

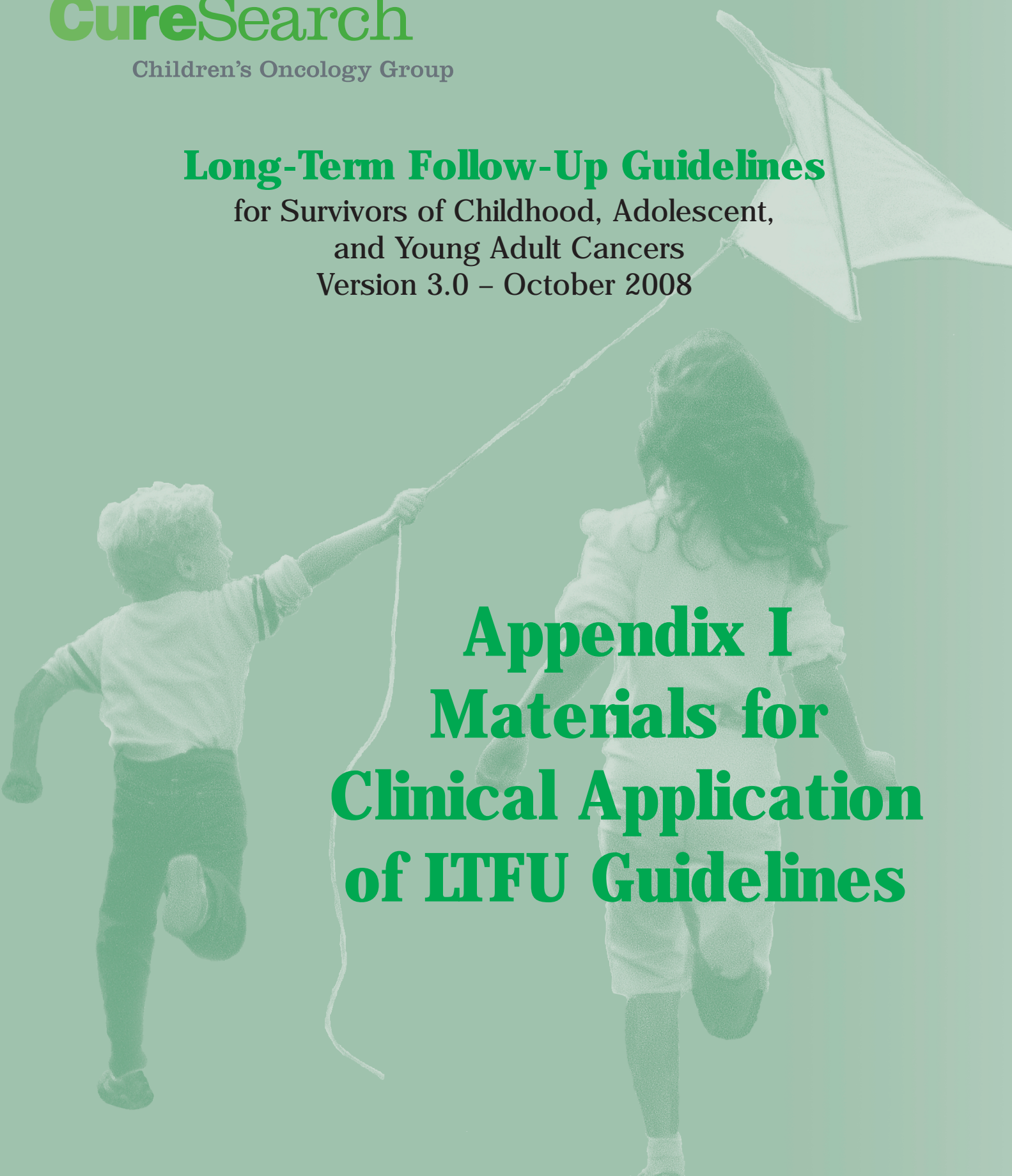
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Children's Oncology Group

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent,
and Young Adult Cancers

Version 3.0 – October 2008



Appendix I Materials for Clinical Application of LTFU Guidelines

Children's Oncology Group
**Long-Term Follow-Up Guidelines for Survivors of Childhood,
Adolescent, and Young Adult Cancers**
Version 3.0 – October 2008

Materials for Clinical Application of the COG LTFU Guidelines

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Reference Materials

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Abbreviations

Abbreviation	Definition
AAP-CIDP	American Academy of Pediatrics Committee on Infectious Disease Prevention
ABR	Brainstem auditory evoked responses
AFP	Alpha fetoprotein
ACS	American Cancer Society
AHA	American Heart Association
ALT	Alanine aminotransferase
AST	Aspartate aminotransferase
ATM	Ataxia telangiectasia cancer susceptibility gene located on chromosome 11
AVN	Avascular necrosis
BAER	Brainstem auditory evoked responses
BCNU	Carmustine
BMD	Bone mineral density
BMI	Body mass index
BRCA1	Breast cancer, early onset gene (cancer susceptibility gene located on chromosome 17)
BRCA2	Breast cancer 2, early onset gene (cancer susceptibility gene located on chromosome 13)
BUN	Blood urea nitrogen
Ca	Calcium
CBC	Complete blood count
CCG	Children's Cancer Group
CCNU	Lomustine
CD-4	Cluster of differentiation antigen associated with helper T lymphocyte
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
CSF	Cerebral spinal fluid
CT	Computed tomography
CXR	Chest radiograph
DES	Diethylstilbestrol
DEXA	Dual energy x-ray absorptiometry
DLCO	Diffusion capacity of carbon monoxide
DOE	Dyspnea on exertion
EBMT	European Group for Blood and Marrow Transplant
ECHO	Echocardiogram
EKG	Electrocardiogram
EIA	Enzyme immunoassay
FAP	Familial adenomatous polyposis
FNA	Fine needle aspirate
FSH	Follicle stimulating hormone
GH	Growth hormone
GVHD	Graft versus host disease
Gy	Gray
HBcAb	Hepatitis B core antibody
HBsAg	Hepatitis B surface antigen
HCT	Hematopoietic cell transplant
HCV	Hepatitis C virus
HDL	High-density lipoproteins
HIB	<i>Haemophilus influenza B</i>
HIV	Human immunodeficiency virus

Abbreviations (cont)

Abbreviation	Definition
HNPCC	Hereditary nonpolyposis colorectal cancer
HPF	High power field
HPV	Human papilloma virus
HRT	Hormonal replacement therapy
Hz	Hertz
IBD	Inflammatory bowel disease
K	Potassium
I-131	Iodine 131 radioisotope
IQ	Intelligence quotient
IT	Intrathecal
IV	Intravenous
IVIG	Intravenous immunoglobulin
KUB	Kidneys, ureters, bladder radiograph
LH	Luteinizing hormone
MIBG	Iodine-131-meta-iodobenzylguanidine
Mg	Magnesium
MOPP	Mechlorethamine, Oncovin, Procarbazine, Prednisone
MRI	Magnetic resonance imaging
MUGA	Multiple Gated Acquisition scan
Na	Sodium
NCEP	National Cholesterol Education Program
NCHS	National Center for Health Statistics
<i>NF1</i>	Neurofibromin 1 (neurofibromatosis) cancer susceptibility gene located on chromosome 17
NSAIDs	Non-steroidal anti-inflammatory drugs
OAE	Otoacoustic emissions
OCP	Oral contraceptive pills
PAP	Papanicolau
PCR	Polymerase chain reaction
PFTs	Pulmonary function tests
<i>p53</i>	Cancer susceptibility gene located on chromosome 17 associated with familial cancers
PO	By mouth
PO ₄	Phosphate
PRN	As needed
PSA	Prostate specific antigen
QCT	Quantitative computed tomography
QTc	Corrected QT interval
<i>RB1</i>	Retinoblastoma gene – cancer susceptibility gene located on chromosome 13
RBC	Red blood cell
RDA	Recommended daily allowance
RUQ	Right upper quadrant
SCUBA	Self-contained underwater breathing apparatus
SD	Standard deviation
SOB	Shortness of breath
T ₄	Thyroxine
TBI	Total body irradiation
TPN	Total parenteral nutrition
TSH	Thyroid stimulating hormone
U/A	Urinalysis
USPSTF	United States Preventive Services Task Force
VOD	Veno-occlusive disease
VZIG	Varicella zoster immunoglobulin

Chemotherapy Agents

Generic Name	Additional Name(s)	Classification
Asparaginase	Elspar®	Enzyme
	Erwinia asparaginase	
	Kidrolase®	
	L-asparaginase	
	Oncaspar®	
	PEG-asparaginase	
Bleomycin	Blenoxane®	Anti-tumor antibiotic
Busulfan	Busulfex®	Alkylating agent
	Busulphan	
	Myleran®	
Carboplatin	CBDCA	Heavy metal
	Paraplatin®	
Carmustine	BCNU	Alkylating agent
	BiCNU®	
Chlorambucil	Leukeran®	Alkylating agent
Cisplatin	CDDP	Heavy metal
	Cisplatinum	
	Platinol®	
Cyclophosphamide	CPM	Alkylating agent
	Cytoxan®	
	Neosar®	
	Procytox®	
Cytarabine	Ara-C	Antimetabolite
	Cytosar®	
	Cytosar-U®	
	Cytosine arabinoside	
Dacarbazine	DTIC	Non-classical alkylator
	DTIC-Dome®	
Dactinomycin	Actinomycin-D	Anti-tumor antibiotic
	Cosmegen®	
Daunorubicin	Cerubidine®	Anthracycline antibiotic
	Daunomycin	
	DaunoXome®	
Dexamethasone	Decadron®	Corticosteroid
Doxorubicin	Adriamycin®	Anthracycline antibiotic
	Doxil®	
	Rubex®	
Epirubicin	Ellence®	Anthracycline antibiotic
	Pharmorubicin PFS®	

Chemotherapy Agents (cont)

Generic Name	Additional Name(s)	Classification
Etoposide	VePesid®	Epipodophyllotoxin
	VP-16	
Idarubicin	Idamycin®	Anthracycline antibiotic
Ifosfamide	Ifex®	Alkylating agent
Lomustine	CeeNU®	Alkylating agent
	CCNU	
Mechlorethamine	Mustargen®	Alkylating agent
	Nitrogen Mustard	
Melphalan	Alkeran®	Alkylating agent
Mercaptopurine	6-Mercaptopurine	Antimetabolite
	6-MP	
	Purinethol®	
Methotextrate	Amethopterin	Antimetabolite
	Folex®	
	Mexate®	
	Trexall®	
Mitoxantrone	Novantrone®	Anthracycline antibiotic
Prednisone	Deltasone®	Corticosteroid
	Methylprednisolone	
	Prednisolone	
Procarbazine	Matulane®	Alkylating agent
	Natulan®	
Temozolomide	Temodal®	Non-classical alkylator
	Temodar®	
Teniposide	VM-26	Epipodophyllotoxin
	Vumon®	
Thioguanine	Lanvis®	Antimetabolite
	Tabloid®	
	6-Thioguanine	
	6-TG	
Thiotepa	Thioplex®	Alkylating agent
Vinblastine	VBL	Plant alkaloid
	Velban®	
	Velbe®	
Vincristine	Oncovin®	Plant alkaloid
	VCR	
	Vincasar®	
	Vincrex®	

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Summary of Cancer Treatment

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Summary of Cancer Treatment - Instructions

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. Ideally, the comprehensive treatment summary should include the following information:

- Demographics (name, sex, date of birth, contact information)
- Diagnosis, including site/stage, date, and relapse(s) if any
- Pertinent secondary diagnoses (e.g., second malignancy, Down syndrome)
- Treatment protocol information, if applicable
- All chemotherapy agents received during treatment (including route of administration for all agents, cumulative doses for alkylators, bleomycin, and anthracyclines, and designation of "high dose" versus "standard dose" for methotrexate and cytarabine). Cumulative doses for all other agents should be provided if available. *Note:* "High dose" methotrexate/cytarabine is defined as any single dose ≥ 1000 mg/m². "Standard dose" methotrexate/cytarabine is defined as all single doses < 1000 mg/m². See section 28 of Guidelines for anthracycline isotoxic dose-equivalent conversion. For doses in mg/kg, multiply by 30 to obtain equivalent dosing in mg/m² (example: 2 mg/kg = 60 mg/m²).
- Radiation therapy summary, including field(s), laterality (if applicable), start/stop dates, number of fractions, dose per fraction, boost dose/location (if applicable), total dose (in Gy), and radiation type. *Note:* To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy); for definition of radiation fields, see page 6 of the Radiation Reference Guide (Appendix 1)
- Hematopoietic cell transplant(s), including type(s), date(s), conditioning regimen(s), and GVHD prophylaxis and/or treatment
- Surgical procedures, including date, site, and laterality if applicable
- Other therapeutic modalities (e.g., biologicals, systemic radiation)
- Significant complications/late effects with dates of onset/resolution
- Adverse drug reactions/allergies

Minimum Information Necessary to Generate Patient-Specific Guidelines:

In order to generate accurate exposure-based follow-up recommendations from these guidelines, the following information regarding the survivor's diagnosis and treatment is required, at minimum:

- Survivor's sex
- Survivor's date of birth
- Date of cancer diagnosis
- Date cancer therapy was completed

- Names of all chemotherapy agents received. *Note:* For a list of chemotherapy agents addressed by these guidelines (sections 6-37), see the “Chemotherapy” portion of the *Patient-Specific Guideline Identification Tool* in Appendix 1. 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), and age at first anthracycline dose (if unknown, age at first anthracycline dose is presumed to be age at diagnosis). *Note:* For anthracycline isotoxic dose-equivalent conversion, see Section 28 of Guidelines. For doses in mg/kg, multiply by 30 to obtain equivalent dosing in mg/m² (example: 2 mg/kg = 60 mg/m²).
- 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/m²) versus “standard dose” (all single doses < 1000 mg/m²)
- All radiation field(s) and total radiation dose (in Gy) to each field. For chest, thoracic spine, and abdominal radiation, include age at first dose; if unknown, age at first dose is presumed to be age at diagnosis. *Note:* 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). For list of radiation fields addressed by these guidelines (Sections 38-91), see “Radiation” portion of the *Patient-Specific Guideline Identification Tool* in Appendix 1; for definition of radiation fields, see page 6 of the Radiation Reference Guide (Appendix 1)
- Whether or not the survivor underwent a hematopoietic cell transplant (HCT), and if so, whether or not the survivor developed chronic graft-versus-host disease (cGVHD).
- Names of all relevant surgical procedures. *Note:* For list of surgical procedures addressed by these guidelines (Sections 107-132), see “Surgery” portion of the *Patient-Specific Guideline Identification Tool* in Appendix 1.
- Names of all other therapeutic modalities. *Note:* For list of other therapeutic modalities addressed by these guidelines (Sections 133-36), see “Other Therapeutic Modality” portion of the *Patient-Specific Guideline Identification Tool* in Appendix 1.

Templates for Summary of Cancer Treatment

Two templates for summarizing cancer treatment are included in Appendix I (and 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. This “key” correlates to the drop-down menus that will be available in the web-based “Passport for Care” guideline interface.

SUMMARY OF CANCER TREATMENT (Abbreviated)

DEMOGRAPHICS		
Name:	Sex:	Date of Birth:

CANCER DIAGNOSIS		
Diagnosis:	Date of Diagnosis:	Date Therapy Completed:

CHEMOTHERAPY: <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>	
Drug Name	Additional Information [†]

[†] **Anthracyclines:** Include cumulative dose in mg/m² and age at first dose (see section 28 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/m²) or "standard dose" (all single doses <1000 mg/m²)
Note: Cumulative doses, if known, should be recorded for all agents, particularly for alkylators and bleomycin.

RADIATION <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>	
Site/Field*	Total Dose** (Gy)***

* For chest, thoracic spine, and upper abdominal radiation, include age at first dose ** Total dose to each field should include boost dose, if given
*** Note: To convert cGy or rads to Gy, divide dose by 100 (example: 2400 cGy = 2400 rads = 24 Gy)

HEMATOPOIETIC CELL TRANSPLANT <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, answer question below</i>	
Was this patient ever diagnosed with chronic graft-versus-host disease (cGVHD)? <input type="checkbox"/> Yes <input type="checkbox"/> No	

SURGERY <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>		
Procedure	Site (if applicable)	Laterality (if applicable)

OTHER THERAPEUTIC MODALITIES <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, answer questions below</i>	
Did this patient receive radioiodine therapy (I-131 thyroid ablation)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did this patient receive systemic MIBG (in therapeutic doses)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did this patient receive bioimmunotherapy?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Summary prepared by:	Date prepared:
----------------------	----------------

SUMMARY OF CANCER TREATMENT (Comprehensive)

DEMOGRAPHICS			
Name: (last, first, middle)	Sex: (M/F)	Date of Birth:	COG Reg #:
Address: (number, street, city, state/province, postal code, country)			
Phone:	SS#	Race/Ethnicity: (see list #1)	
Alternate contact:		Relationship:	Phone:

CANCER DIAGNOSIS			
Diagnosis: (see list #2)			
Date of Diagnosis:	Age at Diagnosis:	Date Therapy Completed:	
Sites involved/stage/diagnostic details:		Laterality: (Right/Left/NA)	
Hereditary/congenital history: (see list #3)			
Pertinent past medical history:			
Treatment Center:			Medical Record #:
MD/APN Contact Information:			
RELAPSE(S) <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide information below</i>			
Date:	Site(s):	Laterality: (Right/Left/NA)	Date Therapy Completed:
SUBSEQUENT MALIGNANT NEOPLASM(S) <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide information below</i>			
Date:	Type: (see list #4)		
Stage/Site(s):		Date Therapy Completed:	

CANCER TREATMENT SUMMARY				
PROTOCOL(S) <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide information below</i>				
Acronym/Number	Title/Description	Initiated	Completed	On-Study

CHEMOTHERAPY <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>		
Drug Name	Route	Additional Information [†]
(see list # 5)	(see list #6)	(see list #7)

[†] **Anthracyclines:** Include cumulative dose in mg/m² and age at first dose (see section 28 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/m²) or "standard dose" (all single doses <1000 mg/m²); **Note:** Cumulative doses, if known, should be recorded for all agents, particularly for alkylators and bleomycin.

