Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Appendix I
Materials for Clinical Application

Version 6.0
October 2023

CHILDREN'S ONCOLOGY GROUP

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Contents

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Reference Materials

Version 6.0
October 2023

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Abbreviations

Abbreviation	Definition
AAP	American Academy of Pediatrics
ABR	Auditory brainstem response
ACIP	Advisory Committee on Immunization Practices
ACS	American Cancer Society
AHA	American Heart Association
ALL	Acute lymphoblastic leukemia
ALT	Alanine aminotransferase
AMH	Anti-Mullerian hormone
AML	Acute myeloid leukemia
AST	Aspartate aminotransferase
ATG	Anti-thymocyte globulin
ATM	Ataxia telangiectasia cancer susceptibility gene (located on chromosome 11)
AVN	Avascular necrosis
BMD	Bone mineral density
BMI	Body mass index
BRCA1	Breast cancer susceptibility gene 1 (located on chromosome 17)
BRCA2	Breast cancer susceptibility gene 2 (located on chromosome 13)
BUN	Blood urea nitrogen
Ca	Calcium
CAD	Coronary artery disease
CBC	Complete blood count
CCG	Children's Cancer Group
CDC	Centers for Disease Control
cGVHD	Chronic graft versus host disease
Cl	Chloride
CNS	Central nervous system
CO_2	Carbon dioxide
COG	Children's Oncology Group
CRT	Cranial radiation
CT	Computed tomography
CVRF	Cardiovascular risk factors
dB	Decibel
DES	Diethylstilbestrol
DI	Diabetes Insipidus
DLCO	Diffusion capacity of carbon monoxide

Abbreviation	Definition
DOR	Diminished ovarian reserve
DTI	Diffusion-tensor imaging
DWI	Diffusion-weighted imaging
DXA	Dual energy x-ray absorptiometry
ECHO	Echocardiogram
EKG	Electrocardiogram
EIA	Enzyme immunoassay
FAP	Familial adenomatous polyposis
FM	Frequency modulated
FNA	Fine needle aspirate
FNH	Focal nodular hyperplasia
FSH	Follicle stimulating hormone
G-CSF	Granulocyte colony stimulating factor
GH	Growth hormone
GI	Gastrointestinal
gm	Gram
GVHD	Graft versus host disease
Gy	Gray
HbA1c	Hemoglobin A1c
HBcAb	Hepatitis B core antibody
HBsAg	Hepatitis B surface antigen
HCT	Hematopoietic cell transplant
HCV	Hepatitis C virus
HDL	High-density lipoproteins
HIB	Haemophilus influenzae type B
HIV	Human immunodeficiency virus
HLA	Human leukocyte antigen
HNPCC	Hereditary nonpolyposis colorectal cancer
HPF	High power field
HPV	Human papillomavirus
ht	Height
Hz	Hertz
IBD	Inflammatory bowel disease
K	Potassium
I-131	Iodine 131 radioisotope
IgA	Immunoglobulin A
IL-2	Interleukin-2
IM	Intramuscular

Abbreviations (cont)

Abbreviation	Definition
IMRT	Intensity-modulated radiation therapy
IO	Intra-Ommaya
IQ	Intelligence quotient
IT	Intrathecal
IU	International unit
IV	Intravenous
IVIG	Intravenous immunoglobulin
kg	Kilogram
KUB	Kidneys, ureters, bladder radiograph
LH	Luteinizing hormone
LV	Left ventricular
m^2	Square meter
MDS	Myelodysplastic syndrome
MIBG	Iodine-131-meta-iodobenzylguanidine
mg	Milligram
Mg	Magnesium
MMF	Mycophenolate mofetil
MOPP	Mechlorethamine, Oncovin, Procarbazine, Prednisone
MR	Magnetic resonance
MRA	Magnetic resonance angiography
MRI	Magnetic resonance imaging
Na	Sodium
NF1	Neurofibromin 1 (neurofibromatosis) cancer susceptibility gene (located on chromosome 17)
NHL	Non-Hodgkin lymphoma
NSAIDs	Non-steroidal anti-inflammatory drugs
p53	Cancer susceptibility gene associated with familial cancers (located on chromosome 17)
PAP	Papanicolaou
PCR	Polymerase chain reaction
PFTs	Pulmonary function tests
PNET	Primitive neuroectodermal tumor
PNS	Peripheral nervous system
PO	By mouth
PO_4	Phosphate
PSA	Prostate specific antigen

Abbreviation	Definition
PUVA	Psoralen plus ultraviolet-A radiation
QTc	Corrected QT interval
RB1	Retinoblastoma cancer susceptibility gene (located on chromosome 13)
RBC	Red blood cell
RUQ	Right upper quadrant
SCUBA	Self-contained underwater breathing apparatus
SD	Standard deviation
SOS	Sinusoidal obstruction syndrome
SQ	Subcutaneous
STLI	Subtotal lymphoid irradiation
T4	Thyroxine
TBI	Total body irradiation
TLI	Total lymphoid irradiation
TPN	Total parenteral nutrition
TSH	Thyroid stimulating hormone
U	Units
USPSTF	United States Preventive Services Task Force
V-A	Ventriculoatrial
V-P	Ventriculoperitoneal
V-V	Ventriculovenus
VZIG	Varicella zoster immunoglobulin
WAGR	Wilms' tumor, aniridia, genitourinary anomalies, range of developmental delays
wt	Weight

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Chemotherapy Agents

Generic Name	Additional Name(s)	Classification
Asparaginase	Elspar® Erwinia asparaginase Kidrolase® L-asparaginase Oncaspar® PEG-asparaginase	Enzyme
Bleomycin	Blenoxane®	Anti-tumor antibiotic
Busulfan	Busulfex® Busulphan Myleran®	Alkylating agent
Carboplatin	CBDCA Paraplatin®	Heavy metal
Carmustine	BCNU BiCNU®	Alkylating agent
Chlorambucil	Leukeran®	Alkylating agent
Cisplatin	CDDP Cisplatinum Platinol®	Heavy metal
Cyclophosphamide	CPM Cytoxan® Neosar® Procytox®	Alkylating agent
Cytarabine	Ara-C Cytosar® Cytosar-U® Cytosine arabinoside	Antimetabolite
Dacarbazine	DTIC DTIC-Dome®	Non-classical alkylator
Dactinomycin	Actinomycin-D Cosmegen®	Anti-tumor antibiotic
Daunorubicin	Cerubidine® Daunomycin DaunoXome®	Anthracycline antibiotic
Dexamethasone	Decadron®	Corticosteroid
Doxorubicin	Adriamycin® Doxil® Rubex®	Anthracycline antibiotic
Epirubicin	Ellence® Pharmorubicin PFS®	Anthracycline antibiotic
Etoposide	VePesid® VP16	Epipodophyllotoxin
Idarubicin	Idamycin®	Anthracycline antibiotic
Ifosfamide	Ifex®	Alkylating agent
Lomustine	CeeNU® CCNU	Alkylating agent
Mechlorethamine	Mustargen® Nitrogen Mustard	Alkylating agent
Melphalan	Alkeran®	Alkylating agent
Mercaptopurine	6-Mercaptopurine 6MP Purinethol®	Antimetabolite
Methotextrate	Amethopterin Folex® Mexate® Trexall®	Antimetabolite
Mitoxantrone	Novantrone®	Anthracycline antibiotic
Prednisone	Deltasone® Methylprednisolone Prednisolone	Corticosteroid
Procarbazine	Matulane® Natulan®	Alkylating agent
Temozolomide	Temodal® Temodar®	Non-classical alkylator
Teniposide	VM26 Vumon®	Epipodophyllotoxin
Thioguanine	Lanvis® Tabloid® 6-Thioguanine 6TG	Antimetabolite
Thiotepa	Thioplex®	Alkylating agent
Vinblastine	VBL Velban® Velbe®	Plant alkaloid
Vincristine	Oncovin® VCR Vincasar® Vincrex®	Plant alkaloid

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Radiation Fields Defined

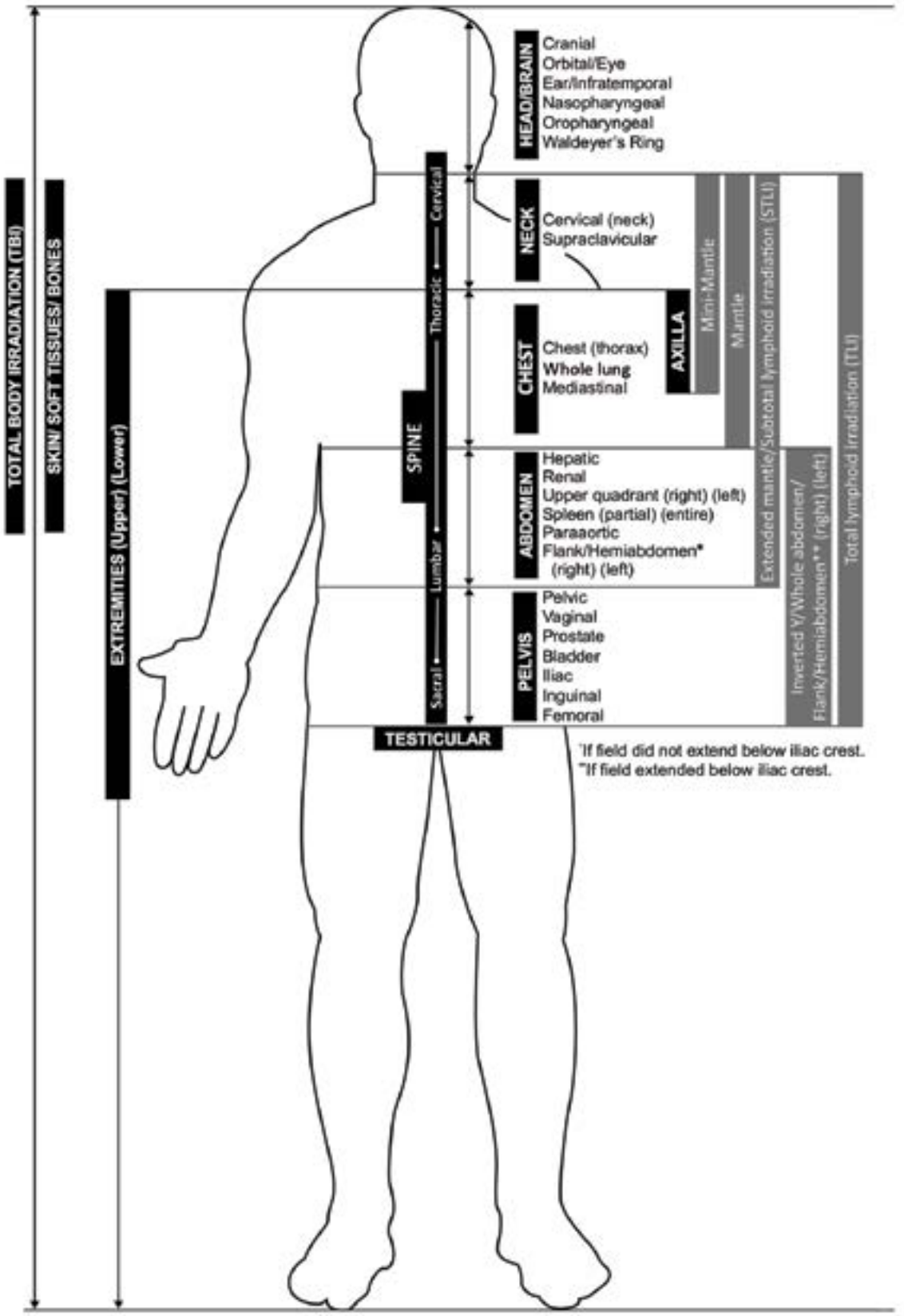
Traditional Radiation Field	Definition	Corresponding Version 5.0 Fields
Total body irradiation (TBI)	Entire body; encompassing all radiation fields	TBI
Cranial	Any field involving the cranium, head, brain and/or face	Head/brain
Waldeyer's ring	Nasopharyngeal and oropharyngeal (tonsils and adenoids)	Head/brain
Spine-cervical	Including some or all of the cervical spine (C1–C7)	Spine (cervical)
Spine-thoracic	Including some or all of the thoracic spine (T1–T12)	Spine (thoracic)
Spine-lumbar	Including some or all of the lumbar spine (L1–L5)	Spine (lumbar)
Spine-sacral	Including some or all of the sacral spine (S1–S5)	Spine (sacral)
Spine-whole	Including the cervical, thoracic, lumbar and sacral spine	Spine (whole)
Mini-mantle	Bilateral cervical (neck), supraclavicular and axillary fields (excludes mediastinal and lung)	Neck Axilla
Mantle	Bilateral cervical (neck), supraclavicular, mediastinal, hilar, and axillary fields	Neck Axilla Chest
Extended mantle	Mantle and paraaortic fields	Neck Axilla Chest Abdomen
Subtotal lymphoid irradiation (STLI)	Mantle + paraaortic + splenic	Neck Axilla Chest Abdomen
Inverted Y	Paraaortic + pelvic ± splenic	Abdomen Pelvis
Total lymphoid irradiation (TLI)	Mantle + inverted Y (paraaortic/pelvic) + splenic	Neck Axilla Chest Abdomen Pelvis
Chest (thorax)	May include any of the following: Mediastinal, hilar, whole lung, chest wall	Chest
Mediastinal	Mediastinum and bilateral hilar fields	Chest
Abdomen (also commonly referred to as "upper abdomen")	Top of diaphragm to iliac crests (bilaterally), including the following fields: • Hepatic • Upper quadrant (right, left) • Renal/Renal bed • Paraaortic • Spleen (partial, entire) • Flank/Hemiabdomen (right, left)	Abdomen
Paraaortic	Paraaortic lymph nodes (generally from T10 to L4 cephalad-caudad, and the transverse processes laterally) ± splenic	Abdomen
Renal	Renal bed	Abdomen

