### Appendix Table A1: Organs exposed to radiation and associated potential late effects*

| Organ/Anatomic Structure | Potential Late Effect |
|--------------------------|-----------------------|
| Bladder                  | Bladder malignancy    |
| Bones                    | Musculoskeletal growth problems |
| Bones                    | Radiation induced fracture |
| Bowel space              | Bowel obstruction     |
| Bowel space              | Chronic enterocolitis, fistula, strictures |
| Brain                    | Brain tumor (benign or malignant) |
| Brain                    | Clinical leukoencephalopathy |
| Brain                    | Neurocognitive deficits |
| Breasts                  | Breast cancer         |
| Breasts                  | Breast tissue hypoplasia |
| Carotid arteries         | Carotid artery disease |
| Cerebral vasculature     | Cerebrovascular complications |
| Cochlea                  | Ototoxicity           |
| Colon                    | Colorectal cancer     |
| Esophagus                | Esophageal stricture  |
| Face                     | Craniofacial abnormalities |
| Frontal, ethmoid, sphenoid, and maxillary sinuses | Chronic sinusitis |
| Heart                    | Cardiac toxicity      |
| Hypothalamus, pituitary  | Central adrenal insufficiency |
| Hypothalamus, pituitary  | Central hypothyroidism |
| Hypothalamus, pituitary  | Gonadotropin deficiency |
| Hypothalamus, pituitary  | Growth hormone deficiency |
| Hypothalamus, pituitary  | Hyperprolactinemia    |
| Hypothalamus, pituitary  | Overweight/obesity    |
| Hypothalamus, pituitary  | Precocious puberty    |
| Kidney                   | Renal toxicity, insufficiency, hypertension |
| Lens                     | Cataracts             |
| Liver                    | Cholelithiasis        |
| Liver                    | Dyslipidemia          |
| Liver                    | Hepatic fibrosis, cirrhosis, focal nodular hyperplasia |
| Lungs                    | Lung cancer           |
| Lungs                    | Pulmonary toxicity    |
| Mandible                 | Osteoradionecrosis of the jaw |
| Oral cavity              | Dental abnormalities, temporomandibular joint dysfunction |
Appendix Table A1, continued

| Organ / Gland                          | Toxicity / Dysfunction                                      |
|----------------------------------------|-------------------------------------------------------------|
| Orbit, optic nerve                     | Ocular toxicity                                             |
| Ovaries                                | Ovarian hormone deficiencies                                |
| Ovaries                                | Reduced ovarian follicular pool                              |
| Pancreas                               | Impaired glucose metabolism                                 |
| Parotid, submandibular glands          | Xerostomia, salivary gland dysfunction                       |
| Skin                                   | Dermatologic toxicity                                       |
| Skin, soft tissue, bone                | Secondary benign or malignant neoplasm                      |
| Spine                                  | Scoliosis/kyphosis male                                     |
| Spleen                                 | Functional asplenia                                         |
| Subclavian arteries                    | Subclavian artery disease                                   |
| Testes                                 | Impaired spermatogenesis                                    |
| Testes                                 | Testicular hormonal dysfunction                              |
| Thyroid                                | Hyperthyroidism                                             |
| Thyroid                                | Hypothyroidism                                              |
| Thyroid                                | Thyroid cancer                                              |
| Thyroid                                | Thyroid nodules                                             |
| Ureter, bladder                        | Urinary tract toxicity                                      |
| Uterus                                 | Uterine vascular insufficiency                               |
| Vagina                                 | Vaginal fibrosis/stenosis                                   |

*As outlined in the Children's Oncology Group (COG) Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancer, version 5.0.7
| Recommended Screening Practice* | Category^ |
|---------------------------------|----------|
| Breast MRI                      | Diagnostic Imaging and Procedures |
| Colonoscopy                     | Diagnostic Imaging and Procedures |
| Complete audiological evaluation | Diagnostic Imaging and Procedures |
| Echocardiogram                  | Diagnostic Imaging and Procedures |
| EKG                             | Diagnostic Imaging and Procedures |
| Mammogram                       | Diagnostic Imaging and Procedures |
| Pulmonary functions testing     | Diagnostic Imaging and Procedures |
| Assess thyroid levels prior to attempting pregnancy and throughout | Health Education and Counseling |
| Avoid frequent contact with irritants | Health Education and Counseling |
| Avoid obesity and management of obesity-related health risks | Health Education and Counseling |
| Avoid tobacco and quit smoking if appropriate | Health Education and Counseling |
| Be aware of adverse impact of hormone deficiencies on growth, BMD, CV disease, and sexual dysfunction | Health Education and Counseling |
| Be aware of increased risk of fractures | Health Education and Counseling |
| Be aware of need for corticosteroid replacement therapy and stress dosing | Health Education and Counseling |
| Be aware of potential for shorter period of fertility | Health Education and Counseling |
| Be aware of risk of life threatening and malarial and tick-borne disease | Health Education and Counseling |
| Be aware recovery of fertility may occur years later (female) | Health Education and Counseling |
| Be aware spermatogenesis may occur years later (male) | Health Education and Counseling |
| Control health conditions known to increase cardiovascular and stroke risk | Health Education and Counseling |
| Exercise safety counseling as appropriate | Health Education and Counseling |
| Maintain appropriate weight, blood pressure, heart healthy diet | Health Education and Counseling |
| Possibility of need for spiral CT with any suspicion for lung pathology | Health Education and Counseling |
| Promptly report dysuria or gross hematuria | Health Education and Counseling |
| Promptly seek medical attention for bone pain, bone mass, persistent fevers | Health Education and Counseling |
| Teach breast self-exam and counsel to perform monthly | Health Education and Counseling |
Appendix Table A2, continued

