Advances in Gynecologic Oncology Surgery

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Learner Objectives

• Review new approaches in the surgical management of gynecologic cancers
• Discuss the management of high risk individuals with uterine, cervical, and ovarian cancer
• Have fun and good discussion on hot topics in the literature!
Disclosures

• In accordance with CME requirements I have no relevant financial disclosures

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Endometrial Cancer
Overview

• Uterine cancer is the most common gyn malignancy with over 60K new cases per year\(^1\)
• Only 5,000 of these cases are uterine sarcomas
• However, usually symptomatic and thus presents typically at early stages \(^2\)
  – 70% are stage I at diagnosis
  – 5 year survival rate of stage I >95%
  – Mean age = 61; Only 8% are under age 45
  – Incidence and mortality rates increasing
Treatment

• Surgical staging:
  – Total hysterectomy
  – Bilateral salpingo-oophorectomy
  – Visual evaluation of peritoneal, diaphragmatic, serosal surfaces with biopsy as indicated
  – Lymph node dissection (pelvic +/- para-aortic)

• Open, laparoscopic or robotic approach acceptable
  – ***Fertility sparing: hormonal therapy – not standard but appropriate for certain cases (ORR 77%)³
  – Patients who are not candidates for surgery: Radiation
Mode of Surgery

• Open, laparoscopic or robotic approach: Data?
• LAP2 Trial\(^4\)
  – Randomized controlled trial of open versus TLH
  – 3 year recurrence rate 11.4 vs 10.2% (NS)
  – 5 year OS 89.8% in both arms
• MIS supported and preferred for uterine confined disease by NCCN due to data demonstrating decrease infection, transfusion, VTE, LOS and lower cost of care, without compromise of oncologic outcomes\(^5\)
Surgery for Endometrial Cancer

• Robotic Surgery
  – RCT data are lacking but supported by large observational studies and systematic reviews\(^5\)
  – Dutch study: National adoption of MIS showed Robotic MIS associated with decrease complications and improved survival compared to open surgery, no difference between robotics and conventional laparoscopy except decreased conversion rate\(^6\)
  – US studies indicated increased cost of Robotics>TLH, but decreased op time and more favorable learning curve, decreased conversion even with morbid obesity\(^7\)
Surgical Staging for Uterine Cancer

• Historically-Staging practices have varied widely
• Newest innovation is the introduction of Sentinel Lymph Node Biopsy (SLNB)
  – Performed robotically or laparoscopy
  – May avoid total lymphadenectomy
  – Decrease risk of lymphedema and symptomatic lymphocyst formation
  – Provide pathologic ultras-taging analysis (i.e. serial sectioning and IHC to detect micrometastasis—upstages 5-15% of patients)
Surgery for Endometrial Cancer

- New advances: Sentinel lymph nodes
Robotic Sentinel Lymph Nodes

Example of Left External Iliac Lymph Node

Cooper Medical School of Rowan University
Surgery for Endometrial Cancer

NCCN Guidelines Version 3.2019
Endometrial Carcinoma

PRINCIPLES OF EVALUATION AND SURGICAL STAGING WHEN SLN MAPPING IS USED

Figure 4: The SLN algorithm for surgical staging of endometrial cancer

1. Peritoneal & serosal evaluation & washings
2. Retroperitoneal evaluation
   - Excision of all mapped SLN with ultrastaging
   - Any suspicious nodes must be removed regardless of mapping
3. If there is no mapping on a hemi-pelvis, a side-specific LND is performed
4. Para-aortic LND---done at attending discretion
SLNB Endometrial Cancer

• FIRES trial – Clinical stage 1 EC ⁹
• Largest multicenter prospective study (n=385)
• Sentinel-lymph-node mapping with complete pelvic lymphadenectomy was performed
  Mapping of at least one SLN in 86%
• Sensitivity 97.2%
• Negative Predictive Value was 99.6%
• False Negative Rate 3%
Cervical Cancer
Minimally Invasive versus Abdominal Radical Hysterectomy for Cervical Cancer

Pedro T. Ramirez, M.D., Michael Frumovitz, M.D., Rene Pareja, M.D., Aldo Lopez, M.D., Marcelo Vieira, M.D., Reitan Ribeiro, M.D., Alessandro Buda, M.D., Xiaojian Yan, M.D., Yao Shuzhong, M.D., Naren Chetty, M.D., David Isla, M.D., Mariano Tamura, M.D., Tao Zhu, M.D., Kristy P. Robledo, Ph.D., Val Gebski, M.Stat., Rebecca Asher, M.Sc., Vanessa Behan, B.S.N., James L. Nicklin, M.D., Robert L. Coleman, M.D., and Andreas Obermair, M.D.

