Smooth Operator

BY ALYSON BLACK

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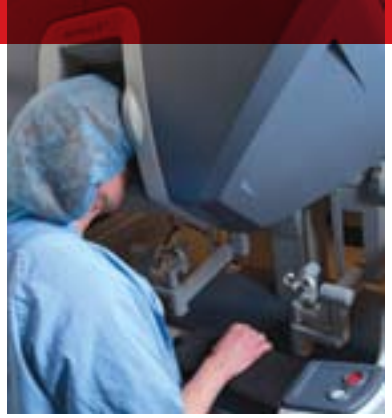

Robots in the O.R. are revolutionizing 21st-century surgery—and people are reaping the benefits.

Meet da Vinci, the newest addition to the Overlook Hospital surgical team. With a trio of arms and a sleek body, he looks like something you might see in a science-fiction movie, but the hulking robot is in fact a welcome presence in the operating room.

With da Vinci, Overlook has entered the next generation of minimally invasive procedures, introducing robot-assisted surgery to such specialties as urology, gynecology, and oncology. And although there is a robot in the room, make no mistake: It's an experienced surgeon who is very much in control and at the helm—or at the console, as the case may be. During a da Vinci procedure, the surgeon is positioned a few feet away from the patient, at a large console from which he or she operates. The surgeon's own hands are positioned on little mitts that are a lot like joysticks; these control the robot's arms to make incisions and maneuver surgical instruments within the body. The surgeon's feet, meanwhile, are situated on pedals that adjust the robot's position and operate the camera that is transmitting magnified, 3-D, high-definition images onto a monitor that the surgeon is viewing. "Any move I make is directly transmitted to the patient," explains Andrew J. Bernstein, MD, Overlook's director of robotic surgery. "Using the robot is very intuitive, but it does only what I tell it to do."

What da Vinci does best is improve the patient experience. "There are lots of advantages," says Bernstein, who has been performing robotic surgeries for eight years. "The biggest advantage is in recovery time. The incisions are smaller, the patients use less pain medication, and are back to work sooner. There is also less bleeding, so we are able to see things better, and there is a much lower incidence of blood transfusion." There are also fewer major complications and less chance for infection—as well as a faster return to home, to work, and to normal activities.

Bernstein says he sees firsthand all the time how patients are benefiting from robotic surgery. As a urologist, he frequently uses the robot to perform radical prostatectomies in cases of localized prostate cancer. "With traditional surgery, there is a much greater chance of incontinence and erectile dysfunction," he says, "but these risks seem to be decreased with robotic surgery." The operation itself, no matter how it is performed, presents significant challenges owing to the body's many delicate structures in the vicinity of the prostate. Not only do the nerves that control erections run right along the prostate, but it also is necessary to detach the urethra from the bladder and then sew it back together without compromising a man's ability to control his urine. "The goal is to do nerve-sparing surgery," Bernstein explains, "and it does appear that men get erections back faster with robotic surgery. By using the fine, accurate instruments that the robot offers, the connection between the bladder and urethra is restored precisely, dramatically reducing the risk of incontinence." Further praising the da Vinci's role in minimizing hospital stays, Bernstein reports that patients undergoing robotic-assisted radical prostatectomy often are discharged home just one day after the procedure, versus a typical three-day stay with the traditional procedure.

Daniel Tobias, MD, FACOG, director of gynecologic oncology at Overlook and Morristown Memorial, says he is seeing similar success with hysterectomies for cervical, endometrial, and early-stage ovarian cancers. In fact, 90 percent of the hysterectomies he performs today are done robotically, and he says robotic-assisted surgery should be considered as an option for most women in need of hysterectomy. "The biggest advantage of the robot is that we're able to offer the benefits of minimally invasive surgery to more patients," he says.

Gynecologic oncologist Brian Slomovitz, MD, FACOG, credits some of this to the robot's ability to extend minimally invasive procedures even to patients who are significantly overweight. "With the advent of the robot, we are able to offer more women with complicated problems—like morbid obesity and advanced cancers—a better surgery," he says. "Morbidly obese patients normally need large incisions and have a horrible time with wound healing. But if I can offer robotic surgery to a woman who is 400 pounds, she'll have a better outcome. Quality of life is significantly improved post-operatively, and that can translate into overall improved outcomes." Slomovitz further credits the robot for enabling him to perform procedures that help to preserve women's fertility, as well as procedures that help patients avoid the need for prolonged periods of radiation, or any radiation at all.

Other specialties are turning to the da Vinci, too. Patrick Culligan, MD, director of Urogynecology and Reconstructive Pelvic Surgery for Atlantic Health, has been using the robot in cases of pelvic organ prolapse, dissection of adhesions, and the removal of uterine fibroids in place of hysterectomy. "The robot is a more flexible tool than anything else I have," says Culligan. "We're doing our very best operations for prolapse with this surgery—and we're doing more than anyplace else in the country—and it's amazing how fast patients recover. And treating fibroids is normally pretty bloody with open surgery, but with the robot, it's practically bloodless and painless."

With robotics, he stresses, patients are getting the same surgery as a traditional procedure, but with better outcomes. "There are no shortcuts, it's just more efficient," he says. "If you can get the same cure rates but with less morbidity and less pain, that's a win. Our patients love it, and we love it."

For a referral to da Vinci surgeon, call (866) 763-5306.

The da Vinci robot is, it is not suited to every procedure. In most cases, patients are well served by other minimally invasive procedures like laparoscopic surgery. "Laparoscopic surgery pushes the envelope every day," says Muhammad Feteiha, MD, FACS, director of minimally invasive surgery at Overlook Hospital. "It's in its next generation and is being adapted to more and more areas of general surgery and more difficult procedures." As with robotic surgery, which is best suited to areas of the body that are smaller and tighter, laparoscopic surgery boasts smaller incisions, less pain and bleeding, fewer infections, and a faster recovery—all of which add up to a great relief for surgical patients.

For a referral to a surgeon, call (866) 232-0448.