Current Management of Early-stage Endometrioid Endometrial Cancer

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NOTHING TO DISCLOSE
### Revised FIGO Staging - 2009

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I</strong></td>
<td>Tumor confined to the corpus uteri</td>
</tr>
<tr>
<td>IA*</td>
<td>No or less than half myometrial invasion</td>
</tr>
<tr>
<td>IB*</td>
<td>Invasion equal to or more than half of the myometrium</td>
</tr>
<tr>
<td><strong>II</strong></td>
<td>Tumor invades cervical stroma, but does not extend beyond the uterus**</td>
</tr>
<tr>
<td>IIIA*</td>
<td>Local and/or regional spread of the tumor</td>
</tr>
<tr>
<td>IIIB*</td>
<td>Tumor invades the serosa of the corpus uteri and/or adnexae#</td>
</tr>
<tr>
<td>IIIC*</td>
<td>Vaginal and/or parametrial involvement#</td>
</tr>
<tr>
<td>IIIC1*</td>
<td>Metastases to pelvic and/or para-aortic lymph nodes#</td>
</tr>
<tr>
<td>IIIC2*</td>
<td>Positive pelvic nodes</td>
</tr>
<tr>
<td></td>
<td>Positive para-aortic lymph nodes with or without positive pelvic lymph nodes</td>
</tr>
<tr>
<td>IV*</td>
<td>Tumor invades bladder and/or bowel mucosa, and/or distant metastases</td>
</tr>
<tr>
<td>IVA*</td>
<td>Tumor invasion of bladder and/or bowel mucosa</td>
</tr>
<tr>
<td>IVB*</td>
<td>Distant metastases, including intra-abdominal metastases and/or inguinal lymph nodes</td>
</tr>
</tbody>
</table>

*Either G1, G2, or G3.*

**Endocervical glandular involvement only should be considered as Stage I and no longer as Stage II.**

#Positive cytology has to be reported separately without changing the stage.
Presentation Plan

- Risk groups
- Surgical Modality
  - Conventional vs. minimally invasive
  - Stage II: Radical Hysterectomy vs. Simple Hysterectomy
- Oophorectomy
- Omentectomy
- Lymphadenectomy
- Fertility sparing management
<table>
<thead>
<tr>
<th>Risk group</th>
<th>Description</th>
<th>LOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Stage I endometrioid, grade 1–2, &lt;50% myometrial invasion, LVSI negative</td>
<td>I</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Stage I endometrioid, grade 1–2, ≥50% myometrial invasion, LVSI negative</td>
<td>I</td>
</tr>
<tr>
<td>High-intermediate</td>
<td>Stage I endometrioid, grade 3, &lt;50% myometrial invasion, regardless of LVSI status</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Stage I endometrioid, 1–2, LVSI unequivocally positive, regardless of depth of invasion</td>
<td>II</td>
</tr>
<tr>
<td>High</td>
<td>Stage I endometrioid, grade 3, ≥50% myometrial invasion, regardless of LVSI status</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Stage II</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Stage III endometrioid, no residual disease</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>Non endometrioid (serous or clear cell or undifferentiated carcinoma, or carcinosarcoma)</td>
<td>I</td>
</tr>
</tbody>
</table>
Surgical Modality
Conventional vs. Minimally Invasive

• Stage I-IIA
• L/S: 1696 patients vs. L/T: 920 patients
• Conversion to laparotomy: 25.8%
• The rate of lymphadenectomy performance was lower in the L/S group
• Postoperative complications and length of hospital stay was less in the L/S group
Recurrence and Survival After Random Assignment to Laparoscopy Versus Laparotomy for Comprehensive Surgical Staging of Uterine Cancer: Gynecologic Oncology Group LAP2 Study


- Follow-up: 59 months
- Non-inferiority (no more than a 40% increase in the risk of recurrence with laparoscopy compared with laparotomy)
- HR for RFS with laparoscopy versus laparotomy was 1.14 (90% CI 0.92 - 1.46)

![Graph showing overall survival by randomly assigned treatment group.](image-url)
• Meta-analysis of 4 RCTs

• OS-DFS-Cancer related death: No significant difference

• Number of LNs retrieved and intra-operative complication rate: No significant difference

• L/S
  – Duration of operation: longer
  – Intra-operative hemorrhage: less
  – Post-operative complications: less
Laparoscopy versus laparotomy for the management of early stage endometrial cancer.

