Epithelial Ovarian Cancer

Disclaimers:

1. If available, clinical trials should be considered as preferred treatment options for eligible patients (Gynecologic Oncology Clinical Trials). Other comorbidities are taken into consideration prior to treatment selection.

2. This algorithm should not be used to treat pregnant women.

3. See Appendix A: Systemic Therapy Regimens

4. See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

5. If Stage I and patient desires fertility preservation, consider unilateral salpingo-oophorectomy (USO) and staging


7. Refer to Reproductive Endocrinologists

8. See Gynecologic Oncology Clinical Trials

CLINICAL PRESENTATION

- Pelvic mass
- Ascites
- Abdominal distention
- Abdominal/pelvic pain
- Early satiety
- Urinary frequency

INITIAL EVALUATION

- Pelvic ultrasound
- CA 125
- Chest x-ray
- CT chest, abdomen, and pelvis with IV/PO contrast if concern for malignancy
- Other tumor markers if indicated
- Colonoscopy if indicated
- Family history with referral to genetic counseling and testing as indicated
- Lifestyle risk assessment

Consider laparoscopic assessment for disease resectability and biopsy to confirm diagnosis if carcinomatosis present by CT imaging and patient is medically stable for surgery

PRIMARY TREATMENT

- Hysterectomy/BSO with comprehensive staging or
- If Stage I, consider fertility sparing surgery (See Fertility Sparing Treatment algorithm) and Oncofertility consult
- If Stage II - IV, cytoreductive surgery

END OF PRIMARY TREATMENT EVALUATION

- CT chest, abdomen, and pelvis with IV/PO contrast
- CA 125
- Consider laparoscopy

Diagnosis by previous surgery or biopsy

- Chest x-ray
- CA 125
- CT chest, abdomen and pelvis with IV/PO contrast
- Genetic counseling and testing for high grade non-mucinous epithelial ovarian cancer, including primary peritoneal cancer and fallopian tube cancer

Inadequate surgery and/or staging?

- Yes
- No

Able to achieve optimal resection ≤ 1 cm?

- Yes
- No

Interval cytoreductive surgery

Response?

- Yes
- No

See Page 5 for relapsed/progression treatment

See Page 2 for treatment by stage

BSO = bilateral salpingo-oophorectomy

1. Consider MD Anderson approved biomarkers

2. See Genetic Counseling algorithm to assess criteria for referral

3. Consider both germline and somatic mutation testing (including HRD testing if BRCA germline or somatic mutation are negative). Consider testing at initial diagnosis or at the time of surgery.
Epithelial Ovarian Cancer

STAGE

- Low risk\(^1\)
  - Stage IA, IB

- High risk\(^2\)
  - Stage IC, II
    - Residual tumor ≤ 1 cm
    - Residual tumor ≥ 1 cm - Stage IVA or IVB

TREATMENT

- See Page 4 for Surveillance
- Taxane and platinum doublet\(^3\) for at least 6 cycles\(^4\)
- Reassessment
  - CA 125 or other tumor markers (e.g., CEA, CA19-9) if initially elevated
  - CT chest, abdomen, and pelvis with IV/PO contrast
- Taxane and platinum doublet\(^3\) with or without bevacizumab for at least 6 cycles

See maintenance on Page 3 and/or relapsed/progression treatment on Page 5

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1 Low risk - Grade 1 endometrioid or low grade serous histology
2 High risk - Grade 2 or 3 endometrioid, high grade serous, clear cell, or carcinosarcoma
3 See Appendix A: Systemic Therapy Regimens
4 Three cycles may be considered in patients with non-high grade serous histologies

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MAINTENANCE TREATMENT

Bevacizumab used during primary therapy?

Yes

BRCA 1/2 wild type and HRD negative or unknown

Germline or somatic BRCA 1/2 or HRD positive

Bevacizumab

• Bevacizumab plus olaparib or PARP-inhibitor alone (olaparib, niraparib)

No

BRCA 1/2 wild type and HRD negative or unknown

Germline or somatic BRCA 1/2 or HRD positive

• Surveillance or Consider clinical trial

PARP-inhibitor alone (olaparib, niraparib)

Stage III and IV Complete or Partial Remission

Note: If available, clinical trials should be considered as preferred treatment options for eligible patients (Gynecologic Oncology Clinical Trials). Other comorbidities are taken into consideration prior to treatment selection.

HRD = homologous recombination deficiency

1 See Appendix A: Systemic Therapy Regimens
2 See Gynecologic Oncology Clinical Trials
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SURVEILLANCE

Surveillance to include the following:
- Review of symptoms (pain, persistent headache, shortness of breath, bleeding, discharge, chronic cough, and change in bowel or bladder habits)
- Pelvic exam during clinic visits
- CA 125 or other tumor markers if initially elevated
- Pap test is not recommended
- Routine diagnostic imaging is not recommended

Recommended surveillance schedule:
- Year 1: Every 3 months
- Year 2: Every 3-4 months
- Year 3-5: Every 6 months
Epithelial Ovarian Cancer

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RELAPSED/PROGRESSION TREATMENT

- Progression or no response on primary chemotherapy\(^1\) or
- Relapse < 6 months after stopping platinum-based chemotherapy\(^1\) (taxane and platinum resistant)
- Relapse ≥ 6 months after stopping platinum-based chemotherapy\(^1\)

Serially rising CA 125

- Discuss Goal Concordant Care (GCC) with patient or if clinically indicated, with Surrogate Decision-Maker (SDM)\(^2\)
- Consider supportive care for selected patients
- Salvage chemotherapy/biotherapy\(^1\) with or without bevacizumab
- Hormonal therapy for patients with low-grade ovarian cancer
- Trimetinib for patients with low-grade ovarian cancer
- NGS, MSI by PCR, and HLA testing for primary tumor
- Clinical trial\(^3\)

