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HEALTH

Shifting Treatment For Colon Cancer

Major Study Finds Less-Invasive Procedure Is as Safe and Effective as Traditional Surgery

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 Staff Reporter of **THE WALL STREET JOURNAL**
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In a finding that could ultimately transform colon-cancer treatment, researchers report that minimally invasive surgery is a safe and effective alternative to the standard operation that most early-stage patients now receive.

The study, published in the *New England Journal of Medicine*, is the most extensive comparison to date of the two procedures. Doctors expect it to prompt far more patients to choose the less-invasive, laparoscopic surgery -- much as gall-bladder patients have gravitated toward the procedure.

Laparoscopy, in which surgeons insert a tiny video camera and surgical instruments through small incisions in the abdomen, involves less scarring and a shorter hospital stay than traditional colon-cancer surgery. In addition, patients who get laparoscopic surgery need only three days of pain medication on average, compared with four days required for the traditional operation.

The seven-year study was launched in response to widespread concerns that the minimally invasive technique actually fueled colon-cancer recurrence. Surgeons started performing minimally invasive surgery for colon cancer in 1990.

But doctors began questioning whether the procedure increased cancer recurrence at the wound site, whether it allowed the same range of abdominal exploration and information about the cancer as standard surgery, and if it actually helped spread the cancer cells. In 1994, virtually all such procedures stopped when professional medical organizations recommended that the new surgery not be performed until clinical studies showed it to be effective in cancer patients.

The research published today, which reinforces the findings of comparable, but smaller, studies, should put to rest those worries.

Colon cancer is the second-most common among cancers affecting both men and women, after lung cancer. About 100,000 new colon-cancer cases will be diagnosed in the U.S. this year, and more than 90% will need surgery to

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Procedures used to treat colon cancer in the New England Journal of Medicine study

Standard Surgery

- Average hospital stay: 6 days
- IV pain medication: 4 days
- Incision: 6-8 inches

Laparoscopic Surgery

- Average hospital stay: 5 days
- IV pain medication: 3 days
- Incision: 2 inches

[See a list⁰](#) of clinics where laparoscopic procedures are performed.

remove all or part of the colon or large intestine to get rid of the cancer.

For patients like John Simpson, the new approach has considerable appeal. The 72-year-old insurance broker in Fort Dodge, Iowa, underwent the minimally invasive procedure as part of the study, and was back at work five days later. "The incision looked like a couple of cat scratches. The pain was practically nothing," says Mr. Simpson. "All I need to do now is take a little fiber."

Before the new colon-cancer technique becomes the norm, surgeons will have to be trained in the less-invasive procedure. Laparoscopy for colon cancer is more technically challenging and actually takes longer than traditional surgery. But an editorial accompanying the study predicts the laparoscopic technique will spread during the next decade, in much the same way it has for gall-bladder patients. Today, many hospitals report that nearly 90% of gall-bladder

patients prefer it over traditional surgery.

Laws of Demand

"Patients will over time begin to demand this as it becomes more widely available," says surgical oncologist Joshua Ellenhorn, at the City of Hope Cancer Center, outside Los Angeles, who wasn't involved in the study. "Market forces will push more physicians to perform the procedure."

In the study, surgeons found that survival rates, tumor recurrence and complications were almost identical in both the laparoscopic and standard operation, called an open colectomy. The main difference, they say, is that patients recuperated slightly faster after undergoing the less-invasive procedure: one fewer day in the hospital, one fewer day on intravenous and oral pain medicine and with a 2-inch surgical scar instead of an 8-inch scar.

The standard operation involves making a large, 6- to 8-inch incision and opening the abdomen for surgery. The laparoscopic method uses a video camera and tiny grasping and cutting instruments inserted through small incisions to help bring the colon out of the abdomen, cut away the cancerous section, then reconnect the two healthy parts and put the colon back in place.

Who Is a Candidate

Heidi Nelson, a colorectal surgeon at the Mayo Clinic, Rochester, Minn., and the study's lead author, warns that the new procedure isn't for everyone. The study of 872 patients at 48 medical centers in the U.S. and Canada was limited to those with potentially curable cancer that was confined to certain parts of the colon.

