Survivorship – Testicular Cancer: Germ Cell

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RPLND = retroperitoneal lymph node dissection
Germ cell tumors, seminoma stage I > 2 years from treatment completion and NED

ELIGIBILITY

CONCURRENT COMPONENTS OF VISITS

- 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, and lipid profile annually
  - Chest x-ray every 6 months
  - CT abdomen and pelvis with and without contrast in year 3 and 5
  - Testicular ultrasound annually if high-risk
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Imaging studies as clinically indicated

- Years 6-10:
  - Comprehensive metabolic panel, CBC with differential, testosterone, and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually (optional)
  - CT abdomen and pelvis as clinically indicated

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 Screening and Management – HBV and HCV algorithm)
  - Consider cardiovascular risk reduction

PSYCHOSOCIAL FUNCTIONING

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

DISPOSITION

New primary or recurrent disease?

Yes

Return to primary treating physician

No

Continue survivorship monitoring

Refer or consult as indicated

NED = no evidence of disease

1. Annual ultrasound of contralateral testicle if one of the following present: diagnosis of seminoma and < 30 years old when diagnosed or testicular maldescent or infertility
2. See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
3. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening
4. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health

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Survivorship – Testicular Cancer: Germ Cell Seminoma Stage I Post Adjuvant Chemotherapy or Radiation Therapy

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ELIGIBILITY

CONCURRENT COMPONENTS OF VISIT

- 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, and lipid profile annually
  - Chest x-ray as clinically indicated; consider CT chest with contrast if symptomatic
  - CT abdomen/pelvis with and without contrast annually in years 3 and 5. (CT pelvis if post-radiation therapy; CT abdomen if post-carcoblatin)
  - Testicular ultrasound\(^1\) annually if high-risk
- Years 6-10:
  - Comprehensive metabolic panel, CBC with differential, testosterone, and lipid profile annually
  - AFP, beta HCG, and LDH as clinically indicated
  - Other imaging as clinically indicated
- After year 10:
  - CBC with differential, testosterone, glucose, creatinine, and lipid profile annually
  - Imaging as clinically indicated

DISPOSITION

Return to primary treating physician

MONITORING FOR LATE EFFECTS

- Infertility
- Hypogonadism
- Cardiovascular disease\(^2\)
- Metabolic syndrome
- Neurotoxicity
- Renal insufficiency

RISK REDUCTION/EARLY DETECTION

Patient education, counseling, and screening:
- Lifestyle risk assessment\(^3\)
- Cancer screening\(^4\)
- HPV vaccination as clinically indicated (see HPV Vaccination algorithm)
- Screening for Hepatitis B and C as clinically indicated (see Hepatitis Screening and Management – HBV and HCV algorithm)

PSYCHOSOCIAL FUNCTIONING

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

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\(^1\) 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

\(^2\) Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health

\(^3\) See Physical Activity, Nutrition, and Tobacco Cessation 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

NED = no evidence of disease

\cite{1}\cite{2}\cite{3}\cite{4}
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**
- 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), and lipid profile annually
  - Chest x-ray every 6 months
  - Testicular ultrasound annually if high-risk
  - CT abdomen/pelvis with and without contrast in year 3 and 5
- Years 6-10:
  - CMP, CBC with differential, testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Imaging studies as clinically indicated

**SURVEILLANCE**

**MONITORING FOR LATE EFFECTS**
- Infertility
- Hypogonadism

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 Screening and Management – HBV and HCV algorithm)
- Consider cardiovascular risk reduction

**RISK REDUCTION/EARLY DETECTION**

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

**DISPOSITION**

Return to primary treating physician

New primary or recurrent disease?

- Yes
- No

Continue survivorship monitoring

Refer or consult as indicated

NED = no evidence of disease

1. Annual ultrasound of contralateral testicle if one of the following present: diagnosis of seminoma and < 30 years old when diagnosed or testicular maldescent or infertility
2. See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice
3. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening
4. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health

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

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ELIGIBILITY

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

CONCURRENT COMPONENTS OF VISIT

- 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), and lipid profile annually
  - CBC with differential annually if adjuvant chemotherapy
  - Chest x-ray every 6 months
  - Testicular ultrasound annually if high risk
  - CT abdomen/pelvis with and without contrast in year 3 and 5
- Years 6-10:
  - CMP, CBC with differential, testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually
  - Other imaging as clinically indicated
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - CBC with differential annually if adjuvant chemotherapy
  - Imaging as clinically indicated

SURVEILLANCE

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

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 Screening and Management – HBV and HCV algorithm)

RISK REDUCTION/EARLY DETECTION

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

PSYCHOSOCIAL FUNCTIONING

DISPOSITION

New primary or recurrent disease?

- Yes
- No

- Return to primary treating physician
- Continue survivorship monitoring
- Refer or consult as indicated

NED = no evidence of disease

1. 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
2. Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health
3. See Physical Activity, Nutrition, and Tobacco Cessation 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

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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

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Category 1, years 2-5 or Category 2, years 3-5:
  - AFP, beta HCG, and LDH every 6 months
  - CBC with differential, testosterone, glucose, creatinine, and lipid profile annually
  - Chest x-ray every 6 months
  - CT abdomen and pelvis year 3 and 5
  - Testicular ultrasound annually if high-risk
- Categories 1 and 2, years 6-10:
  - Comprehensive metabolic panel, CBC with differential, testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually
  - CT abdomen and pelvis 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 1)

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

MONITORING FOR LATE EFFECTS

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

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 Screening and Management – HBV and HCV algorithm)

PSYCHOSOCIAL FUNCTIONING

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

DISPOSITION

Return to primary treating physician

No

Continue survivorship monitoring

Refr or consult as indicated

New primary or recurrent disease?

Yes

NED = no evidence of disease

1 Category 1: germ cell tumors all types, stages II – IIIC; no evidence of disease at 2 years
2 Category 2: germ cell tumors all types, stages IIIB and IIIC; no evidence of disease at 3 years
3 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
4 Consider use of Vanderbilt’s ABCDE approach to cardiovascular health
5 Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening

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SUGGESTED READINGS


Continued on next page
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SUGGESTED READINGS - continued


DEVELOPMENT CREDITS

This survivorship algorithm is based on majority expert opinion of the Genitourinary Survivorship work group 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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