Radiation Fields Defined (cont)

Traditional Radiation Field	Definition	Corresponding Version 5.0 Fields
Flank/Hemiabdomen	Top of diaphragm to iliac crest (unilateral; medial border along contralateral vertebral bodies) **Note**: *Most hemiabdominal fields do not extend beyond the iliac crest; however, in some cases, depending on tumor location, the hemiabdominal field may have extended into the pelvis. If the hemiabdominal field extended below the iliac crest, exposure to pelvic fields should be considered in assessing risk for late sequelae.*	Abdomen ± Pelvis
Whole abdomen	Includes all abdominal and pelvic fields	Abdomen Pelvis
Pelvis	Iliac crest to 3 cm below ischium, including the following fields: • Pelvic • Iliac • Vaginal • Inguinal • Prostate • Femoral • Bladder	Pelvis
Extremities	Including some or all of the arm(s), leg(s), feet or hand(s)	Extremities

Radiation Fields Defined (cont)

Version 6.0 fields shown in black boxes



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Radiation Dose Calculations

Instructions for Radiation Dose Calculation:
Five sections of the COG Long-Term Follow-Up Guidelines (sections 60, 63, 66, 77, 78) include radiation dose specifications. These specifications indicate the minimum dose of radiation that is believed (based on available evidence and the recommendations of the expert panel) to place patients sufficiently at risk of the referenced late effect to recommend screening. For guideline sections that have a minimum specified dose, the following considerations apply in determining the applicability of the section for a patient based on his/her radiation exposure.

Sections with minimum dose specifications are applicable to a patient only if:
1. Patient received radiation to any field(s) relevant to the particular guideline section at ≥ the specified minimum dose†

OR

2. Patient received a combination of radiation to any relevant field(s)† **plus** relevant spinal radiation‡ **and/or** TBI, the sum of which is ≥ the specified minimum dose

†Total dose to each field should include boost dose, if given. If patient received radiation to more than one field relevant to a particular guideline section during a single planned course of radiation treatment (excluding spinal radiation and TBI), **the field that received the largest radiation dose should be used** in making the determination as to the applicability of the indicated guideline section(s). **Exception**: If patient received radiation to the same field at different times (e.g., at time of diagnosis AND at relapse), these doses should be added together when considering the applicability of the indicated guideline section.

‡Use the largest dose of radiation delivered to the spinal field(s) specified in the guideline section.

Examples of Radiation Dose Calculations:

Step 1: If radiation was given to more than one field relevant to the guideline (not including spine, TBI), select the largest dose received
Step 2: If patient received radiation to the same field at different times (e.g., at time of diagnosis AND at relapse), add these doses together
Step 3: If patient received relevant spinal field radiation, add the largest relevant spinal dose
Step 4: If patient received TBI, add TBI dose

Example #1

Guideline Information			Patient Information					
Guideline section	Minimum dose specification for screening	Relevant radiation fields	Patient's relevant radiation fields	Step 1	Step 2	Step 3	Step 4	Conclusion
Section 66, osteoradionecrosis of the jaw	≥40 Gy	Head/Brain Neck Spine (cervical) Spine (whole) TBI	Radiation at diagnosis: • Head/Brain: 24 Gy • Neck: 18 Gy Radiation at relapse: • Head/Brain: 12 Gy • TBI: 12 Gy	24 Gy	24 Gy + 12 Gy 36 Gy	N/A	36 Gy + 12 Gy 48 Gy	48 Gy Guideline 65 is applicable

Example #2

Guideline Information			Patient Information					
Guideline section	Minimum dose specification for screening	Relevant radiation fields	Patient's relevant radiation fields	Step 1	Step 2	Step 3	Step 4	Conclusion
Section 77, cardiac toxicity	≥15 Gy	Chest Abdomen Spine (thoracic) Spine (whole) TBI	Radiation at diagnosis: • Chest: 6 Gy Radiation at relapse: • Spine (whole): 12 Gy	6 Gy	N/A	6 Gy + 12 Gy 18 Gy	N/A	18 Gy Guideline 76 is applicable

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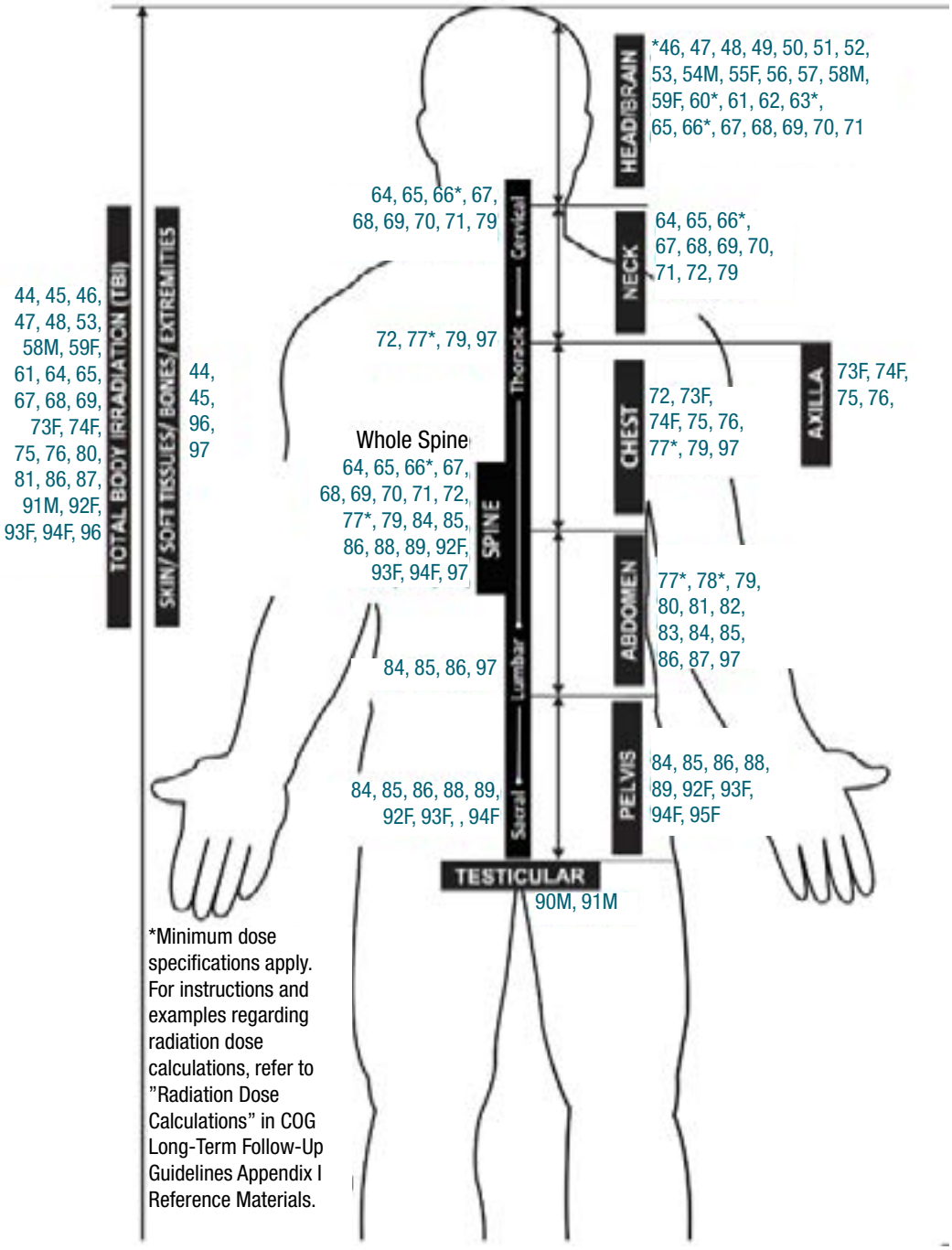
Guideline Radiation Sections by Field

Applicable guideline sections indicated in bold/dark blue; M=Male; F=Female



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Guideline Radiation Sections by Potential Impact

Applicable guideline sections indicated in bold/dark blue; M=Male; F=Female

Potential Impact	Fields	Dose	Section Numbers	Potential Late Effects
All Fields	Any radiation	Any	**44***	Subsequent benign or malignant neoplasm
			45*	Dermatologic toxicity
Brain/Cranium	Head/Brain	Any	**46***	Brain tumor (benign or malignant)
			47*	Neurocognitive deficits
			48*	Clinical leukoencephalopathy
			49	Cerebrovascular complications
			50	Craniofacial abnormalities
			51	Chronic sinusitis
Neuroendocrine Axis	Head/Brain	Any	**52**	Overweight; Obesity
			53*	Growth hormone deficiency
			54M	Precocious puberty (male)
			55F	Precocious puberty (female)
			56	Hyperprolactinemia
			57	Central hypothyroidism
			58M*	Gonadotropin deficiency (male)
			59F*	Gonadotropin deficiency (female)
		≥30Gy**	**60**	Central adrenal insufficiency
Eye	Head/Brain	Any	**61***	Cataracts
			62	Ocular toxicity
Ear	Head/Brain	≥30Gy**	**63**	Ototoxicity
Oral Cavity	Head/Brain Neck Spine (cervical, whole)	Any	**64***	Xerostomia; Salivary gland dysfunction
			65*	Dental abnormalities; Temporomandibular joint dysfunction
		≥40 Gy**	**66**	Osteoradionecrosis of the jaw
Neck/Thyroid	Head/Brain Neck Spine (cervical, whole)	Any	**67***	Thyroid nodules
			68*	Thyroid cancer
			69*	Hypothyroidism
			70	Hyperthyroidism
			71	Carotid artery disease
	Neck Chest Spine (thoracic, whole)	Any	**72**	Subclavian artery disease

* Patients who received TBI are at risk for this late effect. For a full list of TBI related sections, refer to "Total Body Irradiation Related Potential Late Effects" in COG Long-Term Follow-Up Guidelines Appendix I Reference Materials.

