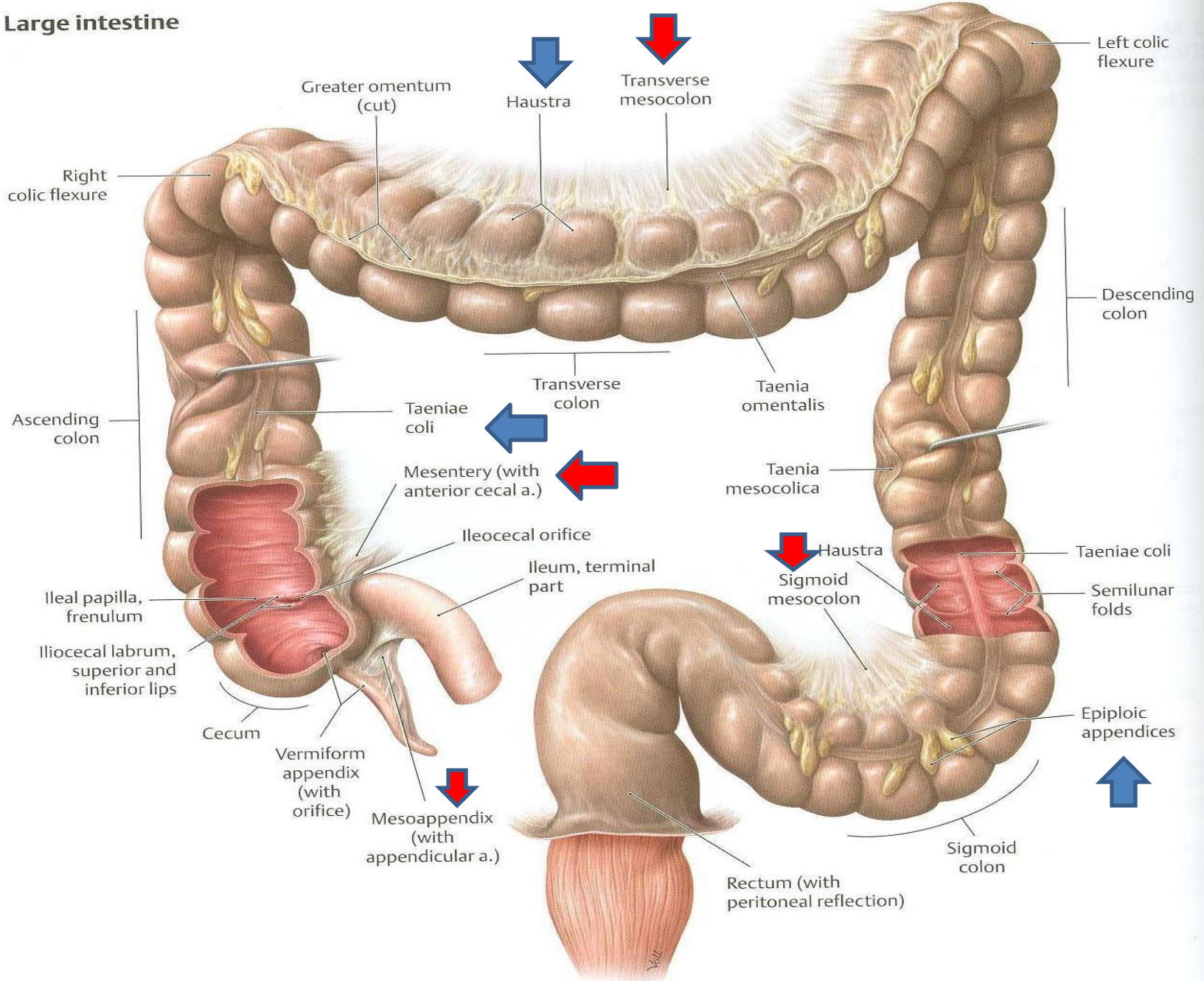
At the end of the lecture, students should:

- ❑ 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



# Large intestine



# **CHARACTERISTICS OF COLON**

## **(NOT FOUND IN RECTUM & ANAL CANAL)**

- 1. Teniae coli: 3 longitudinal muscle bands**
- 2. Sacculations (haustra): teniae coli are shorter than large intestine**
- 3. Epiploic Appendices : short peritoneal fold filled with fat**

# PERITONEAL COVERING

## ☐ PARTS WITH MESENTERY:

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

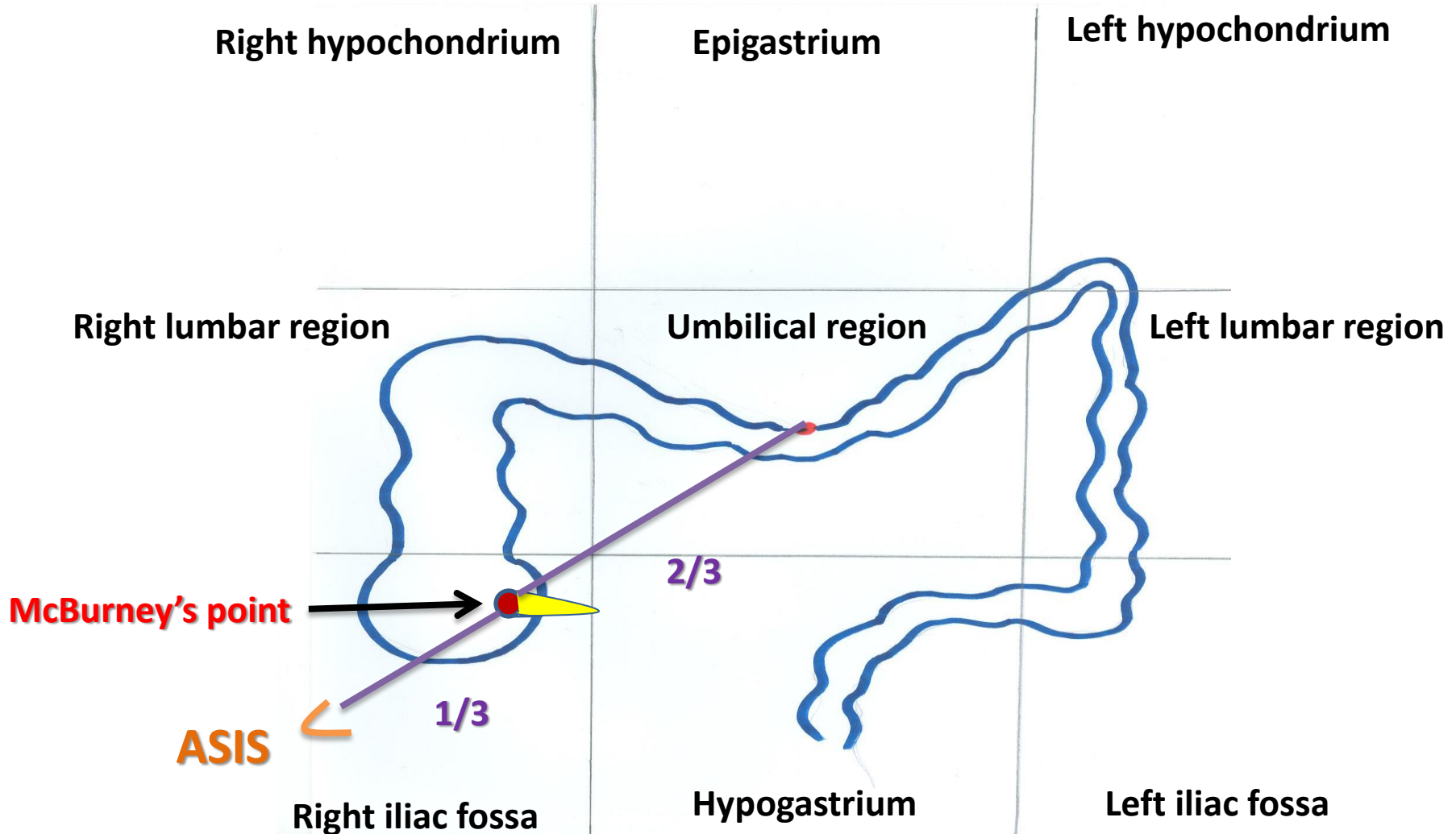
## ☐ RETROPERITONEAL PARTS:

