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

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ELIGIBILITY

Conecurrent Components of Visits

Surveillance

Monitoring for Late Effects

Risk Reduction/Early Detection

Psychosocial Functioning

Disposition

NED = no evidence of disease

1. 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

2. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening

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

4. Includes colorectal, liver, lung, pancreatic, prostate, and skin cancer screening

1. Germ cell tumors, seminoma stage I, 2 or more years from treatment completion and NED

- 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
  - Chest x-ray every 6 months
  - CT of abdomen and pelvis every 12-24 months
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Testicular ultrasound1 annually if high-risk
- Years 6-10:
  - Comprehensive metabolic panel (CMP), CBC with platelets, serum testosterone, and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually (optional)
  - CT of abdomen and pelvis as clinically indicated
  - Testicular ultrasound1 annually if high-risk
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Imaging studies as clinically indicated
- New primary or recurrent disease?

- Infertility
- Hypogonadism

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

- Lifestyle risk assessment2
- Cancer screening2
- 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 reduction4

- Patient education, counseling, and screening:
  - Lifestyle risk assessment2
  - Cancer screening2
  - 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 reduction4

- Fever, night sweats, weight loss, abnormal liver function, and other signs and symptoms

- Referred or consult as indicated

- Refer or consult as indicated

- Continue survivorship monitoring

- Return to primary treating physician
Survivorship – Testicular Cancer: Germ Cell
Seminoma Stage I Post Adjuvant Radiation Therapy or Single-Agent Carboplatin

Eligibility

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

Concurrent Components of 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 platelets, testosterone, glucose, creatinine, and lipid profile annually
  - Chest x-ray and CT annually (CT of pelvis if post-radiation therapy; CT of abdomen if post-carboplatin)
  - Testicular ultrasound annually if high-risk
- Years 4 and 5:
  - CBC and platelets, AFP, beta HCG, LDH, testosterone, glucose, creatinine, and lipid profile annually
  - Chest x-ray annually
  - CT of abdomen every 12-24 months (CT of pelvis if post-radiation therapy; CT of abdomen if post-carboplatin)
  - Testicular ultrasound annually if high-risk
- Years 6-10:
  - CMP, CBC and platelets, serum testosterone and lipid profile annually
  - AFP, beta HCG, and LDH as clinically indicated
  - Testicular ultrasound annually if high-risk
  - Other imaging as clinically indicated
  - After year 10:
    - CBC and platelets, testosterone, glucose, creatinine, and lipid profile annually
    - Imaging as clinically indicated

Surveillance

- Testicular Cancer Management

Monitoring for Late Effects

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

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

Disposition

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

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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 Non-Seminoma Stage I Surveillance

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**ELIGIBILITY**

- Germ cell tumors
- non-seminoma stage I
- 2 or more 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 2-5:
  -AFP, beta HCG and LDH every 6 months
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Chest x-ray every 6 months
  - Testicular ultrasound annually if high-risk
  - CT of abdomen and pelvis annually
- Years 6-10:
  - CMP, CBC and platelets, serum testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Testicular ultrasound annually if high-risk
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Imaging studies as clinically indicated

**SURVEILLANCE**

- 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 profile annually
  - Chest x-ray every 6 months
  - Testicular ultrasound annually if high-risk
  - CT of abdomen and pelvis annually
- Years 6-10:
  - CMP, CBC and platelets, serum testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Testicular ultrasound annually if high-risk
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - Imaging studies as clinically indicated

**DISPOSITION**

- Return to primary treating physician
- New primary or recurrent disease?
- Yes
- No
  - Continue survivorship monitoring

**NEW PRIMARY OR RECURRENT DISEASE?**

- Refer or consult as indicated

**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**

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

**PSYCHOSOCIAL FUNCTIONING**

- CMP = comprehensive metabolic panel
- NED = no evidence of disease

1 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
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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Department of Clinical Effectiveness V6
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Survivorship – Testicular Cancer: Germ Cell Non-Seminoma Stage I Post-RPLND and/or Adjuvant Chemotherapy

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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 2-5:
  - AFP, beta HCG, and LDH every 6 months
  - Chest x-ray every 6 months
  - Testosterone, glucose, creatinine, and lipid profile annually
  - CBC and platelets annually if adjuvant chemotherapy
  - Testicular ultrasound annually if high risk
  - CT of abdomen and pelvis at year 2 and 5
- Years 6-10:
  - CMP, CBC and platelets, serum testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually
  - Testicular ultrasound annually if high risk
  - Other imaging as clinically indicated
- After year 10:
  - Testosterone, glucose, creatinine, and lipid profile annually
  - CBC and platelets annually if adjuvant chemotherapy
  - Imaging as clinically indicated

SURVEILLANCE

MONITORING FOR LATE EFFECTS

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

RISK REDUCTION/EARLY DETECTION

PSYCHOSOCIAL FUNCTIONING

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

Patient education, counseling, and screening:
- Lifestyle risk assessment
- HPV 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)

DISPOSITION

- New primary or recurrent disease?
  - Yes
  - Refer or consult as indicated
  - No
  - Continue survivorship monitoring

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

NED = no evidence of disease

CMP = comprehensive metabolic panel

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

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

ELIGIBILITY

CONCURRENT COMPONENT OF VISIT

- Physical exam with each visit to include thorough exam of supraclavicular lymph nodes and contralateral testicle
- Category 1, 2, years 2-5 or Category 2, 3, 4, 5
  - AFP, beta HCG, and LDH every 6 months
  - CBC and platelets, testosterone, glucose, creatinine, and lipid profile annually
  - Chest x-ray every 6 months
  - CT of abdomen and pelvis annually
  - Testicular ultrasound annually if high-risk

- Categories 1 and 2, years 6-10:
  - CMP, CBC and platelets, serum testosterone and lipid profile annually
  - AFP, beta HCG and LDH as clinically indicated
  - Chest x-ray annually
  - Testicular ultrasound annually if high-risk
  - CT of abdomen and pelvis every 24 months or as clinically indicated

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

SURVEILLANCE (both Categories)

MONITORING FOR LATE EFFECTS

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

RISK REDUCTION / EARLY DETECTION

- 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

PSYCHOSOCIAL FUNCTIONING

DISPOSITION

New primary or recurrent disease?

- Yes
  - Return to primary treating physician

- No
  - Refer or consult as indicated

Evaluate and treat side effects

Directions and Navigation System: Use this survival with knowledge of the components of a survivor’s health care record and the categories.

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1 Category 1: germ cell tumors all types, stages II – IIIA; 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 Consider use of Vanderbilt’s ABCDE’s approach to cardiovascular health

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

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

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SUGGESTED READINGS


Survivorship – Testicular Cancer: Germ Cell

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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