**TBI should be included for dose calculation purposes only

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Guideline Radiation Sections by Potential Impact (cont)

Applicable guideline sections indicated in bold/dark blue; M=Male; F=Female

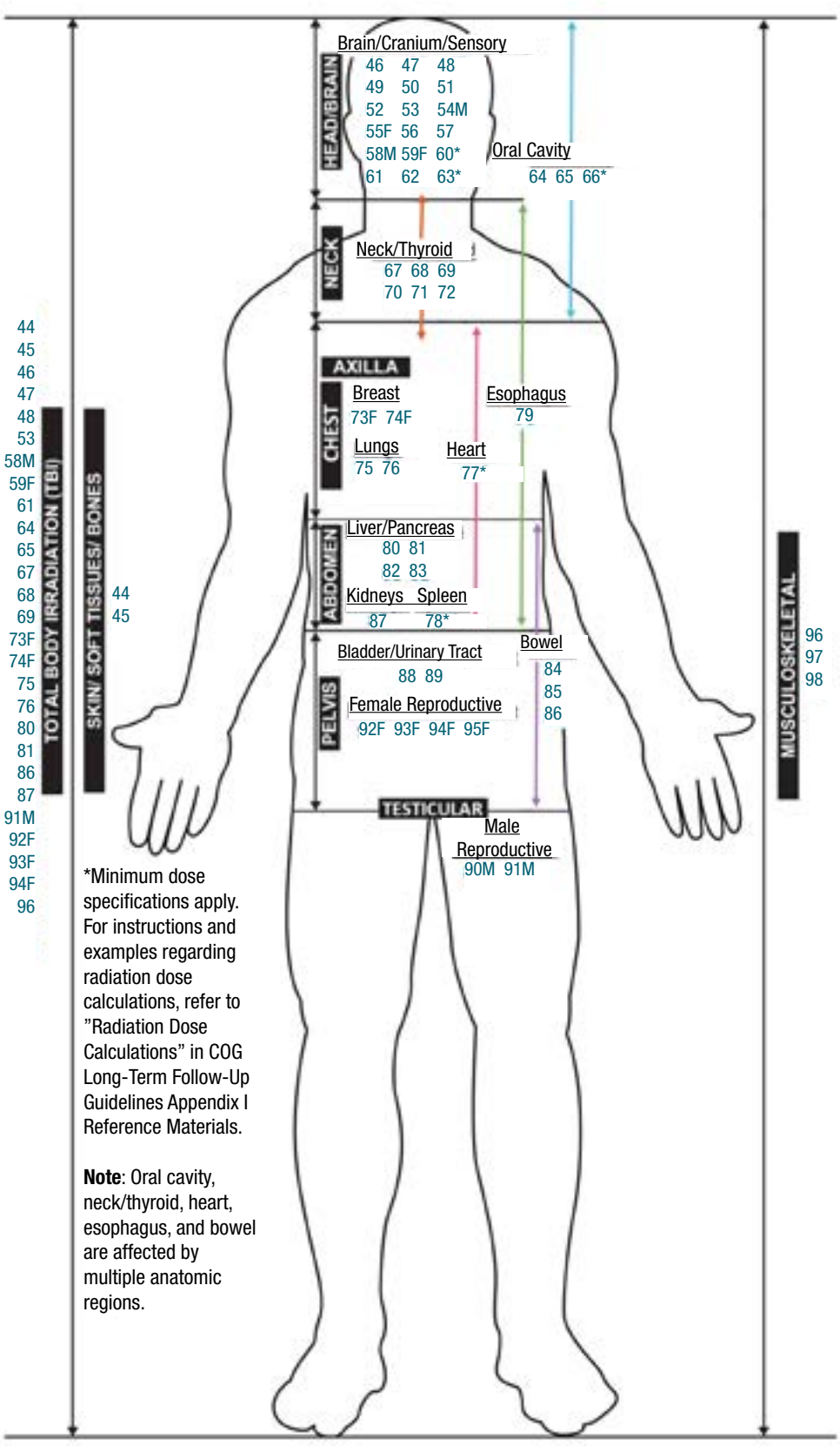
Potential Impact	Fields	Dose	Section Numbers	Potential Late Effects
Breast	Chest Axilla	Any	**73F***	Breast cancer
			74F*	Breast tissue hypoplasia
Lungs	Chest Axilla	Any	**75***	Pulmonary toxicity
			76*	Lung cancer
Heart	Chest Abdomen Spine (thoracic, whole)	≥15 Gy**	**77**	Cardiac toxicity
Spleen	Abdomen	≥40 Gy**	**78**	Functional asplenia
GI/Hepatic System	Neck Chest Abdomen Spine (cervical, thoracic, whole)	Any	**79**	Esophageal stricture
	Abdomen	Any	**80***	Impaired glucose metabolism/Diabetes mellitus
			81*	Dyslipidemia
			82	Hepatic toxicity
			83	Cholelithiasis
	Abdomen Pelvis Spine (lumbar, sacral, whole)	Any	**84**	Bowel obstruction
			85	Chronic enterocolitis; Fistula; Strictures
			86*	Colorectal cancer
Urinary Tract	Abdomen	Any	**87**	Renal toxicity
	Pelvis Spine (sacral, whole)	Any	**88**	Urinary tract toxicity
			89	Bladder malignancy
Male Reproductive System	Testes	Any	**90M**	Testicular hormonal dysfunction
			91M*	Impaired spermatogenesis
Female Reproductive System	Pelvis Spine (sacral, whole)	Any	**92F***	Ovarian hormone deficiencies
			93F*	Diminished ovarian reserve (DOR)
			94F*	Uterine vascular insufficiency
	Pelvis	Any	**95F**	Vaginal fibrosis/stenosis
Musculoskeletal System	Any radiation	Any	**96***	Musculoskeletal growth problems
	Chest Abdomen Spine (thoracic, lumbar, whole)	Any	**97**	Scoliosis/Kyphosis
	Any radiation	Any	**98**	Radiation-induced fracture

* Patients who received TBI are at risk for this late effect. For a full list of TBI related sections, refer to "Total Body Irradiation Related Potential Late Effects" in COG Long-Term Follow-Up Guidelines Appendix I Reference Materials.

**TBI should be included for dose calculation purposes only

Guideline Radiation Sections by Potential Impact (cont)

Applicable guideline sections indicated in bold/dark blue; M=Male; F=Female



*Minimum dose specifications apply. For instructions and examples regarding radiation dose calculations, refer to "Radiation Dose Calculations" in COG Long-Term Follow-Up Guidelines Appendix I Reference Materials.

Note: Oral cavity, neck/thyroid, heart, esophagus, and bowel are affected by multiple anatomic regions.

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Total Body Irradiation (TBI) Related Potential Late Effects

The complete list of potential late effects and associated Guideline section numbers are included here for clinician convenience when evaluating patients who received TBI. For details regarding each potential late effect and indicated screening, please refer to the relevant section within the Guidelines.

Section Number	Sex	Potential Late Effect
44	Both	Subsequent benign or malignant neoplasm occurring in or near radiation field
45	Both	Dermatologic toxicity
46	Both	Brain tumor (benign or malignant)
47	Both	Neurocognitive deficits
48	Both	Clinical leukoencephalopathy
53	Both	Growth hormone deficiency
58	Male	Gonadotropin deficiency
59	Female	Gonadotropin deficiency
61	Both	Cataracts
64	Both	Xerostomia; Salivary gland dysfunction
65	Both	Dental abnormalities; Temporomandibular joint dysfunction
67	Both	Thyroid nodules
68	Both	Thyroid cancer
69	Both	Hypothyroidism
73	Female	Breast cancer
74	Female	Breast tissue hypoplasia
75	Both	Pulmonary toxicity
76	Both	Lung cancer
80	Both	Impaired glucose metabolism/Diabetes mellitus
81	Both	Dyslipidemia
86	Both	Colorectal cancer
87	Both	Renal toxicity
91	Male	Impaired spermatogenesis
92	Female	Ovarian hormone deficiencies
93	Female	Diminished ovarian reserve
94	Female	Uterine vascular insufficiency
96	Both	Musculoskeletal growth problems

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Appeal Letter Following Denial of Insurance Claims

Version 6.0
October 2023

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Instructions:

Appeal Letter Following Denial of Insurance Claims for Survivorship Care

Not all insurance companies recognize the need for ongoing long-term follow-up care for survivors of childhood, adolescent, and young adult cancers. As with any medical care, it is prudent for the survivor to determine coverage for anticipated screening tests that may be recommended as part of their long-term follow-up care, and to work with the survivorship provider to obtain any pre-authorizations that may be necessary.

Nevertheless, we recognize that some essential services may be denied from time to time. The letters on the following pages are designed for use as templates to appeal denial letters from insurance companies, should the need arise. One letter is designed to be completed and submitted to the insurance company by the patient (or his/her parent). The other letter is designed to be completed and submitted to the insurance company by the patient's survivorship care provider. Although neither letter can guarantee insurance coverage, we are hopeful that these letters may be helpful in securing the indicated coverage for tests recommended as part of routine long-term follow-up care after the completion of cancer-directed therapy.

These templates were developed by Kristy Sharif and Alison Olig, COG Patient Advocacy Committee, 2018.

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Appeal Letter Following Denial of Insurance Claims for Survivorship Care: Template for Letter from Patient, Parent or Guardian

(Date)

(Name)
(Insurance Company Name)
(Address)
(City, State ZIP)

Re: **(Patient's Name)**
(Type of Coverage)
(Group number/Policy number)

Dear **(name of contact person at insurance company)**,

Please accept this letter as **(patient's name)**'s appeal to **(insurance company name)**'s decision to deny coverage for **(name of test)**. It is my understanding based on your letter of denial dated **(date)** that **(name of test)** has been denied because:

(Quote the specific reason for the denial stated in denial letter)

It is possible that you did not have all the necessary information at the time of your initial review. **(Patient's name)** was diagnosed with **(disease)** on **(date)**. Currently **(name of long-term follow-up clinician)** from **(name of treating facility)**, a specialist in long-term follow-up after therapy for cancer during childhood, adolescence, and young adulthood, has indicated that **(patient's name)** requires **(name of test)** in order to monitor for long-term complications related to (patient's name) cancer treatment. Please see the enclosed letter from (**name of long-term follow-up clinician)** that discusses **(patient's name)**'s medical history and provides justification for this testing in more detail. Also included are medical records and support documentation explaining the evidence-based recommendations for this required monitoring.

Based on this information, **(patient's name)** is asking that you reconsider your previous decision and allow coverage for the procedure Dr. (name) outlines in the enclosed letter. **(Name of test)** is recommended to be completed by **(date)**. Should you require additional information, please do not hesitate to contact me at **(phone number)**. I look forward to hearing from you in the near future.

Sincerely,

(Patient, parent or guardian name)

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Appeal Letter Following Denial of Insurance Claims for Survivorship Care: Template for Letter from Long-Term Follow-Up Clinician

(Date)

(Name)
(Insurance Company Name)
(Address)
(City, State ZIP)

Re: **(Patient's Name)**
(Type of Coverage)
(Group number/Policy number)

Dear **(name of contact person at insurance company),**

This letter is written in support of **(patient's name)**'s appeal to **(insurance company name)**'s decision to deny coverage for **(name of test)**. I am the clinician who is currently providing long-term follow-up care for this patient. Based on your letter of denial dated **(date)**, it is my understanding that **(name of test)** has been denied because:

(Quote the specific reason for the denial stated in denial letter)

(Patient's name) is a **(age)** year old **(male/female)** who was diagnosed with **(disease)** on **(date)** and began treatment on **(date)**. Treatment was completed on **(date)**.

