

FUTURE OF CARE

## can technology improve on a surgeon's hands?

*Your next operation may be performed smoothly and safely by a robot*

Forget Rosie from *The Jetsons* and *Star Wars*' C-3PO. The robot that occupies an operating room at Monmouth Medical Center doesn't wave its arms or move around by itself. But it does function as a surgical tool that can overcome some of the natural limitations of even the steadiest human hands.

Of course, the robotic da Vinci S Surgical System, the newest technology employed by Monmouth surgeons, isn't a substitute for surgeons' skills, but a new tool these physicians use in applying them. The center is the first and only hospital in Monmouth and Ocean counties to acquire a da Vinci, which is named for Renaissance artist Leonardo da Vinci, who designed—and is thought to have built—the world's first robot.

Surgeons use the da Vinci S Surgical System's computerized robotic technology to provide patients with a safer, gentler, more precise approach to many types of surgery, including hysterectomy, prostatectomy and lung biopsy. Robotic surgery is a natural evolution of laparoscopic surgery, which—because it is performed through very small incisions—offers patients reduced risk, faster recovery and the potential for successful repeat operations.

The robotic system cannot be programmed or maneuvered without the surgeon's hands. When using da Vinci, the surgeon sits at a console in the operating room a few feet away from the patient. Inside the console, he or she views a magnified three-dimensional image of the surgical field that is sent by a tiny camera inside the patient. The surgeon slips his or her hand into instrument controls resembling joysticks below the image display. These instrument controls move special robotic instruments that have been placed inside the patient through several very small incisions. The surgeon can even manipulate the robotic "arms" to move the camera without having to



rely on another person in the OR.

"Da Vinci enables us to operate more accurately because the system eliminates the slight movements that a surgeon's hand can make, and it offers us superior visualization and improved dexterity," explains Robert A. Graebe, M.D., chairman of obstetrics and gynecology at Monmouth Medical Center, who was part of a medical team that helped bring da Vinci to the hospital in June. "Da Vinci makes it easier for surgeons to place sutures and connect tissue at difficult angles that would be impossible using standard laparoscopic surgery. In addition to routine surgeries, we can use the da Vinci to perform more complex procedures with less blood loss, fewer complications, less pain, fewer infections and a quicker recovery."

Robotic surgery also gives doctors more options for patients who cannot tolerate traditional surgery



It's a tool, not a substitute. Robert A. Graebe, M.D., shows off the da Vinci S Surgical System at a recent demonstration in Monmouth Medical Center's main lobby.

because of fragile overall health.

An example of what robotic surgery can do better than laparoscopic or traditional "open" surgery is the radical prostatectomy, the gold-standard treatment for localized prostate cancer. Recent research has shown that robotic prostatectomy is as effective as traditional surgery in removing the prostate gland, yet significantly reduces the incidence of incontinence and impotence, two of the surgery's most onerous side effects.

Dr. Graebe and other surgeons on staff at Monmouth Medical Center trained with the da Vinci S Surgical System at the medical center's affiliate, Newark Beth Israel Medical Center of the Saint Barnabas Health Care System, which serves as a training site for the entire Northeast. In time, Monmouth Medical Center will also function as a

regional center for the training of other surgeons in Monmouth and Ocean counties.

Surgeons in various specialties at Monmouth Medical Center are already using the da Vinci to perform gynecologic procedures such as hysterectomy, uterine fibroid removal (myomectomy) and tubal ligation reversal; urologic procedures such as radical prostatectomy; thoracic (chest) biopsy and lung cancer surgery; and general operations, including hiatal hernia repair, gallbladder removal, gastric bypass and colon cancer surgery. Potential future uses include urogynecologic procedures to treat incontinence and complex gynecologic surgeries to treat ovarian and uterine cancers. *M*



For more information about robotic surgery at Monmouth Medical Center, call 1-888-SBHS-123 or visit [www.sbhcs.com/hospitals/monmouth\\_medical](http://www.sbhcs.com/hospitals/monmouth_medical).