GALLBLADDER
The gallbladder is a sac about 7.5 to 10 cm long located on the undersurface of the right lobe of the liver. About 1,000 ml of bile are produced by the hepatic duct of the liver each day, and flows through the cystic duct into the gallbladder. Excess bile is stored in the gallbladder until it is needed in the small intestine. The gallbladder also concentrates bile by absorbing water.
When fatty foods enter the duodenum, the enteroendocrine cells of the duodenal mucosa secrete the hormone cholecystokinin (CCK) which stimulates contraction of the smooth muscle in the wall of the gallbladder, which forces bile into the cystic duct, then into the common bile duct, and on into the duodenum.

Clinical disorders related to digestive system:

GASTRITIS
Gastritis is inflammation of the stomach mucosa and can be acute or chronic. Results when the protective mucosal barrier is broken down and allows autodigestion from hydrochloric acid and pepsin to occur. Edema of the tissue and possible hemorrhage result. With severe gastritis, the gastric mucosa can become gangrenous and perforate, which can lead to peritonitis (infection of the peritoneum). Scarring may also occur, resulting in pyloric obstruction. Symptoms:
The major symptom of gastritis is abdominal pain, which is often accompanied by nausea and anorexia.

PEPTIC ULCER DISEASE
Peptic ulcer disease (PUD) is a condition in which the lining of the stomach, pylorus, duodenum, or the esophagus is exocoteroned, usually from infection with H. pylori. Symptoms including pain, may not be experienced with gastric or duodenal ulcers until complications such as hemorrhage, obstruction, or perforation.
Appendicitis
Appendicitis is the inflammation of the appendix, the small, fingerlike appendage attached to the cecum of the large intestine.
Because of the small size of the appendix, obstruction may occur, making it susceptible to infection.
The resulting inflammatory process causes an increase in intraluminal pressure of the appendix.

Signs and Symptoms:
Signs and symptoms of appendicitis include fever, increased white blood cells, and generalized pain in the upper abdomen.
Within hours the pain usually becomes localized to the right lower quadrant. Nausea, vomiting, and anorexia are also usually present.

INTESTINAL OBSTRUCTION
Intestinal obstructions occur when the flow of intestinal contents is blocked.
There are two types of intestinal obstruction: mechanical and paralytic, which can be either partial or complete.

Mechanical obstruction occurs when a blockage occurs within the intestine from conditions, causing pressure on the intestinal walls such as adhesions, twisting of the bowel, or strangulated hernia.
Paralytic obstruction occurs when peristalsis is impaired and the intestinal contents cannot be propelled through the bowel.
Paralytic obstruction is seen following abdominal surgeries, trauma, mesenteric ischemia, or infection.