Patients with late-stage cancer that had spread to other organs didn't qualify. Nor did patients with rectal cancer or tumors in the transverse, or mid-portion of the colon, which is relatively rare. In addition, patients with extensive scar tissue from previous surgeries were excluded from the study.

The issue of cost-effectiveness wasn't addressed in the current study but will be analyzed in a future paper, Dr. Nelson says.

WEB FEATURES

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See an [animated video](#)² of a laparoscopic procedure. (QuickTime required)

Mayo Clinic Colorectal Surgeon Heidi Nelson, M.D., [discusses minimally invasive laparoscopic surgery](#)³.

Mayo Clinic patient, John Simpson, [returned to work](#)⁴ five days after undergoing laparoscopic surgery.

Source: *The Mayo Clinic*

Patients considering the newer technique must be sure to find an experienced surgeon. Professional medical societies are currently drafting credentialing guidelines, which should be available within weeks. Consumers will be able to check the Web site of the American Society for Colon and Rectal Surgeons (www.fascrs.org)⁵ for recommendations on what to look for in a surgeon. For now, Dr. Nelson recommends asking for a surgeon with qualifications comparable to those in the study. Those 66 surgeons had performed at least 20 laparoscopic colon surgeries and had some training in laparoscopic cancer surgery.

Surgical Issues

Also, look for surgeons familiar with cancer-surgery techniques such as proper handling of the bowel, and knowledge about how to protect wounds to prevent the spread of cancer cells. One

consideration in the laparoscopic procedure is that circumstances, such as an unexpectedly large tumor, will require converting to a more traditional operation midstream. In the study, 21% of laparoscopic patients were converted during the procedure for safety or other reasons.

Some doctors might balk at the new type of surgery because it takes more time: 150 minutes for the laparoscopy compared with 95 minutes for the open surgery, according to the study.

"My major concern is that this may give some surgeons and patients the green light to go ahead with laparoscopic surgery in the hands of people who are not trained to do it or in patients who are not appropriate," says Len Lichtenfeld, a medical oncologist and deputy chief medical officer for the American Cancer Society, based in Atlanta.

He says that the best scenario would be a gradual shift toward the new procedure, which has been used for years in benign diseases of the colon, such as diverticulitis.

A Less-Invasive Way

Here is a partial list of health-care centers that performed laparoscopic surgery on colon-cancer patients as part of a seven-year study. Patients interested in this less-invasive procedure should check with their local hospital:

Hospital	Location	Web Site
Columbia-Presbyterian Hospital	New York	www.nyp.org ⁶
Group Health Cooperative	Seattle	www.ghc.org ⁷
Intermountain Health Care Cancer Center Services, LDS Hospital	Salt Lake City	ihc.cancersource.com ⁸
Lahey Clinic	Burlington, Mass.	www.lahey.org ⁹

Mayo Clinic	Rochester, Minn.	www.mayoclinic.org ¹⁰
Northwestern University, Feinberg School of Medicine	Chicago	www.feinberg.northwestern.edu ¹¹
St. Joseph Mercy Hospital	Ann Arbor, Mich.	www.sjmh.com ¹²
University of Miami, Jackson Memorial Medical Center	Miami	www.med.miami.edu/index.asp ¹³
University of Southern California, Keck School of Medicine	Los Angeles	www.usc.edu/schools/medicine/ksom.html ¹⁴
Washington University School of Medicine	St. Louis	www.medicine.wustl.edu ¹⁵

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- (2) <http://www.mayoclinic.org/news2004-av/coloncancer051004/laparoscopiccolectom.mov>
- (3) <http://www.mayoclinic.org/news2004-av/coloncancer051004/drnelson1.mov>
- (4) <http://www.mayoclinic.org/news2004-av/coloncancer051004/patient1.mov>
- (5) <http://www.fascrs.org>
- (6) <http://www.nyp.org>
- (7) <http://www.ghc.org>
- (8) <http://ihc.cancersource.com/>
- (9) <http://www.lahey.org>
- (10) <http://www.mayoclinic.org>
- (11) <http://www.feinberg.northwestern.edu>
- (12) <http://www.sjmh.com>
- (13) <http://www.med.miami.edu/index.asp>
- (14) <http://www.usc.edu/schools/medicine/ksom.html>
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