Adrenal Gland

Protocol applies to adrenal cortical carcinoma. Pheochromocytoma, neuroblastoma, and other adrenal medullary tumors of childhood are excluded.

Protocol revision date: January 2004
No AJCC/UICC staging system

Procedures

- **Cytology** (No Accompanying Checklist)
- **Incisional Biopsy**
- **Excisional Biopsy**
- **Adrenalectomy**

Authors
David L. Page, MD
Department of Pathology, Vanderbilt University Medical Center, Nashville, Tennessee
Stephen G. Ruby, MD, MBA
Department of Pathology, Palos Community Hospital, Palos Heights, Illinois
For the Members of the Cancer Committee, College of American Pathologists

Previous contributors: Edward Paloyan, MD; Geoffrey Smoron, MD; Ronald A. DeLellis, MD; Ernest E. Lack, MD

Surgical Pathology Cancer Case Summary (Checklist)

Protocol revision date: January 2004
Applies to invasive carcinomas only
No AJCC/UICC staging system

ADRENAL CORTICAL CARCINOMA: Resection

Patient name:
Surgical pathology number:

Note: Check 1 response unless otherwise indicated.

MACROSCOPIC

Specimen Type
___ Subtotal adrenalectomy
___ Total adrenalectomy
___ Other (specify): _____
___ Not specified

Laterality
___ Right
___ Left
___ Not specified

Tumor Size
Greatest dimension: ___ cm
*Additional dimensions: ___ x ___ cm
___ Cannot be determined (fragmented specimen)

Tumor Weight
Specify: ___ g

MICROSCOPIC

Pathologic Staging

Primary Tumor
___ I: Confined to gland, 5 cm or less
___ II: Confined to gland, greater than 5 cm
___ III: Extraglandular extension without other organ involvement
___ IV: Distant metastasis or extension into other organs
___ Cannot be determined

* Data elements ***with asterisks*** are ***not required*** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

Regional Lymph Nodes
___ Cannot be assessed
___ No regional lymph node metastasis
___ Regional lymph node metastasis
Specify: Number examined: ___
Number involved: ___

Distant Metastasis
___ Cannot be assessed
___ Distant metastasis
*Specify site(s), if known: _____

Margins
___ Margins uninvolved by tumor
___ Margin(s) involved by tumor
Specify site(s) of involvement: _____
___ Involvement by tumor cannot be determined

***Venous (Large Vessel) Invasion**
*___ Absent
*___ Present
*___ Indeterminate

***Additional Pathologic Findings (check all that apply)**
*___ None identified
*___ Tumor necrosis
*___ Hyperplasia
*___ Adenoma
*___ Other (specify): _____

***Comment(s)**

* Data elements ***with asterisks*** are ***not required*** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

Background Documentation

Protocol revision date: January 2004

I. Cytologic Material

A. Clinical Information

1. Patient identification
   a. Name
   b. Identification number
   c. Age (birth date)
   d. Sex
2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
   a. Relevant history (Note **A**)
   b. Relevant findings (eg, hormonal and imaging studies) (Note **B**)
   c. Clinical diagnosis
   d. Procedure (eg, fine-needle aspiration [FNA])
   e. Anatomic site(s) (eg, right/left adrenal gland, related sites)

B. Macroscopic Examination

1. Specimen
   a. Unfixed/fixed (specify fixative)
   b. Number of slides received
   c. Quantity and appearance of fluid specimen
   d. Other (eg, cytologic preparation from tissue)
   e. Results of rapid smear review
2. Material submitted for microscopic evaluation (eg, direct smear, cytocentrifuge preparation, touch or filter preparation, cell block)
3. Special studies (Note **C**)

C. Microscopic Evaluation

1. Adequacy of specimen (if unsatisfactory for evaluation, specify reason)
2. Tumor, if present
   a. Histologic type, if possible (Note **D**)
   b. Other descriptive features (eg, nuclear atypia, necrosis)
3. Additional pathologic finding, if present
4. Results/status of special studies (specify) (Note **C**)
5. Comments
   a. Correlation with intraprocedural consultation, as appropriate
   b. Correlation with other specimens, as appropriate
   c. Correlation with clinical information, as appropriate

II. Incisional Biopsy (Any Surgical Approach Less Than Complete Adrenal Excision)

A. Clinical Information

1. Patient identification
   a. Name
   b. Identification number
   c. Age (birth date)
   d. Sex

2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
    a. Relevant history (Note **A**)
    b. Relevant findings (eg, hormonal and imaging studies) (Note **B**)
    c. Clinical diagnosis
    d. Procedure (eg, fine-needle biopsy, core biopsy, incisional biopsy)
    e. Operative findings
    f. Anatomic sites (eg, right/left adrenal gland, related sites)