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

## ☐ PARTS DEVOID OF PERITONEAL COVERINGS:

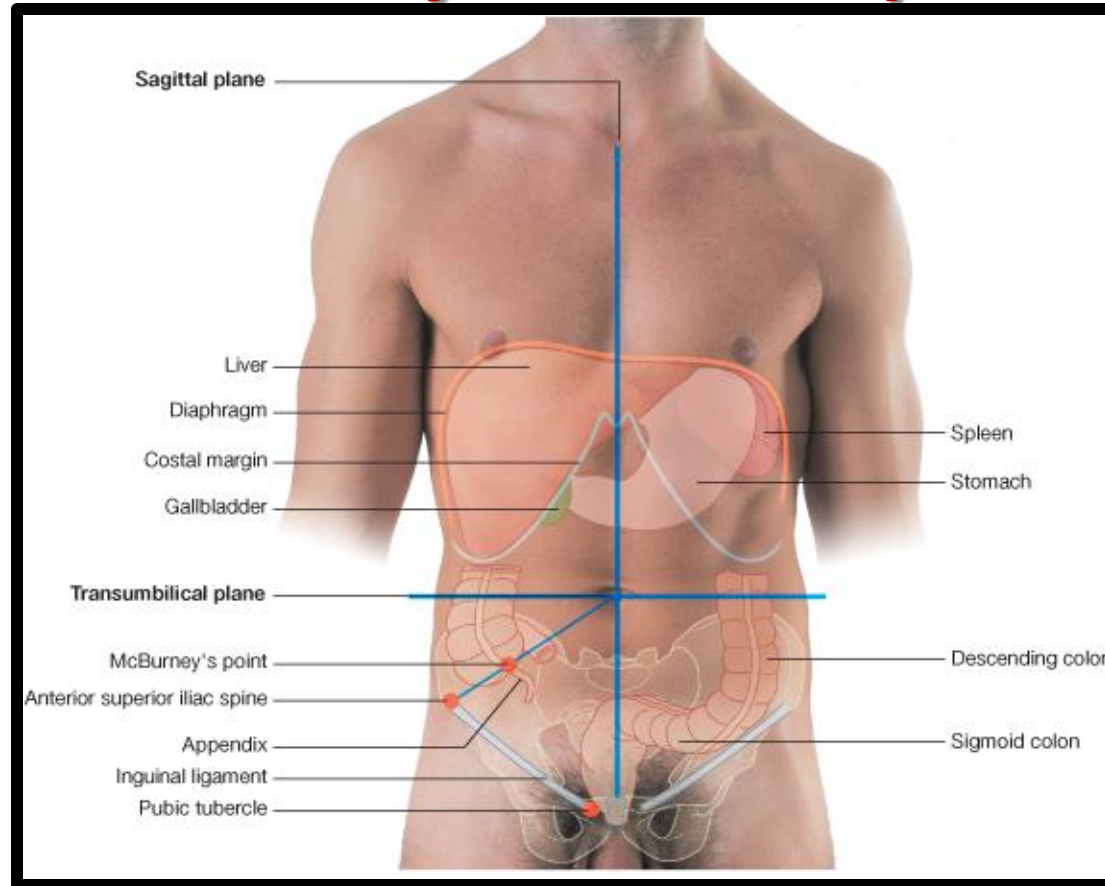
1. Lower 1/3 of rectum
2. Anal canal

# SURFACE ANATOMY



# APPENDIX

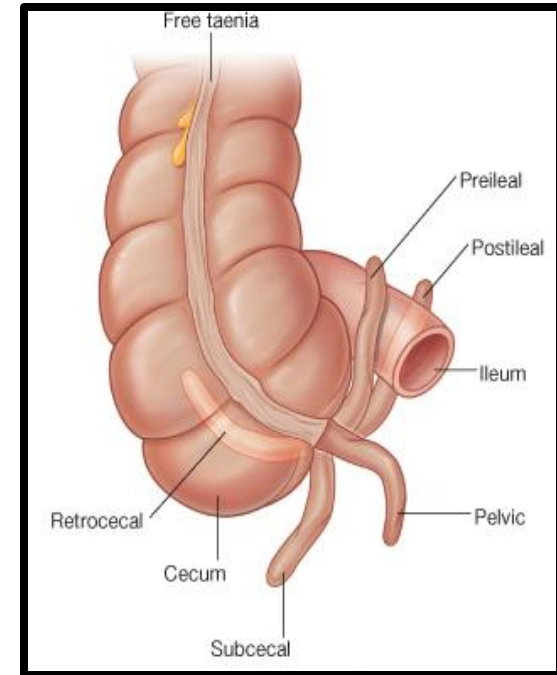
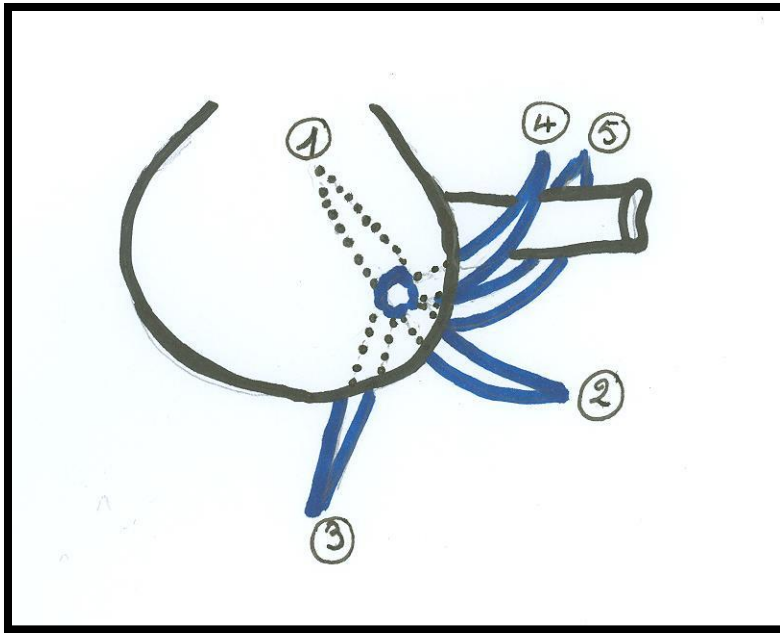
## *Surface Anatomy*



