DID YOU KNOW? OVER 2.5 MILLION PATIENTS HAVE HAD MINIMALLY INVASIVE DA VINCI® SURGERY WORLDWIDE SINCE 2000



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At Virginia Heartburn and Hernia Institute, we are committed to providing superior patient care and being a leader in healthcare excellence and innovation in the communities we serve. We provide a Robotic-Assisted Surgery Program and are using *da Vinci*® Surgery to expand our range of services to offer another minimally invasive surgical option to patients.

WHAT DOES OUR ROBOTIC-ASSISTED SURGERY PROGRAM OFFER?

The Robotic-Assisted Surgery Program at Inova Alexandria Hospital has a multidisciplinary surgical team. Dr. Lee is specially trained and credentialed to perform robotic-assisted *da Vinci* Surgery. A dedicated, highly experienced team of anesthesiologists, nurses, assistants and surgical techs are also trained to support each surgeon's needs during robotic-assisted surgery.

Our da Vinci Robotic-Assisted Surgeries include:

- Hernia surgery
- Anti-reflux surgery
- Adrenalectomy
- Splenectomy
- Gastric surgery
- Pancreatic surgery
- Small Bowel or Colorectal surgery
- Single Site Gallbladder surgery

WHAT IS DA VINCI SURGERY?

da Vinci Surgery is a type of minimally invasive surgery where specially trained surgeons use the *da Vinci* robotic-assisted surgical system to perform a wide range of delicate and complex operations. The *da Vinci* System features a magnified 3D high-definition vision system and tiny wristed instruments that bend and rotate far greater than the human wrist. As a result, *the da Vinci* System enables surgeons to operate with enhanced vision, precision, dexterity and control.

WHY OUR SURGEONS OFFER DA VINCI® SURGERY

As physicians, our ultimate responsibilities are to our patients. We believe in offering our patients all the treatment and surgical options supported by evidence-based medicine. That includes minimally invasive *da Vinci* surgery. More than 9,500 peerreviewed studies and reports examining the use of the *da Vinci* Surgical System in various procedures have been published. The publications include the following types: randomized studies, systematic reviews, prospective and retrospective comparison studies, single arm studies, literature reviews, case studies, cadaver studies, animal studies and editorials.

KEY POTENTIAL PATIENT BENEFITS OF DA VINCI SURGERY VS. OPEN SURGERY*:

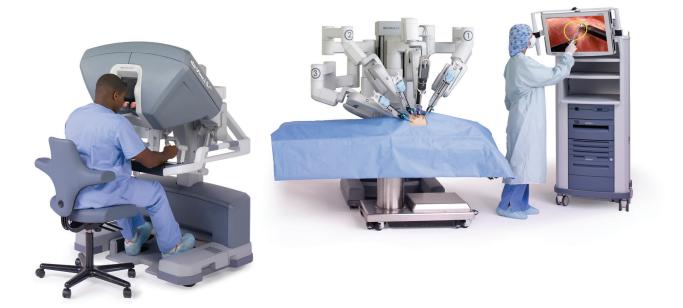
- A shorter hospital stay¹⁻⁵
- Less blood loss^{2-4,6}
- Fewer complications^{2-4,7-8}
- Less need for narcotic pain medicine^{1,7,9-10}
- A faster recovery 1-2,11-12
- Smaller incisions associated with minimal scarring^{3,6-7}

* Potential benefits are specific to the procedure referenced in the footnoted publications.

HOW DOES THE DA VINCI® SURGICAL SYSTEM WORK?

Using the *da Vinci* Surgical System, surgeons perform delicate and complex operations through a few small incisions. The *da Vinci* System consists of several key components, including:

- an ergonomically designed console where the surgeon sits while operating
- a patient-side cart with interactive robotic arms
- a 3D HD vision system
- *EndoWrist*® instruments that bend and rotate far greater than the human wrist



da Vinci software can scale down surgeon's movements and minimize the effects of a surgeon's hand tremors on instrument movements. As a result, the *da Vinci* System enables surgeons to operate with enhanced vision, precision, dexterity and control.