B. Macroscopic Examination

1. Specimen
    a. Organ(s)/tissue(s) (specify)
    b. Unfixed/fixed (specify fixative)
    c. Number of fragments
    d. Dimensions
    e. Weight, if appropriate
    f. Orientation, if indicated by surgeon
    g. Descriptive features
    h. Results of intraoperative consultation
2. Tumor(s), if identified
    a. Location
    b. Dimensions
    c. Descriptive features (eg, hemorrhage/necrosis)
    d. Relationship to margins, if appropriate
3. Additional pathologic findings, if present (eg, hyperplasia)
4. Tissue submitted for microscopic evaluation
    a. Tumor
    b. Margin(s), if appropriate
    c. Nodules
    d. Other lesions
    e. Frozen section tissue fragment(s) (unless saved for special studies)
5. Special studies (specify) (Note **C**)

C. Microscopic Evaluation

1. Tumor, if present
    a. Histologic type (Note **D**)
    b. Descriptive features (eg, nuclear atypia, necrosis) (Note **E**)
    c. Venous/lymphatic vessel invasion
2. Additional pathologic findings, if present (eg, hyperplasia)
3. Results/status of special studies (specify) (Note **C**)
4. Comments
    a. Correlation with intraoperative consultation, as appropriate
    b. Correlation with other specimens, as appropriate
    c. Correlation with clinical information, as appropriate

III. Complete Excision (Including Laparoscopically Removed Glands)

A. Clinical Information

1. Patient identification
    a. Name
    b. Identification number

   c. Age (birth date)
   d. Sex
2. Responsible physician(s)
3. Date of procedure
4. Other clinical information
   a. Relevant history (Note **A**)
   b. Relevant findings (eg, hormonal and imaging studies) (Note **B**)
   c. Clinical diagnosis
   d. Procedure (eg, laparoscopically removed gland) (Note **F**)
   e. Operative findings
   f. Type of specimen (adrenal excision with or without surrounding soft tissues)
   g. Anatomic site(s) of specimen (eg, right/left adrenal gland, related sites)

B. Macroscopic Examination

1. Specimen
   a. Organ(s)/tissue(s) included
   b. Unfixed/fixed (specify fixative)
   c. Dimensions
   d. Weight
   e. Orientation, if indicated by surgeon
   f. Descriptive features
   g. Results of intraoperative consultation (Note **C**)
2. Tumor(s)
   a. Dimensions (3)
   b. Weight (Note **G**)
   c. Descriptive features (eg, color, consistency, hemorrhage, necrosis)
   d. Extent of invasion (Note **H**)
3. Margins, relationship to and distance from tumor, as appropriate
4. Regional lymph nodes, if submitted
   a. Number
   b. Location, if designated by surgeon
5. Additional pathologic findings, if present
6. Tissue(s) submitted for microscopic evaluation
   a. Tumor, adequate sampling of all areas
   b. Nodules
   c. Margins of resection
   d. All lymph nodes
   e. Other lesions
   f. Frozen section tissue fragment(s) (unless saved for special studies)
   g. Other organs/tissues (eg, liver biopsy)
7. Special studies (specify) (Note **C**)

C. Microscopic Evaluation

1. Tumor
   a. Histologic type (Note **D**)
   b. Descriptive features (eg, nuclear atypia , mitotic rate, necrosis) (Note **E**)
   c. Extent of invasion (Note **H**)
   d. Venous/lymphatic vessel invasion
2. Margins, as appropriate
3. Regional lymph nodes (Note H)
   a. Number (location, if possible)

   b. Number involved by tumor
4. Additional pathologic findings, if present (eg, hyperplasia)
5. Result/status of special studies (specify) (Note **C**)
6. Other organs/tissues
7. Comments
   a. Correlation with intraoperative consultation, as appropriate
   b. Correlation with other specimens, as appropriate
   c. Correlation with clinical information, as appropriate

Explanatory Notes

A. Relevant History

Endocrine manifestations, such as hypertension, change in body habitus, feminization, or virilism, are important. Also of import are family history, previous surgery for adrenal tumors (both benign and malignant) or other endocrine organs, other tumors that may metastasize to the adrenal gland, and endocrine or other therapies. Hyperplastic adrenal tissue may re-grow if previously excised incompletely.

