

Minimally invasive surgery shown safe and effective treatment for rectal cancer

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Laparoscopic surgery has been used in the treatment of intestinal disorders for close to 20 years, but its benefits have only recently begun to be extended to people with rectal cancer. In a prospective study of 103 patients who underwent straightforward or "hand-assisted" laparoscopic surgery for rectal cancer, a team of colon and rectal surgeons at NewYork-Presbyterian Hospital/Weill Cornell Medical Center has shown that the minimally invasive approach can be as effective as traditional open surgery in treating rectal cancers.

The advantages of laparoscopic and other minimally invasive surgical techniques are well known. After laparoscopic surgery, patients experience shorter hospital stays, smaller scars, far less pain and faster recovery, compared with open surgery. NewYork-Presbyterian/Weill Cornell has offered these procedures for many years, and continues to be at the forefront of innovation, applying the minimally invasive approach to diseases and conditions once considered treatable mainly using open surgery techniques. Until recently, [rectal cancer](#) was one such disease -- and its treatment via laparoscopic surgery is still seen by some as controversial.

Rectal surgery, according to Dr. Jeffrey Milsom, chief of colon and rectal surgery at NewYork-Presbyterian/Weill Cornell, is inherently more challenging than colon surgery. For one, the pelvic cavity of the body where the rectum lies, is a narrow space, making rectal tumors difficult to access. Surgical success depends not only on the complete removal of the [cancerous tumor](#) and repair of the rectum, but also on

restoring continence. For these reasons, rectal cancer has been a difficult arena to apply advances in minimally invasive surgery.

Delaying matters further, initial reports on the use of laparoscopic surgery in patients with rectal cancer described a higher incidence of cancer-positive cells at the edges of removed tumors compared with open surgery, says Dr. Milsom. Early data suggested that as a result, more patients could experience a local recurrence of their rectal cancer after laparoscopic surgery than [open surgery](#). But the current study refutes these initial findings.

Between January 1999 and December 2006, three colon and rectal surgeons at NewYork-Presbyterian/Weill Cornell (Dr. Milsom and his colleagues Dr. Toyooki Sonoda and Dr. Sang Lee) treated 103 patients with mid or low rectal cancer using an operation called total mesorectal excision (TME), performed via laparoscopic-assisted (LAP) or hand-assisted laparoscopic surgery (HALS). To gather the relevant data and analyze outcomes, Dr. Milsom and his team relied on inpatient and outpatient medical records, telephone interviews with patients, and standard actuarial survival calculations. Patients received regular follow-up for five years.

"More than 90 percent of the patients in our study were able to undergo laparoscopic surgery successfully," says Dr. Sonoda, one of the study's key surgeons. "We define 'success' in both the short- and long-term sense: More than 95 percent emerged with an intact and functioning rectum and, as expected after a minimally invasive procedure, recovered rapidly. None had cancer-positive tumor margins, which has been a major concern in the medical literature all along. In fact, after five years, overall survival has remained high at 91 percent, with more than 73 percent of patients completely free from disease."

"In terms of cancer cure and recovery," says Dr. Lee, the other key

surgeon on the study, "these outcomes are at least as good as the best outcomes seen with open surgical techniques. And when you add in all the advantages of laparoscopic [surgery](#), it seems clear that this is an approach that could evolve to become the surgical standard."

Reported earlier this year in the professional journal of the *American Society of Colon & Rectal Surgeons*, the study was conducted at a single institution. That fact plus its relatively small sample size, lack of randomization, and relatively short follow-up period all point to the need for large, randomized studies before its findings can be considered definitive. Dr. Milsom reports that his surgical team is now participating in two such studies, one in collaboration with the American College of Surgeons Oncology Group (ACSOG) and the other headed up by Dr. Lee and involving several other U.S. medical centers.

In the meantime, the group continues to explore new minimally invasive surgical techniques to improve clinical recovery even more significantly, including new stapling instruments, robotics, and innovative endoscopy.

Source: New York- Presbyterian Hospital ([news](#) : [web](#))

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