**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:**

|  |  |
| --- | --- |
| **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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**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**](#2182)**)**

\_\_\_ 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): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_ 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**

**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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 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**](#2183)**)**

\_\_\_ 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): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**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,](#8501)[2,](#8502)[3,](#8503)[4,](#8504)[5,](#8505)[6,](#8506)[7,](#8507)[8,](#8508)[9,](#8509)[10,](#8510)[11,](#8511)[12](#8512) For hematolymphoid neoplasms involving the testis, refer to the corresponding CAP protocols.

**World Health Organization (WHO) Histologic Classification of Testicular Tumors (2016)**[13](#8513)

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.