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

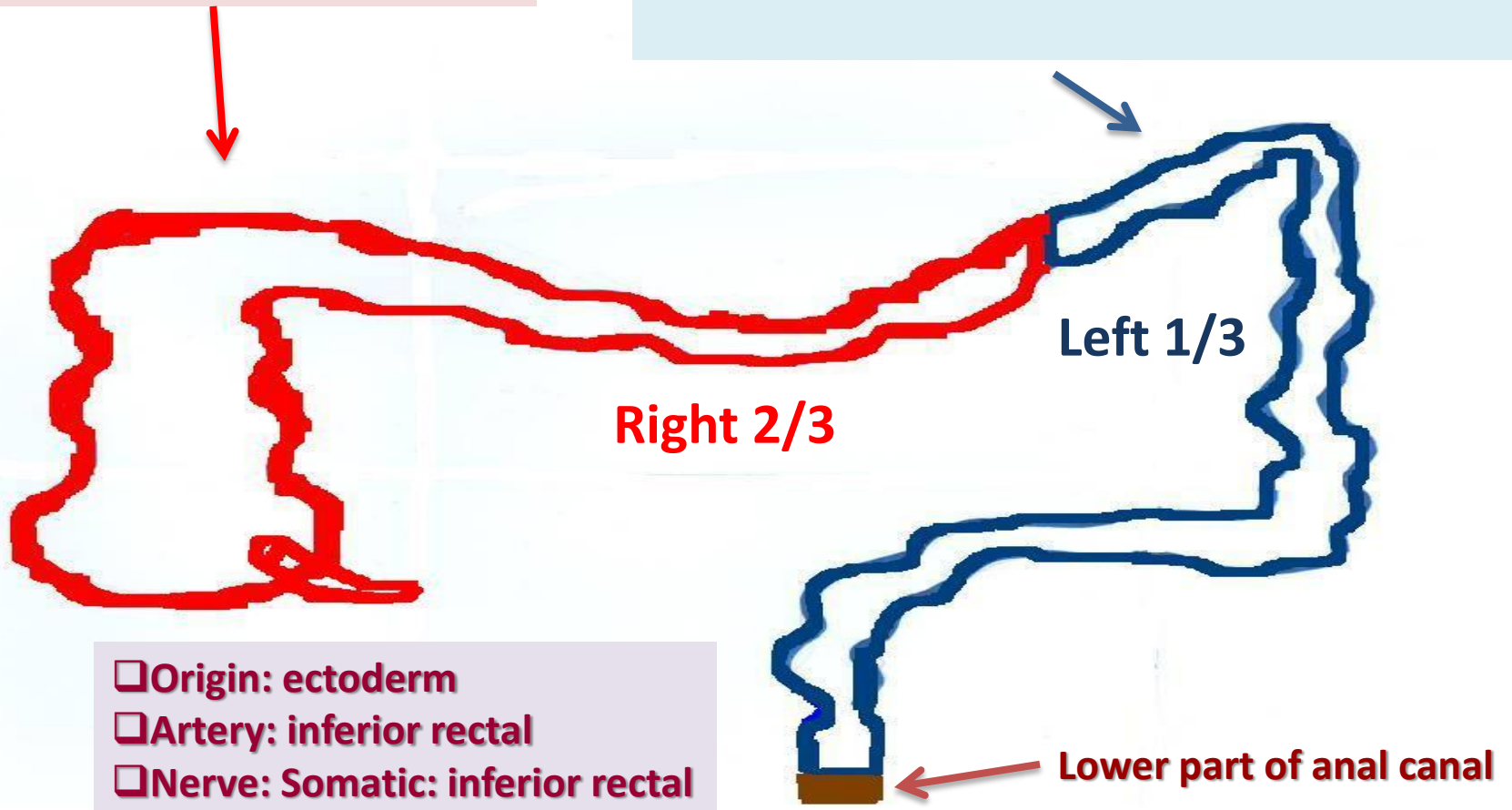


- ❑ **Opening:** at posteromedial aspect of cecum, 1 inch below ileo-cecal junction
- ❑ **Positions:**
  1. Retrocecal: most common
  2. Pelvic   3. Subcecal   4. Preileal   5. Postileal: least common

