# **Oncology Clinical Pathways** Ovarian & Fallopian Cancer

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### **Ovarian & Fallopian Cancer – Presumptive Conditions**

VA automatically presumes that certain disabilities were caused by military service. This is because of the unique circumstances of a specific Veteran's military service. If a presumed condition is diagnosed in a Veteran within a certain group, they can be awarded disability compensation.

#### Atomic Veterans Exposed to Ionizing Radiation

Cancer of the ovary

#### Gulf War and Post 9/11 Veterans

If the patient served on or after Sept. 11, 2001, in Afghanistan, Djibouti, Egypt, Jordan, Lebanon, Syria, Uzbekistan, or Yemen or if the patient served in the \*Southwest Asia theater of operations, or Somalia, on or after Aug. 2, 1990, specific conditions include:

• Reproductive cancer of any type

\* The Southwest Asia theater of operations refers to Iraq, Kuwait, Saudi Arabia, the neutral zone between Iraq and Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, Oman, the Gulf of Aden, the Gulf of Oman, the Persian Gulf, the Arabian Sea, the Red Sea, and the airspace above these locations.

For more information, please visit U.S. Department of Veterans Affairs - Presumptive Disability Benefits (va.gov)

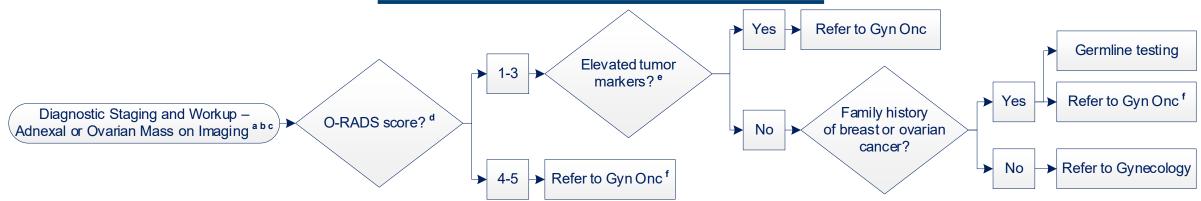






### **Ovarian & Fallopian Cancer – Diagnostic Workup and Staging –**

#### **Adnexal or Ovarian Mass**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinical TrialsNavigation@va.gov.

- <sup>a</sup> Diagnostic Staging and Workup indications for imaging include
  - 1. unexplained symptoms such as but not limited to bloating, pelvic-abdominal pain, urinary urgency or frequency, changes in bowel habit, early satiety;
  - 2. clinically-suspicious lesions upon abdominal and pelvic exam

<sup>b</sup> All Adnexal Masses should be referred to Gyn or Gyn Onc per pathway

<sup>c</sup> Imaging transabdominal-transvaginal pelvic ultrasound and/or abdominal-pelvic CT or MRI

<sup>d</sup> O-RADS score currently only available on transvaginal or transabdominal ultrasound or MRI; for CT, complex masses, i.e., septations, mural nodules, papillary projections, ascites, increased Doppler flow, should be referred to Gyn Oncology

<sup>e</sup> CA125 and CEA for premenopausal patients with complex masses highly suspicious for malignancy and for all postmenopausal patients; additional tumor markers such as inhibin A/B, LDH, AFP, HCG, HE4, CA19-9 may be ordered per clinician decision-making; germ cell tumors may be more common in Veterans than non-Veterans

<sup>f</sup> Refer to NTO if local gyn oncologist not available via IFC Durham order (select BGSOE)

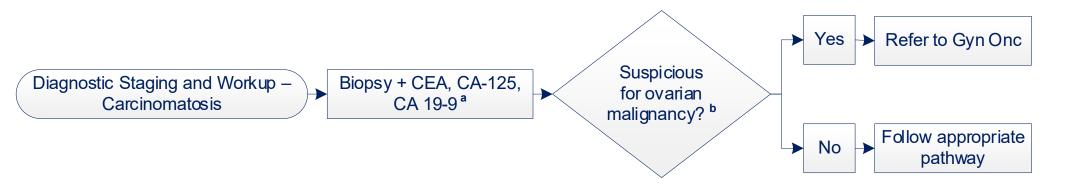
ORADS Ovarian-Adnexal Reporting and Data System







#### Ovarian & Fallopian Cancer – Diagnostic Workup and Staging – Carcinomatosis



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinical TrialsNavigation@va.gov.

