COLLEGE of AMERICAN PATHOLOGISTS

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

Version: Testis Lymphadenectomy 4.0.1.1 **Protocol Posting Date:** February 2019

Accreditation Requirements
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:

Procedure	Description
Lymphadenectomy	Includes specimens designated retroperitoneal lymphadenectomy
Tumor Type	**Description**
Germ cell tumors	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
Sex cord-stromal tumors	Includes Leydig cell tumors, Sertoli cell tumors, granulosa cell tumors, and mixed sex cord tumors

The following should NOT be reported using this protocol:

Procedure
Radical orchiectomy (consider Testis Radical Orchiectomy protocol)
Tumor Type
Paratesticular malignancies (consider Soft Tissue protocol)
Non-testis germ cell tumors (consider Extragonadal Germ Cell protocol)
Lymphoma (consider the Hodgkin or non-Hodgkin Lymphoma protocols)
Sarcoma (consider the Soft Tissue protocol)

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

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Summary of Changes
Version 4.0.1.1:
Separated Retroperitoneal Lymphadenectomy and Radical Orchiectomy into individual protocols

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Surgical Pathology Cancer Case Summary

Protocol posting date: February 2019

TESTIS: Retroperitoneal Lymphadenectomy

Notes:
This case summary is recommended for reporting lymphadenectomy specimens but is NOT REQUIRED for accreditation purposes. Core data elements are bolded to help identify routinely reported elements.

Select a single response unless otherwise indicated.

Specimen Site(s)**:** _____

Prelymphadenectomy Treatment
___ Chemo/radiation therapy
___ No chemo/radiation therapy
___ Unknown

Number of Nodal Groups Present: ____

Histologic Viability of Tumor (if applicable) (select all that apply)
___ Viable teratoma present
___ Viable nonteratomatous tumor present
___ No viable tumor present

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): _____
___ Spermatocytic tumor
___ Spermatocytic tumor with a sarcomatous component
___ Well-differentiated neuroendocrine tumor (monodermal teratoma)
___ Other histologic type not listed (specify): _____

Regional Lymph Nodes
Number of Lymph Nodes Involved: _____
Specify Site(s)(if applicable): _____
Note: Sites may include interaortocaval, paraaortic, paracaval, preaortic, precaval, retroaortic, retrocaval, or other lymph nodes.

Lymph Node Metastasis (required only if lymph nodes involved)
Size of Largest Lymph Node (or Nodal Mass) Involved (centimeters): ___ cm

Size of Largest Metastatic Deposit (centimeters): ___ cm
Specify Site: _____

Extranodal Extension (ENE)
___ Not identified
___ Present
___ Cannot be determined

Histologic subtype of germ cell tumor in involved largest lymph node(s) (if applicable, specify):
_____

Number of Lymph Nodes Examined: _____

Nonregional Lymph Node Metastasis (M1a, AJCC 8th Edition) (Note B)
___ Not applicable
___ Not identified
___ Present
Number of Lymph Nodes Involved: _____
Specify site(s): _____

Number of Lymph Nodes Examined: _____

Pathologic Stage Classification (pN, AJCC 8th Edition)

N Descriptors (required only if applicable) (select all that apply)
___ r (recurrent)
___ y (posttreatment)

Regional Lymph Nodes (pN, AJCC 8th Edition)
Note: Reporting of pN category is based on information available to the pathologist at the time the report is issued.
___ pNX: Regional lymph nodes cannot be assessed
___ 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

Comment(s)

Explanatory Notes

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.[1-12] For hematolymphoid neoplasms involving the testis, refer to the corresponding CAP protocols.

World Health Organization (WHO) Histologic Classification of Testicular Tumors (2016)[13]

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

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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.