TABLE OF CONTENTS

Suspicious Testicular Cancer .................................................. Page 2
Pure Seminoma: Workup and Clinical Stage ................................ Page 3
Stage I Pure Seminoma: Post-orchiectomy Management ............... Page 4
Advanced Seminoma: Management ............................................. Page 5
Seminoma: Treatment and Follow-up ....................................... Page 6
Nonseminomatous Germ Cell Tumor (NSGCT): Workup and Clinical Stage ……… Page 7
Stage I Nonseminoma: Post-orchiectomy Management .................. Page 8
Stage IIA, IIB, IIC, IIIA, IIIB Nonseminoma: Post-orchiectomy Management … Page 9
Stage IIC (Poor Prognosis) Nonsemimoma: Initial Management ............ Page 10
Nonseminoma: Post-chemotherapy Management .......................... Page 11
Nonseminoma: Post-chemotherapy Recurrence ............................ Page 12
APPENDIX B: IA, IB Nonsemimoma Surveillance .......................... Page 14
APPENDIX C: Nonsemimoma Surveillance after Complete Response to
Chemotherapy and/or Retroperitoneal Lymph Node Dissection (RPLND) .... Page 14
Suggested Readings ................................................................. Pages 15-16
Development Credits .............................................................. Page 17
**Testicular Cancer**  **Suspicious Testicular Cancer**

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

**Note:** Consider Clinical Trials as treatment options for eligible patients.

---

### CLINICAL PRESENTATION
- History and physical
- Lifestyle risk assessment
- Alpha-fetoprotein (AFP)
- Beta-hCG (quantitative)
- Testosterone
- Sodium, potassium, chloride, CO₂, BUN, creatinine, magnesium, total bilirubin, AST, ALT, alkaline phosphatase, albumin, calcium, uric acid, phosphorus, and total LDH
- Scrotal ultrasound
- Chest x-ray

### INITIAL EVALUATION

**Suspicious testicular mass**

**Solid intratesticular mass on ultrasound?**

Yes → **Radical inguinal orchiectomy**
- Evaluate contralateral testicle
- Discuss sperm banking

No → **Consider other etiologies**

---

### TUMOR HISTOLOGY

- Pure seminoma (and normal AFP)
  - See Page 3: Pure Seminoma: Workup and Clinical Stage

- Mixed or nonseminomatous germ cell tumor (NSGCT) histology
  - See Page 7: NSGCT: Workup and Clinical Stage

- Stromal cell testicular tumor
  - Management according to tumor type

---

1 See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice.
**HISTOLOGY**  
**FURTHER WORK-UP**

Pure seminoma
- Repeat AFP, beta-hCG, and LDH
- CT abdomen and pelvis with contrast
- CT chest if abnormal chest x-ray or involved lymph nodes on CT of abdomen/pelvis
- Bone scan if clinically indicated
- Brain imaging if clinically indicated
- Discuss sperm banking

---

**AFP within normal limits?**
- Yes
  - Imaging negative for metastasis?
    - Yes
      - Suspect unrelated source of non-specific AFP?
        - Yes
          - See Page 7: NSGCT Workup and Clinical Stage
        - No
          - Extra-pulmonary metastases in bone, liver or brain?
            - Yes
              - Intermediate Prognosis
                - See Page 5: Advanced Seminoma: Management
            - No
              - Good Prognosis
                - See Page 6: Seminoma: Treatment and Follow-up
    - No
      - Post-operative beta-hCG or LDH elevated?
        - Yes
          - Consider occult metastasis or performing PET scan
        - No
          - Stage I Good Prognosis
            - See Page 4: Stage I Pure Seminoma: Post-orchiectomy Management

---

Note: Consider Clinical Trials as treatment options for eligible patients.