ABSTRACT
Laparoscopic Approach to Cervical Cancer (LACC)\textsuperscript{10}

- Randomized phase III non-inferiority trial of radical hysterectomy
  - Arm 1: minimal access surgery (laparoscopic or robotic)
  - Arm 2: Open (laparotomy)
- **Primary outcome:** Disease Free Survival (DFS) at 4.5 years
- **Secondary outcomes:** recurrence rate, overall survival

Eligibility:
- Squamous cell/ adenocarcinoma/ adenosquamous carcinomas of cervix
- **FIGO stage 1A1 (+LVSI), 1A2-1B1**
- Planned type II or type III radical hysterectomy
- ECOG performance status 0-1
Laparoscopic Approach to Cervical Cancer (LACC)  

- Treatment:  
  - MIS: 319 patients  
  - 84% laparoscopy  
  - 16% robotic  
  - Open: 312 patients  
  - 92% both arms Stage IB1  

- Results:  
  - 4.5 year DFS: 86% vs 96.5%  
  - 3 year OS: 93.8% vs 99%  
  - (HR=6; 95%CI 1.77)  
  - MIS did NOT meet non-inferiority criteria
Surgery for Cervical Cancer

Table 3. Proportional-Hazards Models (Tests for Superiority) According to Randomized Treatment.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Open Surgery</th>
<th>Minimally Invasive Surgery</th>
<th>Hazard Ratio vs. Open Surgery (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no. of events/no. of patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disease recurrence or death from cervical cancer</td>
<td>7/312</td>
<td>27/319</td>
<td>3.74 (1.63–8.58)</td>
<td>0.002</td>
</tr>
<tr>
<td>Unadjusted analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted analysis*</td>
<td>7/282</td>
<td>27/295</td>
<td>4.39 (1.88–10.20)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Disease recurrence or death from any cause</td>
<td>8/312</td>
<td>32/319</td>
<td>3.88 (1.79–8.41)</td>
<td></td>
</tr>
<tr>
<td>Locoregional recurrence†</td>
<td>4/312</td>
<td>18/319</td>
<td>4.26 (1.44–12.60)</td>
<td></td>
</tr>
<tr>
<td>Death from any cause</td>
<td>3/312</td>
<td>19/319</td>
<td>6.00 (1.77–20.30)</td>
<td></td>
</tr>
<tr>
<td>Death from cervical cancer†</td>
<td>2/312</td>
<td>14/319</td>
<td>6.56 (1.48–29.00)</td>
<td></td>
</tr>
</tbody>
</table>

- Minimally invasive radical hysterectomy was associated with a higher rate of recurrence and cancer related death than the open approach.\(^{10}\)
Surgery for Cervical Cancer

• Reaction to LACC trial findings by Gyn Onc community: heavily debated and criticized but it is level 1 evidence

• 5 stages of grief: Denial, Anger, Bargaining, Depression...
Surgery for Cervical Cancer

• What now? Acceptance (and further testing)
• NCCN guidelines (Version 4.2019)\textsuperscript{11}
  – Radical hysterectomy with BPLND (or SLNB) is the preferred treatment for early stage cervical cancer
  – Standard and historical approach is open
  – Given recently presented findings of poorer survival outcomes with MIS compared to open approach “women should be carefully counseled about the short and long-term outcomes and oncologic risk of the different surgical approaches.”
Ovarian Cancer
Ovarian Cancer Management

• Role of surgery
  – Establish diagnosis
  – Comprehensive staging
Total hysterectomy/BSO
Omentectomy
Lymph node dissection and staging biopsies
  – Primary cytoreduction (*debunking*) removal of as much gross tumor as possible
Surgery for Ovarian Cancer

• Recent data has been reported that has modified treatment paradigm for ovarian cancer

• NCCN added an algorithm: poor surgical candidates and low likelihood of optimal cytoreduction\(^\text{12}\)

• Randomized controlled trials of Neoadjuvant chemotherapy and interval debulk \textit{NOT INFERIOR} to primary debulking surgery \textbf{in select patients}\(^\text{13}\) (EORTC 55971 & CHORUS Trials)
THANK YOU
References