RADIATION <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>											
Site/Field	Laterality	Start Date	Stop Date	Fractions	Dose per Fraction (Gy)*	Initial Dose (Gy)*	Boost Site	Boost Dose (Gy)*	Total Dose (including boost) (Gy)*	Type	
(see list #8)							(see list #9)				(see list #10)
Radiation oncologist:						Institution:					

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

HEMATOPOIETIC CELL TRANSPLANT <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>				
Type	Source	Date of Infusion	Conditioning Regimen	Institution/Treating MD
(see list #11) Tandem? <input type="checkbox"/> Yes <input type="checkbox"/> No	(see list #12)		(see list #13)	

GVHD prophylaxis/treatment (For transplant patients only) <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>		
Type	First Dose	Last Dose
(see list #14)		
Was this patient ever diagnosed with chronic graft-versus-host disease (cGVHD)? <input type="checkbox"/> Yes <input type="checkbox"/> No		

SURGERY <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>				
Date	Procedure	Site (if applicable)	Laterality (if applicable)	Surgeon/Institution
	(see list #15)			

OTHER THERAPEUTIC MODALITIES <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>		
Therapy	Route	Cumulative Dose (if known)
(see list # 16)	(see list #6)	(see list #7)

COMPLICATIONS/LATE EFFECTS <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>			
Problem	Date onset	Date resolved	Status
(see list #17)			(Active/Resolved)
			(Active/Resolved)
			(Active/Resolved)
			(Active/Resolved)
			(Active/Resolved)

Adverse Drug Reactions/Allergies <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, complete chart below</i>			
Drug	Reaction	Date	Status
			(Active/Resolved)
			(Active/Resolved)

Additional Information/Comments <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide information below</i>	
Summary prepared by: (name/title/institution)	
Date prepared:	
Summary updated by: (name/title/institution)	
Date updated:	

Key for Completing Summary of Cancer Treatment (Comprehensive Version)

#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
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
Germ cell tumor, other, specify: _____

#2: Cancer Diagnosis (continued)

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: _____
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
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:
Other CNS tumor, specify type:
Cervical cancer
Gastrointestinal cancer
Esophageal cancer
Stomach cancer
Colorectal cancer
Hepatocellular carcinoma
Pancreatic cancer
Other GI cancer, specify:
Leukemia
Acute lymphoblastic leukemia
Acute myeloid leukemia
Chronic myeloid leukemia
Myelodysplastic syndrome
Myeloproliferative disorder
Leukemia, other, specify:
Lung cancer
Lymphoma
Hodgkin lymphoma
Non-Hodgkin lymphoma
Lymphoblastic lymphoma
Burkitt's 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
Other renal cancer, specify: _____
Sarcoma
Ewing's sarcoma/peripheral PNET
Osteogenic sarcoma
Rhabdomyosarcoma
Soft tissue sarcoma (nonrhabdomyosarcomatous)
Undifferentiated sarcoma
Other sarcoma, specify:

#4: Subsequent Malignancy Diagnosis (continued)

Skin cancer
Basal cell carcinoma
Malignant melanoma
Squamous cell carcinoma
Thyroid cancer
Other malignancy, specify:
None
Unknown

#5: Chemotherapy

Asparaginase
Bleomycin
Busulfan
Carboplatin
Myeloablative dose? <input type="checkbox"/> Yes <input type="checkbox"/> No
Carmustine (BCNU)
Chlorambucil
Cisplatin
Cladribine
Clofarabine
Cyclophosphamide
Cytarabine
If IV: Any single dose ≥ 1000 mg/m ² ? <input type="checkbox"/> Yes <input type="checkbox"/> 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 ? <input type="checkbox"/> Yes <input type="checkbox"/> No
Mitoxantrone
Oxaliplatin
Paclitaxel
Prednisone

#5: Chemotherapy (continued)

Procarbazine
Temozolomide
Teniposide (VM-26)
Thioguanine (6-TG)
Thiotepa
Topotecan
Trimetrexate
Vinorelbine
Vinblastine
Vincristine
Other, specify:
None
Unknown

#6: Route

PO
IM
IV
SQ
IT
IO
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
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
Other head/brain radiation, specify: _____
Neck
Cervical (neck), specify: Right, left, bilateral
Supraclavicular, specify: Right, left, bilateral
Spine
Spine - cervical
Spine - thoracic
Spine - lumbar
Spine - sacral
Spine - whole

#8: Radiation Site/Field (continued)

Axilla, specify: Right, left, bilateral
Thorax
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)
Other , specify:
None
Unknown
Add comment:

#9: Radiation Boost

Tumor bed, specify location:
Other location, specify:
None
Unknown
Add comment:

#10: Radiation Type

Brachytherapy
Conformal
External beam (conventional)
IMRT
Stereotactic
Other, specify:
None
Unknown

#11: Hematopoietic Cell Transplant - Type

Autologous
Matched related
Mismatched related
Haploidentical related
Syngeneic
Matched unrelated
Other, specify:
Unknown

#12: Hematopoietic Cell Transplant - Source

Bone marrow
Peripheral blood stem cells
Cord blood
Other, specify:
Unknown

#13: Hematopoietic Cell Transplant - Conditioning Regimen

ATG
Busulfan
Carmustine (BCNU)
Cyclophosphamide
Etoposide
Fludarabine
Melphalan
Thiotepa
TBI
Other, specify:
Unknown

#14: GVHD Prophylaxis/Treatment

ATG
Cyclosporine
Methotrexate
MMF (mycophenolate mofetil)
Prednisone
PUVA
Sirolimus
Tacrolimus
Other, specify:
None
Unknown

#15: Surgery

Amputation, specify: Right, left, bilateral; specify site:
Central venous catheter
Cystectomy
Enucleation specify: Right, left, bilateral
Hysterectomy
Laparotomy
Limb sparing procedure, specify: Right, left, bilateral; specify site:
Nephrectomy, specify: Right, left, bilateral
Neurosurgery - brain
Neurosurgery – spinal cord
Oophoropexy
Oophorectomy, specify: Right, left, bilateral
Orchiectomy, specify: Right, left, bilateral
Pelvic surgery
Pulmonary lobectomy, specify site:
Pulmonary wedge resection, specify site:
Pulmonary metastasectomy, specify site:
Splenectomy
Thyroidectomy
Other, specify:
None
Unknown
Add comment:

#16: Other Therapeutic Modalities

Systemic Radiation
Radioiodine therapy (I-131 thyroid ablation)
Systemic MIBG (in therapeutic doses)
Other, specify:
Bioimmunotherapy
Hematopoietic growth factors:
G-CSF
Erythropoietin
Thrombopoietin
Interferon:
Alpha interferon
Gamma interferon
Interleukin:
IL-2
IL-11
Other, specify:
Monoclonal antibody, specify type:
Retinoic acid, specify type:
Other, specify:
Other therapeutic modality, specify:
None
Unknown

#17: Complications/Late Effects (by system)

Psychosocial
Behavioral problems/behavioral change
Educational problems
Fatigue
Limitations in healthcare access and/or insurance
Psychosocial disability due to pain
Anxiety
Depression
Post-traumatic stress
Psychosocial disability due to pain
Social withdrawal
Risky behaviors
Tobacco use
Alcohol abuse
Substance abuse
Other, specify:
Psychosocial maladjustment
Impaired quality of life
Psychosocial complication, other, specify:
Ocular
Cataract
Enophthalmos
Orbital hypoplasia
Glaucoma
Keratitis
Xerophthalmia (keratoconjunctivitis sicca)
Lacrimal duct atrophy
Optic chiasm neuropathy
Retinopathy
Telangiectasia
Maculopathy
Papillopathy
Chronic painful eye
Visual impairment (uncorrectable)
Ocular nerve palsy
Gaze paresis
Nystagmus
Papilledema
Optic atrophy
Ocular complication, other, specify:
Auditory
Eustachian tube dysfunction
Hearing loss (requires hearing aids? <input type="checkbox"/> Yes <input type="checkbox"/> No)
Specify type: Sensorineural hearing loss; Conductive hearing loss
Otosclerosis
Tinnitus
Tympanosclerosis
Vertigo
Auditory complication, other, specify:
Dental
Dental abnormalities
Enamel dysplasia
Root thinning/shortening
Tooth/root agenesis

#17: Complications/Late Effects (by system, continued)

Microdontia
Periodontal disease
Tooth decay
Malocclusion
Xerostomia (salivary gland dysfunction)
Osteoradionecrosis
Temporomandibular joint dysfunction
Dental complication, other, specify:
Cardiovascular
Arrhythmia
Atherosclerotic heart disease
Cardiomyopathy
Congestive heart failure
Myocardial infarction
Pericardial fibrosis
Pericarditis
Subclinical left ventricular dysfunction
Valvular disease
Carotid artery disease
Subclavian artery disease
Thrombosis/vascular insufficiency (related to central line)
Vasospastic attacks (Raynaud's phenomenon)
Cardiovascular complication, other, specify:
Pulmonary
Bronchiolitis obliterans
Interstitial pneumonitis
Pulmonary fibrosis
Pulmonary dysfunction
Acute respiratory distress syndrome (ARDS)
Obstructive lung disease
Restrictive lung disease
Chronic bronchitis
Bronchiectasis
Pulmonary complication, other, specify:
Gastrointestinal/Hepatic
Abdominal adhesions
Bowel obstruction
Bowel strictures
Fecal incontinence
Cholelithiasis
Cholecystitis
Chronic enterocolitis
Esophageal stricture
Fistula
Malabsorption
Nutritional deficiency
Vitamin B12, folate or carotene deficiency
Cirrhosis
Hepatic fibrosis
Hepatic dysfunction
Chronic hepatitis (non-infectious)
Iron overload
Venocclusive disease (VOD) of the liver
Gastrointestinal/hepatic complication, other, specify:

#17: Complications/Late Effects (by system, continued)

Endocrine/Metabolic
Hypothyroidism
Primary hypothyroidism (thyroid gland failure)
Secondary (central) hypothyroidism (TR/TSH deficiency)
Hyperthyroidism
Thyroid nodule
Precocious puberty
Gonadal dysfunction/failure
Gonadotropin deficiency (LH/FSH deficiency) [central gonadal failure]
Gonadal dysfunction – testicular: See Reproductive (male)
Gonadal dysfunction – ovarian: See Reproductive (female)
Metabolic syndrome
Overweight (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)
Underweight (FTT)
Insulin resistance
Impaired glucose tolerance
Diabetes mellitus
Type I
Type II
Gestational
Dyslipidemia
Adrenal insufficiency
Primary adrenal insufficiency (adrenal gland failure)
Secondary (central) adrenal insufficiency (ACTH deficiency)
Hyperprolactinemia
Growth deceleration
Growth hormone deficiency
Short stature ($< 5^{\text{th}}$ percentile)
Endocrine/metabolic complication, other, specify:
Musculoskeletal
Amputation, specify type and site:
Osteonecrosis (avascular necrosis – AVN), specify site:
Craniofacial abnormalities
Impaired cosmesis
Contractures
Functional and activity limitation, specify:
Hypoplasia, specify site:
Kyphosis
Limb length discrepancy
Limb salvage, specify type and site:
Phantom pain
Prosthesis, malfunction (poor fit, loosening, non-union, fracture)
Prosthesis, revision required due to growth
Reduced bone mineral density
Residual limb integrity problems
Fracture (radiation-induced)
Increased energy expenditure (related to amputation/limb salvage)
Fibrosis (musculoskeletal)
Scoliosis
Short stature
Shortened trunk height
Reduced/uneven growth
Musculoskeletal complication, other, specify:

#17: Complications/Late Effects (by system, continued)

Central Nervous System (CNS)
Clinical leukoencephalopathy
With imaging abnormalities
Without imaging abnormalities
Learning disorder/disability
Math
Reading
Other, specify:
Motor deficit
Neurocognitive deficit, specify:
Diminished IQ
Executive function (planning/organization)
Sustained attention
Memory
Processing speed
Visual-motor integration
Moyamoya
Ataxia
Movement disorder
Neurogenic bladder
Neurogenic bowel
Paralysis
Occlusive cerebral vasculopathy
Seizures
Stroke
CNS complication, other, specify:
Peripheral Nervous System (PNS)
Peripheral sensory neuropathy
Peripheral motor neuropathy
PNS complication, other, specify:
Urinary
Hydronephrosis, specify: Right, left, bilateral
Hypertension
Mononephric
Renal insufficiency
Renal glomerular disorder
Hyperfiltration
Renal tubular disorder
Hypophosphatemic rickets
Renal Fanconi syndrome
Renal tubular acidosis
Vesicoureteral reflux
Bladder fibrosis
Urinary incontinence
Reservoir calculi
Dysfunctional voiding
Hemorrhagic cystitis
Proteinuria
Chronic UTI
Neobladder perforation
Urinary tract obstruction (due to retroperitoneal fibrosis)
Stricture, urinary tract, specify:
Urinary complication, other, specify:

#17: Complications/Late Effects (by system, continued)

Reproductive - Female
Breast tissue hypoplasia
Uterine vascular insufficiency
Adverse pregnancy outcome
Pregnancy complications
Delivery complications
Fetal malposition
Low birthweight infant
Spontaneous abortion
Premature labor
Neonatal death
Gonadal dysfunction - ovarian
Primary ovarian failure
Delayed/arrested puberty
Premature menopause
Infertility
Inability to conceive (despite normal ovarian function)
Dyspareunia
Symptomatic ovarian cysts
Pelvic adhesions
Sexual dysfunction
Vaginal stenosis/fibrosis
Reproductive - Male
Gonadal dysfunction - testicular
Germ cell failure
Azoospermia
Oligospermia
Infertility
Leydig cell failure
Hypogonadism (testosterone deficiency)
Delayed/arrested puberty
Sexual dysfunction - male
Erectile dysfunction
Anejaculation
Retrograde ejaculation
Hydrocele
Dermatologic
Alopecia (permanent)
Dysplastic nevi
Altered skin pigmentation
Skin fibrosis
Nail dysplasia
Scleroderma
Telangiectasia
Vitiligo
Immune
Asplenia
Functional asplenia
Surgical asplenia
History of life-threatening infection related to asplenia
Chronic sinusitis
Chronic graft versus host disease (GVHD)
Chronic Hepatitis B
Chronic Hepatitis C

#17: Complications/Late Effects (by system, continued)

Chronic infection, specify:
Human immunodeficiency virus (HIV) infection
Hypogammaglobulinemia
Secretory IgA deficiency
Pain, chronic
Musculoskeletal
Neuropathic
Other, specify:
Other, specify
No late effects identified
Unknown

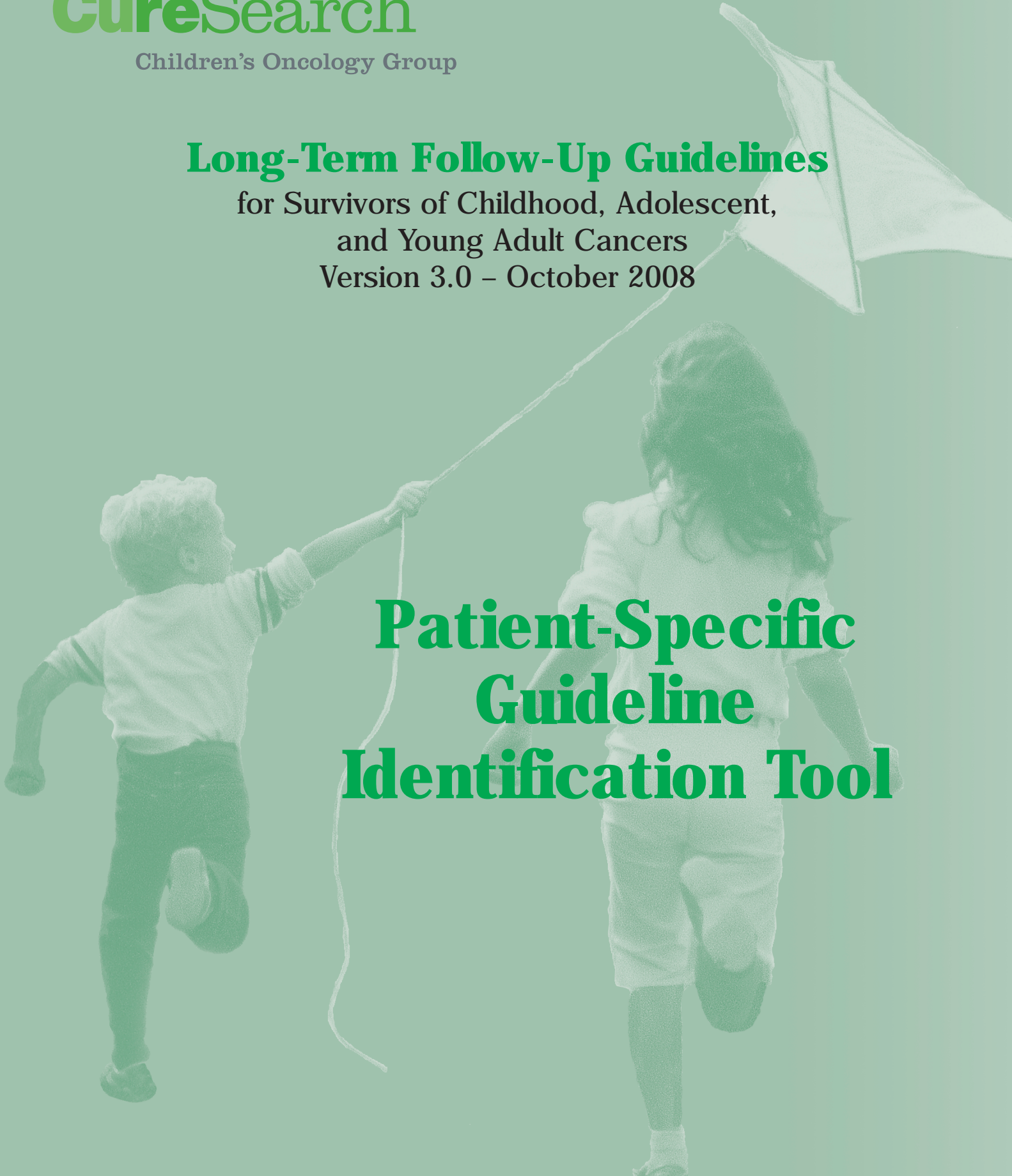
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Children's Oncology Group

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent,
and Young Adult Cancers

Version 3.0 – October 2008



Patient-Specific Guideline Identification Tool

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Instructions for Using the Patient-Specific Guideline Identification Tool

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

1. Place a checkmark in the “Mark if Patient Received” or “Mark All that Apply” column for each chemotherapy agent, radiation field, surgery, or other therapeutic modality that the patient received.
2. Place a checkmark in the “Mark as Indicated” column for all cancer screening guidelines that are applicable to this patient based on age, gender, and indicated conditions.
3. Compile a list of all section numbers generated during steps 1 and 2. Include the following sections as applicable:
 - Sections 1-2 Applicable to all patients
 - Section 3 Patients diagnosed before 1972
 - Section 4 Patients diagnosed before 1993
 - Section 5 Patients diagnosed between 1977 and 1985
 - Section 6 All patients who received chemotherapy
 - Sections 92-97 All patients who underwent hematopoietic cell transplant
 - Sections 98-106 Patients with history of chronic graft-vs-host (cGVHD) disease*
 - *Section 103 is for patients with active cGVHD only
 - *Section 105 is for females only
 - Section 146 Applicable to all patients

You now have a list of all guideline sections potentially applicable to this patient.

4. For patients who received radiation for which a minimum dose specification is indicated, follow the instructions for “Determining Applicability of Radiation Sections for Specific Patients Based on Exposure” (see page 47 of Guidelines or page 2 of *Radiation Reference Guide*). Delete from your list those radiation section(s) for which this patient did not receive the minimum radiation exposure at which the section(s) become applicable.
5. You now have a finalized list of all guideline sections applicable to this patient.