B. Endocrine Status

Laboratory findings are important in the evaluation of an adrenal mass that is not obviously a high-grade carcinoma because the absence of evidence of hormonal excess in the presence of an enlarged adrenal gland usually indicates that the tumor is an incidental finding ("incidentaloma") and not a functioning adenoma.[1]

C. Special Procedures

Special procedures may include frozen sections, cytologic imprints, immunohistochemical stains, histochemical stains, electron microscopy, flow cytometry, molecular studies, and cytogenetic studies. If such studies are performed in another laboratory, either extrainstitutional or intrainstitutional, the laboratory should be identified.

D. Histologic Type

The following histologic classification of adrenal tumors has been modified from Page et al.[2]

Histologic Classification of Adrenal Tumors

Cortical Tumors
- Adenoma
- Carcinoma
- Myelolipoma
- Miscellaneous

Medullary Tumors[#]
- Pheochromocytoma[#]
- Neuroblastoma[#]
- Ganglioneuroblastoma[#]
- Ganglioneuroma[#]

[#] Not covered in protocol.

E. Histologic Grade

Adrenal cortical tumors are not usually graded on histologic grounds. Severe nuclear atypia, high mitotic count, vascular invasion, tumor necrosis, and other microscopic features may, in combination, support a diagnosis of adrenal cortical carcinoma over adenoma and should be recorded, but no precise clustering of histologic features is considered diagnostic of malignancy. However, when several malignant features are present together (eg, highly atypical nuclei, sheet-like growth, necrosis, and many mitoses), the risk of distant metastases is increased.[3-6] In some studies, specific combinations of features, such as mitotic rates of 6 or more per 50 high-power fields (HPF) along with atypical mitosis and venous invasion, have been found to correlate with metastasis or recurrence of adrenal cortical carcinomas.[4] Other studies have shown that mitotic rates greater than 20 per 50 HPF are associated with decreased survival, suggesting that a high mitotic index may be an important adverse prognostic factor.[5]

Although this protocol does not cover medullary tumors, it should be noted that pheochromocytoma is usually diagnosed preoperatively by pharmacologic means. No pathologic criteria for differentiation of benign from malignant pheochromocytomas have been defined. Metastatic disease is considered the only irrefutable proof of malignancy.

F. Laparoscopic Surgery

An entire adrenal tumor may be removed laparoscopically, but with this technique, the gland may become fragmented. This anatomic information, including maximal diameter of the resected tumor, should be provided by the surgeon.

G. Weight

Accurate weights of adrenal cortical neoplasms are important.[6] Although tumor mass cannot be used as the sole criterion for malignancy, adrenal cortical neoplasms weighing less than 50 g are almost always benign, whereas the weight of malignant tumors is usually greater than 100 g.

H. Staging

The staging system proposed by MacFarlane[7] and modified by Sullivan et al[8] and Henley et al[9] is most commonly used for adrenal cortical carcinomas. The American Joint Committee on Cancer (AJCC) and the International Union Against Cancer (UICC) have no published TNM staging system for malignancies of the adrenal gland.

Stage	Extent	Size
I	Confined to gland	5 cm or less
II	Confined to gland	Greater than 5 cm
III	Extends out of gland without involving adjacent organs	Any
IV	Distant metastasis or involvement of adjacent organs	Any

Tumors of the Adrenal Gland and Extra-Adrenal Paraganglia[10] proposes the following staging system.

Primary Tumor (T)

T1	Tumor 5 cm or less, no invasion
T2	Tumor greater than 5 cm, no invasion
T3	Tumor of any size, locally invasive but not involving adjacent organs
T4	Tumor of any size with invasion of adjacent organs

Regional Lymph Nodes (N)

N0	Negative regional nodes
N1	Positive regional nodes

Distant Metastasis (M)

M0	No distant metastasis
M1	Distant metastasis

Stage Definitions

Stage I	T1	N0	M0
Stage II	T2	N0	M0
Stage III	T1,T2	N1	M0
	T3	N0	M0
Stage IV	Any T	Any N	M1
	T3,T4	N1	M0

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Peritoneum

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

Protocol revision date: January 2004
No AJCC/UICC staging system

Procedures

- **Cytology** (No Accompanying Checklist)
- **Biopsy** (No Accompanying Checklist)
- **Resection**

Authors
Esther Oliva, MD
Department of Pathology, Massachusetts General Hospital, Boston, Massachusetts
Philip A. Branton, MD
Department of Pathology, Inova Fairfax Hospital, Fairfax, Virginia
Robert E. Scully, MD
Department of Pathology, Massachusetts General Hospital, Boston, Massachusetts
For the Members of the Cancer Committee, College of American Pathologists

Previous contributor: Karen Antman, MD

Surgical Pathology Cancer Case Summary (Checklist)

Protocol revision date: January 2004
Applies to primary borderline tumors, carcinomas, and mesotheliomas only
No AJCC/UICC staging system

PERITONEUM: Resection

Patient Name:
Surgical pathology Number:

Note: Check 1 response unless otherwise indicated.

