

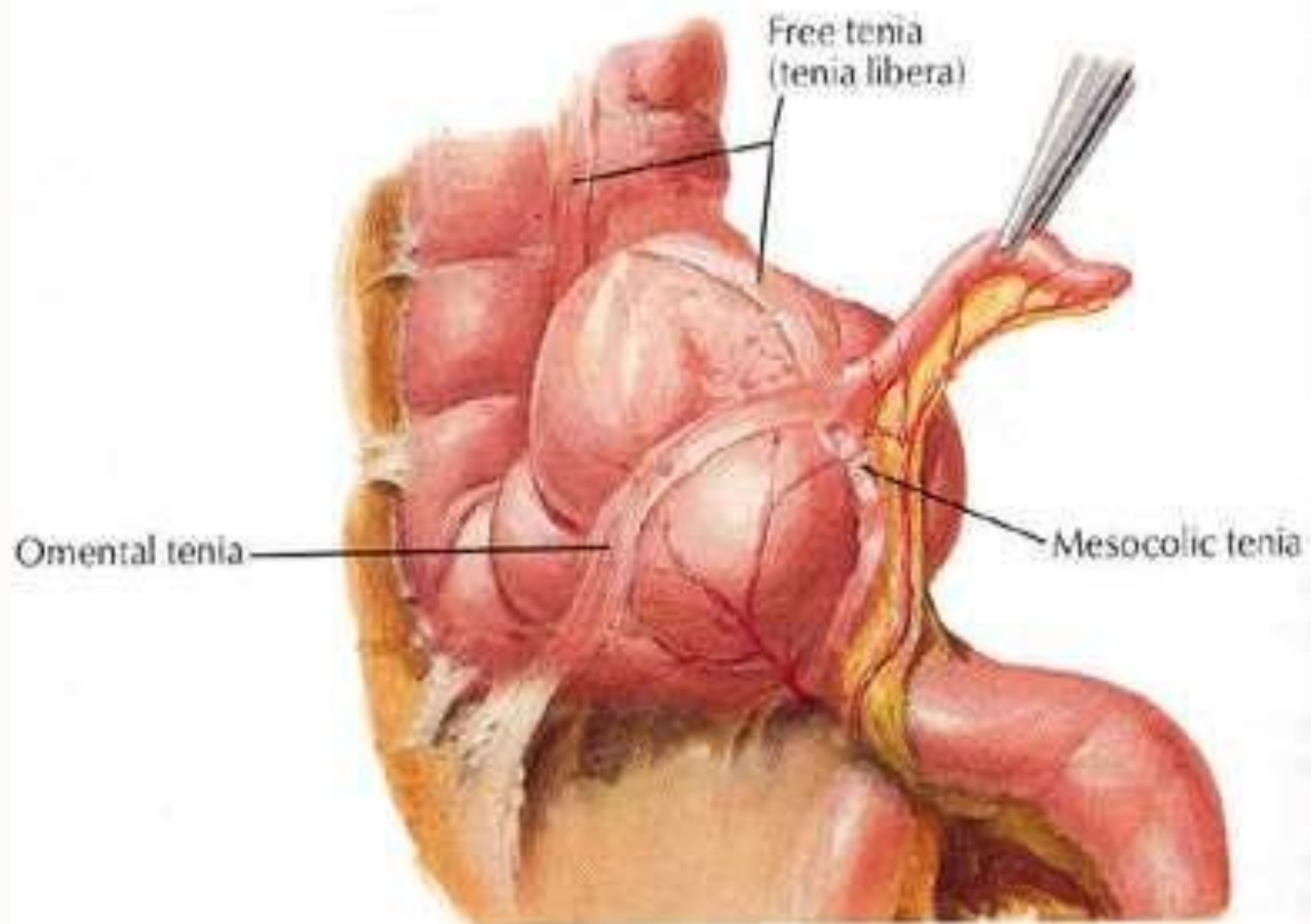
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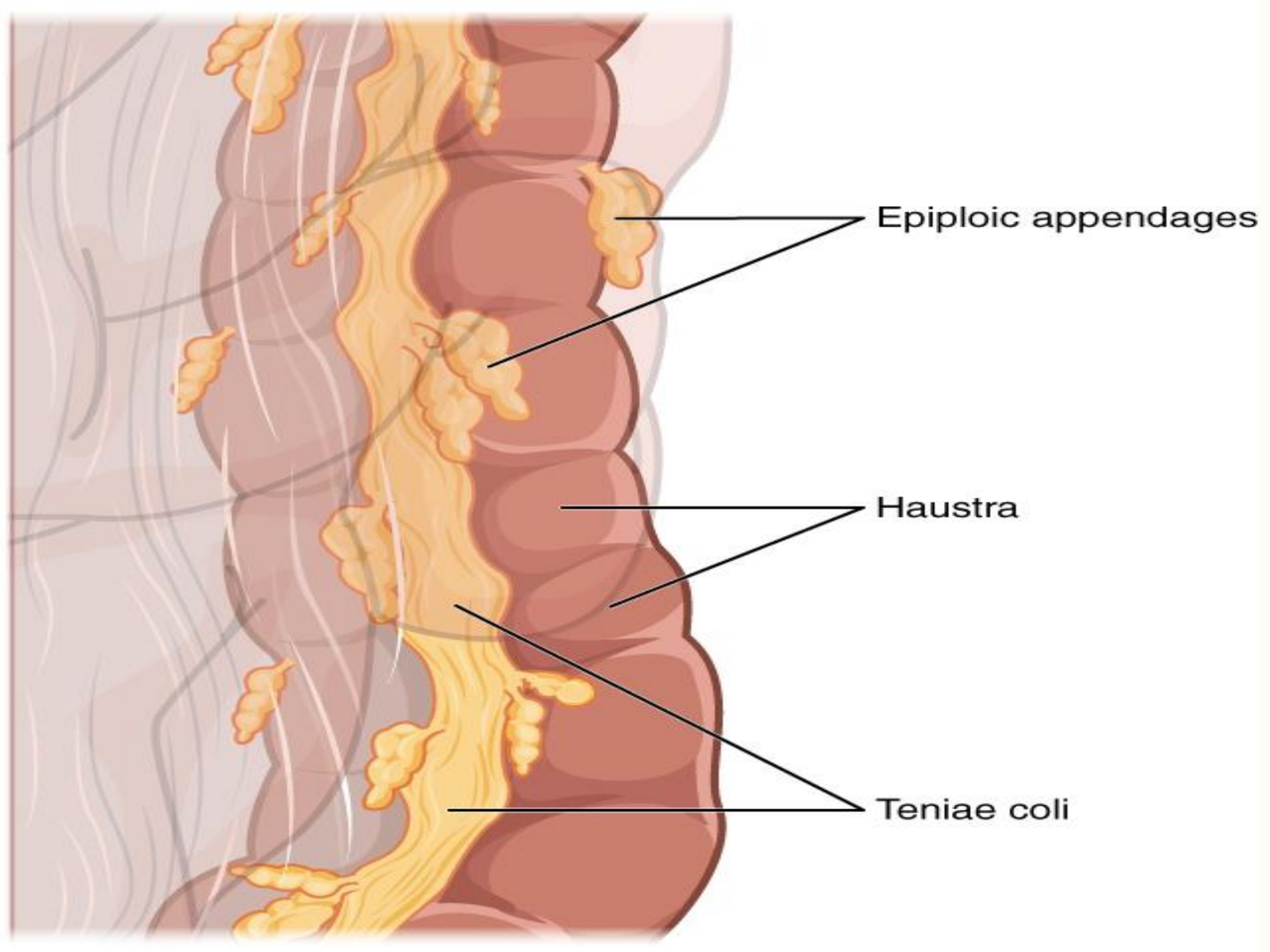


LARGE INTESTINE

LARGE INTESTINE

- The large intestine extends from the ileum to the anus. It is divided into the **cecum**, **appendix**, **ascending colon**, **transverse colon**, **descending colon**, and **sigmoid colon**. The **rectum** and **anal canal** are considered in the sections on the pelvis and perineum. The primary function of the large intestine is the absorption of water and electrolytes and the storage of undigested material until it can be expelled from the body as feces.





Epiploic appendages

Haustra

Teniae coli

Caecum

Relations:

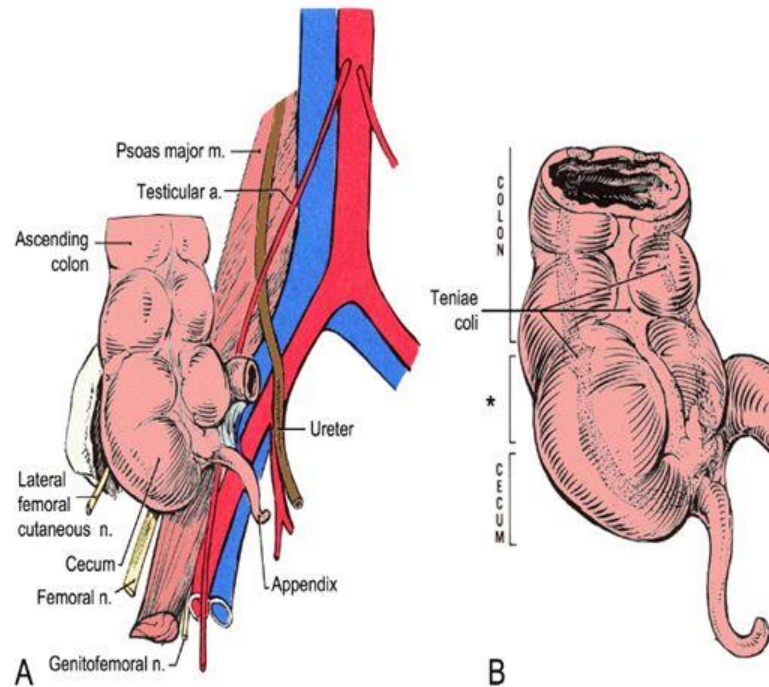
Anteriorly: anterior abdominal wall, greater omentum, and coils of small intestine.

