

## Study was an open and shut case

**M**edical residents have a lot to learn. So when Jason Kemp, M.D., a fourth-year general-surgery resident, started thinking about the time it would take to master a minimally invasive approach to colon surgery, he had some concerns. “Is it something that I wanted to spend a lot of time learning?” he asked himself. “Does it translate into better outcomes for the patient?”

**Colon:** More than 100,000 elective colectomies—surgeries to remove all or part of the colon—are performed each year in the U.S. to treat inflammatory bowel disease, cancer, and a number of other conditions. Most are done with the traditional open procedure, in which a surgeon makes a long incision down the middle of the patient’s abdomen. The number of colectomies performed with a laparoscopic—or minimally invasive—approach is growing, but it’s not an easy procedure to learn. A surgeon makes several tiny incisions in the abdomen and inserts a video camera through one and tiny instruments through the others. The camera transmits a view of the operative field to monitors in the operating room, and the surgeon watches the monitors while removing the diseased portion of the colon.

Clinical trials have shown that the laparoscopic approach has a number of advantages, including shorter hospital stays, lower complication rates, and less pain. But Kemp and Samuel Finlayson, M.D., M.P.H., an associate professor of surgery, felt that those trials—although important—had some limitations. “Clinical trials are necessarily limited to relatively small numbers of patients in a limited number of institutions,” Finlayson says. And, Kemp adds, some of the trials had stringent selection criteria, meaning the conclusions were based on surgeries done by experienced doctors at large academic medical centers.

**They wanted to know if the findings applied in small hospitals, too.**

Kemp and Finlayson wanted to know if the findings from trials applied everywhere—including in small hospitals, where surgeons might not perform as many laparoscopic procedures. They examined outcomes from thousands of laparoscopic and open colon resections, conducted from 2000 to 2004, using data in the Nationwide Inpatient Sample, a database filled with information on more than 8 million hospital stays each year at a variety of hospitals.

**Laparoscopy:** Their conclusions, published in *Surgical Innovation*, add to the evidence for the advantages of laparoscopy. The complication rate was 32.1% for patients who had a laparoscopic colectomy, and 38.2% for the open operation. The minimally invasive procedure also resulted in shorter hospital stays and lower mortality.

Between 2000 and 2004, only 4.4% of the elective colon resections performed nationwide were done laparoscopically. But Kemp and Finlayson say the approach has gained popularity in recent years and is likely to continue to do so. As for Kemp, he’s now convinced that learning the procedure will be time well spent. **AMOS ESTY**



**DMS’s Batsis showed that bariatric surgery does more than shrink stomach size.**

## Bariatric surgery also cuts CV risk

**B**ariatric surgery leaves patients with a smaller stomach *and* a smaller risk of suffering a cardiovascular (CV) event, found a recent study. DMS’s John Batsis, M.D., was the lead author of the paper, which showed that the long-term risk of a CV event—such as a heart attack—is likely to drop substantially after bariatric surgery.

The procedure’s main goal is to help people lose excess weight if they’ve been unable to do so through diet and exercise; it involves partitioning off and/or bypassing part of the stomach.

**Factors:** Batsis says other researchers had recently concluded that factors which affect an individual’s likelihood of experiencing a CV event—such as diabetes, hypertension, and high cholesterol—improved after bariatric surgery. “But,” he says, “no one had really ascertained whether or not CV risk changed.”

So he and colleagues did a reanalysis of existing data from six previously published clinical trials of bariatric surgery and calculated the 10-year risk of the subjects having a CV event. They found that across all six studies—which were conducted in Italy, Mexico, New Zealand, Sweden, and the U.S.—bariatric surgery reduced the risk of a CV event between 8% and 79%. In the U.S. study, subjects’ CV risk after surgery fell 50% (from 7% to 3.5%), whereas the risk of patients in the nonsurgical group declined just 8% (from 7.1% to 6.5%).

**Rise:** All six studies followed subjects for a minimum of one year, but only one had actual 10-year follow-up data. That study, from Sweden, found that both surgical and nonsurgical patients’ CV risk increased after 10 years. But the risk rose significantly more in the nonsurgical than the surgical group. The overall rise, Batsis thinks, was due to the patients aging. “Just the incremental increase of a 10-year period to age,” he says, “increases your cardiac risk.” He did the actual research while he was a fellow at the Mayo Clinic and published the results in the *American Journal of Cardiology* after coming to DMS.

The study has “a lot of public health implications,” notes Batsis, since over a third of U.S. adults—some 72 million people—are obese. For those who choose bariatric surgery, he says, “over time [their] predicted cardiac risk is likely decreasing.” **MATTHEW C. WIENCKE**