## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germ Cell Seminoma Stage I Surveillance</td>
<td>2</td>
</tr>
<tr>
<td>Germ Cell Seminoma Stage I – Post Adjuvant Chemotherapy or Radiation Therapy</td>
<td>3</td>
</tr>
<tr>
<td>Germ Cell Non-Seminoma Stage I Surveillance</td>
<td>4</td>
</tr>
<tr>
<td>Germ Cell Non-Seminoma Stage I – Post-RPLND and/or Adjuvant Chemotherapy</td>
<td>5</td>
</tr>
<tr>
<td>Germ Cell – All types, Stages II-IIIC</td>
<td>6</td>
</tr>
<tr>
<td>Suggested Readings</td>
<td>7-9</td>
</tr>
<tr>
<td>Development Credits</td>
<td>10</td>
</tr>
</tbody>
</table>

RPLND = retroperitoneal lymph node dissection
Survivorship – Testicular Cancer: Germ Cell Seminoma Stage I Surveillance

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**ELIGIBILITY**

- Germ cell tumors, seminoma stage I, > 2 years from treatment completion and NED

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**SURVEILLANCE**

- History & physical exam with each visit to include thorough exam of suprACLavicular lymph nodes and contralateral testicle
  - Years 3-5:
    - AFP, beta HCG and LDH every 6 months
    - Testosterone, glucose, creatinine, lipid profile, and vitamin D 25-OH annually
    - Chest x-ray every 6 months
    - CT abdomen and pelvis with contrast in year 3 and 5
    - Testicular ultrasound annually if high-risk
  - After year 10:
    - Testosterone, glucose, creatinine, lipid profile, and vitamin D 25-OH annually
    - Imaging studies as clinically indicated

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**MONITORING FOR LATE EFFECTS**

- Infertility
- Hypogonadism

---

**RISK REDUCTION/EARLY DETECTION**

- Patient education, counseling, and screening:
  - Lifestyle risk assessment
  - Cancer screening
  - HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
  - Screening for Hepatitis B and C as clinically indicated (see Hepatitis B Virus (HBV) Screening and Management and Hepatitis C Virus (HCV) Screening algorithms)
  - Consider cardiovascular risk reduction

---

**PSYCHOSOCIAL FUNCTIONING**

- Assess for:
  - Distress management (see Distress Screening and Psychosocial Management algorithm)
  - Financial stressors
  - Social support
  - Body image
  - Onco-fertility

---

**DISPOSITION**

- Suspected new primary or recurrent disease?
  - Yes: Return to Primary Oncologist to discuss treatment options and Goal Concordant Care (GCC) with patient, or if clinically indicated, with Patient Representative
  - No: Continue survivorship monitoring

---

1 Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and < 30 years old when diagnosed or testicular maldescent or infertility
2 GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).
3 See Physical Activity, Nutrition, and Tobacco Cessation Treatment algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
4 Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening
5 Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health
6 For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic Department of Clinical Effectiveness V9

Approved by the Executive Committee of the Medical Staff on 05/21/2024
Survivorship – Testicular Cancer: Germ Cell
Seminoma Stage I Post Adjuvant Chemotherapy or Radiation Therapy

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ELIGIBILITY

CONCURRENT COMPONENTS OF VISIT

History & physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle

- Years 3-5:
  - AFP, beta HCG, and LDH every 6 months
  - CBC with differential, testosterone, glucose, creatinine, lipid profile and vitamin D 25-OH annually
  - Chest x-ray as clinically indicated; consider CT chest with contrast if symptomatic
  - CT abdomen/pelvis with contrast annually in year 3 and 5. (CT pelvis if post-radiation therapy; CT abdomen if post-carboplatin)
  - Testicular ultrasound annually if high-risk

- Years 6-10:
  - Comprehensive metabolic panel, CBC with differential, testosterone, lipid profile, and vitamin D 25-OH annually
  - AFP, beta HCG, and LDH as clinically indicated
  - Other imaging as clinically indicated

- After year 10:
  - CBC with differential, testosterone, glucose, creatinine, lipid profile and vitamin D 25-OH annually
  - Imaging as clinically indicated

SURVEILLANCE

Germ cell tumors, seminoma stage I, > 2 years post-adjuvant radiotherapy or single-agent carboplatin and NED

MONITORING FOR LATE EFFECTS

RISK REDUCTION/EARLY DETECTION

Patient education, counseling, and screening:

- Lifestyle risk assessment
- Cancer screening
- HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
- Screening for Hepatitis B and C as clinically indicated (see Hepatitis B Virus (HBV) Screening and Management and Hepatitis C Virus (HCV) Screening algorithms)

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Body image
- Social support
- Onco-fertility

DISPOSITION

Suspected new primary or recurrent disease?