# RELATION BETWEEN ORIGIN & SUPPLY

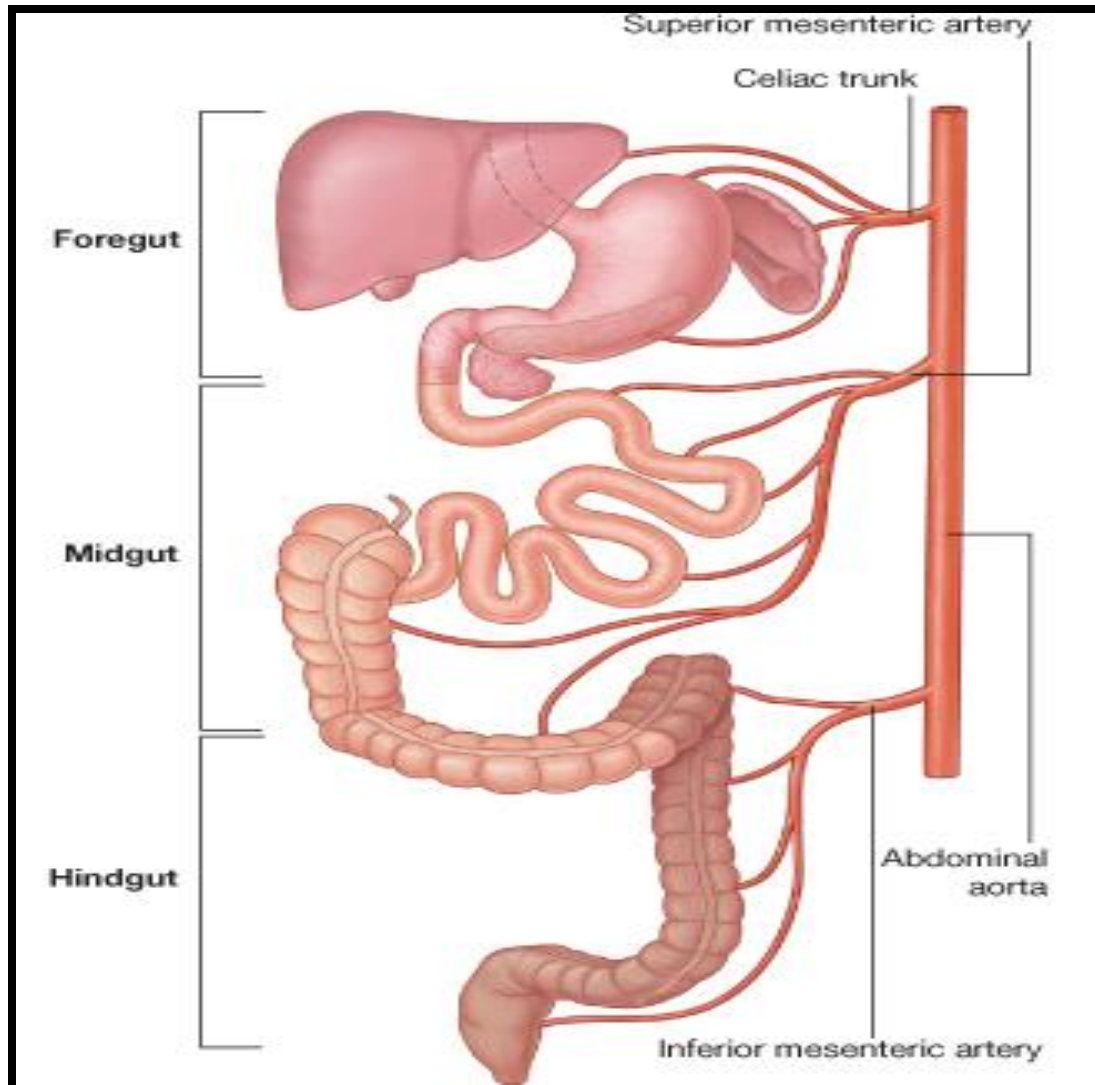
- ❑ Origin: Midgut (endoderm)
- ❑ Artery: Superior Mesenteric
- ❑ Nerve: Autonomic: Sympathetic + vagus

- ❑ Origin: Hindgut (endoderm)
- ❑ Artery: Inferior Mesenteric
- ❑ Nerve: Autonomic: Sympathetic + pelvic splanchnic nerves

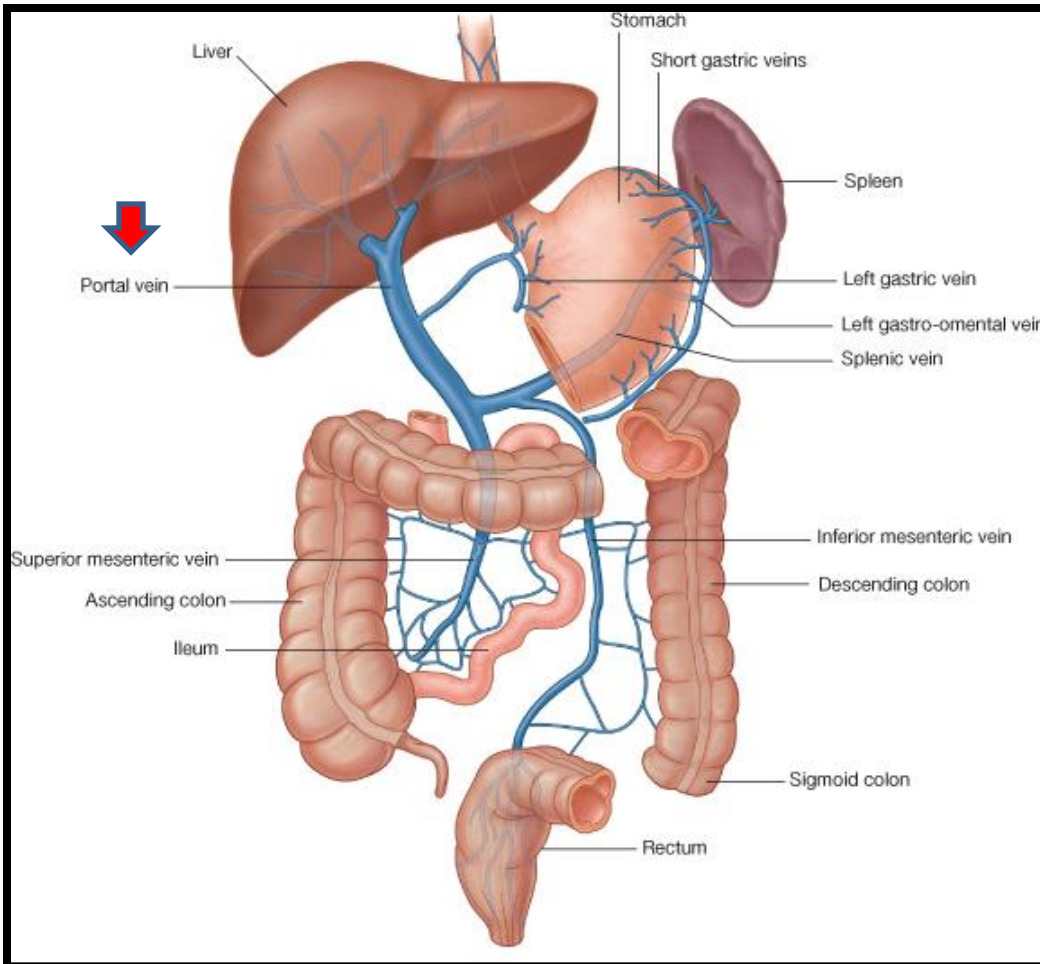


- ❑ Origin: ectoderm
- ❑ Artery: inferior rectal
- ❑ Nerve: Somatic: inferior rectal

