Endometrial Cancer

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.

NOTE: If available, clinical trials should be considered as preferred treatment options for eligible patients (www.mdanderson.org/gynonc trials). Other co-morbidities are taken into consideration prior to treatment selection.

INITIAL EVALUATION

- History and Physical
- Chest x-ray
- Pathology review
- Nutrition consult
- Labs
- Consider CA125, and pre-operative imaging of abdomen and pelvis
- Screen for Lynch Syndrome by family history or molecular testing

CLINICAL PRESENTATION

- Disease confined to uterus

- Hysterectomy\(^2\), BSO and consider intraoperative frozen section and/or sentinel lymph node mapping

- Stage II gross cervical involvement

- Radical hysterectomy\(^2\), BSO, pelvic and para-aortic node sampling and/or sentinel lymph node mapping (omentalis biopsy for non-endometroid cell type)

- Disease not confined to uterus

- Consider surgical debulking

PRIMARY TREATMENT

- Grade 1-2, less than or equal to 50% invasion and tumor diameter less than or equal to 2 cm
  - Grade 1-2, greater than 50% invasion or
  - Tumor diameter greater than 2 cm with any invasion or
  - Grade 3 and non-endometroid cell type (papillary serous, clear cell, carcinosarcoma)

- 45 Gy pelvic radiation therapy plus reduced dose of brachytherapy

- Hysterectomy\(^2\) and BSO with para-aortic node sampling (omentalis biopsy for non-endometroid cell type)

- Conclude procedure with/without lymph node dissection

- Full staging with pelvic and para-aortic node sampling (omentalis biopsy for non-endometroid cell type)

- See Pages 2-3 for Endometroid and Page 4 for Non-Endometroid Cell Type

BSO = Bilateral Salpingo-Oophorectomy

Please refer to American College of Obstetricians and Gynecologists (ACOG) Guidelines for referral.

\(^1\) See MD Anderson Approved Biomarkers https://www.mdanderson.org/content/dam/mdanderson/documents/for-physicians/ algorithms/clinical-management/clin-management-biomarkers-web-algorithm.pdf

\(^2\) Hysterectomy may be performed through open or minimally invasive techniques based on surgeon/patient discretion
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**Endometrial Cancer (Endometroid Cell Type)**

**Stage 1 Adjuvant Therapy**

1. See Appendix A for FIGO Staging
2. Potential adverse risk factors include the following: age, positive lymphovascular invasion, tumor size, and lower uterine (cervical/glandular) involvement.

### Stage 1A (less than 50% myometrial invasion)

- **Adverse risk-factors present?**
  - Yes
    - Grade 1: Observe or vaginal brachytherapy
    - Grade 2: Observe or vaginal brachytherapy and/or pelvic RT
    - Grade 3: Vaginal brachytherapy and/or pelvic RT
  - No
    - Grade 1: Observe or vaginal brachytherapy
    - Grade 2: Observe or vaginal brachytherapy and/or pelvic RT
    - Grade 3: Vaginal brachytherapy and/or pelvic RT

### Stage 1B (greater than or equal to 50% myometrial invasion)

- **Adverse risk-factors present?**
  - Yes
    - Grade 1: Observe or vaginal brachytherapy
    - Grade 2: Pelvic RT with or without chemotherapy or vaginal brachytherapy plus chemotherapy
    - Grade 3: Vaginal brachytherapy
  - No
    - Grade 1: Vaginal brachytherapy
    - Grade 2: Vaginal brachytherapy
    - Grade 3: Vaginal brachytherapy and/or pelvic RT

### Stage II

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaginal brachytherapy and/or pelvic RT</td>
<td>Pelvic RT with vaginal brachytherapy</td>
<td>Pelvic RT with vaginal brachytherapy with or without chemotherapy</td>
</tr>
</tbody>
</table>

RT = radiation therapy

1. Preferred
2. Depends on depth of invasion in uterus and cervical stroma plus other risk factors
3. This does not influence the choice of adjuvant treatment

Department of Clinical Effectiveness
Approved by the Executive Committee of the Medical Staff on 01/31/2017
Endometrial Cancer (Endometroid Cell Type)

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STAGE 1

ADJUVANT THERAPY

Stage IIIA with serosal involvement
- 45 Gy pelvic radiation therapy and vaginal brachytherapy with or without concurrent chemotherapy or adjuvant chemotherapy

Stage IIIA with adnexal involvement
- Adjuvant chemotherapy, consider vaginal brachytherapy, or external beam radiation therapy.

Stage IIIB, Stage IIIC1
- 45 Gy pelvic radiation therapy and vaginal brachytherapy with or without concurrent chemotherapy followed by adjuvant chemotherapy
- Higher dose than 45 Gy needs to be given for sites of ECE, and for any other residual suspicious nodes seen on post-op CT.

