# Oncology Clinical Pathways Uterine Cancer

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# **Table of Contents**

Presumptive Conditions	3
Diagnostic Workup and Staging	4
Endometrial Intraepithelial Neoplasia (EIN)	5
Stage I Endometrioid.	6
Stage II Endometrioid	7
Stage I Non-Endometrioid	
Stage II Non-Endometrioid	9
Stage III No Residual Disease	10
Stage III Preoperative Gross Nodal Disease	11
Stage IV.	12
<u>Fertility-Sparing</u>	13
Recurrent Disease	14
Medically Inoperable	15
Incomplete Surgical Staging Incidental Diagnosis	16
Surveillance	17
Molecular Testing	
HER2 Scoring	19
Molecular Testing Table	20







# **Uterine 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.

#### 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>U.S. Department of Veterans Affairs - Presumptive Disability Benefits</u> (va.gov)







### **Uterine Cancer – Diagnostic Workup and Staging**



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> High-risk histology grade 2-3 endometrioid, carcinosarcoma, clear cell carcinoma, serous carcinoma, mixed or undifferentiated carcinoma

<sup>b</sup> Fertility-sparing surgery fertility-sparing management is an option for some patients age ≤ 45 with grade 1 endometrioid endometrial cancer and no evidence of myometrial invasion or spread (see Fertility-Sparing pathway)

<sup>c</sup> Surgery by Gyn Oncologist is preferred

<sup>d</sup> Minimally-invasive surgery and sentinel lymph node sampling are preferred when technically feasible; omental biopsy and pelvic washings are recommended for high-grade histologies

<sup>e</sup> **Oophorectomy** may be omitted in select patients who are premenopausal with clinically early-stage (grade 1-2) endometrioid cancer, normal appearing ovaries, and no family history of Lynch Syndrome or other hereditary cancer syndrome

**BSO** bilateral salpingo-oophorectomy **EIN** endometrial intraepithelial neoplasia







# <u> Uterine Cancer – Endometrial Intraepithelial Neoplasia (EIN)</u>









# **Uterine Cancer – Stage I Endometrioid**



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> Low or low-intermediate risk if stage IA, stage IB, or not meeting high-intermediate risk criteria
- <sup>b</sup> High-intermediate risk if age 70 + 1 pathologic risk factor, age 50-69 + 2 pathologic risk factors, or age 18-49 + 3 pathologic risk factors
- <sup>c</sup> High risk if stage I and more pathological risk factors than high-intermediate risk
- <sup>d</sup> **p53 (by IHC) abnormal** lack of staining or upregulated is considered abnormal p53 pattern

IHC immunohistochemistry LVSI lymphovascular space invasion







### **Uterine Cancer – Stage II Endometrioid**



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> **p53 (by IHC) abnormal** lack of staining or upregulated is considered abnormal p53 pattern <sup>b</sup> **PC** every 3 weeks for 6 cycles <sup>c</sup> **EBRT** IMRT/VMAT are preferred techniques when expertise is available

EBRT external beam radiation therapy
IHC immunohistochemistry
IMRT intensity-modulated radiation therapy
PC paclitaxel and carboplatin
VMAT volumetric modulated arc therapy







#### **Uterine Cancer – Stage I Non-Endometrioid**



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









#### **Uterine Cancer – Stage II Non-Endometrioid**



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** every 3 weeks for 6 cycles

PC paclitaxel and carboplatin







## **Uterine Cancer – Stage III No Residual Disease**



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> Stage III No Residual Disease also consider for patients whose only nodal disease is positive sentinel lymph nodes

<sup>b</sup> **PC** every 3 weeks for 6 cycles

<sup>c</sup> **Dostarlimab + pembrolizumab** candidate for immunotherapy if patient without active autoimmune disease, primary immune deficiency, concurrent immunosuppression (including prednisone equivalent > 10mg/day), or prior allogeneic HSCT/solid organ transplant

<sup>d</sup> No carcinosarcoma, no targetable alterations, PC immunotherapy can be added at physician's discretion