# RELATION BETWEEN EMBRYOLOGICAL ORIGIN OF GUT & ITS ARTERIAL SUPPLY

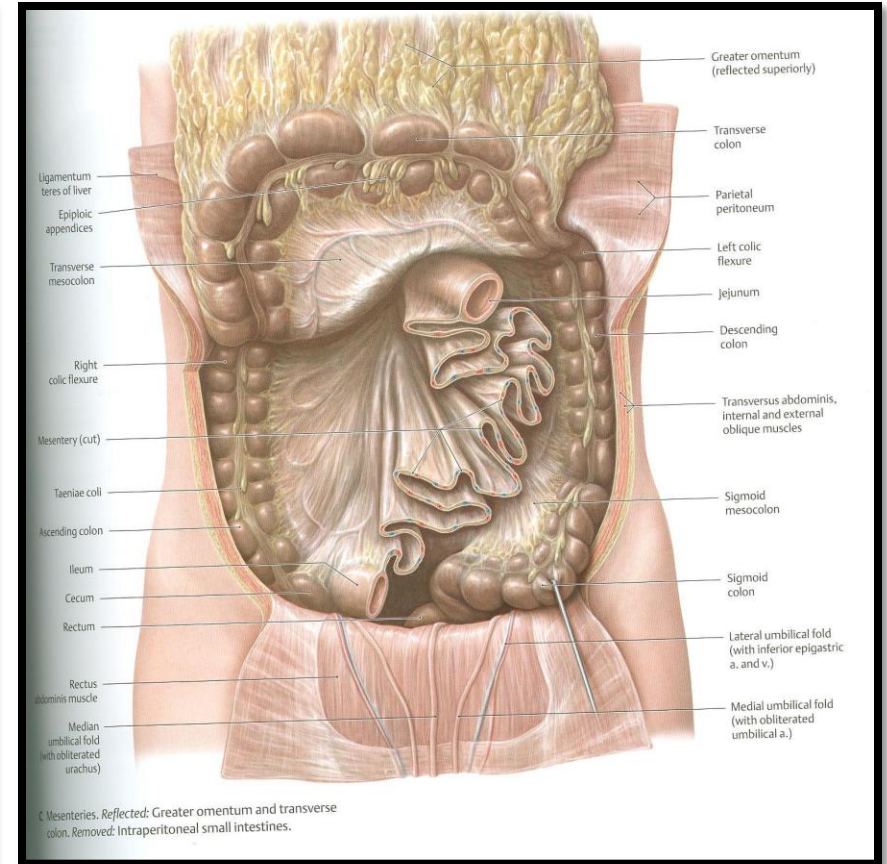
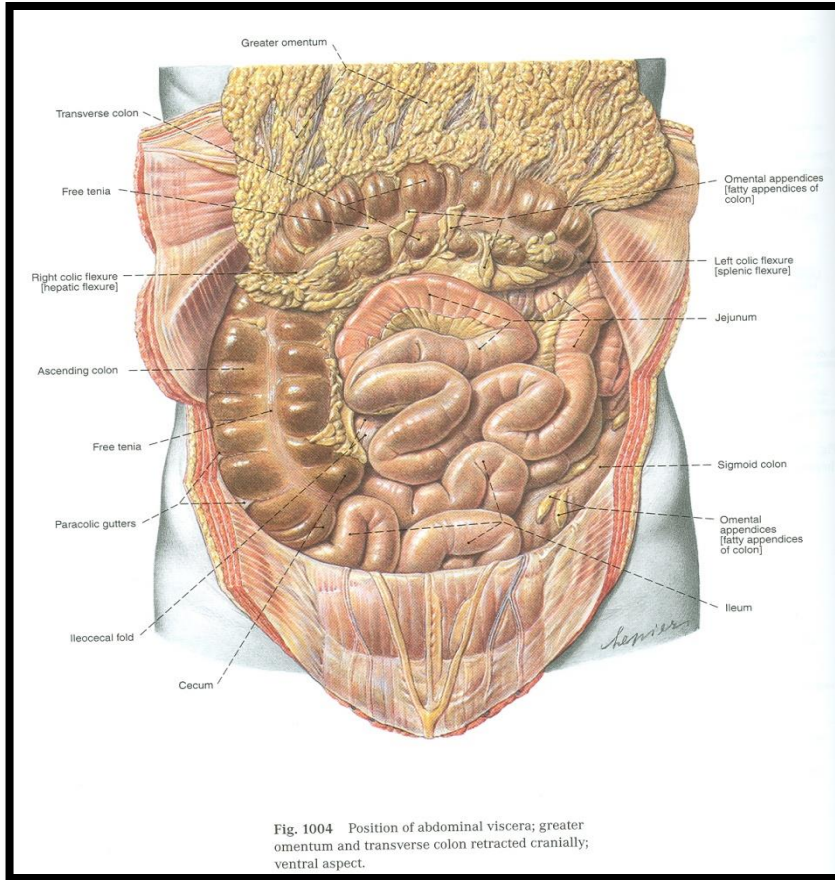


# VENOUS DRAINAGE OF GUT



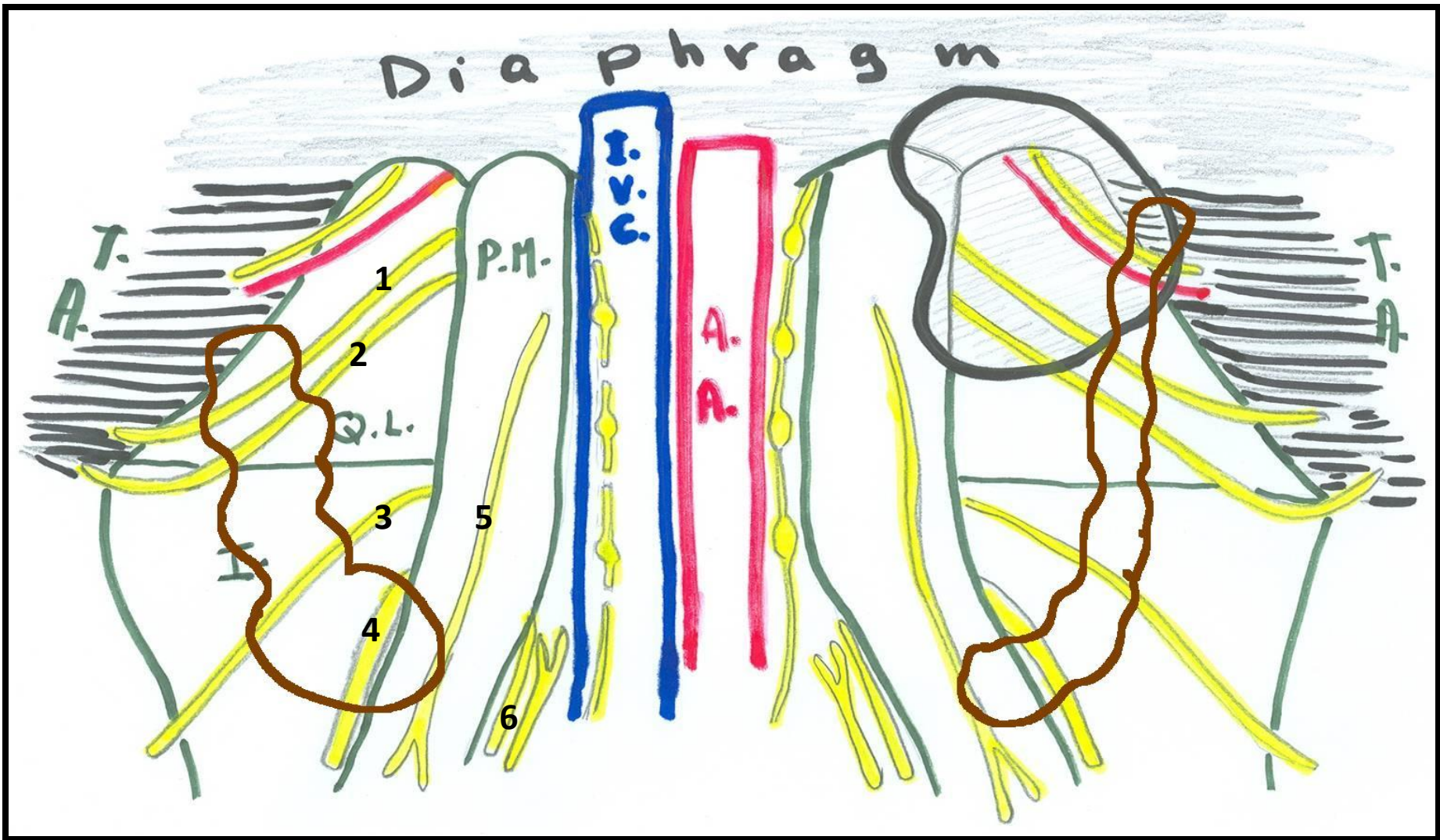
- Veins draining gut form the portal circulation
- All veins finally end into portal vein which enters the liver