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

1 See Appendix A for International Classifications of Germ Cell Cancer
TUMOR MARKERS AND STAGING

Stage IS:
- Beta-hCG or AFP elevated and Metastatic workup negative

Consider sperm banking

Any of the following present?
- Horseshoe or pelvic kidney
- Inflammatory bowel disease
- Prior radiation therapy

Most patients with clinical stage IA pure seminoma can be offered three options:
- Surveillance or
- Single-dose carboplatin AUC = 7 or
- Adjuvant carboplatin (AUC = 7) for 1 or 2 cycles

Consider sperm banking

Primary tumor > 4 cm or pT3-4?

Yes

No

See Page 6:
Seminoma: Treatment and Follow-up

TREATMENT
CLINICAL STAGE/TREATMENT

IIC or III

Good Prognosis

EP for 4 cycles

Intermediate Prognosis

VIP for 4 cycles

RESPONSE TO TREATMENT

Complete response

Partial response

Progression

FOLLOW-UP

• History and physical, tumor markers (AFP, beta-hCG, LDH), CT abdomen/pelvis with and without contrast every 4 months for year 1, then every 6 months for year 2, then annually for up to 10 years

• Chest x-ray at alternate visits

• PET scan if possible progression with disseminated disease

PET negative

PET positive or not feasible

See Page 12: Nonseminoma: Post-chemotherapy Recurrence

Consider:
• Radiation therapy or
• Biopsy or
• Surveillance if < 3 cm

EP = etoposide and cisplatin
VIP = etoposide, ifosfamide, and cisplatin
1 See Appendix A: International Classifications of Germ Cell Cancers
2 Seminoma that is refractory to chemotherapy is rare and should be managed as nonseminoma
**Testicular Cancer**

Seminoma: Treatment and Follow-up

---

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

---

**Note:** Consider Clinical Trials as treatment options for eligible patients.

---

**CLINICAL STAGE**

- IA or IB
  - No adjuvant therapy
  - Adjuvant chemotherapy or radiation therapy
- IS
- IIA or IIB
  - After radiation therapy or post chemotherapy
- Bulky IIB, IIC, and IIIC
  - Post chemotherapy

---

**TREATMENT**

- Non-Bulky
  - History and physical, every 3-6 months for year 1, then every 6 months for years 2, then every 6-12 months for year 3, then annually for years 4 and 5
  - CT abdomen/pelvis with and without contrast annually for years 1-5
  - Chest x-ray as clinically indicated; consider CT chest with contrast if symptomatic

- Bulky IIB, IIC, and IIIC
  - History and physical, every 3 months for year 1, then every 6 months for years 1-5
  - CT abdomen/pelvis with and without contrast annually for years 1-3
  - Chest x-ray as clinically indicated; consider CT chest with contrast if symptomatic

---

**FOLLOW-UP**

- History and physical, every 3 months for year 1, then every 6 months for years 1-2, then annually for years 3-5
- CT abdomen/pelvis with and without contrast every 4 months for year 1, then every 6 months for years 1-2, then annually for years 3-5
- Chest x-ray as clinically indicated; consider CT chest with contrast if symptomatic

---

**RECURRENCE**

- Tumor recurrence?
  - Yes
    - Treat according to histology and stage (post-orchiectomy management)
  - No
    - Continue follow-up as indicated

---

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

---

**Note:** Consider Clinical Trials as treatment options for eligible patients.

---

**Copyright 2020 The University of Texas MD Anderson Cancer Center**

**Department of Clinical Effectiveness V7**

Approved by the Executive Committee of the Medical Staff on 01/21/2020
**HISTOLOGY**

- Repeat AFP, beta-hCG, and LDH
- CT abdomen and pelvis with contrast
- CT chest if embryonal carcinoma-predominant or abnormal chest x-ray, or abnormal CT of abdomen/pelvis
- Bone scan if clinically indicated
- Brain imaging if clinically indicated
- Discuss sperm banking
- Pulmonary function test (PFT) if bleomycin based treatment planned

---

**FURTHER WORK-UP**

Mixed or NSGCT

- Imaging negative for metastasis?
  - Yes
    - Tumor markers normalize with appropriate half-life?
      - Yes
        - Stage I: Good Prognosis
      - No
        - Stage IS: Good Prognosis
  - No
    - Symptomatic from metastases (brain, lung, retroperitoneal mass)?
      - Yes
        - Consider emergency chemotherapy followed by treatment based on stage and prognosis.
      - No
        - No

---

1. See Appendix A: International Classifications of Germ Cell Cancer
2. It is acceptable to administer emergency chemotherapy to selected patients with advanced metastatic NSGCT on the basis of clinical presentation before orchiectomy, and without a tissue diagnosis.

