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

Version: 4.2.0.0
Protocol Posting Date: September 2023

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>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germ cell tumors</td>
<td>Includes seminoma and variants, all non-seminomatous germ cell tumors, Leydig cell tumors</td>
</tr>
<tr>
<td>Malignant 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 orchiectomy (consider Testis Radical Orchietomy protocol)</td>
<td></td>
</tr>
<tr>
<td>Paratesticular malignancies including appendageal, mesothelial, and soft tissue tumors (consider Soft Tissue protocol)</td>
<td></td>
</tr>
<tr>
<td>Non-testis germ cell tumors (consider Extranongadal 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 4.2.0.0
- WHO 5th Edition update to content and Explanatory Notes
- pNM Classification update
Reporting Template
Protocol Posting Date: September 2023
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) (select all that apply)
  ___ Seminoma (specify percent): _________________ %
  ___ Seminoma with syncytiotrophoblastic cells (specify percent): _________________ %
  ___ Embryonal carcinoma (specify percent): _________________ %
  ___ Yolk sac tumor, postpubertal-type (specify percent): _________________ %
  ___ Choriocarcinoma (specify percent): _________________ %
  ___ Placental site trophoblastic tumor (specify percent): _________________ %
  ___ Epithelioid trophoblastic tumor (specify percent): _________________ %
  ___ Cystic trophoblastic tumor (specify percent): _________________ %
  ___ Teratoma, postpubertal-type (specify percent): _________________ %
  ___ Teratoma with somatic-type malignancy
  Select all that apply
    ___ Adenocarcinoma
    ___ Embryonic-type neuroectodermal tumor
___ Rhabdomyosarcoma
___ Other (specify): __________________________
___ Spermatocytic tumor
___ Spermatocytic tumor with a sarcomatous component
___ Yolk sac tumor, prepubertal-type
___ Leydig cell tumor
___ Sertoli cell tumor
___ Sertoli cell tumor, large cell calcifying
___ Granulosa cell tumor, adult type
___ Sex cord-stromal tumor type, mixed
___ Sex cord-stromal tumor type, unclassified
___ Other histologic type not listed (specify): __________________________
___ Cannot be determined: __________________________

+Histologic Type Comment: __________________________

Histologic Viability of Tumor (if applicable) (select all that apply)
___ Not applicable
___ Viable teratoma present
___ Viable non-teratomatous tumor present
___ Viable tumor not identified
___ Other (specify): __________________________
___ Cannot be determined: __________________________

LYMPH NODES (Note B)
Regional Lymph Node Involvement
Number of Regional Lymph Nodes with Tumor
___ Exact number (specify): __________________________
___ At least (specify): __________________________
___ Other (specify): __________________________
___ Cannot be determined (explain): __________________________
Regional Nodal Site(s) with Tumor (select all that apply)
___ Interaortocaval: __________________________
___ Paraaortic: __________________________
___ Paracaval: __________________________
___ Preaortic: __________________________
___ Precaval: __________________________
___ Retroaortic: __________________________
___ Retrocaval: __________________________
___ Other (specify): __________________________
___ Cannot be determined: __________________________

+Size of Largest Nodal Metastatic Deposit
Specify in Centimeters (cm)
___ Exact size: __________________________ cm
___ At least (specify): __________________________ cm
___ Greater than: __________________________ cm
___ Less than: __________________________ cm
___ Other (specify): __________________________
___ Cannot be determined (explain): __________________________
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 (specify): ______________ cm
___ Greater than: ______________ cm
___ Less than: ______________ cm
___ Other (specify): ___________________
___ Cannot be determined (explain): ___________________

Histologic Subtype of 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 (specify): _________________
___ 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

pNM CLASSIFICATION (AJCC 8th Edition)
Reporting of pN and (when applicable) pM 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.

Modified Classification (required only if applicable) (select all that apply)
___ Not applicable
___ y (post-neoadjuvant therapy)
___ r (recurrence)

**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

**pM Category (required only if confirmed pathologically)**
___ Not applicable - pM cannot be determined from the submitted specimen(s)
___ pM1: Distant metastasis
   ___ pM1a: Non-retroperitoneal nodal or pulmonary metastases
   ___ pM1b: Non-pulmonary visceral metastases
___ pM1 (subcategory cannot be determined)

**COMMENTS**

Comment(s): _________________
Explanatory Notes

A. Histologic Type
The protocol mainly applies to metastatic tumors of the testis, the vast majority of which are of germ cell origin. It may also be applied to metastatic sex cord stromal tumors of the testis included in the classification shown below.

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, unless accompanied by somatic-type malignancy, is generally treated by surgical excision alone, whereas patients who have other residual germ cell tumor components are usually treated with additional chemotherapy.

2022 WHO Classification of Testicular Tumors

Germ cell tumors derived from germ cell neoplasia in situ
Non-invasive germ cell neoplasia
Germ cell neoplasia in situ
Specific forms of intratubular germ cell neoplasia
Gonadoblastoma
The germinoma family of tumors
Seminoma
Non-seminomatous germ cell tumors
Embryonal carcinoma
Yolk sac tumor, postpubertal-type
Choriocarcinoma
Placental site trophoblastic tumor
Epithelioid trophoblastic tumor
Cystic trophoblastic tumor
Teratoma, postpubertal-type
Teratoma with somatic-type malignancy
Mixed germ cell tumors of the testis
Mixed germ cell tumors
Germ cell tumors of unknown type
Regressed germ cell tumors
Germ cell tumors unrelated to germ cell neoplasia in situ
Spermatocytic tumor
Yolk sac tumor, prepubertal-type
Testicular neuroendocrine tumor, prepubertal-type
Mixed teratoma and yolk sac tumor, prepubertal-type

Sex cord-stromal tumors of the testis
Leydig cell tumor
Leydig cell tumor
Sertoli cell tumors
Sertoli cell tumor
Large cell calcifying Sertoli cell tumor
Granulosa cell tumors
Adult granulosa cell tumor
Mixed and other sex cord-stromal tumors
Mixed sex cord-stromal tumor
Sex cord stromal tumor NOS

References

B. Lymph Nodes
The testicular lymphatic drainage follows the testicular veins in the spermatic cord and drains into the retroperitoneal lumbar nodes (Figures 1 and 2). These lymph nodes, i.e., interaortocaval, paraaortic, periaortic, paracaval, preaortic, precaval, retroaortic, and retrocaval are considered regional lymph nodes, usually termed “landing zones” of testicular tumors. The intrapelvic, external iliac, and inguinal lymph nodes can be considered regional if there is bulky lumbar lymphadenopathy, if the tumor extends to the scrotum, or if there is prior scrotal or inguinal surgery. Nodes along the spermatic vein are also considered regional. All nodes outside the regional nodes, including the nodes above the diaphragm, are considered non-regional and their involvement should be labeled as M1a.

![Figure 1](image)

The **N** categories are distinguished by the size of lymph node mass and/or number of positive lymph nodes. The size cut-offs in the N category refer to the size of the involved lymph node on imaging or by histological examination and not the size of the metastatic deposit.

### References


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