Chemotherapy Agent (cont) (mark if patient received)	Applicable guideline sections
Methotrexate: PO, IM, low and high-dose IV	Sections 22, 23, 24
Methotrexate: High-dose IV, IT, IO	Sections 25, 26 Note: High-dose IV = any single dose ≥ 1000 mg/m²
Mitoxantrone* (see footnote on previous page) Cumulative dose: _____ mg/m ² Age at first dose: _____	Sections 27, 28M/F Cumulative dose x 4 = _____ mg/m² = doxorubicin isotoxic dose
Prednisone	Sections 31, 32, 33
Procarbazine	Sections 7M/F, 8
Temozolomide	Sections 7M/F, 8
Teniposide (VM-26)	Section 37
Thioguanine (6-TG)	Section 21
Thiotepa	Sections 7M/F, 8
Vinblastine	Sections 35, 36
Vincristine	Sections 35, 36

Total anthracycline cumulative dose (doxorubicin isotoxic equivalent) = _____ mg/m²
(Instructions: Add all anthracycline doses from boxes in above table to obtain total cumulative dose)
Note: For doses in mg/kg, multiply by 30 to obtain equivalent dosing in mg/m²

RADIATION: Yes No *If yes, include applicable guidelines based on exposure to specific radiation field(s) (see instructions[§])*

§INSTRUCTIONS FOR RADIATION SECTIONS:

DETERMINING APPLICABILITY OF GUIDELINE SECTION BASED ON MINIMUM RADIATION DOSE SPECIFICATIONS:

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 \geq 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 \geq 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

[§]Whole lung radiation, if given, should be included in minimum dose calculations for Sections 65, 66, 67, 68, 73, and 91.

See Appendix I – “Radiation Reference Guide” – for examples.

SELECTING APPLICABLE GUIDELINE RADIATION SECTIONS BASED ON RADIATION EXPOSURE:

- Select all sections listed under “any dose” for each applicable radiation exposure
- Refer to the “Radiation Reference Guide” in Appendix I to determine which, if any, of the sections with minimum dose specifications are applicable to each particular patient based on their exposures
- For examples of radiation dose calculations, see pages 3 – 5 of the “Radiation Reference Guide”

Radiation by field [§] (mark all that apply)		Applicable guideline sections	
ALL RADIATION FIELDS:			
All radiation fields including TBI	Any dose	Sections 38, 39	
All radiation fields <u>except</u> TBI	Any dose	Sections 40, 41	
TOTAL BODY IRRADIATION (TBI):			
Total body irradiation (TBI)	Any dose	Sections 38, 39, 42, 43, 44, 49, 50, 56, 60, 62, 63, 64, 68F[‡], 69F, 70, 71M/F, 78[‡], 79, 83F, 84F, 86M, 88[‡] [‡]Screening <i>may</i> be indicated; refer to Info Link in this section	
HEAD/BRAIN:			
Cranial [Any field involving the cranium/head, brain, and/or face]	Any dose	Sections 42, 43, 44, 46, 47, 48, 49, 50, 51M/F, 56, 59, 60, 62, 63, 64	
	Minimum dose specifications apply	See Pages 11-13 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 45, 52M/F, 53, 54 M/F, 55, 57, 58, 61, 65, 66	
Orbital/Eye	Any dose	Sections 42, 46, 47, 48, 49, 50, 51M/F, 56	
	Minimum dose specifications apply	See Page 11 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 45, 52M/F, 53, 54M/F, 55, 57	
Ear/Infratemporal	Any dose	Sections 42, 43, 44, 46, 47, 48, 49, 50, 51M/F	
	Minimum dose specifications apply	See Page 11 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 45, 52M/F, 53, 54M/F, 55, 58	
Nasopharyngeal	Any dose	Sections 42, 46, 47, 48, 49, 50, 51M/F, 59, 60, 62, 63, 64	
	Minimum dose specifications apply	See Pages 11-13 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 45, 52M/F, 53, 54M/F, 55, 58, 61, 65, 66	
Oropharyngeal	Any dose	Sections 59, 60, 62, 63, 64	
	Minimum dose specifications apply	See Page 12-13 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66	
Waldeyer's Ring (Nasopharyngeal + Oropharyngeal)	Any dose	Sections 42, 46, 47, 48, 49, 50, 51M/F, 59, 60, 62, 63, 64	
	Minimum dose specifications apply	See Page 11-13 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 45, 52M/F, 53, 54M/F, 55, 58, 61, 65, 66	
SPINE:			
Spine (cervical) [Including some or all of the cervical spine (C1 – C7)]	Any dose	Sections 59, 60, 62, 63, 64, 88	
	Minimum dose specifications apply	See Pages 12-13, 18, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 73, 91	
Spine (thoracic) Age at time of XRT: _____ [Including some or all of the thoracic spine (T1 – T12)]	Any dose	Sections 71M/F, 88, 89, 90	
	Minimum dose specifications apply	See Pages 16, 18, 20, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 73, 76, 77, 78, 91	
Spine (lumbar) [Including some or all of the lumbar spine (L1 – L5)]	Any dose	Sections 83F, 84F, 88	
	Minimum dose specifications apply	See Pages 20, 23, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 76, 77, 78, 91	
Spine (sacral) [Including some or all of the sacral spine (S1 – S5)]	Any dose	Sections 82, 83F, 84F, 88	
	Minimum dose specifications apply	See Pages 20, 22-23, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 76, 77, 78, 80, 81, 91	
Spine (whole) [Includes cervical, thoracic, lumbar and sacral spine]	Any dose	Sections 59, 60, 62, 63, 64, 71M/F, 82, 83F, 84F, 88, 89, 90	
	Minimum dose specifications apply	See Pages 12-13, 16, 18, 20, 22-23, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 73, 76, 77, 78, 80, 81, 91	

[§]See instructions on page 2

Radiation by field [§] (mark all that apply)		Applicable guideline sections	
NECK:			
Cervical (neck) Supraclavicular	Any dose	Sections 59, 60, 62, 63, 64, 88	
	<i>Minimum dose specifications apply</i>	See Pages 12-13, 18, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 73, 91	
Mini-Mantle [Includes cervical (neck), supraclavicular, axillary] <i>Excludes mediastinal and lung</i>	Any dose	Sections 59, 60, 62, 63, 64, 69F, 70, 88	
	<i>Minimum dose specifications apply</i>	See Pages 12-15, 18, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 68F, 73, 91	
Mantle [Includes bilateral cervical (neck), supraclavicular, mediastinal, hilar, axillary] Age at time of XRT: _____	Any dose	Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90	
	<i>Minimum dose specifications apply</i>	See Pages 12-16, 18, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 68F, 73, 91	
Extended Mantle [Includes mantle + paraaortic] Age at time of XRT: _____	Any dose	Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 88, 89, 90	
	<i>Minimum dose specifications apply</i>	See Pages 12-16, 18-21, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 68F, 73, 74, 75, 76, 77, 78, 91	
Subtotal Lymphoid (STLI) [Includes mantle + paraaortic + spleen] Age at time of XRT: _____	Any dose	Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 88, 89, 90	
	<i>Minimum dose specifications apply</i>	See Pages 12-21, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 68F, 72, 73, 74, 75, 76, 77, 78, 91	
Total Lymphoid (TLI) [Includes mantle + inverted Y + spleen] Age at time of XRT: _____	Any dose	Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90	
	<i>Minimum dose specifications apply</i>	See Pages 12-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 61, 65, 66, 67, 68F, 72, 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91	
AXILLA:			
Axilla Age at time of XRT: _____	Any dose	Sections 69F, 70, 88	
	<i>Minimum dose specifications apply</i>	See Pages 14-15, 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 68F, 91	
Mini-Mantle	See "Neck"	See "Neck" (above)	
Mantle	See "Neck"	See "Neck" (above)	
Extended Mantle	See "Neck"	See "Neck" (above)	
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (above)	
Total Lymphoid (TLI)	See "Neck"	See "Neck" (above)	
THORAX:			
Chest (thorax): Age at time of XRT: _____ [May include any of the following: mediastinal, hilar, whole lung, chest wall]	Any dose	Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90	
	<i>Minimum dose specifications apply</i>	See Pages 13-16, 18, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 65, 66, 67, 68F, 73, 91	
Whole lung	Any dose	Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90	

[§]See instructions on page 2

Radiation by field [§] (mark all that apply)		Applicable guideline sections
THORAX (cont):		
Mediastinal Age at time of XRT: _____ [Includes mediastinum plus bilateral hilar]	Any dose	Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90
	<i>Minimum dose specifications apply</i>	See Pages 13-16, 18, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 65, 66, 67, 68F, 73, 91
Mini-Mantle	See "Neck"	See "Neck" (page 4)
Mantle	See "Neck"	See "Neck" (page 4)
Extended Mantle	See "Neck"	See "Neck" (page 4)
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (page 4)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (page 4)
ABDOMEN:		
Any abdominal field* Age at time of XRT: _____ *Includes: Hepatic, renal, upper quadrant (right, left), spleen (partial, entire), paraaortic, flank/hemiabdomen (right, left)	Any dose	Sections 71M/F, 79, 88, 89, 90
	<i>Minimum dose specifications apply</i>	See Pages 16-21, 25-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 72 (if spleen in field*), 73, 74, 75, 76, 77, 78, 91 *includes left upper quadrant, entire spleen, left flank/hemiabdomen, and paraaortic if spleen in field
Extended mantle	See "Neck"	See "Neck" (page 4)
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (page 4)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (page 4)
Inverted Y [Includes paraaortic and pelvic ± spleen]	Any dose	Sections 71 M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90
	<i>Minimum dose specifications apply</i>	See Pages 16-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 72 (if spleen in field), 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91
Whole abdomen Age at time of XRT: _____ [Includes all abdominal and pelvic fields]	Any dose	Sections 71M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90
	<i>Minimum dose specifications apply</i>	See Pages 16-26 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 72, 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91
PELVIS:		
Any pelvic field** **Iliac crest to 3 cm below ischium. Includes: Pelvic, vaginal, prostate, bladder, iliac, inguinal, femoral; Flank/hemiabdomen included only if field extended below iliac crest	Any dose	Sections 82 (except femoral), 83F (except iliac/inguinal/femoral), 84F (except inguinal/femoral), 85F (except inguinal/femoral), 86M, 88
	<i>Minimum dose specifications apply</i>	See Pages 20, 22 (except femoral), 23 (except prostate/inguinal/femoral), 24 (except vaginal), and 25 of the Radiation Reference Guide to determine the applicability of the following sections for this patient: Sections 76, 77, 78, 80 (except femoral), 81 (except femoral), 87M, 91
Inverted Y	See "Abdomen"	See "Abdomen" (above)
Whole abdomen	See "Abdomen"	See "Abdomen" (above)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (page 4)
TESTICULAR:		
Testicular	Any dose	Section 86M
	<i>Minimum dose specifications apply</i>	See Page 24 of the Radiation Reference Guide to determine the applicability of the following section for this patient: Section 87M
EXTREMITIES:		
Extremity (Upper, Lower)	Any dose	Section 88
	<i>Minimum dose specifications apply</i>	See Page 25 of the Radiation Reference Guide to determine the applicability of the following section for this patient: Section 91

[§]See instructions on page 2

HEMATOPOIETIC CELL TRANSPLANT: Yes No *If yes:* Sections 92, 93M/F, 94-97
If yes, does patient have any history of **chronic graft-versus-host disease (cGVHD)**? Yes No *If yes:* Sections 98-106*
 *103 – active cGVHD only
 105F – females only

SURGERY: Yes No *If yes*, include applicable guideline sections below:

Surgical procedure (mark if patient received) ↓	Applicable guideline sections
Amputation	Section 107
Central venous catheter	Section 108
Cystectomy	Sections 109, 126, 127, 128M/F, 129M
Enucleation	Section 110
Hysterectomy	Section 111F (see also oophorectomy, if applicable, section 123F or 124F)
Laparotomy	Section 112
Limb sparing procedure	Section 113
Nephrectomy	Section 114M/F
Neurosurgery - brain	Sections 115, 116, 117, 118
Neurosurgery - spinal cord	Sections 119, 120, 121M/F
Oophoropexy	Section 122F
Oophorectomy - unilateral	Section 123F
Oophorectomy - bilateral	Section 124F
Orchiectomy	Section 125M
Pelvic surgery	Sections 126, 127, 128M/F, 129M
Pulmonary lobectomy, metastasectomy and/or wedge resection	Section 130
Splenectomy	Section 131
Thyroidectomy	Section 132

OTHER THERAPEUTIC MODALITIES: Yes No *If yes*, include applicable guideline sections below:

Other Therapeutic Modality (mark if patient received) ↓	Applicable guideline sections
Radioiodine therapy (I-131 thyroid ablation)	Sections 133, 134
Systemic MIBG (in therapeutic doses)	Section 135
Bioimmunotherapy	Section 136

CANCER SCREENING GUIDELINES

Patient type	Cancer type	Age at first screening	Applicable guideline sections (mark as indicated) ↓
All patients	Colorectal	Standard risk: Age 50 years Highest risk: XRT: Age 35 or 10 years after XRT (whichever occurs last) HNPCC: Puberty FAP: Age 21 years IBD: 8 years after diagnosis	Section 139
	Lung	Highest risk: At entry into LTFU	Section 141
	Oral	Highest risk: At entry into LTFU	Section 142
	Skin	Highest risk: At entry into LTFU	Section 144

CANCER SCREENING GUIDELINES (cont)			
Females	Breast	Standard risk: Age 20 years Highest risk: At puberty	Section 137F
	Cervical	All females: 3 years after first vaginal intercourse, or age at 21, whichever occurs first	Section 138F
	Endometrial	Highest risk: Age 35 years	Section 140F
Males	Prostate	Males \geq 45 years (see guideline)	Section 143M
	Testicular	N/A (see guideline)	Section 145M

GENERAL HEALTH SCREENING		
All patients	<input checked="" type="checkbox"/>	Section 146

CureSearch

Children's Oncology Group

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent,
and Young Adult Cancers

Version 3.0 – October 2008



Radiation Reference Guide

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Children's Oncology Group
**Long-Term Follow-Up Guidelines for Survivors of Childhood,
Adolescent, and Young Adult Cancers**
Version 3.0 – October 2008

RADIATION REFERENCE GUIDE

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Acknowledgment:

*Special thanks to Shweta Bhatia for preparing all
illustrations included in this Radiation Reference Guide*

Determining Applicability of Radiation Sections for Specific Patients Based on Exposure

GENERAL CONSIDERATIONS:

- The radiation sections of the *COG Long-Term Follow-Up Guidelines* (Sections 38 – 91) are organized by anatomic region from the head downward. For specifics regarding relevant exposures to each anatomic region and radiation field, refer to the applicable pages of this Radiation Reference Guide and to the Figures in this introductory section.
- To determine specific screening guidelines by section number for an individual patient, use the “Patient-Specific Guideline Identification Tool” in Appendix I together with this Radiation Reference Guide.

RADIATION DOSE CALCULATIONS:

Some sections of the *COG Long-Term Follow-Up Guidelines* relevant to radiation exposure include 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 \geq 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 \geq 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

[§]Whole lung radiation, if given, should be included in minimum dose calculations for Sections 65, 66, 67, 68, 73, and 91.

EXAMPLES:

Examples of radiation dose calculations are provided on the following pages.

RADIATION DOSE CALCULATION EXAMPLES

Example 1

Guideline section:

Section 68 (female); potential late effect = breast cancer

Minimum dose specification:

Radiation \geq 20 Gy

Relevant radiation fields:

Chest (thorax)

Whole lung

Mediastinal

Axilla

Mini-Mantle

Mantle

Extended Mantle

TLI

STLI

TBI

Clinical example:

Patient received the following radiation doses to these relevant fields:

- Axillary: 12 Gy
- Mediastinum: 18 Gy
- TBI: 10 Gy

Step 1:

If radiation was given to more than one field relevant to the guideline section, select the largest dose received:

= 18 Gy (Mediastinum)

Step 2:

Add TBI dose, if received:

	18 Gy
+ TBI	<u>10 Gy</u>
	28 Gy

This patient received a total dose of 28 Gy of radiation potentially impacting the breast. Therefore, Guideline Section 68 regarding screening for breast cancer, which is indicated for radiation doses \geq 20 Gy, is applicable.

Note: See Info Link in Section 68 for patients who received TBI alone, as screening may also be indicated for these patient based on clinical considerations.

Example 2

Guideline section:

Section 73; potential late effect = esophageal stricture

Minimum dose specification

Radiation \geq 30 Gy

Relevant radiation fields:

Spine (cervical, thoracic, whole)

Cervical (neck)

Supraclavicular

Chest (thorax)

Whole lung

Mediastinal

Mini-Mantle

Mantle

Extended mantle

Hepatic

Renal

Upper quadrant (right, left)

Spleen (partial, entire)

Paraortic

Flank/hemiabdomen (right, left)

Whole abdomen

Inverted Y

TLI

STLI

Clinical example:

Patient received the following radiation doses:

- Chest (thorax): 25 Gy
- Hepatic: 20 Gy
- Thoracic spine: 18 Gy
- Lumbar spine: 24 Gy
- TBI: 12 Gy

Step 1:

If radiation given to more than one non-spinal field, select the highest dose received:

= 25 Gy (Chest/thorax)

Step 2:

Add the largest relevant* spinal dose to highest non-spinal dose:

Thoracic spine = 18 Gy

+ Chest(thorax) 25 Gy

43 Gy

*Largest dose of radiation delivered to the spinal field(s) specified in the guideline section

Step 3:

Add TBI dose, if received, to total:

$$\begin{array}{r} 43 \text{ Gy} \\ + \text{TBI} \quad \underline{12 \text{ Gy}} \\ \hline 55 \text{ Gy} \end{array}$$

This patient received a total dose of 55 Gy of radiation potentially impacting the esophagus.

Therefore, Guideline Section 73 regarding screening for esophageal stricture, which is indicated for radiation doses ≥ 30 Gy, is applicable.

Example 3

Guideline section:

Section 55; potential late effect = central adrenal insufficiency

Minimum dose specification:

Radiation ≥ 40 Gy

Relevant radiation fields:

Cranial
Orbital/eye
Ear/infratemporal
Nasopharyngeal
Waldeyer's Ring

Clinical example:

Patient received 24 Gy cranial radiation at time of diagnosis. Five years later patient relapsed and was given an additional course of 24 Gy cranial radiation.