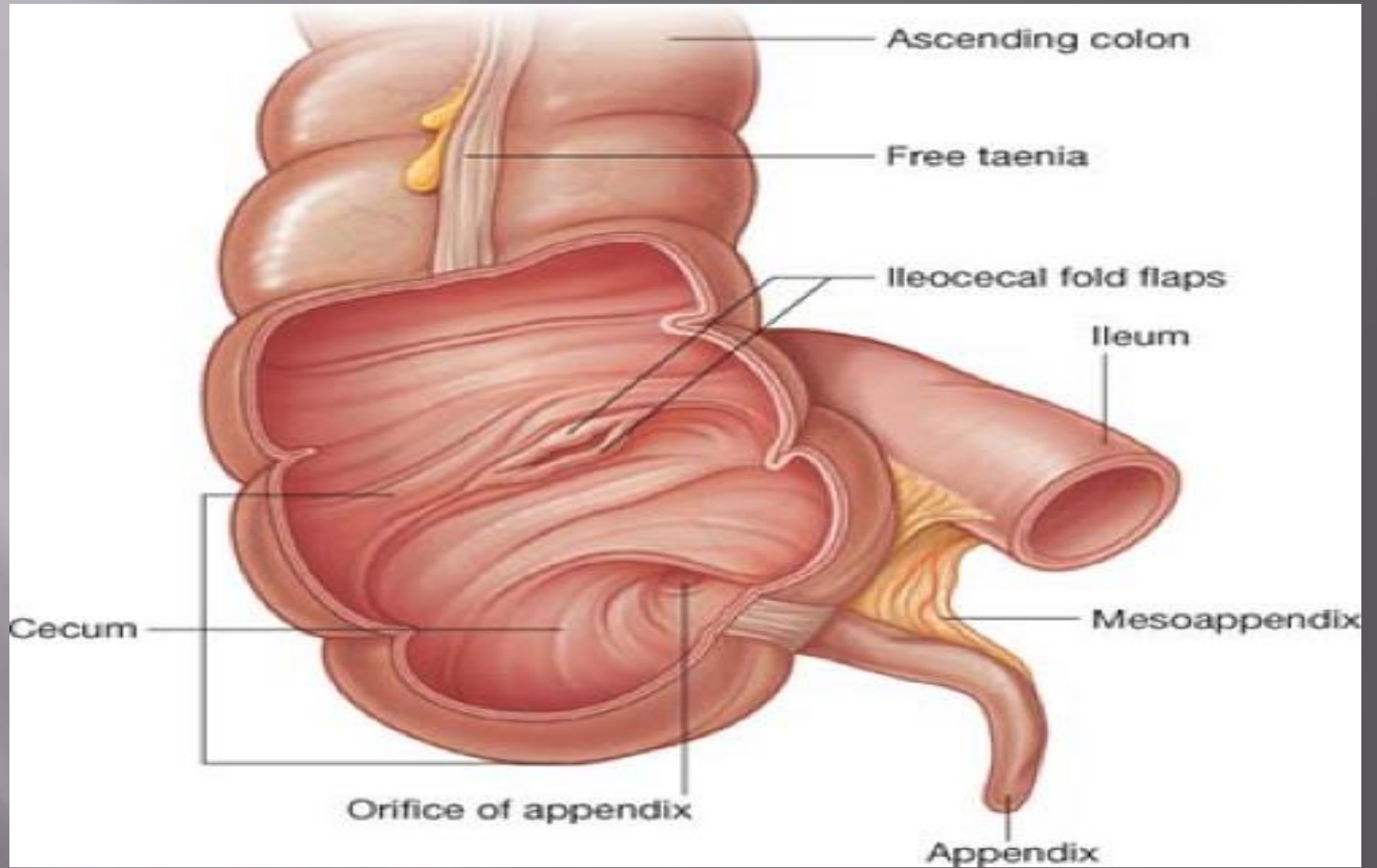
Posteriorly:

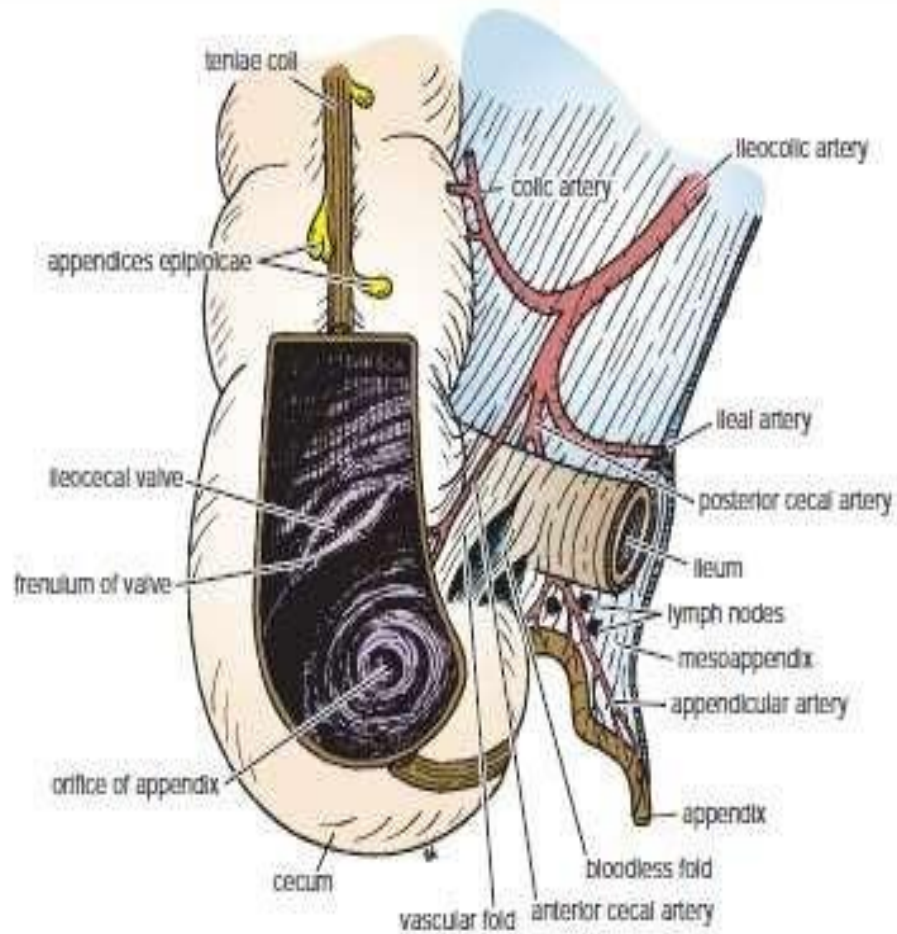
2 Muscles: Psoas major and iliacus.