Stage IIIC2
- Extended-field radiation therapy and vaginal brachytherapy, with or without concurrent chemotherapy followed by adjuvant chemotherapy

Stage IV
- Chemotherapy

ECE = extra-capsular (nodal) extension
1 See Appendix A for FIGO Staging
2 See Appendix B for Chemotherapy Regimens

See surveillance on Page 5
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### Endometrial Cancer (Serous Cell Type)

#### STAGE 1

**Stage IA**
- (no invasion or superficial invasion)
- Vaginal brachytherapy followed by adjuvant chemotherapy

**Stage IB**
- Vaginal brachytherapy or pelvic RT with or without concurrent chemotherapy followed by adjuvant chemotherapy

**Stage II**
- Pelvic RT or vaginal brachytherapy with or without concurrent chemotherapy followed by adjuvant chemotherapy

**Stage IIIA**
- Vaginal brachytherapy with or without concurrent chemotherapy followed by adjuvant chemotherapy

**Stage IIIB**
- Pelvic RT or vaginal brachytherapy with or without concurrent chemotherapy followed by adjuvant chemotherapy

**Stage IIIC**
- Disease present in ovaries?
  - Yes: Chemotherapy
  - No: Pelvic RT or vaginal brachytherapy with or without concurrent chemotherapy followed by adjuvant chemotherapy

**Stage VI**
- Chemotherapy

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1 See Appendix A for FIGO Staging
2 Preferred
3 See Appendix B for Chemotherapy Regimens
4 Consider concurrent paclitaxel for disease confined to the pelvis

See surveillance on Page 5
**Endometrial Cancer**

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**SURVEILLANCE**

After completion of treatment

- Visits every 3-6 months for Years 1 and 2, then every 6 months for 3 to 5 years
- Physical and pelvic exam every visit
- CA125 (if initially elevated) every visit
- Imaging as clinically indicated

**Systemic recurrence?**

Yes → **Chemotherapy**

No – isolated recurrence

Consider radiation therapy and/or resection with or without chemotherapy

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1 See Appendix B for Systemic Therapy

Please refer to American College of Obstetricians and Gynecologists (ACOG) Guidelines for referral.
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**APPENDIX A: International Federation of Gynecology and Obstetrics (FIGO) Staging**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
</table>
| I¹    | Tumor confined to the corpus uteri  
IA: No or less than half myometrial invasion  
IB: Invasion equal to or more than half of the myometrium |
| II¹   | Tumor invades cervical stroma, but does not extend beyond the uterus² |
| III¹  | Local and/or regional spread of the tumor  
IIIA: Tumor invades the serosa of the corpus uteri and/or adnexae³  
IIIB: Vaginal and/or parametrial involvement³  
IIIC: Metastases to pelvic and/or para-aortic lymph nodes³  
IIIC1: Positive pelvic nodes  
IIIC2: Positive para-aortic lymph nodes with or without positive pelvic lymph nodes |
| IV¹   | Tumor invades bladder and/or bowel mucosa, and/or distant metastases  
IVA: Tumor invasion of bladder and/or bowel mucosa  
IVB: Distant metastases, including intra-abdominal metastases and/or inguinal lymph nodes |

¹ Either G1, G2, or G3  
² Endocervical glandular involvement only should be considered as Stage I and no longer as Stage II  
³ Positive cytology has to be reported separately without changing the stage

**APPENDIX B: Systemic Therapy**

<table>
<thead>
<tr>
<th>Multi-agent Chemotherapy</th>
<th>Single Agents</th>
</tr>
</thead>
</table>
| Paclitaxel and carboplatin | Cisplatin  
Carboplatin  
Doxorubicin  
Liposomal doxorubicin  
Paclitaxel  
Hormonal agents |
| Docetaxel and carboplatin | Topotecan  
Bevacizumab  
Temsirrolmus |
| Ifosfamide and paclitaxel (carcinosarcoma) | Docetaxel |
| Cisplatin and ifosfamide (carcinosarcoma) | Ifosfamide ( carcinosarcoma) |
SUGGESTED READINGS


This practice consensus algorithm is based on majority expert opinion of the Endometrial cancer faculty at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following medical, radiation and surgical oncologists.

Michael W. Bevers, MD
Diane C. Bodurka, MD
Jubilee Brown, MD
Thomas W. Burke, MD
Jennifer K. Burzawa, MD
Robert L. Coleman, MD
†Patricia Eifel, MD
†Nicole Fleming, MD
Michael M. Frumovitz, MD
David M. Gershenson, MD
Shonice Holdman, BA*
†Anuja Jhingran, MD

† Ann Klopp, MD
Charles F. Levenback, MD
Clemente Logriono Jr., BSN, RN-BC*
Karen H. Lu, MD
Larissa Meyer, MD
Alpa M. Nick, MD
Pedro T. Ramirez, MD
Lois M. Ramondetta, MD
Kathleen M. Schmeler, MD
Pamela T. Soliman, MD
Anil K. Sood, MD
Shannon N. Westin, MD

† Core Development Team Lead
* Clinical Effectiveness Development Team