The treatments that **(patient's name)** received for **(disease)** were lifesaving, however, this treatment has the potential to cause significant long-term complications (late effects) that can negatively impact **(patient's name)**'s health. Ongoing monitoring is required so that any long-term complications of cancer therapy can be identified and treated in a timely fashion in order to optimize **(patient's name**)'s health and prevent a decline in health status.

Because **(patient's name)** received **(name of relevant therapeutic exposures/doses)** as part of **(his/her)** cancer therapy, **(he/she)** is at risk for **(relevant late effect(s))**. The Children's Oncology Group (COG) Long-Term Follow-Up Guidelines, which set the standard of care for the ongoing follow-up of survivors of childhood, adolescent, and young adult cancers, provide specific follow-up recommendations related to **(patient's name)**'s treatment, including **(name of test denied)**. These evidence-based guidelines are based on the known long-term risks associated with cancer therapy delivered during childhood, adolescence, and young adulthood. The recommendations within the COG Long-Term Follow-Up Guidelines represent the consensus of experts in the late effects of pediatric cancer treatment.

I have attached documentation that supports the recommended testing in more detail **[attach relevant sections from COG LTFU Guidelines and any additional supportive materials such as journal articles]**, along with **(patient's name)**'s relevant medical records. Additional information is available from the Children's Oncology Group at *www.survivorshipguidelines.org*.

Based on this information, as the clinician providing **(patient's name)**'s long-term follow-up care, I am asking that you reconsider your previous decision and allow coverage for **(name of test)**. **(Name of test)** is recommended to be completed by **(date)**. Should you require additional information, please do not hesitate to contact me at **(phone number**). I look forward to hearing from you

Sincerely,

(Name of long-term follow-up clinician)

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Summary of Cancer Treatment

Version 6.0
October 2023

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Instructions: Summary of Cancer Treatment

Importance of a Comprehensive Cancer Treatment Summary

The *Children's Oncology Group Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers* are based on therapeutic exposures received during cancer treatment. Availability of a comprehensive treatment summary, including all therapeutic agents received by the survivor, is presumed. Patients who do not have a comprehensive treatment summary should be instructed to obtain one from the institution(s) where they received their treatment.

The following table outlines:

1. The **minimum** information necessary to generate patient-specific guidelines (i.e., an **abbreviated** treatment summary).
2. The ideal information included in the **comprehensive** treatment summary. We ***strongly*** advise that a ***comprehensive*** treatment summary be prepared for each childhood cancer survivor when feasible.

At Minimum	Additional Information- *Strongly* Advised if Feasible
Demographics	**Demographics**
• Name • Sex • Date of birth	• Race/Ethnicity • Social security number, if available • COG registration number, if available • Contact information
Cancer Diagnosis	**Cancer Diagnosis**
• Diagnosis • Date of diagnosis • Date cancer therapy was completed	• Diagnosis, including date, site/stage, laterality, and relapse(s) if any • Pertinent hereditary conditions, past medical history and subsequent neoplasms • Treating institution and team
Cancer Treatment: Protocols	**Cancer Treatment: Protocols**
N/A	• Treatment protocol information, if applicable
Cancer Treatment: Chemotherapy	**Cancer Treatment: Chemotherapy**
• Names of all chemotherapy agents received – For a list of chemotherapy agents addressed by these guidelines (Sections 11-43), see the "Chemotherapy" portion of the Patient-Specific Guideline Identification Tool in Appendix I. – For generic and brand names of chemotherapy agents, see Chemotherapy Agents in Appendix I. • Cumulative dose of all anthracycline chemotherapy received (i.e., doxorubicin, daunorubicin, idarubicin, mitoxantrone and epirubicin) – See Section 34 of Guidelines for anthracycline isotoxic dose-equivalent conversion. – For doses in mg/kg, multiply by 30 to obtain equivalent dosing in mg/m^2 (example: 2 mg/kg = 60 mg/m^2). • For carboplatin, whether any dose was myeloablative (i.e., given as conditioning for HCT) • For cytarabine and methotrexate: – Route of administration (i.e., IV, IM, SQ, PO, IT, IO) – If IV, designation of "high dose" (any single dose ≥ 1000 mg/m^2) versus "standard dose" (all single doses < 1000 mg/m^2)	• Cumulative doses for all other agents should be provided if available, particularly for alkylators and bleomycin. – For doses in mg/kg, multiply by 30 to obtain equivalent dosing in mg/m^2 (example: 2 mg/kg = 60 mg/m^2). • Route of administration for all other agents

CHILDREN'S ONCOLOGY GROUP

Instructions: Summary of Cancer Treatment (cont)

At Minimum	Additional Information- *Strongly* Advised if Feasible
Cancer Treatment: Radiation	**Cancer Treatment: Radiation**
• Names of all radiation field(s) treated – For list of radiation fields addressed by these guidelines (Sections 44-98), see "Radiation" portion of the Patient-Specific Guideline Identification Tool in Appendix I – For definition of radiation fields, see "Radiation Fields Defined" in Appendix I • For head/brain, neck, chest, abdomen, spine (whole, cervical, thoracic) radiation and TBI, total dose (in Gy): – Total radiation dose to each field (should include boost dose, if given) – To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy)	• Laterality (if applicable), start/stop dates, radiation type, number of fractions, dose per fraction, boost dose/location (if applicable) • Total dose (in Gy) for all other fields – Should include boost dose if given – To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy) • Treating institution and radiation oncologist
Cancer Treatment: Hematopoietic Cell Transplant(s)	**Cancer Treatment: Hematopoietic Cell Transplant(s)**
• Whether or not the survivor underwent a hematopoietic cell transplant (HCT), and if so: – Transplant type (autologous vs allogeneic) – Chronic graft-versus-host disease (cGVHD) status (no history of chronic GVHD, history of chronic GVHD, currently active chronic GVHD)	• Type(s), source(s), date(s), conditioning regimen(s), GVHD prophylaxis and/or treatment • Treating institution and transplant physician
Cancer Treatment: Surgery	**Cancer Treatment: Surgery**
• Names of all surgical procedures. – For list of surgical procedures addressed by these guidelines (Sections 115–151), see "Surgery" portion of the Patient-Specific Guideline Identification Tool in Appendix I	• Dates, site (if applicable), laterality (if applicable) • Treating institution and surgeon
Cancer Treatment: Other Therapeutic Modalities	**Cancer Treatment: Other Therapeutic Modalities**
• Whether or not the survivor received radioiodine therapy (I-131 thyroid ablation), systemic MIBG (in therapeutic doses), or a novel therapy	• Names, routes and cumulative doses of all other therapeutic modalities received
Additional Clinical Information	**Additional Clinical Information**
N/A	• Significant complications/late effects with dates of onset/resolution • Adverse drug reactions/allergies • Additional information/comments

Templates for Summary of Cancer Treatment

Two templates for summarizing cancer treatment are included in Appendix I (also available in electronic format at www.survivorshipguidelines.org). These templates were originally developed by the COG Nursing Clinical Practice Subcommittee under the leadership of Lisa Bashore, MS, RN, CPNP, CPON® and Lori Boucher, RN, CRA. The templates were subsequently pilot tested and revised, then further refined based on feedback from the Late Effects Committee and a working group from the National Cancer Institute.

The abbreviated form contains all data elements currently necessary for generation of patient-specific recommendations from the COG LTFU Guidelines, and meets the minimum data requirements for initial use of the "Passport for Care" web-based guideline interface. However, the COG Long-Term Follow-Up Guidelines Core Committee recognizes that as new evidence becomes available and these guidelines are updated, additional details regarding the childhood cancer survivor's therapeutic exposures may be required in order to generate comprehensive recommendations. Therefore, we ***strongly*** advise that a ***comprehensive*** treatment summary be prepared for each childhood cancer survivor when feasible, including a record of ***all*** therapeutic exposures with applicable dates, details of administration, and cumulative doses of all agents, including those not currently addressed by these guidelines.

In addition to the treatment summary templates, a "key" for completing the comprehensive version of the treatment summary is also included in Appendix I.

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Summary of Cancer Treatment (Abbreviated)

Demographics		
Name	Sex ☐ M ☐ F	Date of birth

Cancer Diagnosis		
Diagnosis	Date of diagnosis	Date therapy completed

Chemotherapy ☐ **Yes** ☐ **No** ***If yes, provide information below***

Drug name	Additional information†

†**Anthracyclines**: Include cumulative dose in mg/m^2 (see section 34 of Guidelines for isotoxic dose conversion);
Carboplatin: Indicate if dose was myeloablative
Methotrexate and Cytarabine: Indicate route of administration (i.e., IV, IM, SQ, PO, IT, IO);
IV Methotrexate and Cytarabine: Indicate if "high dose" (any single dose ≥ 1000 mg/m^2) or "standard dose" (all single doses < 1000 mg/m^2)
Note: Cumulative doses, if known, should be recorded for all agents, particularly for alkylators and bleomycin.

Radiation ☐ **Yes** ☐ **No** ***If yes, provide information below***

Site/Field	Total dose* (including boost) (Gy)**

*For head/brain, neck, chest, abdomen, spine (whole, cervical, thoracic) radiation and TBI, include total doses (including boost dose, if given)
**To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy)

Hematopoietic Cell Transplant ☐ **Yes** ☐ **No** ***If yes, provide information below***

Transplant type	Autologous ☐ Yes ☐ No	Allogeneic ☐ Yes ☐ No
Chronic graft-versus-host disease (cGVHD)	Ever diagnosed? ☐ Yes ☐ No	Currently active? ☐ Yes ☐ No

Surgery ☐ **Yes** ☐ **No** ***If yes, provide information below***

Procedure	Site (if applicable)	Laterality (if applicable)

Other Therapeutic Modalities ☐ **Yes** ☐ **No** ***If yes, provide information below***

Did the patient receive radioiodine therapy (I-131 thyroid ablation)? ☐ Yes ☐ No

Did the patient receive systemic MIBG (in therapeutic doses)? ☐ Yes ☐ No

Did the patient receive any other novel therapy from Sections 158-163 (in therapeutic doses)? ☐ Yes ☐ No

Summary prepared by:	**Date prepared:**

CHILDREN'S ONCOLOGY GROUP

Summary of Cancer Treatment (Comprehensive)

Superscript numbers correspond with lists in "Key for Completing Summary of Cancer Treatment Form"

Demographics				
Name				
Sex ☐ M ☐ F	Date of birth	Race/Ethnicity[1]	SS#	COG Reg #
Address				Phone
Alternate contact		Relationship		Phone

Cancer Diagnosis		
Diagnosis[2]		
Date of diagnosis	Age at diagnosis	Date therapy completed
Sites involved/Stage/Diagnostic details		Laterality ☐ Right ☐ Left ☐ NA
Hereditary/Congenital history[3]		
Pertinent past medical history		
Institution	MD/APN	Medical record #
Relapse(s) ☐ **Yes** ☐ **No** ***If yes, provide information below***		
Date of diagnosis	Age at diagnosis	Date therapy completed
Sites involved/Stage/Diagnostic details		Laterality ☐ Right ☐ Left ☐ NA
Subsequent malignant neoplasm(s) ☐ **Yes** ☐ **No** ***If yes, provide information below***		
Type[4]		
Date of diagnosis	Age at diagnosis	Date therapy completed
Sites involved/Stage/Diagnostic details		Laterality ☐ Right ☐ Left ☐ NA

Cancer Treatment Summary

Protocol(s) ☐ **Yes** ☐ **No** ***If yes, provide information below***

Acronym/Number	Title/Description	Initiated	Completed	On-study

Chemotherapy ☐ **Yes** ☐ **No** ***If yes, provide information below***

Drug name[5]	Route[6]	Additional information[†,7]

[†]**Anthracyclines**: Include cumulative dose in mg/m^2 and age at first dose (see section 34 of Guidelines for isotoxic dose conversion);
Carboplatin: Indicate if dose was myeloablative
IV Methotrexate and Cytarabine: Indicate if "high dose" (any single dose ≥ 1000 mg/m^2) or "standard dose" (all single doses < 1000 mg/m^2);
Note: Cumulative doses, if known, should be recorded for all agents, particularly for alkylators and bleomycin.