Galaal K¹, Bryant A, Fisher AD, Al-Khaduri M, Kew F, Lopes AD.

- Cochrane Database Systematic Review
- 8 RCTs
- 3644 patients
- No significant difference in terms of DFS and OS.
Retrospective, multicenter study

383 patients
  - 191 L/T
  - 192 MIS (%65 robotic, %35 laparoscopic)

MIS: Number of LNs retrieved: MORE (38 vs 34, p=0.03)

Median follow-up: 44 months

No significant difference in terms of PFS and OS.

Length of hospital stay and complication rate were less in the MIS group
Comparative safety and effectiveness of robot-assisted laparoscopic hysterectomy versus conventional laparoscopy and laparotomy for endometrial cancer: A systematic review and meta-analysis.

- A meta-analysis of 24 studies: Robot-assisted laparoscopic hysterectomy vs. Conventional laparoscopy and Open Hysterectomy
- No significant difference in terms of DFS and OS
- Robot-assisted laparoscopic hysterectomy was better in terms of
  - Blood loss,
  - Length of hospital stay, and
  - Complication rate
Stage II: Radical Hysterectomy vs. Simple Hysterectomy

The long-term survival of women with surgical stage II endometrioid type endometrial cancer

Ali Ayhan,* Cagatay Taskiran, Cetin Celik, and Kunter Yuce

Department of Obstetrics and Gynecology, Hacettepe University Hospitals, Yukarayranc, Ankara, Turkey

Received 7 August 2002

• 48 patients
  – 21 women underwent RH (no adjuvant radiotherapy)
  – 27 women underwent simple hysterectomy followed by adjuvant radiotherapy

• Median follow-up: 60 months

• RH: 5y-DFS: 85%; 5y-OS: 90%

• SH: 5y-DFS: 81%; 5y-OS: 83%

• No significant difference
Surgery for endometrial cancers with suspected cervical involvement: is radical hysterectomy needed (a GOTIC study)?

- 300 women: 74 RH, 112 modified-RH, 114 SH
- Median follow-up: 47 months
- Factors associated with OS (multivariable analysis)
  - Age, tumor grade, peritoneal cytology, LN involvement
- Operation type was associated neither with DFS nor OS
- Duration of operation, blood transfusion and urinary system dysfunction: more in the RH group
ESMO–ESGO–ESTRO consensus conference on endometrial cancer: Diagnosis, treatment and follow-up

Nicoletta Colombo a,*, Carien Creutzberg b, Frederic Amant c, Tjalling Bosse e, Antonio González-Martín f,g, Jonathan Ledermann h, Christian Marth i, Remi Nout j, Denis Querleu k,l, Mansoor Raza Mirza m, Cristiana Sessa n, The ESMO–ESGO–ESTRO Endometrial Consensus Conference Working Group 1

a Division of Medical Gynecologic Oncology, European Institute of Oncology and University of Milan-Bicocca, Milan, Italy; b Department of Radiation Oncology, Leiden University Medical Center, Leiden, The Netherlands; c Department of Gynecological Oncology, University Hospital Leuven, Leuven, Belgium; d Center for Gynecological Oncology Amsterdam (CGOA), Antoni van Leeuwenhoek, Amsterdam, The Netherlands; e Department of Pathology, Leiden University Medical Center, Leiden, The Netherlands; f Medical Oncology Department, GEICO, Madrid, Spain; g MD Anderson Cancer Center, Madrid, Spain; h Department of Oncology and Cancer Trials, UCL Cancer Institute, London, United Kingdom; i Department of Obstetrics and Gynecology, Innsbruck Medical University, Innsbruck, Austria; j Department of Radiotherapy, Leiden University Medical Center, Leiden, The Netherlands; k Department of Surgery, Institut Bergonié, Bordeaux, France; l Gynecology and Obstetrics Department, McGill University Health Centre, Montreal, Canada; m Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; and n Department of Medical Oncology, Oncology Institute of Southern Switzerland, Ospedale San Giovanni, Bellinzona, Switzerland