Step 1:

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

$$\begin{array}{r} 24 \text{ Gy (Cranial radiation at diagnosis)} \\ + \underline{24 \text{ Gy (Cranial radiation at relapse)}} \\ \hline 48 \text{ Gy} \end{array}$$

Step 2:

Add TBI dose, if received:

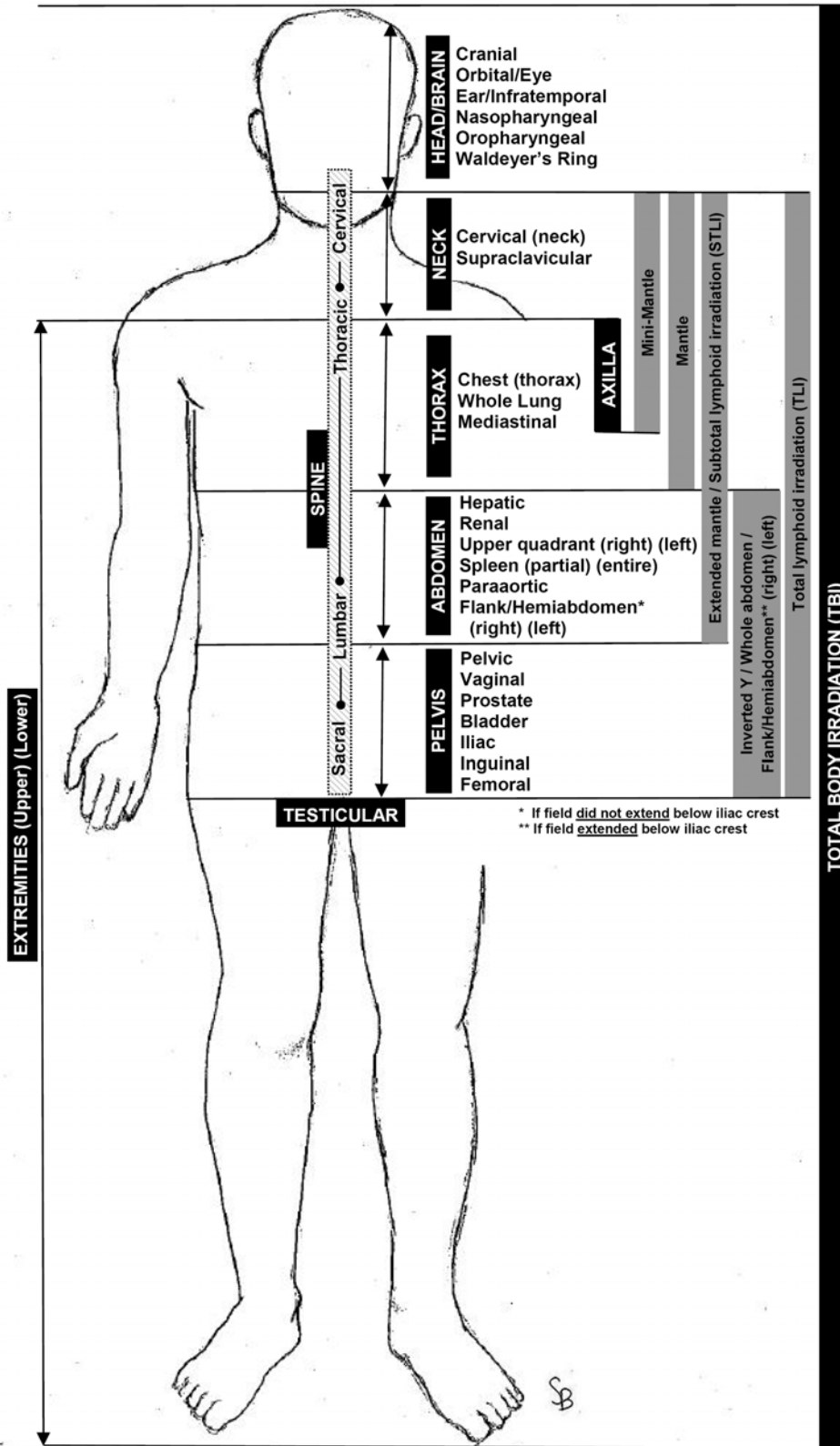
$$\begin{array}{r} 48 \text{ Gy} \\ + \text{TBI} \quad \underline{0 \text{ Gy}} \\ \hline 48 \text{ Gy} \end{array}$$

This patient received a total dose of 48 Gy of radiation potentially impacting the brain/neuroendocrine axis. Therefore, Guideline Section 55 regarding screening for central adrenal insufficiency, which is indicated for radiation doses ≥ 40 Gy, is applicable.

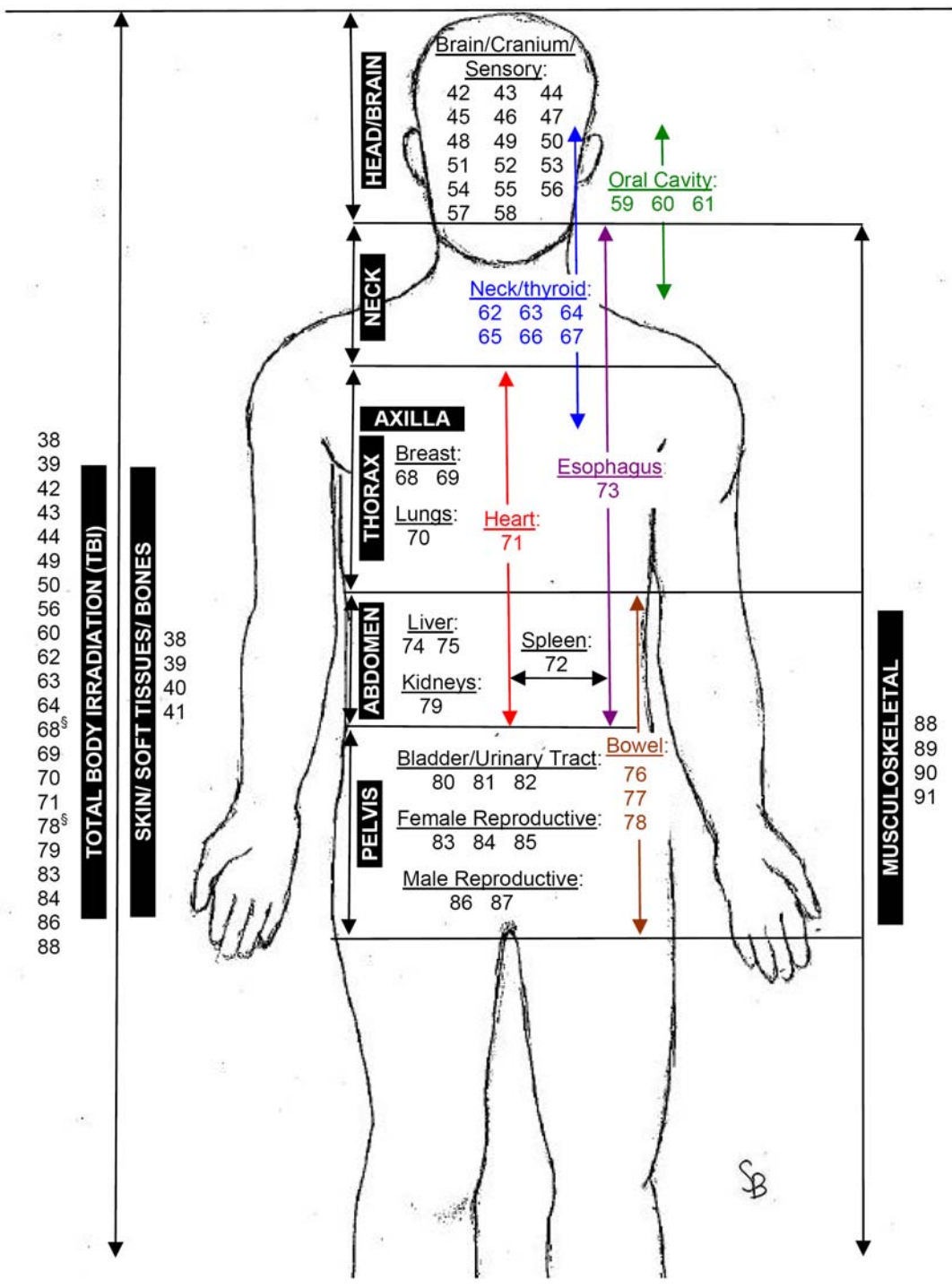
RADIATION FIELDS DEFINED

Field	Definition
Total body irradiation (TBI)	Entire body; encompassing all radiation fields
Cranial	Any field involving the cranium, head, brain and/or face
Waldeyer's Ring	Nasopharyngeal and oropharyngeal (tonsils and adenoids)
Spine – cervical	Including some or all of the cervical spine (C1 – C7)
Spine – thoracic	Including some or all of the thoracic spine (T1 – T12)
Spine – lumbar	Including some or all of the lumbar spine (L1 – L5)
Spine – sacral	Including some or all of the sacral spine (S1 – S5)
Spine – whole	Including the cervical, thoracic, lumbar and sacral spine
Mini-mantle	Bilateral cervical (neck), supraclavicular and axillary fields (excludes mediastinal and lung)
Mantle	Bilateral cervical (neck), supraclavicular, mediastinal, hilar, and axillary fields
Extended mantle	Mantle and paraaortic fields
Subtotal lymphoid (STLI)	Mantle + paraaortic + splenic
Inverted Y	Paraaortic + pelvic +/- splenic
Total lymphoid (TLI)	Mantle + inverted Y (paraaortic/pelvic) + splenic
Chest (thorax)	May include any of the following: Mediastinal, hilar, whole lung, chest wall
Mediastinal	Mediastinum and bilateral hilar fields
Abdomen (also commonly referred to as “upper abdomen”)	Top of diaphragm to iliac crests (bilaterally), including the following fields: <ul style="list-style-type: none"> - Hepatic - Renal/renal bed - Spleen (partial, entire) - Upper quadrant (right, left) - Paraaortic - Flank/hemiabdomen (right, left)
Paraaortic	Paraaortic lymph nodes (generally from T10 to L4 cephalad-caudad, and the transverse processes laterally) +/- splenic
Renal	Renal bed
Flank/hemiabdomen	Top of diaphragm to iliac crest (unilateral; medial border along contralateral vertebral bodies) <i>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.</i>
Whole abdomen	Includes all abdominal and pelvic fields
Pelvis	Iliac crest to 3 cm below ischium, including the following fields: <ul style="list-style-type: none"> - Pelvic - Vaginal - Prostate - Bladder - Iliac - Inguinal - Femoral

Radiation Fields by Anatomic Region



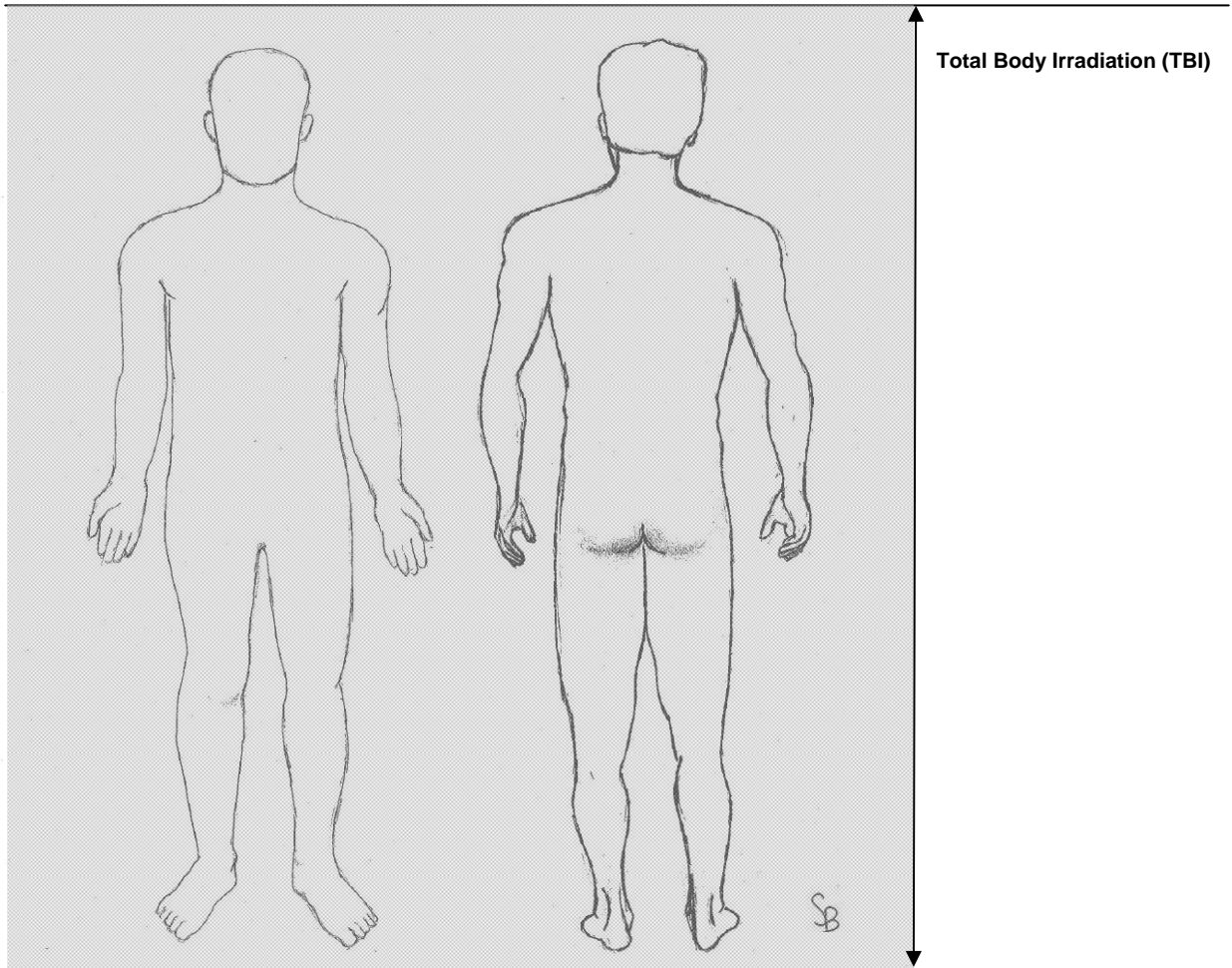
Guideline Radiation Section Numbers by Anatomic Region



[§]Screening may be indicated for patients who received TBI alone - see Info Link in indicated section
 Note: Oral cavity, neck/thyroid, heart, esophagus, and bowel are affected by radiation to multiple anatomic regions

Relevant Guideline Radiation Sections for Patients who Received

TOTAL BODY IRRADIATION (TBI)

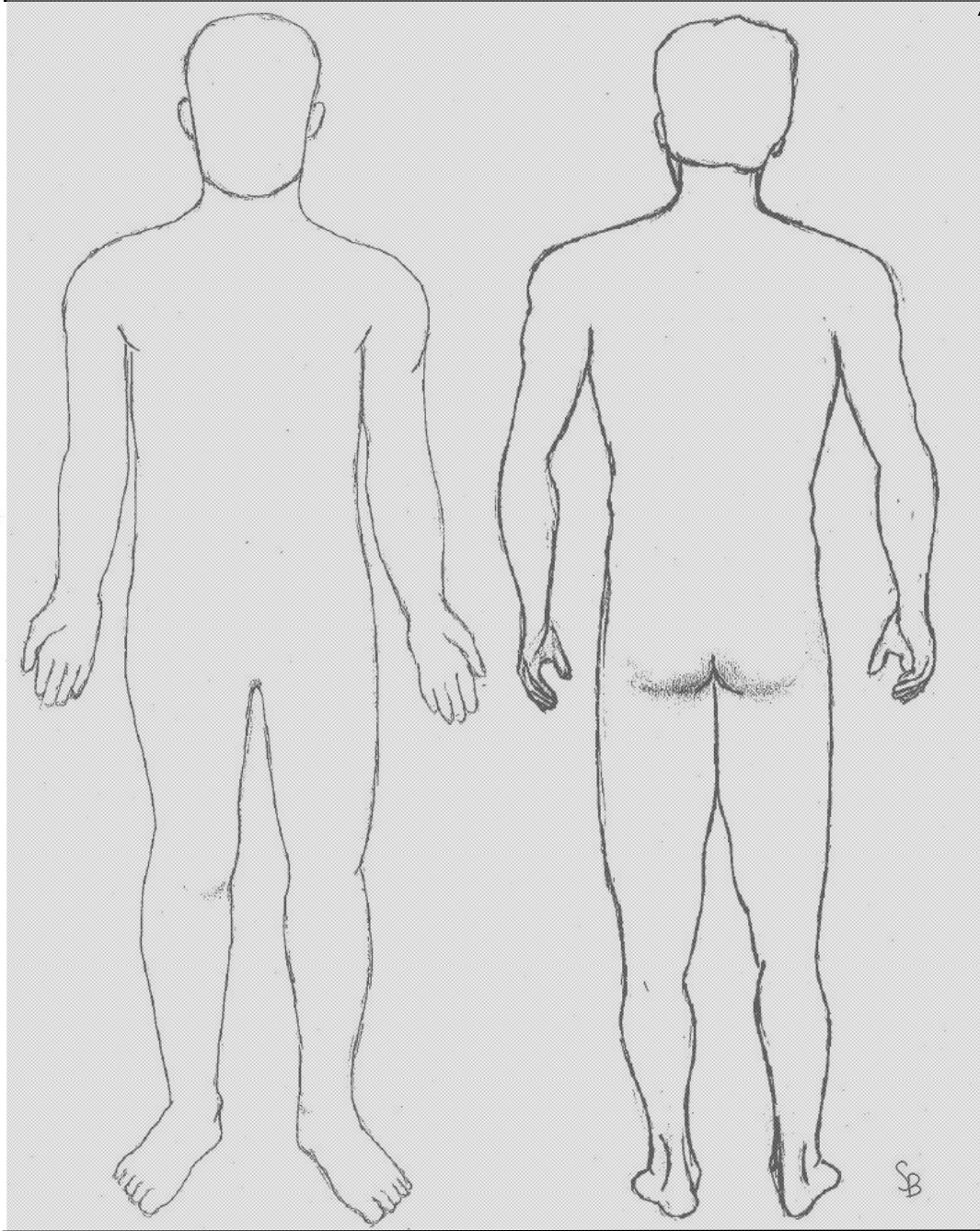


Fields	Dose	Section Numbers	Potential Late Effects
TBI	Any	38 39 42 43 44 49 50 56 60 62 63 64 68 [§] 69 70 71 78 [§] 79 83 84 86 88	Secondary benign or malignant neoplasms Dysplastic nevi/skin cancer Brain tumor Neurocognitive deficits Clinical leukoencephalopathy Metabolic syndrome Growth hormone deficiency Cataracts Dental abnormalities Thyroid nodules Thyroid cancer Hypothyroidism Breast cancer Breast tissue hypoplasia Pulmonary toxicity Cardiac toxicity Colorectal cancer Renal toxicity Uterine vascular insufficiency Gonadal dysfunction (ovarian) Gonadal dysfunction (testicular) Musculoskeletal growth problems

[§]Screening may be indicated for patients who received TBI alone - see Info Link in this section

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Skin, Bones, Soft Tissues**



**Skin, Soft Tissues, Bones -
Relevant Fields**

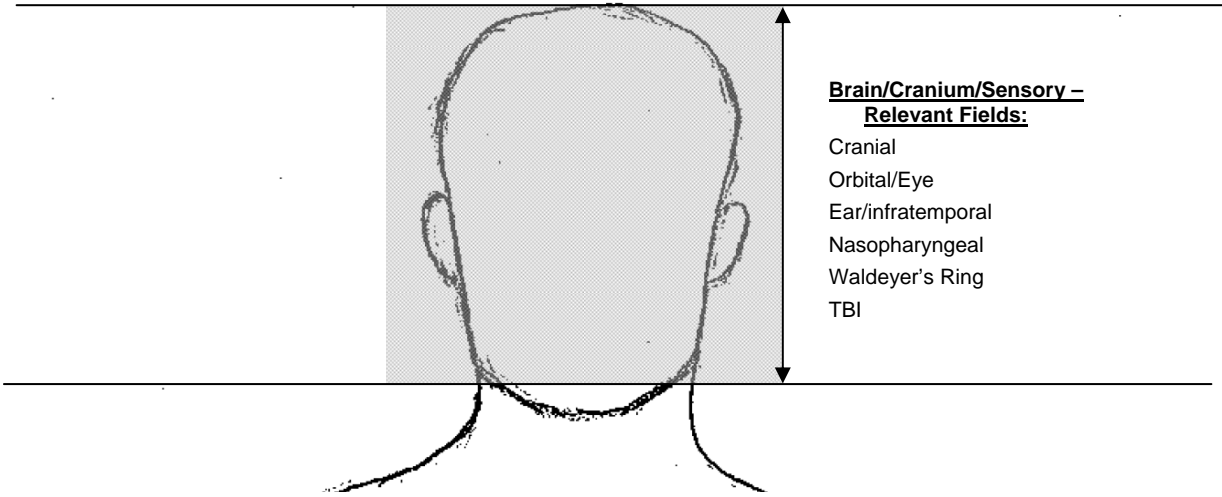
All radiation fields:

- Cranial
- Orbital/Eye
- Ear/Infratemporal
- Nasopharyngeal
- Oropharyngeal
- Waldeyer's Ring
- Spine (cervical, thoracic, lumbar, sacral, whole)
- Cervical (neck)
- Supraclavicular
- Chest (thorax)
- Whole lung
- Mediastinal
- Axilla
- Mini-Mantle
- Mantle
- Extended mantle
- Hepatic
- Renal
- Upper quadrant (right, left)
- Spleen (partial, entire)
- Paraaortic
- Flank/Hemiabdomen (right, left)
- Whole abdomen
- Inverted Y
- Pelvic
- Vaginal
- Prostate
- Bladder
- Iliac
- Inguinal
- Femoral
- Testicular
- Extremity (upper, lower)
- Total lymphoid irradiation (TLI)
- Subtotal lymphoid irradiation (STLI)
- Total body irradiation (TBI)

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Skin Bones Soft Tissues	All	Any	38, 39	Secondary benign or malignant neoplasms Dysplastic nevi Skin cancer
	All except TBI	Any	40, 41	Dermatologic changes Bone malignancies

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Brain/Neuroendocrine Axis, Cranium, Face, Eye, Ear**



Potential Impact To	Relevant Fields	Dose	Section Numbers	Potential Late Effects
Brain Neuroendocrine axis Cranium Face	Cranial Orbital/eye Ear/infratemporal Nasopharyngeal Waldeyer's Ring TBI	Any	42, 46*, 47*, 48*, 49, 50, 51*	Brain tumor, Craniofacial abnormalities*, Chronic sinusitis*, Overweight/ obesity*, Metabolic syndrome, Growth hormone deficiency, Precocious puberty*
		≥18 Gy***	45**	Cerebrovascular complications
		≥40 Gy***	52,** 53,** 54,** 55**	Hyperprolactinemia, Central hypothyroidism, Gonadotropin deficiency, Central adrenal insufficiency
Brain	Cranial Ear/infratemporal TBI	Any	43, 44	Neurocognitive deficit, Clinical leukoencephalopathy
Eye	Cranial Orbital/eye TBI	Any	56	Cataracts
		≥30 Gy***	57**	Ocular toxicity
Ear	Cranial Ear/infratemporal Nasopharyngeal Waldeyer's Ring TBI	≥30 Gy***	58**	Ototoxicity

*TBI not associated with these sections

**TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

***This/these section(s) applicable to patient only if:

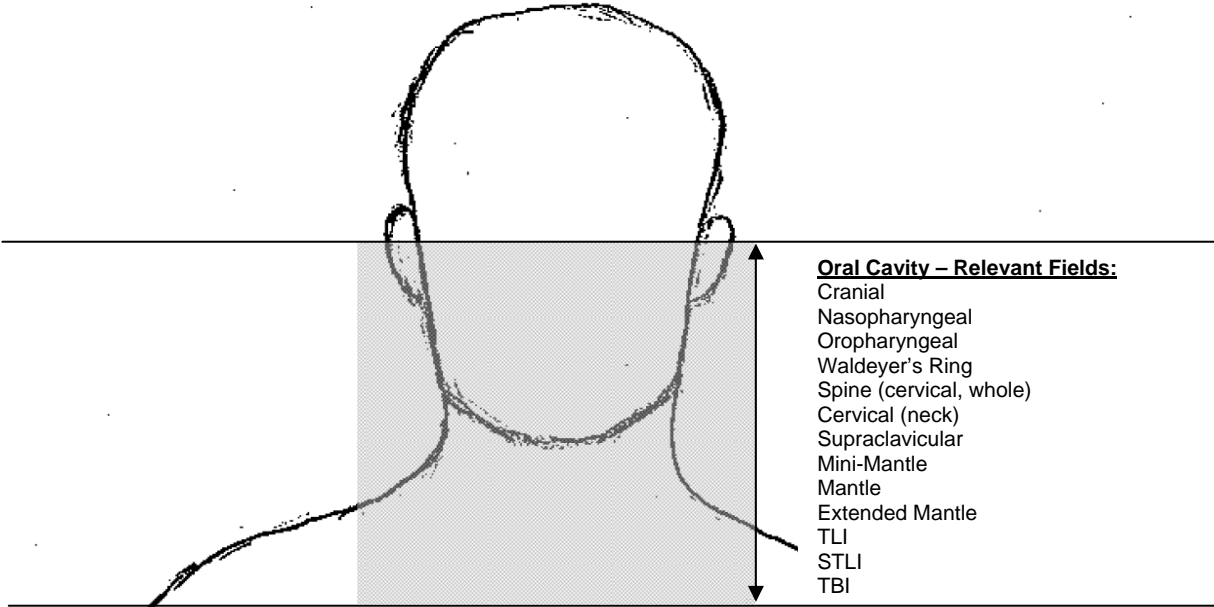
1) Patient received radiation to any field(s) relevant to the particular guideline section at ≥ the specified minimum dose[†]

OR 2) Patient received a combination of radiation to any relevant field(s) **and** TBI, the sum of which is ≥ the specified minimum dose[†]

[†]**Notes:** 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 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.*

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Oral Cavity**



- Oral Cavity – Relevant Fields:**
 Cranial
 Nasopharyngeal
 Oropharyngeal
 Waldeyer's Ring
 Spine (cervical, whole)
 Cervical (neck)
 Supraclavicular
 Mini-Mantle
 Mantle
 Extended Mantle
 TLI
 STLI
 TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Oral cavity	Cranial Nasopharyngeal Oropharyngeal Waldeyer's Ring Spine (cervical, whole) Cervical (neck) Supraclavicular Mini-Mantle Mantle Extended Mantle TLI STLI TBI	Any	59*, 60	Xerostomia Salivary gland dysfunction Dental abnormalities
		≥40 Gy***	61**	Osteoradionecrosis

*TBI not associated with this section

**TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

***This section applicable to patient only if:

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

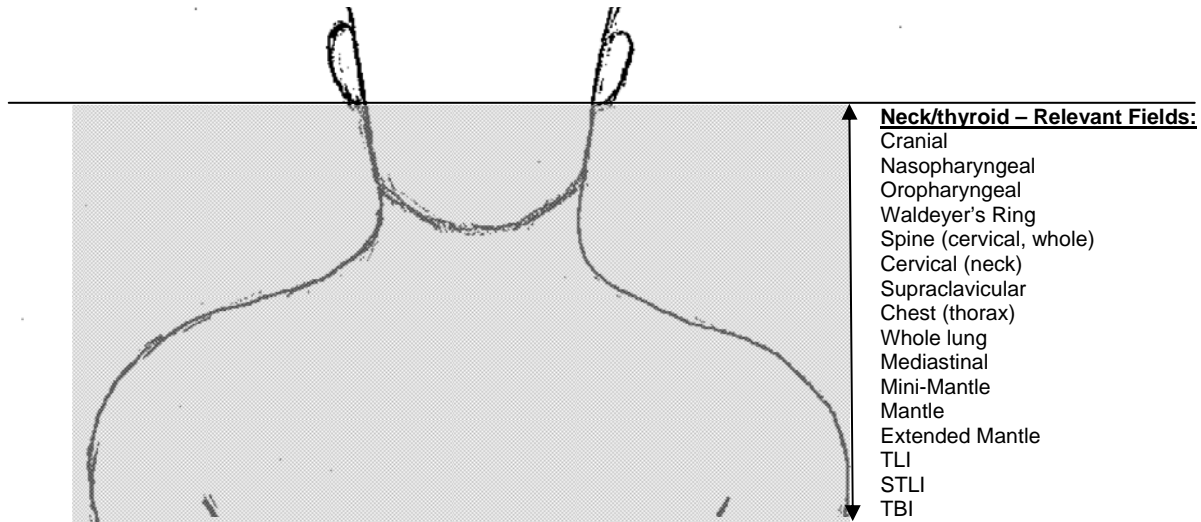
OR 2) Patient received a combination of radiation to any relevant field(s)[†] **plus** relevant spinal radiation[†] **and/or** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Neck/Thyroid**



Potential impact to	Fields	Dose	Section #	Potential Late Effects
Thyroid Carotid artery	Cranial Nasopharyngeal Oropharyngeal Waldeyer's Ring Spine (cervical, whole) Cervical (neck) Supraclavicular Chest (thorax) Whole lung Mediastinal Mini-Mantle Mantle Extended Mantle TLI, STLI, TBI	Any	62, 63, 64	Thyroid nodules Thyroid cancer Hypothyroidism
		≥40 Gy**	65*	Hyperthyroidism
			66*	Carotid artery disease
Subclavian artery	Spine (cervical, whole) Cervical (neck) Supraclavicular Chest (thorax) Whole lung Mediastinal Mini-Mantle Mantle Extended Mantle TLI, STLI, TBI	≥40 Gy**	67*	Subclavian artery disease

*TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

**This section applicable to patient only if:

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

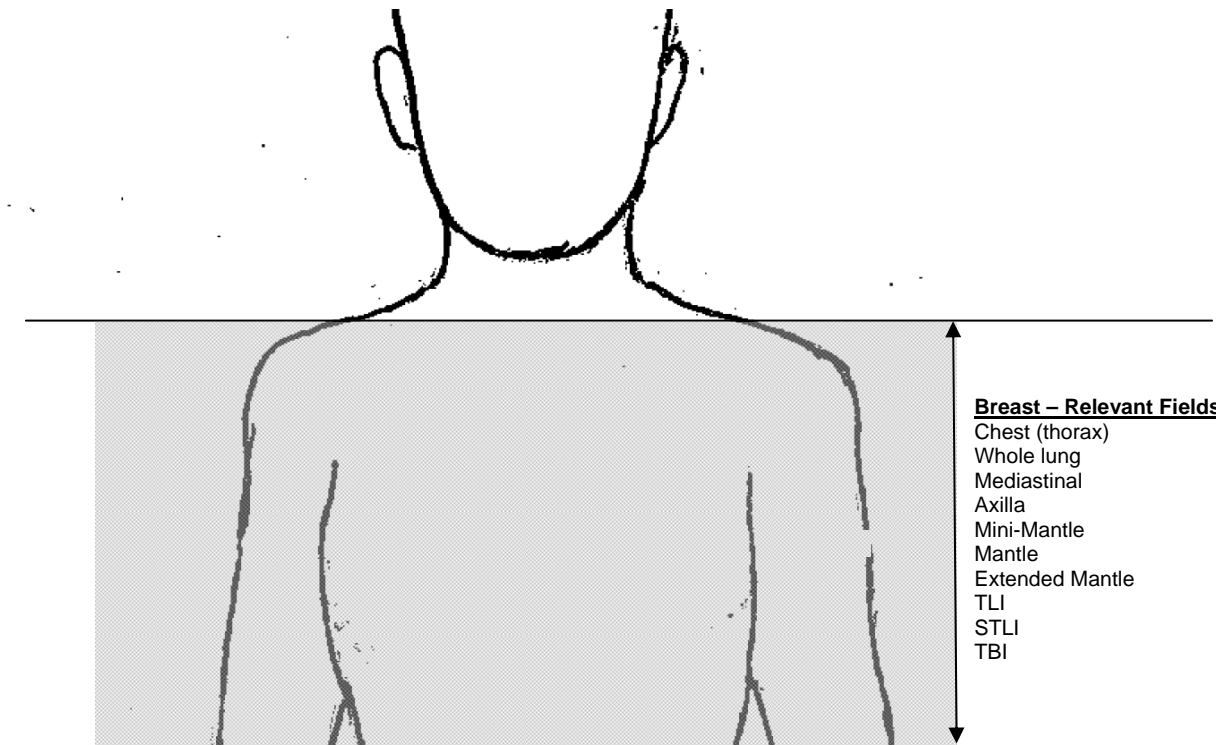
OR 2) Patient received a combination of radiation to any relevant field(s)[†] **plus** relevant spinal radiation[†] **and/or** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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

Relevant Guideline Radiation Sections for Females who Received

**RADIATION WITH POTENTIAL IMPACT TO THE:
Breast**



Breast – Relevant Fields:
 Chest (thorax)
 Whole lung
 Mediastinal
 Axilla
 Mini-Mantle
 Mantle
 Extended Mantle
 TLI
 STLI
 TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Breast	Chest (thorax) Whole lung Mediastinal Axilla	Any	69	Breast hypoplasia
	Mini-Mantle Mantle Extended Mantle TLI STLI TBI	≥20 Gy*	68 [§]	Breast cancer

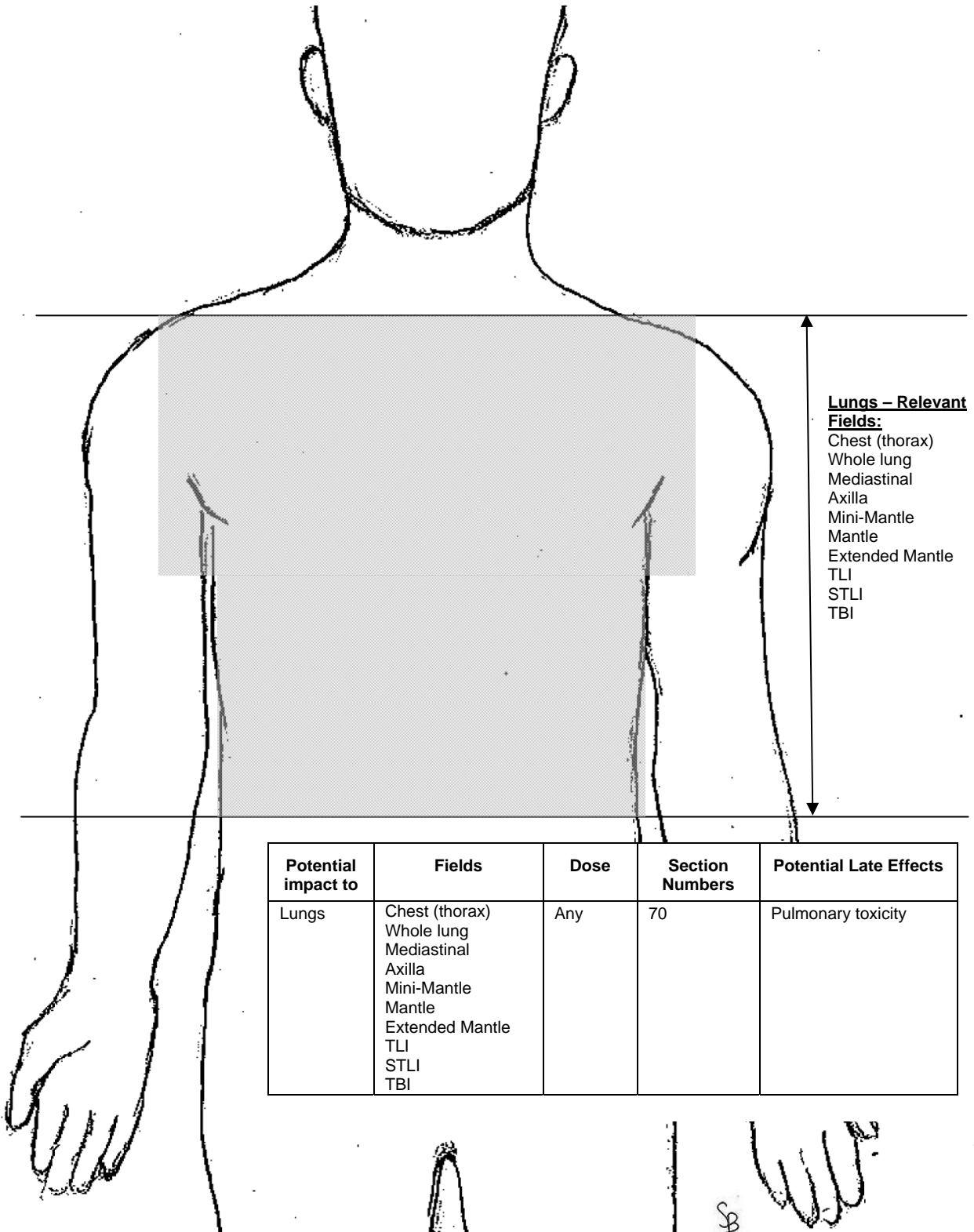
[§]Screening may be indicated for patients who received TBI alone - see Info Link in Section 68

*This section applicable to 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) and TBI, the sum of which is ≥ the specified minimum dose[†]

[†]Notes: 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 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.