<sup>a</sup> Obtain CT chest if chest imaging not previously obtained

<sup>b</sup> Suspicious for ovarian malignancy examples include high-grade or low-grade serous histology and/or PAX8 positive







#### **Ovarian & Fallopian Cancer – Histology**

Epithelial Borderline	Epithelial Malignant
Serous borderline tumor	Low-grade serous carcinoma
Borderline Brenner tumor	High-grade serous carcinoma
Mucinous borderline tumor	Mesonephric-like adenocarcinoma
Endometrioid borderline tumor	Undifferentiated and dedifferentiated carcinoma
Seromucinous borderline tumor	Carcinosarcoma
Clear cell borderline tumor	Mixed carcinoma
	Endometrioid stromal sarcoma
	Adenosarcoma
	Malignant Brenner tumor
	Endometrioid carcinoma
	Mucinous carcinoma
	Clear cell carcinoma
	Seromucinous carcinoma

Sex Cord-Stromal Tumors	Germ Cell Tumors
Ovarian fibroma	Immature teratoma
Thecoma	Dysgerminoma
Luetinized thecoma associated with sclerosing peritonitis	Yolk sac tumor
Sclerosing stromal tumor	Embryonal carcinoma
Signet-ring stromal tumor	Nongestational choriocarcinoma
Leydig cell tumor	Mixed germ cell tumor
Steroid cell tumor	Monodermal teratoma and somatic-type tumors arising from a dermoid cyst
Ovarian fibrosarcoma	Struma ovarii
Adult granulosa cell tumor	Carcinoid
Juvenile granulosa cell tumor	Neuroectodermal-type tumors
Sertoli cell tumor	Monodermal cystic teratomas
Sex cord tumor with annular tubules	Somatic neoplasms arising from teratomas
Sertoli-Leydig cell tumor	Germ cell-sex cord-stromal tumors
Sex cord-stromal tumors NOS	Gonadoblastoma
Gynandroblastoma	Mixed germ cell-sex cord-stromal tumor, unclassified
	Rete adenocarcinoma

Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email <u>CancerClinicalTrialsNavigation@va.gov</u>.

Rete adenocarcinoma



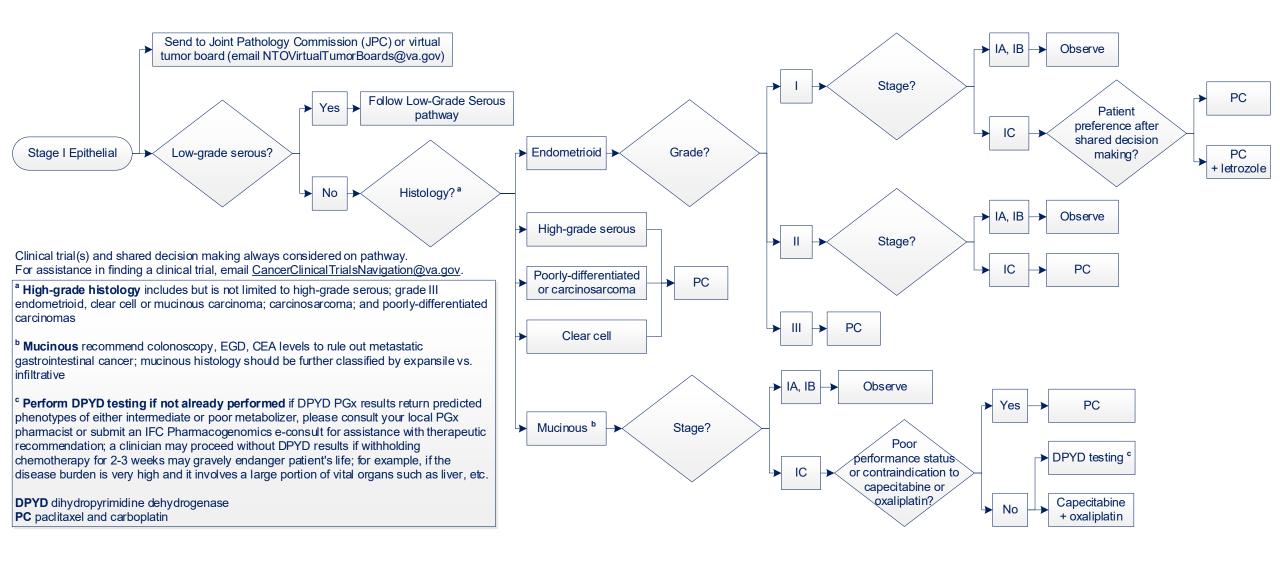




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U.S. Department of Veterans Affairs