**Recommendation 6.1:** Radical hysterectomy is not recommended for the management of stage II endometrial cancer

**Level of evidence:** IV

**Strength of recommendation:** B

**Consensus:** 91.9% (34) yes, 8.1% (3) abstain (37 voters)
Oophorectomy in Early-stage EC

Safety of ovarian preservation in young patients with early-stage endometrial cancer: a retrospective study and meta-analysis

- Age <45
- 203 women: 169 BSO, 14 USO, 20 both ovaries preserved
- Risk factors for ovarian involvement: Gross extra-uterine disease
- No significant difference in terms of OS between the groups
Survival Impact of Ovarian Preservation on Women With Early-Stage Endometrial Cancer

A Systematic Review and Meta-analysis

- 7 retrospective cohort studies
- Ovarian preservation: 1419 women
- BSO: 15826 women
- Stage I-II disease
<table>
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<tr>
<th>Author, Year</th>
<th>Country</th>
<th>Data Source</th>
<th>Study Type</th>
<th>Period</th>
<th>No. (OP/BSO)</th>
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<td>Wright et al, 2016</td>
<td>United States</td>
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<td>Cancer Hospital of CAMS</td>
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<td>20/55</td>
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<td>70%</td>
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<td>5%</td>
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<td>I</td>
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<td>Endo 100%</td>
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<tr>
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<td>95%</td>
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<td>64%</td>
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<td></td>
<td>2</td>
<td>18%</td>
<td>20%</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>18%</td>
<td></td>
<td>3</td>
<td>18%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>100%</td>
<td>100%</td>
<td>Endo 87%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>480*</td>
</tr>
</tbody>
</table>

*Note: DFS = Disease-Free Survival, OS = Overall Survival
FIGURE 2. Comparison of OS between ovarian preservation and BSO group in EC patients: (A) all patients and (B) young and premenopausal patients.
Ovarian preservation improves overall survival in young patients with early-stage endometrial cancer

Peng Jia¹ and Yan Zhang¹

- 10 retrospective studies
ESMO–ESGO–ESTRO consensus conference on endometrial cancer:
Diagnosis, treatment and follow-up

Nicoletta Colombo a,*, Carien Creutzberg b, Frederic Amant c,d, Tjalling Bosse e, Antonio González-Martín f,g, Jonathan Ledermann h, Christian Marth i, Remi Nout j, Denis Querleu k,l, Mansoor Raza Mirza m, Cristiana Sessa n, The ESMO–ESGO–ESTRO Endometrial Consensus Conference Working Group

Recommendation 4.7: Ovarian preservation can be considered in patients younger than 45 years old with grade 1 EEC with myometrial invasion <50% and no obvious ovarian or other extrauterine disease
Level of evidence: IV
Strength of recommendation: B
Consensus: 100% yes (37 voters)

Recommendation 4.8: In cases of ovarian preservation, salpingectomy is recommended
Level of evidence: IV
Strength of recommendation: B
Consensus: 100% yes (37 voters)

Recommendation 4.9: Ovarian preservation is not recommended for patients with cancer family history involving ovarian cancer risk (e.g. BRCA mutation, LS, etc.). Genetic counselling/testing should be offered
Level of evidence: IV
Strength of recommendation: B
Consensus: 100% yes (37 voters)
Omentectomy

Is Omentectomy Necessary for Non-Endometrioid Endometrial Cancer.
Kaban A¹, Topuz S, Erdem B, Sozen H, Numanoğlu C, Salihoğlu Y.

