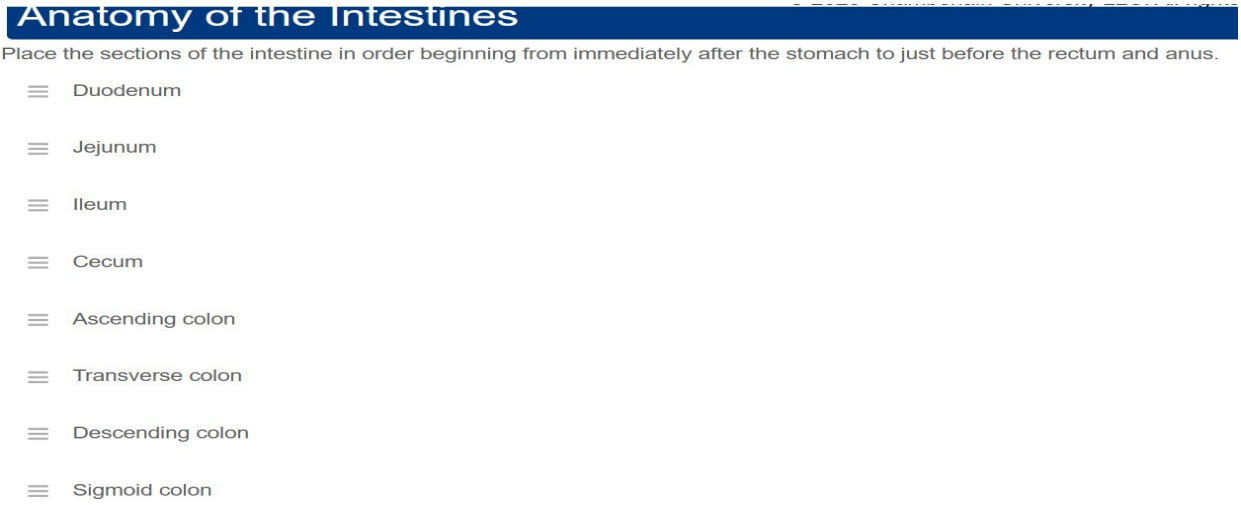
NR507 Week 5 Edapt Inflammatory Bowel Disease

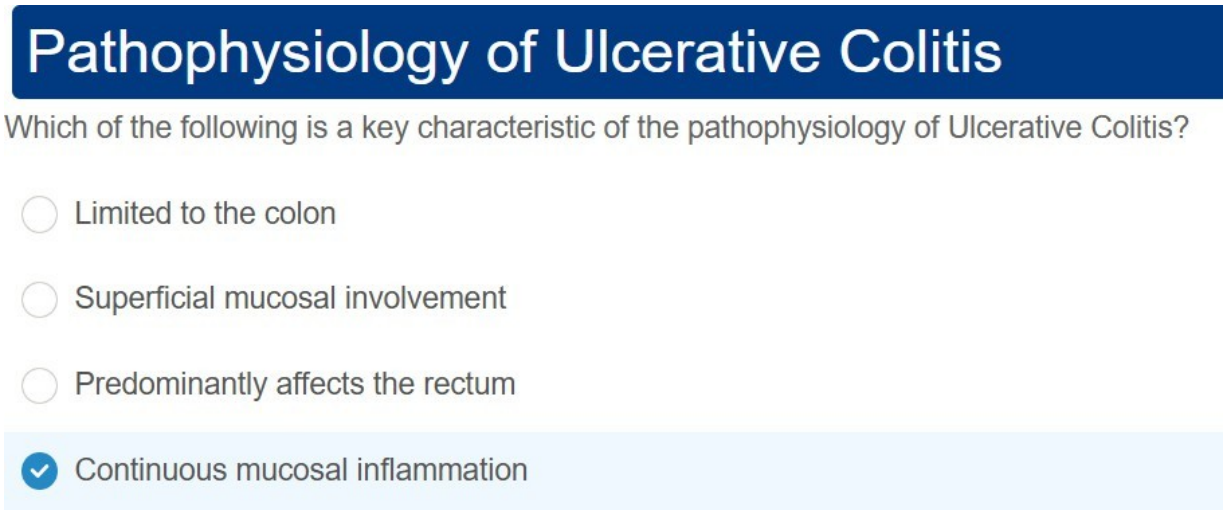
Introduction to Inflammatory Bowel Disease



The duodenum is the first part of the small intestine and is located immediately after the stomach. The jejunum is the second part of the small intestine. The ileum is the final section of the small intestine, connecting to the cecum, which is the beginning of the large intestine (colon).

