

## **Protocol for the Examination of Specimens From Patients With Tumors of the Peritoneum**

**Protocol applies to all primary borderline and malignant epithelial tumors and malignant mesothelial neoplasms of the peritoneum.**

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### **No AJCC/UICC TNM Staging System**

Protocol web posting date: August 2015

### **Procedure**

- Resection

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## CAP Peritoneum Protocol Revision History

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### Version Code

The definition of the version code can be found at [www.cap.org/cancerprotocols](http://www.cap.org/cancerprotocols).

**Version:** Peritoneum 3.2.0.1

### Summary of Changes

The only change to the October 2013 version is the addition of the following:

### Important Note

Recent observations including molecular findings have indicated that high-grade serous carcinoma of the fallopian tube/ovary/and peritoneum is very often of fallopian tube origin. Serous intraepithelial carcinoma of the fallopian tube has been observed in patients undergoing prophylactic and routine salpingectomy/salpingoophorectomy for nonneoplastic disease, providing supportive evidence for this change in the understanding of high-grade serous carcinoma carcinogenesis occurring in the adnexa and peritoneum. FIGO 2014 has acknowledged high-grade serous carcinoma as a unified entity based on clinical behavior but recommends assigning a primary site if possible. In a recent publication, Singh et al describe 10 scenarios to illustrate assigning high-grade serous carcinoma to fallopian tube, ovary, or peritoneum.

### Bibliography

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- McCluggage WG, Judge MJ, Clarke BA, et al. Data set for reporting of ovary, fallopian tube and primary peritoneal carcinoma: recommendations from the International Collaboration on Cancer Reporting (ICCR). *Mod Pathol*. 2015;28(8):1101-1122.
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**Surgical Pathology Cancer Case Summary**

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Protocol web posting date: August 2015

**PERITONEUM: Resection**

Select a single response unless otherwise indicated.

**Specimen (select all that apply)**

- Peritoneum  
 Omentum  
 Ovary  
      Right  
      Left  
 Fallopian Tube  
      Right  
      Left  
 Uterus  
 Other (specify): \_\_\_\_\_  
 Not specified

**Procedure (select all that apply)**

- Peritoneal resection  
 Omentectomy  
 Hysterectomy with bilateral salpingo-oophorectomy  
 Other (specify): \_\_\_\_\_  
 Not specified

**Lymph Node Sampling**

- No lymph node sampling  
 Obturator lymph nodes  
 Common iliac lymph nodes  
 Periaortic lymph nodes  
 Inguinal lymph nodes  
 Pelvic lymph nodes not otherwise specified (NOS)  
 Retroperitoneal lymph nodes NOS  
 Other lymph nodes (specify): \_\_\_\_\_

**Tumor Site**

- Specify: \_\_\_\_\_  
 Cannot be determined

**Tumor Size (Peritoneum / Omentum)**

- Greatest dimension: \_\_\_ cm  
 + Additional dimensions: \_\_\_ x \_\_\_ cm  
 Cannot be determined (see Comment)

**Tumor Focality**

- Unifocal  
 Multifocal  
 Diffuse  
 Cannot be determined

**Involvement of Other Locations (Note A)**

Left Ovary

- No tumor
- Confined to surface epithelium
- Surface and cortical stroma involvement
- Only ovarian substance involvement
- Greatest dimensions of tumor: \_\_\_ x \_\_\_ mm
- + Additional dimension: \_\_\_ mm
- Cannot be determined (see Comment)

Right Ovary

- No tumor
- Confined to surface epithelium
- Surface and cortical stroma involvement
- Only ovarian substance involvement
- Greatest dimensions of tumor: \_\_\_ x \_\_\_ mm
- + Additional dimension: \_\_\_ mm
- Cannot be determined (see Comment)

Other (specify): \_\_\_\_\_

- Greatest dimension of tumor: \_\_\_ mm
- + Additional dimensions: \_\_\_ x \_\_\_ mm
- Cannot be determined (see Comment)

**Histologic Type (Note A, Note B)**

- Malignant mesothelioma, epithelioid
- Malignant mesothelioma, sarcomatoid (spindle cell)
- Malignant mesothelioma, biphasic
- Malignant mesothelioma, other (specify): \_\_\_\_\_
- Serous borderline tumor (of low malignant potential)
- Serous carcinoma
- Other malignant tumor of Mullerian type (specify): \_\_\_\_\_
- Other (specify): \_\_\_\_\_
- Malignant tumor, type cannot be determined

**Histologic Grade (Note C)**

- Not applicable (borderline neoplasms and mesotheliomas)
- GX: Cannot be assessed
- G1: Well differentiated
- G2: Moderately differentiated
- G3: Poorly differentiated
- Other (specify): \_\_\_\_\_

**+ Lymph-Vascular Invasion**

- +  Not identified
- +  Present
- +  Indeterminate

**+ Effusions**

- +  Positive ascites/peritoneal washings
- +  Positive pleural effusions
- +  Indeterminate

+ Data elements preceded by this symbol are not required. However, these elements may be clinically important but are not yet validated or regularly used in patient management.

