

**Supplemental Table 1. Cardiac Conditions per Common Terminology Criteria for Adverse Events (v4.03)
Grade**

Grade	Heart Failure	Coronary artery disease	Valvular heart disease	Pericardial disease	Arrhythmia
3 (Severe/disabling)	Cardiomyopathy or HF requiring medication	MI, angina, coronary heart disease not requiring heart catheterization but on antianginal medication	None	Pericardial disease requiring surgical intervention	Arrhythmia requiring pacemaker
4 (Life-threatening)	Cardiac transplantation	MI requiring catheterization/PTCA, or CABG	Valve replacement	N/A	<u>Cardioversion</u> , Ventricular fibrillation/ flutter
5 (Death)	Death from heart failure	Death from MI, ischemic heart disease, or atherosclerosis	Death from valvular heart disease	Death from pericardial disease	Death from arrhythmia

HF=heart failure, MI=myocardial infarction, PTCA=percutaneous transluminal coronary angioplasty, CABG=coronary artery bypass graft
N/A=not applicable

Supplemental Table 2. Characteristics of participating CCSS survivors vs. non-participants

	Participants				Total N=12,187 N (%)	Non-participants			(p) [‡]	
	Overall cohort N=23,462	1970-1979 N=6,193	1980-1989 N=9,363	1990-1999 N=7,906		1970-1979 N=3,735	1980-1989 N=4,367	1990-1999 N=3,918		
	N (%)	N (%) [*]	N (%) [*]	N (%) [*]		N (%) [*]	N (%) [*]	N (%) [*]		
Gender										
Female	10,874 (46.3)	2,883 (46.6)	4,292 (45.9)	3,699 (46.4)	4,874 (39.9)	1,577 (42.2)	1,797 (40.6)	1,485 (37.5)	<0.001	
Male	12,588 (53.7)	3,310 (53.4)	5,071 (54.1)	4,207 (53.6)	7,186 (60.1)	2,158 (57.8)	2,570 (59.4)	2,433 (62.5)		
Age at diagnosis (years)										
Median (range)	6.1 (0.0-20.9)	7.2 (0.0-20.9)	5.9 (0.0-20.9)	5.9 (0.00-20.9)	6.8 (0.0-20.9)	7.6 (0.0-20.9)	7.0 (0.0-20.9)	6.0 (0.0-20.9)	<0.001	
Diagnosis										
Leukemia	7,281 (39.5)	2,023 (32.7)	3,314 (40.1)	1,944 (43.0)	3,086 (32.8)	988 (26.5)	1,227 (33.1)	845 (37.9)	<0.001	
ALL**	6,127 (35.2)	1,818 (29.4)	2,885 (35.9)	1,424 (38.0)	2,424 (28.1)	834 (22.3)	1,006 (28.4)	584 (32.6)		