2 Arteries: Right gonadal and External iliac artery.

3 Nerves: Femoral, genitofemoral, and lateral cutaneous nerve of the thigh.







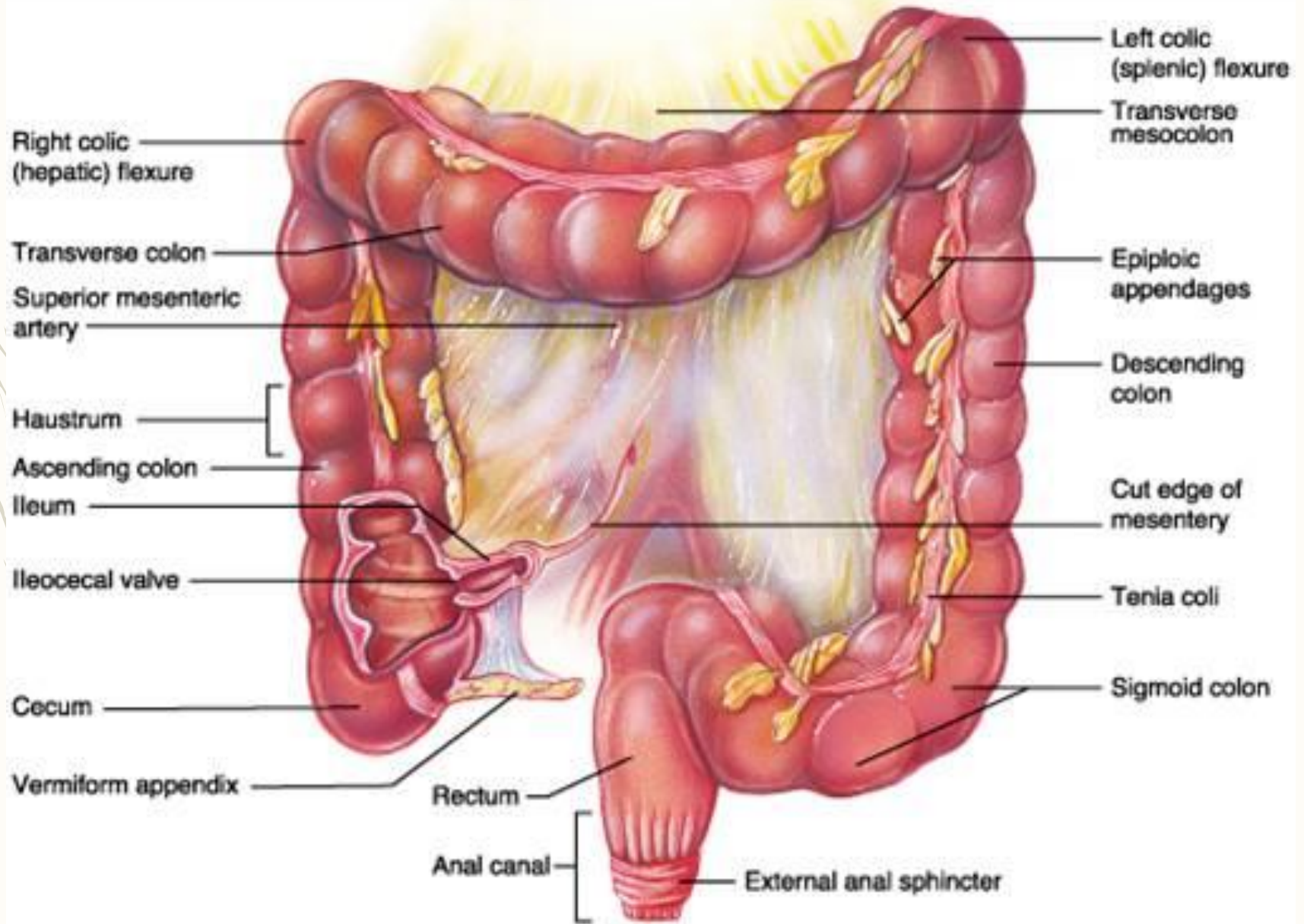
ASCENDING COLON

Location and Description

- The ascending colon is about 5 in. (13 cm) long and lies in the right lower quadrant. It extends upward from the cecum to the inferior surface of the right lobe of the liver, where it turns to the left, forming the **right colic flexure**, and becomes continuous with the transverse colon. The peritoneum covers the front and the sides of the ascending colon, binding it to the posterior abdominal wall.

Relations

- ■■ **Anteriorly:** Coils of small intestine, the greater omentum, and the anterior abdominal wall.
- ■■ **Posteriorly:** The iliacus, the iliac crest, the quadratus lumborum, the origin of the transversus abdominis muscle, and the lower pole of the right kidney. The iliohypogastric and the ilioinguinal nerves cross behind it



BLOOD SUPPLY & LYMPHATIC DRAINAGE & NERVE SUPPLY

Blood Supply

- **Arteries** The ileocolic and right colic branches of the superior mesenteric artery supply this area.
- **Veins** The veins correspond to the arteries and drain into the superior mesenteric vein.

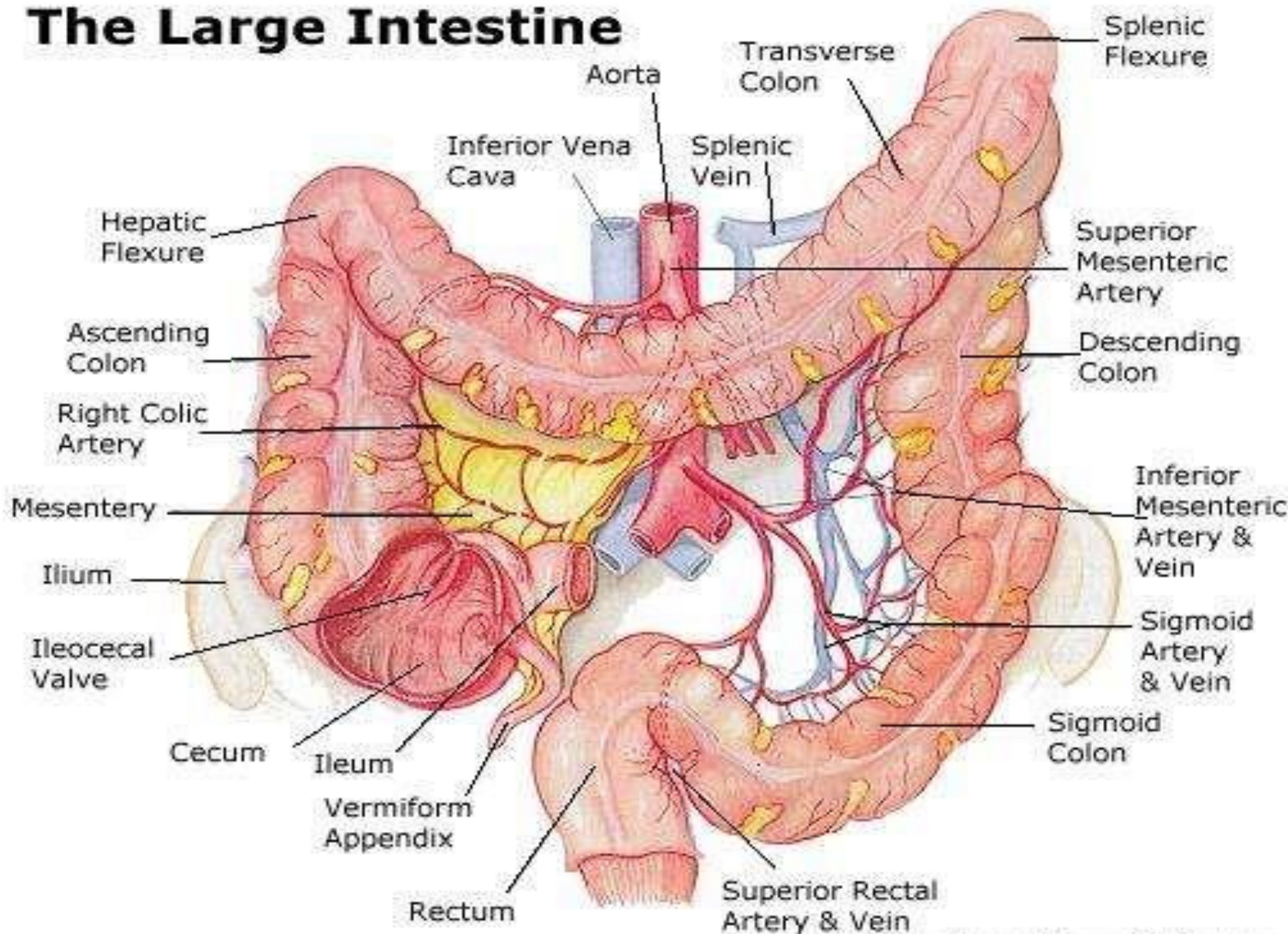
Lymph Drainage

- The lymph vessels drain into lymph nodes lying along the course of the colic blood vessels and ultimately reach the superior mesenteric nodes.

Nerve Supply

- Sympathetic and parasympathetic (vagus) nerves from the superior mesenteric plexus supply this area of the colon.

