da Vinci®

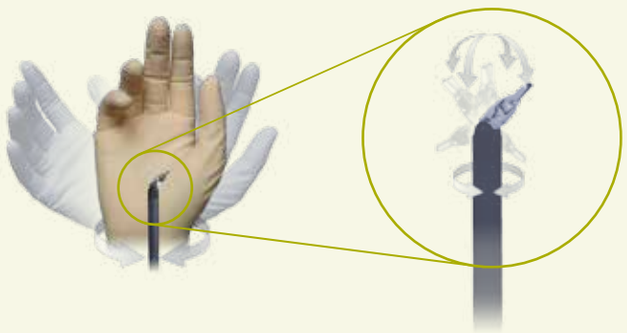
HYSTERECTOMY

FOR BENIGN CONDITIONS

Solutions for minimally invasive gynecologic surgery

INTUITIVE SURGICAL®

The *da Vinci* Surgical System



***EndoWrist*® Instrumentation**
EndoWrist Instruments are designed to provide surgeons with natural dexterity and a range of motion far greater than even the human hand.

- High-definition 3D vision
- *EndoWrist*® instrumentation
- *Intuitive*® motion

Dual Console: Available exclusively on the *da Vinci*® *Si*™
Dual console capability allows an additional surgeon to provide an assist or can facilitate teaching and proctoring by connecting a second surgeon console.

Surgeon Benefits

Enables gynecologists to offer an effective minimally invasive approach for benign gynecologic conditions requiring surgery. Compared to conventional laparoscopic surgery, *dV*Hb minimizes conversions[2] as well as the need for total abdominal hysterectomy (TAH)[2]

The excellent visualization, dexterity and control provide surgeons with:

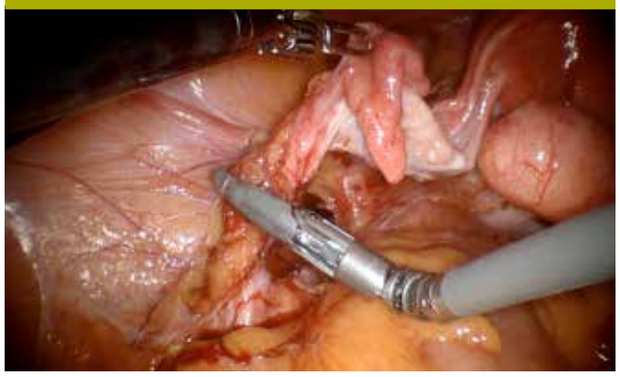
- A surgical option to approach pathology minimally invasively — safely, reproducibly and following open surgical technique[2] — including patients with:
  - Adhesive disease[2]
  - Large pathology[2]
  - Obesity[6]
- Improved access, precision and control for efficient dissection[2]
- Quick, easy suturing during vaginal cuff closure[2]
- Control of the camera and all three operative arms for excellent surgical autonomy and efficiency[2]

Monopolar
Hot Shears™

Application Highlights

Four ways *da Vinci* technology facilitates a precise benign hysterectomy:

Skeletonizing and Coagulating Vascular Pedicles



The *EndoWrist One* Vessel Sealer provides the performance of a conventional vessel sealer enhanced by wristed articulation and the unparalleled precision of the *da Vinci* Surgical System. Allows surgeons to have direct control of a cut and seal instrument to efficiently skeletonize and coagulate the vascular pedicles with minimal lateral thermal spread.

Vesico-uterine Reflection

The improved visualization of the anterior cul-de-sac combined with fully articulating instruments allow the vesico-uterine reflection to be created easily and efficiently.

Colpotomy

The improved articulation of the *EndoWrist*® Instruments greatly facilitates colpotomy, with division of the cardinal and uterosacral ligaments in a 360° fashion, a step often found to be difficult using conventional laparoscopy.

Vaginal Cuff Closure

An *EndoWrist*® *Mega*™ Needle Driver's high-force grip helps securely hold CT-1 or CT-2 needles as they pass through the thick vaginal cuff. Edges are everted with either a grasping instrument or Large Needle Driver to ensure inclusion of vaginal mucosa, for an efficient, effective closure.

For technology videos visit
www.daVinciSurgeryCommunity.com

Clinical Data

Clinical Validation: Benign Hysterectomy

Payne T, Dauterive F. A Comparison of Total Laparoscopic Hysterectomy to Robotically-Assisted Hysterectomy: Surgical Outcomes in a Community Practice. The Journal of Minimally Invasive Gynecology (JMIG). May/June 2008; 15:3:286-291.

This study compares historically accepted approaches for hysterectomy before implementation of a robotics program in a community hospital setting. In each arm, 100 consecutive patients were used, to try to minimize potential biases. A limitation of the study was that it is a single-center study and does not involve a case-matched historical control.

