

Predisposing therapy modality	Late effect	Surveillance recommendation	Reference
<b>Ionizing radiation</b>	Secondary neoplasm including sarkoma and skin cancer	Awareness, medical history, adherence to regular cancer prevention measurements	114, 119
<b>TBI</b>	Bone disease (osteoporosis, fracture)	Evaluation of bone mineral density and fracture risk at baseline	14, 20
	Hepatotoxicity	ALT, AST, gGT, ALP at baseline, lifestyle counseling	13, 47-49
	Colon cancer	colonoscopy every 5 years, beginning 5 years after RT or at 30 years	5
	Pituitary disease, Diabetes mellitus	Fasting blood glucose or HbA1c every 2 years, TSH, fT4, morning cortisol, IGF-1, LH, morning testosterone (males), estradiol, LH and FSH (females)	2, 5, 20, 44
	Renal dysfunction	Serum: creatinine, eGFR, urine: protein	2, 75
		Surveillance regarding additional risk factors (obesity, hypertension)	
<b>Cranial RT</b>	Bone disease (osteoporosis, fracture)	Evaluation of bone mineral density and fracture risk at baseline	14, 20
	Intracranial tumor	History, focused neurological examination, discuss MRI surveillance	105
	Ototoxicity	Audiometry every 5 years, avoid noise exposure	2, 68, 69
	Pituitary disease, Diabetes mellitus	Fasting blood glucose or HbA1c every 2 years, TSH, fT4, morning cortisol, IGF-1, LH, morning testosterone (males), estradiol, LH and FSH (females)	2, 5, 20, 44
<b>Cervical RT</b>	Thyroid and parathyroid disorders	TSH and fT4, serum calcium yearly	2, 5, 20, 39
	Thyroid cancer	Awareness, neck palpation at every LTFU, thyroid ultrasonography every 3-5 years	122
<b>Thoracic RT</b>	Breast cancer	Annual mammogram and breast MRI from 25 up to 60 years or 8 years after RT	13
	Cardiotoxicity	Surveillance, risk factor assessment and control, ECG at baseline, risk-adapted echocardiography	5, 11, 23-25, 27-29
	Lung cancer	history, risk factor assessment, low-dose-CT in smoking survivors at risk	9, 10, 39, 113
	Pneumotoxicity	Annual clinical examination, history (respiratory symptoms), risk factor counseling (nicotine)	50, 70, 72, 73
<b>Abdominal and pelvic RT</b>	Diabetes mellitus	Fasting blood glucose or HbA1c every 2 years	5, 20
	Early menopause, female infertility	FSH, estradiol, AMH at baseline, menstrual history and childbearing desire, early fertility counseling	33, 34, 41, 55
	Hypogonadism, male infertility	FSH, Inhibin B, early morning testosterone, fertility counseling	33, 40, 41
	Colon cancer	colonoscopy every 5 years, beginning 5 years after RT or at 30 years	5
	Sexual problems	actively address sexuality in LTFU, referral to experts as indicated	87
<b>RT involving the liver</b>	Hepatotoxicity	ALT, AST, gGT, ALP at baseline, lifestyle counseling	13, 47-49
<b>RT involving the kidneys</b>	Renal dysfunction	Serum: creatinine, eGFR, urine: protein	2, 75
		Surveillance regarding additional risk factors (obesity, hypertension, diabetes)	
<b>RT involving the spleen</b>	Secondary immune deficiency	Awareness, vaccination against encapsulated bacteria, emergency antibiotic	79, 80
<b>Radio iodine therapy</b>	Hematologic malignancy	Awareness, blood differentials at every LTFU	112
<b>Cytostatic agents</b>	Secondary neoplasm including sarkoma	Awareness, medical history, adherence to regular cancer prevention measurements	115
<b>Anthracyclines</b>	Breast cancer	Awareness, participation in national screening programs	13
	Cardiotoxicity	Risk factor assessment and control, ECG at baseline, risk-adapted echocardiography	5, 11, 23-25, 27-29
<b>Antimetabolites</b>	Hepatotoxicity	ALT, AST, gGT, ALP at baseline, lifestyle counseling	13, 47-49
<b>Methotrexate</b>	Bone disease (avascular nekrosis, osteoporosis, fracture)	Evaluation of bone mineral density and fracture risk at baseline	2, 20
	Renal dysfunction	Serum: creatinine, eGFR, sodium, potassium, magnesium, calcium, phosphate, albumin; urin	2, 30, 75
		glucose, phosphate: Surveillance regarding additional risk factors (obesity, hypertension, diabetes)	