The Large Intestine

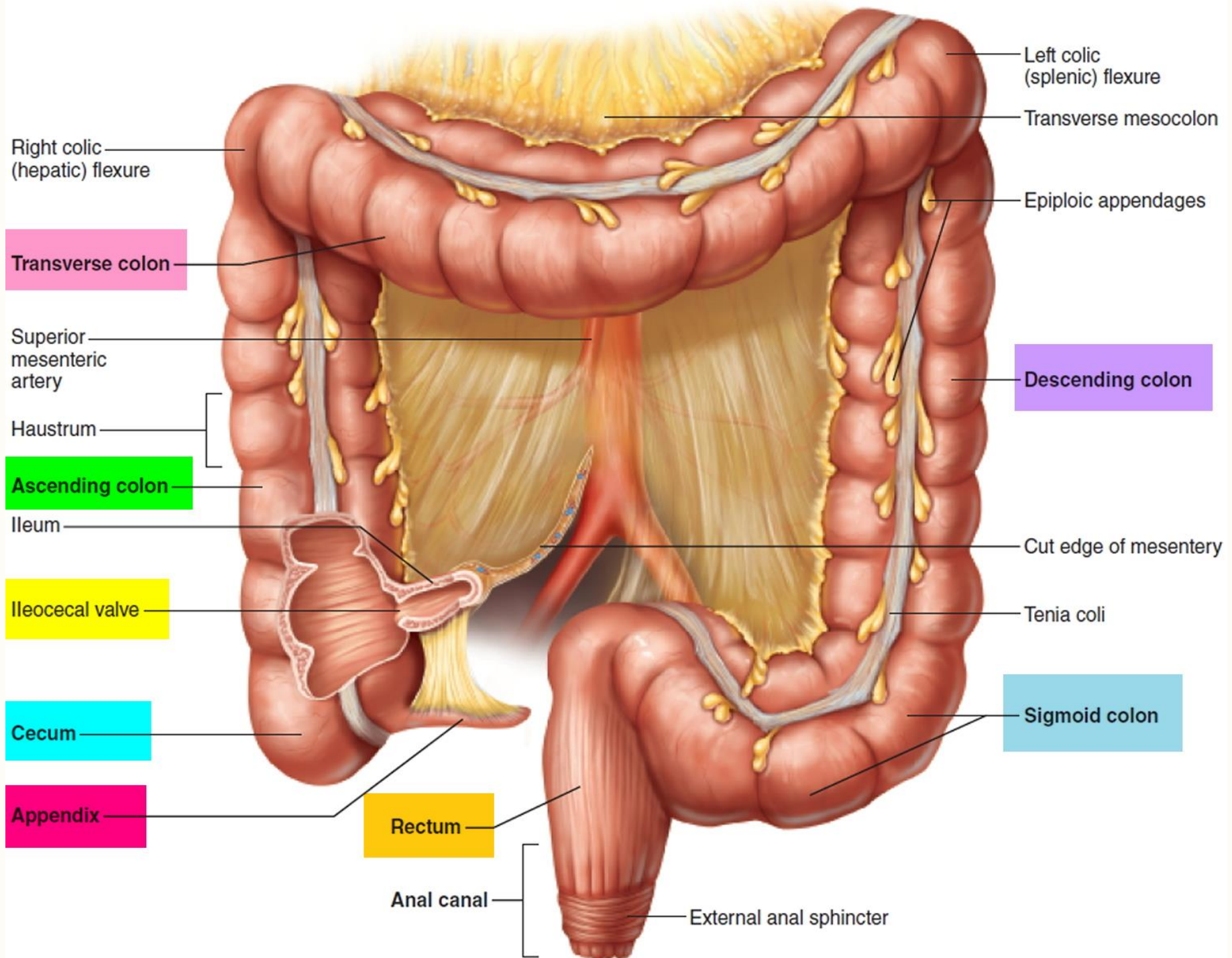


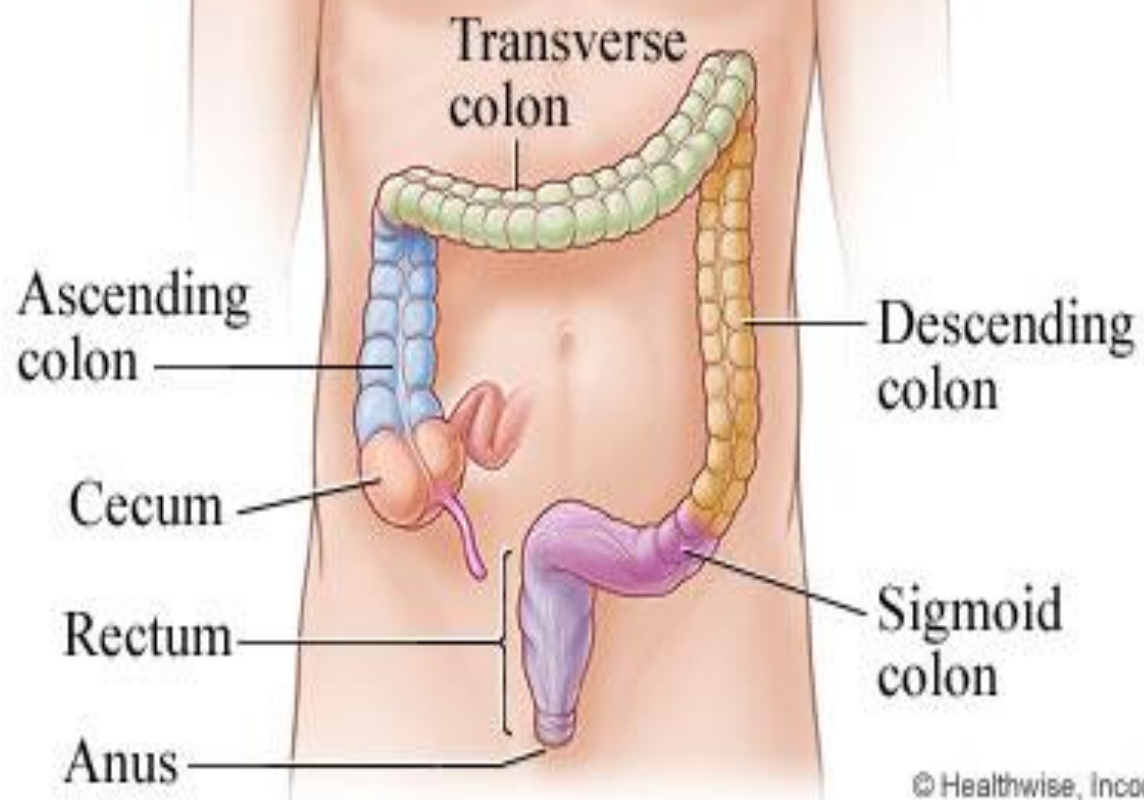
adapted from Thibodeau

TRANSVERSE COLON

Location and Description

- The transverse colon is about 15 in. (38 cm) long and extends across the abdomen, occupying the umbilical region. It begins at the right colic flexure below the right lobe of the liver and hangs downward, suspended by the transverse mesocolon from the pancreas. It then ascends to the **left colic flexure** below the spleen. The left colic flexure is higher than the right colic flexure and is suspended from the diaphragm by the **phrenicocolic ligament**. The **transverse mesocolon**, or mesentery of the transverse colon, suspends the transverse colon from the anterior border of the pancreas. The mesentery is attached to the superior border of the transverse colon, and the posterior layers of the greater omentum are attached to the inferior border..

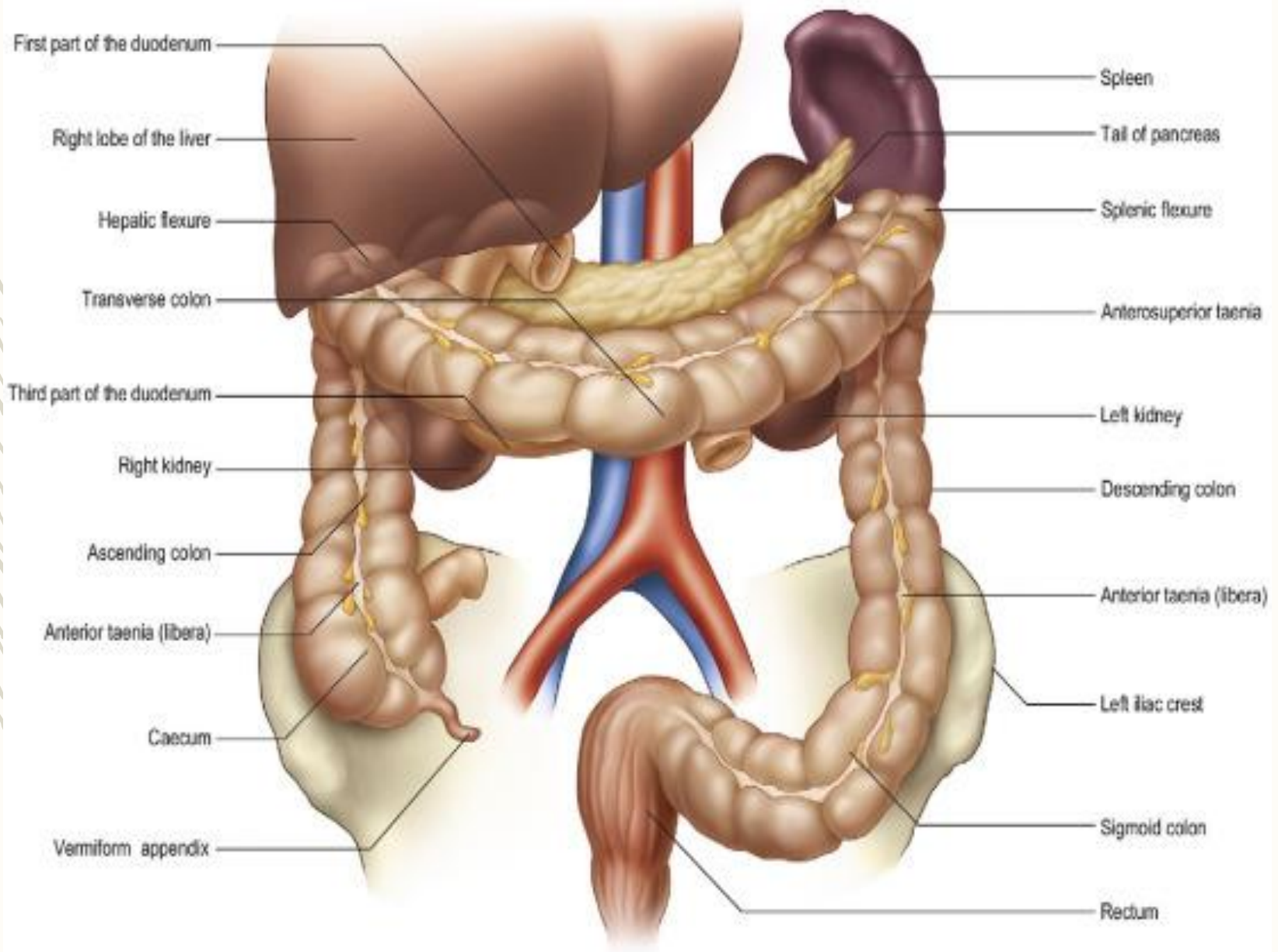




TRANSVERSE COLON

Relations

- ■■ **Anteriorly:** The greater omentum and the anterior abdominal wall (umbilical and hypogastric regions)
- ■■ **Posteriorly:**
 - The second part of the duodenum,
 - the head of the pancreas,
 - the coils of the jejunum and the ileum