# CECUM – ASCENDING & DESCENDING COLONS (ANTERIOR RELATIONS)



- Coils of small intestine
- Greater omentum

- Anterior abdominal wall



1: Iliohypogastric nerve; 2: Ilioinguinal nerve; 3: lateral cutaneous nerve of thigh

4: Femoral nerve; 5: Genitofemoral nerve; 6: Obturator nerve

P.M.= psoas major; Q.L.=quadratus lumborum; I.=iliacus;

T.A.= transversus abdominis; I.V.C.=inferior vena cava; A.A.=abdominal aorta

# **CECUM – ASCENDING & DESCENDING COLONS (POSTERIOR RELATIONS)**

## **□ Cecum:**

- 1. Psoas major**
- 2. Iliacus**

## **□ Ascending colon:**

- 1. Iliacus**
- 2. Quadratus lumborum**

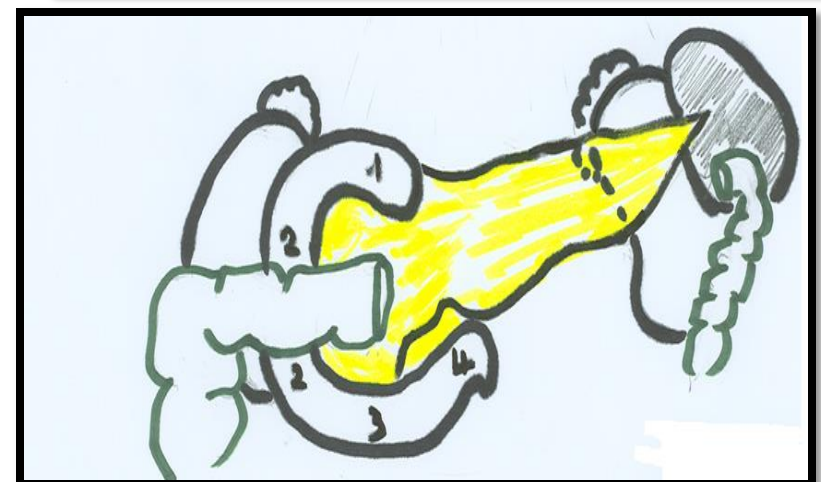
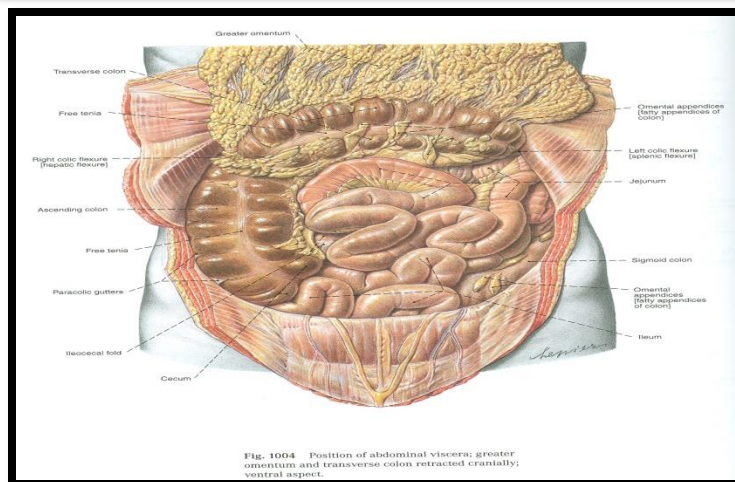
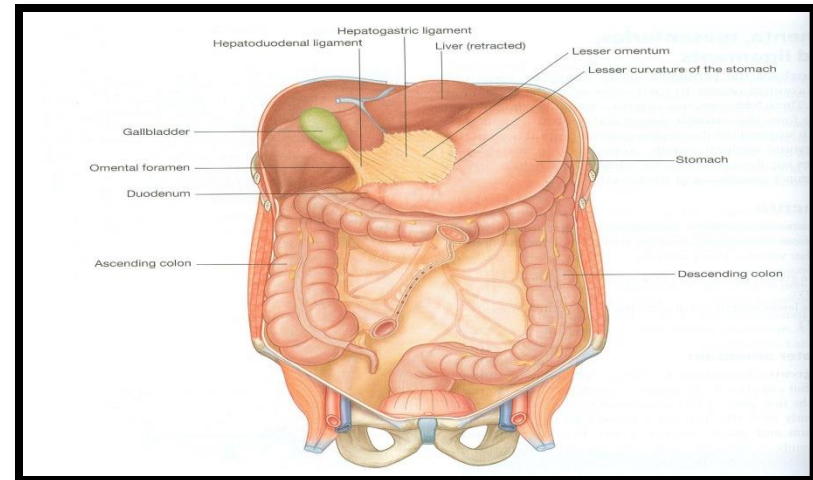
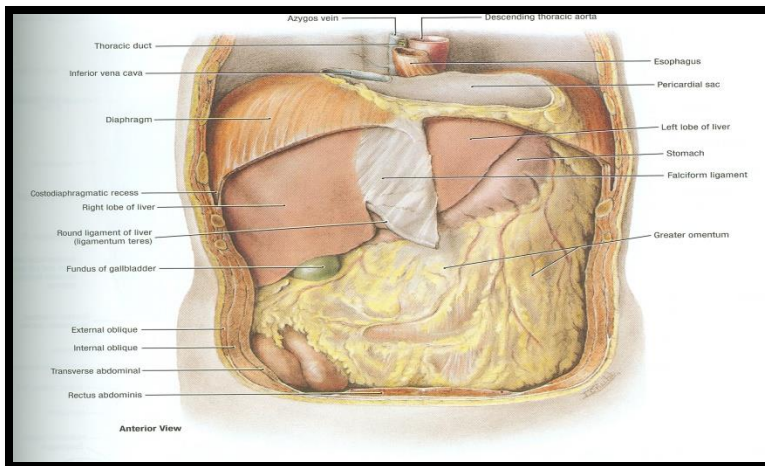
## **□ Descending colon:**