---

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.
TUMOR MARKERS AND STAGING

- Any pT/Tx
- N0
- M0
- S1-3

Stage IS:
- Beta-hCG or AFP elevated
- Metastatic workup negative

Consider sperm banking

2 cycles BEP

See Page 11: Nonseminoma: Post-chemotherapy Management

MANAGEMENT OPTIONS

Consider management options:
- Surveillance (in compliant patients, pT1-2)
- Adjuvant chemotherapy (1-2 cycles BEP)

Yes

Consider sperm banking

Embryonal carcinoma predominant?

Yes

Consider management options:
- Surveillance (in compliant patients, pT1-2)
- Prophylactic RPLND
- Adjuvant chemotherapy (1-2 cycles BEP)

No

Consider sperm banking

Average Risk – probability of recurrence is approximately 30%

Consider management options:
- Surveillance (in compliant patients)
- Prophylactic RPLND

High Risk – probability of recurrence is approximately 50%

Consider sperm banking

High Risk Features? Yes

Any pT/Tx
- N0
- M0
- S0

High Risk Features (in the primary tumor):
- Lymphovascular invasion
- Invasion of spermatic cord or scrotum (pT3-4)
- Invasion of tunica vaginalis
- Embryonal carcinoma predominant

BEP = bleomycin, etoposide, and cisplatin
RPLND = retroperitoneal lymph node dissection

Note: Consider Clinical Trials as treatment options for eligible patients.
**Pretreatment Workup**

- **Stage IIA, IIB**
  - Any pT/Tx
  - N1-3
  - M0 or N1-3, M0, S2
- **Stage IIC, IIIB, IIIC, IIIA, IIIB**
  - Any pT/Tx
  - Any pT/Tx
  - N1-3
  - M1a, S0-2
  - M0 or N1-3, S0-2

- **Stage IIB**
  - N0 (markers not elevated) and Teratoma component in primary tumor and Not embryonal carcinoma predominant tumor?

- **Stage IIC, IIIA**
  - Total LDH < 1.5 times upper limit of normal and Beta-hCG < 5,000 mIU/mL and AFP < 1,000 ng/mL?

  - **S1**
    - Total LDH < 1.5 times upper limit of normal
    - Beta-hCG < 5,000 mIU/mL and AFP < 1,000 ng/mL

  - **S2**
    - Total LDH 1.5-10 times upper limit of normal or Beta-hCG 5,000-50,000 mIU/mL or AFP 1,000-10,000 ng/mL

  - **S3**
    - Total LDH > 10 times upper limit of normal or Beta-hCG > 50,000 mIU/mL or AFP > 10,000 ng/mL

- **Stage IIB**
  - BEP for 3 cycles or EP for 4 cycles

- **Stage IIC, IIIA**
  - Surgical option: retroperitoneal lymph node dissection

- **Stage IIA**
  - Surveillance

- **Stage IIB**
  - EP for 2 cycles

- **Stage IIC, IIIA**
  - BEP for 3 cycles or Clinical trial

**Treatment**

- **See Appendix B:** IA, IB Nonseminoma Surveillance

- **See Page 11:** Nonseminoma: Post-chemotherapy Management

- **See Page 10:** Stage IIIC (Poor Prognosis) Nonseminoma: Initial Management

---

**Tumor Markers and Staging**

- **Stage IIA, IIB**
  - Any pT/Tx
  - N1-3
  - M0 or N1-3, M0, S2
- **Stage IIC, IIIA and IIIB**
  - Any pT/Tx
  - N1-3
  - M0 or N1-3, M0, S2

- **Baseline pulmonary function testing**
- **Consider baseline audiometry testing**
- **Consider sperm banking**

---

**Note:** Consider Clinical Trials as treatment options for eligible patients.

---

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

---

**Copyright 2020 The University of Texas MD Anderson Cancer Center**
TUMOR MARKERS AND STAGING

IIC, Poor Prognosis:
- Any pT/Tx, Any N, M1b¹, Any S
- Total LDH > 10 times upper limit of normal or
- Beta-hCG > 50,000 mIU/mL or
- AFP > 10,000 ng/mL

Respiratory distress or symptomatic brain metastases?