Role of omentectomy and appendectomy in advanced endometrial cancers:
Ozdal B¹, Unlu BS, Yalcin HR, Tapisiz OL, Energin H, Beal M.

Should omentectomy be a part of surgery on the uterine corpus?
Ulker V¹, Tunca A, Numanoğlu C, Akbayir O, Akyol A, Erım A, G.

Omentectomy, peritoneal biopsy and appendectomy in patients with clinical stage I endometrial carcinoma.
Saygılı U¹, Kavaz S, Altunyurt S, Uslu T, Koyuncuoglu M, Erten O.

The role of omentectomy and appendectomy during the surgical staging of clinical stage I endometrial cancer.

Department of Obstetrics and Gynecology, Mersin University, Pathology, Gulhane Military School of Medicine.

DOI 10.1245/s10434-001-0100-5.
Omentectomy

• Overall omental involvement in endometrioid endometrial cancer: 0.5-3.4%
  • G3, >50% myometrial invasion: 37.5%

• There is no need to perform omentectomy or omental biopsy in early-stage endometrioid endometrial cancer
ESMO–ESGO–ESTRO consensus conference on endometrial cancer: Diagnosis, treatment and follow-up

Nicoletta Colombo a,*, Carien Creutzberg b, Frederic Amant c,d, Tjalling Bosse e, Antonio González-Martín f,g, Jonathan Ledermann h, Christian Marth i, Remi Nout j, Denis Querleu k,l, Mansoor Raza Mirza m, Cristiana Sessa n, The ESMO–ESGO–ESTRO Endometrial Consensus Conference Working Group 1

**Recommendation 6.7:** Staging omentectomy is not mandatory in clear cell or undifferentiated endometrial carcinoma and carcinosarcoma

- Level of evidence: IV
- Strength of recommendation: C
- Consensus: 100% yes (37 voters)

**Recommendation 6.8:** Staging omentectomy should be considered in serous carcinoma

- Level of evidence: IV
- Strength of recommendation: C
- Consensus: 94.6% (35) yes, 5.4% (2) abstain (37 voters)
Lymphadenectomy

- Systematic
  - Staging
    - Determination of prognosis
    - Tailoring adjuvant treatment
  - Survival benefit: ???
Lymphadenectomy in Endometrioid Uterine Cancer Staging
How Many Lymph Nodes Are Enough? A Study of 11,443 Patients
CANCER June 15, 2007 / Volume 109 / Number 12

• 11,443 women

• Stage I: 78.7%, Stage II: 10.3%, Stage III: 11.0%

• Grade 1: 31.5%, grade 2: 40.6%, grade 3: 24.3%

• For a 45% increase in the detection of one positive LN
  • Number of LNs resected: 21 → 25 (OR 1.45 [%95 CI: 1.08-1.94], p <0.01)

• No benefit in terms of 5-year DSS in low-risk group (all grades in women with no myometrial invasion, grade 1 or 2 with <50% myometrial invasion)

• 5-year DSS in intermediate and high-risk group:
  » LN #1: 75.3%
  » LN #6-10: 84.1%
  » LN #>20: 86.8% (p<0.001)
Systematic Pelvic Lymphadenectomy vs No Lymphadenectomy in Early-Stage Endometrial Carcinoma: Randomized Clinical Trial

Pierluigi Benedetti Panici, Stefano Basile, Francesco Maneschi, Andrea Alberto Lissoni, Mauro Signorelli, Giovanni Scambia, Roberto Angioli, Saverio Tateo, Giorgia Mangili, Dionyssios Katsaros, Gaetano Garozzo, Elio Campagnutta, Nicoletta Donadello, Stefano Greggi, Mauro Melpignano, Francesco Raspagliesi, Nicola Ragni, Gennaro Cormio, Roberto Grassi, Massimo Franchi, Diana Giannarelli, Roldano Fossati, Valter Torri, Mariangela Amoroso, Clara Crocè, Costantino Mangioni