PC paclitaxel and carboplatin







# **Uterine Cancer – Stage III Preoperative Gross Nodal Disease**



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









#### **Uterine Cancer – Stage IV**









#### **Uterine Cancer – Fertility-Sparing**









## **Uterine Cancer – Recurrent Disease**



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> EBRT IMRT/VMAT are preferred techniques when expertise is available

<sup>b</sup> Multidisciplinary discussion discuss at virtual tumor board (email NTOVirtualTumorBoards@va.gov); consider adding bevacizumab for clear cell histology

<sup>c</sup> Surgical resection consider interval since primary treatment and disease distribution

EBRT external beam radiation therapy IHC immunohistochemistry IMRT intensity-modulated radiation therapy NGS next-generation sequencing VMAT volumetric modulated arc therapy







#### **Uterine Cancer – Medically Inoperable**









# **Uterine Cancer – Incomplete Surgical Staging Incidental Diagnosis**



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> Stage prior to nodal evaluation this includes myometrial invasion, involvement of fallopian tube / ovaries, cervical, vaginal or parametrial involvement, and other involved organs; this may include LVSI
 <sup>b</sup> Stage 1-2 discuss cophorectomy if patient diagnosed with hereditary cancer syndrome and ovaries not removed at time of original surgery
 <sup>c</sup> Imaging or surgical restaging consider trachelectomy and removal of any residual uterine tissue if supra-cervical hysterectomy was performed
 LVSI lymphovascular space invasion







# **Uterine Cancer – Surveillance**



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> Imaging as indicated by symptoms or examination findings suspicious for recurrence; CT chest, abdomen, pelvis preferred mode of imaging

<sup>b</sup> CA125 if initially elevated

<sup>c</sup> Stage I-III exam frequency consider more frequent surveillance visits based on clinical judgment, e.g., p53 positive, grade 3







#### **Uterine 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> Lynch Testing the diagnostic Lynch genetic testing algorithm depends on the pattern of MLH1, MSH2, MSH6, and PMS2 expression by IHC; diagnostic Lynch genetic testing should be performed if there is loss of MSH2, MSH6, MSH2/MSH6, or PMS2 expression by IHC; if there is loss of MLH1 expression by IHC, *MLH1* promoter hypermethylation testing should be performed; diagnostic Lynch genetic testing should be performed if *MLH1* is unmethylated in the context of MLH1 loss by IHC; a diagnostic Lynch genetic testing panel should include at minimum the following genes: *EPCAM*, *MLH1*, *MSH2*, *MSH6*, and *PMS2* 

<sup>b</sup> Germline Testing consider germline testing beyond Lynch Testing based on family history or known hereditary cancer gene in family; germline testing for uterine cancer should include at the minimum the following genes: MLH1, MSH2, MSH6, PMS2, EPCAM, PTEN, POLD1, POLE, and BRCA½; genetic testing is also recommended if personal history of other cancer or family history of cancer, or pathogenic or likely pathogenic variant in a gene associated with known hereditary cancer syndrome is present in the family member

<sup>c</sup> HER2 per ASCO pathology guidelines; use HER2 scoring for breast cancer; for recurrent, use HER2 scoring for gastric cancer

<sup>d</sup> Recurrent any recurrent uterine cancer, any previous stage at diagnosis

<sup>e</sup> If IHC not feasible, consider MSI testing;

<sup>f</sup> Yes MLH1, MSH2, MSH6, or PMS2 loss alone is sufficient to consider tumor to be dMMR

CGP comprehensive genomic profiling IHC immunohistochemistry MSI microsatellite instability







#### **Uterine Cancer – HER2 Scoring**

Breast Scoring per HER2 (IHC) used for new uterine cancer diagnosis					
Result	Criteria				
Negative (Score 0)	No staining observed OR Complete membrane staining that is faint/barely perceptible and within ≤10% of tumor cells				
Negative (Score 1+)	Incomplete membrane staining that is faint/barely perceptible and within >10% of tumor cells				
Equivocal (Score 2+)	Weak to moderate complete membrane staining in >10% of tumor cells OR Complete membrane staining that is intense but within ≤10% of tumor cells				
Positive (Score 3+)	Complete membrane staining that is intense and >10% of tumor cells				

