Overview

- Welcome & Introductions
- Hysterectomy in the US
- da Vinci Surgery
- Patient Expectations & Benefits
- Clinical Outcomes
- da Vinci Hysterectomy
- Experience / Credentials
- Our Partnership / Next Steps

Hysterectomy Facts

- Approximately 525,000 hysterectomies are performed each year in the U.S.¹
- By age 60, 1 in 3 women in the U.S. will have had a hysterectomy²
- 90% are performed for elective benign indications¹
  - Fibroids
  - Abnormal uterine bleeding
  - Endometriosis
  - Chronic pelvic pain

¹Thomson Solucient data
²US Department of Health & Human Services, womenshealth.gov, Hysterectomy FAQ. www.womenshealth.gov/faq/hysterectomy.htm
³American College of Surgeons “About Hysterectomy” brochure. http://www.facs.org/public_info/operation/hysterectomy.pdf#search=%2290%25%20hysterectomies%20performed%20are%20elective%22
Evolution of Hysterectomy

- Total abdominal (TAH) & vaginal hysterectomy (TVH)
- Laparoscopic-assisted vaginal hysterectomy was introduced by Reich in the late 1980s (LAVH)
- Laparoscopic supracervical hysterectomy (LSH)
- Total laparoscopic hysterectomy (TLH)

Roughly 56% of all hysterectomies performed in the U.S. are abdominal.

Complex Hysterectomy

- Pelvic Adhesive Disease (PAD)
- Prior pelvic surgery
- Endometriosis
- Prior pelvic infection
- Large Uteri
- High BMI Patient (BMI ≥ 30)
- Presence of single or multiple adnexal masses

A significant portion of benign hysterectomies are complex.

da Vinci® Surgical System Overview
Tremor filtration, motion scaling, 3D vision and robotic precision improve the technical quality of reconstruction.

EndoWrist® instruments provide 7 degrees of freedom and added dexterity.

Using the da Vinci System’s 4th arm to perform traction and retraction tasks provides the surgeon with enhanced control of the surgical site.

Net result: Improved technical capabilities for quality reconstruction.

When compared to the open approach, da Vinci offers the patient and surgeon numerous potential benefits.

da Vinci Hysterectomy

da Vinci overcomes the limitations of conventional laparoscopy by enabling gynecologists to treat complex pathology minimally invasively, minimizing conversions and the need for total abdominal hysterectomy.

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Patient Expectations and Benefits

- Less post-operative pain
- Less blood loss
- Fewer transfusions
- Less risk of infection
- Shorter hospital stay
- Faster recovery time
- Fewer complications
- Improved cosmesis with small incisions
- Better outcomes and patient satisfaction, in many cases

Surgeon Benefits

- Ability to treat more pathology minimally invasively - including patients with:
  - Adhesive disease
  - Large pathology
  - Obesity
- Greater access, precision and control for improved dissections
- Quicker, easier suturing during vaginal cuff closure
- Control of the camera and of all three operative arms for the ultimate in surgical autonomy and efficiency

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3. Statement from Dr. Arnold Advincula (University of Michigan, Ann Arbor, MI), reference document, PN 871184
da Vinci® Advantage

da Vinci® Advantage Shown in Patients with Pelvic Adhesive Disease and Enlarged Uterus

- Clip #1: Superior precision when developing planes during bladder dissection
- Clip #2: Unmatched articulation for dissecting around a large uterus
- Clip #3: Tunneling out the ureter with greater surgical precision/confidence

Video courtesy of Dr. Arnold Advincula (University of Michigan)

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Clinical Outcomes Using da Vinci® Hysterectomy

Clinical data* from Drs. Thomas Payne and Ralph Dauterive
Ochsner Clinic, Baton Rouge, LA

<table>
<thead>
<tr>
<th></th>
<th>da Vinci (n=100)</th>
<th>da Vinci (n=100)</th>
<th>Last 25 da Vinci</th>
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</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>43.5</td>
<td>42.2</td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>28.8</td>
<td>28.8</td>
<td></td>
</tr>
<tr>
<td>Estimated blood loss (ml)</td>
<td>113</td>
<td>41</td>
<td></td>
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<tr>
<td>Hospital stay (days)</td>
<td>1.6</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>TAH rate (%)</td>
<td>20%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Conversions (subset of TAH)</td>
<td>9%</td>
<td>4%</td>
<td>0%</td>
</tr>
<tr>
<td>Uterine weight of conversions (g)</td>
<td>399.3</td>
<td>1387.5</td>
<td></td>
</tr>
<tr>
<td>TAH due to adhesions (%)</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Operative times (skin-to-skin) (min)</td>
<td>92.4</td>
<td>119</td>
<td>78.7</td>
</tr>
</tbody>
</table>


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Robotically Assisted Hysterectomy in Patients With Large Uteri

Clinical data* from Dr. Payne, Ochsner Clinic, Baton Rouge, LA
Obstetrics & Gynecology, March 2010.