CHILDREN'S ONCOLOGY GROUP

Summary of Cancer Treatment (Comprehensive) (cont)

Cancer Treatment Summary (cont)

Radiation ☐ Yes ☐ No *If yes, provide information below*

Site/Field[8]	Laterality	Start/Stop dates	Type[9]	Fractions	Dose per fraction (Gy)*	Initial dose (Gy)*	Boost site[10]	Boost dose (Gy)*	Total dose (including boost) (Gy)*

Institution	Radiation oncologist

*__Note__: To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy)

Hematopoietic Cell Transplant ☐ Yes ☐ No *If yes, provide information below*

Type[11]	Tandem?	Source[12]	Date of infusion	Conditioning regimen[13]
	☐ Yes ☐ No			

Institution	Transplant physician

Graft-Versus-Host Disease (GVHD) Prophylaxis/Treatment (for transplant patients only) ☐ Yes ☐ No *If yes, provide information below*

Type[14]	First dose	Last dose

Was the patient ever diagnosed with chronic GVHD? ☐ Yes ☐ No Does the patient currently have active chronic GVHD? ☐ Yes ☐ No

Surgery ☐ Yes ☐ No *If yes, provide information below*

Procedure[15]	Date	Site (if applicable)	Laterality (if applicable)	Institution/Surgeon

Other Therapeutic Modalities ☐ Yes ☐ No *If yes, provide information below*

Therapy[16]	Route[6]	Cumulative dose[7] (if known)

Additional Clinical Information

Complications/Late Effects ☐ Yes ☐ No *If yes, provide information below*

Problem[17]	Date onset	Date resolved	Status
			☐ Active ☐ Resolved
			☐ Active ☐ Resolved
			☐ Active ☐ Resolved
			☐ Active ☐ Resolved

Adverse Drug Reactions/Allergies ☐ Yes ☐ No *If yes, provide information below*

Drug	Reaction	Date	Status
			☐ Active ☐ Resolved

Additional Information/Comments ☐ Yes ☐ No *If yes, provide information below*

Summary prepared by:	**Date prepared**:
Summary updated by:	**Date updated**:

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Key for Completing Summary of Cancer Treatment (Comprehensive)

#1: Race/Ethnicity
Asian
Black/African American
Caucasian (non-Hispanic/non-Latino)
Hispanic or Latino
Native American/Alaskan Native
Native Hawaiian/Pacific Islander
Multi-racial/multi-ethnic
Race/ethnicity, other, specify:
#2: Cancer Diagnosis
Central Nervous System Tumor
Astrocytoma
Cerebellar astrocytoma
Supratentorial astrocytoma
Brainstem glioma
Choroid plexus neoplasm
Craniopharyngioma
Ependymoma
Germ cell tumor, intracranial
Optic glioma
Pineal tumor
PNET
Cerebellar (medulloblastoma)
Supratentorial PNET
Spinal cord tumor, intramedullary
CNS tumor, other, specify:
Endocrine tumor
Adrenal tumor (non-neuroblastoma)
Thyroid tumor
Parathyroid tumor
Gastroenteropancreatic tumor
Multiple endocrine neoplasia syndrome
Endocrine tumor, other, specify:
Germ cell tumor (extracranial)
Seminoma
Germinoma
Dysgerminoma
Non-seminomas
Yolk sac tumor
Embryonal carcinoma
Choriocarcinoma
Teratoma
Mature
Immature
With malignant transformation

#2: Cancer Diagnosis (cont)
Germ cell tumor (extracranial) (cont)
Germ cell tumor, other, specify:
Langerhans cell histiocytosis
Leukemia
Acute lymphoblastic leukemia
Acute myeloid leukemia
Chronic myeloid leukemia
Myelodysplastic syndrome
Myeloproliferative disorder
Leukemia, other, specify:
Liver tumor
Hepatoblastoma
Hepatocellular carcinoma
Liver tumor, other, specify:
Lymphoma
Hodgkin lymphoma
Non-Hodgkin lymphoma
Lymphoblastic lymphoma
Burkitt's lymphoma
Large cell lymphoma
Anaplastic large cell lymphoma
Diffuse large B-cell lymphoma
Lymphoma, other, specify:
Nasopharyngeal carcinoma
Neuroblastoma
Ganglioneuroblastoma
Renal tumor
Wilms tumor
Clear cell sarcoma
Renal cell carcinoma
Renal tumor, other, specify:
Retinoblastoma
Sarcoma
Ewing's sarcoma/peripheral PNET
Osteogenic sarcoma
Rhabdomyosarcoma
Soft tissue sarcoma (nonrhabdomyosarcomatous)
Alveolar soft part sarcoma
Fibrosarcoma
Leiomyosarcoma
Liposarcoma
Malignant fibrous histiocytoma
Malignant peripheral nerve sheath tumor
Neurofibrosarcoma

#2: Cancer Diagnosis (cont)
Sarcoma (cont)
Soft tissue sarcoma (nonrhabdomyosarcomatous) (cont)
Synovial sarcoma
Undifferentiated sarcoma
Sarcoma, other, specify:
Skin cancer
Basal cell carcinoma
Malignant melanoma
Squamous cell carcinoma
Skin cancer, other, specify:
Malignancy, other, specify:
Diagnosis, other, specify:
#3: Hereditary/Congenital History
Congenital heart disease
Congenital disease, other, specify:
Hemihypertrophy
Neurofibromatosis Specify: ☐ Type I ☐ Type II
Down syndrome
Syndrome, other, specify:
Hereditary condition, other, specify:
None
Unknown
#4: Subsequent Malignancy Diagnosis
Bladder cancer
Breast cancer
Central nervous system tumor
Malignant, specify type and location:
Meningioma, specify location:
CNS tumor, other, specify type:
Cervical cancer
Gastrointestinal cancer
Esophageal cancer
Stomach cancer
Colorectal cancer
Hepatocellular carcinoma
Pancreatic cancer
GI cancer, other, specify:
Leukemia
Acute lymphoblastic leukemia
Acute myeloid leukemia
Chronic myeloid leukemia
Myelodysplastic syndrome
Myeloproliferative disorder

CHILDREN'S ONCOLOGY GROUP

Key for Completing Summary of Cancer Treatment (Comprehensive) (cont)

#4 Subsequent Malignancy Diagnosis (cont)
Leukemia (cont)
Leukemia, other, specify:
Lung cancer
Lymphoma
Hodgkin lymphoma
Non-Hodgkin lymphoma
Lymphoblastic lymphoma
Burkitt lymphoma
Large cell lymphoma
Post-transplant lymphoproliferative disorder (PTLD)
Lymphoma, other, specify:
Peripheral nerve sheath tumor/ Schwannoma/Acoustic neuroma
Renal cancer
Renal cell carcinoma
Clear cell sarcoma
Renal cancer, other, specify:
Sarcoma
Ewing's sarcoma/peripheral PNET
Osteogenic sarcoma
Rhabdomyosarcoma
Soft tissue sarcoma (nonrhabdomyosarcomatous)
Undifferentiated sarcoma
Sarcoma, other, specify:
Skin cancer
Basal cell carcinoma
Malignant melanoma
Squamous cell carcinoma
Thyroid cancer
Malignancy, other, specify:
None
Unknown

#5: Chemotherapy
Asparaginase
Bleomycin
Busulfan
Carboplatin Myeloablative dose? ☐ Yes ☐ No
Carmustine (BCNU)
Chlorambucil
Cisplatin
Cladribine
Clofarabine

#5: Chemotherapy (cont)
Cyclophosphamide
Cytarabine If IV: any single dose ≥ 1000 mg/m^2? ☐ Yes ☐ No
Dacarbazine (DTIC)
Dactinomycin
Daunorubicin
Dexamethasone
Docetaxel
Doxorubicin
Epirubicin
Etoposide (VP-16)
Fludarabine
Fluorouracil
Gemcitabine
Hydrocortisone
Hydroxyurea
Idarubicin
Ifosfamide
Imatinib Mesylate
Irinotecan
Lomustine (CCNU)
Mechlorethamine
Melphalan
Mercaptopurine
Methotrexate If IV: Any single dose ≥ 1000 mg/m^2? ☐ Yes ☐ No
Mitoxantrone
Oxaliplatin
Paclitaxel
Prednisone
Procarbazine
Temozolomide
Teniposide (VM-26)
Thioguanine (6-TG)
Thiotepa
Topotecan
Trimetrexate
Vinorelbine
Vinblastine
Vincristine
Chemotherapy, other, specify:
None
Unknown

#6: Route
PO
IM
IV
SQ
IT
IO
Route, other, specify:
Unknown

#7: Cumulative Dose (*Note: this is a required field for anthracyclines and optional but suggested for all others*)
mg/m^2
units/m^2
mg/kg (**Note**: computer will multiply mg by 30 and display as mg/m^2)
Not available
Not applicable
Cumulative dose, other, specify:
Unknown

#8: Radiation Site/Field
Head/brain
Cranial
Orbital/Eye Specify: ☐ Right ☐ Left ☐ Bilateral
Ear/Infratemporal Specify: ☐ Right ☐ Left ☐ Bilateral
Nasopharyngeal
Oropharyngeal
Waldeyer's ring
Head/brain radiation, other, specify:
Neck
Cervical (neck) Specify: ☐ Right ☐ Left ☐ Bilateral
Supraclavicular Specify: ☐ Right ☐ Left ☐ Bilateral
Spine
Spine – cervical
Spine – thoracic
Spine – lumbar
Spine – sacral
Spine – whole
Axilla Specify: ☐ Right ☐ Left ☐ Bilateral

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Key for Completing Summary of Cancer Treatment (Comprehensive) (cont)

#8: Radiation Site/Field (cont)
Chest
Chest (thorax)
Whole lung Specify: ☐ Right ☐ Left ☐ Bilateral
Mediastinal
Chest, other, specify:
Abdomen
Hepatic
Renal Specify: ☐ Right ☐ Left ☐ Bilateral
Upper quadrant Specify: ☐ Right ☐ Left ☐ Bilateral
Spleen Specify: ☐ Partial ☐ Entire
Paraaortic
Flank/hemiabdomen Specify: ☐ Right ☐ Left Specify: Extended below iliac crest: ☐ Yes ☐ No
Pelvis
Pelvic
Vaginal
Prostate
Bladder
Iliac
Inguinal
Femoral
Testicular Specify: ☐ Right ☐ Left ☐ Bilateral
Extremity
Upper Specify: ☐ Right ☐ Left ☐ Bilateral Specify: ☐ Proximal ☐ Distal ☐ Entire
Lower Specify: ☐ Right ☐ Left ☐ Bilateral Specify: ☐ Proximal ☐ Distal ☐ Entire
Total Body Irradiation (TBI)
Combination Fields:
Mantle
Mini-mantle
Extended mantle
Inverted Y
Whole abdomen
Total lymphoid irradiation (TLI)
Subtotal lymphoid irradiation (STLI)

