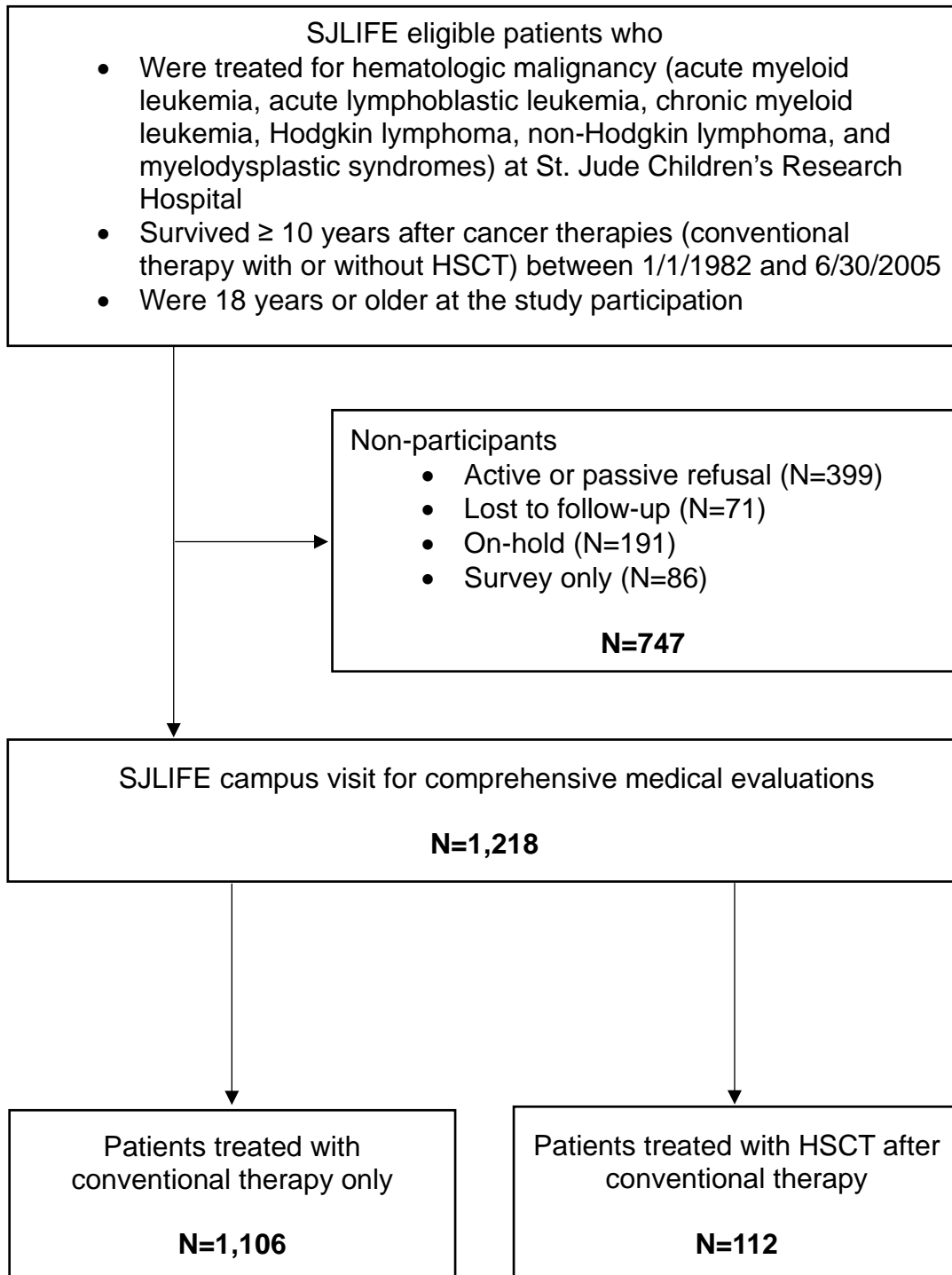## Supplementary Materials

Supplementary Figure S1: Recruitment of survivors who have been treated with conventional therapy only or hematopoietic stem cell transplantation (HSCT) after conventional therapy

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┌─────────────────────────────────────────────────────────────┐
│              SJLIFE eligible patients who                     │
│  • Were treated for hematologic malignancy (acute myeloid     │
│    leukemia, acute lymphoblastic leukemia, chronic myeloid    │
│    leukemia, Hodgkin lymphoma, non-Hodgkin lymphoma, and      │
│    myelodysplastic syndromes) at St. Jude Children's Research │
│    Hospital                                                   │
│  • Survived ≥ 10 years after cancer therapies (conventional   │
│    therapy with or without HSCT) between 1/1/1982 and 6/30/2005│
│  • Were 18 years or older at the study participation          │
└─────────────────────────────────────────────────────────────┘
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┌─────────────────────────────────────────────┐
│  Non-participants                             │
│     • Active or passive refusal (N=399)       │
│     • Lost to follow-up (N=71)                │
│     • On-hold (N=191)                         │
│     • Survey only (N=86)                      │
│                                               │
│                  N=747                        │
└─────────────────────────────────────────────┘
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┌─────────────────────────────────────────────────────────────┐
│  SJLIFE campus visit for comprehensive medical evaluations    │
│                                                               │
│                        N=1,218                                │
└─────────────────────────────────────────────────────────────┘
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┌──────────────────────────────┐   ┌──────────────────────────────┐
│    Patients treated with      │   │  Patients treated with HSCT after │
│   conventional therapy only   │   │      conventional therapy     │
│                               │   │                               │
│          N=1,106              │   │            N=112              │
└──────────────────────────────┘   └──────────────────────────────┘
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Supplementary Table S1: A list of symptom items and corresponding domains included in this study[†]

