This cancer survivorship algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. This algorithm is provided as informational purposes only and is not intended to replace the independent medical or professional judgment of physicians or other health care providers.

CONTENTS

Germ Cell Seminoma Stage I Surveillance  
Germ Cell Seminoma Stage I – Post Adjuvant Radiotherapy or Single-agent Carboplatin  
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Germ Cell – All types, Stages II-IIIC  
Suggested Readings  
Development Credits

RPLND = Retroperitoneal Lymph Node Dissection
Survivorship – Testicular Cancer, Germ Cell: Stage I Seminoma Surveillance

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**ELIGIBILITY**

2 or more years from treatment completion and NED¹

**CONCURRENT COMPONENTS OF SURVIVORSHIP VISITS**

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Years 2-5:
  - AFP, beta HCG and LDH every 6 months
  - CXR every 6 months
  - CT of abdomen annually
  - Testosterone, glucose, creatinine, and Lipid Battery annually
  - Testicular ultrasound³ annually if high-risk
- Years 6-10:
  - AFP, beta HCG and LDH, testosterone, glucose, creatinine, and Lipid Battery annually
  - CXR and CT of abdomen annually
  - Testicular ultrasound annually if high-risk
- After Year 10:
  - Testosterone, glucose, creatinine, and Lipid Battery annually
  - Imaging studies as clinically indicated

**MONITORING FOR LATE EFFECTS**

- Infertility
- Hypogonadism

**RISK REDUCTION/EARLY DETECTION**

- Colorectal cancer screening (See Colorectal Cancer Screening Algorithm)
- Prostate cancer screening⁴

**PSYCHOSOCIAL FUNCTIONING**

- Assess for:
  - Distress
  - Financial stressors
  - Body image
  - Social support

**DISPOSITION**

- New primary or recurrent disease?
  - Yes: Return to primary treating physician
  - No: Continue survivorship visits
  - Refer or consult as indicated

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¹ NED = no evidence of disease
² Also obtain CT of pelvis if previous scrotal interference or pelvic surgery
³ Annual ultrasound of contralateral testicle if one of the following present: Diagnosis of seminoma and less than 30 years old when diagnosed or testicular maldescent or infertility.
⁴ Beginning at age 50, men should discuss risks and benefits of prostate testing with their doctor.
**Germ Cell Tumors, Seminoma, Stage I – 2 or more years Post-Adjuvant Radiotherapy or Single-Agent Carboplatin and NED¹**

**CONCURRENT COMPONENTS OF SURVIVORSHIP VISIT**

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Years 2 and 3:
  - AFP, beta HCG, and LDH every 6 months
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR and CT annually (CT of pelvis if post-radiotherapy; CT of abdomen if post-Carboplatin)
  - Testicular ultrasound² annually if high-risk
- Years 4-5:
  - CBC and platelet, AFP, beta HCG, LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR and CT annually (CT of pelvis if post-radiotherapy; CT of abdomen if post-Carboplatin)
  - Testicular ultrasound² annually if high-risk
- Years 6-10:
  - CBC and platelet, AFP, beta HCG, and LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Testicular ultrasound² annually if high-risk
  - Other imaging as clinically indicated
- After Year 10:
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Imaging as clinically indicated

**DISPOSITION**

Yes

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Years 2 and 3:
  - AFP, beta HCG, and LDH every 6 months
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR and CT annually (CT of pelvis if post-radiotherapy; CT of abdomen if post-Carboplatin)
  - Testicular ultrasound² annually if high-risk
- Years 4-5:
  - CBC and platelet, AFP, beta HCG, LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR and CT annually (CT of pelvis if post-radiotherapy; CT of abdomen if post-Carboplatin)
  - Testicular ultrasound² annually if high-risk
- Years 6-10:
  - CBC and platelet, AFP, beta HCG, and LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Testicular ultrasound² annually if high-risk
  - Other imaging as clinically indicated
- After Year 10:
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Imaging as clinically indicated

No

- Continue survivorship visits

1 NED = No Evidence of Disease
2 Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and less than 30 years old when diagnosed or testicular maldescent, or infertility.
3 Beginning at age 50, men should discuss risks and benefits of prostate testing with their doctor.
Survivorship – Testicular Cancer, Germ Cell: Stage I Non-Seminoma Surveillance

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**ELIGIBILITY**

2 or more years from completion of treatment and NED1

**CONCURRENT COMPONENTS OF SURVIVORSHIP VISITS**

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Years 2-5:
  - AFP, beta HCG and LDH every 6 months
  - Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Chest X-ray every 6 months
  - Testicular ultrasound annually if high-risk2
  - CT of abdomen annually3
- Years 6-10:
  - AFP, beta HCG and LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - Testicular ultrasound annually if high-risk2
  - After Year 10:
    - Testosterone, Glucose, Creatinine, and Lipid Battery annually
    - Imaging studies as clinically indicated

