Survivorship – Testicular Cancer: Germ Cell

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RPLND = retroperitoneal lymph node dissection

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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

CONCURRENT COMPONENTS OF VISITS

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, and lipid profile annually
  - Chest x-ray every 6 months
  - CT abdomen and pelvis with contrast in year 3 and 5
  - Testicular ultrasound[1] 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 with contrast as clinically indicated

MONITORING FOR LATE EFFECTS

- Infertility
- Hypogonadism

RISK REDUCTION/ EARLY DETECTION

Patient education, counseling, and screening:

- Lifestyle risk assessment[2]
- Cancer screening[3]
- 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 algorithm)
- Consider cardiovascular risk reduction[4]

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility[5]

DISPOSITION

New primary or recurrent disease?

- Yes → Return to primary treating physician
- No → Continue survivorship monitoring

Refer or consult as indicated

[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
[5] For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic

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

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Survivorship – Testicular Cancer: Germ Cell

Seminoma Stage I Post Adjuvant Chemotherapy or Radiation Therapy

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ELIGIBILITY

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

CONCURRENT COMPONENTS OF VISIT

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
  - 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 contrast annually in years 3 and 5. (CT pelvis if post-radiation therapy; CT abdomen if post-carboplatin.)
  - 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

MONITORING FOR LATE EFFECTS

- Infertility
- Cardiovascular disease[2]
- Neurotoxicity
- Hypogonadism
- Metabolic syndrome
- 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 B Virus (HBV) Screening and Management algorithm)

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Body image
- Social support
- Onco-fertility[5]

DISPOSITION

New primary or recurrent disease?

- Yes → Return to primary treating physician
- No → Continue survivorship monitoring

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] 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
[5] For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic

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Survivorship – Testicular Cancer: Germ Cell
Non-Seminoma Stage I Surveillance

ELIGIBILITY

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

CONCURRENT COMPONENTS OF VISITS

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, comprehensive metabolic panel (CMP), and lipid profile annually
  - Chest x-ray every 6 months
  - Testicular ultrasound[1] annually if high-risk
  - CT abdomen/pelvis with 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

MONITORING FOR LATE EFFECTS

- Infertility
- Hypogonadism

RISK REDUCTION/ EARLY DETECTION

Patient education, counseling, and screening:

- Lifestyle risk assessment[2]
- Cancer screening[3]
- 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 algorithm)
- Consider cardiovascular risk reduction[4]

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility[5]

DISPOSITION

New primary or recurrent disease?

- Yes → Return to primary treating physician
- No → Continue survivorship monitoring

Refer or consult as indicated

[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
[5] For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic

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

ELIGIBILITY

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

CONCURRENT COMPONENTS OF VISIT

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, comprehensive metabolic panel (CMP), and lipid profile annually
  - CBC with differential annually if treated with adjuvant chemotherapy
  - Chest x-ray every 6 months
  - Testicular ultrasound[1] annually if high risk
  - CT abdomen/pelvis with 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 treated with adjuvant chemotherapy
  - Imaging as clinically indicated

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 B Virus (HBV) Screening and Management algorithm)

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility[5]

DISPOSITION

New primary or recurrent disease?

- Yes → Return to primary treating physician
- No → Continue survivorship monitoring

Refer or consult as indicated

[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
[5] For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic

AFP = alpha fetoprotein
HCG = human chorionic gonadotrophin
LDH = lactate dehydrogenase
NED = no evidence of disease
RPLND = retroperitoneal lymph node dissection

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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

SURVEILLANCE (both Categories[1])

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

- Category[1] 1, years 4-5 or Category[1] 2, years 4-5:
  - 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 with contrast in year 4
  - Testicular ultrasound[2] annually if high-risk
- Categories[1] 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 with contrast every 24 months or as clinically indicated
- Categories[1] 1 and 2, after year 10:
  - CBC with differential, testosterone, glucose, creatinine, and lipid profile annually

MONITORING FOR LATE EFFECTS

- Infertility
- Cardiovascular disease[3]
- Neurotoxicity
- Hypogonadism
- Metabolic syndrome
- Renal insufficiency

RISK REDUCTION/ EARLY DETECTION

Patient education, counseling, and screening:

- Lifestyle risk assessment[4]
- Cancer screening[5]
- 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 algorithm)

PSYCHOSOCIAL FUNCTIONING

Assess for:

- Distress management (see Distress Screening and Psychosocial Management algorithm)
- Financial stressors
- Social support
- Body image
- Onco-fertility[6]

DISPOSITION

New primary or recurrent disease?

- Yes → Return to primary treating physician
- No → Continue survivorship monitoring

Refer or consult as indicated

[1] Category 1: germ cell tumors all types, stages II – IIIA; 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] 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, liver, lung, pancreatic, prostate, and skin cancer screening
[6] For additional resources consider a referral to the Adolescent and Young Adult (AYA) Clinic

AFP = alpha fetoprotein
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DEVELOPMENT CREDITS

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