#### **Ovarian & Fallopian Cancer – Stage I Epithelial**

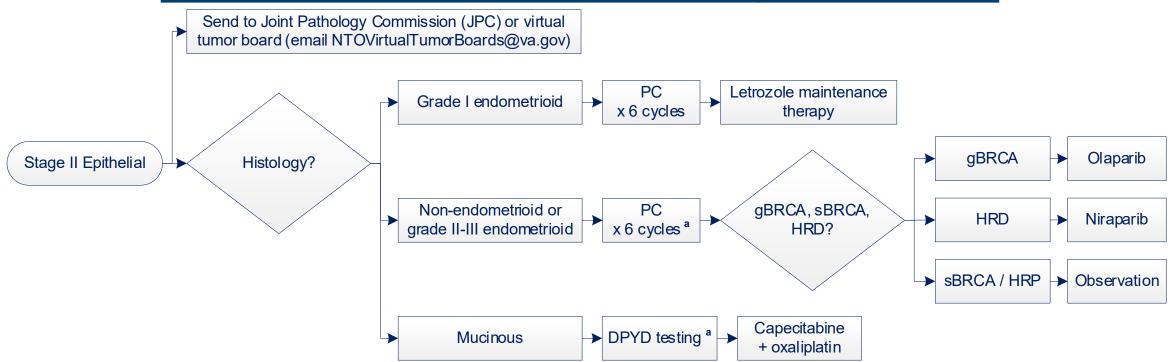








### **Ovarian & Fallopian Cancer – Stage II Epithelial**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinicalTrialsNavigation@va.gov.

<sup>a</sup> **Perform DPYD testing if not already performed** if DPYD PGx results return predicted phenotypes of either intermediate or poor metabolizer, please consult your local PGx pharmacist or submit an IFC Pharmacogenomics e-consult for assistance with therapeutic recommendation; a clinician may proceed without DPYD results if withholding chemotherapy for 2-3 weeks may gravely endanger patient's life; for example, if the disease burden is very high and it involves a large portion of vital organs such as liver, etc.

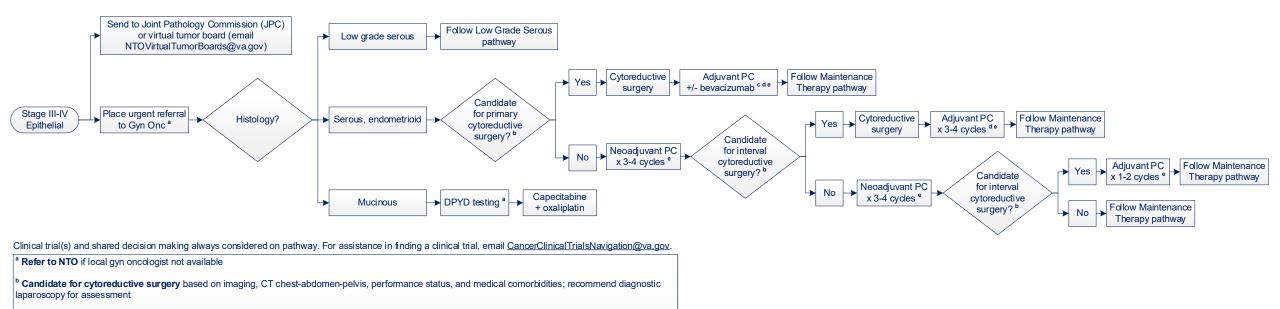
**DPYD** dihydropyrimidine dehydrogenase **HRD** homologous recombination deficiency **HRP** homologous recombination proficiency **PC** paclitaxel and carboplatin







#### **Ovarian & Fallopian Cancer – Stage III-IV Epithelial**



<sup>c</sup> Candidate for bevacizumab ECOG PS 0-2; bevacizumab should be held in the following patients: non-healing wound/fracture, major surgery in prior 4 weeks, recent history of GI perforation or small bowel obstruction, or unstable cardiac condition (uncontrolled HTN, arterial thromboembolism)

<sup>d</sup> Bevacizumab consider bevacizumab if suboptimal cytoreductive surgery > 1cm residual disease or significant burden of ascites or pleural infusions