MACROSCOPIC

Tumor Site(s)
Specify, if known: _____
___ Not specified

Organ(s) Included (if applicable):
Specify: _____

Tumor Size
Greatest dimension: ___cm
*Additional dimensions: ____ x ____cm
___ Cannot be determined (see Comment)

MICROSCOPIC

Histologic Type
___ Malignant mesothelioma, epithelial
___ Malignant mesothelioma, sarcomatous (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):
_____
___ Desmoplastic small round cell tumor
___ Other (specify): _____
___ Malignant tumor, type cannot be determined

* Data elements ***with asterisks*** are ***not required*** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

Histologic Grade
___ Not applicable (borderline neoplasms and mesotheliomas)
___ GX: Cannot be assessed
___ G1: Well differentiated
___ G2: Moderately differentiated
___ G3: Poorly differentiated
___ Other (specify): _____

***Venous/Lymphatic (Large/Small Vessel) Invasion (V/L)**
*___ Absent
*___ Present
*___ Indeterminate

***Additional Pathologic Findings (check all that apply)**
*___ None
*___ Ferruginous bodies
*___ Endosalpingiosis
*___ Endometriosis
*___ Other (specify): _____

***Comment(s)**

* Data elements ***with asterisks*** are ***not required*** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

Background Documentation

Protocol revision date: January 2004

I. Cytologic Material

A. Clinical Information

1. Patient identification
   a. Name
   b. Identification number
   c. Age (birth date)
   d. Sex
   e. Location (eg, ward, clinic, office)
2. Responsible physician(s)
3. Date of procedure
4. Clinical information
   a. Relevant history
      (1) present/past occupation
      (2) asbestos exposure
      (3) radiation exposure
      (4) evidence of tumor(s) elsewhere
      (5) prior tumor(s)
      (6) prior operation(s)
   b. Relevant findings (eg, radiologic studies, laboratory data, ascites [duration])
   c. Clinical diagnosis
   d. Operative findings (eg, unifocal, multifocal, or diffuse)
   e. Type(s) or site(s) of specimen(s)
      (1) ascitic fluid
      (2) peritoneal washings (specify site[s])
      (3) brushings (specify site[s])
      (4) fine-needle aspirate (specify site[s])
      (5) cytology preparation of tissue (touch preparation) (specify site[s])
      (6) other

B. Macroscopic Examination

1. Specimen
   a. Unfixed/fixed (specify fixative)
   b. Number of slides received, if appropriate
   c. Quantity and appearance of fluid specimen, if appropriate
   d. Other (eg, cytologic preparation from tissue)
2. Material submitted for microscopic evaluation (eg, smear, cytocentrifuge, touch or filter preparation, cell block)

C. Microscopic Examination

1. Adequacy of specimen for evaluation (if unsatisfactory or limited, specify reason)
2. Tumor, if present
   a. Histologic type, if possible (Note **A**)
   b. Other characteristics (eg, grade, necrosis) (Note **B**)
3. Additional cytologic findings
4. Special studies (specify) (eg, cytochemistry, immunocytochemistry, electron microscopy, asbestos fiber count) (Note **C**)

5. Pathologic stage (Note **D**)
6. Comments
    a. Correlation with intraprocedural consultation, as appropriate
    b. Correlation with other specimens, as appropriate
    c. Correlation with clinical information, as appropriate

II. Biopsy

A. Clinical Information

1. Patient identification
    a. Name
    b. Identification number
    c. Age (birth date)
    d. Sex
    e. Location (eg, ward, clinic, office)
2. Responsible physician(s)
3. Date of procedure
4. Clinical information
    a. Relevant history
        (1) present/past occupation
        (2) asbestos exposure
        (3) radiation exposure
        (4) evidence of tumor(s) elsewhere
        (5) prior tumor(s)
        (6) prior operation(s)
    b. Relevant findings (eg, radiologic studies, laboratory data, ascites [duration])
    c. Clinical diagnosis
    d. Procedure
    e. Operative findings (eg, unifocal, multifocal, or diffuse)
    f. Anatomic site(s) of specimen(s)