#8: Radiation Site/Field (cont)
Radiation site/field, other, specify:
None
Unknown
Add comment:
#9: Radiation Type
Brachytherapy
Conformal
External beam (conventional)
Intensity-modulated radiation therapy (IMRT)
Proton beam
Stereotactic
Radiation type, other, specify:
None
Unknown
#10: Radiation Boost
Tumor bed, specify location:
Radiation boost location, other, specify:
None
Unknown
Add comment:
#11: Hematopoietic Cell Transplant (HCT) – Type
Autologous
Matched related
Mismatched related
Haploidentical related
Syngeneic
Matched unrelated
HCT type, other, specify:
Unknown
#12: Hematopoietic Cell Transplant – Source
Bone marrow
Peripheral blood stem cells
Cord blood
HCT source, other, specify:
Unknown
#13: Hematopoietic Cell Transplant – Conditioning Regimen
Anti-thymocyte globulin (ATG)
Busulfan
Carmustine (BCNU)
Cyclophosphamide
Etoposide
Fludarabine

#13: Hematopoietic Cell Transplant (HCT) – Conditioning Regimen (cont)
Melphalan
Thiotepa
Total body irradiation (TBI)
HCT conditioning regimen, other, specify:
Unknown
#14: Graft versus host disease (GVHD) Prophylaxis/Treatment
Anti-thymocyte globulin (ATG)
Cyclosporine
Methotrexate
Myophenolate mofetil (MMF)
Prednisone
Psoralen plus ultraviolet-A radiation (PUVA)
Sirolimus
Tacrolimus
GVHD prophylaxis/treatment, other, specify:
None
Unknown
#15: Surgery
Amputation, specify site: Specify: ☐ Right ☐ Left ☐ Bilateral
Central venous catheter
Cystectomy
Enucleation Specify: ☐ Right ☐ Left ☐ Bilateral
Hysterectomy
Laparotomy
Limb sparing procedure, specify site: Specify: ☐ Right ☐ Left ☐ Bilateral
Nephrectomy Specify: ☐ Right ☐ Left ☐ Bilateral
Neurosurgery – brain Potential to affect hypothalamic-pituitary axis? ☐ Yes ☐ No
Neurosurgery – spinal cord
Oophoropexy
Oophorectomy Specify: ☐ Right ☐ Left ☐ Bilateral
Orchiectomy Specify: ☐ Partial ☐ Unilateral ☐ Bilateral If partial or unilateral, specify: ☐ Right ☐ Left
Pelvic surgery
Thoracic surgery*
Splenectomy

CHILDREN'S ONCOLOGY GROUP

Key for Completing Summary of Cancer Treatment (Comprehensive) (cont)

#15: Surgery (cont)
Thyroidectomy
Surgery, other, specify:
None
Unknown
Add comment:
*Thoracic surgery includes: thoracotomy, chest wall surgery, rib resection, pulmonary lobectomy, pulmonary metastasectomy, and pulmonary wedge resection
#16: Other Therapeutic Modalities
Systemic Radiation
Radioiodine therapy (I-131 thyroid ablation)
Systemic Iodine metaiodobenzylguanidine (MIBG) (in therapeutic doses)
Systemic radiation, other, specify:
Bioimmunotherapy
Hematopoietic growth factors:
Granulocyte colony stimulating factor (G-CSF)
Erythropoietin
Thrombopoietin
Interferon:
Alpha interferon
Gamma interferon
Interleukin (IL):
IL-2
IL-11
Other, specify:
Monoclonal antibody, specify type:
Retinoic acid, specify type:
Bioimmunotherapy, other, specify:
Other therapeutic modality, specify:
None
Unknown
#17: Complications/Late Effects (by system)
Auditory
Conductive hearing loss
Eustachian tube dysfunction
Otosclerosis
Sensorineural hearing loss
Tinnitus
Tympanosclerosis
Vertigo
Auditory complication, other, specify:
Cardiovascular
Arrhythmia

#17: Complications/Late Effects (by system) (cont)
Cardiovascular (cont)
Atherosclerotic heart disease
Cardiomyopathy
Carotid artery disease
Congestive heart failure
Infection of retained cuff or line tract
Myocardial infarction
Pericardial fibrosis
Pericarditis
Post-thrombotic syndrome
Subclavian artery disease
Subclinical left ventricular dysfunction
Thrombosis
Valvular disease
Vascular insufficiency
Cardiovascular complication, other, specify:
Central Nervous System (CNS)
Ataxia
Cavernomas
Chronic pain, central neuropathic
Clinical leukoencephalopathy
Dysarthria
Dysphagia
Hemiparesis
Hydrocephalus
Movement disorders
Moyamoya
Neurocognitive deficits
Academic fluency
Behavioral change
Diminished IQ
Executive function (planning and organization)
Fine motor dexterity
Language
Learning deficits in math and reading (particularly reading comprehension)
Memory (particularly visual, sequencing, temporal memory)
Processing speed
Sustained attention
Visual-motor integration
Neurogenic bladder
Neurogenic bowel

#17: Complications/Late Effects (by system) (cont)
Central Nervous System (CNS) (cont)
Occlusive cerebral vasculopathy
Paralysis
Seizures
Shunt malfunction
Spasticity
Stroke
CNS complication, other, specify:
Dental
Dental caries
Ectopic molar eruption
Enamel dysplasia
Malocclusion
Microdontia
Osteoradionecrosis of the jaw
Periodontal disease
Root thinning/shortening
Salivary gland dysfunction
Temporomandibular joint dysfunction
Tooth/root agenesis
Xerostomia
Dental complication, other, specify:
Dermatologic
Altered skin pigmentation
Nail dystrophy
Permanent alopecia
Sclerodermatous changes
Skin fibrosis
Telangiectasias
Vitiligo
Dermatologic complication, other, specify:
Endocrine/Metabolic
Central adrenal insufficiency
Diabetes insipidus
Dyslipidemia
Gonadotropin deficiency (LH/FSH deficiency)
Growth hormone (GH) deficiency
Hyperprolactinemia
Hyperthyroidism
Hypothyroidism, primary (thyroid gland failure)
Hypothyroidism, central/secondary (T4/TSH deficiency)

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Key for Completing Summary of Cancer Treatment (Comprehensive) (cont)

#17: Complications/Late Effects (by system) (cont)
Endocrine/Metabolic (cont)
Impaired glucose metabolism/diabetes mellitus
Overweight [Body Mass Index (BMI)] Age 2–20 yrs: BMI for age ≥ 85 – <95%ile Age > 20 yrs: BMI 25 to 29.9
Obesity Age 2–20 yrs: BMI for age ≥ 95%ile Age > 20 yrs, BMI ≥ 30
Precocious puberty
Thyroid nodule
Endocrine/metabolic complication, other, specify:
Gastrointestinal/Hepatic
Abdominal adhesions
Bowel obstruction
Cholelithiasis
Chronic enterocolitis
Cirrhosis
Esophageal stricture
Fecal incontinence
Fistula
Focal nodular hyperplasia
Hepatic dysfunction
Hepatic fibrosis
Iron overload
Sinusoidal obstruction syndrome (SOS) [previously known as veno-occlusive disease (VOD)]
Strictures
Vitamin B12/folate/carotene deficiency
Gastrointestinal/hepatic complication, other, specify:
Immune
Asplenia - functional
Asplenia - surgical
Chronic hepatitis B
Chronic hepatitis C
Chronic graft-versus-host disease (cGVHD)
Chronic infection
Chronic sinusitis
Decreased B cells
HIV infection
Hypogammaglobulinemia
Secretory IgA deficiency
T cell dysfunction

#17: Complications/Late Effects (by system) (cont)
Immune (cont)
Immune complication, other, specify:
Musculoskeletal
Chronic pain, musculoskeletal
Contractures
Fibrosis
Functional and activity limitations
Hypoplasia
Impaired cosmesis
Increased energy expenditure (related to amputation/limb salvage)
Kyphosis
Limb length discrepancy
Osteonecrosis (avascular necrosis)
Prosthetic malfunction (loosening, non-union, fracture) requiring revision, replacement or amputation
Radiation-induced fracture
Reduced bone mineral density (BMD)
Reduced or uneven growth
Residual limb integrity problems
Scoliosis
Shortened trunk height
Musculoskeletal complication, other, specify:
Ocular
Cataract
Chronic painful eye
Gaze paresis
Glaucoma
Keratitis
Lacrimal duct atrophy
Maculopathy
Nystagmus
Ocular nerve palsy
Optic atrophy
Optic chiasm neuropathy
Orbital hypoplasia
Papilledema
Papillopathy
Poor prosthetic fit (related to enucleation)
Retinopathy
Telangiectasias

#17: Complications/Late Effects (by system) (cont)
Ocular (cont)
Xerophthalmia (keratoconjunctivitis sicca)
Ocular complication, other, specify:
Peripheral Nervous System (PNS)
Areflexia
Chronic pain, peripheral neuropathic
Dysesthesias
Foot drop
Paresthesias
Vasospastic attacks (Raynaud's phenomenon)
Weakness
PNS complication, other, specify:
Psychosocial
Anxiety
Dependent living
Depression
Educational problems
Fatigue
Limitations in healthcare and insurance access
Impaired quality of life
Post-traumatic stress
Psychological maladjustment
Psychosocial disability due to pain
Relationship problems
Risky behavior (behaviors known to increase the likelihood of subsequent illness or injury)
Sleep problems
Social withdrawal
Suicidal ideation
Under-employment/Unemployment
Psychosocial complication, other, specify:
Pulmonary
Acute respiratory distress syndrome
Bronchiectasis
Bronchiolitis obliterans
Chronic bronchitis
Interstitial pneumonitis
Obstructive lung disease
Pulmonary fibrosis
Restrictive lung disease
Pulmonary complication, other, specify:

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Key for Completing Summary of Cancer Treatment (Comprehensive) (cont)

#17: Complications/Late Effects (by system) (cont)
Reproductive – Female
Adverse pregnancy outcome
Delivery complications
Fetal malposition
Adverse pregnancy outcome (cont)
Low-birth weight infant
Neonatal death
Premature labor
Pregnancy complications
Spontaneous abortion
Breast tissue hypoplasia
Dyspareunia
Infertility
Pelvic adhesions
Pelvic floor dysfunction
Premature ovarian insufficiency/ premature menopause
Psychosexual/sexual dysfunction
Puberty - absence
Puberty - delayed/arrested
Reduced fertility
Symptomatic ovarian cysts
Uterine vascular insufficiency
Vaginal fibrosis/stenosis
Vulvar scarring
Reproductive – female complication, other, specify:
Reproductive – Male
Anejaculation
Azoospermia
Ejaculatory dysfunction
Erectile dysfunction
Infertility
Oligospermia
Puberty - absence
Puberty - delayed/arrested
Reduced fertility
Retrograde ejaculation
Testosterone deficiency/insufficiency
Reproductive – male complication, other, specify:
Urinary
Asymptomatic bacteriuria
Bladder fibrosis

#17: Complications/Late Effects (by system) (cont)
Urinary (cont)
Chronic urinary tract infection
Dysfunctional voiding
Fanconi syndrome
Glomerular injury
Hemorrhagic cystitis
Hydrocele
Hydronephrosis
Hyperfiltration
Hypertension
Hypophosphatemic rickets
Proteinuria
Renal dysfunction
Renal insufficiency
Renal tubular acidosis
Reservoir calculi
Spontaneous neobladder perforation
Urinary incontinence
Urinary tract obstruction
Vesicoureteral reflux
Urinary complication, other, specify:
Other, specify:
No late effects identified
Unknown

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Patient-Specific Guideline Identification Tool

Version 6.0
October 2023

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Instructions:
Patient-Specific Guideline Identification Tool (Version 6.0)

To determine Long-Term Follow-Up Guideline sections relevant to an **individual** patient:

1. Place a check mark in the "Mark if Patient Received" column for each chemotherapy agent, radiation field, transplant type, surgery, or other therapeutic modality that the patient received.
2. Compile a list of all section numbers generated during step 1. Include the following sections as applicable:
   - Sections 1 - 7 — Applicable to all patients
   - Section 8 — Patients diagnosed before 1972
   - Section 9 — Patients diagnosed before 1993
   - Section 10 — Patients diagnosed between 1977 and 1985
   - Section 11 — All patients who received chemotherapy
   - Sections 44, 45, 96 — All patients who received radiation
   - Sections 100 - 105 — All patients who underwent hematopoietic cell transplant
     - Section 100 is for males only
     - Section 101 is for females only
   - Section 164-165 — Applicable to all patients
3. For patients who received radiation for which a minimum dose specification is indicated, follow the "Instructions for Radiation Dose Calculation" in Appendix I. Delete from your list those radiation section(s) for which the patient did not receive the minimum radiation exposure at which the section(s) become applicable.
4. You now have a finalized list of all guideline sections applicable to this patient.