AML [‡]	852 (3.2)	131 (2.1)	324 (3.1)	397 (3.8)	397 (3.0)	70 (1.9)	122 (2.6)	205 (4.2)		
Other	302 (1.1)	74 (1.19)	105 (1.0)	123 (1.2)	239 (1.8)	84 (2.3)	99 (2.1)	56 (1.1)		
Brain cancer	4,227 (15.8)	735 (11.9)	1,498 (14.8)	1,994 (19.1)	2,377 (17.6)	490 (13.1)	825 (17.6)	998 (20.2)		
Astrocytoma	2,589 (9.7)	509 (8.2)	944 (9.4)	1,136 (10.9)	1,415 (10.5)	315 (8.4)	481 (10.3)	619 (12.5)		
Medulloblastoma	994 (3.7)	147 (2.4)	348 (3.4)	499 (4.8)	428 (3.2)	81 (2.2)	159 (3.4)	188 (3.8)		
Other	644 (2.4)	79 (1.3)	206 (2.0)	359 (3.4)	470 (3.5)	94 (2.5)	185 (4.0)	191 (3.9)		
Lymphoma	4,904 (18.3)	1,545 (25.0)	1,820 (18.0)	1,539 (14.7)	2,417 (17.9)	776 (20.8)	771 (16.4)	838 (16.9)		
HL [†]	2,985 (11.2)	1,093 (17.7)	1,053 (10.4)	839 (8.0)	1,426 (10.6)	514 (13.8)	426 (9.1)	467 (9.4)		
NHL [‡]	1,919 (7.2)	452 (7.3)	767 (7.6)	700 (6.7)	991 (7.4)	262 (7.0)	345 (7.4)	371 (7.5)		
Kidney tumor	2,130 (8.0)	531 (8.6)	870 (8.6)	729 (7.0)	970 (7.2)	289 (7.7)	309 (6.6)	360 (7.3)		
Neuroblastoma	1,825 (6.8)	441 (7.1)	668 (6.6)	716 (6.9)	882 (6.5)	245 (6.6)	274 (5.8)	344 (7.0)		
Soft tissue sarcoma	1,153 (4.3)	364 (5.9)	443 (4.4)	346 (3.3)	1,394 (10.3)	634 (17.0)	571 (12.2)	187 (3.8)		
Bone cancer	1,942 (7.3)	554 (9.0)	750 (7.4)	638 (6.1)	1,061 (7.8)	313 (8.4)	390 (8.3)	346 (7.0)		
Osteosarcoma	1,187 (4.4)	354 (5.7)	467 (4.6)	366 (3.5)	616 (4.6)	186 (5.0)	224 (4.8)	206 (4.2)		
Ewing sarcoma	702 (2.6)	197 (3.2)	274 (2.7)	231 (2.2)	319 (2.4)	84 (2.3)	116 (2.5)	119 (2.4)		
Other	53 (0.2)	3 (0.1)	9 (0.1)	41 (0.4)	114 (0.9)	43 (1.2)	50 (1.1)	21 (0.4)		
Mortality										
Alive	20,295 (87.6)	4,706 (76.0)	8,171 (87.7)	7,418 (94.5)	9,948 (82.7)	2,681 (71.8)	3,582 (82.2)	3,526 (90.8)		<0.001
Dead	3,167 (12.4)	1,487 (24.0)	1,192 (12.3)	488 (5.5)	2,239 (17.4)	1,054 (28.2)	785 (17.8)	392 (9.2)		
Cardiac death at 15 years from cohort entry	84 (2.6)	32 (2.2)	37 (3.0)	15 (3.1)	63 (2.8)	26 (2.5)	25 (3.3)	12 (2.7)	0.69	