<sup>e</sup> PC first-line chemotherapy for ovarian cancer consists of 6-9 cycles

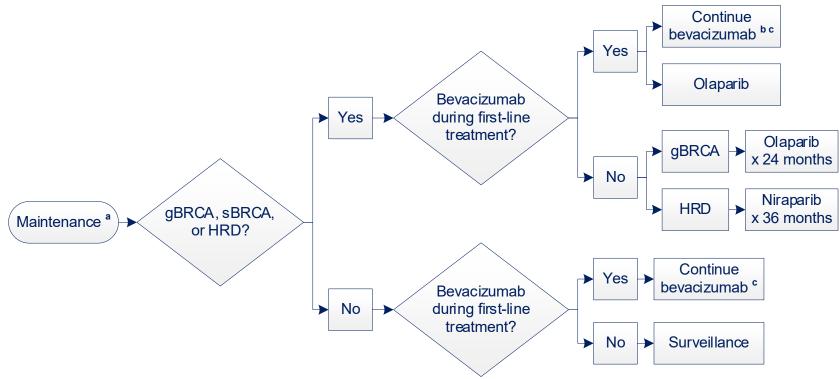
PC paclitaxel and carboplatin







#### **Ovarian & Fallopian Cancer – Maintenance**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email <u>CancerClinicalTrialsNavigation@va.gov</u>.

<sup>a</sup> Maintenance therapy after first-line chemotherapy for high-grade serous, endometrioid or clear cell histology with partial or complete response to chemotherapy

<sup>b</sup> Bevacizumab if bevacizumab with olaparib, up to 15 months, including those given during chemotherapy or until disease progression

<sup>c</sup> Bevacizumab if bevacizumab alone, up to 22 cycles total including those given during chemotherapy or until disease progression

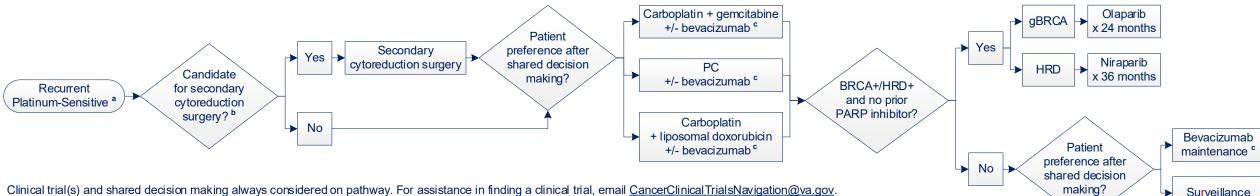
**HRD** homologous recombination deficiency







#### **Ovarian & Fallopian Cancer – Recurrent Platinum-Sensitive**



<sup>a</sup> Recurrent Platinum-Sensitive Ovarian Cancer >6 months from last platinum chemotherapy; includes all epithelial histologies excluding low-grade serous

<sup>b</sup> Candidate for secondary cytoreduction surgery consider if oligometastatic disease, ECOG 0-1, low-to-minimal ascites; complete optimal primary cytoreduction or early stage disease at initial surgery; CT chest-abdomen-pelvis is recommended prior to surgery

Bevacizumab there is evidence to repeat bevacizumab therapy and maintenance in individuals who have previously received bevacizumab, including those who have progressed on bevacizumab; standard criteria for bevacizumab include ECOG PS 0-2; bevacizumab should be held in the following patients: nonhealing wound/fracture, major surgery in prior 4 weeks, recent history of GI perforation or small bowel obstruction, or unstable cardiac condition (uncontrolled HTN, arterial thromboembolism)