	Pre-robotic (n=100)	*da Vinci* (n=100)	Last 25 *da Vinci*
Age (yrs)	43.5	43.2	
BMI	28.8	28.8	
Estimated Blood loss (ml)	113	61	
Hospital stay (days)	1.6	1.1	
TAH rate	20%	4%	0%
Intraop. Conversions (subset of TAH)	9%	4%	0%
Avg uterine weight of conversions	359.5	1387.5	
TAH due to adhesions	8%	0%	
Operative times (skin-to-skin)	92.4	119	78.7

For additional data pertaining to these studies visit
www.daVinciSurgeryCommunity.com

Potential Patient Benefits & Risks

POSSIBLE BENEFITS COMPARED TO OPEN SURGERY:

- Less blood loss[1]
- Fewer complications[1]
- Shorter hospital stay[1]
- Minimal scarring

POSSIBLE BENEFITS COMPARED TO TRADITIONAL LAPAROSCOPY:

- Less blood loss[2]
- Lower conversion rate to open surgery[2]
- Shorter hospital stay[2,3]
- Less need for narcotic pain medicine[4,5]

POSSIBLE RISKS INCLUDE:

- Separation of the vaginal incision[6]
- Blocked lung artery[6]
- Urinary tract injury[6]

EndoWrist® Instruments Optimized for *da Vinci*® Benign Hysterectomy

	STANDARD/*S*,*Si* PNs	FEATURES
	***EndoWrist PK***™ **Dissector** **400227/420227**	*PK* Technology advantage
	***Hot Shears***™ **(Monopolar Curved Scissors)** **400179/420179** **Requires Tip Cover** **400180**	Combined scissors and monopolar cautery Tapered tip-profile
	***Mega SutureCut***™ **Needle Driver** **400309/420309** **Large SutureCut**™ **Needle Driver** **400296/420296**	Strong grasping force Scissor blades at the base Tapered, smooth outer jaw
	**Large Needle Driver** **400006/420006**	Carbide-insert style jaws Diamond pattern jaw profile
	**Tenaculum Forceps** **400207/420207**	Wide opening jaw angle (75°) Strong, controlled closing force

	STANDARD/*S*,*Si* PNs	FEATURES
	**Vessel Sealer** **410322**	Fully wristed articulation Dual-hinged jaw opening
	**Permanent Cautery Hook** **428090**	Dissecting triangle of Calot Separating gallbladder from liver bed Lysis of adhesion
	**Maryland Bipolar Forceps – Fenestrated** **400172/420172**	Grasping, dissection and coagulation
	***ProGrasp***™ **400093/420093**	Grasping & dissection
	**Fenestrated Bipolar Forceps (Bipolar Cadiere)** **400205/420205**	Grasping, dissection and coagulation Lymphadenectomy

INTUITIVE SURGICAL®

Taking Surgery Beyond the Limits of the Human Hand.™

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While clinical studies support the use of the *da Vinci*® Surgical System as an effective tool for minimally invasive surgery for specific indications, individual results may vary. Contraindications applicable to the use of conventional endoscopic instruments also apply to the use of all *da Vinci* instruments, including *Single-Site* Instrumentation. General contraindications for endoscopic surgery include bleeding diathesis, morbid obesity and pregnancy. Be sure to read and understand all information in the applicable user manuals, including full cautions and warnings, before using *da Vinci* products. Failure to properly follow all instructions may lead to injury and result in improper functioning of the device. Unless otherwise noted, products featured are cleared for commercial distribution in the U.S. and bear the CE mark. For availability and clearances outside the US, please check with your local representative or distributor. We encourage patients and physicians to review all available information. Clinical studies are available through the National Library of Medicine at www.ncbi.nlm.nih.gov/pubmed.

[1] Landeen LB, Bell MC, Hubert HB, Bennis LY, Knutsen-Larson SS, Seshadri-Kreaden U. 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. [2] Payne, T. N. and F. R. Dauterive. A comparison of total laparoscopic hysterectomy to robotically assisted hysterectomy: surgical outcomes in a community practice. J Minim Invasive Gynecol, 2008;15(3): 286-291. [3] Giep BN, Giep HN, Hubert HB. Comparison of minimally invasive surgical approaches for hysterectomy at a community hospital: robotic-assisted laparoscopic hysterectomy, laparoscopic-assisted vaginal hysterectomy and laparoscopic supracervical hysterectomy. J Robot Surg. 2010 Sep;4(3):167-175. Epub 2010 Aug 10. [4] Shashoua AR, Gill D, Locher SR. Robotic-assisted total laparoscopic hysterectomy versus conventional total laparoscopic hysterectomy. JSLS. 2009 Jul-Sep;13(3):364-9. [5] Betcher R MD, Chaney P MD, Otey S MD, Wood D DO, Lacy P MD, Lee M RN, Chi G PhD. A Retrospective Analysis of Post Operative Pain in Patients Following *da Vinci* Robotic Hysterectomy and Total Laparoscopic Hysterectomy. Presented at: AAGL 2012. [6] Boggess JF, Gehrig PA, Cantrell L, Shafer A, Mendivil A, Rossi E, Hanna R. Perioperative outcomes of robotically assisted hysterectomy for benign cases with complex pathology. Obstet Gynecol. 2009 Sep;114(3):585-93.