* Sampling weights were applied for all percentages, means, and medians to account for under sampling of acute lymphoblastic leukemia survivors (1987-1999), using a weight of 1.21 for those aged 0 or 11-20 years at diagnosis and a weight of 3.63 for those aged 1-10 years.

‡ p-value comparing overall participants to non-participants

** Acute lymphoblastic leukemia, † Acute myelogenous leukemia, † Hodgkin lymphoma, ‡ non-Hodgkin lymphoma

Supplemental Table 3: Anthracycline exposure by diagnosis and treatment era

Diagnosis	Anthracycline (mg/m ²)	Overall cohort	1970-1979	1980-1989	1990-1999
		N=23,462	N=6,193	N=9,363	N=7,906
		N (%)	N (%)	N (%)	N (%)
Leukemia	None	2,552 (32.6)	1,096 (65.7)	1,211 (38.6)	245 (14.8)
	< 250	3,058 (57.4)	307 (18.4)	1,323 (50.6)	1,428 (78.3)
	≥ 250	757 (9.9)	265 (15.9)	322 (10.9)	170 (5.9)
CNS tumors	None	3,890 (99.3)	643 (99.6)	1,352 (99.6)	1,895 (99.0)
	< 250	11 (0.3)	1 (0.2)	3 (0.2)	7 (0.4)
	≥ 250	16 (0.4)	1 (0.2)	3 (0.2)	12 (0.6)
Hodgkin Lymphoma	None	1,413 (53.9)	824 (89.0)	507 (56.3)	82 (10.3)
	< 250	890 (34.0)	30 (3.2)	263 (29.2)	597 (75.2)
	≥ 250	318 (12.1)	72 (7.8)	131 (14.5)	115 (14.5)
Non-Hodgkin Lymphoma	None	472 (28.7)	205 (58.9)	191 (29.6)	76 (11.6)
	< 250	887 (53.9)	96 (27.6)	307 (47.6)	484 (74.2)
	≥ 250	287 (17.4)	47 (13.5)	147 (22.8)	93 (14.2)
Kidney	None	1,054 (55.7)	327 (74.8)	392 (51.9)	335 (47.9)
	< 250	506 (26.8)	46 (10.5)	172 (22.8)	288 (41.2)
	≥ 250	331 (17.5)	64 (14.7)	191 (25.3)	76 (10.9)
Neuroblastoma	None	979 (60.3)	319 (85.1)	361 (61.7)	299 (45.1)
	< 250	512 (31.6)	18 (4.8)	176 (30.1)	318 (48.0)
	≥ 250	132 (8.1)	38 (10.1)	48 (8.2)	46 (6.9)
Soft tissue sarcoma	None	594 (57.5)	192 (62.1)	172 (43.5)	230 (69.7)
	< 250	113 (10.9)	39 (12.6)	33 (8.4)	41 (12.4)
	≥ 250	327 (31.6)	78 (25.2)	190 (48.1)	59 (17.9)
Bone cancer	None	191 (11.6)	104 (24.0)	62 (9.9)	25 (4.2)
	< 250	213 (12.9)	44 (10.2)	83 (13.3)	86 (14.5)
	≥ 250	1247 (75.5)	285 (65.8)	479 (76.8)	483 (81.3)
All Survivors	None	11,145 (49.0)	3,710 (72.2)	4,248 (50.0)	3,187 (36.0)

	< 250	6,190 (36.0)	581 (11.3)	2,360 (32.2)	3,249 (52.1)
	≥ 250	3,415 (15.0)	850 (16.5)	1,511 (17.8)	1,054 (11.9)

|| doxorubicin equivalents

Supplemental Table 4: Mean heart radiation exposure by diagnosis and treatment era