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Lungs**

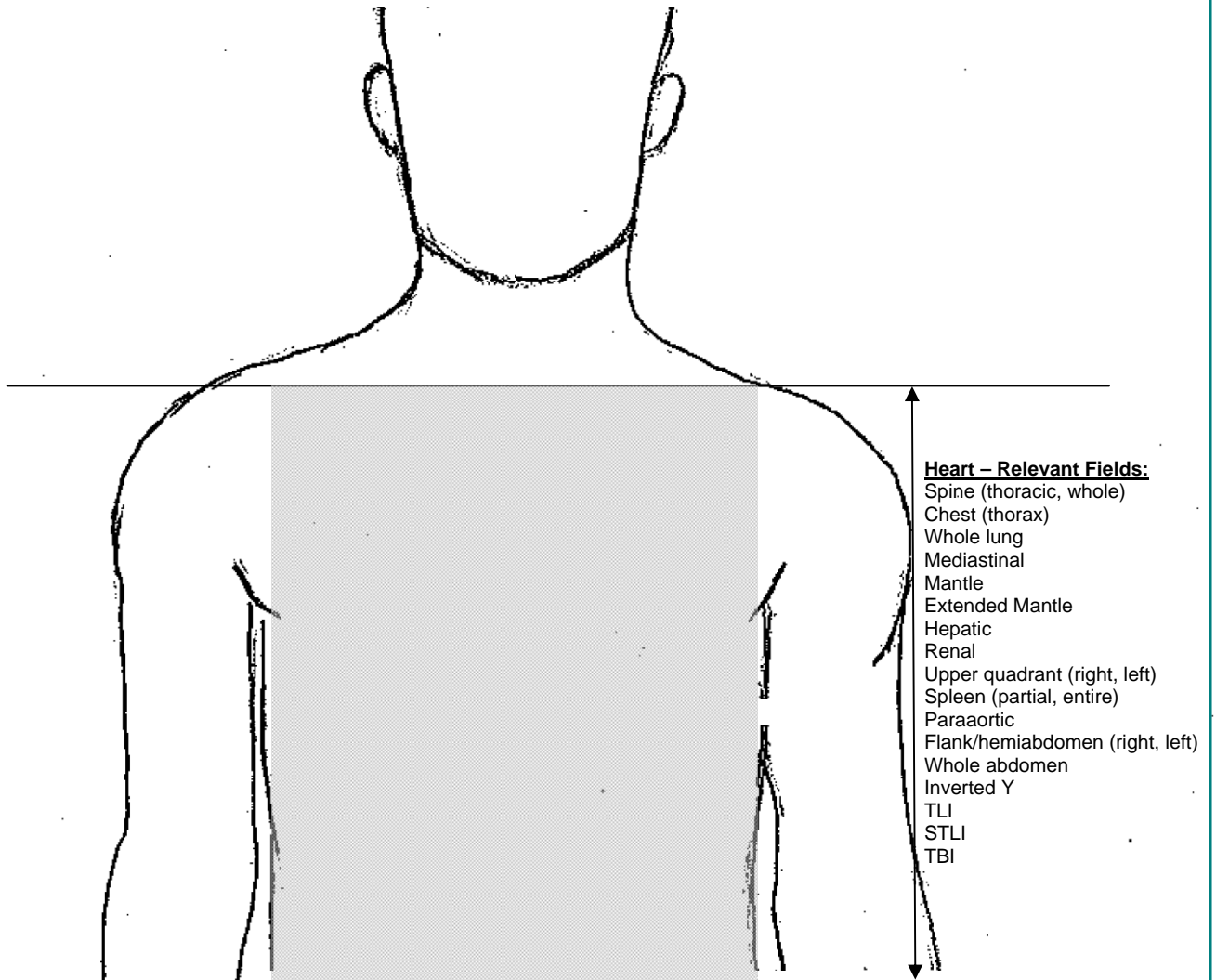


Lungs – Relevant Fields:
 Chest (thorax)
 Whole lung
 Mediastinal
 Axilla
 Mini-Mantle
 Mantle
 Extended Mantle
 TLI
 STLI
 TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Lungs	Chest (thorax) Whole lung Mediastinal Axilla Mini-Mantle Mantle Extended Mantle TLI STLI TBI	Any	70	Pulmonary toxicity

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Heart**



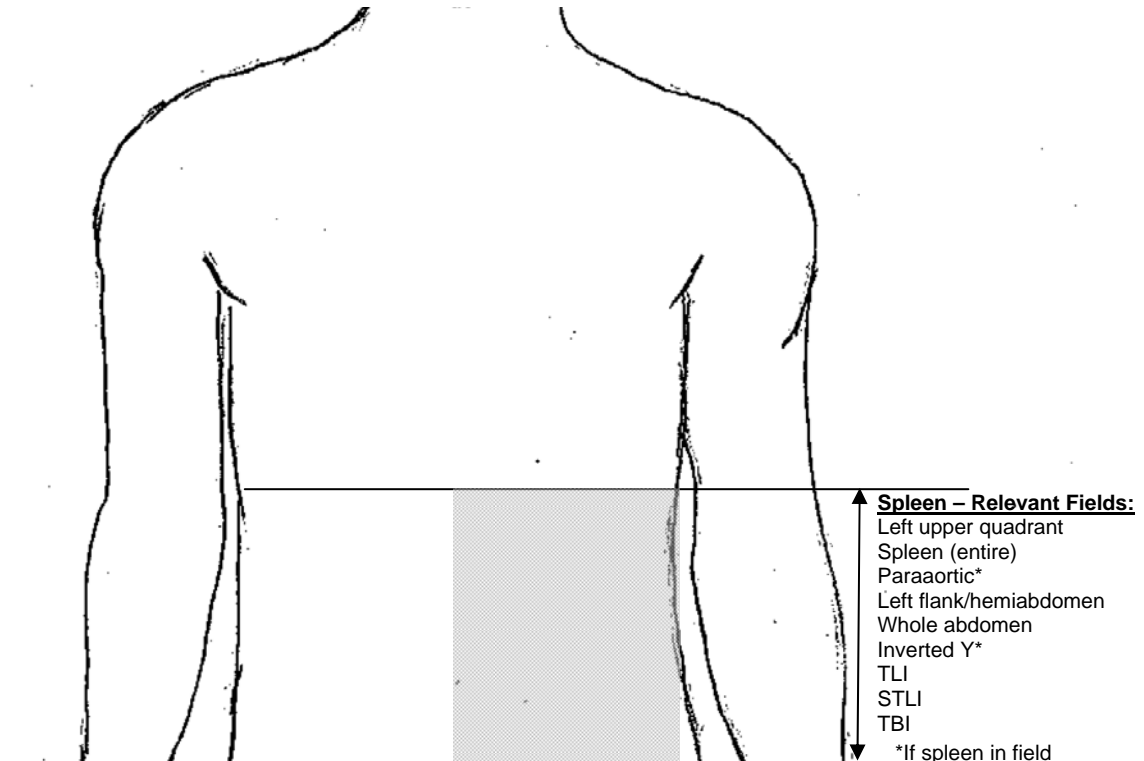
- Heart – Relevant Fields:**
- Spine (thoracic, whole)
 - Chest (thorax)
 - Whole lung
 - Mediastinal
 - Mantle
 - Extended Mantle
 - Hepatic
 - Renal
 - Upper quadrant (right, left)
 - Spleen (partial, entire)
 - Paraortic
 - Flank/hemiabdomen (right, left)
 - Whole abdomen
 - Inverted Y
 - TLI
 - STLI
 - TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Heart	Spine (thoracic, whole) Chest (thorax) Whole lung Mediastinal Mantle Extended Mantle Hepatic Renal Upper quadrant (right, left) Spleen (partial, entire) Paraortic Flank/hemiabdomen (right, left) Whole abdomen Inverted Y TLI STLI TBI	Any*	71	Cardiac toxicity

* Note: Frequency of screening is determined by dose and age at exposure

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Spleen**



Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Spleen	Left upper quadrant Spleen (entire) Paraaortic* Left flank/hemiabdomen Whole abdomen Inverted Y* TLI STLI TBI	≥40 Gy***	72**	Functional asplenia

*If spleen in field

**TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

***This section applicable to patient only if:

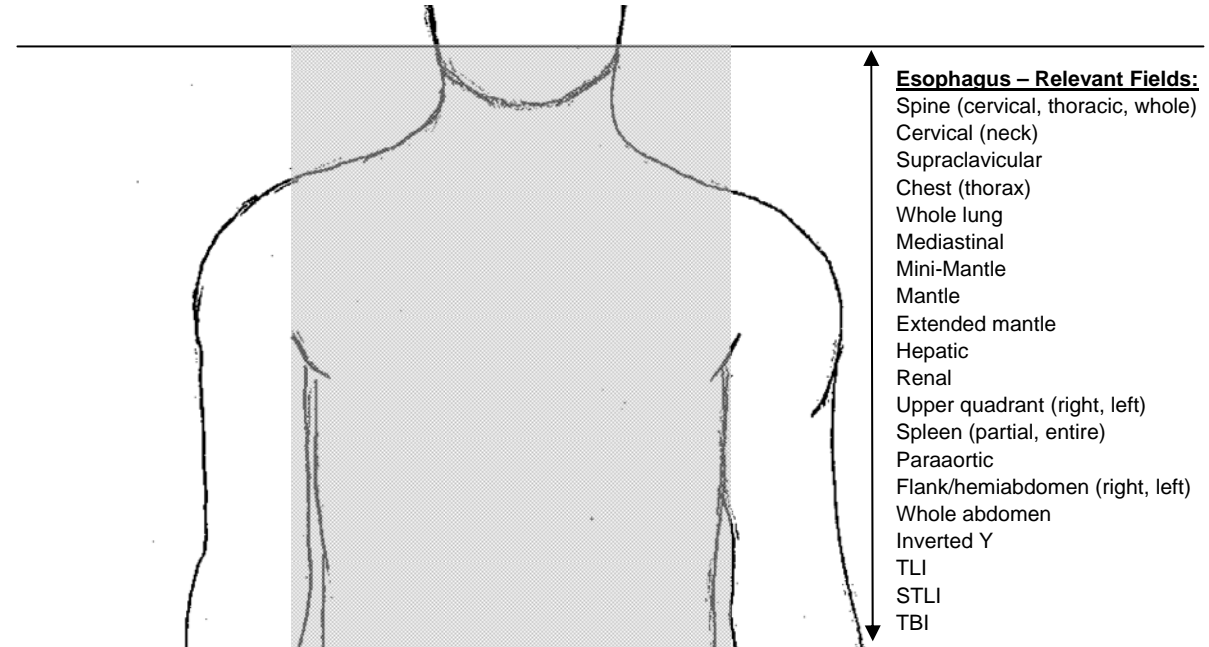
1) Patient received radiation to any field(s) relevant to the particular guideline section at ≥ the specified minimum dose[†]

OR 2) Patient received a combination of radiation to any relevant field(s)[†] **and** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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 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.*

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Esophagus**



- Esophagus – Relevant Fields:**
 Spine (cervical, thoracic, whole)
 Cervical (neck)
 Supraclavicular
 Chest (thorax)
 Whole lung
 Mediastinal
 Mini-Mantle
 Mantle
 Extended mantle
 Hepatic
 Renal
 Upper quadrant (right, left)
 Spleen (partial, entire)
 Paraaortic
 Flank/hemiabdomen (right, left)
 Whole abdomen
 Inverted Y
 TLI
 STLI
 TBI

SB

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Esophagus	Spine (cervical, thoracic, whole) Cervical (neck) Supraclavicular Chest (thorax) Whole lung Mediastinal Mini-Mantle Mantle Extended mantle Hepatic Renal Upper quadrants (right, left) Spleen (partial, entire) Paraaortic Flank/hemiabdomen (right, left) Whole abdomen Inverted Y TLI, STLI, TBI	≥30 Gy**	73*	Esophageal stricture

*TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

**This section applicable to patient only if:

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

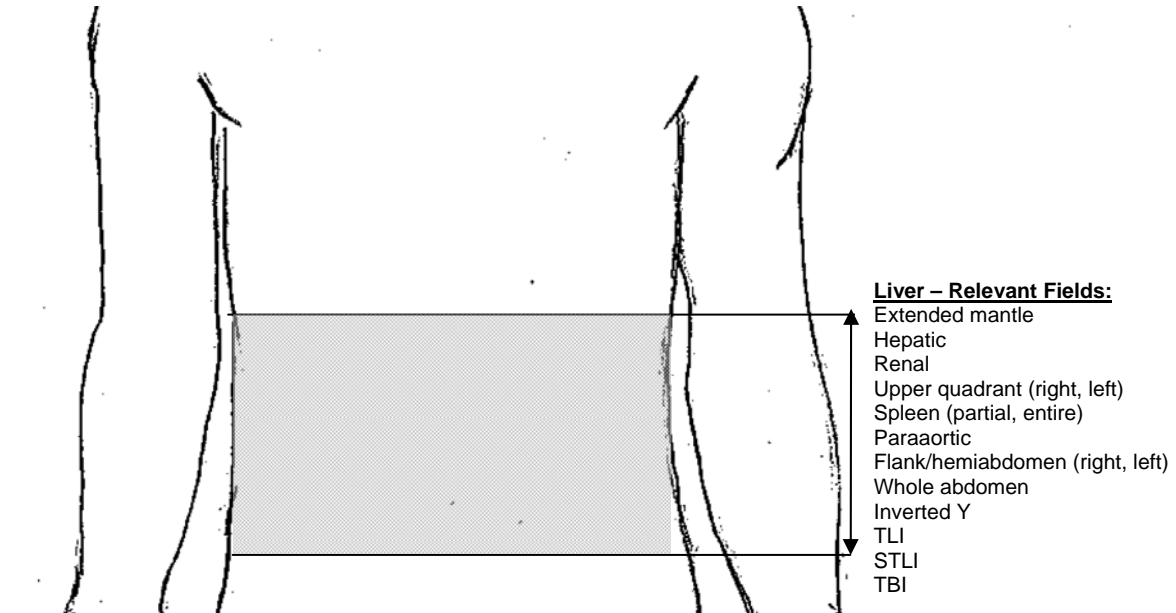
OR 2) Patient received a combination of radiation to any relevant field(s)[†] **plus** relevant spinal radiation[‡] **and/or** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Liver**



- Liver – Relevant Fields:**
 Extended mantle
 Hepatic
 Renal
 Upper quadrant (right, left)
 Spleen (partial, entire)
 Paraaortic
 Flank/hemiabdomen (right, left)
 Whole abdomen
 Inverted Y
 TLI
 STLI
 TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Liver	Extended mantle Hepatic Renal Upper quadrant (right, left) Spleen (partial, entire) Paraaortic Flank/hemiabdomen (right, left) Whole abdomen Inverted Y	≥30 Gy**	74*	Hepatic fibrosis Cirrhosis
	TLI STLI TBI		75*	Cholecystitis

*TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

**These sections applicable to 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)[†] **and** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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 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.

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Bowel**

Potential Impact To	Relevant Fields	Dose	Section Numbers	Potential Late Effects
Bowel	Spine (thoracic, lumbar, sacral, whole)	≥30 Gy**	76*	Bowel obstruction
	Extended mantle Hepatic Renal Upper quadrant (right, left) Spleen (partial, entire) Paraortic		77*	Chronic enterocolitis Fistula Strictures
	Flank/hemiabdomen (right, left) Whole abdomen Inverted Y Pelvic Vaginal Prostate Bladder Iliac Inguinal Femoral TLI, STLI, TBI		78 [§]	Colorectal cancer

[§]Screening for colorectal cancer may be indicated for patients who received TBI alone - see Info Link in Section 78

*TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

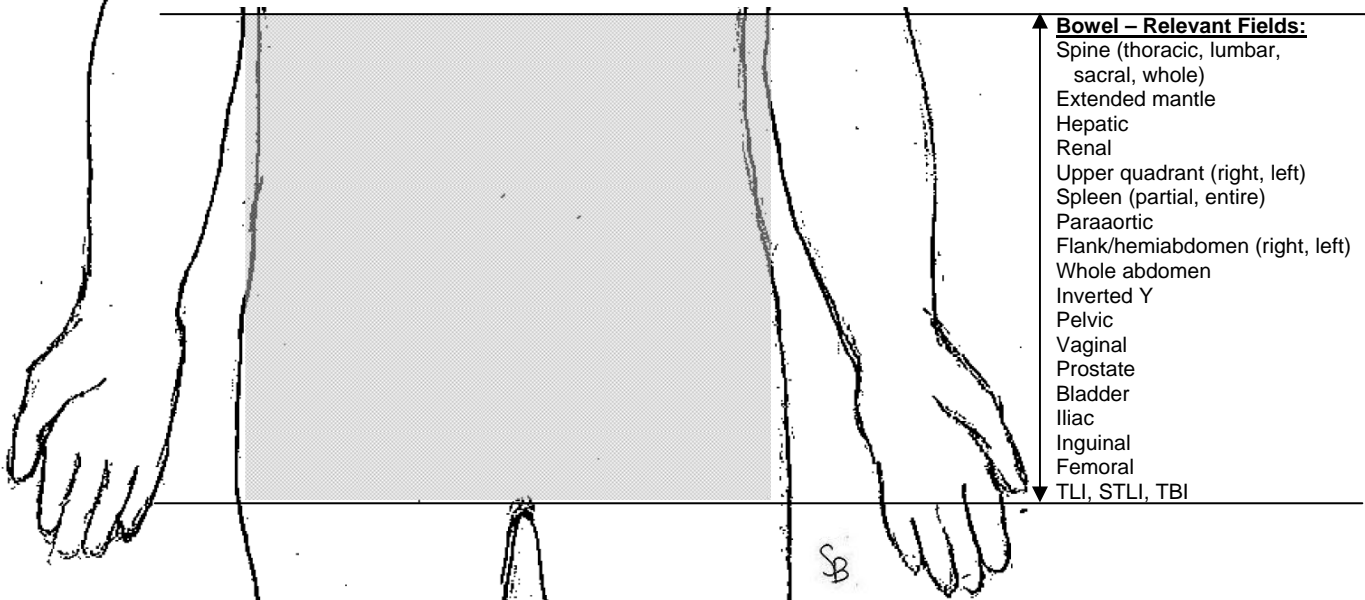
**This section applicable to patient only if:

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

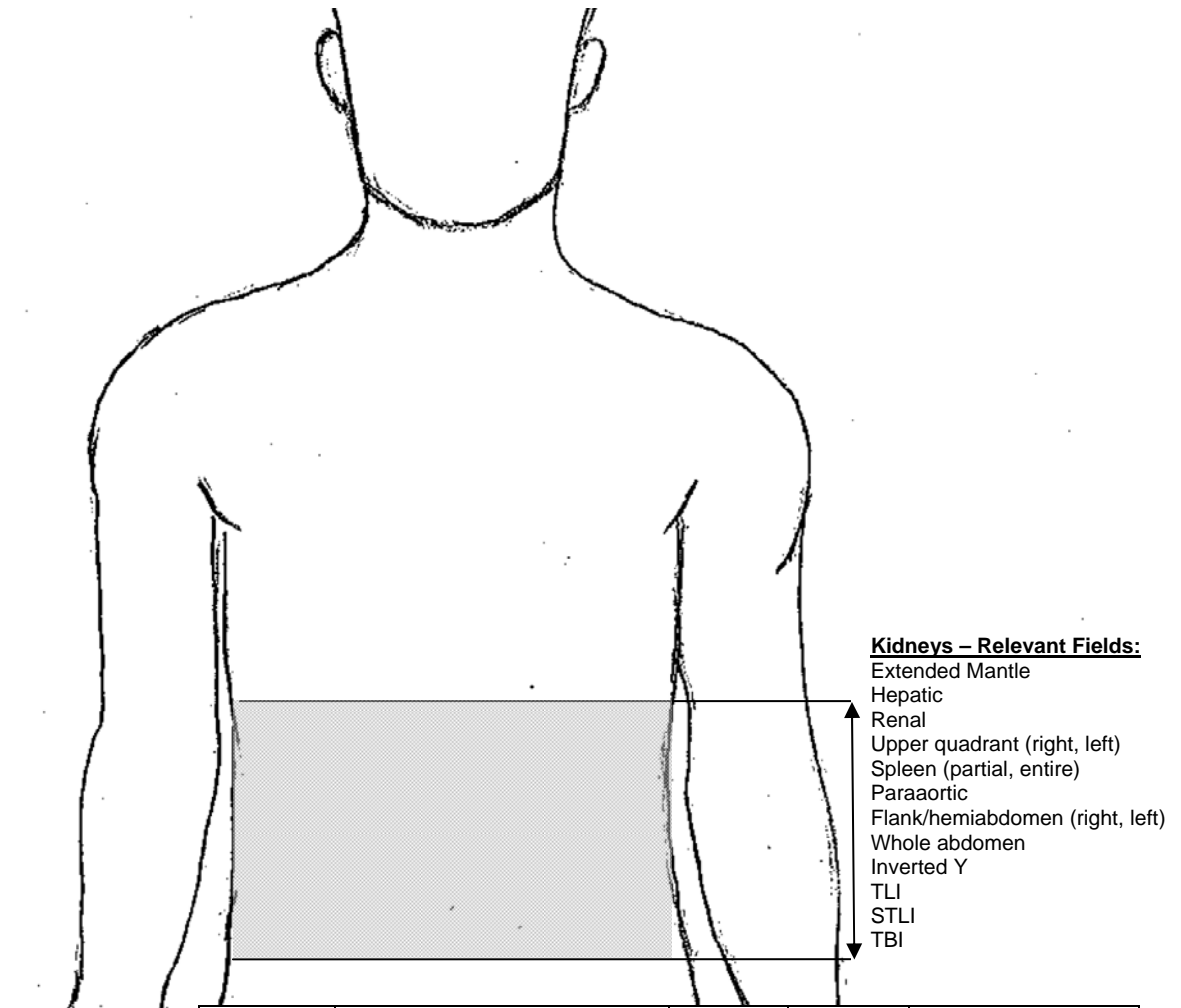
[†]**Notes:** Total dose to each field should include boost dose, if given. If patient received radiation to more than one field relevant to a particular guideline section during a single planned course of radiation treatment (excluding spinal radiation and TBI), the field that received the largest radiation 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



Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Kidneys**



Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Kidneys	Extended Mantle Hepatic Renal Upper quadrant (right, left) Spleen (partial, entire) Paraaortic Flank/hemiabdomen (right, left) Whole abdomen Inverted Y TLI STLI TBI	Any dose	79	Renal toxicity

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Bladder / Urinary Tract**

Potential Impact To	Relevant Fields	Dose	Section Numbers	Potential Late Effects
Bladder Urinary tract	Spine (sacral, whole)	Any dose	82 [§]	Bladder malignancy
	Flank/hemiabdomen (right, left)* Whole abdomen Inverted Y Pelvic Vaginal Prostate Bladder Iliac Inguinal TLI TBI	≥30 Gy***	80**	Hemorrhagic cystitis
			81**	Urinary tract toxicity

[§]TBI not applicable to this section

*Only if field extended below iliac crest

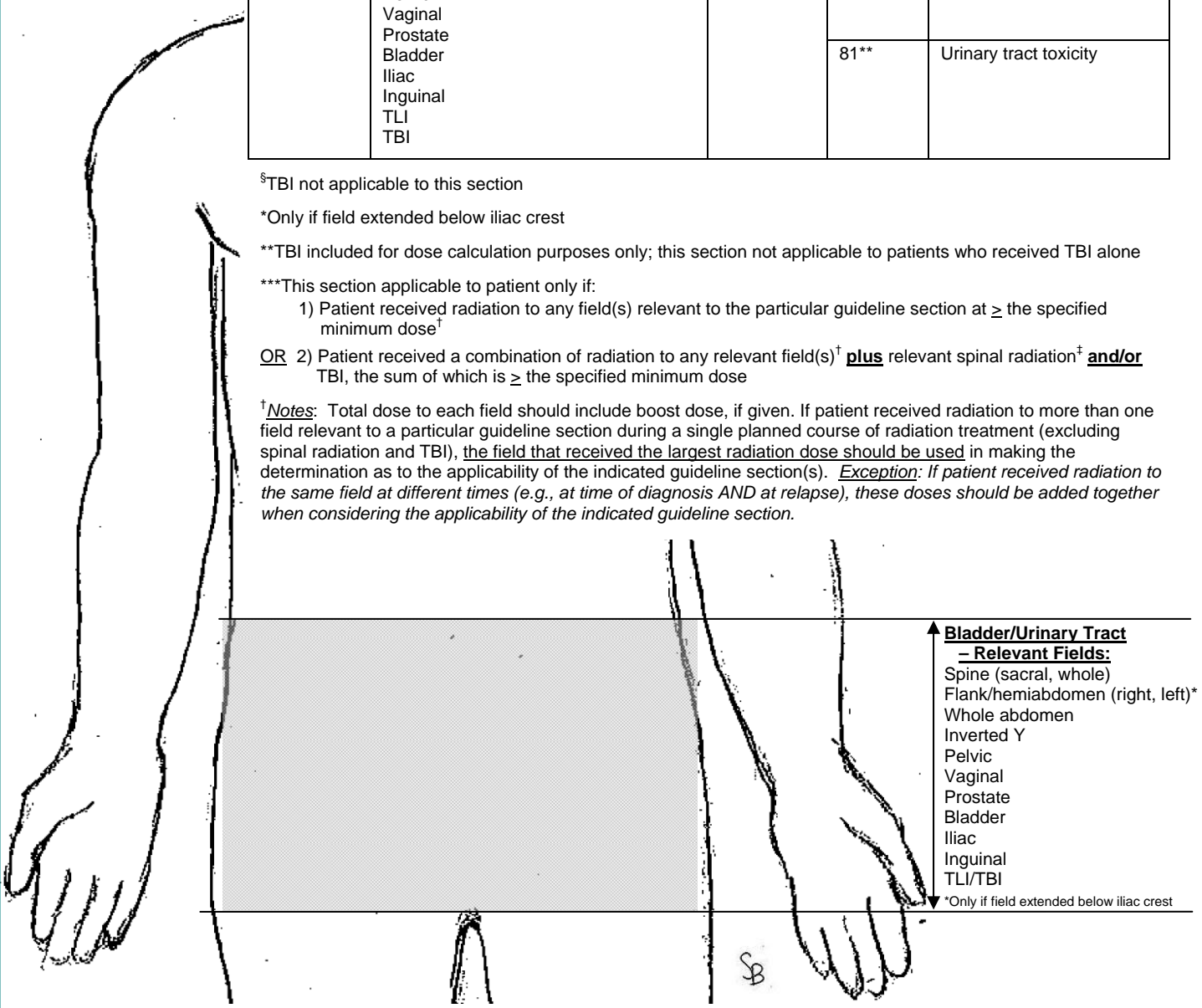
**TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

***This section applicable to patient only if:

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

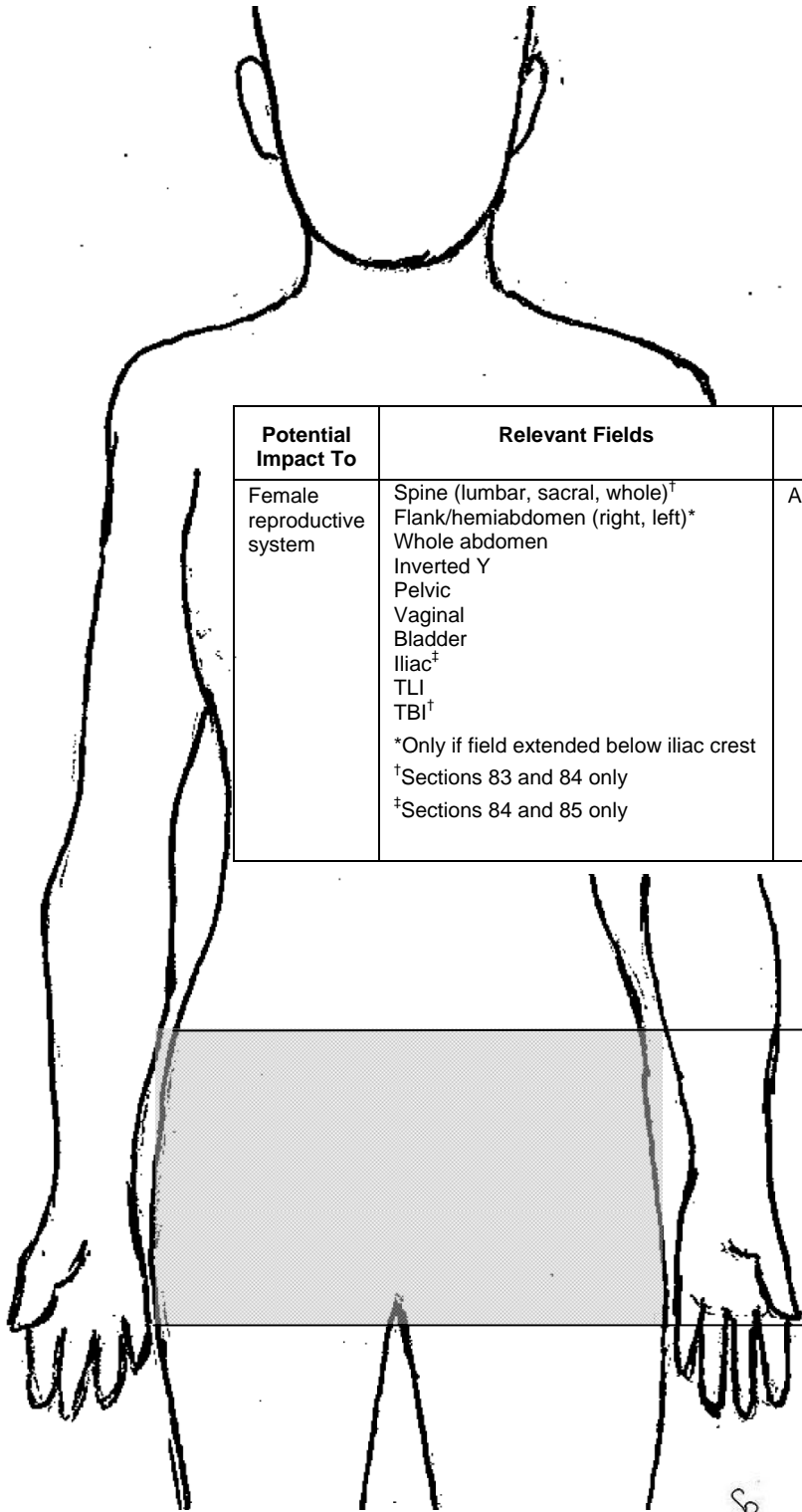
OR 2) Patient received a combination of radiation to any relevant field(s)[†] **plus** relevant spinal radiation[†] **and/or** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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.*



Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Female Reproductive System**



Potential Impact To	Relevant Fields	Dose	Section Numbers	Potential Late Effects
Female reproductive system	Spine (lumbar, sacral, whole) [†] Flank/hemiabdomen (right, left)* Whole abdomen Inverted Y Pelvic Vaginal Bladder Iliac [‡] TLI [†] TBI [†]	Any dose	83	Uterine vascular insufficiency
			84	Gonadal dysfunction (ovarian)
			85	Vaginal fibrosis/stenosis
	*Only if field extended below iliac crest [†] Sections 83 and 84 only [‡] Sections 84 and 85 only			

Female Reproductive System - Relevant Fields:
 Spine (lumbar, sacral, whole)[†]
 Flank/hemiabdomen (right, left)*
 Whole abdomen
 Inverted Y
 Pelvic
 Vaginal
 Bladder
 Iliac[‡]
 TLI[†]
 TBI[†]

*Only if field extended below iliac crest
[†]Sections 83 and 84 only
[‡]Sections 84 and 85 only

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO:
Male Reproductive System**

Potential Impact To	Relevant Fields	Dose	Section Numbers	Potential Late Effects
Male reproductive system	Flank/hemiabdomen (right, left)* Whole abdomen Inverted Y Pelvic Prostate Bladder Iliac Inguinal Femoral Testicular TLI TBI	Any dose	86	Gonadal dysfunction (testicular): Germ cell failure
		≥20 Gy***	87**	Gonadal dysfunction (testicular): Leydig cell failure

*Only if field extended below iliac crest

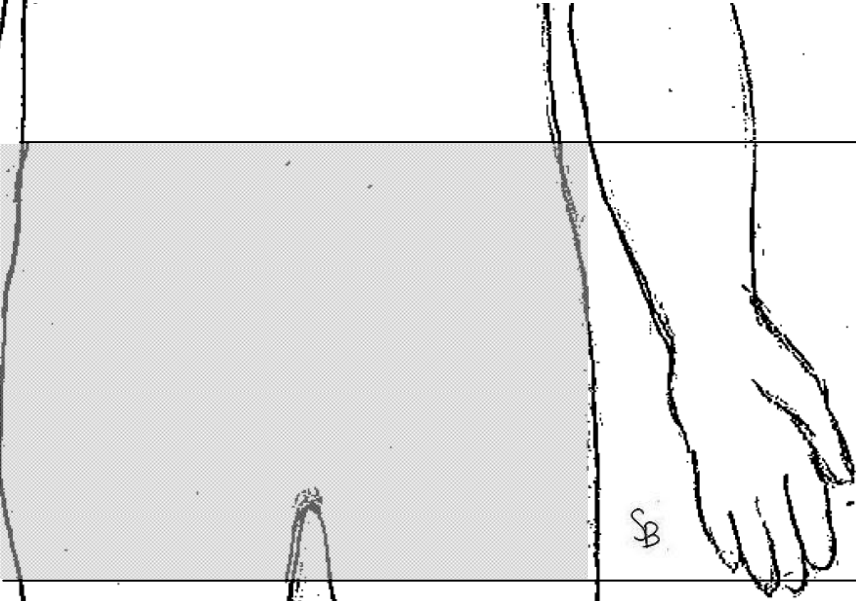
**TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

***This section is applicable to 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)† **and** TBI, the sum of which is ≥ the specified minimum dose

†Notes: 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 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.

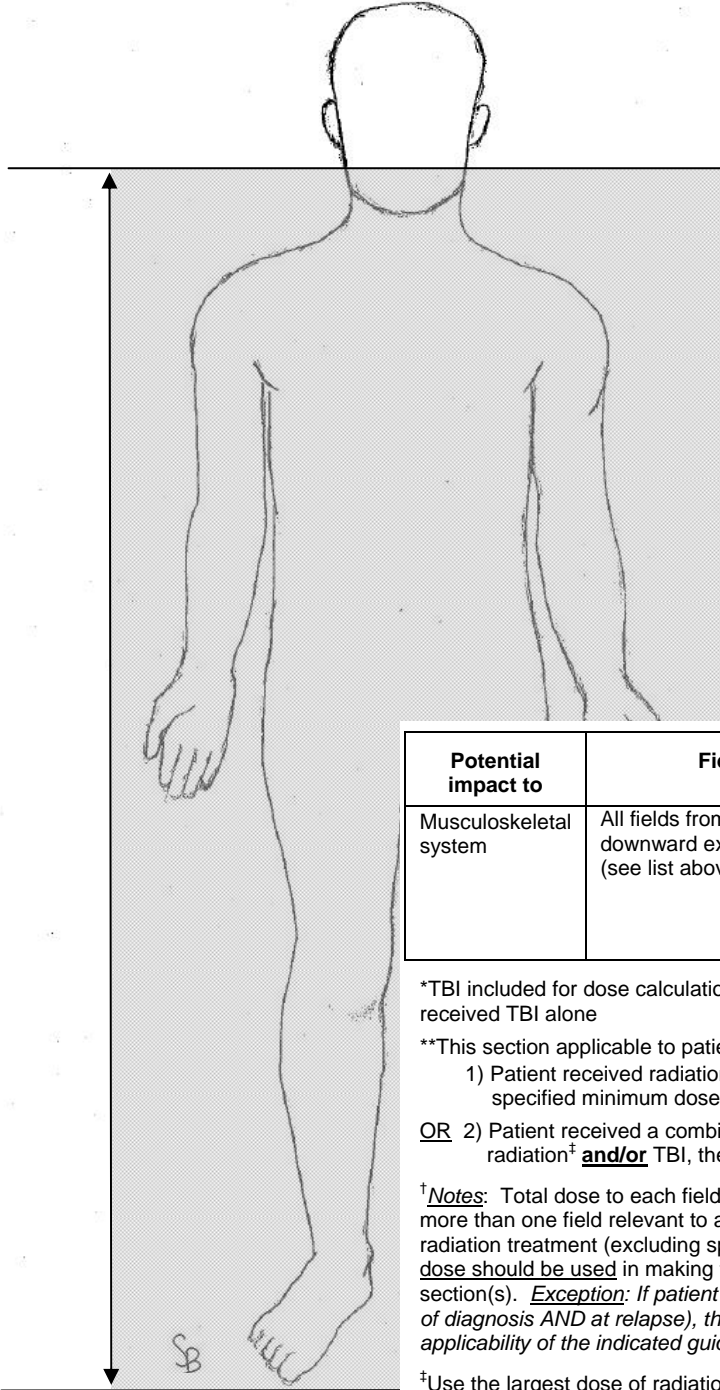


**Male Reproductive System
– Relevant Fields:**
Flank/hemiabdomen (right, left)*
Whole abdomen
Inverted Y
Pelvic
Prostate
Bladder
Iliac
Inguinal
Femoral
Testicular
TLI
TBI

*Only if field extended below iliac crest

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO THE:
Musculoskeletal System
(Growth Problems, Radiation-Induced Fracture)**



Musculoskeletal System - Relevant Fields

All fields from neck downward

- Spine (cervical, thoracic, lumbar, sacral, whole)
- Cervical (neck)
- Supraclavicular
- Chest (thorax)
- Whole lung
- Mediastinal
- Axilla
- Mini-Mantle
- Mantle
- Extended mantle
- Hepatic
- Renal
- Upper quadrant (right, left)
- Spleen (partial, entire)
- Paraortic
- Flank/hemiabdomen (right, left)
- Whole abdomen
- Inverted Y
- Pelvic
- Vaginal
- Prostate
- Bladder
- Iliac
- Inguinal
- Femoral
- Extremity (upper, lower)
- TLI
- STLI
- TBI

Potential impact to	Fields	Dose	Section Numbers	Potential Late Effects
Musculoskeletal system	All fields from neck downward except testicular (see list above)	Any	88	Musculoskeletal growth problems
		≥40 Gy**	91*	Radiation-induced fracture

*TBI included for dose calculation purposes only; this section not applicable to patients who received TBI alone