Gastric Scoring per HER2 (IHC) used for recurrent uterine cancer <sup>a</sup>								
Score	HER2 IHC Pattern in Surgical Specimen	HER2 IHC Pattern in Biopsy Specimen	HER2 Expression Assessment					
0	No reactivity or membranous reactivity in <10% of cancer cells	No reactivity or membranous reactivity in any cancer cells	Negative by IHC					
1+	Faint or barely perceptible membranous reactivity in ≥10% of cancer cells; cells are reactive only in part of their membrane	Cancer cell cluster with a faint or barely perceptible membranous reactivity irrespective of percentage of cancer cells positive	Negative by IHC					
2+	Weak to moderate complete, basolateral or lateral membranous reactivity in ≥10% of tumor cells	Cancer cell cluster with a weak to moderate complete, basolateral or lateral membranous reactivity irrespective of percentage of cancer cells positive	Equivocal by IHC					
3+	Strong complete, basolateral or lateral membranous reactivity in ≥10% of tumor cells	Cancer cell cluster with a strong complete, basolateral or lateral membranous reactivity irrespective of percentage of cancer cells positive	Positive					

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> HER2 scoring in cancer is rapidly evolving; lower HER2 scores may qualify for HER2-directed therapy

**IHC** immunohistochemistry







### **Molecular Testing Table**

Eligibility	Test Category	Test Type	Recommended Vendors	NPOP Coverage	Specimen Type		
	IHC	MLH1, MSH2, MSH6, PMS2	Local VA or locally contracted vendor	No	Tumor Tissue		
	IHC	TP53	Local VA or locally contracted vendor	No	Tumor Tissue		
	IHC	ER, PR	Local VA or locally contracted vendor	No	Tumor Tissue		
Uterine Carcinoma All Stages, All Histologies	PCR	Microsatellite instability (MSI) status by PCR*	Regional Testing Center (GLA)	Yes	Tumor Tissue AND Normal Tissue or Blood		
	Methylation Testing	MLH1 promoter hypermethylation testing (in the setting of loss of MLH1 or PMS2 expression by IHC). Hypermethylation suggests somatic mutation. Unmethylated calls for Germline Lynch testing.	Local VA or locally contracted vendor	No	Tumor Tissue		
	IHC	HER2 IHC	Local VA or locally contracted vendor	No	Tumor Tissue		
Stage III/IV or Recurrent Carcinoma (any previous stage)	IHC	HER2 (for trastuzumab deruxtecan)	Foundation Medicine (when concurrently ordered with NGS)	Yes	Tumor Tissue		
	Somatic NGS	Comprehensive genomic profiling (CGP)	Tempus Foundation	Yes Yes	Tumor Tissue, Blood		
Any stage or histology, MMR-deficient or MSI-H	Germline NGS	Germline Lynch NGS Panel* If full germline testing not performed, perform Germline Lynch testing if: 1) MSH2 or MSH6 loss by IHC; 2) MLH1 or PMS2 loss by IHC and MLH1 unmethylated; or 3) MSI-H without IHC testing and MLH1 unmethylated	Fulgent Genetics	Yes	Blood, Saliva		
Age < 50 or Personal or Family History of Other Cancers	Germline NGS	Germline NGS panel for Uterine cancers**	Fulgent Genetics	Yes	Blood, Saliva		
* For Uterine cancers, mismatch repair proficiency/deficienc	cy is best determi	ined by IHC; PCR can detect microsatellite instability (MSI-H), but a normal result (MSS or MSI-L) should alw	vays be confirmed by IHC				
** Germline Lynch NGS panel should include at minimum the	e following genes	: EPCAM (deletion), MLH1, MSH2, MSH6, and PMS2					
*** VA Common Hereditary POC panel or Equivalent Germline Test; Full Germline NGS panel for uterine cancers should include at minimum the following genes: EPCAM (deletion), MLH1, MSH2, MSH6, PMS2, PTEN, POLD1, POLE, and BRCA1/2;							
For genetic online ordering, refer to CCGS page for further details							