Diagnosis	Mean Heart RT dose (Gy)	Overall cohort N=23,462	1970-1979 N=6,193	1980-1989 N=9,363	1990-1999 N=7,906
		N (%)	N (%)	N (%)	N (%)
Leukemia	None	2,742 (48.4)	339 (19.7)	1,303 (47.0)	1,100 (61.2)
	< 15	3,287 (43.4)	1,271 (73.9)	1,520 (48.0)	496 (27.0)
	15 to < 35	387 (7.6)	109 (6.3)	87 (4.6)	191 (10.6)
	≥ 35	32 (0.7)	1 (0.1)	6 (0.4)	25 (1.2)
CNS tumors	None	1,789 (46.5)	170 (27.5)	531 (40.3)	1,088 (57.0)
	< 15	1,349 (35.1)	314 (50.8)	486 (36.9)	549 (28.8)
	15 to < 35	672 (17.5)	133 (21.5)	293 (22.2)	246 (12.9)
	≥ 35	34 (0.9)	1 (0.2)	8 (0.6)	25 (1.3)
Hodgkin Lymphoma	None	621 (23.6)	52 (5.6)	159 (17.4)	410 (52.0)
	< 15	499 (18.9)	119 (12.8)	163 (17.8)	217 (27.5)
	15 to < 35	606 (23.0)	202 (21.7)	264 (28.8)	140 (17.8)
	≥ 35	909 (34.5)	558 (59.9)	330 (36.0)	21 (2.7)
Non-Hodgkin Lymphoma	None	809 (47.2)	71 (19.1)	317 (47.3)	421 (62.8)
	< 15	672 (39.3)	225 (60.7)	270 (40.3)	177 (26.4)
	15 to < 35	179 (10.5)	53 (14.3)	65 (9.7)	61 (9.1)
	≥ 35	51 (3.0)	22 (5.9)	18 (2.7)	11 (1.6)
Kidney	None	831 (45.5)	102 (22.9)	371 (49.6)	358 (56.5)
	< 15	826 (45.2)	287 (64.4)	328 (43.9)	211 (33.3)
	15 to < 35	162 (8.9)	57 (12.8)	48 (6.4)	57 (9.0)
	≥ 35	9 (0.5)	0 (0.0)	1 (0.1)	8 (1.3)
Neuroblastoma	None	965 (58.2)	145 (37.9)	387 (65.6)	433 (63.30)
	< 15	523 (31.6)	182 (47.5)	155 (26.3)	186 (27.2)
	15 to < 35	157 (9.5)	54 (14.1)	45 (7.6)	58 (8.5)
	≥ 35	12 (0.7)	2 (0.5)	3 (0.5)	7 (1.0)
Soft tissue sarcoma	None	341 (33.5)	60 (19.4)	117 (29.9)	164 (51.6)
	< 15	595 (58.4)	228 (73.8)	248 (63.3)	119 (37.4)
	15 to < 35	71 (7.0)	16 (5.2)	25 (6.4)	30 (9.4)
	≥ 35	12 (1.2)	5 (1.6)	2 (0.5)	5 (1.6)
Bone cancer	None	1,136 (65.3)	280 (59.2)	446 (67.0)	410 (68.1)
	< 15	448 (25.7)	138 (29.2)	173 (26.0)	137 (22.8)
	15 to < 35	142 (8.2)	51 (10.8)	39 (5.9)	52 (8.6)

	≥ 35	15 (0.9)	4 (0.9)	8 (1.2)	3 (0.5)
All Survivors	None	9,234 (46.3)	1,219 (23.2)	3,631 (45.2)	4,384 (59.7)
	< 15	8,199 (37.8)	2,764 (52.6)	3,343 (39.9)	2,092 (27.9)
	15 to < 35	2,376 (11.3)	675 (12.9)	866 (10.6)	835 (11.1)
	≥ 35	1,074 (4.6)	593 (11.3)	376 (4.3)	105 (1.3)

Supplemental Table 5. Cumulative Incidence of cardiac outcomes at 20 years from diagnosis by cancer diagnosis and treatment decade