- 1. Left kidney**
- 2. Quadratus lumborum**
- 3. Iliacus**
- 4. Psoas major**

# RELATIONS OF TRANSVERSE COLON

**Anterior:** greater omentum, anterior abdominal wall

**Superior:** liver, gall bladder, stomach

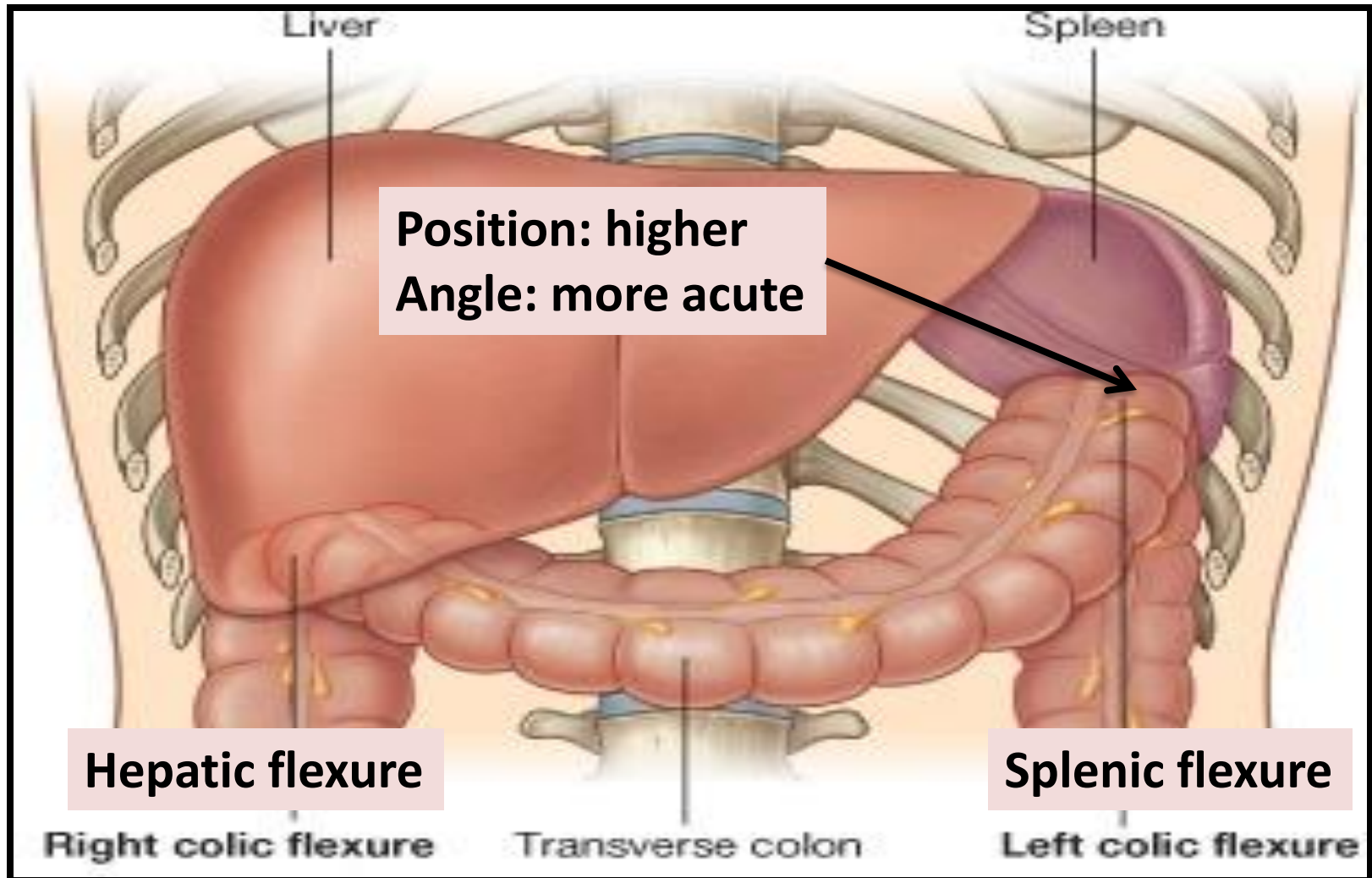


**Inferior:** coils of small intestine

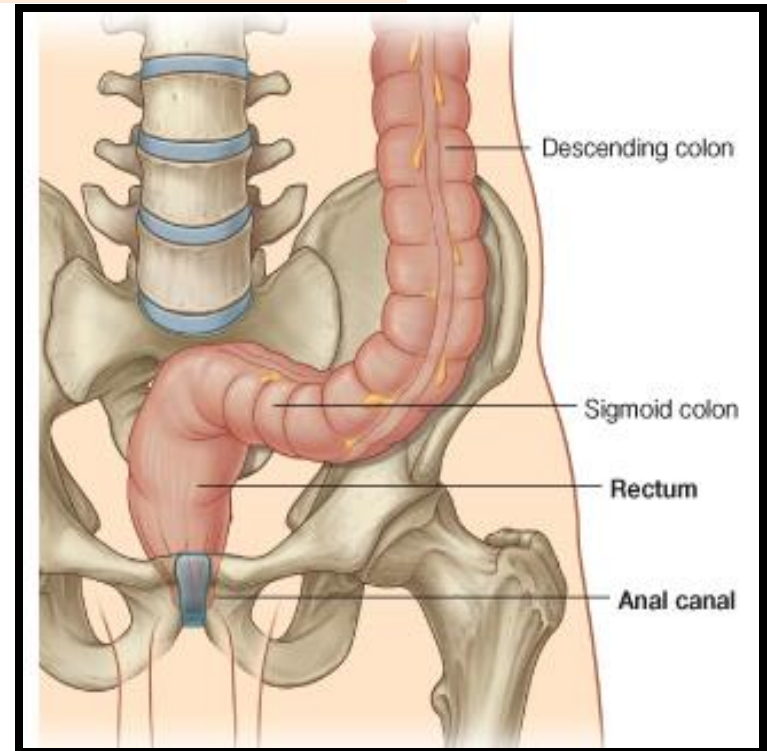
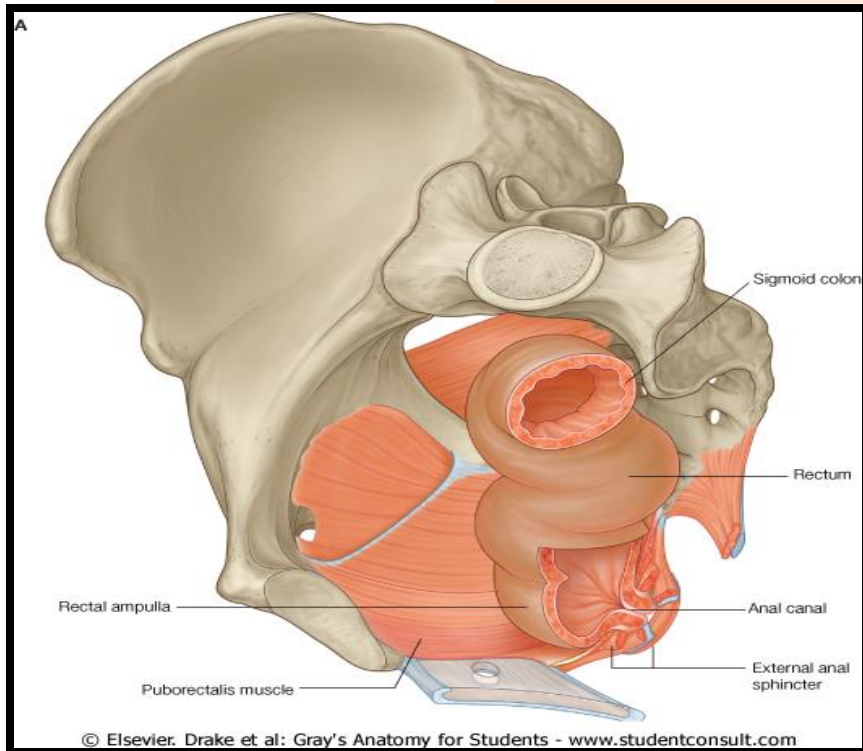
**Posterior:** 2<sup>nd</sup> part of duodenum, pancreas