+ **Metastasis**

- + \_\_\_ None identified
- + \_\_\_ Microscopic peritoneal metastasis beyond pelvis (no macroscopic tumor)
- + \_\_\_ Macroscopic peritoneal metastasis beyond pelvis 2 cm or less in greatest dimension
- + \_\_\_ Peritoneal metastasis beyond pelvis more than 2 cm in greatest dimension and/or regional lymph node metastasis
- + \_\_\_ Liver capsule metastasis
- + \_\_\_ Liver parenchymal metastasis
- + \_\_\_ Other (specify): \_\_\_\_\_
- + \_\_\_ Cannot be determined

+ **Additional Pathologic Findings (select all that apply)**

- + \_\_\_ None identified
- + \_\_\_ Ferruginous bodies
- + \_\_\_ Endosalpingiosis
- + \_\_\_ Endometriosis
- + \_\_\_ Mesothelial inclusion cysts
- + \_\_\_ Other (specify): \_\_\_\_\_

+ **Ancillary Studies**

- + Specify: \_\_\_\_\_

+ **Clinical History**

- + Specify: \_\_\_\_\_
- + \_\_\_ Not specified

+ **Comment(s)**

## Explanatory Notes

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### A. Histologic Type

This protocol refers only to primary borderline and malignant epithelial tumors of the peritoneum. Secondary tumors, for example, those causing pseudomyxoma peritonei (almost always of appendiceal origin), are not addressed. However, in some cases "peritoneal spread" of a serous borderline tumor may actually reflect a primary peritoneal tumor rather than a metastasis from the ovary.

### Classification of Peritoneal Tumors

#### Benign

- Adenomatoid tumor
- Benign multicystic mesothelioma (multilocular peritoneal inclusion cyst)
- Mesothelial cyst(s) (unilocular) (free or attached)
- Well-differentiated papillary mesothelioma
- Solitary fibrous tumor (fibrous mesothelioma) (usually benign)

#### Malignant

- Diffuse malignant mesothelioma
  - Epithelioid type
  - Sarcomatoid type
  - Biphasic type
  - Rare types<sup>#</sup>
- Serous tumor of borderline malignancy (of low malignant potential)<sup>1-3 ##</sup>
- Serous carcinoma<sup>4-8 ###</sup>
- Malignant tumors of other Mullerian types
- Sarcomas

<sup>#</sup> Rare types include desmoplastic, small cell, lymphohistiocytoid, deciduoid, and undifferentiated types.

<sup>##</sup> When this tumor involves the extraovarian peritoneum significantly and the ovarian surface minimally or not at all, it is generally considered to be of peritoneal origin.

<sup>###</sup> The Gynecological Oncology Group has adopted the following criteria for the diagnosis of primary peritoneal serous carcinoma:

1. Both ovaries are either normal in size or enlarged by a benign process. In the judgment of the surgeon and the pathologist, the bulk of the tumor involves the peritoneum, and the extent of tumor involvement at 1 or more extraovarian sites is greater than that on the surface of or within either ovary.
2. Microscopic examination of the ovaries reveals: (a) no tumor; (b) tumor confined to the surface epithelium, with no evidence of cortical invasion; (c) tumor involving the ovarian surface and the underlying cortical stroma, but less than 5 x 5 mm in diameter; or (d) tumor less than 5 x 5 mm within the ovarian substance, with or without surface involvement.
3. The histologic and cytologic characteristics of the tumor are predominantly serous and similar or identical to those of ovarian serous papillary carcinoma of any grade.
4. If an oophorectomy has been performed in the past, a confident diagnosis of primary peritoneal serous carcinoma requires 1 of the following: (a) a pathology report to document the absence of carcinoma in the ovarian specimen, with review of all the slides if the oophorectomy has been performed within 5 years of the current procedure; (b) if the oophorectomy has been performed more than 5 years before the current procedure, the pathology report of the specimen should be obtained, and the slides should be reviewed if still available. The peritoneal tumor should be interpreted in light of the ovarian findings.

### B. Special Studies

Histochemical, immunohistochemical, and electron microscopic studies are helpful to routine microscopic evaluation in the diagnosis of mesothelioma. These tumors are usually mucicarmine and Pas-D negative. They may be positive for Alcian blue or colloidal iron stains. Mesotheliomas usually are positive for different keratins, including cytokeratins 5/6, EMA, thrombomodulin, WT1, D2-40 (podoplanin), and calretinin. They are usually

negative for CEA, B72.3, BER-EP4, and CD15 (Leu-M1), although they may be positive for single antibodies. In all these cases, a panel of antibodies is recommended. (For further detail, see Thoracic Mesothelium protocol.)

### C. Histologic Grade

There is no established grading system for malignant mesotheliomas. Serous and other Mullerian-type tumors can be graded according to the criteria used for similar tumors in the female genital tract, as shown below. (For further detail, see Ovary protocol.)

Grade X	Cannot be assessed
Grade 1	Well differentiated
Grade 2	Moderately differentiated
Grade 3	Poorly differentiated (tumors with minimal differentiation seen in very small foci)

### D. Staging of Peritoneal Tumors

There is no widely accepted staging system for peritoneal tumors, but their extent may have prognostic significance.<sup>9</sup> Thus, it is important to determine whether a mesothelioma is unifocal, multifocal, or diffuse<sup>10</sup>; and whether there are lymph node or distant metastases. Peritoneal serous carcinomas are generally staged as though they were stage II to stage IV ovarian cancers. (For further detail, see ovary protocol.)

### References

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