BLOOD SUPPLY & LYMPHATIC DRAINAGE & NERVE SUPPLY

Blood Supply

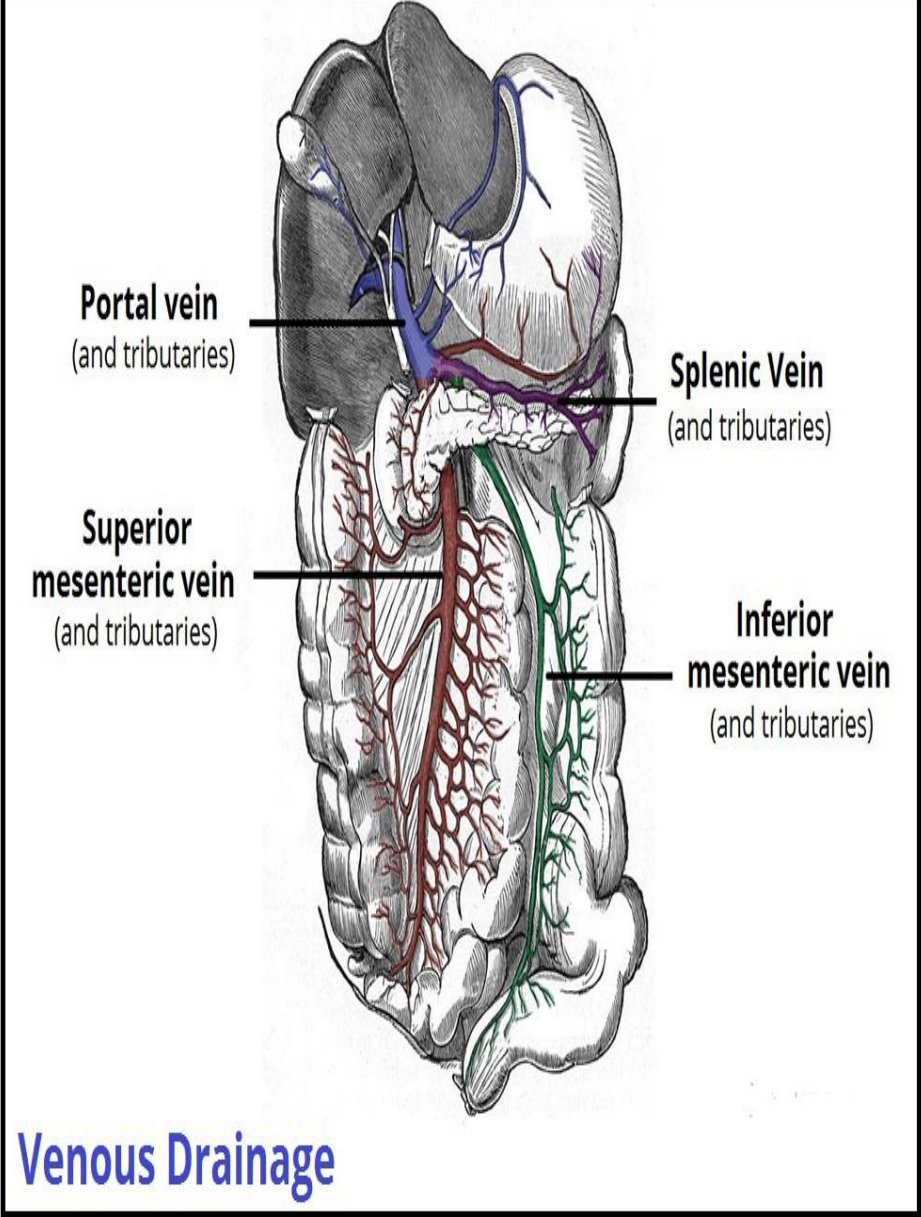
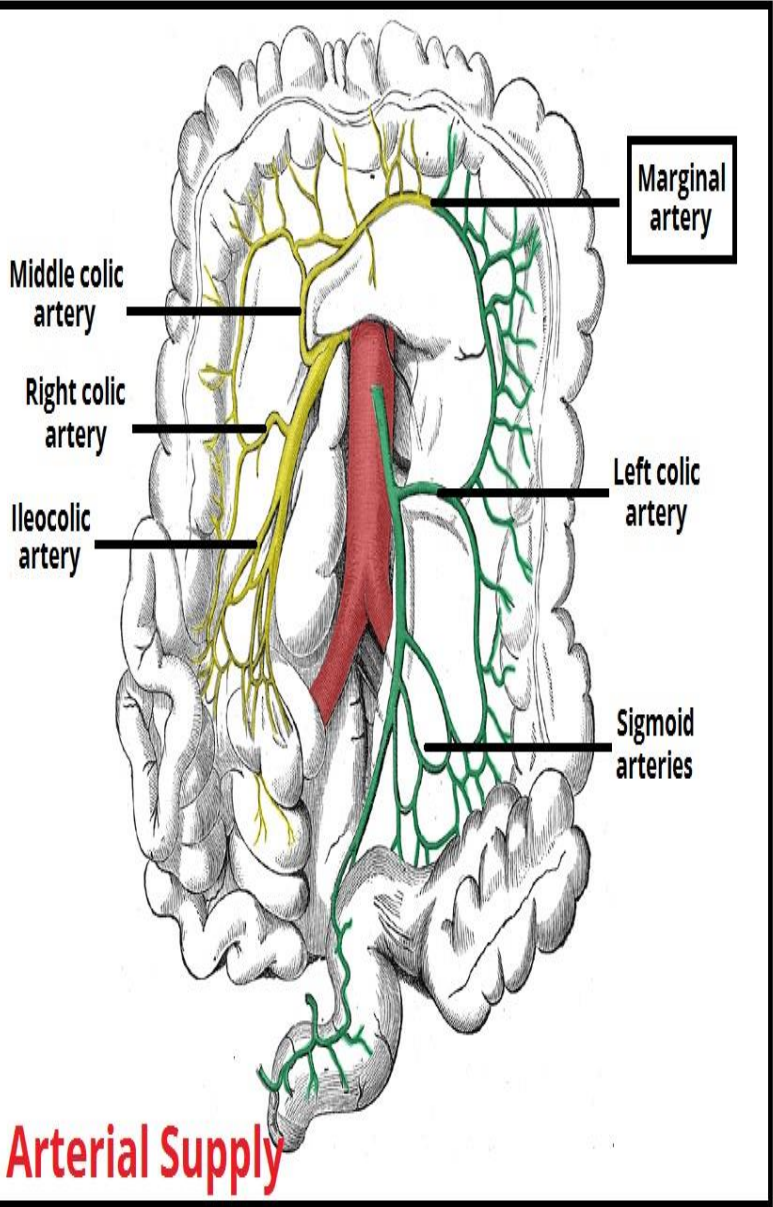
- **Arteries** The proximal two thirds are supplied by the middle colic artery, a branch of the superior mesenteric artery. The distal third is supplied by the left colic artery, a branch of the inferior mesenteric artery .
- **Veins** The veins correspond to the arteries and drain into the superior and inferior mesenteric veins.

Lymph Drainage

- The proximal two thirds drain into the colic nodes and then into the superior mesenteric nodes; the distal third drains into the colic nodes and then into the inferior mesenteric nodes.

Nerve Supply

- The proximal two thirds are innervated by sympathetic and vagal nerves through the superior mesenteric plexus; the distal third is innervated by sympathetic and parasympathetic pelvic splanchnic nerves through the inferior mesenteric plexus.



