Laparoscopic Radical Hysterectomy and Pelvic Lymphadenectomy

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No relevant financial disclosures

• Invitae - speaker
• Olympus - speaker and consultant
Objectives

- Describe techniques for laparoscopic radical hysterectomy, pelvic lymphadenectomy, lymphatic mapping, and radical trachelectomy
- Demonstrate using edited video of complete pelvic lymphadenectomy, and radical hysterectomy, show the nerves spared in nerve-sparing techniques.
- Discuss complications and how to avoid them

### Radical Hysterectomy

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>EBL (ml)</th>
<th>Node Count</th>
<th>OR time (min)</th>
<th>LOS (days)</th>
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</thead>
<tbody>
<tr>
<td>Vidal - 62</td>
<td>1996</td>
<td>600</td>
<td>250*</td>
<td>180</td>
<td>25</td>
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<tr>
<td>Abu-Rustum - 19</td>
<td>2003</td>
<td>693</td>
<td>301*</td>
<td>295</td>
<td>371*</td>
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<td>Zakashansky - 24</td>
<td>2007</td>
<td>520</td>
<td>210*</td>
<td>318</td>
<td>424*</td>
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<td>Shafer - 31</td>
<td>2007</td>
<td>562</td>
<td>119*</td>
<td>251</td>
<td>240</td>
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<tr>
<td>Li - 90</td>
<td>2007</td>
<td>250</td>
<td>370</td>
<td>217</td>
<td>262*</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>455</td>
<td>290</td>
<td>231</td>
<td>286</td>
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</tbody>
</table>

*Denotes P < 0.05
Robot-assisted versus total laparoscopic radical hysterectomy in early cervical cancer, a review


- No RCT comparing these approaches
- 27 studies, total of 342 Robotics vs. 914 TLRH
- Major postoperative complications more frequent in RRH (9.6%) vs. TLRH patients (5.5%) (p<0.05)
- Length of stay shorter in RRH (3.3 d) vs. TLRH (6.2 d) (p=0.04)
- No differences in methods, OR time, LN, EBL, or outcomes

Laparoscopic Versus Open Abdominal Management of Cervical Cancer: Long-Term Results From a Propensity-Matched Analysis

Giorgio Bogani, MD, Antonella Cremi, PhD, Stefano Uccella, MD, Maurizio Serati, MD, Jean Cassarini, MD, Dario Pinelli, MD, Fabio Ghetti, MD
Department of Obstetrics and Gynecology, University of Insubria, Del Ponte Hospital, Varese, Italy

- 65 patients in each arm
- 2 patients (2%) converted to open
- Less EBL (200 vs 500 cc, p<0.001), lower transfusion rate (6 vs 22%, p=0.02)
- Similar OR time (245 vs 259.5 min, p=0.26)
- Shorter length of stay (4 vs 8 d, p<0.001; 3.3 d)
- No differences in complications (though trend for lower in LSC); 5y DSS or OS
Impactful Trials in MIGS: Cervical Cancer

- 319 patients MIS, 312 patients open; IA1 with LVSI - IB1
- 84% LSC, 16% Robot-assisted
- Primary outcome: Disease-free survival at 4.5 years, with non-inferiority claimed if the lower boundary of the 2-sided 95% CI of the between group difference (MIS - open) was > -7.2% (i.e. closer to zero)
- DFS at 4.5 yrs: 86% vs. 96.5% (-10.6 % points, 95% CI, -16.4 to -4.7) [Non-inferiority is not claimed]
- 3y DFS: 91.2% vs. 97.1%
- 3 y OS: 93.8% vs. 99%
What is the conclusion?
• “MIS is associated with a lower risk of DFS and OS”
• Scientifically:
  • Strengths: international randomized trial, “the best we have”
  • Weaknesses:
    • NOT a superiority trial, we just cannot say that MIS is “non-
      inferior” (similar issues with colon cancer data)
    • FU incomplete
    • Risk of error (false positive trial)
    • Does not make sense - 99% OS in open arm? Counter to all
      other studies (every one)
  • Realistically: May be the death knell for MIS radical hyst

• Radical Hysterectomy
Radical Hysterectomy

- Follow same technique as open surgery
- 4 - 5mm ports
- Uterine manipulator: Koh ring x 2 or VCare
- Sealing device
- Bags for removal of nodes vaginally
- Suture to close vagina
VCare™ and VCare Dx™

VCare is a uterine manipulator/elevator for use in Laparoscopic Hysterectomy. VCare DX is a uterine manipulator for use in GYN Laparoscopic procedures other than Hysterectomy.

Identify anatomy
Open Retroperitoneum

Develop pararectal space
Left pararectal space

Radical Hysterectomy
Isolate the ureter from the peritoneum
Isolate the uterine and ureter

Dissect the bladder down
Dissect the bladder down

Divide tissue over tunnel
Dissect ureter in tunnel cleanly

Take down bladder completely
See ureter as it enters the bladder

Open Rectovaginal Space
Ligate IP and Divide Peritoneum

Take last piece of peritoneum and drop it away
Divide uterosacral ligament

Set up to enter vagina
Importance of pushing up on RUMI

Divide vagina
Position of ureter relative to vaginal entry

Uterus removed
ICG-10 Lymphatic Mapping
ICG-10 Lymphatic Mapping

Laparoscopic Pelvic Lymphadenectomy
Complication: obturator nerve

Laparoscopic Splenectomy
Thank you!

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