Clinical or radiologic relapse

- Delay until clinical or radiologic relapse or treat as clinically indicated
- BRCA testing, if not already performed
- HRD tumor testing if germline BRCA testing negative
- NGS, MSI by PCR, and HLA testing for primary tumor
- Clinical trial\(^2\)
- Discuss Goal Concordant Care (GCC) with patient or if clinically indicated, with Surrogate Decision-Maker (SDM)\(^2\)
- Consider supportive care for selected patients

Consider cytoreductive surgery or radiation therapy in selected patients

- Platinum-based doublet with or without bevacizumab\(^1\) plus bevacizumab maintenance therapy or
- Platinum doublet followed by PARP inhibitor maintenance therapy\(^1\)
- BRCA testing, if not already performed
- HRD tumor testing if germline BRCA testing negative
- NGS, MSI by PCR, and HLA testing for primary tumor
- Clinical trial\(^3\)
- Discuss Goal Concordant Care (GCC) with patient or if clinically indicated, with Surrogate Decision-Maker (SDM)\(^2\)
- Consider supportive care for selected patients

HRD = homologous recombination deficiency
MSI = microsatellite instability
HLA = human leukocyte antigen

1 See Appendix A: Systemic Therapy Regimens
2 GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients or if clinically indicated the SDM should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion.
3 See Gynecologic Oncology Clinical Trials

Note: If available, clinical trials should be considered as preferred treatment options for eligible patients (Gynecologic Oncology Clinical Trials). Other comorbidities are taken into consideration prior to treatment selection.

1 See Appendix A: Systemic Therapy Regimens
2 GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients or if clinically indicated the SDM should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion.
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Department of Clinical Effectiveness V10
Approved by the Executive Committee of the Medical Staff on 03/21/2023
APPENDIX A: Systemic Therapy Regimens

**Adjuvant Therapy**
- Paclitaxel 135 mg/m² IV over 3 hours on Day 1 with cisplatin 75-100 mg/m² IP on Day 2 and paclitaxel 60 mg/m² IP on Day 8 every 3 weeks for 6 cycles
- Paclitaxel 175 mg/m² IV over 3 hours with carboplatin AUC 5-6 IV over 1 hour every 3 weeks for 6 cycles
- Docetaxel 75 mg/m² IV over 1 hour with carboplatin AUC 5 IV over 1 hour every 3 weeks for 6 cycles
- Paclitaxel 175 mg/m² IV over 3 hours with carboplatin AUC 5-6 IV over 1 hour every 3 weeks for 6 cycles. Starting Day 1 of cycle 2 give bevacizumab 15 mg/kg IV over 30 minutes every 3 weeks.
  - Option for patients with mucinous ovarian cancer:
    - Oxaliplatin 130 mg/m² IV over 2 hours on Day 1 and capecitabine 850 mg/m² PO twice daily on Days 1 through 14 followed by 7 day rest period every 3 weeks

**Neoadjuvant Therapy**
- Paclitaxel 175 mg/m² IV over 3 hours with carboplatin AUC 5-6 IV over 1 hour every 3 weeks for 3 to 6 cycles
- Docetaxel 75 mg/m² IV over 1 hour with carboplatin AUC 5 IV over 1 hour every 3 weeks for 3 to 6 cycles
- Paclitaxel 175 mg/m² IV over 3 hours with carboplatin AUC 5-6 IV over 1 hour and bevacizumab 15 mg/kg IV over 30 minutes every 3 weeks for 3 to 6 cycles.
  - Bevacizumab should not be given in the cycle prior to surgery.

**Maintenance Therapy**
- Bevacizumab 15 mg/kg IV over 30 minutes every 3 weeks for up to 22 cycles
- Approved PARP inhibitor therapy until progression (BRCA positive or HRD positive); olaparib for 2 years or niraparib for 3 years
- Aromatase inhibitors (low-grade serous ovarian cancer)

**Recurrence Therapy**

### Platinum Sensitive
- Paclitaxel and carboplatin
- Carboplatin and weekly paclitaxel
- Carboplatin and docetaxel
- Carboplatin and gemcitabine
- Carboplatin and liposomal doxorubicin
- Carboplatin single agent
- Bi-weekly cisplatin and gemcitabine
- Approved PARP inhibitor therapy (BRCA positive) until progression/toxicity
- Trimetinib for low-grade ovarian cancer

### Platinum Resistant
- Docetaxel
- Oral etoposide
- Gemcitabine
- Liposomal doxorubicin
- Weekly paclitaxel
- Bevacizumab single agent until progression/toxicity
- Hormonal therapy for low-grade ovarian cancer
- Approved PARP inhibitor therapy (BRCA positive or HRD positive) until progression/toxicity
- Aromatase inhibitor (low-grade serous ovarian cancer)
- Trimetinib for low-grade ovarian cancer
- Bi-weekly cisplatin and gemcitabine
- Oral cyclophosphamide
- Topotecan
- Vinorelbine
- Mirvetuximab [folate receptor alpha (FRα) positive]

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1 Excludes PARP inhibitors

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SUGGESTED READINGS


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Epithelial Ovarian Cancer

SUGGESTED READINGS - continued


MD Anderson Institutional Policy #CLN1202 - Advance Care Planning Policy


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Epithelial Ovarian Cancer

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SUGGESTED READINGS - continued


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DEVELOPMENT CREDITS

This practice algorithm is based on majority expert opinion of the Gynecologic Oncology and Reproductive Medicine Center Faculty at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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