Diagnosis	Decade	Heart Failure	Coronary Artery Disease	Valvular Heart Disease	Pericardial Disease	Arrhythmia
		Cumulative incidence (%) (95% CI)	Cumulative incidence (%) (95% CI)	Cumulative incidence (%) (95% CI)	Cumulative incidence (%) (95% CI)	Cumulative incidence (%) (95% CI)
Leukemia	1970-1979	0.39 (0.17 to 1.91)	0.27 (0.07 to 1.06)	0.03 (0.01 to 0.49)	0.00	0.12 (0.04 to 0.37)
	1980-1989	0.31 (0.12 to 0.77)	0.19 (0.05 to 0.68)	0.02 (0.00 to 33.4)	0.00	0.08 (0.02 to 0.29)
	1990-1999	0.40 (0.21 to 0.77)	0.23 (0.05 to 1.13)	0.09 (0.02 to 0.51)	0.00	0.05 (0.01 to 0.21)
CNS tumors	1970-1979	0.15 (0.03 to 0.80)	0.18 (0.05 to 0.67)	0.00	0.00	0.00
	1980-1989	0.08 (0.02 to 0.28)	0.15 (0.05 to 0.46)	0.00	0.00	0.00
	1990-1999	0.20 (0.09 to 0.44)	0.11 (0.03 to 0.41)	0.00	0.00	0.02 (0.01 to 0.04)
Hodgkin Lymphoma	1970-1979	1.13 (0.69 to 1.87)	0.99 (0.67 to 1.48)	0.17 (0.07 to 0.43)	0.02 (0.00 to 0.25)	0.16 (0.05 to 0.46)
	1980-1989	1.44 (0.93 to 2.24)	0.75 (0.46 to 1.21)	0.26 (0.09 to 0.75)	0.01 (0.00 to 0.13)	0.20 (0.07 to 0.60)
	1990-1999	0.93 (0.51 to 1.70)	0.42 (0.20 to 0.88)	0.07 (0.01 to 0.50)	0.02 (0.00 to 0.85)	0.27 (0.10 to 0.72)
Non-Hodgkin Lymphoma	1970-1979	1.30 (0.74 to 2.29)	0.44 (0.14 to 1.40)	0.00	0.06 (0.01 to 0.55)	0.04 (0.00 to 0.64)
	1980-1989	1.22 (0.65 to 2.28)	0.35 (0.15 to 0.82)	0.00	0.02 (0.00 to 0.33)	0.12 (0.03 to 0.57)
	1990-1999	0.50 (0.21 to 1.12)	0.36 (0.12 to 1.07)	0.00	0.03 (0.00 to 0.36)	0.12 (0.02 to 0.62)
Kidney	1970-1979	0.69 (0.28 to 1.70)	0.00	0.26 (0.05 to 1.28)	0.00	0.00
	1980-1989	0.86 (0.45 to 1.64)	0.00	0.17 (0.04 to 0.79)	0.00	0.00
	1990-1999	0.26 (0.07 to 0.94)	0.00	0.13 (0.02 to 0.99)	0.00	0.00
Neuroblastoma	1970-1979	0.21 (0.06 to 0.75)	0.25 (0.07 to 0.87)	0.00	0.00	0.00
	1980-1989	0.63 (0.31 to 1.26)	0.16 (0.03 to 0.72)	0.00	0.00	0.00
	1990-1999	1.13 (0.57 to 2.24)	0.12 (0.02 to 0.74)	0.00	0.00	0.00
Soft tissue sarcoma	1970-1979	0.82 (0.33 to 2.02)	0.08 (0.01 to 1.19)	0.00	0.01 (0.00 to 0.09)	0.01 (0.00 to 0.07)
	1980-1989	0.92 (0.38 to 2.23)	0.04 (0.01 to 0.37)	0.00	0.01 (0.00 to 0.06)	0.01 (0.00 to 0.04)
	1990-1999	0.51 (0.14 to 1.84)	0.00	0.00	0.00	0.00
Bone cancer	1970-1979	1.37 (0.77 to 2.43)	0.80 (0.36 to 1.80)	0.00	0.00	0.07 (0.01 to 0.42)

	1980-1989	2.33 (1.49 to 3.65)	0.76 (0.40 to 1.45)	0.03 (0.00 to 0.33)	0.01 (0.00 to 0.02)	0.20 (0.06 to 0.64)
	1990-1999	1.08 (0.55 to 2.12)	0.44 (0.16 to 1.19)	0.02 (0.00 to 0.30)	0.02 (0.01 to 0.08)	0.15 (0.04 to 0.51)
All Cancer Survivors	1970-1979	0.69 (0.52 to 0.93)	0.38 (0.26 to 0.54)	0.06 (0.03 to 0.13)	0.04 (0.01 to 0.16)	0.08 (0.04 to 0.15)
	1980-1989	0.74 (0.57 to 0.95)	0.24 (0.16 to 0.35)	0.06 (0.03 to 0.13)	0.02 (0.00 to 0.15)	0.09 (0.05 to 0.17)
	1990-1999	0.54 (0.38 to 0.75)	0.19 (0.12 to 0.33)	0.05 (0.02 to 0.12)	0.03 (0.01 to 0.08)	0.13 (0.08 to 0.23)

Supplemental Table 6. Prevalence of Grade 3-5 cardiac conditions at 20 years from diagnosis by treatment decade in survivors and siblings