• 514 patients: 264 LND vs 250 no LND (only bulky LNs)
• Endometrioid, adenosquamous histology; Clinical stage I
• Median follow-up: 49 months
1408 patients clinically confined to the uterus
704 LND vs 704 no LND

Interpretation Our results show no evidence of benefit in terms of overall or recurrence-free survival for pelvic lymphadenectomy in women with early endometrial cancer. Pelvic lymphadenectomy cannot be recommended as routine procedure for therapeutic purposes outside of clinical trials.
Criticisms

– Patients found to have suspicious LNs via CT or MRI in pre-operative evaluation were randomized
– No standard approach
– Pelvik LND: systematic? / sampling? Not clear
– PA LND at the discretion of the attending surgeon...
• Two randomized trials showed no difference in OS and RFS among low-risk EC patients who underwent LND and those who did not.  

Benedetti Panici P. J Natl Cancer Inst 2008; 100: 1707-16  

• However, these trials have been criticized because LND was not sufficiently thorough and adjuvant therapy was not standardized nor based on LN involvement.  

Creasman WT. Gynecol Oncol 2010; 116: 293-4.
MAYO CLINIC
Hysterectomy-Frozen Section

• Primary tumor diameter
• FIGO Grade
• Histologic subtype
• Myometrial invasion
• Gross extra-uterine disease
• Approximately 75% of patients with EC require lymph node (LN) assessment using the Mayo Clinic algorithm although the rate of LN involvement is approximately 15% in endometrioid EC.

• Approximately two thirds of patients managed intraoperatively according to the Mayo criteria were exposed to unnecessary LND.

Karalok A. Int J Gynecol Cancer 2017; 27: 748-753.
• The low-risk group should be expanded to include
  – grade 1 endometrioid tumors with <50% MMI regardless of PTD,
  – grade 2 tumors with tumor size<3 cm, and
  – grade 3 tumors with no MMI.

  Vargas R. Gynecol Oncol 2014;133: 216-20

• Lymphadenectomy may be omitted in women with FIGO grade 1 endometrioid EC having <50% MMI, regardless of PTD.

  Oz M. Int J Gynecol Cancer 2017; 27:1393-98
Authors' conclusions

This review found no evidence that lymphadenectomy decreases risk of death or disease recurrence compared with no lymphadenectomy in women with presumed stage I disease. Evidence on serious adverse events suggests that women who undergo lymphadenectomy are more likely to experience surgery-related systemic morbidity or lymphoedema/lymphocyst formation. Currently, no RCT evidence shows the impact of lymphadenectomy in women with higher-stage disease and in those at high risk of disease recurrence.
ESMO-ESGO-ESTRO consensus conference on endometrial cancer: Diagnosis, treatment and follow-up

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a Division of Medical Gynecologic Oncology, European Institute of Oncology and University of Milan-Bicocca, Milan, Italy; b Department of Radiation Oncology, Leiden University Medical Center, Leiden, The Netherlands; c Department of Gynecological Oncology, University Hospital Leuven, Leuven, Belgium; d Center for Gynecological Oncology Amsterdam (CGOA), Antoni van Leeuwenhoek, Amsterdam, The Netherlands; e Department of Pathology, Leiden University Medical Center, Leiden, The Netherlands; f Medical Oncology Department, GEICO, Madrid, Spain; g MD Anderson Cancer Center, Madrid, Spain; h Department of Oncology and Cancer Trials, UCL Cancer Institute, London, United Kingdom; i Department of Obstetrics and Gynecology, Innsbruck Medical University, Innsbruck, Austria; j Department of Radiotherapy, Leiden University Medical Center, Leiden, The Netherlands; k Department of Surgery, Institut Bergonié, Bordeaux, France; l Gynecology and Obstetrics Department, McGill University Health Centre, Montreal, Canada; m Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; and n Department of Medical Oncology, Oncology Institute of Southern Switzerland, Ospedale San Giovanni, Bellinzona, Switzerland