HRD homologous recombination deficiency **PC** paclitaxel and carboplatin

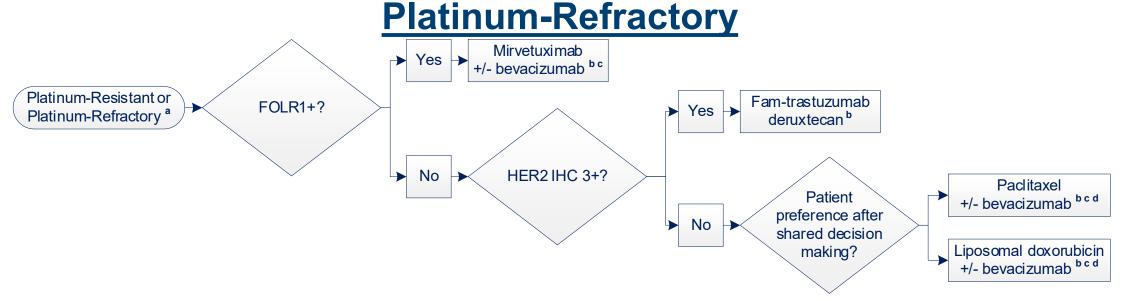








# Ovarian & Fallopian Cancer – Platinum-Resistant or



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email <u>CancerClinicalTrialsNavigation@va.gov</u>. **Platinum-Resistant or Platinum Refractory** platinum-resistant is disease recurrence within six months of prior platinum therapy; platinum-refractory is progression during platinum-based chemotherapy; platinum-refractory patients should be strongly considered for clinical trial

<sup>b</sup> Multidisciplinary discussion at time of disease progression, discuss at virtual tumor board (email NTOVirtualTumorBoards@va.gov)

<sup>c</sup> **Bevacizumab** there is evidence to repeat bevacizumab therapy and maintenance in individuals who have previously received bevacizumab, including those who have progressed on bevacizumab; standard criteria for bevacizumab include ECOG PS 0-2; bevacizumab should be held in the following patients: non-healing wound/fracture, major surgery in prior 4 weeks, recent history of GI perforation or small bowel obstruction, or unstable cardiac condition (uncontrolled HTN, arterial thromboembolism)

<sup>d</sup> Other single agent regimens include gemcitabine, pemetrexed, cyclophosphamide, topotecan

