



Lourdes urologist Rajen Butani, M.D., is fellowship trained in advanced laparoscopy and robotics, and is a member of the Center for Urologic Care. He is shown here with the da Vinci® S™ Robotic Surgical System, recently acquired by the Lourdes Health System.

Robotic Surgery: New Approach to Prostate Cancer Treatment at Lourdes

While the survival rate for prostate cancer has improved considerably in recent years, patients are nonetheless reluctant to opt for traditional open prostatectomy given its many disadvantages: large incisions, long hospital stays and concern over post-operative incontinence and impotence.

The da Vinci® S™ Robotic Surgical System is an advanced, minimally invasive tool that gives surgeons unparalleled precision and flexibility in performing delicate procedures. It is particularly useful for prostatectomies, offering smaller incisions, less pain, quicker recovery times, shorter indwelling catheter requirements and reduced risk for infection.

Our Lady of Lourdes Medical Center is one of the few hospitals in the region with the latest advance in the da Vinci® system. The da Vinci® S™ has an integrated, rather than

optional, fourth arm, interactive video displays, as well as instruments with an extended reach. It also has a motorized base unit, which enables easier setup.

"The da Vinci® system allows the surgeon to perform complex reconstructive procedures in a minimally invasive fashion while adhering to traditional open surgery principles," said Rajen Butani, M.D., a urologist at Lourdes in practice with the Center for Urologic Care, who completed an advanced laparoscopic/robotic fellowship in Westchester, N.Y. "You have optimal visualization due to the magnified three-dimensional optical system and an unparalleled ability to dissect and reconstruct as a result of the instruments, which have six degrees of freedom. This gives you an edge which you never had in standard laparoscopy."

Decreasing Risk, Increasing Benefit

During a traditional open radical prostatectomy, surgeons utilize an 8-to-10-inch incision in order to perform the procedure. Advancements in laparoscopic surgery allow surgeons to perform the procedure utilizing approximately five half-inch or smaller incisions. With smaller incisions and less blood loss and pain, patients also experience fewer problems with bladder control and sexual function. Nonetheless, in traditional laparoscopic surgery, the surgeon is working in two dimensions, moving instruments in a "counter-intuitive" manner.

Introducing da Vinci®

The da Vinci® is considered the "next generation" of laparoscopic surgery. It does not replace surgeons. Rather, the system enhances the surgeon's ability to perform delicate procedures through tiny surgical openings. The system cannot be programmed or make decisions on its own. Every maneuver is directly controlled by the surgeon.

The da Vinci® features three-dimensional imaging of the operating field and intuitive hand movement, two major improvements over standard laparoscopic surgery. The system's 3-D camera, which the surgeon can reposition, zoom and rotate directly from the console, delivers a highly magnified view of the operative field, with bright, crisp images. Natural depth-of-field enables the



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surgeon to perform delicate tissue dissection and suture with precision.

"You're better able to visualize vital structures and avoid nerve damage in comparison to standard laparoscopy or open surgery where you do not have such a crisp 3-D image," said Dr. Butani.

The surgeon's fingers grasp the master controls below the display, with hands and wrists naturally positioned relative to his or her eyes. The system seamlessly translates the surgeon's hand, wrist and finger movements to surgical instruments inside the patient.

Dr. Butani said the system is especially effective with reconstruction, allowing the surgeon to use every necessary angle to complete the procedure.

"The da Vinci® is the first robotic surgical system to provide the surgeon with nearly all of the natural movements of the human wrist," he said. "It also eliminates natural hand tremor and improves dexterity to enable surgeons to do ever-finer surgery in a more controlled manner."

In addition, the da Vinci® S™ is improved over the previous model in that it has four arms standard instead of three, Dr. Butani said.

"With the fourth arm, you can assist yourself to expose the tissues that you need," he said. "It's a big advantage."

Better Clinical Outcomes

Patients who undergo prostatectomies with the da Vinci® report better outcomes than those who undergo standard laparoscopic surgery. Benefits of a da Vinci® prostatectomy include:

- Decreased blood loss;
- Shortened length of hospital stay;
- Decreased postoperative pain;
- Better cosmetic incision;
- Shorter urinary catheter time;
- Faster return to regular activities;
- Anticipation of improved potency and continence.

Other Uses

The da Vinci® is a versatile system that can be used across multiple specialties, such as urology, as well as general surgery, gynecology, and cardiothoracic surgery.

"In particular, we intend to use it for many of our laparoscopic cases that may require reconstruction, such as a dismembered pyeloplasty for ureteropelvic junction obstructions, uretero-ureterostomies and ureteral re-implants for ureteral strictures, pyelolithotomies as well as certain partial nephrectomies," concluded Dr. Butani.

For more information about robotic-assisted prostate surgeries at Lourdes or to refer a patient, call 1-888-LOURDES (568-7337).

Candidates for Robot-Assisted Prostatectomy

Patients considered for robot-assisted prostatectomy should meet the same criteria as those considered for traditional laparoscopic or open surgery: localized cancer that is not locally advanced (cancers which have spread to the pelvic lymph nodes) or metastatic.

Difficult dissections are seen under the following conditions:

- Previous history of perforated viscous;
- Extensive abdominal surgery;
- Previous history of radiation or androgen deprivation therapy;
- Morbid obesity (BMI > 40);
- Presence of large median lobe;
- Previous history of TURP (trans-urethral resection of the prostate).

Southern New Jersey Home to New Urology "Megagroup"

Dr. Butani practices with the Center for Urologic Care, a division of Delaware Valley Urology, a large multi-county urology practice that formed in October 2006. Delaware Valley Urology includes 35 physicians working in 16 office locations in southern New Jersey, stretching from Columbus, Burlington County to Hammonton, Atlantic County. It is comprised of five divisions: the Center for Urologic Care, Urology Physicians, Urology Associates, Urology Healthcare Associates and Associated Urologic Specialists.

For more information about Delaware Valley Urology, call 865-985-8000.