Yes

Return to Primary Oncologist to discuss treatment options and GCC with patient, or if clinically indicated, with Patient Representative

No

Continue survivorship monitoring

Refer or consult as indicated

AFP = alpha fetoprotein
HCG = human chorionic gonadotrophin
LDH = lactate dehydrogenase
NED = no evidence of disease

1 Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and < 30 years old when diagnosed or testicular maldescent or infertility

2 GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).

3 Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health

4 See Physical Activity, Nutrition, and Tobacco Cessation Treatment algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

5 Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening

6 For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic Department of Clinical Effectiveness V9

Approved by the Executive Committee of the Medical Staff on 05/21/2024
Survivorship – Testicular Cancer: Germ Cell Non-Seminoma Stage I Surveillance

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**ELIGIBILITY**
- Germ cell tumors, non-seminoma stage I, >2 years from completion of treatment and NED

**CONCURRENT COMPONENTS OF VISITS**
- History & physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
  - Years 3-5:
    - AFP, beta HCG, and LDH every 6 months
    - Testosterone, comprehensive metabolic panel (CMP), lipid profile, and vitamin D 25-OH annually
    - Chest x-ray every 6 months
    - Testicular ultrasound annually if high-risk
    - CT abdomen/pelvis with contrast in year 3 and 5
  - Years 6-10:
    - CMP, CBC with differential, testosterone, lipid profile, and vitamin D 25-OH annually
    - AFP, beta HCG and LDH as clinically indicated
  - After year 10:
    - Testosterone, glucose, creatinine, lipid profile, and vitamin D 25-OH annually
    - Imaging studies as clinically indicated

**SURVEILLANCE**
- Infertility
- Hypogonadism

**MONITORING FOR LATE EFFECTS**
- Patient education, counseling, and screening:
  - Lifestyle risk assessment
  - Cancer screening
  - HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
  - Screening for Hepatitis B and C as clinically indicated (see Hepatitis B Virus (HBV) Screening and Management and Hepatitis C Virus (HCV) Screening algorithms)
  - Consider cardiovascular risk reduction

**RISK REDUCTION/EARLY DETECTION**
- Assess for:
  - Distress management (see Distress Screening and Psychosocial Management algorithm)
  - Financial stressors
  - Social support
  - Body image
  - Onco-fertility

**PSYCHOSOCIAL FUNCTIONING**

**DISPOSITION**
- Yes
  - Suspected new primary or recurrent disease?
    - Yes
      - Refer to Primary Oncologist to discuss treatment options and GCC with patient, or if clinically indicated, with Patient Representative
    - No
      - Continue survivorship monitoring
- No
  - Refer or consult as indicated

---

1. Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and <30 years old when diagnosed or testicular maldescent or infertility
2. GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page for internal use only.

---

1. See Physical Activity, Nutrition, and Tobacco Cessation Treatment algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
2. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening
3. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health
4. For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic Department of Clinical Effectiveness V9

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**Survivorship – Testicular Cancer: Germ Cell Non-Seminoma Stage I Post-RPLND and/or Adjuvant Chemotherapy**

Disability: 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.

### ELIGIBILITY

**Germ cell tumors, non-seminoma, stage I, > 2 years post-RPLND and/or adjuvant chemotherapy completion and NED**

### CONCURRENT COMPONENTS OF VISIT

- **History & physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle**
  - Years 3-5:
    - AFP, beta HCG, and LDH every 6 months
    - Testosterone, comprehensive metabolic panel (CMP), lipid profile, and vitamin D 25-OH annually
    - CBC with differential annually if treated with adjuvant chemotherapy
    - Chest x-ray every 6 months
    - Testicular ultrasound annually if high risk
    - CT abdomen/pelvis with contrast in year 3 and 5
  - Years 6-10:
    - CMP, CBC with differential, testosterone, lipid profile, and vitamin D 25-OH annually
    - AFP, beta HCG and LDH as clinically indicated
    - Chest x-ray annually
    - Other imaging as clinically indicated
  - After year 10:
    - Testosterone, glucose, creatinine, lipid profile, and vitamin D 25-OH annually
    - CBC with differential annually if treated with adjuvant chemotherapy
    - Imaging as clinically indicated