REFERENCES:

- 1. Park JS, et al. S052: a comparison of robot-assisted, laparoscopic, and open surgery in the treatment of rectal cancer. Surg Endosc. 2011 Jan;25(1):240-8. Epub 2010 Jun 15
- 2. Poston RS, et al. Comparison of economic and patient outcomes with minimally invasive versus traditional offpump coronary artery bypass grafting techniques. Ann Surg. 2008 Oct;248(4):638-46
- 3. Health Information and Quality Authority (HIQA), reporting to the Minister of Health-Ireland. Health technology assessment of robot-assisted surgery in selected surgical procedures, 21 September 2011
- 4. Landeen LB, et al. Clinical and cost comparisons for hysterectomy via abdominal, standard laparoscopic, vaginal and robot-assisted approaches. S D Med. 2011 Jun;64(6):197-9, 201, 203 passim
- Martino MA, Berger EA, McFetridge JT, et al. A comparison of quality outcome measures in patients having a hysterectomy for benign disease: robotic vs. non-robotic approaches. J Minim Invasive Gynecol. 2014 May-Jun;21(3):389-93. Epub 2013 Oct 26.
- de Souza AL, et al. A comparison of open and robotic total mesorectal excision for rectal adenocarcinoma. Dis Colon Rectum. 2011 Mar;54(3):275-82
- 7. Cerfolio RJ, et al. Initial consecutive experience of completely portal robotic pulmonary resection with 4 arms. J Thorac Cardiovasc Surg. 2011 Oct;142(4):740-6. Epub 2011 Aug 15
- 8. Shaligram A, et al. How does the robot affect outcomes? A retrospective review of open, laparoscopic, and robotic Heller myotomy for achalasia. Surg Endosc. 2012 Apr;26(4):1047-50. doi: 10.1007/s00464-011-1994-5. Epub 2011 Oct 25
- 9. Lowe MP, et al. A comparison of robot-assisted and traditional radical hysterectomy for early-stage cervical cancer. Journal of Robotic Surgery 2009:1-5
- 10. Menon M, et al. Prospective comparison of radical retropubic prostatectomy and robot-assisted anatomic prostatectomy: the Vattikuti Urology Institute experience. Urology. 2002 Nov;60(5):864-8
- 11. Bell MC, et al. Comparison of outcomes and cost for endometrial cancer staging via traditional laparotomy, standard laparoscopy, and robotic techniques. Gynecologic Oncology III 2008:407-411
- Miller J, et al. Prospective evaluation of short-term impact and recovery of health related quality of life in men undergoing robotic assisted laparoscopic radical prostatectomy versus open radical prostatectomy. J Urol. 2007 Sep;178(3 Pt 1):854-8; discussion 859. Epub 2007 Jul 16

NOTE: The referenced studies evaluated an *Si* or earlier model of the *da Vinci* Surgical System. There is no clinical data currently available for the *da Vinci Xi* Surgical System. The *da Vinci Xi* Surgical System is not cleared for use in transoral otolaryngology surgical procedures and is not specifically cleared for use in prostatectomy. It is cleared for use in urologic surgical procedures.

In order to provide benefit and risk information, Intuitive Surgical reviews the highest available level of evidence on representative *da Vinci* procedures. Intuitive Surgical strives to provide a complete, fair and balanced view of the clinical literature. However, our materials should not be seen as a substitute for a comprehensive literature review for inclusion of all potential outcomes. We encourage patients and physicians to review the original publications and all available literature in order to make an informed decision. Clinical studies are available at pubmed.gov.

The implementation of a da Vinci® Surgery program is practice- and hospital-specific. Results may vary. Past customer experience does not imply any guarantee of results in practice or program success. When considering cost-effectiveness of an advanced technology like the da Vinci System, we recommend that hospitals perform a full cost-benefit analysis, considering not just the operating room costs but the costs associated with hospital stays, procedure-related complications and hospital re-admissions.

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