B. Macroscopic Examination

1. Specimen
    a. Unfixed/fixed (specify fixative)
    b. Number of pieces
    c. Size or size range
    d. Descriptive features
2. Submit entire specimen(s) for microscopic evaluation
3. Results of intraoperative consultation

C. Microscopic Examination

1. Tumor
    a. Histologic type (Note **A**)
    b. Histologic grade, if appropriate (Note **B**)
    c. Other features of possible prognostic or therapeutic significance
2. Additional pathologic findings (eg, endosalpingiosis and relation to tumor, if pertinent)
3. Special studies (specify) (eg, histochemistry, immunohistochemistry, electron microscopy, asbestos fiber count) (Note **C**)
4. Pathologic stage (Note **D**)
5. Comments
    a. Correlation with intraprocedural consultation

b. Correlation with other specimens, as appropriate
c. Correlation with clinical information, as appropriate

III. Resection

A. Clinical Information

1. Patient identification
   a. Name
   b. Identification number
   c. Age (birth date)
   d. Sex
   e. Location (eg, ward, clinic, office)
2. Responsible physician(s)
3. Date of procedure
4. Clinical information
   a. Relevant history
      (1) present/past occupation
      (2) asbestos exposure
      (3) radiation exposure
      (4) evidence of tumor(s) elsewhere
      (5) prior tumor(s)
      (6) prior operation(s)
   b. Relevant findings (eg, radiologic studies, laboratory data, ascites [duration])
   c. Clinical diagnosis
   d. Procedure
   e. Operative findings (eg, unifocal, multifocal, or diffuse)
   f. Anatomic site(s) of specimen(s)

B. Macroscopic Examination

1. Specimen
   a. Organs/tissues received (specify)
   b. Unfixed/fixed (specify fixative)
   c. Number of pieces
   d. Dimensions (measure attached tissues individually)
   e. Orientation of specimen, if indicated by surgeon
   f. Descriptive features
      (1) peritoneal tissue(s)
         i. outer surface (normal, adhesions, roughening, granularity, tumor)
         ii. sectioned surface(s)
         iii. size of tumor, if different from size of entire specimen; descriptive features; identification of areas for special study (eg, resection margin[s], if pertinent)
         iv. other lesions
      (2) organ(s) removed
         i. outer surface (normal, adhesions, roughening, granularity, tumor)
         ii. sectioned surface
            (a) tumor(s) dimension(s) and distribution on or within organ, descriptive features, identification of areas for special study (eg, resection margin[s], if pertinent)
            (b) other lesions
2. Tissues submitted for microscopic evaluation

C. Microscopic Examination

1. Tumor
   a. Histologic type (Note **A**)
   b. Histologic grade, if appropriate (Note **B**)
   c. Other features of possible prognostic or therapeutic significance (eg, localized, diffuse)
2. Status of resection margins, if pertinent
3. Additional pathologic findings (eg, endosalpingiosis)
4. Special studies (specify) (eg, histochemistry, immunohistochemistry, electron microscopy, asbestos fiber count)
5. Pathologic stage (Note **D**)
6. Comments
   a. Correlation with intraprocedural consultation, as appropriate
   b. Correlation with other specimens, as appropriate
   c. Correlation with clinical information, as appropriate

Explanatory Notes

A. Histologic Type

This protocol refers only to primary borderline and malignant epithelial tumors of the peritoneum. Secondary tumors, for example, those causing pseudomyxoma peritoneii (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
  - Epithelial type
  - Sarcomatous type
  - Biphasic type
  - Rare types[#]
- Serous tumor of borderline malignancy (of low malignant potential)[1,2 ##]
- Serous carcinoma[3-5 ###]
- Malignant tumors of other Mullerian types
- Desmoplastic small round cell tumor
- Sarcomas

[#] Rare types include desmoplastic, small cell, lymphohistiocytoid, deciduoid, and undifferentiated types.

[##] 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.

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 judgement of the surgeon and the pathologist, the bulk of the tumor is on 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. 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)

C. 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, 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.)

D. Staging of Peritoneal Tumors

There is no widely accepted staging system for peritoneal tumors, but their extent may have prognostic significance.[6] Thus, it is important to determine whether a mesothelioma is unifocal, multifocal, or diffuse[7]; 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.)

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