### SURVEILLANCE

- **History & physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle**

### MONITORING FOR LATE EFFECTS

- **Patient education, counseling, and screening:**
  - Lifestyle risk assessment
  - Cancer screening
  - HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
  - Screening for Hepatitis B and C as clinically indicated (see Hepatitis B Virus (HBV) Screening and Management and Hepatitis C Virus (HCV) Screening algorithms)

### RISK REDUCTION/EARLY DETECTION

- **Assess for:**
  - Distress management (see Distress Screening and Psychosocial Management algorithm)
  - Financial stressors
  - Social support
  - Body image
  - Onco-fertility
  - Infertility
  - Cardiovascular disease
  - Hypogonadism
  - Metabolic syndrome
  - Neurotoxicity
  - Renal insufficiency

### PSYCHOSOCIAL FUNCTIONING

**Assess for:**

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility

### DISPOSITION

- **Suspected new primary or recurrent disease?**
  - **Yes**
    - **Return to Primary Oncologist** to discuss treatment options and GCC with patient, or if clinically indicated, with Patient Representative
  - **No**
    - **Continue survivorship monitoring**

**AFP = alpha fetoprotein**

**HCG = human chorionic gonadotrophin**

**LDH = lactate dehydrogenase**

**NED = no evidence of disease**

**RPLND = retroperitoneal lymph node dissection**

---

1. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health
2. GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).

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Survivorship – Testicular Cancer: Germ Cell
All types, Stages II-IIIC

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**ELIGIBILITY**

Germ cell tumors, all types, stages II – IIIC after completion of treatment and NED

**CONCURRENT COMPONENT OF VISIT**

History & physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle

- Category 1, years 4-5 or Category 2, years 4-5:
  - AFP, beta HCG, and LDH every 6 months
  - CBC with differential, testosterone, glucose, creatinine, lipid profile, and vitamin D 25-OH annually
  - Chest x-ray every 6 months
  - CT abdomen and pelvis with contrast in year 4
  - Testicular ultrasound annually if high-risk

- Categories 1 and 2, years 6-10:
  - Comprehensive metabolic panel, CBC with differential, testosterone, lipid profile, and vitamin D 25-OH annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually
  - CT abdomen and pelvis with contrast every 24 months or as clinically indicated

- Categories 1 and 2, after year 10:
  - CBC with differential, testosterone, glucose, creatinine, and lipid profile annually

**SURVEILLANCE** (both Categories)

- Infertility
- Cardiovascular disease
- Hypogonadism
- Metabolic syndrome
- Neurotoxicity
- Renal insufficiency

**MONITORING FOR LATE EFFECTS**

- Lifestyle risk assessment
- Cancer screening
- Screening for Hepatitis B and C as clinically indicated (see Hepatitis B Virus (HBV) Screening and Management and Hepatitis C Virus (HCV) Screening algorithms)
- HPV vaccination as clinically indicated (see HPV Vaccination algorithm)

**RISK REDUCTION/EARLY DETECTION**

Patient education, counseling, and screening:

- HPV vaccination as clinically indicated (see HPV Vaccination algorithm)

**PSYCHOSOCIAL FUNCTIONING**

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility

1. Category 1: germ cell tumors all types, stages II – IIIC; no evidence of disease at years 4-5. Category 2: germ cell tumors all types, stages IIIB and IIIC; no evidence of disease at years 4-5
2. Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and < 30 years old when diagnosed or testicular maldescent, or infertility
3. GCC should be initiated by the Primary Oncologist. If Primary Oncologist is unavailable, Primary Team/Attending Physician to initiate GCC discussion and notify Primary Oncologist. Patients, or if clinically indicated, the Patient Representative should be informed of therapeutic and/or palliative options. GCC discussion should be consistent, timely, and re-evaluated as clinically indicated. The Advance Care Planning (ACP) note should be used to document GCC discussion. Refer to GCC home page (for internal use only).

4. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health
5. See Physical Activity, Nutrition, and Tobacco Cessation Treatment algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
6. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening
7. For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic Department of Clinical Effectiveness V9

Approved by the Executive Committee of the Medical Staff on 05/21/2024
SUGGESTED READINGS


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MD Anderson Institutional Policy #CLN1202 - Advance Care Planning Policy. Advance Care Planning (ACP) Conversation Workflow (ATT1925).


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

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