Protocol for the Examination of Lymphadenectomy Specimens From Patients With Malignant Germ Cell and Sex Cord-Stromal Tumors of the Testis

Version: 4.1.0.0
Protocol Posting Date: June 2021

The use of this protocol is recommended for clinical care purposes but is not required for accreditation purposes.

This protocol should be used for the following procedures AND tumor types:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lymphadenectomy</td>
<td>Includes specimens designated retroperitoneal lymphadenectomy</td>
</tr>
<tr>
<td>Tumor Type</td>
<td>Description</td>
</tr>
<tr>
<td>Germ cell tumors</td>
<td>Includes seminoma and variants, all non-seminomatous germ cell tumors, mixed germ cell tumors, Leydig cell tumors, Sertoli cell tumors, granulosa cell tumors, and placental site trophoblastic tumors</td>
</tr>
<tr>
<td>Sex cord-stromal tumors</td>
<td>Includes Leydig cell tumors, Sertoli cell tumors, granulosa cell tumors, and mixed sex cord tumors</td>
</tr>
</tbody>
</table>

The following should NOT be reported using this protocol:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radical orchietectomy (consider Testis Radical Orchiectomy protocol)</td>
<td></td>
</tr>
<tr>
<td>Tumor Type</td>
<td>Description</td>
</tr>
<tr>
<td>Paratesticular malignancies (consider Soft Tissue protocol)</td>
<td></td>
</tr>
<tr>
<td>Non-testis germ cell tumors (consider Extragonadal Germ Cell protocol)</td>
<td></td>
</tr>
<tr>
<td>Lymphoma (consider the Hodgkin or non-Hodgkin Lymphoma protocols)</td>
<td></td>
</tr>
<tr>
<td>Sarcoma (consider the Soft Tissue protocol)</td>
<td></td>
</tr>
</tbody>
</table>

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With guidance from the CAP Cancer and CAP Pathology Electronic Reporting Committees.

* Denotes primary author.
Accreditation Requirements
The use of this case summary is recommended for clinical care purposes but is not required for accreditation purposes. The core and conditional data elements are routinely reported. Non-core data elements are indicated with a plus sign (+) to allow for reporting information that may be of clinical value.

Summary of Changes

v 4.1.0.0

- General Reformatting
- Removed Prelymphadenectomy Treatment
- Revised Lymph Nodes Section
- Removed pNX Staging Classification
Reporting Template

Protocol Posting Date: June 2021
Select a single response unless otherwise indicated.

CASE SUMMARY: (TESTIS: Retroperitoneal Lymphadenectomy)
Standard(s): AJCC-UICC 8
This template is recommended for reporting retroperitoneal lymphadenectomy specimens, but is not required for accreditation purposes.

CLINICAL

+Prelymphadenectomy Treatment (select all that apply)
  ___ No known preresection therapy
  ___ Chemotherapy performed
  ___ Radiation therapy performed
  ___ Therapy performed, type not specified
  ___ Not specified

SPECIMEN

+Regional Nodal Site(s) Examined (specify): _________________
+Number of Regional Nodal Groups Examined
  ___ Specify number: _________________
  ___ Other (specify): _________________
  ___ Cannot be determined: _________________
+Nonregional Nodal Site(s) Examined (specify): _________________
+Number of Nonregional Nodal Groups Examined
  ___ Specify number: _________________
  ___ Other (specify): _________________
  ___ Cannot be determined: _________________

TUMOR

Histologic Type of Metastatic Tumor (Note A)
  ___ Seminoma
  ___ Seminoma with syncytiotrophoblastic cells
  ___ Embryonal carcinoma
  ___ Yolk sac tumor, postpubertal type
  ___ Choriocarcinoma
  ___ Mixed germ cell tumor (specify components and approximate percentages): _________________
  ___ Non-choriocarcinomatous trophoblastic tumor, NOS
  ___ Placental site trophoblastic tumor
  ___ Epithelioid trophoblastic tumor
  ___ Cystic trophoblastic tumor
  ___ Teratoma, postpubertal type
  ___ Teratoma with somatic-type malignancy (specify type): _________________
<table>
<thead>
<tr>
<th>Spermatocytic tumor</th>
<th>Spermatocytic tumor with a sarcomatous component</th>
<th>Well-differentiated neuroendocrine tumor (monodermal teratoma)</th>
<th>Other histologic type not listed (specify): _________________</th>
<th>Cannot be determined: _________________</th>
</tr>
</thead>
</table>

