

Your Money



Health Trends

Use of surgical robots on rise in South Florida

Surgical robots won FDA approval in 2000, and there are now 1,395 of them in 860 hospitals worldwide

Three robots -- no waiting.

It could be the slogan of South Miami Hospital, where 19 surgeons are on track to perform more than 1,000 robotic surgeries this year.

Since its program began in 2007, hospital executives say it has become one of the world's busiest centers for surgeries using the robots, formally called da Vinci Surgical Systems. They say the hospital ranks fifth in the combined total of gynecologic, prostate, thoracic, bariatric, colorectal and heart surgeries performed with robots.

“This is the future,” says Wayne Brackin, chief operating officer of Baptist Health South Florida, South Miami Hospital's parent company, who helped set South Miami's course when he was CEO there. “We don't want to be left behind.”

Other hospitals in South Florida and across the nation are also increasingly turning to surgical robots.

The Food and Drug Administration first approved surgical robots in 2000, and there are now 1,395 of them in 860 hospitals worldwide, performing more than 200,000 operations a year. Officials at Intuitive Surgical, one of the nation's leading surgical robot manufacturers, say 70 percent of all prostatectomies in the United States now are done by robot.

In Florida, 49 hospitals have 67 robots doing surgery. In Miami-Dade, nine hospitals have 12 robots. In Broward, hospitals using robots include Cleveland Clinic Florida, Coral Springs Medical Center, Holy Cross Hospital, Imperial Point Medical Center, Memorial Regional Hospital, Memorial Hospital Pembroke and Westside Regional Medical Center, Intuitive says. In [Palm Beach County](#), Good Samaritan Medical Center, JFK Medical Center and [West Boca Medical Center](#) all use the machines.

In Miami-Dade County, the University of Miami Hospital has one surgical robot, with 11 surgeons doing about 250 operations a year in urology and gynecology. It plans to expand that to include cardiac, colorectal and head and neck cancer surgery. In Pembroke Pines, Memorial Hospital Pembroke has a da Vinci robot serving the six-hospital Memorial Healthcare System. It is used by seven surgeons in gynecology, urology and thoracic procedures.

The only other Florida hospitals matching South Miami with three robots are Florida Hospital in Orlando, Florida Hospital Celebration Health in Celebration and Mayo Clinic in Jacksonville, according to Intuitive.

Dr. Jonathan Masel, a urologist in the Memorial Healthcare System who does surgery by open, traditional laparoscopic and robotic methods, is convinced the robot is the most precise.

“The more complex the procedure, the more I move to the robot. Its 3D optics are just like the movie Avatar.”

Advocates say robots do surgery with greater precision, reducing pain and blood loss, shortening hospital stays and getting patients back to work more quickly.

But critics say that despite its meteoric growth -- or maybe because of it -- robotic surgery lacks an adequate body of solid scientific studies demonstrating that it is better than traditional open surgery or regular laparoscopic surgery.

To a layperson -- and clearly to many surgeons -- the surgical robot is dazzling. The human surgeon sits at a computer console peering into a monitor that gives him or her a view inside the patient's body that is full-color, three-dimensional and magnified 10 times. Across the room, the robot's four massive arms wield delicate surgical instruments inside the patient, carrying out the surgeon's instructions with space-age precision.

"The robot is better," says Dr. Ricardo Estape, a gynecological surgeon at South Miami Hospital who helped start its robotic program. "You can see what you're doing so much better than even with open surgery. You can't stick your head in somebody's pelvis with open surgery when you're doing a radical hysterectomy."

"The robot is amazing," says Dr. Lynn Seto, a cardiac surgeon who performed 450 robotic heart surgeries at Cleveland Clinic in Ohio before South Miami recruited her to help start its robotic heart program. "The view is so good you actually think you're inside the body."

By the traditional method, open-heart surgery requires a 12-inch incision, cracking the breastbone and spreading the ribs, resulting in a week-long hospital stay. The same operation by robot is done through five to seven incisions -- smaller in diameter than a pencil -- between the ribs. The patient can go home in a day or two.

Dr. Mark Dylewski, who does robotic thoracic surgery at South Miami, argues that it is safer, especially for older, sicker patients. He has developed a robotic technique to remove a cancerous esophagus and attach a portion of the stomach to the throat to replace it. He has trained 200 other surgeons how to do it.

"You don't have the trauma of cutting through the sternum. The risk of pneumonia from a long hospital stay is reduced," he says.

Morgan, the Intuitive spokeswoman, cites a study released this month at Wake Forest University. It followed a single surgeon who did kidney surgery on 30 patients using laparoscopy and 30 using the robot, and concluded that robotic surgery was faster, involved less blood loss and a shorter hospital stay. Both methods were equally effective in cancer care.

But critics say such same-surgeon comparisons only demonstrate how a doctor's skill can grow with practice. They want studies comparing outcomes of many operations by many doctors.

Dr. Michael J. Barry, a professor of medicine at Harvard Medical School and chief of the General Medicine Unit at Massachusetts General Hospital, is one of those critics.

“The best kind of study would randomly assign patients who are equally willing to have all three kinds of surgery -- open, laparoscopic and robotic, using a mix of surgeons and institutions,” he says. “That would be the most generalizable to what the average patient would get at the average facility.”

Morgan also cites a 2009 study of thousands of hospital prostate surgery records by Massachusetts General Hospital's Institute for Clinical and Economic Review. It found little difference in patient death rates, loss of urinary control and erectile dysfunction among the three major surgical procedures -- open surgery, traditional laparoscopic surgery and robotic surgery. But it said its own conclusions were weakened by a paucity of apples-and-apples data.

The Massachusetts General study also said robotic prostate surgery costs \$2,000 to \$3,000 more than traditional open prostate surgery, but that the same lack of good data makes it unclear whether those costs are balanced by the shorter hospital stays of robotic surgery.

Barry says the fast growth of robotic surgery is “marketing pressure.”

“People assume that more technology makes things better,” he says. “And if one hospital gets one, there's an incentive for others to get one in the medical arms race we have in the U.S.”

Robots can be pricey. The latest-model da Vinci robots cost \$1.4 million, with annual maintenance costs of \$140,000. Brackin, the Baptist Health CEO, says Medicare will not pay any more for a robotic operation than for a traditional open procedure, meaning the hospital must absorb the difference.

“In the operating room the robot is more expensive,” he says. “In the overall picture, considering length of stay and associated complications or lack of them, we think it's pretty comparable.”

He goes on: “Frequently, technology gets ahead of the payments for it. In robotic surgery that's the case right now. We make investment decisions despite the short term financial situation if they create better outcomes for the patient. Historically, reimbursement has caught up.”

Staff writer Bob LaMendola contributed material to this article.