**Recommendation 5.5.** Patients with low-risk endometrioid carcinoma (grade 1 or 2 and superficial myometrial invasion <50%) have a low risk of lymph node involvement, and two RCTs did not show a survival benefit. Therefore, lymphadenectomy is not recommended for these patients

- Level of evidence: II
- Strength of recommendation: A
- Consensus: 100% yes (37 voters)

**Recommendation 5.6.** For patients with intermediate risk (deep myometrial invasion >50% or grade 3 superficial myometrial invasion <50%), data have not shown a survival benefit. Lymphadenectomy can be considered for staging purposes in these patients

- Level of evidence: II
- Strength of recommendation: C
- Consensus: 100% yes (37 voters)

**Recommendation 5.7.** For patients with high risk (grade 3 with deep myometrial invasion > 50%), lymphadenectomy should be recommended

- Level of evidence: IV
- Strength of recommendation: B
- Consensus: 73.0% (27) yes, 8.1% (3) abstain, 18.9% (7) no (37 voters)
Fertility-sparing Management

• Confined to endometrium (MRI), No myometrial invasion
• Endometrioid type
• Grade 1
• Fertility potential (+)
• Response to gestagen treatment must be evaluated
Vanishing endometrial carcinoma in hysterectomy specimens: probable implications for fertility sparing management

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Background/aim: The vanishing cancer phenomenon was first reported in radical prostatectomy specimens in the absence of neoadjuvant treatment. Reported cases are mostly well-differentiated and low-volume tumors. A similar entity was described for hysterectomy specimens of patients with biopsy proven endometrial cancer (EC). In this study, we discuss the probable reasons for vanishing EC and long-term follow-up results of EC patients without residual tumors in hysterectomy specimens.

Materials and methods: This study was carried out at two institutions in Ankara, Turkey, in a retrospective design. The computerized databases of both institutions were searched for endometrioid type EC patients whose final pathological specimens failed to show any residual tumor.

Results: We evaluated 38 endometrial biopsy confirmed EC patients with no residual tumor detected in the hysterectomy specimens among a total of 224 women (17%) with the disease confined to the endometrium. During the follow-up period, no recurrences were noted among the patients.

Conclusion: It can be suggested that premenopausal women with FIGO grade 1 endometrioid type EC with MRI proven “absent myometrial invasion” would have a significant probability of having no residual tumor after endometrial biopsy without any further medical treatment.

Key words: Endometrial cancer, fertility sparing, vanishing cancer, residual tumor, endometrioid type
Conclusions - 1

• Surgical modality
  • Conventional vs. minimally invasive: no significant difference in terms of oncologic outcome
  • Stage II: RH vs. SH

• Ovarian preservation
  – age<45, stageIa, low-grade, endometrioid

• Omentectomy or omental biopsy
  – No need in early-stage endometrioid EC
Conclusions- 2

- Endometrioid hystology, G1-2, myometrial invasion <1/2, PTD < 2cm, no need to perform LND (in centers with a high accuracy rate of IFS analysis)
- The low-risk group may be expanded to include
  - grade 1 endometrioid tumors with <50% MMI regardless of PTD
  - grade 2 tumors with tumor size <3 cm
  - grade 3 tumors with no MMI
TURKISH STUDIES ASSOCIATED WITH EARLY-STAGE ENDOMETRIOID EC (2017-2018)
Is Tumor Size Really Important for Prediction of Lymphatic Dissemination in Grade 1 Endometrial Carcinoma With Superficial Myometrial Invasion?

Murat Oz, MD, Vakkas Korkmaz, MD, Mehmet Mutlu Meydanli, MD, Mustafa Erkan Sari, MD, Zeliha Fırat Cuylan, MD, and Tayfun Gungor, MD
• This study only focused on women with FIGO grade 1 EEC having ≤50 % MMI

• **123 women in Group 1 (PTD ≤ 20 mm),** and **120 women in Group 2 (PTD > 20 mm).**

• The median number of total lymph nodes removed was 54 (range: 20-151) for the entire study population.