The cecum is the first part of the large intestine, situated at the junction of the ileum and the ascending colon. The colon, also known as the large intestine, is divided into several segments: 1) the ascending colon begins at the cecum and travels upward on the right side; 2) the transverse colon extends horizontally across the abdomen; 3) the descending colon travels downward on the left side; and 4) the sigmoid colon forms an S-shaped curve leading to the rectum.

The rectum is the final part of the large intestine before the anus. It serves as a temporary storage site for feces. The anus is the opening at the end of the digestive tract through which feces are expelled from the body.



Crohn's disease is characterized by transmural (or continuous mucosal) inflammation that can affect any part of the gastrointestinal tract, leading to skip lesions and patchy involvement.

It is not limited to the colon, can involve all layers of the bowel wall, and may affect areas beyond the rectum. Understanding these key features helps in differentiating Crohn's disease from other gastrointestinal conditions.

Anticipated Findings With Ulcerative Colitis

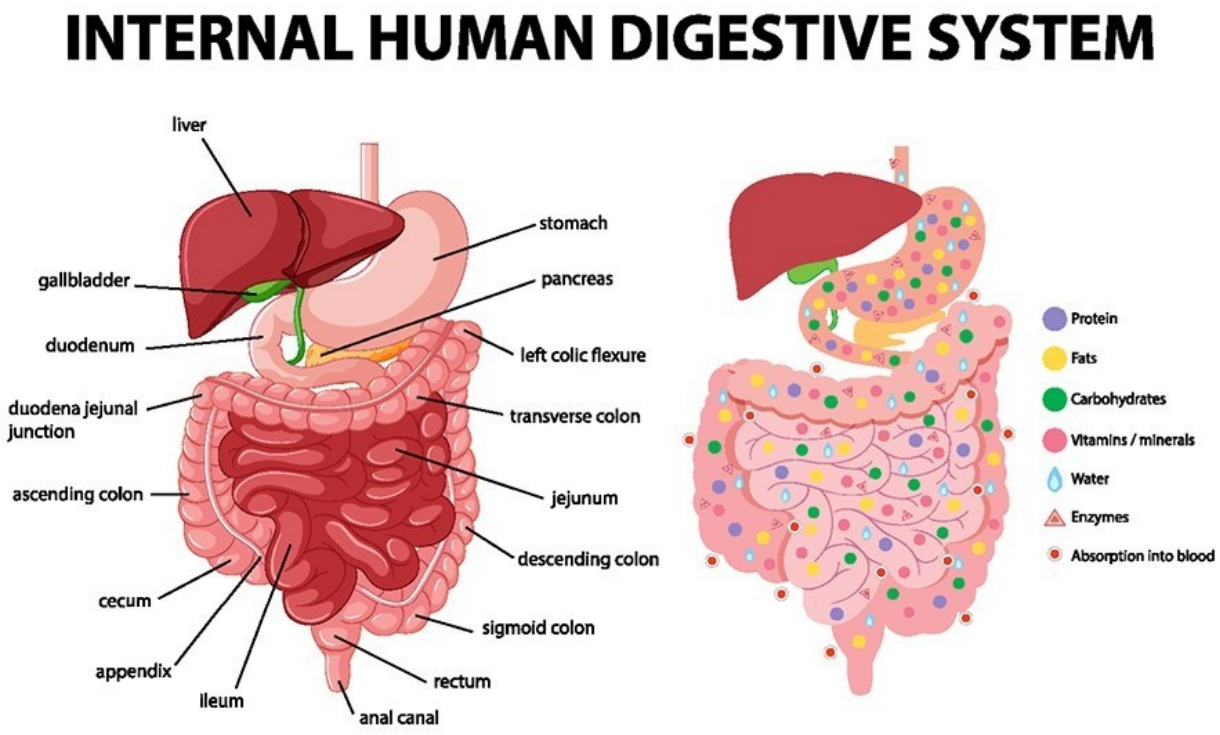
Complete the following sentence by choosing from the list of options.

The nurse practitioner (NP) is evaluating a client who presents with symptoms consistent with ulcerative colitis. The NP orders a computed tomography (CT) scan and anticipates the rectum and sigmoid colon to be affected.

The nurse practitioner (NP) anticipates the rectum and sigmoid colon to be affected for a client with ulcerative colitis because the typical pattern of involvement is continuous and typically starts in the rectum and extends proximally.

