Laparoscopic or minimally invasive surgery is a recent surgical advancement in treating problems of the small intestine or colon. The word laparoscopy means "to see" (scope) and lapara is that portion of the body between the ribs and the hips. This technique evolved from Gynecologic procedures to those for the gastrointestinal tract. In the early 1990’s the technique was introduced for treating benign colon and rectal problems and in the early 2000's, a landmark paper showed that this technique was equally effective in treating colon cancer as open surgery. The learning curve for surgeons to master Laparoscopic Colon Resection is very steep requiring a minimum of 80-100 procedures to attain a level high enough so that laparoscopic results will be similar to open results. Because of this, penetration has only been about 30-35% in the U.S.

During laparoscopic surgery, patients are placed under general anesthesia. Your surgeon will make a quarter to half inch-long incision in the abdomen, then a narrow tube-like instrument called a Trocar is used to enter the abdomen. A laparoscope will then be passed through this tube. The laparoscope, is a tiny telescope connected to a video camera, allowing the surgeon to see what is going on inside of the abdominal cavity on a video screen. The abdominal wall, which is typically collapsed is inflated with carbon dioxide (CO2) gas. The inflation of the abdomen lifts the skin off the organs, enabling the surgeon to better visualize and work around them. The surgeon inserts other trocars and then places various small, specialized instruments through the trocars to perform the surgery.
Minimally invasive surgery (MIS) has been used to treat both benign and malignant disorders of the colon such as inflammatory bowel disease, diverticular disease or polyps of the colon too large to be removed by colonoscopy, in addition to cancers of the colon or rectum. In this practice typically about 80% of patients will be candidates for MIS. Problems that may prevent us from performing or completing a procedure laparoscopically include: Obesity, previous abdominal surgery secondary to adhesions, or an inability to see clearly during the procedure.

Benefits of minimally invasive surgery include:

- **Smaller Incisions** - An incision for LCS is about four centimeters versus a 30 centimeter incision for open traditional surgery. The scars are usually less visible and are preferable - for cosmetic reasons - to having a larger scar across the abdomen. The smaller incisions also greatly reduce the chance of infection and further complications.
- **Less Pain** - Because the incisions are smaller, the pain experienced post-surgery by patients is significantly decreased. This reduces the amount of pain medication patients require in the days following the surgery.
- **Quicker Recovery** - Most patients are able to walk around the same day; and in many instances are able to drink fluids on the day of surgery. Generally, a patient can return to his or her normal lifestyle and activities much more quickly than with traditional, open surgery, which may require weeks of recovery and prolonged bed rest.
- **Shorter Hospital Stay** - Many patients are discharged within 2-4 days after the laparoscopic colon surgery. This is a tremendous advantage when compared to the 7 to 10-day hospital stay that is typical of traditional, open surgery.