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Patient-Specific Guideline Identification Tool

Applicable guideline sections indicated in bold/dark blue; M=Male; F=Female

Name:	**Sex**: ☐ M ☐ F	**Date of Birth**:

Cancer Diagnosis: _____	**Date of Diagnosis**: _____	**End Therapy Date**: _____
☐ **Sections 1–7 applicable to all patients**	Prior to 1972: ☐ **Section 8** Prior to 1993: ☐ **Section 9** 1977–1985: ☐ **Section 10**	**LTFU guidelines are applicable to patients who are ≥ 2 years following completion of cancer therapy.**

CHEMOTHERAPY: ☐ **Yes** ☐ **No**

If yes: ☐ **Section 11** ***and*** applicable guidelines for specific chemotherapy agents below

Mark If Patient Received	Chemotherapy Agent	Applicable Guideline Sections
	Asparaginase	**Section 40**
	Bleomycin	**Section 35**
	Busulfan** Cumulative dose = _____ mg/m^2 Cyclophosphamide isotoxic dose = _____ mg/m^2 = Cumulative dose x 8.823	**Sections 12M, 13M, 14F, 15F, 16, 17, 18**
	Carboplatin: All doses	**Sections 12M, 13M, 14F, 15F, 16, 23, 24**
	Carboplatin: Myeloablative dose (conditioning for HCT)	**Section 22**
	Carmustine (BCNU)** Cumulative dose = _____ mg/m^2 Cyclophosphamide isotoxic dose = _____ mg/m^2 = Cumulative dose x 15	**Sections 12M, 13M, 14F, 15F, 16, 17**
	Chlorambucil** Cumulative dose = _____ mg/m^2 Cyclophosphamide isotoxic dose = _____ mg/m^2 = Cumulative dose x 14.286	**Sections 12M, 13M, 14F, 15F, 16**
	Cisplatin	**Sections 12M, 13M, 14F, 15F, 16, 22, 23, 24**
	Cyclophosphamide** Cumulative dose = _____ mg/m^2 Cyclophosphamide isotoxic dose = _____ mg/m^2 = Cumulative dose x 1	**Sections 12M, 13M, 14F, 15F, 16, 19, 20**
	Cytarabine: Low dose IV (all single doses <1000 mg/m^2), IO, IT, SQ	**Section 26**
	Cytarabine: High dose IV (any single dose ≥1000 mg/m^2)	**Section 25**
	Dacarbazine (DTIC)	**Sections 12M, 13M, 14F, 15F, 16**
	Dactinomycin	**Section 36**
	Daunorubicin* Cumulative dose = _____ mg/m^2 Doxorubicin isotoxic dose = _____ mg/m^2 = Cumulative dose x 0.5	**Section 33, 34**
	Dexamethasone	**Sections 37, 38, 39**
	Doxorubicin* Cumulative dose: _____ mg/m^2 Doxorubicin isotoxic dose = _____ mg/m^2 = Cumulative dose x 1	**Section 33, 34**
	Epirubicin* Cumulative dose: _____ mg/m^2 Doxorubicin isotoxic dose = _____ mg/m^2 = Cumulative dose x 0.67	**Section 33, 34**
	Etoposide (VP16)	**Section 43**
	Idarubicin* Cumulative dose: _____ mg/m^2 Doxorubicin isotoxic dose = _____ mg/m^2 = Cumulative dose x 5	**Section 33, 34**
	Ifosfamide** Cumulative dose = _____ mg/m^2 Cyclophosphamide isotoxic dose = _____ mg/m^2 = Cumulative dose x 0.244	**Sections 12M, 13M, 14F, 15F, 16, 19, 21**

CHILDREN'S ONCOLOGY GROUP

Patient-Specific Guideline Identification Tool (cont)

Mark If Patient Received (cont)	Chemotherapy Agent (cont)	Applicable Guideline Sections (cont)
	Lomustine (CCNU)** Cumulative dose = _____ mg/m² Cyclophosphamide isotoxic dose = _____ mg/m² = Cumulative dose x 16	Sections 12M, 13M, 14F, 15F, 16, 17
	Mechlorethamine** Cumulative dose = _____ mg/m² Cyclophosphamide isotoxic dose = _____ mg/m² = Cumulative dose x 100	Sections 12M, 13M, 14F, 15F, 16
	Melphalan** Cumulative dose = _____ mg/m² Cyclophosphamide isotoxic dose = _____ mg/m² = Cumulative dose x 40	Sections 12M, 13M, 14F, 15F, 16
	Mercaptopurine (6MP)	Section 27
	Methotrexate: High dose IV, Low dose IV, IM, PO	Sections 28, 29, 30
	Methotrexate: High dose IV, IO, IT	Sections 31, 32
	Mitoxantrone* Cumulative dose: _____ mg/m² Doxorubicin isotoxic dose = _____ mg/m² = Cumulative dose x 10	Section 33, 34
	Prednisone	Sections 37, 38, 39
	Procarbazine** Cumulative dose = _____ mg/m² Cyclophosphamide isotoxic dose = _____ mg/m² = Cumulative dose x 0.857	Sections 12M, 13M, 14F, 15F, 16
	Temozolomide	Sections 12M, 13M, 14F, 15F, 16
	Teniposide (VM26)	Section 43
	Thioguanine (6TG)	Section 27
	Thiotepa** Cumulative dose = _____ mg/m² Cyclophosphamide isotoxic dose = _____ mg/m² = Cumulative dose x 50	Sections 12M, 13M, 14F, 15F, 16
	Vinblastine	Sections 41, 42
	Vincristine	Sections 41, 42

***Instructions for Anthracycline Dose Calculation:** Use formulas below to convert to doxorubicin isotoxic equivalents prior to calculating total cumulative anthracycline dose:

Daunorubicin – multiply total dose x 0.5
Doxorubicin – multiply total dose x 1
Epirubicin – multiply total dose x 0.67
Idarubicin – multiply total dose x 5
Mitoxantrone – multiply total dose x 10

****Instructions for Cyclophosphamide Dose Calculation:** Use formulas below to convert to cyclophosphamide isotoxic equivalents prior to calculating total cumulative cyclophophamide dose:

Busulfan – multiply total dose x 8.823
BCNU – multiply total dose x 15
Chlorambucil – multiply total dose x 14.286
Cyclophosphamide – multiply total dose x 1
Ifosfamide – multiply total dose x 0.244
CCNU – multiply total dose x 16
Mechlorethamine – multiply total dose x 100
Melphalan – multiply total dose x 40
Procarbazine – multiply total dose x 0.857
Thiotepa – multiply total dose x 50

Note: There is a paucity of literature to support isotoxic dose conversion; however, the above conversion factors may be used for convenience in order to gauge screening frequency. Clinical judgment should ultimately be used to determine indicated screening for individual patients.

RADIATION: ☐ **Yes** ☐ **No**

If yes: ☐ **Sections 44, 45, 96** ***and*** applicable guidelines for specific radiation fields below

Mark If Patient Received	Radiation Field*	Dose	Applicable Guideline Sections
	Any Radiation (not including TBI)	Any	Section 98
	Head/Brain	Any	Sections 46, 47, 48, 49, 50, 51, 52, 53, 54M, 55F, 56, 57, 58M, 59F, 61, 62, 64, 65, 67, 68, 69, 70, 71
	Head/Brain	Minimum dose specifications apply**	Sections 60, 63, 66

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Patient-Specific Guideline Identification Tool (cont)

RADIATION: ☐ **Yes** ☐ **No**

If yes: ☐ **Sections 44, 45, 96 *and*** applicable guidelines for specific radiation fields below

Mark If Patient Received (cont)	Radiation Field* (cont)	Dose (cont)	Applicable Guideline Sections (cont)
	Neck	Any	**Sections 64, 65, 67, 68, 69, 70, 71, 72, 79**
	Neck	Minimum dose specifications apply**	**Section 66**
	Axilla	Any	**Sections 73F, 74F, 75, 76**
	Chest	Any	**Sections 72, 73F, 74F, 75, 76, 79, 97**
	Chest	Minimum dose specifications apply**	**Section 77**
	Abdomen	Any	**Sections 79, 80, 81, 82, 83, 84, 85, 86, 87, 97**
	Abdomen	Minimum dose specifications apply**	**Sections 77, 78**
	Pelvis	Any	**Sections 84, 85, 86, 88, 89, 92F, 93F, 94F, 95F**
	Testes	Any	**Sections 90M, 91M**
	Spine (whole)	Any	**Sections 64, 65, 67, 68, 69, 70, 71, 72, 79, 84, 85, 86, 88, 89, 92F, 93F, 94F, 97**
	Spine (whole)	Minimum dose specifications apply**	**Sections 66, 77**
	Spine (cervical)	Any	**Sections 64, 65, 67, 68, 69, 70, 71, 79**
	Spine (cervical)	Minimum dose specifications apply**	**Section 66**
	Spine (thoracic)	Any	**Sections 72, 79, 97**
	Spine (thoracic)	Minimum dose specifications apply**	**Section 77**
	Spine (lumbar)	Any	**Sections 84, 85, 86, 97**
	Spine (sacral)	Any	**Sections 84, 85, 86, 88, 89, 92F, 93F, 94F**
	TBI	Any	**Sections 44, 45, 46, 47, 48, 53, 58M, 59F, 61, 64, 65, 67, 68, 69, 73F, 74F, 75, 76, 80, 81, 86, 87, 91M, 92F, 93F, 94F, 96**
	TBI	For cumulative dose calculation purposes only; these sections are not applicable to patients who received TBI alone**	**Sections 60, 63, 66, 77, 78**

***Instructions for Determining Radiation Field**

Refer to "Radiation Fields Defined" in COG Long-Term Follow-Up Guidelines Appendix I pages 6-8 to determine applicable radiation fields. Note, for patients who received radiation to the flank/hemiabdomen, include the pelvis only if the field extended below the iliac crest.

****Instructions for Radiation Dose Calculation:**

Five sections of the COG Long-Term Follow-Up Guidelines (sections 60, 63, 66, 77, 78) include radiation dose specifications. These specifications indicate the minimum dose of radiation that is believed (based on available evidence and the recommendations of the expert panel) to place patients sufficiently at risk of the referenced late effect to recommend screening. For guideline sections that have a minimum specified dose, the following considerations apply in determining the applicability of the section for a patient based on his/her radiation exposure.

Sections with minimum dose specifications are applicable to a patient only if:

1. Patient received radiation to any field(s) relevant to the particular guideline section at ≥ the specified minimum dose†

OR

2. Patient received a combination of radiation to any relevant field(s)† **plus** relevant spinal radiation‡ **and/or** TBI, the sum of which is ≥ the specified minimum dose

†Total dose to each field should include boost dose, if given. If patient received radiation to more than one field relevant to a particular guideline section during a single planned course of radiation treatment (excluding spinal radiation and TBI), **the field that received the largest radiation dose should be used** in making the determination as to the applicability of the indicated guideline section(s). **Exception:** If patient received radiation to the same field at different times (e.g., at time of diagnosis AND at relapse), these doses should be added together when considering the applicability of the indicated guideline section.

‡Use the largest dose of radiation delivered to the spinal field(s) specified in the guideline section.

For examples of radiation dose calculations, refer to "Radiation Dose Calculations" in COG Long-Term Follow-Up Guidelines Appendix I page 9.