**This section applicable to patient only if:

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

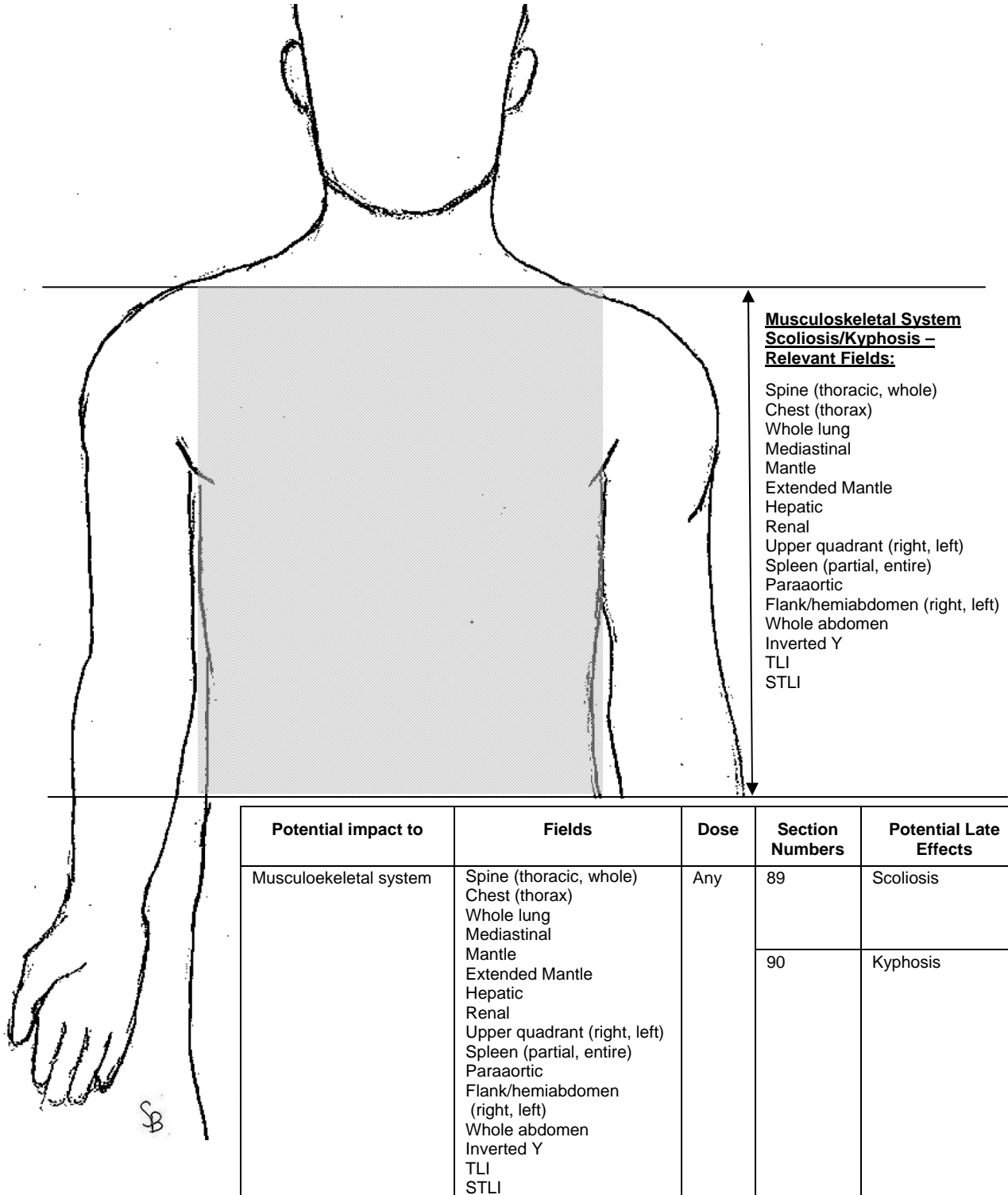
OR 2) Patient received a combination of radiation to any relevant field(s)[†] **plus** relevant spinal radiation[†] **and/or** TBI, the sum of which is ≥ the specified minimum dose

[†]**Notes:** 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

Relevant Guideline Radiation Sections for Patients who Received

**RADIATION WITH POTENTIAL IMPACT TO THE:
Musculoskeletal System
(Scoliosis/Kyphosis)**



Radiation Reference Guide - Index by Radiation Field

RADIATION FIELD	SEE PAGES	POTENTIALLY RELEVANT SECTION NUMBERS
ALL RADIATION FIELDS:		
All radiation fields including TBI	9-10	Any dose: Sections 38, 39
All radiation fields <u>except</u> TBI	10	Any dose: Sections 40, 41
TOTAL BODY IRRADIATION (TBI):		
Total body irradiation (TBI)	9	Any dose: Sections 38, 39, 42, 43, 44, 49, 50, 56, 60, 62, 63, 64, 68F [†] , 69F, 70, 71M/F, 78 [‡] , 79, 83F, 84F, 86M, 88 [†] Screening <u>may</u> be indicated; refer to Info Link in this section
HEAD/BRAIN:		
Cranial	10-13	Any dose: Sections 42, 43, 44, 46, 47, 48, 49, 50, 51M/F, 56, 59, 60, 62, 63, 64 Minimum dose specifications apply: Sections 45, 52M/F, 53, 54 M/F, 55, 57, 58, 61, 65, 66
Orbital/Eye	10-11	Any dose: Sections 42, 46, 47, 48, 49, 50, 51M/F, 56 Minimum dose specifications apply: Sections 45, 52M/F, 53, 54M/F, 55, 57
Ear/Infratemporal	10-11	Any dose: Sections 42, 43, 44, 46, 47, 48, 49, 50, 51M/F Minimum dose specifications apply: Sections 45, 52M/F, 53, 54M/F, 55, 58
Nasopharyngeal	10-13	Any dose: Sections 42, 46, 47, 48, 49, 50, 51M/F, 59, 60, 62, 63, 64 Minimum dose specifications apply: Sections 45, 52M/F, 53, 54M/F, 55, 58, 61, 65, 66
Oropharyngeal	10, 12-13	Any dose: Sections 59, 60, 62, 63, 64 Minimum dose specifications apply: Sections 61, 65, 66
Waldeyer's Ring	10-13	Any dose: Sections 42, 46, 47, 48, 49, 50, 51M/F, 59, 60, 62, 63, 64 Minimum dose specifications apply: Sections 45, 52M/F, 53, 54M/F, 55, 58, 61, 65, 66
SPINE:		
Spine (cervical)	10, 12-13, 18, 25	Any dose: Sections 59, 60, 62, 63, 64, 88 Minimum dose specifications apply: Sections 61, 65, 66, 67, 73, 91
Spine (thoracic)	10, 16, 18, 20, 25-26	Any dose: Sections 71M/F, 88, 89, 90 Minimum dose specifications apply: Sections 73, 76, 77, 78, 91
Spine (lumbar)	10, 20, 23, 25	Any dose: Sections 83F, 84F, 88 Minimum dose specifications apply: Sections 76, 77, 78, 91
Spine (sacral)	10, 20, 22-23, 25	Any dose: Sections 82, 83F, 84F, 88 Minimum dose specifications apply: Sections 76, 77, 78, 80, 81, 91
Spine (whole)	10, 12-13, 16, 18, 20, 22-23, 25-26	Any dose: Sections 59, 60, 62, 63, 64, 71M/F, 82, 83F, 84F, 88, 89, 90 Minimum dose specifications apply: Sections 61, 65, 66, 67, 73, 76, 77, 78, 80, 81, 91

RADIATION FIELD	SEE PAGES	POTENTIALLY RELEVANT SECTION NUMBERS
NECK:		
Cervical (neck) Supraclavicular	10, 12-13, 18, 25	Any dose: Sections 59, 60, 62, 63, 64, 88 Minimum dose specifications apply: Sections 61, 65, 66, 67, 73, 91
Mini-Mantle	10, 12-15, 18, 25	Any dose: Sections 59, 60, 62, 63, 64, 69F, 70, 88 Minimum dose specifications apply: Sections 61, 65, 66, 67, 68F, 73, 91
Mantle	10, 12-16, 18, 25-26	Any dose: Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90 Minimum dose specifications apply: Sections 61, 65, 66, 67, 68F, 73, 91
Extended Mantle	10, 12-16, 18-21, 25-26	Any dose: Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 88, 89, 90 Minimum dose specifications apply: Sections 61, 65, 66, 67, 68F, 73, 74, 75, 76, 77, 78, 91
Subtotal Lymphoid (STLI)	10, 12-21, 25-26	Any dose: Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 88, 89, 90 Minimum dose specifications apply: Sections 61, 65, 66, 67, 68F, 72, 73, 74, 75, 76, 77, 78, 91
Total Lymphoid (TLI)	10, 12-26	Any dose: Sections 59, 60, 62, 63, 64, 69F, 70, 71M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90 Minimum dose specifications apply: Sections 61, 65, 66, 67, 68F, 72, 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91
AXILLA:		
Axilla	10, 14-15, 25	Any dose: Sections 69F, 70, 88 Minimum dose specifications apply: Sections 68F, 91
Mini-Mantle	See "Neck"	See "Neck" (above)
Mantle	See "Neck"	See "Neck" (above)
Extended Mantle	See "Neck"	See "Neck" (above)
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (above)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (above)
THORAX:		
Chest (thorax):	10, 13-16, 18, 25-26	Any dose: Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90 Minimum dose specifications apply: Sections 65, 66, 67, 68F, 73, 91
Whole lung	10, 13-16, 25-26	Any dose: Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90
Mediastinal	10, 13-16, 18, 25-26	Any dose: Sections 62, 63, 64, 69F, 70, 71M/F, 88, 89, 90 Minimum dose specifications apply: Sections 65, 66, 67, 68F, 73, 91
Mini-Mantle	See "Neck"	See "Neck" (above)
Mantle	See "Neck"	See "Neck" (above)
Extended Mantle	See "Neck"	See "Neck" (above)
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (above)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (above)

RADIATION FIELD	SEE PAGES	POTENTIALLY RELEVANT SECTION NUMBERS
ABDOMEN:		
Any abdominal field* *Includes: Hepatic, renal, upper quadrant (right, left), spleen (partial, entire), paraaortic, flank/hemiabdomen (right, left)	10, 16-21, 25-26	Any dose: Sections 71M/F, 79, 88, 89, 90 Minimum dose specifications apply: Sections 72 (if spleen in field*), 73, 74, 75, 76, 77, 78, 91 *includes left upper quadrant, entire spleen, left flank/hemiabdomen, and paraaortic if spleen in field
Extended mantle	See "Neck"	See "Neck" (page 2)
Subtotal Lymphoid (STLI)	See "Neck"	See "Neck" (page 2)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (page 2)
Inverted Y	10, 16-26	Any dose: Sections 71 M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90 Minimum dose specifications apply: Sections 72 (if spleen in field), 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91
Whole abdomen	10, 16-26	Any dose: Sections 71M/F, 79, 82, 83F, 84F, 85F, 86M, 88, 89, 90 Minimum dose specifications apply: Sections 72, 73, 74, 75, 76, 77, 78, 80, 81, 87M, 91
PELVIS:		
Any pelvic field** **Iliac crest to 3 cm below ischium. Includes: Pelvic, vaginal, prostate, bladder, iliac, inguinal, femoral; Flank/hemiabdomen included only if field extended below iliac crest	10, 20, 22-25	Any dose: Sections 82 (except femoral), 83F (except iliac/inguinal/femoral), 84F (except inguinal/femoral), 85F (except inguinal/femoral), 86M, 88 Minimum dose specifications apply: Sections 76, 77, 78, 80 (except femoral), 81 (except femoral), 87M, 91
Inverted Y	See "Abdomen"	See "Abdomen" (above)
Whole abdomen	See "Abdomen"	See "Abdomen" (above)
Total Lymphoid (TLI)	See "Neck"	See "Neck" (page 2)
TESTICULAR:		
Testicular	10, 24	Any dose: Section 86M Minimum dose specifications apply: Section 87M
EXTREMITIES:		
Extremity (Upper, Lower)	10, 25	Any dose: Section 88 Minimum dose specifications apply: Section 91

CureSearch

Children's Oncology Group

Long-Term Follow-Up Guidelines

for Survivors of Childhood, Adolescent,
and Young Adult Cancers

Version 3.0 – October 2008



Health Link Index

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Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers

Version 3.0 – September 2008

Index to “Health Links” by Guideline Section Number

Guideline Section(s)	Health Link - Abbreviated Title	Health Link - Full Title
1	Introduction to Long-Term Follow-Up	Introduction to Long-Term Follow-Up after Treatment for Childhood, Adolescent, or Young Adult Cancer
	Emotional Issues	Emotional Issues after Childhood Cancer
	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
	Chronic Pain	Chronic Pain after Childhood Cancer
2	Finding Healthcare	Finding and Paying for Healthcare after Treatment for Childhood Cancer
3	Hepatitis	Hepatitis after Childhood Cancer
4	Hepatitis	Hepatitis after Childhood Cancer
6	Dental Health	Dental Health Following Childhood Cancer Treatment
7 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
7 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
8	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
9	Pulmonary Health	Pulmonary Health
10	Cataracts	Cataracts after Treatment for Childhood Cancer
11	Bladder Health	Bladder Health After Childhood Cancer
12	Bladder Health	Bladder Health After Childhood Cancer
13	Kidney Health	Kidney Health after Childhood Cancer
	Single Kidney Health	Keeping Your Single Kidney Healthy <i>(for mononephric patients only)</i>
14	Hearing Loss	Hearing Loss after Treatment for Childhood Cancer
	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
15	Peripheral Neuropathy	Peripheral Neuropathy
16	Kidney Health	Kidney Health after Childhood Cancer
	Single Kidney Health	Keeping Your Single Kidney Healthy <i>(for mononephric patients only)</i>
17	Diet and Physical Activity	Staying Healthy through Diet and Physical Activity
18	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
21	Liver Health	Liver Health after Childhood Cancer
22	Bone Health	Keeping Your Bones Healthy after Childhood Cancer

Guideline Section(s)	Health Link - Abbreviated Title	Health Link - Full Title
23	Kidney Health	Kidney Health after Childhood Cancer
	Single Kidney Health	Keeping Your Single Kidney Healthy <i>(for mononephric patients only)</i>
24	Liver Health	Liver Health after Childhood Cancer
25	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
27	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
28	Heart Health	Keeping Your Heart Healthy after Treatment for Childhood Cancer
29	Pulmonary Health	Pulmonary Health
	Bleomycin Alert	Bleomycin Alert
31	Bone Health	Keeping Your Bones Healthy after Childhood Cancer
32	Osteonecrosis	Osteonecrosis
33	Cataracts	Cataracts after Treatment for Childhood Cancer
35	Peripheral Neuropathy	Peripheral Neuropathy
36	Raynaud's Phenomenon	Raynaud's Phenomenon
37	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
38	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
39	Skin Health	Skin Health after Childhood Cancer
	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
40	Skin Health	Skin Health after Childhood Cancer
43	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
48	Diet and Physical Activity	Staying Healthy through Diet and Physical Activity
49	Diet and Physical Activity	Staying Healthy through Diet and Physical Activity
50	Growth Hormone Deficiency	Endocrine Problems after Childhood Cancer: Growth Hormone Deficiency
	Hypopituitarism	Endocrine Problems after Childhood Cancer: Hypopituitarism
51	Precocious Puberty	Endocrine Problems after Childhood Cancer: Precocious Puberty
52	Hyperprolactinemia	Endocrine Problems after Childhood Cancer: Hyperprolactinemia
53	Thyroid Problems	Thyroid Problems after Childhood Cancer
	Hypopituitarism	Endocrine Problems after Childhood Cancer: Hypopituitarism
54 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
	Hypopituitarism	Endocrine Problems after Childhood Cancer: Hypopituitarism
54 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer

Guideline Section(s)	Health Link - Abbreviated Title	Health Link - Full Title
	Hypopituitarism	Endocrine Problems after Childhood Cancer: Hypopituitarism
55	Central Adrenal Insufficiency	Endocrine Problems after Childhood Cancer: Central Adrenal Insufficiency
	Hypopituitarism	Endocrine Problems after Childhood Cancer: Hypopituitarism
56	Cataracts	Cataracts after Treatment for Childhood Cancer
57	Eye Health	Keeping Your Eyes Healthy after Treatment for Childhood Cancer
58	Hearing Loss	Hearing Loss after Treatment for Childhood Cancer
	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
59	Dental Health	Dental Health Following Childhood Cancer Treatment
60	Dental Health	Dental Health Following Childhood Cancer Treatment
61	Osteoradionecrosis	Osteoradionecrosis after Childhood Cancer
62	Thyroid Problems	Thyroid Problems after Childhood Cancer
63	Thyroid Problems	Thyroid Problems after Childhood Cancer
64	Thyroid Problems	Thyroid Problems after Childhood Cancer
65	Thyroid Problems	Thyroid Problems after Childhood Cancer
68 (female)	Breast Cancer	Breast Cancer following Treatment for Childhood Cancer: Are You at Risk?
70	Pulmonary Health	Pulmonary Health
71	Heart Health	Keeping Your Heart Healthy after Treatment for Childhood Cancer
	Diet and Physical Activity	Staying Healthy through Diet and Physical Activity
	Dental Health	Dental Health Following Childhood Cancer Treatment
72	Splenic Precautions	Precautions for People Without a Functioning Spleen
73	GI Health	Gastrointestinal Health after Childhood Cancer
74	Liver Health	Liver Health after Childhood Cancer
75	GI Health	Gastrointestinal Health after Childhood Cancer
76	GI Health	Gastrointestinal Health after Childhood Cancer
77	GI Health	Gastrointestinal Health after Childhood Cancer
78	Colorectal Cancer	Colorectal Cancer Following Treatment for Childhood Cancer: Are You at Risk?
79	Kidney Health	Kidney Health after Childhood Cancer
	Single Kidney Health	Keeping Your Single Kidney Healthy (for mononephric patients only)
80	Bladder Health	Bladder Health After Childhood Cancer

Guideline Section(s)	Health Link - Abbreviated Title	Health Link - Full Title
81	Bladder Health	Bladder Health After Childhood Cancer
82	Bladder Health	Bladder Health After Childhood Cancer
83 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
84 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
86 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
87 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
89	Scoliosis and Kyphosis	Scoliosis and Kyphosis after Treatment for Childhood Cancer
90	Scoliosis and Kyphosis	Scoliosis and Kyphosis after Treatment for Childhood Cancer
92	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
93	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
95	Liver Health	Liver Health after Childhood Cancer
	GI Health	Gastrointestinal Health after Childhood Cancer
96	Osteonecrosis	Osteonecrosis
97	Bone Health	Keeping Your Bones Healthy after Childhood Cancer
98	Skin Health	Skin Health after Childhood Cancer
99	Eye Health	Keeping Your Eyes Healthy after Treatment for Childhood Cancer
100	Dental Health	Dental Health Following Childhood Cancer Treatment
101	Pulmonary Health	Pulmonary Health
103	Splenic Precautions	Precautions for People Without a Functioning Spleen
104	GI Health	Gastrointestinal Health after Childhood Cancer
107	Amputation	Late Effects after Amputation for Childhood Cancer
109	Cystectomy	Cystectomy and Childhood Cancer
	Kidney Health	Kidney Health after Childhood Cancer
110	Eye Health	Keeping Your Eyes Healthy after Treatment for Childhood Cancer
111 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
112	GI Health	Gastrointestinal Health after Childhood Cancer
113	Limb Sparing Procedures	Limb Sparing Procedures
114	Single Kidney Health	Keeping Your Single Kidney Healthy
	Kidney Health	Kidney Health after Childhood Cancer

Guideline Section(s)	Health Link - Abbreviated Title	Health Link - Full Title
115	Educational Issues	Educational Issues Following Treatment for Childhood Cancer
119	Neurogenic Bladder	Neurogenic Bladder Following Treatment for Childhood Cancer
121 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
123 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
124 (female)	Female Health Issues	Female Health Issues after Treatment for Childhood Cancer
125 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
128 (male)	Male Health Issues	Male Health Issues after Treatment for Childhood Cancer
130	Pulmonary Health	Pulmonary Health
131	Splenic Precautions	Precautions for People Without a Functioning Spleen
132	Thyroid Problems	Thyroid Problems after Childhood Cancer
134	Thyroid Problems	Thyroid Problems after Childhood Cancer
135	Thyroid Problems	Thyroid Problems after Childhood Cancer
137 (female)	Breast Cancer	Breast Cancer following Treatment for Childhood Cancer: Are You at Risk?
138 (female)	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
139	Colorectal Cancer	Colorectal Cancer Following Treatment for Childhood Cancer: Are You at Risk?
140 (female)	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
141	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
142	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
	Dental Health	Dental Health Following Childhood Cancer Treatment
143 (male)	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
144	Reducing Risk of Cancers	Reducing the Risk of Second Cancers
	Skin Health	Skin Health after Childhood Cancer