• The median number of removed pelvic and para-aortic LNs were 36 (range: 12-110) and 14 (range: 5-55), respectively.
• LN metastasis was not detected in any case, including women with a PTD > 20 mm.

• Our results indicate that women with FIGO grade 1 EEC having ≤ 50 % MMI do not seem to have LN metastases regardless of PTD in a series of 243 women.

• 120 women with the same low-risk features had no nodal involvement even though they had a PTD > 20 mm.

• Of those, 62 patients had a PTD > 30 mm whereas 26 women had a PTD > 40 mm.
Women with FIGO grade 1 EEC having ≤ 50% MMI and a PTD > 2 cm represent 25-27 % of those women fulfilling the Mayo criteria for whom systematic LND is indicated.

Systematic LND does not seem to be necessary in this subgroup of patients with reported LN involvement rates to be 1.46- 1.62 %

We found out this rate as 0% at our institution in a series of 120 women.
• Our results suggest that **lymphadenectomy may be omitted in women with FIGO grade 1 EEC having ≤ 50 % MMI regardless of PTD.**

• Deferral of systematic LND in this subgroup of patients may lead to reductions in costs and surgical morbidity.
Comparison of three different risk-stratification models for predicting lymph node involvement in endometrioid endometrial cancer clinically confined to the uterus


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• The study population included women with endometrioid type EC clinically confined to the uterus who underwent comprehensive surgical staging according to the current Mayo criteria depending on intraoperative frozen section analysis.

• We excluded patients with less than 15 LNs in the final pathology report.
• **625 women** of surgically-staged endometrioid type EC were identified according to the inclusion criteria.

• According to **GOG-99 criteria**, 451 women were classified as low-risk whereas 174 were categorized as high-risk.

• **LN positivity** was correctly estimated in 51 of 70 LN-positive patients according to the GOG-99 criteria (**Sensitivity 72.9 %, Specificity 77.8 %, NPV %95.8, PPV %29.3**).
• When women were classified as low-risk (n=361) and high-risk (n=264) according to the ESMO-modified criteria

• 64 of 70 LN-positive patients were found to be in the high-risk group (Sensitivity 91.4 %, Specificity 63.9 %, NPV %98.3, PPV 24.2%).
• The Mayo-modified criteria identified 266 women as low-risk and 359 women as high-risk.

• All of the 70 LN-positive patients were found to be classified in the high-risk group when the Mayo-modified criteria were used (Sensitivity 100%, Specificity 47.9%, NPV 100%, PPV 19.5%).
Diagonal segments are produced by ties.
• When the ROC analysis of the Mayo-modified, the GOG-99 and the ESMO-modified criteria was performed in order to predict LN metastasis, the area under curve was 0.740, 0.753 and 0.780, respectively (p<0.001).

• The ESMO-modified criteria predicted LN involvement better than the GOG-99 and the Mayo-modified criteria based on the ROC analysis.
Comparing prediction models for lymph node metastasis risk in endometrial cancer: the winner may not take it all

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See the article “Comparison of three different risk-stratification models for predicting lymph node involvement in endometrioid endometrial cancer clinically confined to the uterus” in volume 28, e78.

In the current issue of *Journal of Gynecologic Oncology*, Korkmaz and his/her colleagues [1] analyzed 3 risk-stratification models or guidelines for predicting lymph node involvement
Risk Factors for Recurrence in Low-Risk Endometrial Cancer: A Case-Control Study

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• Data from 10 gynecologic oncology departments, in Turkey

• Study Group (n=56)
  – Women with recurrent disease
    • Endometrioid histology
    • Myometrial invasion < 50%
    • Grade 1 or 2
    • At least pelvic LND performed and no obvious evidence of extrauterine disease intra-operatively

• Control Group (n=224)
  – Women with no recurrence
    – The same criteria
In women with low-risk endometrial cancer

- **Presence of LVSI** (OR 5.8, 95% CI: 2.0-16.9, p=0.001)
- **PTD≥ 20 mm** (OR 6.6, 95% CI: 2.7-15.8, p<0.001)

seem to be independent risk factors for recurrence.
Factors associated with survival after relapse in patients with low-risk endometrial cancer treated with surgery alone

Our objective was to determine factors influencing overall survival following recurrence (OSFR) in women with low-risk endometrial cancer (EC) treated with surgery alone.