<table>
<thead>
<tr>
<th>Practice 1 (n=80)</th>
<th>Practice 2 (n=79)</th>
<th>Practice 3 (n=55)</th>
<th>Practice 4 (n=25)</th>
<th>Practice 5 (n=17)</th>
<th>Total (N=256)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age BMI</td>
<td>43.5</td>
<td>43.2</td>
<td>43.6</td>
<td>43.9</td>
<td>43.5</td>
<td>41.5-45.6</td>
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<tr>
<td>Mean Uterine Weight (g)</td>
<td>596.1</td>
<td>640.0</td>
<td>494.8</td>
<td>494.7</td>
<td>498.5</td>
<td>440-1500</td>
</tr>
<tr>
<td>Previous Surgery (%)</td>
<td>58.3</td>
<td>55.7</td>
<td>69.1</td>
<td>48.0</td>
<td>17.7</td>
<td>55.5</td>
</tr>
<tr>
<td>Complications (%)</td>
<td>1.3</td>
<td>7.6</td>
<td>1.8</td>
<td>4.0</td>
<td>0.0</td>
<td>3.5</td>
</tr>
<tr>
<td>LOS (days)</td>
<td>1.1</td>
<td>1.2</td>
<td>1.0</td>
<td>1.4</td>
<td>1.1</td>
<td>1.5-5</td>
</tr>
<tr>
<td>TAH rate (%)</td>
<td>5.5</td>
<td>0.0</td>
<td>3.6</td>
<td>0.0</td>
<td>0.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Mean skin-to-skin operative time (min)</td>
<td>123.7</td>
<td>192.4</td>
<td>148.6</td>
<td>128.7</td>
<td>125.3</td>
<td>151-430</td>
</tr>
</tbody>
</table>


1 Practice 2's operative time affected by high percentage of additional procedures, internal pelvic examination and lateral laparoscopy.
2 Practice 3's operative time affected by patients with multiple previous procedures, internal pelvic examination and lateral laparoscopy.
3 Practice 4's operative time affected by patients with multiple previous procedures, internal pelvic examination and lateral laparoscopy.
4 Practice 5's operative time affected by patients with multiple previous procedures, internal pelvic examination and lateral laparoscopy.

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**Slide 13**

Gynecology Publications (n=240)

- 7 of 39 papers facilitated by CI Clinical Affairs Group

**Slide 14**

*da Vinci* Surgical System U.S. Installed Base

- Map showing U.S. installation base from 1999 to 2010, with some years highlighted.

**Slide 15**

*da Vinci* Hysterectomy Steps

- Diagram outlining steps in hysterectomy procedure.
1. Overview & Pathology
   - Identify the relevant anatomy and pathology:
     - Uterus
     - Fallopian tubes and ovaries
     - Uterosacral ligaments
     - Utero-ovarian ligament
     - Round ligament
     - Anterior/posterior cul-de-sac
     - Iliac vessels
     - Bulge from colpotomy ring

2. Right Fallopian Tube / Utero-Ovarian Ligament
   - Skeletonize the right fallopian tubes and right utero-ovarian ligament.
   - Coagulate and transect the pedicles.
   - Transect the round ligament.
   - Incise and develop the anterior and posterior leaflets of the broad ligament.

3. Vesico-Uterine Reflection
   - Create a vesico-uterine reflection and skeletonize the right uterine vasculature.
   - Pay careful attention to the right ureter.
   - Move the uterus cephalad to aid in dissection.
4. Right-Side Dissection

- Continue right-side dissection.
- Ligate the uterine vasculature.

5. Left Fallopian Tube / Utero-Ovarian Ligament

- Skeletonize the left fallopian tube and utero-ovarian ligament.
- Coagulate and transect the pedicles.
- Transect the round ligament.
- Incise and develop the anterior and posterior leaflets of the broad ligament.

6. Left-Side Dissection

- Continue left-side dissection and ligate the uterine vasculature.
- Complete the vesico-uterine reflection.
7. Colpotomy

- Incise and divide the cardinal and uterosacral ligament complexes.
- Inflate the Colpo-Pneumo Occluder™ if not already done prior to the colpotomy.
- Complete the anterior and posterior vaginotomies circumferential around the KOV™ colpotomy ring.
- Minimize the amount of electrosurgical energy applied to the vaginal cuff.
- Place the colpotomy ring cephalad under pressure during transection.
- Pay careful attention to ureters.

8. Specimen Removal

- The uterine specimen is delivered through the vagina.
- If the uterine specimen is small, it's left in the vagina where it helps to maintain pneumoperitoneum during the vaginal cuff closure.
- Otherwise, the Colpo-Pneumo Occluder™ is replaced following specimen removal.
- Note: Use the morcellator if the specimen is too large to remove vaginally.

9. Vaginal Cuff Closure

- Running or interrupted closure:
  - Running: Follow the stitch using the 4th arm or assistant to ensure a tight closure.
  - Interrupted: Use the 4th arm to approximate the tissue.
- Take adequate needle bites to ensure incorporation of the vaginal mucosa.
- The ureters must be noted if incorporating the uterosacral ligaments.
My Credentials

- Board certified OB/GYN practicing robotic surgery
- 18 years of experience in private practice
- Completed the established clinical pathway:
  - Onsite training
  - Laboratory training
  - Case observation
  - Proctoring
- Completed over 300 cases
  - Conversion Rate: 0.3%

Our Partnership

- Patient Referral
- Optional Joint Consultation
- Surgery & Follow Up Care
- Patient Return to Normal Activities

Summary

do Vinci® Hysterectomy for Benign Gynecologic Conditions

- Enables gynecologists to treat complex pathology minimally invasively, minimizing conversions and the need for total abdominal hysterectomy (TAH).