Distinguishing between ulcerative colitis and other inflammatory bowel diseases, such as Crohn's disease, is crucial for appropriate management. Crohn's disease can affect any part of the gastrointestinal tract, has a more heterogeneous pattern, and is more likely to involve the ascending or transverse part of the colon.

Normal Physiology of the Intestines



The function of the intestines is to break down and absorb water and nutrients from food. Review the components and functions of the small intestine and the large intestine below.

Small Intestine

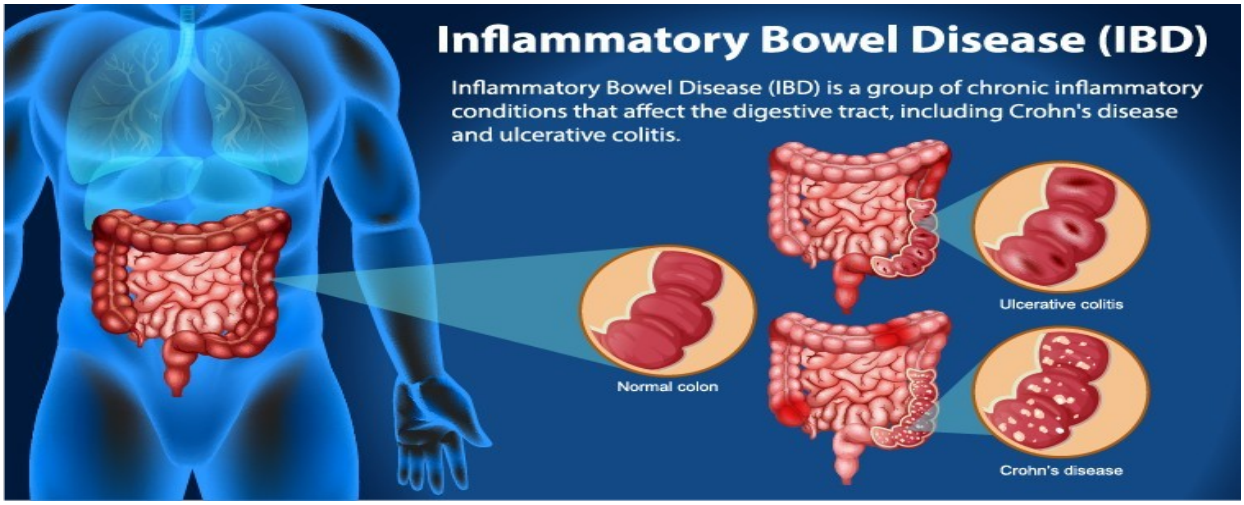
- Duodenum: The first part of the small intestine receives partially digested food from the stomach along with digestive juices from the pancreas and bile from the liver. Here, further breakdown of food occurs.
- Jejunum and ileum: These are the remaining parts of the small intestine where absorption of nutrients takes place. The inner lining of the small intestine is covered in tiny finger-like projections called villi and microvilli, which significantly increase the surface area for nutrient absorption.

Large Intestine (Colon)

- Cecum: The large intestine begins with the cecum, where some remaining nutrients and water are absorbed.
- Colon: The colon is divided into several segments, including the ascending, transverse, descending, and sigmoid colon. Water and electrolytes are further absorbed here, and the remaining material forms feces.
- Rectum: Feces are stored in the rectum until they are ready to be expelled from the body.

Pathophysiology of Inflammatory Bowel Diseases

Inflammatory bowel disease (IBD) is a chronic inflammatory condition that affects the gastrointestinal tract. Individuals with IBD often experience periods of active symptoms followed by periods of remission. The exact cause is unknown but is believed to involve a combination of genetic, environmental, and immune system factors. The two most common types of IBD are ulcerative colitis and Crohn's disease. It is important to recognize the pathological differences between ulcerative colitis and Crohn's disease including the location, depth, and pattern of inflammation, the types of lesions, and related complications. Review the pathophysiology of each type of inflammatory bowel disease below.



Ulcerative Colitis: Ulcerative colitis causes mucosal ulcerations that most often occur in the rectum and sigmoid colon, though the inflammation can extend throughout the entire colon. These lesions are limited to the mucosa, initiating in the rectum and progressing backward to the sigmoid colon in a continuous pattern. Mild cases manifest with hyperemic and edematous mucosa, while severe cases result in hemorrhaging, abscesses, and necrosis. In chronic conditions, inflammatory polyps can develop.

Crohn's Disease: The inflammatory lesions of Crohn's disease most commonly occur in the ascending or transverse colons but can affect any part of the digestive tract from the mouth to the anus. There are often "skip" areas where healthy tissue is interspersed with inflamed areas. The lesions have