**SURVEILLANCE**

- Infertility
- Hypogonadism

**MONITORING FOR LATE EFFECTS**

Patient education/counseling/screening:
- Colorectal cancer screening (See Colorectal Cancer Screening Algorithm)
- Prostate cancer screening4

**RISK REDUCTION/EARLY DETECTION**

- Diet/weight management
- Exercise/activity
- Tobacco cessation
- Sun exposure/skin cancer screening if indicated

**PSYCHOSOCIAL FUNCTIONING**

Assess for:
- Distress
- Financial stressors
- Body image
- Social support

**DISPOSITION**

- New primary or recurrent disease? Yes
  - Return to primary treating physician

- No
  - Continue survivorship visits

- Refer or consult as indicated

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1 NED = no evidence of disease
2 Annual ultrasound of contralateral testicle if one of the following present: Diagnosis of seminoma and less than 30 years old when diagnosed or testicular maldescent or infertility
3 Also obtain CT of pelvis if previous scrotal interference of pelvic surgery
4 Beginning at age 50, men should discuss risks and benefits of prostate testing with their doctor.
Survivorship – Testicular Cancer, Germ Cell: Non-Seminoma, Stage I – Post Retroperitoneal Lymph Node Dissection and/or Adjuvant Chemo

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ELIGIBILITY

Concurrent Components of Survivorship Visit

SURVEILLANCE

Germ Cell Tumors, Non-Seminoma, Stage I 2 or more years Post-RPLND\(^1\) and/or Adjuvant Chemotherapy Completion and NED\(^1\)

MONITORING FOR LATE EFFECTS

RISK REDUCTION/EARLY DETECTION

PSYCHOSOCIAL FUNCTIONING

DISPOSITION

\(^1\) RPLND = Retroperitoneal Lymph Node Dissection

\(^2\) Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and less than 30 years old when diagnosed or testicular maldescent, or infertility

\(^3\) Beginning at age 50, men should discuss risks and benefits of prostate testing with their doctor.
Survivorship – Testicular Cancer, Germ Cell:
All Types, Stages II – III C

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ELIGIBILITY

CONCURRENT COMPONENT OF SURVIVORSHIP VISIT

SURVEILLANCE (both Categories)

Monitor for late effects

Risk reduction/early detection

Psychosocial functioning

Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle

- Category 2, Years 2-5 or Category 2, Years 3-5:
  - AFP, beta HCG, and LDH every 6 months
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR every 6 months
  - CT of abdomen and pelvis every 2 years
  - Testicular ultrasound annually if high-risk

- Categories 1 and 2, Years 6-10:
  - CBC and platelet, AFP, beta HCG, and LDH, Testosterone, Glucose, Creatinine, and Lipid Battery annually
  - CXR annually
  - Testicular ultrasound annually if high-risk
  - CT of abdomen and pelvis every 2 years
  - Categories 1 and 2, after Year 10:
  - CBC and platelet, Testosterone, Glucose, Creatinine, and Lipid Battery annually

- Infertility
- Hypogonadism
- Metabolic syndrome
- Neuropathy
- Renal insufficiency
- Diet/weight management
- Exercise/activity
- Sun exposure/skin cancer screening
- Tobacco cessation
- If indicated

Assess for:

- Distress
- Financial stressors
- Social support
- Body image

Patient education/counseling/screening:

- Colorectal cancer screening (See Colorectal Cancer Screening Algorithm)
- Prostate cancer screening

New primary or recurrent disease?

Refer or consult as indicated

Return to primary treating physician

Continue survivorship visits

DISPOSITION

1 NED = No Evidence of Disease
2 Category 1: Germ cell tumors all types, Stages II – IIIA; no evidence of disease at 2 years
3 Category 2: Germ cell tumors all types, Stages IIIB and IIIC; no evidence of disease at 3 years
4 Annual ultrasound of contralateral testicle if one of the following is present: diagnosis of seminoma and less than 30 years old when diagnosed or testicular maldescent, or infertility.
4 Beginning at age 50, men should discuss risks and benefits of prostate testing with their doctor.
SUGGESTED READINGS


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SUGGESTED READINGS - continued


DEVELOPMENT CREDITS

This practice algorithm is based on literature review conducted by the Genitourinary Survivorship Committee, and majority expert opinion of the Genitourinary Center Faculty at The University of Texas MD Anderson Cancer Center. Core committee team members include:

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