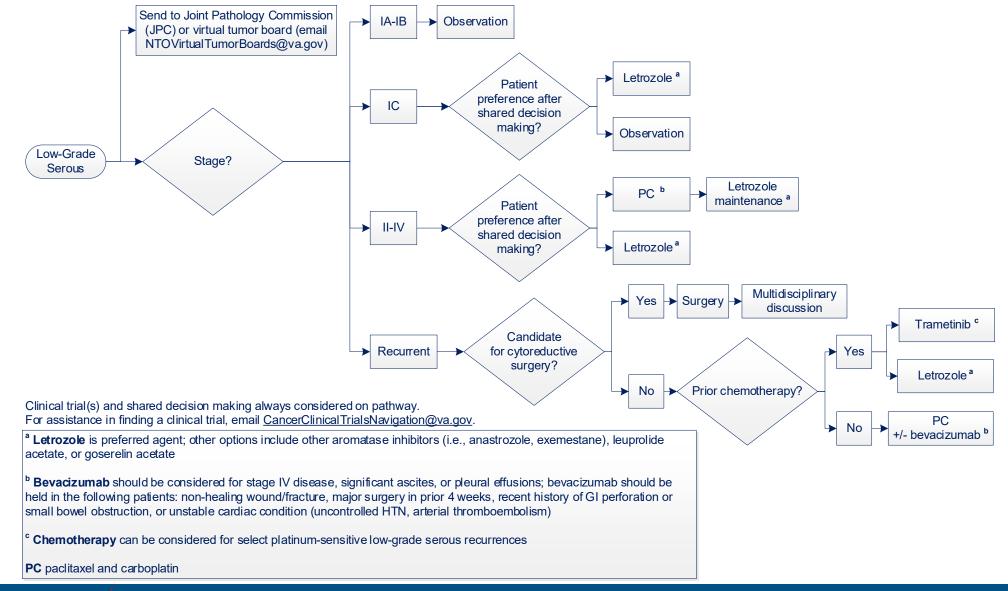
FOLR1 folate receptor alpha







#### **Ovarian & Fallopian Cancer – Low-Grade Serous**

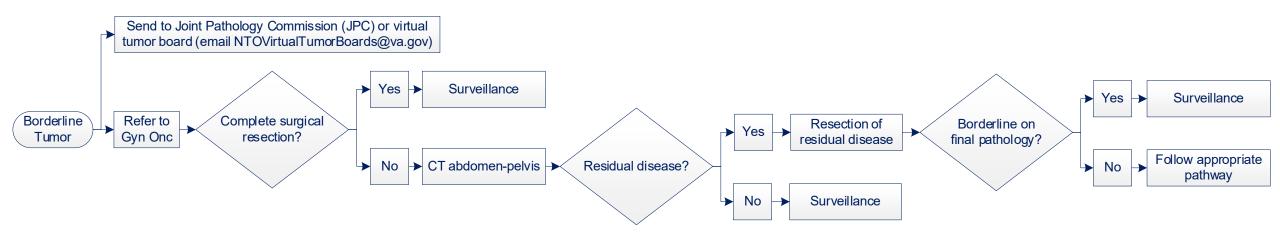








#### **Ovarian & Fallopian Cancer – Borderline Tumor**



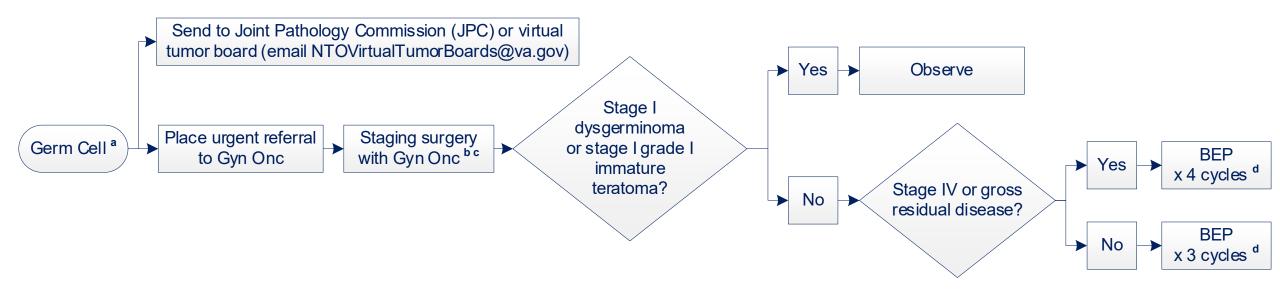
Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinicalTrialsNavigation@va.gov.







#### **Ovarian & Fallopian Cancer – Germ Cell**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinicalTrialsNavigation@va.gov.

- <sup>a</sup> Germ Cell suspected by appearance on imaging or tumor markers (e.g., inhibin, DHEA, AMH, testosterone) or incidental diagnosis; refer to Histology slide
- <sup>b</sup> Staging surgery fertility-sparing surgery with staging can be considered for premenopausal patients with disease confined to one ovary and desired fertility
- <sup>c</sup> Staging for germ cell includes pelvic washings, peritoneal biopsies, omental biopsy, and lymphadenectomy
- <sup>d</sup> BEP consider 4 cycles of BEP if high-risk tumor markers: AFP > 10,000 mcg/L, serum beta hCG > 50,000 unit/L, LDH > 10 x normal range

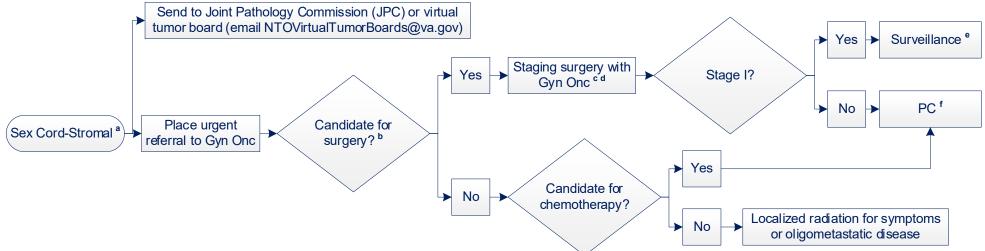
BEP bleomycin, etoposide, cisplatin







#### **Ovarian & Fallopian Cancer – Sex Cord-Stromal**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinical TrialsNavigation@va.gov.

<sup>a</sup> Sex Cord-Stromal suspected by appearance on imaging or tumor markers (e.g., inhibin, DHEA, AMH, testosterone) or incidental diagnosis

<sup>b</sup> Cytoreductive surgery should be considered at recurrence

<sup>c</sup> Staging surgery fertility-sparing surgery with staging can be considered for premenopausal patients with disease confined to one ovary and desired fertility; endometrial sampling required for patients with fertility-sparing surgery

<sup>d</sup> Staging for sex cord-stromal tumors includes pelvic washings and peritoneal biopsies and omental biopsy; lymphadenectomy may be omitted; repeat surgery can be omitted for patients with incidental diagnosis of sex cord-stromal tumor, oophorectomy, and negative imaging

<sup>e</sup> Surveillance platinum-based chemotherapy can be considered for high-risk Stage I sex cord-stromal tumors, e.g., ruptured Stage IC or poorly-differentiated; inhibin levels should be followed for granulosa cell tumors