A multicenter, retrospective department database review

10 gynecologic oncology centers in Turkey.

We identified 67 patients who developed recurrence of their EC after initially being diagnosed and treated for low-risk EC.

For the entire study cohort, the median time to recurrence (TTR) was 23 months and the median OSFR was 59 months.
• 32 (47.8%) isolated vaginal recurrences,
• 6 (9%) nodal failures,
• 19 (28.4%) peritoneal failures,
• 10 (14.9%) hematogenous disseminations.
• According to the Gynecologic Oncology Group Trial-99, 7 (10.4%) out of 67 women with recurrent low-risk EC were qualified as high-intermediate risk (HIR).
• The 5-year OSFR rate was significantly higher for patients with TTR≥36 months compared to those with TTR<36 months (74.3% compared to 33%, p=0.001).
• On multivariate analysis for OSFR,
  – **TTR<36 months** (hazard ratio [HR] 8.46, 95% CI, 1.65-43.36, p=0.01)
  – **Presence of HIR criteria** (HR 4.62, 95% CI, 1.69-12.58, p=0.003)

  were significant predictors.

• Low-risk EC patients recurring earlier than 36 months and those carrying HIR criteria seem more likely to die of their tumors after recurrence.
• THE PROGNOSTIC SIGNIFICANCE OF LYMPHOVASCULAR SPACE INVASION IN LOW-RISK ENDOMETRIAL CANCER

Ali AYHAN, Hanifi ŞAHİN, Mustafa Erkan SARI, İbrahim YALÇIN, Ali HABERAL, Mehmet Mutlu MEYDANLI

• Accepted for publication, International Journal of Gynecological Cancer, in press.
A dual-institutional, retrospective department database review was performed to identify patients with “low-risk EC” (patients having less than 50% myometrial invasion [MMI] with grade 1 or 2 endometrioid EC according to their final pathology reports) at two gynecologic oncology centers in Ankara, Turkey.
THE PROGNOSTIC SIGNIFICANCE OF LYMPHOVASCULAR SPACE INVASION IN LOW-RISK ENDOMETRIAL CANCER

- We identified 912 women with low-risk EC.
- 53 patients (5.8%) had LVSI.
- When compared to LVSI-negative patients, LVSI-positive patients were more likely to have post-operative grade 2 disease (p<0.001), deeper MMI (p=0.003), and larger tumor size (p=0.005).
- Patients with LVSI were more likely to receive adjuvant therapy when compared to LVSI-negative women (11/53 vs. 12/859, respectively; p<0.001).
• The 5-year PFS rate for LVSI-positive women was 85.5% compared to 97.0% for LVSI-negative women (p<0.001).

• The 5-year OS rate for LVSI-negative women was significantly greater than that of LVSI-positive women (98.5 % vs. 88.2 %, respectively; p<0.001).
THE PROGNOSTIC SIGNIFICANCE OF LYMPHOVASCULAR SPACE INVASION IN LOW-RISK ENDOMETRIAL CANCER

• Independent prognostic factors for decreased OS
  – **Age ≥ 60 years** (HR 3.13, 95% CI 1.13-8.63; p=0.02),
  – **positive LVSI status** (HR 6.68, 95% CI 1.60-27.88; p=0.009)

• Low-risk EC patients with LVSI and those ≥ 60 years seem more likely to die of their tumors.
Thank you for your attention