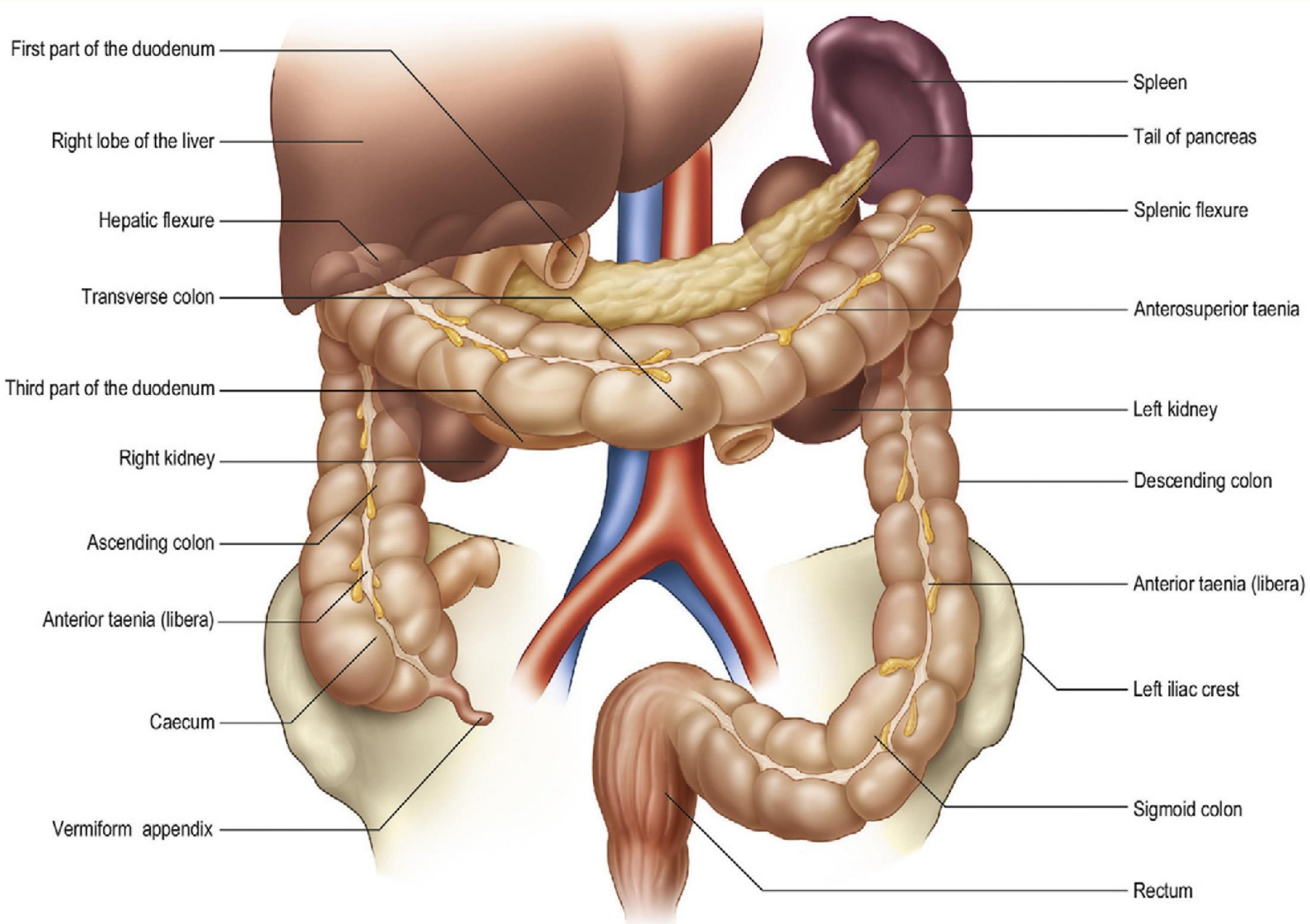
DESCENDING COLON

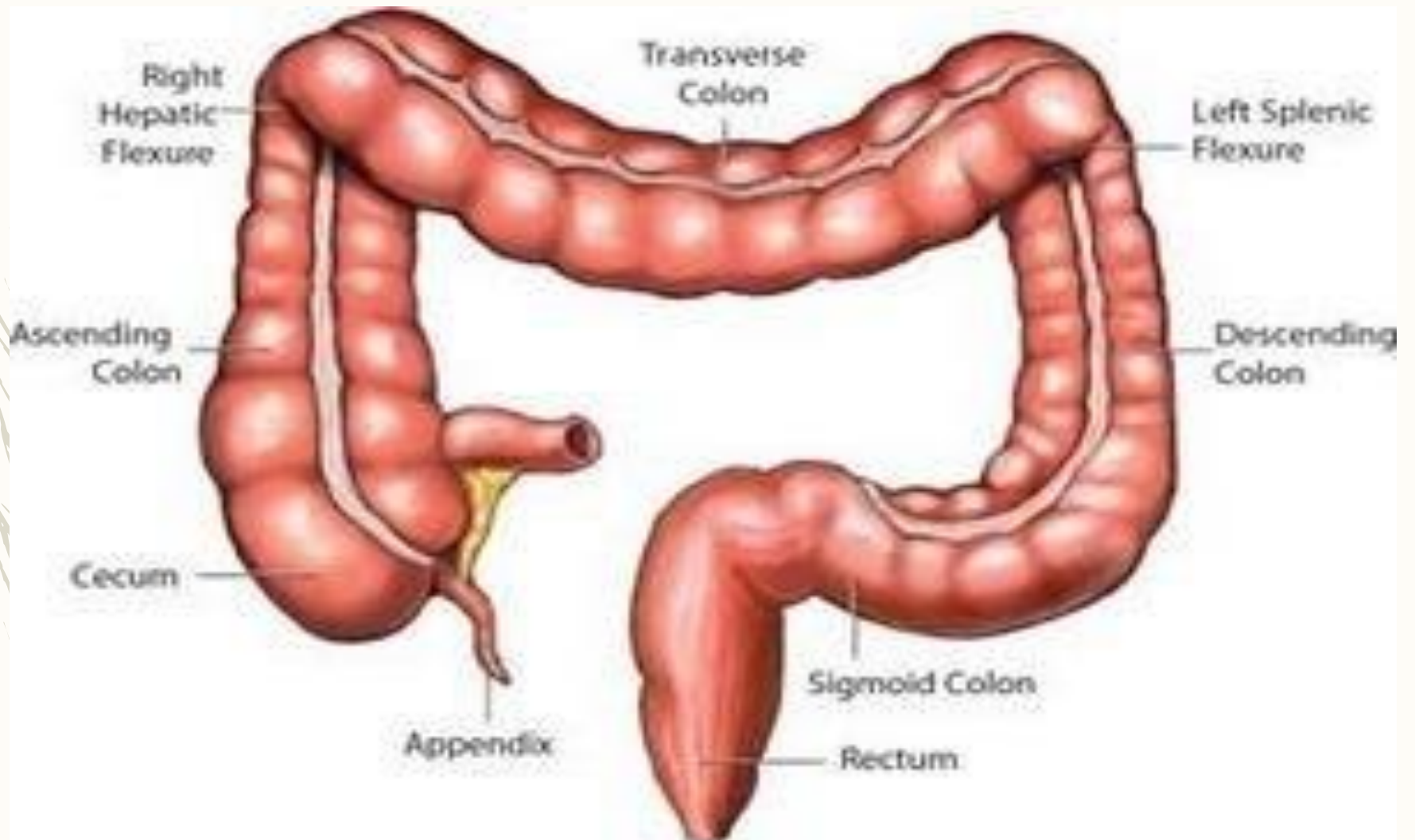
Location and Description

- The descending colon is about 10 in. (25 cm) long and lies in the left upper and lower quadrants . It extends downward from the left colic flexure, to the pelvic brim, where it becomes continuous with the sigmoid colon. The peritoneum covers the front and the sides and binds it to the posterior abdominal wall.

Relations

- ■■ **Anteriorly:** Coils of small intestine, the greater omentum, and the anterior abdominal wall .
- ■■ **Posteriorly:** The lateral border of the left kidney, the origin of the transversus abdominis muscle, the quadratus lumborum, the iliac crest, the iliacus, and the left psoas. The iliohypogastric and the ilioinguinal nerves, the lateral cutaneous nerve of the thigh, and the femoral nerve also lie posteriorly.





Anatomy of Large Intestine



BLOOD SUPPLY & LYMPHATIC DRAINAGE & NERVE SUPPLY

Blood Supply

- **Arteries** The left colic and the sigmoid branches of the inferior mesenteric artery supply this area.
- **Veins** The veins correspond to the arteries and drain into the inferior mesenteric vein.