<sup>f</sup> **PC** is preferred; other options include EP or BEP

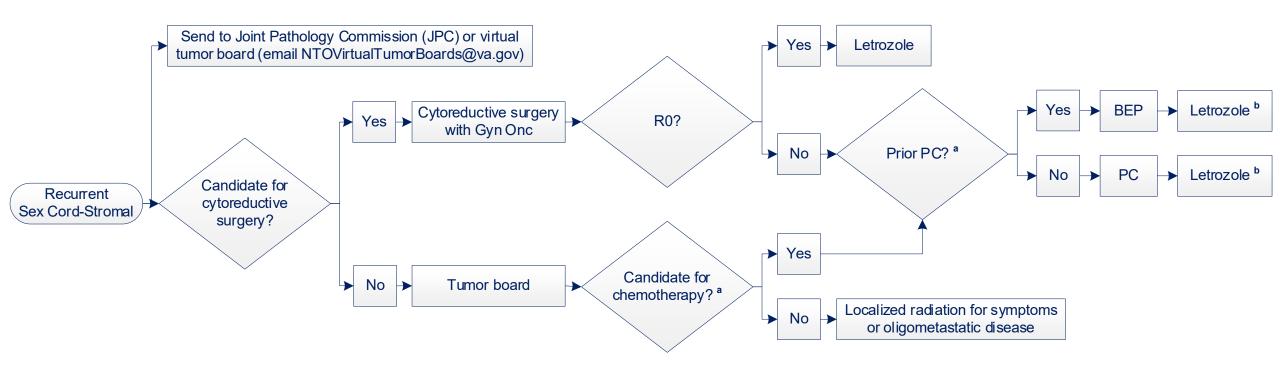
**BEP** bleomycin, etoposide, cisplatin **EP** etoposide and cisplatin **PC** paclitaxel and carboplatin







#### **Ovarian & Fallopian Cancer – Recurrent Sex Cord-Stromal**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email <u>CancerClinicalTrialsNavigation@va.gov</u>.

<sup>a</sup> PC x 6-9 cycles preferred; EP or BEP can be used if not already given; bevacizumab can also be considered as a single-agent in later recurrences

<sup>b</sup> Letrozole hormonal maintenance therapy should be considered for patients without prior progression on hormonal maintenance therapy, aromatase inhibitors are preferred with leuprolide as alternative option for granulosa cell tumors

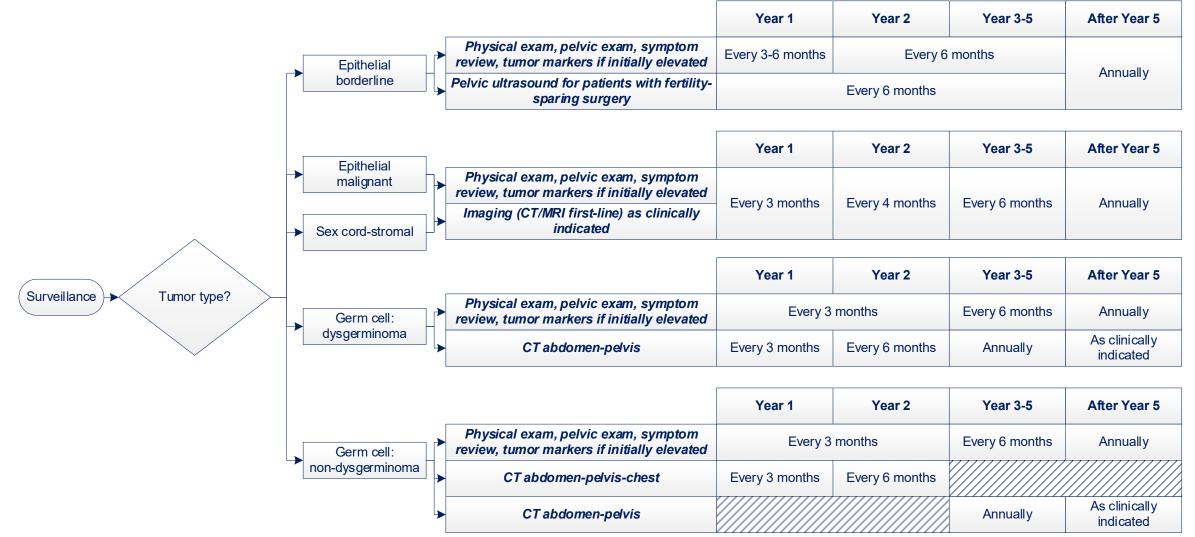
**BEP** bleomycin, etoposide, cisplatin **EP** etoposide and cisplatin **PC** paclitaxel and carboplatin