		Heart Failure	Coronary Artery Disease	Valvular Heart Disease	Pericardial Disease	Arrhythmia
		Grade 3-5	Grade 3-5	Grade 3-5	Grade 3-5	Grade 3-5
Diagnosis	Decade	N (%)	N (%)	N (%)	N (%)	N (%)

Leukemia	1970-1979	13 (0.64)	13 (0.64)	1 (0.05)	0 (0.00)	5 (0.25)
	1980-1989	21 (0.52)	14 (0.42)	1 (0.02)	1 (0.02)	6 (0.15)
	1990-1999	16 (0.54)	10 (0.35)	2 (0.10)	0 (0.00)	3 (0.07)
CNS tumors	1970-1979	2 (0.27)	3 (0.41)	0 (0.00)	0 (0.00)	0 (0.00)
	1980-1989	2 (0.13)	5 (0.33)	1 (0.07)	1 (0.07)	0 (0.00)
	1990-1999	5 (0.25)	4 (0.20)	0 (0.00)	0 (0.00)	5 (0.25)
Hodgkin lymphoma	1970-1979	24 (2.20)	48 (4.39)	3 (0.73)	4 (0.37)	6 (0.55)
	1980-1989	27 (2.56)	31 (2.94)	11 (1.04)	2 (0.19)	7 (0.66)
	1990-1999	10 (1.19)	6 (0.72)	1 (0.12)	1 (0.12)	4 (0.48)
Non-Hodgkin lymphoma	1970-1979	11 (2.43)	4 (0.88)	0 (0.00)	2 (0.44)	1 (0.22)
	1980-1989	17 (2.22)	5 (0.65)	1 (0.13)	1 (0.13)	5 (0.65)
	1990-1999	5 (0.71)	3 (0.43)	0 (0.00)	1 (0.14)	2 (0.29)
Kidney tumor	1970-1979	6 (1.13)	2 (0.38)	2 (0.38)	2 (0.38)	0 (0.00)
	1980-1989	11 (1.26)	0 (0.00)	2 (0.23)	0 (0.00)	0 (0.00)
	1990-1999	2 (0.27)	1 (0.14)	1 (0.14)	0 (0.00)	2 (0.27)
Neuroblastoma	1970-1979	2 (0.45)	3 (0.68)	0 (0.00)	0 (0.00)	0 (0.00)
	1980-1989	8 (1.20)	3 (0.45)	0 (0.00)	0 (0.00)	2 (0.30)
	1990-1999	10 (1.40)	2 (0.28)	0 (0.00)	0 (0.00)	3 (0.42)
Soft tissue sarcoma	1970-1979	8 (2.20)	3 (0.82)	1 (0.55)	1 (0.27)	3 (0.82)
	1980-1989	10 (2.26)	2 (0.45)	0 (0.00)	1 (0.23)	2 (0.45)
	1990-1999	3 (0.87)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Bone cancer	1970-1979	16 (2.89)	9 (1.62)	0 (0.00)	0 (0.00)	2 (0.36)
	1980-1989	32 (4.27)	11 (1.47)	2 (0.27)	1 (0.13)	7 (0.93)
	1990-1999	10 (1.57)	4 (0.63)	1 (0.16)	4 (0.63)	3 (0.47)
All Cancer Survivors	1970-1979	82 (1.32)	85 (1.37)	13 (0.21)	9 (0.15)	17 (0.27)
	1980-1989	128 (1.27)	71 (0.73)	18 (0.18)	7 (0.07)	29 (0.29)
	1990-1999	61 (0.66)	30 (0.34)	5 (0.07)	6 (0.06)	22 (0.21)
Siblings	1970-1979	1 (0.06)	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.11)
	1980-1989	0 (0.00)	4 (0.17)	2 (0.08)	0 (0.00)	1 (0.04)

1990-1999	0 (0.00)	0 (0.00)	2 (0.25)	0 (0.00)	1 (0.12)
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Supplemental Table 7. Relative rates of cardiac conditions, per five-year treatment eras, by diagnosis, with and without adjustment for cardio-toxic exposures*