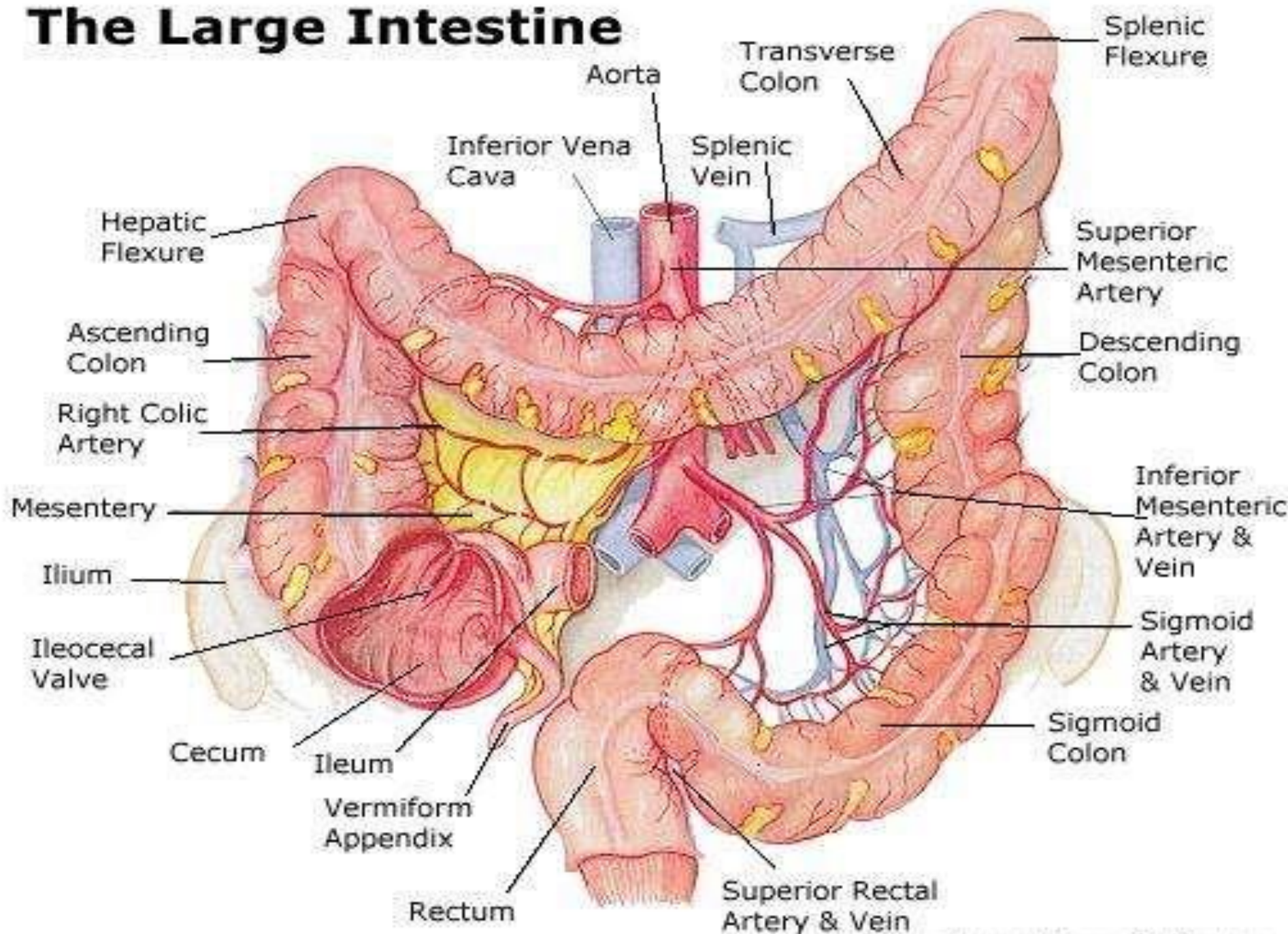
Lymph Drainage

- Lymph drains into the colic lymph nodes and the inferior mesenteric nodes around the origin of the inferior mesenteric artery.

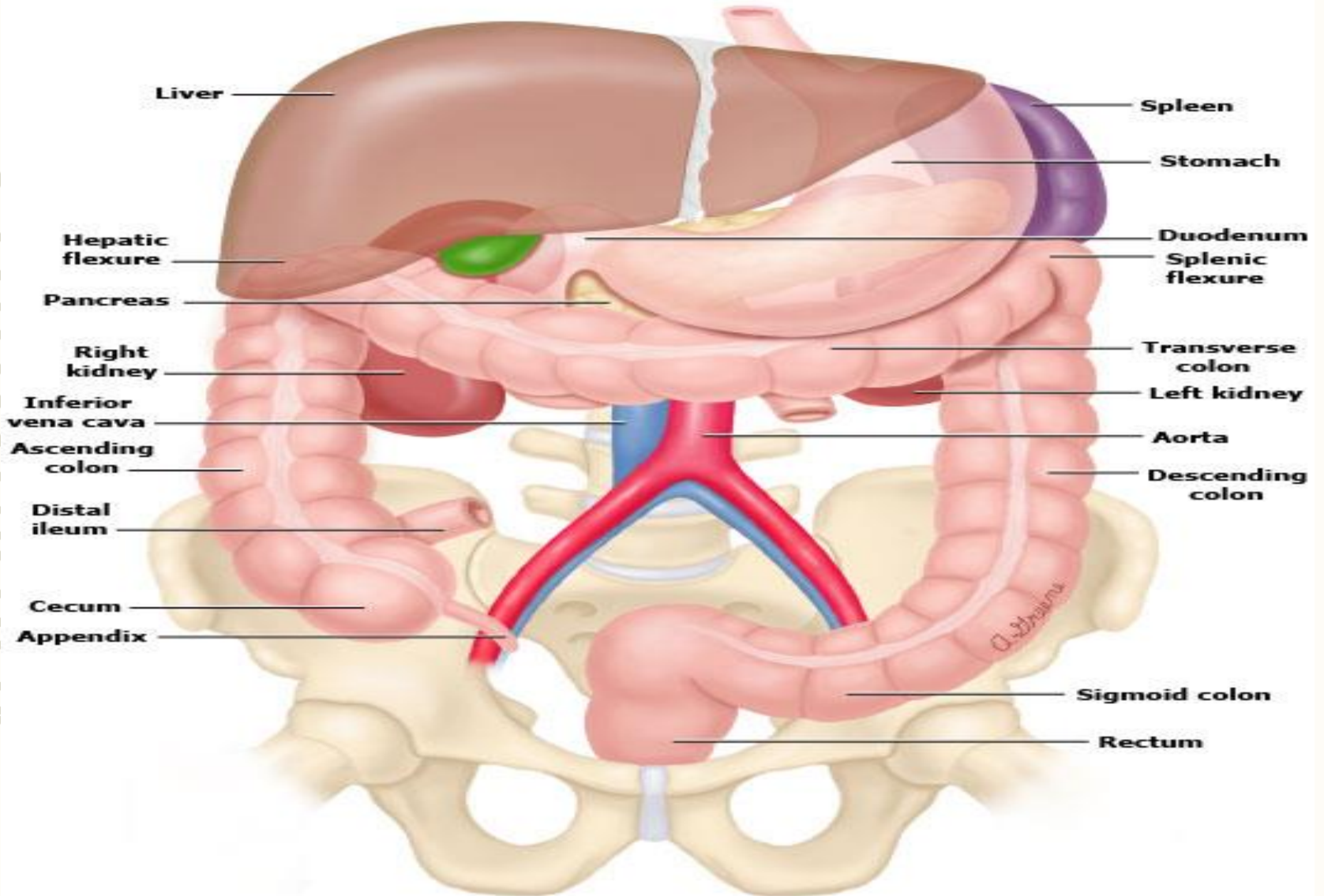
Nerve Supply

- The nerve supply is the sympathetic and parasympathetic pelvic splanchnic nerves through the inferior mesenteric plexus.

The Large Intestine



adapted from Thibodeau



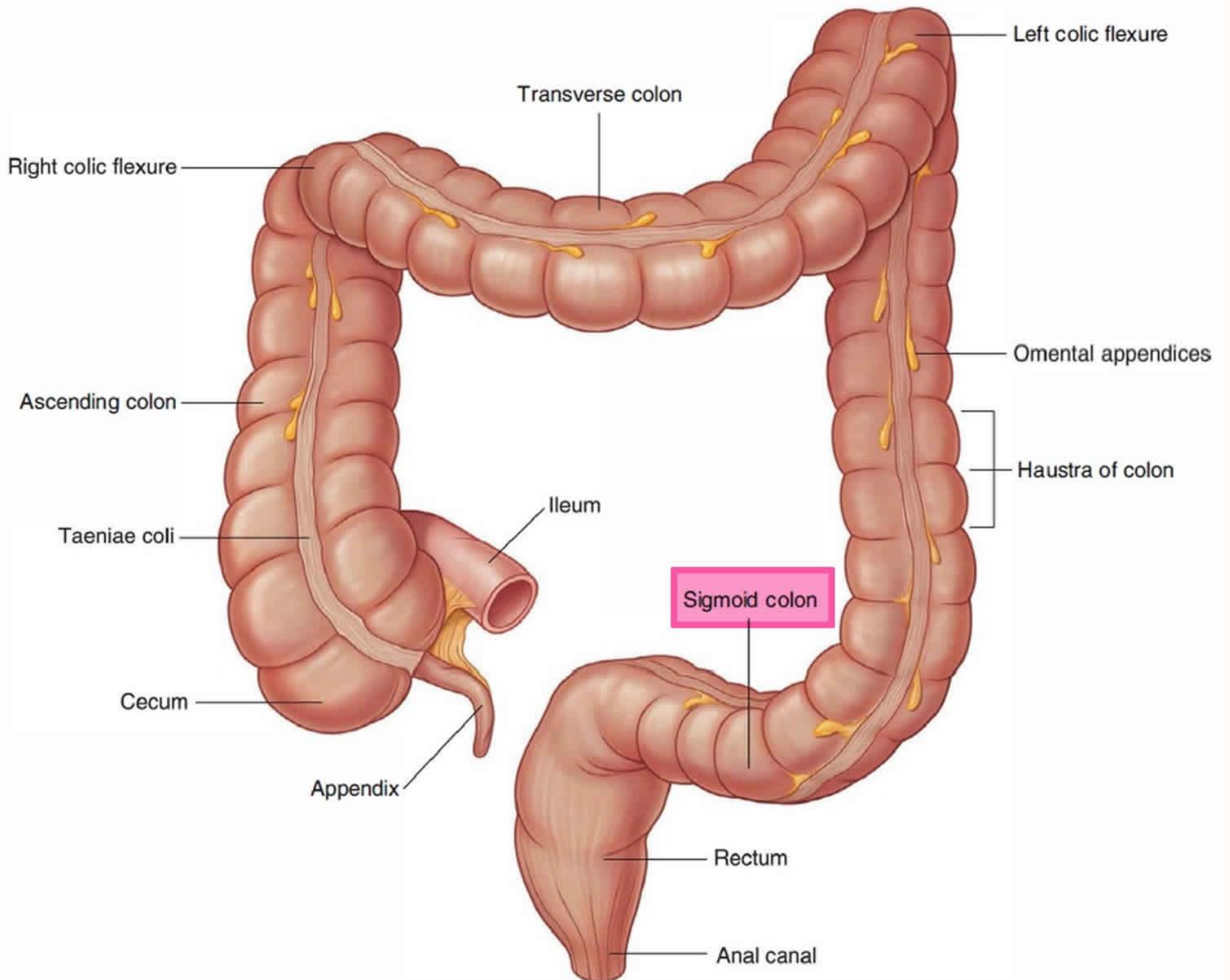
SIGMOID COLON

Location and Description

- The sigmoid colon is 10 to 15 in. (25 to 38 cm) long and begins as a continuation of the descending colon in front of the pelvic brim. Below, it becomes continuous with the rectum in front of the 3rd sacral vertebra. The sigmoid colon is mobile and hangs down into the pelvic cavity in the form of a loop. The sigmoid colon is attached to the posterior pelvic wall by the fan-shaped **sigmoid mesocolon**.