### **Ovarian & Fallopian Cancer – Surveillance**



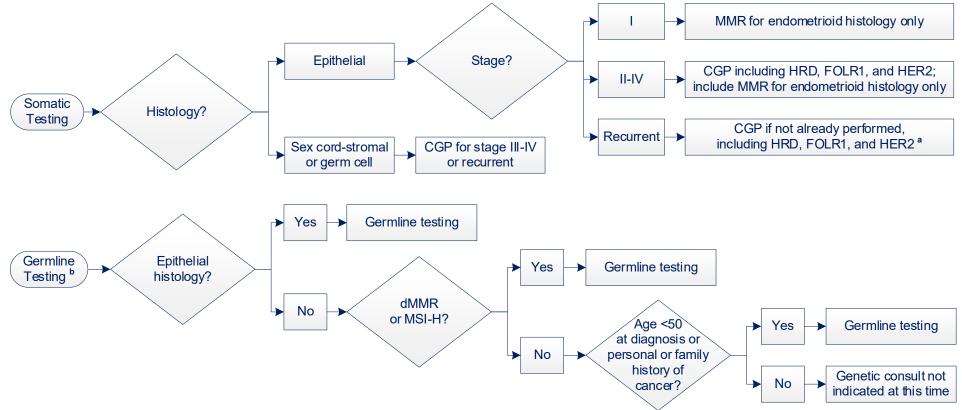
Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinicalTrialsNavigation@va.gov.







#### **Ovarian & Fallopian Cancer – Molecular Testing**



Clinical trial(s) and shared decision making always considered on pathway. For assistance in finding a clinical trial, email CancerClinicalTrialsNavigation@va.gov.

<sup>a</sup> CGP other reasons to repeat include prior targeted therapy (including PARP inhibitors), variant histology in metastatic disease

<sup>b</sup> Germline Testing recommend panel genetic testing for genes associated with ovarian cancer including ATM, BRCA1, BRCA2, BRIP1, Lynch syndrome genes [MLH1, MSH2, MSH6, EPCAM], PALB2, RAD51C, and RAD51D

CGP comprehensive genomic profiling FOLR1 folate receptor alpha HRD homologous recombination deficiency







#### **Molecular Testing Table**

Eligibility	Test Category	Test Type	Recommended Vendors	NPOP Coverage	Specimen Type			
Epithelial Tumor, Endometrioid Histology, Stage I	IHC	MLH1, MSH2, MSH6, PMS2	Local VA or locally contracted vendor	No	Tumor Tissue			
	PCR	Microsatellite instability (MSI) status by PCR	Regional Testing Center (GLA)		Tumor Tissue, Normal Tissue, Blood			
Epithelial Tumor, All Histologies, Stage II-IV	IHC	MLH1, MSH2, MSH6, PMS2	Tempus	Yes	Tumor Tissue			
	IHC	Folate Receptor alpha (FOLR1)	Foundation Medicine when ordered with NGS	Yes	Tumor Tissue			
	IHC	HER2	Foundation Medicine when ordered with NGS	Yes	Tumor Tissue			
	Somatic NGS	CGP using both DNA and RNA based methodology	Tempus Foundation Medicine	Yes Yes	Tumor Tissue, Blood			
Epithelial Tumor, Mucinous Histologies, All Stages	PGx	DPYD*	Fulgent	Yes	Blood, Saliva			
Epithelial Tumor, All Histologies, All Stages	Germline NGS	Germline NGS panel (VA POC recommended)	Fulgent	Yes	Blood, Saliva			
* Parform DRVD Tacting If not already Parformed; if DRVD RCy results rature predicted phanetypes of either intermediate or pear metabolizer, places expendit your level RCy pharmaciet or submit								

\* Perform DPYD Testing If not already Performed; if DPYD PGx results return predicted phenotypes of either intermediate or poor metabolizer, please consult your local PGx pharmacist or submit an IFC Pharmacogenomics e-consult for assistance with therapeutic recommendation; a clinician may proceed without DPYD testing if withholding chemotherapy for 2-3 weeks may gravely endanger patient's life; for example, if the disease burden is very high and it involves a large portion of vital organs such as liver, etc.