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Patient-Specific Guideline Identification Tool (cont)

Hematopoietic Cell Transplant: ☐ **Yes** ☐ **No**

If yes: ☐ **Sections 100M, 101F, 102, 103, 104, 105** ***and*** applicable guidelines below

Mark If Patient Received	Transplant Type	Chronic GVHD Status	Applicable Guideline Sections
	Autologous	N/A	**Section 99**
	Allogeneic	Without history of chronic GVHD	**No additional guideline sections**
	Allogeneic	With history of chronic GVHD	**Sections 106, 107, 108, 109, 110, 112, 113F, 114**
	Allogeneic	With currently active chronic GVHD	**Section 111**

Surgery: ☐ **Yes** ☐ **No**

If yes, applicable guidelines for specific surgical procedures below

Mark If Patient Received	Surgical Procedure	Applicable Guideline Sections
	Amputation	**Section 115**
	Central venous catheter	**Section 116**
	Cystectomy	**Sections 117, 142, 143, 144M, 145M, 146F**
	Enucleation	**Section 118**
	Hysterectomy	**Section 119F**
	Laparotomy	**Section 120**
	Limb sparing procedure	**Section 121**
	Nephrectomy	**Sections 122M, 123F**
	Neurosurgery – brain (all types)	**Sections 124, 125, 126, 127**
	Neurosurgery – brain (applies only to neurosurgery with potential to affect the hypothalamic-pituitary axis)	**Sections 128, 129**
	Neurosurgery – spinal cord	**Sections 130, 131, 132M, 133F, 134**
	Oophoropexy	**Section 135F**
	Oophorectomy – unilateral	**Section 136F, 137F**
	Oophorectomy – bilateral	**Section 138F**
	Orchiectomy – unilateral/partial	**Sections 139M, 140M**
	Orchiectomy – bilateral	**Section 141M**
	Pelvic surgery	**Sections 142, 143, 144M, 145M, 146F**
	Splenectomy	**Section 147**
	Thoracic surgery	**Sections 148, 149**
	Thyroidectomy - total/partial	**Section 150, 151**

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Patient-Specific Guideline Identification Tool (cont)

Other Therapeutic Modalities: ☐ **Yes** ☐ **No**

If yes, applicable guidelines for specific modalities below

Mark If Patient Received	Other Therapeutic Modality	Applicable Guideline Sections
	Radioiodine therapy (I-131 thyroid ablation)	**Sections 152, 153, 154**
	Systemic MIBG	**Sections 155, 156, 157**
	Bioimmunotherapy (e.g., G-CSF, IL-2, erythropoietin)	**Section 158**
	BCR-ABL tyrosine kinase inhibitors (e.g., imatinib, dasatinib)	**Section 159, 160**
	Other targeted biologic therapies	**Section 161**
	B-cell directed antibody-based therapies (e.g., rituximab)	**Section 162**
	Other antibody-based immune therapies, including antibody drug conjugates (e.g., blinatumomab, brentuximab vedotin, inotuzumab, gemtuzomab ozogamicin, dinutuximab, naxitamab, pembrolizumab, ipilimumab, nivolumab, atezolizumab)	**Section 163**

General Health Screening

All patients: ☐ **Section 164, 165**

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent, and Young Adult Cancers

Section Number Comparison COG LTFU Guidelines Version 6.0 vs 5.0

Version 6.0
October 2023

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Section Number Comparison
COG LTFU Guidelines Version 6.0 vs 5.0

Version 6.0	Version 5.0	Potential Late Effect
		Any Cancer Experience
1	1	Adverse psychosocial/quality of life effects
2	2	Mental health disorders
3	3	Risky behavior
4	4	Psychosocial disability due to pain
5	5	Fatigue; Sleep problems
6	6	Limitations in healthcare and insurance access
7	N/A	New to V6: Subsequent malignancy; Risk of malignancy in offspring
		Blood/Serum Products
8	7	Chronic hepatitis B
9	8	Chronic hepatitis C
10	9	HIV infection
		Chemotherapy
11	10	Dental abnormalities
12	11	Testicular hormonal dysfunction
13	12	Impaired spermatogenesis
14	13	Ovarian hormone deficiencies
15	14	Diminished ovarian reserve (DOR), previously Reduced ovarian follicular pool
16	15	Acute myeloid leukemia; Myelodysplasia
17	16	Pulmonary fibrosis
18	17	Cataracts
19	18	Urinary tract toxicity
20	19	Bladder malignancy
21	20	Renal toxicity
22	21	Ototoxicity
23	22	Peripheral sensory neuropathy
24	23	Renal toxicity
25	24	Neurocognitive deficits
26	25	No known late effects related to cytarabine (low dose IV, IO, IT, SQ)
27	26	Hepatic dysfunction; Sinusoidal obstruction syndrome (SOS)
28	27	Update in V6: No known BMD late effects related to methotrexate (IV, IM, PO)
29	28	No known renal late effects related to methotrexate
30	29	Hepatic dysfunction
31	30	Neurocognitive deficits
32	31	Clinical leukoencephalopathy
33	32	Acute myeloid leukemia
34	33	Cardiac toxicity
35	34	Pulmonary toxicity
36	35	No known late effects related to dactinomycin
37	36	Reduced bone mineral density (BMD)
38	37	Osteonecrosis (avascular necrosis)
39	38	Cataracts
40	39	No known late effects related to asparaginase
41	40	Peripheral sensory or motor neuropathy
42	41	Vasospastic attacks (Raynaud's phenomenon)
43	42	Acute myeloid leukemia
		Radiation
44	43	Subsequent benign or malignant neoplasm occurring in or near radiation field
45	44	Dermatologic toxicity other than neoplasms
46	45	Brain tumor (benign or malignant)
47	46	Neurocognitive deficits
48	47	Clinical leukoencephalopathy
49	48	Cerebrovascular complications
50	49	Craniofacial abnormalities
51	50	Chronic sinusitis
52	51	Overweight; Obesity
53	52	Growth hormone deficiency
54	53	Precocious puberty (male)
55	54	Precocious puberty (female)
56	55	Hyperprolactinemia
57	56	Central hypothyroidism
58	57	Gonadotropin deficiency (male)
59	58	Gonadotropin deficiency (female)
60	59	Central adrenal insufficiency
61	60	Cataracts

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Section Number Comparison
COG LTFU Guidelines Version 6.0 vs 5.0 (cont)

Version 6.0	Version 5.0	Potential Late Effect
62	61	Ocular toxicity
63	62	Ototoxicity
64	63	Xerostomia; Salivary gland dysfunction
65	64	Dental abnormalities; Temporomandibular joint dysfunction
66	65	Osteoradionecrosis of the jaw
67	66	Thyroid nodules
68	67	Thyroid cancer
69	68	Hypothyroidism
70	69	Hyperthyroidism
71	70	Carotid artery disease
72	71	Subclavian artery disease
73	72	Breast cancer
74	73	Breast tissue hypoplasia
75	74	Pulmonary toxicity
76	75	Lung cancer
77	76	Cardiac toxicity
78	77	Functional asplenia
79	78	Esophageal stricture
80	79	Impaired glucose metabolism/diabetes mellitus
81	80	Dyslipidemia
82	81	Hepatic toxicity
83	82	Cholelithiasis
84	83	Bowel obstruction
85	84	Chronic enterocolitis; Fistula; Strictures
86	85	Colorectal cancer
87	86	Renal toxicity
88	87	Urinary tract toxicity
89	88	Bladder malignancy
90	89	Testicular hormonal dysfunction
91	90	Impaired spermatogenesis
92	91	Ovarian hormone deficiencies
93	92	Diminished ovarian reserve, previously Reduced ovarian follicular pool
94	93	Uterine vascular insufficiency

Version 6.0	Version 5.0	Potential Late Effect
95	94	Vaginal fibrosis/stenosis
96	95	Musculoskeletal growth problems
97	96	Scoliosis/Kyphosis
98	97	Radiation-induced fracture
Hematopoietic Cell Transplant		
99	98	Acute myeloid leukemia; Myelodysplasia
100	99	Solid tumors (male)
101	100	Solid tumors (female)
102	101	Hepatic toxicity
103	102	Osteonecrosis (avascular necrosis)
104	103	Reduced bone mineral density
105	104	Renal toxicity
106	105	Dermatologic toxicity
107	106	Xerophthalmia (keratoconjunctivitis sicca)
108	107	Oral toxicity
109	108	Pulmonary toxicity
110	109	Immunologic complications
111	110	Functional asplenia
112	111	Esophageal stricture
113	112	Vulvar scarring; Vaginal fibrosis/stenosis
114	113	Joint contractures
Surgery		
115	114	Amputation-related complications
116	115	Thrombosis; Vascular insufficiency; Infection of retained cuff or line tract; Post-thrombotic syndrome
117	116	Cystectomy-related complications
118	117	Impaired cosmesis; Poor prosthetic fit; Orbital hypoplasia
119	118	Pelvic floor dysfunction; Urinary incontinence; Sexual dysfunction (female)
120	119	Adhesions; Bowel obstruction
121	120	Complications related to limb sparing procedure
122	121	Hydrocele; Renal toxicity (male)

Section Number Comparison
COG LTFU Guidelines Version 6.0 vs 5.0 (cont)

Version 6.0	Version 5.0	Potential Late Effect
123	122	Renal toxicity (female)
124	123	Neurocognitive deficits
125	124	Motor and/or sensory deficits
126	125	Seizures
127	126	Hydrocephalus; Shunt malfunction
128	127	Overweight; Obesity
129	128	Diabetes insipidus
130	129	Neurogenic bladder; Urinary incontinence
131	130	Neurogenic bowel; Fecal incontinence
132	131	Psychosexual dysfunction (male)
133	132	Psychosexual dysfunction (female)
134	133	Scoliosis/Kyphosis
135	134	Oophoropexy-related complication
136	135	Ovarian hormone deficiencies
137	136	Diminished ovarian reserve, previously Reduced ovarian follicular pool
138	137	Ovarian hormone deficiencies; Loss of ovarian follicular pool
139	138	Testicular hormonal dysfunction
140	139	Impaired spermatogenesis
141	140	Testosterone deficiency; Azoospermia
142	141	Urinary incontinence; Urinary tract obstruction
143	142	Fecal incontinence
144	143	Psychosexual dysfunction
145	144	Sexual dysfunction (anatomic); Infertility
146	145	Sexual dysfunction
147	146	Asplenia
148	147	Pulmonary dysfunction
149	148	Scoliosis/Kyphosis
150	149	Hypothyroidism
151	N/A	New to V6: Hypothyroidism
Other Therapeutic Models		
152	150	Lacrimal duct atrophy
153	151	Hypothyroidism
154	N/A	New to V6: Xerostomia; Salivary gland dysfunction; Chronic sialadenitis

Version 6.0	Version 5.0	Potential Late Effect
155	152	Hypothyroidism
156	153	Thyroid nodules
157	154	Thyroid cancer
158	155	Insufficient information currently available regarding late effects of biologic agents
159	N/A	New to V6: Growth attenuation
160	N/A	New to V6: Hypothyroidism
161	N/A	New to V6: Insufficient information currently available regarding late effects of biologic agents
162	N/A	New to V6: Immunologic complications
163	N/A	New to V6: Insufficient information currently available regarding late effects of biologic agents
Cancer Screening Guidelines		
N/A	156	Breast cancer (female)
N/A	157	Cervical cancer (female)
N/A	158	Colorectal cancer
N/A	159	Endometrial cancer (female)
N/A	160	Lung cancer
N/A	161	Oral cancer
N/A	162	Prostate cancer (male)
N/A	163	Skin cancer
N/A	164	Testicular cancer (male)
General Health Screening		
164	165	General health
165	N/A	New to V6: Vaccinations