To avoid delay in the start of chemotherapy, the diagnosis can be made on clinical grounds and orchiectomy can be deferred.

Yes

Respiratory distress or symptomatic brain metastases?

No

Patient with respiratory distress

Patient with symptomatic brain metastases

Primary chemotherapy with or without surgery if clinically indicated

EP = etoposide and cisplatin
BEP = bleomycin, etoposide, and cisplatin
VIP = etoposide, ifosfamide, and cisplatin
TIP = paclitaxel, ifosfamide, and cisplatin

Vincristine and cisplatin

EP (limit to 3 days in unstable patient)

Baseline pulmonary function testing

Consider baseline audiometry testing

Consider sperm banking

Clinical trial preferred or

BEP for 4 cycles

Tumor markers normalized or plateau²?

After first cycle, continue for a minimum of 4 cycles:
First line
- Clinical trial (preferred) or
- BEP or
- VIP or
Second line
- TIP or
- High dose chemotherapy regimens or
- Stem cell transplant or
- Clinical trial (preferred)

Additional chemotherapy

See Page 11: Nonseminoma: Post-chemotherapy Management

¹ M1b - Distant metastases other than to non-regional lymph nodes and lungs
² Plateau: The observed rate of decline in tumor markers should be compared to the expected serum half-lives of 5-7 days (AFP) and 2-3 days (beta-hCG). It is common to see a slower rate of decline after the second cycle of chemotherapy. A continued rate of decline that is much less than the expected half life and does not normalize should be interpreted as a plateau. The decision to stop chemotherapy should be based on clinical judgement, taking into consideration the clinical status of the patient, which of the markers are elevated, extent of elevation, and after ruling out potential sources of spurious elevation.
FOLLOW-
UP

CLINICAL STAGE

<table>
<thead>
<tr>
<th>Stage</th>
<th>RESPONSE TO CHEMOTHERAPY</th>
<th>TREATMENT</th>
<th>FOLLOW-UP</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB (or high risk) IS IIA, IIB, IIC</td>
<td>Markers negative, complete response</td>
<td>Retroperitoneal lymph node dissection</td>
<td>See Appendix C: Nonseminoma Surveillance after Complete Response to Chemotherapy and/or Retroperitoneal Lymph Node Dissection (RPLND)</td>
</tr>
<tr>
<td></td>
<td>Residual mass, markers negative, or plateau¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rising markers or clinical progression</td>
<td>Salvage treatment</td>
<td>See Page 12: Nonseminoma: Post-chemotherapy Recurrence</td>
</tr>
<tr>
<td>IIIA, IIIB, IIC</td>
<td>Markers negative, complete response</td>
<td>Orchiectomy if not already performed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partial response</td>
<td></td>
<td>See Appendix C: Nonseminoma Surveillance after Complete Response to Chemotherapy and/or Retroperitoneal Lymph Node Dissection (RPLND)</td>
</tr>
<tr>
<td></td>
<td>Rising markers, or clinical progression</td>
<td>• Retroperitoneal lymph node dissection</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• and resection of any other residual mass</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Orchiectomy if not already performed</td>
<td></td>
</tr>
</tbody>
</table>

¹ Plateau: The observed rate of decline in tumor markers should be compared to the expected serum half-lives of 5-7 days (AFP) and 2-3 days (beta-hCG). It is common to see a slower rate of decline after the second cycle of chemotherapy. A continued rate of decline that is much less than the expected half life and does not normalize should be interpreted as a plateau. The decision to stop chemotherapy should be based on clinical judgement, taking into consideration the clinical status of the patient, which of the markers are elevated, extent of elevation, and after ruling out potential sources of spurious elevation.
**TREATMENT**