| Procedure Description                                                      | Specialty                              |
|---------------------------------------------------------------------------|----------------------------------------|
| Use contraception regularly                                              | Health Education and Counseling        |
| Wear Medical Alert bracelet                                               | Health Education and Counseling        |
| Assessment of bone pain and health                                       | History and Physical Exam Element      |
| Assessment of nutritional status                                         | History and Physical Exam Element      |
| Bilateral upper extremity blood pressure monitoring                      | History and Physical Exam Element      |
| Blood pressure monitoring                                                | History and Physical Exam Element      |
| Brachial and radial pulses assessment                                    | History and Physical Exam Element      |
| Breast exam                                                              | History and Physical Exam Element      |
| Carotid exam                                                             | History and Physical Exam Element      |
| Comprehensive jaw exam                                                   | History and Physical Exam Element      |
| Comprehensive jaw history                                                | History and Physical Exam Element      |
| Craniofacial exam                                                        | History and Physical Exam Element      |
| Detailed pubertal history                                                | History and Physical Exam Element      |
| External genitalia exam                                                  | History and Physical Exam Element      |
| Eye exam                                                                  | History and Physical Exam Element      |
| Focused abdominal exam                                                   | History and Physical Exam Element      |
| Focused cardiac exam                                                     | History and Physical Exam Element      |
| Focused cardiac history                                                  | History and Physical Exam Element      |
| Focused dermatologic exam                                                | History and Physical Exam Element      |
| Focused dermatologic history                                             | History and Physical Exam Element      |
| Focused educational history                                              | History and Physical Exam Element      |
| Focused endocrine history                                                | History and Physical Exam Element      |
| Focused exam for dermatologic evidence of endocrine disorder             | History and Physical Exam Element      |
| Focused gastrointestinal history                                          | History and Physical Exam Element      |
| Focused genitourinary history                                            | History and Physical Exam Element      |
| Focused hair exam                                                        | History and Physical Exam Element      |
| Focused hepatic exam                                                     | History and Physical Exam Element      |
| Focused neurologic exam                                                  | History and Physical Exam Element      |
| Focused neurologic history                                               | History and Physical Exam Element      |
| Focused ophthalmologic symptomatology assessment                         | History and Physical Exam Element      |
| Focused oral and dental exam                                             | History and Physical Exam Element      |
| Focused otic history                                                     | History and Physical Exam Element      |
| Focused pulmonary history                                                | History and Physical Exam Element      |
| Focused sinus exam                                                       | History and Physical Exam Element      |
| Focused sinus history                                                    | History and Physical Exam Element      |
### Appendix Table A2, continued

| History and Physical Exam Element | Laboratory Test | Referral to Specialist |
|-----------------------------------|-----------------|------------------------|
| Focused urologic history          |                 |                        |
| Focused vision history            |                 |                        |
| Height and weight                 |                 |                        |
| Height/Weight/BMI                 |                 |                        |
| History of galactorrhea           |                 |                        |
| Limb lengths                      |                 |                        |
| Menopausal symptoms               |                 |                        |
| Menstrual and pregnancy history   |                 |                        |
| Menstrual history                 |                 |                        |
| Otoscopic exam                    |                 |                        |
| Palpation of bones in irradiated fields |         |                        |
| Perfusion exam                    |                 |                        |
| Pregnancy history                 |                 |                        |
| Psychosocial assessment           |                 |                        |
| Pulmonary exam                    |                 |                        |
| Regular growth monitoring         |                 |                        |
| Sexual function history           |                 |                        |
| Sitting height                    |                 |                        |
| Skin self-exam                    |                 |                        |
| Spine exam                        |                 |                        |
| Tanner staging                    |                 |                        |
| Testicular volume by Prader orchidometry |         |                        |
| Thyroid exam                      |                 |                        |
| 8 AM Cortisol level               |                 |                        |
| Electrolyte panel                 |                 |                        |
| Fasting blood glucose or HbA1c    |                 |                        |
| Lipid profile                     |                 |                        |
| Liver function testing            |                 |                        |
| Thyroid function tests            |                 |                        |
| Referral for dental exam and cleaning |             |                        |
| Referral for formal neuropsychological evaluation |         |                        |
| Referral for ophthalmology evaluation |             |                        |

*As outlined in the Children's Oncology Group (COG) Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancer, version 5.0.7

^As defined in this study.