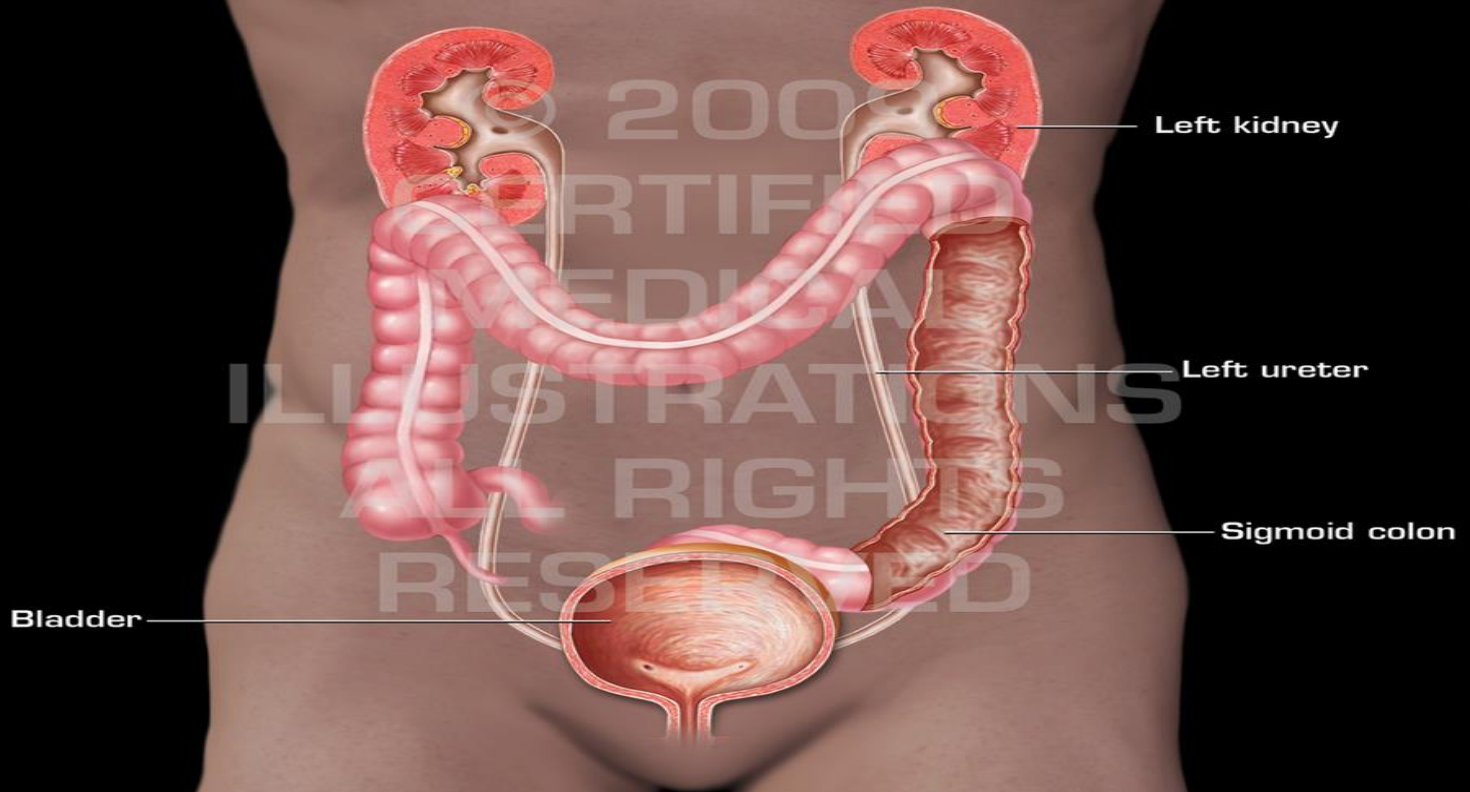
Relations

- ■■ **Anteriorly:** In the male, the urinary bladder; in the female, the posterior surface of the uterus and the upper part of the vagina
- ■■ **Posteriorly:** The rectum and the sacrum. The sigmoid colon is also related to the lower coils of the terminal part of the ileum.



NORMAL ANATOMY OF SIGMOID COLON & LEFT URETER

Anterior View



BLOOD SUPPLY & LYMPHATIC DRAINAGE & NERVE SUPPLY

Blood Supply

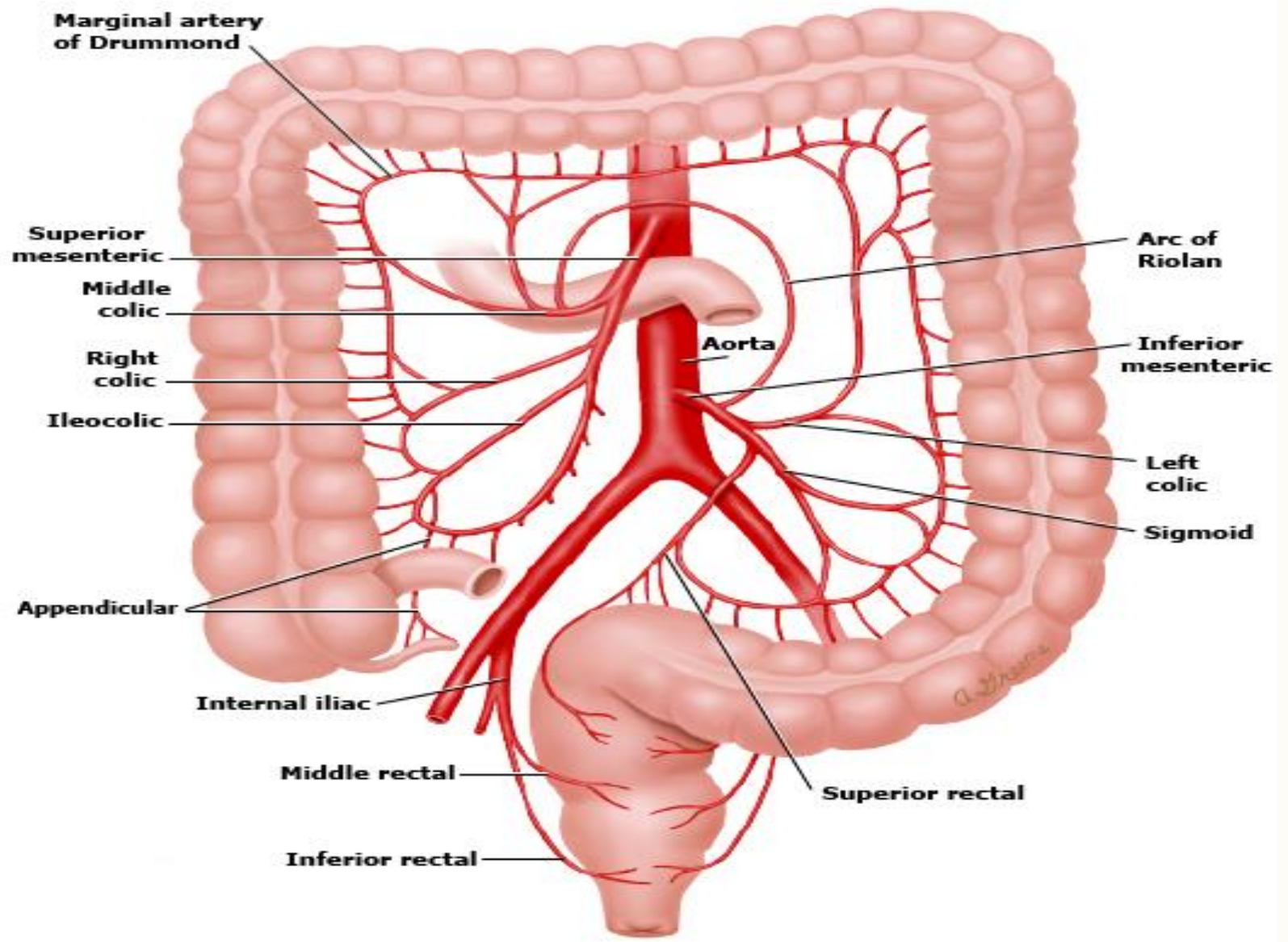
- **Arteries** :- Sigmoid branches of the inferior mesenteric artery.
- **Veins** :- The veins drain into the inferior mesenteric vein, which joins the portal venous system.

Lymph Drainage

- The lymph drains into nodes along the course of the sigmoid arteries; from these nodes, the lymph travels to the inferior mesenteric nodes.

Nerve Supply

- The sympathetic and parasympathetic nerves from the inferior hypogastric plexuses.



THANK YOU