<b>Alkylating agents</b>	Early menopause, female infertility	FSH, estradiol, AMH at baseline, menstrual history and childbearing desire, early fertility counseling	33, 34, 41, 55
	Hypogonadism, male infertility	FSH, Inhibin B, early morning testosterone, fertility counseling	33, 40, 41
	Sexual problems	actively address sexuality in LTFU, referral to experts as indicated	87
	Pneumotoxicity	Annual clinical examination, history (respiratory symptoms), risk factor counseling (nicotine)	50, 70, 72, 73
	Lung cancer	history, risk factor assessment, low-dose-CT in smoking survivors at risk	9, 10, 39, 113
<b>Ifosfamide</b>	Renal dysfunction	Serum: creatinine, eGFR, sodium, potassium, magnesium, calcium, phosphate, albumin; urin	2, 30, 75
		glucose, phosphate: Surveillance regarding additional risk factors (obesity, hypertension, diabetes)	
<b>Bleomycin</b>	Pneumotoxicity	Annual clinical examination, history (respiratory symptoms), risk factor counseling (nicotine)	50, 70, 72, 73
<b>Platins</b>	Early menopause	Assessment of menstrual history and childbearing wish at every LTFU, fertility counseling	33, 34
	Sexual problems	actively address sexuality in LTFU, referral to experts as indicated	87
	Dyslipidemia	Lipid status (Cholesteroline, LDL, HDL, Triglycerides) at every LTFU	2
	Renal dysfunction	Serum: creatinine, eGFR, sodium, potassium, magnesium, calcium, phosphate, albumin; urin	2, 30, 75
		glucose, phosphate: Surveillance regarding additional risk factors (obesity, hypertension, diabetes)	
<b>Cisplatin, Carboplatin &gt;1500 mg</b>	Ototoxicity	Audiometry every 5 years, avoid noise exposure	2, 68, 69
<b>Platins, Taxans, Vinca-Alkaloids</b>	Peripheral neurotoxicity	Patient history, awareness	62, 63, 65-67
<b>Other antineoplastic substances</b>			
<b>Antihormones, Aromatase inhibitors</b>	Bone disease (osteoporosis, fractures)	Evaluation of bone mineral density and fracture risk at baseline	20
	Infertility		
<b>Glucocorticoids</b>	bone disease (avascular nekrosis, osteoporosis, fracture)	Evaluation of bone mineral density and fracture risk at baseline	2, 20
<b>Cellular and targeted Therapies</b>			
<b>Stem cell transplantation</b>	Early menopause, female infertility	FSH, estradiol, AMH at baseline, menstrual history and childbearing desire, early fertility counseling	33, 34, 41, 55
	Hypogonadism, male infertility	FSH, Inhibin B, early morning testosterone, fertility counseling	33, 40, 41
	Hepatotoxicity	ALT, AST, gGT, ALP, ferritine at baseline, lifestyle counseling	13, 47-49
	Colon cancer	colonoscopy every 5 years, at 30 years	5
	Skin cancer	Self examination, dermatological skin cancer screening	118
	Sexual problems	actively address sexuality in LTFU, referral to experts as indicated	87
<b>Stem cell transplantation, CAR-T-cell therapy</b>	Secondary immune deficiency	Immunological testing in clinical concern (Serum IgG, IgA, IgM, lymphocyte typing; vaccine A	132
<b>Surgery</b>	Secondary neoplasm	Awareness, medical history, adherence to regular cancer prevention measurements	132, 58
<b>Hepatic surgery</b>	Hepatotoxicity	ALT, AST, gGT, ALP at baseline, lifestyle counseling	13, 47-49
<b>Nephrectomy</b>	Renal dysfunction	Serum: creatinine, eGFR, urine: protein	2, 75
		Surveillance regarding additional risk factors (obesity, hypertension)	
<b>Uni-/ bilateral oophorectomy</b>	Early menopause, female infertility	FSH, estradiol, AMH at baseline, menstrual history and childbearing desire, early fertility counseling	33, 34, 41, 55
<b>Orchiectomy</b>	Hypogonadism, male infertility	FSH, Inhibin B, early morning testosterone, fertility counseling	33, 40, 41
<b>Orchiectomy, oophorectomy</b>	Sexual problems	actively address sexuality in LTFU, referral to experts as indicated	87
<b>Splenectomy</b>	Secondary immune deficiency	Awareness, vaccination against encapsulated bacteria, emergency antibiotic	79, 80
<b>Thoracic surgery</b>	Pneumotoxicity	Annual clinical examination, history (respiratory symptoms), risk factor counseling (nicotine)	50, 70, 72, 73