**Histologic Type Comment:** _________________

**Histologic Viability of Tumor (if applicable) (select all that apply)**

<table>
<thead>
<tr>
<th>Not applicable</th>
<th>Viable teratoma present</th>
<th>Viable non-teratomatous tumor present</th>
<th>Viable tumor not identified</th>
<th>Other (specify): _________________</th>
<th>Cannot be determined: _________________</th>
</tr>
</thead>
</table>

**LYMPH NODES**

**Regional Lymph Node Involvement**

**Number of Regional Lymph Nodes with Tumor**

<table>
<thead>
<tr>
<th>Exact number (specify): _________________</th>
<th>At least (specify): _________________</th>
<th>Other (specify): _________________</th>
<th>Cannot be determined (explain): _________________</th>
</tr>
</thead>
</table>

**Regional Nodal Site(s) with Tumor (select all that apply)**

|------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------------|-----------------------------------------------|

**Size of Largest Nodal Metastatic Deposit**

*Specify in Centimeters (cm)*

<table>
<thead>
<tr>
<th>Exact size: _________________ cm</th>
<th>At least: _________________ cm</th>
<th>Greater than: _________________ cm</th>
<th>Less than: _________________ cm</th>
<th>Other (specify): _________________</th>
<th>Cannot be determined (explain): _________________</th>
</tr>
</thead>
</table>

**Site of Largest Nodal Metastatic Deposit (select all that apply)**

| Interaortocaval | Paraaortic: _________________ | Paracaval: _________________ | Preaortic: _________________ | Retroaortic: _________________ | Retrocaval: _________________ |
___ Other (specify): _________________________
___ Cannot be determined: _________________________

**Size of Largest Lymph Node or Nodal Mass**

*Specify in Centimeters (cm)*

___ Exact size: _________________________ cm
___ At least: _________________________ cm
___ Greater than: _________________________ cm
___ Less than: _________________________ cm
___ Other (specify): _________________________
___ Cannot be determined (explain): _________________________

**Histologic Subtype of Germ Cell Tumor in Largest Involved Lymph Node (if applicable):**

_________________

**Extranodal Extension (ENE)**

___ Not identified
___ Present
___ Cannot be determined: _________________________

**Number of Regional Lymph Nodes Examined**

___ Exact number: _________________________
___ At least (specify): _________________________
___ Other (specify): _________________________
___ Cannot be determined (explain): _________________________

**Nonregional Lymph Node Status (Note B)**

___ All nonregional lymph nodes negative for tumor metastasis
___ Tumor metastasis present in nonregional lymph node(s) (M1a, AJCC 8th edition)

+**Number of Nonregional Lymph Nodes with Tumor**

___ Exact number (specify): _________________________
___ At least (specify): _________________________
___ Other (specify): _________________________
___ Cannot be determined (explain): _________________________

+**Nonregional Nodal Site(s) with Tumor:** _________________________

+**Number of Nonregional Lymph Nodes Examined**

___ Exact number (specify): _________________________
___ At least (specify): _________________________
___ Other (specify): _________________________
___ Cannot be determined (explain): _________________________
___ Other (specify): _________________________
___ Cannot be determined (explain): _________________________
___ Not applicable
PATHOLOGIC STAGE CLASSIFICATION (pN, AJCC 8th Edition)
Reporting of pN category is based on information available to the pathologist at the time the report is issued. As per the AJCC (Chapter 1, 8th Ed.) it is the managing physician’s responsibility to establish the final pathologic stage based upon all pertinent information, including but potentially not limited to this pathology report.

N Descriptors (select all that apply)
___ Not applicable: __________________
___ r (recurrent)
___ y (post-treatment)

pN Category
___ pN not assigned (cannot be determined based on available pathological information)
___ pN0: No regional lymph node metastasis
___ pN1: Metastasis with a lymph node mass 2 cm or smaller in greatest dimension and less than or equal to five nodes positive, none larger than 2 cm in greatest dimension
___ pN2: Metastasis with a lymph node mass larger than 2 cm but not larger than 5 cm in greatest dimension; or more than five nodes positive, none larger than 5 cm; or evidence of extranodal extension of tumor
___ pN3: Metastasis with a lymph node mass larger than 5 cm in greatest dimension

COMMENTS
Comment(s): __________________
A. Histologic Type
The protocol mainly applies to malignant tumors of the testis, the vast majority of which are of germ cell origin. It may also be applied to other malignant or potentially malignant tumors of the testis included in the classification shown below. For hematolymphoid neoplasms involving the testis, refer to the corresponding CAP protocols.

