

Guide to Robotic Surgery

Robotic Surgery at Retreat Doctors' Hospital

Robotics technology has changed the way many surgeries are performed. In addition to offering all the benefits of minimally invasive surgery, robotic surgery allows for greater precision, increased dexterity and, in some cases, the ability to perform surgery using a single small incision.

As part of the Virginia Institute of Robotic Surgery, surgeons at Retreat Doctors' Hospital utilize the latest robotic surgery technology to perform numerous urological procedures. By combining our urology specialists' expertise with Virginia's most advanced technology, we offer patients the best possible experience and superior outcomes.

We've put together this guide to help you learn more about robotic surgery and the benefits it may offer.

HCA Virginia Institute of Robotic Surgery is an award-winning organization in Central, Northern, and Southwest Virginia, performing more robotic-assisted surgeries than any other health system in Virginia.

What is Robotic Surgery?

To understand robotic surgery, it helps to first understand the differences between traditional and minimally invasive surgery.

Traditional or "open" surgery generally requires a large incision through the skin and possibly muscle across the surgical area. This allows the surgeon to view the area and perform the surgery using surgical tools they manipulate by hand. The large incision is invasive, which means it breaks the skin. Large incisions bleed more than small ones, have a higher risk of complications such as infection, take longer to heal, and may leave a significant scar.

Minimally invasive surgery (also known as laparoscopic surgery) requires just a few very small incisions, usually less than an inch. In some cases, only one small incision is needed. The surgeon inserts thin surgical instruments



and a tiny video camera through the incisions; the video camera projects images of the surgical area onto a screen, and the surgeon uses these images as a guide while manipulating the tools to perform the surgery. However, because the surgeon is working through very small incisions, their mobility with the instruments may be limited.

Robotic technology takes minimally invasive surgery a step further by allowing surgeons to operate using robotic "arms" inserted through the incisions. Guided by the surgeon, the robotic arms hold and manipulate the surgical tools. The surgeon views the surgical area on high-definition, three-dimensional video that magnifies the surgical area up to 10 times larger than normal and uses an instrument panel to control every movement of the robotic arms. Because the arms can move in any direction and do things human hands cannot, they give the surgeon much more dexterity, precision and control.

Benefits of Robotic Surgery

Minimally invasive robotic surgery can offer many benefits to patients, including:

- Smaller incisions
- Less pain
- Less blood loss
- Lower risk of infection
- Minimal scarring
- Shorter hospital stay
- Faster recovery and return to activities

Risks of Robotic Surgery

All surgeries have risks, but because it is less invasive, robotic surgery has fewer risks than traditional surgery. These include:

- Infection
- Excessive bleeding
- Organ, tissue or nerve damage
- Complications from anesthesia
- Equipment failure

Robotic Urology Surgery Procedures at Retreat Doctors' Hospital

Retreat Doctors' Hospital is the first and only hospital in Virginia to perform urological surgery using the latest robotic technology designed for single-incision surgery. We're also the first hospital in Virginia to expand our urological program with next-generation robotic technology, the da Vinci® Single Port SP Surgical System.

Utilizing the latest and most advanced da Vinci® Surgical robotic systems, we are fully equipped for minimally invasive robotic procedures.

Our surgeons have completed advanced, specialized training to perform robotic surgery for procedures including:

- Cyst removal (surgery to remove a cyst)
- Cystectomy (bladder surgery)
- Partial and total nephrectomy (remove part or all of the kidney)
- Prostatectomy (prostate surgery)
- Pyeloplasty (surgical reconstruction of the renal pelvis)
- Sacrocolpopexy (to repair pelvic organ prolapse which occurs when the pelvic floor is not strong enough to support the uterus, bladder or other pelvic organs)
- Ureteral Implantation (fix the tubes that connect the bladder to the kidneys)

Who Can Have Robotic Surgery?

Most patients are able to have robotic surgery. Your care team will determine whether robotic surgery is best for your procedure based on your individual treatment needs, your health history and other factors.

Meet the Retreat Doctors' Hospital Robots

daVinci SP

Recently cleared by the U.S. Food and Drug Administration, the daVinci® SP Surgical System makes robotic laparoscopic single-site surgery possible through a single incision, about one inch long. The new single port system provides our surgeons with more precision, a clearer image of the surgical field, and improved patient access.

daVinci Xi

The da Vinci Xi® is versatile and flexible, with set-up automation and guidance that promotes OR efficiency. It provides multi-quadrant access and integrated table motion.

Learn More About Robotic Surgery at Retreat Doctors' Hospital

- To learn more about robotic surgery at Retreat Doctors' Hospital, visit retreatdoctors.com/specialties/robotic-surgery/
- To speak with our urology surgery navigator, call **804-254-5226**.

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