Nonseminoma - Prior Chemotherapy

- Incomplete response or first relapse
  - Salvage chemotherapy:
    - TIP (preferred)
    - VeIP
    - POMB-ACE
    - Consider HDC

**RESPONSE TO TREATMENT**

- Complete response and normalization of tumor markers
  - Resect all residual masses
  - Consider adjuvant chemotherapy if viable malignant tumor
  - Consider surgery if solitary site
    - Clinical trial (preferred)
    - Second or subsequent salvage chemotherapy:
      - TIP
      - Gemcitabine and oxaliplatin
      - POMB-ACE

- Incomplete response and anatomically resectable
  - Resect all residual masses

- Incomplete response that is unresectable or second relapse
  - Consider HDC followed by autologous stem cell transplant

**SUBSEQUENT TREATMENT**

- Response?
  - Yes: Third or subsequent relapse
    - Palliative chemotherapy or radiation therapy
    - Best supportive care
  - No: Potential for salvage?
    - Yes
      - Palliative chemotherapy or radiation therapy
      - Best supportive care
    - No: Consider TIP

---

*TIP = paclitaxel, ifosfamide, cisplatin
VeIP = vinblastine, ifosfamide, cisplatin, mesna
POMB-ACE = cisplatin, vincristine, methotrexate and bleomycin alternating with actinomycin-D, cyclophosphamide, and etoposide
HDC = high-dose chemotherapy

**Nonseminoma: Post-chemotherapy Recurrence**

**Note:** Consider Clinical Trials as treatment options for eligible patients.

**Disclaimer:** This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.
# APPENDIX A: International Classifications for Germ Cell Cancers

<table>
<thead>
<tr>
<th>Good Prognosis</th>
<th>Nonseminoma</th>
<th>Seminoma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Features</strong></td>
<td>Testes/retroperitoneal primary <strong>and</strong> No non-pulmonary visceral metastases <strong>and</strong></td>
<td>Any primary site <strong>and</strong> No non-pulmonary visceral metastases <strong>and</strong></td>
</tr>
<tr>
<td><strong>All Good Markers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• AFP</td>
<td>&lt; 1,000 ng/mL <strong>and</strong></td>
<td>Normal</td>
</tr>
<tr>
<td>• Beta-hCG</td>
<td>&lt; 5,000 iu/L (1,000 ng/mL) <strong>and</strong></td>
<td>Any value</td>
</tr>
<tr>
<td>• LDH</td>
<td>&lt; 1.5 times upper limit of normal</td>
<td>Any value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermediate Prognosis</th>
<th>Nonseminoma</th>
<th>Seminoma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Features</strong></td>
<td>Testes/retroperitoneal primary <strong>and</strong> No non-pulmonary visceral metastases <strong>and</strong></td>
<td>Any primary site <strong>and</strong> Non-pulmonary visceral metastases <strong>and</strong></td>
</tr>
<tr>
<td><strong>Markers any of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• AFP</td>
<td>≥ 1,000 and ≤ 10,000 ng/mL <strong>or</strong></td>
<td>Normal</td>
</tr>
<tr>
<td>• Beta-hCG</td>
<td>≥ 5,000 iu/L and &lt; 50,000 iu/L <strong>or</strong></td>
<td>Any value</td>
</tr>
<tr>
<td>• LDH</td>
<td>≥ 1.5 times normal and ≤ 10 times normal</td>
<td>Any value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poor Prognosis</th>
<th>Nonseminoma</th>
<th>Seminoma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Features</strong></td>
<td>Mediastinal primary <strong>or</strong> Non-pulmonary metastases</td>
<td>No patients classified as poor prognosis</td>
</tr>
<tr>
<td><strong>Markers any of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• AFP</td>
<td>&gt; 10,000 ng/mL <strong>or</strong></td>
<td></td>
</tr>
<tr>
<td>• Beta-hCG</td>
<td>≥ 50,000 iu/L (10,000 ng/mL) <strong>or</strong></td>
<td></td>
</tr>
<tr>
<td>• LDH</td>
<td>&gt; 10 times normal</td>
<td></td>
</tr>
</tbody>
</table>

