

Meet Dr. Sanjay Razdan, the Surgeon With 'Robotic Hands' - InsideHook

By Will Levith / March 13, 2017 5:00 am

5-6 minutes



For the average person, the thought of robotic hands reaching into their chest cavity and performing surgery on their vital organs might evoke images of a '50s B-movie or a particular comic book [supervillain](#).

But for surgeon [Dr. Sanjay Razdan](#)—with his calming Bollywood music lilting lightly in the background—it's just another day in the office.

Dr. Razdan makes his living as a urologist, specializing in prostate cancer treatment, and is the chairman of the department of surgery at Jackson South Community Hospital in Miami, Florida; as well as a surgeon at miVIP Surgery Centers (also in Miami). He also happens to be one of the foremost experts in and practitioner of robotic surgery.

"I was amongst the first generation of surgeons in the United States or the world who were doing robotics," he explains with the vim and vigor of a kid in a candy store. And well, he sort of is, because this technology isn't available in every hospital and not every surgeon is equipped, mentally or physically, to utilize it to its greatest potential.

While Dr. Razdan may be somewhat of a robotic surgery pioneer, he is by no means the first to ever use the cutting-edge technology. Many medical historians place the first use of a robot in an operating room in the mid-'80s, when robots [were used](#) in minimally invasive surgeries. As the technology powering robots advanced, surgeons were able to complete increasingly complicated procedures. And by the early 2000s, the future arrived in the form of Intuitive Surgical Inc.'s da Vinci surgical system, a device that revolutionized what went on inside the OR.

The robotic system looks more like [Johnny 5](#) from *Short Circuit* than some groundbreaking medical machine. And at least according to Dr. Razdan, it's not all that smart either. "The robot is just a dumb machine; it just does what you are doing," explains Dr. Razdan. "It's the experience of the surgeon that [counts]; it's just like flying a 747 or an F-16; you have some of those people who are ace pilots, and then you have some rookies who are still practicing." Can you guess the type of robotic surgeon Dr. Razdan is?



Doctors perform a surgery with Da Vinci surgical robot at Wuhan Tongji Hospital on February 7, 2015 in Wuhan, Hubei Province of China. (VCG/VCG via Getty Images)

Imagine Dr. Razdan decked out in scrubs, sitting behind what can only be described as the world's most complicated—and pricey as da Vinci's run about \$2 million each—video game console. (He explains that the surgeon can either be sitting in the same room with his patient or outside of the operating room, depending on the procedure.) The robotic arms on the machine—which number four, with the latest Xi model of the robot—are controlled via joysticks (moving its arms/hands) and foot pedals (which toggle between each arm). Dr. Razdan then “docks” the robotic hands on the patient, which he describes as the act of the tool entering the body through small incisions.

And the entire surgery is done in front of a screen, which allows the surgeon to see a 3-D image of what's inside a patient's abdomen, all of which is magnified 10 times. All of this, by the way, isn't being controlled by some autopilot button; it's the surgeon behind the controls. “The manual dexterity [of the hands] is actually increased, because ... the human wrist cannot roll or point in the shapes that your robotic arm can,” he explains. “You can go into nooks and crevices in the depths of the human body and be able to extricate tumors or repair aneurysms, which would not be possible with [human hands].”

In 13 years, Dr. Razdan has never had a da Vinci malfunction on him in the middle of surgery. Plus, as he notes, if one were to do so, he'd be able to jump in and finish the surgery with his own hands, no problem.

So if robotic surgery is already the future, where do we go from here? Dr. Razdan has high hopes for its continued use in surgery and believes that it could one day drive medical costs down considerably. “I really feel that the majority of surgeries should be done robotically,” he says, citing 12-13 years ago, when a prostate procedure he'd do would land someone in an intensive care unit for two days, and in the hospital itself for three or four days total.

“Just [recently] I operated on two patients, and they left three or four hours after surgery, got out of the hospital, and went home.” And well, maybe the next medical drama that hits your streaming service won't feature an ER surgeon using a da Vinci robot, it's entirely likely that, down the line, some will. “I really think that open surgery, with its big incisions ... is a thing of the past,” says Dr. Razdan.

To order a copy of Dr. Razdan's latest book, [click here](#). Watch a viral video of the da Vinci machine in action below, sewing up a grape (if you were wondering, that is neither Dr. Razdan in action behind the robot, nor does he know who it recorded the video).

da Vinci Robot Stitches a Grape Back Together