World Health Organization (WHO) Histologic Classification of Testicular Tumors (2016)

Germ Cell Tumors Derived From Germ Cell Neoplasia In Situ

Noninvasive germ cell neoplasia
- Germ cell neoplasia in situ
- Specific forms of intratubular germ cell neoplasia

Tumors of a single histologic type (pure forms)
- Seminoma
- Seminoma with syncytiotrophoblastic cells

Nonseminomatous germ cell tumors
- Embryonal carcinoma
- Yolk sac tumor, postpubertal type
- Trophoblastic tumors
  - Choriocarcinoma
  - Nonchoriocarcinomatous trophoblastic tumors
  - Placental site trophoblastic tumor
  - Epidermoid trophoblastic tumor
  - Cystic trophoblastic tumor
- Teratoma, postpubertal type
- Teratoma with somatic-type malignancy

Nonseminomatous germ cell tumors of more than one histologic type
- Mixed germ cell tumor

Germ cell tumors of unknown type
- Regressed germ cell tumor

Germ Cell Tumors Unrelated to Germ Cell Neoplasia In Situ
- Spermatocytic tumor
- Teratoma, prepubertal type
Dermoid cyst
Epidermoid cyst
Well-differentiated neuroendocrine tumor (monodermal teratoma)
Yolk sac tumor, prepubertal type
Mixed teratoma and yolk sac tumor, prepubertal type
York sac tumor, prepubertal type

**Sex Cord-Stromal Tumors**

*Pure tumors*

Leydig cell tumor
  - Malignant Leydig cell tumor
Sertoli cell tumor
  - Malignant Sertoli cell tumor
  - Large cell calcifying Sertoli cell tumor
  - Intratubular large cell hyalinizing Sertoli cell neoplasia
Granulosa cell tumor
  - Adult granulosa cell tumor
  - Juvenile granulosa cell tumor

**Tumors in the fibroma-thecoma group**

*Mixed and unclassified sex cord stromal tumor*

  - Mixed sex cord-stromal tumor
  - Unclassified sex cord-stromal tumor

**Tumor Containing Both Germ Cell and Sex Cord-Stromal Elements**

Gonadoblastoma

**Miscellaneous**

Ovarian epithelial-type tumors
  - Serous cystadenoma
  - Serous tumor of borderline malignancy
  - Serous cystadenocarcinoma
  - Mucinous cystadenoma
  - Mucinous borderline tumor
  - Mucinous cystadenocarcinoma
Endometrioid adenocarcinoma
Clear cell adenocarcinoma
Brenner tumor
Juvenile xanthogranuloma
Hemangioma
Hematolymphoid Tumors
Diffuse large B-cell lymphoma
Follicular lymphoma
Extranodal Ni/T-cell lymphoma, nasal type
Plasmacytoma
Myeloid sarcoma
Rosai-Dorfman disease
Tumors of Collecting Duct and Rete Testis
Adenoma
Adenocarcinoma
Tumors of Paratesticular Structures
Adenomatoid tumor
Mesothelioma
Well-differentiated papillary mesothelioma
Epididymal tumors
Cystadenoma of the epididymis
Papillary cystadenoma
Adenocarcinoma of the epididymis
Squamous cell carcinoma
Melanotic neuroectodermal tumor
Nephroblastoma
Paraganglioma
Mesenchymal Tumors of the Spermatic Cord and Testicular Adnexa
Apipocytic tumors
Lipoma
Well-differentiated liposarcoma
Dedifferentiated liposarcoma
Myxoid liposarcoma
Pleomorphic liposarcoma

References

B. Metastatic Tumor
Often the most important distinction in patients with metastatic testicular germ cell tumor following initial chemotherapy is the differentiation of metastatic residual teratoma from nonteratomatous types of germ cell tumor. Pure teratomatous metastasis is generally treated by surgical excision alone, whereas patients who have other residual germ cell tumor components are usually treated with additional chemotherapy.