1 From the International Germ Cell Consensus Classification from the International Germ Cell Cancer Collaborative Group
### APPENDIX B: IA, IB Nonseminoma Surveillance

<table>
<thead>
<tr>
<th>Year</th>
<th>Visits, Markers, and Chest X-ray</th>
<th>CT Abdomen/Pelvis with and without contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Every 1-2 months</td>
<td>Every 4 months</td>
</tr>
<tr>
<td>2</td>
<td>Every 2-3 months</td>
<td>Every 6 months</td>
</tr>
<tr>
<td>3</td>
<td>Every 3 months</td>
<td>Every 6 months</td>
</tr>
<tr>
<td>4</td>
<td>Every 4 months</td>
<td>Annually</td>
</tr>
<tr>
<td>5</td>
<td>Every 6 months</td>
<td>Annually</td>
</tr>
<tr>
<td>6 and above</td>
<td>Annually</td>
<td>Annually</td>
</tr>
</tbody>
</table>

### APPENDIX C: Nonseminoma Surveillance after Complete Response to Chemotherapy and/or Retroperitoneal Lymph Node Dissection (RPLND)

<table>
<thead>
<tr>
<th>Year</th>
<th>Visits, Markers, and Chest X-ray</th>
<th>CT&lt;sup&gt;1&lt;/sup&gt; Abdomen/Pelvis with and without contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Every 2-3 months</td>
<td>Every 6 months</td>
</tr>
<tr>
<td>2</td>
<td>Every 2-3 months</td>
<td>Every 6-12 months</td>
</tr>
<tr>
<td>3</td>
<td>Every 4 months</td>
<td>Annually</td>
</tr>
<tr>
<td>4</td>
<td>Every 6 months</td>
<td>Annually</td>
</tr>
<tr>
<td>5</td>
<td>Every 6-12 months</td>
<td>Annually</td>
</tr>
<tr>
<td>6 and above</td>
<td>Annually</td>
<td>Every 12-24 months</td>
</tr>
</tbody>
</table>

<sup>1</sup> CT scans for patients treated with chemotherapy. Baseline CT scan for patients status post RPLND.
Testicular Cancer

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

**SUGGESTED READINGS**


Continued on next page
SUGGESTED READINGS - continued


This practice algorithm is based on majority expert opinion of the Genitourinary Center Faculty at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

- Ana Aparicio, MD (Genitourinary Medical Oncology)
- John Araujo, MD (Genitourinary Medical Oncology)
- Tharakeswara K. Bathala, MD (Abdominal Imaging Department)
- Seungtaek Choi, MD (Radiation Oncology)
- Paul Corn, MD (Genitourinary Medical Oncology)
- Olga N. Fleckenstein
- Eric Jonasch, MD (Genitourinary Medical Oncology)
- Karen Hoffman, MD (Radiation Oncology)
- Jose Karam, MD (Urology)
- Deborah Kuban, MD (Radiation Oncology)
- Christopher Logothetis, MD (Genitourinary Medical Oncology)
- Yago Nieto, MD (Stem Cell Transplantation)
- Louis Pisters, MD (Urology)
- Padmanee Sharma, MD (Genitourinary Medical Oncology)
- Arlene O. Siefker-Radtke, MD (Genitourinary Medical Oncology)
- Nizar M. Tannir, MD (Genitourinary Medical Oncology)
- Shi-Ming Tu, MD (Genitourinary Medical Oncology)
- John Ward, MD (Urology)
- Mary Lou Warren, DNP, RN, CNS-CC
- Amado Zurita-Saavedra, MD (Genitourinary Medical Oncology)

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care.

Core Development Team Lead
Clinical Effectiveness Development Team