# COLIC FLEXURES



# 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)

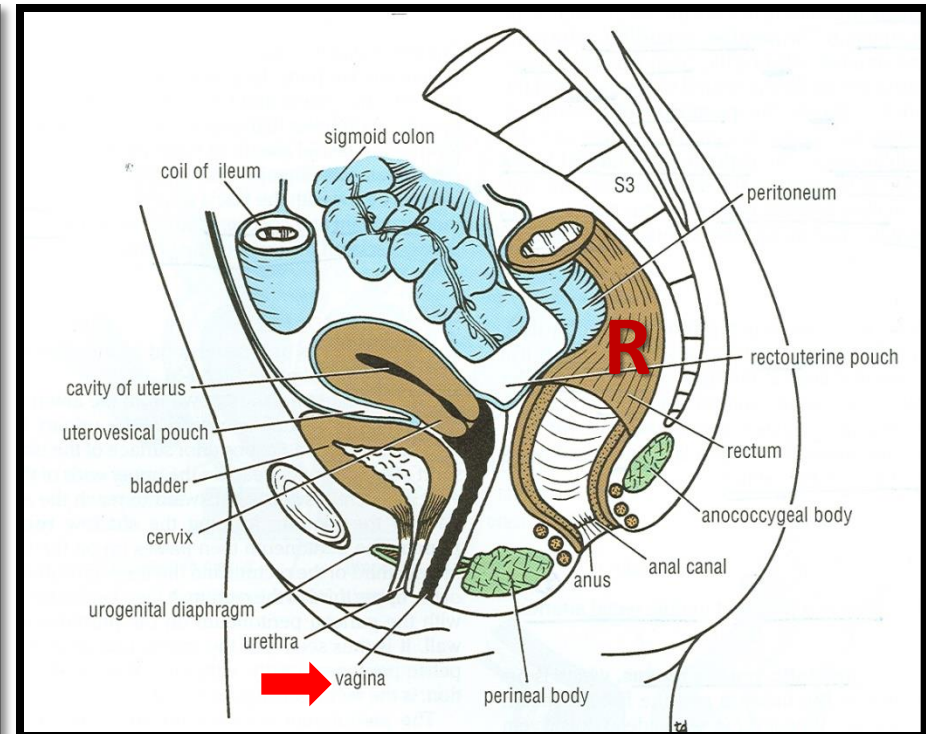
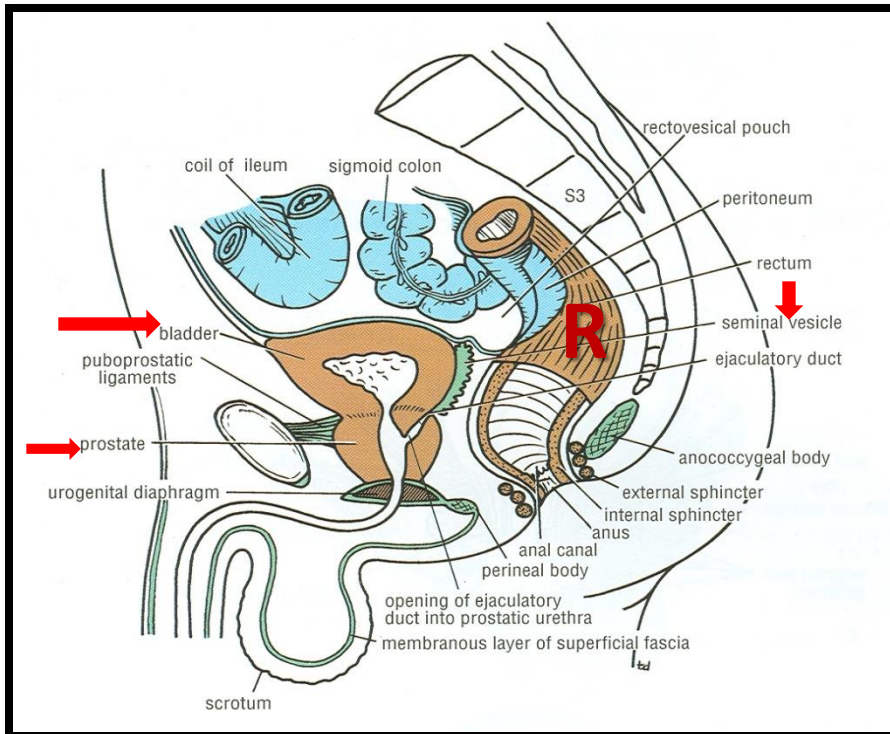
# RELATIONS OF RECTUM IN PELVIS

## MALE PELVIS

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


## FEMALE PELVIS

- ❑ **Anterior:** posterior wall of vagina
- ❑ **Posterior:** sacrum & coccyx




# QUESTION 1

In which one of the following regions lies McBurney's point?

1. Right iliac fossa 
2. Hypogastrium
3. Right lumbar region
4. Umbilical region

## QUESTION 2

Which one of the following parts of large intestine is found in the pelvis?

1. Transverse colon
2. Anal canal
3. Rectum 
4. Cecum

The image features two large, stylized yellow roses with white and light yellow petals, set against a teal background. The roses are positioned on the left and right sides of the frame. The text "THANK YOU" is written in a bold, blue, sans-serif font across the center of the image, overlapping the petals of both roses. The entire scene is enclosed within a thin orange border.

**THANK YOU**