Diagnosis	Adjusted for cardio-toxic therapy	Heart Failure	Coronary Artery Disease	Valvular Heart Disease	Pericardial Disease	Arrhythmia
		HR 95% CI	HR 95% CI	HR 95% CI	HR 95% CI	HR 95% CI
Leukemia	No	1.05 (0.69 – 1.60)	0.92 (0.65 – 1.31)	2.12 (0.49 – 9.24)	N/E	0.82 (0.57 – 1.19)
	Yes	0.99 (0.68 – 1.43)	0.89 (0.58 – 1.37)	2.27 (0.62 – 8.24)	N/E	0.83 (0.53 – 1.31)
CNS Tumors	No	1.05 (0.69 – 1.60)	0.82 (0.57 – 1.18)	N/E	N/E	2.23 (1.49 – 3.34)
	Yes	1.12 (0.58 – 2.15)	0.85 (0.58 – 1.25)	N/E	N/E	2.20 (1.45 – 3.33)
Hodgkin lymphoma	No	0.98 (0.81 – 1.19)	0.77 (0.66 – 0.89)	0.92 (0.72 – 1.18)	0.83 (0.42 – 1.63)	1.09 (0.85 – 1.41)
	Yes	0.90 (0.74 – 1.10)	0.87 (0.69 – 1.10)	1.13 (0.83 – 1.55)	0.70 (0.42 – 1.17)	1.04 (0.69 – 1.56)
Non-Hodgkin lymphoma	No	0.92 (0.77 – 1.09)	1.16 (0.79 – 1.71)	N/E	0.90 (0.52 – 1.58)	1.40 (0.63 – 3.12)
	Yes	0.84 (0.65 – 1.09)	1.05 (0.65 – 1.71)	N/E	1.04 (0.44 – 2.48)	1.57 (0.54 – 4.57)
Kidney tumor	No	0.83 (0.59 – 1.17)	0.75 (0.25 – 2.21)	0.85 (0.49 – 1.49)	N/E	3.86 (1.69 – 8.78)
	Yes	0.81 (0.53 – 1.22)	N/E	0.74 (0.39 – 1.39)	N/E	N/E
Neuroblastoma	No	1.51 (1.26 – 1.82)	0.70 (0.34 – 1.43)	N/E	N/E	3.43 (1.83 – 6.41)
	Yes	1.41 (1.12 – 1.78)	0.82 (0.52 – 1.31)	N/E	N/E	2.91 (1.73 – 4.88)
Soft tissue sarcoma	No	1.02 (0.76 – 1.37)	0.51 (0.24 – 1.07)	N/E	N/E	0.56 (0.31 – 1.01)
	Yes	1.03 (0.71 – 1.49)	0.39 (0.14 – 1.08)	N/E	N/E	0.52 (0.23 – 1.17)
Bone cancer	No	0.98 (0.83 – 1.16)	0.91 (0.66 – 1.25)	1.43 (0.80 – 2.57)	2.78 (1.81 – 4.28)	1.47 (0.94 – 2.29)
	Yes	0.91 (0.75 – 1.10)	0.86 (0.60 – 1.23)	N/E	2.86 (1.72 – 4.78)	1.45 (0.86 – 2.43)
All Survivors	No	0.97 (0.88 – 1.06)	0.80 (0.71 – 0.91)	0.97 (0.74 – 1.28)	0.98 (0.68 – 1.40)	1.17 (0.99 – 1.38)
	Yes	0.94 (0.83 – 1.05)	0.87 (0.74 – 1.03)	1.13 (0.83 – 1.53)	0.99 (0.66 – 1.50)	1.19 (0.99 – 1.43)

*Estimates adjusted for age at diagnosis, sex, race, BMI, smoking, exercise intensity (metabolic hours/week), and modifiable risk factors (diabetes, dyslipidemia, hypertension). N/E=not estimated.