Domains	Items
Sensation abnormalities	• Decreased sense of touch • Tinnitus/ringing in ear • Dizziness/vertigo • Double vision • Trouble seeing when wearing glasses • Very dry eyes • Abnormal sense of taste • Numbness
Motor/movement problems	• Balance equilibrium problems • Tremors • Weakness to move arm • Weakness to move leg
Cardiac symptoms	• Irregular heartbeat/palpitation • Angina pectoris • Shortness of breath or irregular heartbeat when exercising
Pulmonary symptoms	• Chronic cough • Trouble getting breath
Pain	• Migraine • Severe headaches • Prolonged pain in arms, legs, or back • Pain in general
Fatigue	• Faintness • Feeling weak
Nausea	• Nausea
Memory problems	• Memory problems
Anxiety	• Suicidal thought • Feeling lonely • Feeling blue • Feeling no interest in things • Feeling hopeless about the future • Feeling of worthless
Depression	• Nervousness • Suddenly scared for no reasons • Feeling fearful • Feeling tense • Spells of terror • Restless cannot sit still

†Based on a previous study: Huang IC, et al. Association between the prevalence of symptoms and health-related quality of life in adult survivors of childhood cancer: a report from the St Jude Lifetime Cohort study. J Clin Oncol 2013;31(33):4242-51.

Supplementary Table S2: Comparisons between study participants vs. non-participants

Characteristics	HSCT survivors			Conventional therapy survivors		
	Participants (N=112)	Non-participants (N=98)	*P*-value	Participants (N=1,106)	Non-participants (N=649)	*P*-value
Age (years) at diagnosis, mean ± SD (range)	9.8 ± 5.3 (0.5,18.8)	10.0 ± 5.6 (0.4,20.2)	0.826	9.4 ± 5.5 (0.2,21.8)	9.3 ± 5.4 (0.2,21.7)	0.670
Time (years) since diagnosis, mean ± SD (range)	18.3 ± 4.2 (11.3,28.5)	22.5 ± 4.4 (17.3,29.1)	0.004	19.8 ± 5.1 (10.4,32.9)	21.8 ± 4.8 (11.6,30.3)	<0.001
Sex, N (%)			0.228			<0.001
Female	55 (49.1)	40 (40.8)		525 (47.5)	247 (38.1)	
Male	57(50.9)	58 (59.2)		581 (52.5)	402 (61.9)	
Race/ Ethnicity, N (%)			0.448			0.188
White, non-Hispanic	83 (74.1)	68 (69.4)		914 (82.6)	520 (80.1)	
Other	29 (25.9)	30 (30.6)		192 (17.4)	129 (19.9)	
Diagnosis, N (%)			0.514			0.109
Acute lymphoblastic leukemia	23 (20.5)	21 (21.4)		649 (58.7)	360 (55.5)	
Acute myeloid leukemia	44 (39.3)	31 (31.6)		42 (3.8)	33 (5.1)	
Lymphoma (Hodgkin, non-Hodgkin)	18 (16.1)	23 (23.5)		413 (37.3)	251 (38.7)	
Other	27 (24.1)	23 (23.5)		2 (0.2)	5 (0.8)	
Radiation site, N (%)						
Total body Irradiation	82 (73.2)	63 (68.5)	0.458	0 (0)	4 (0.9)	0.007
Cranial/ spinal	87 (77.7)	69 (70.4)	0.229	297 (26.9)	143 (22.0)	0.025
Chest radiation	93 (83.0)	81 (84.4)	0.795	289 (26.1)	152 (32.1)	0.016
Pelvic/ abdominal	88 (78.6)	69 (73.4)	0.386	102 (9.2)	53 (11.8)	0.131
Any radiation	95 (84.8)	85 (88.5)	0.433	560 (50.6)	276 (52.1)	0.585
Chemotherapy, N (%)						
Alkylators	111 (99.1)	96 (98.0)	0.484	747 (67.5)	436 (67.2)	0.876

Anthracyclines	87 (77.7)	78 (81.3)	0.526	941 (85.1)	562 (94.1)	<0.001
Antimetabolites	111 (99.1)	92 (94.9)	0.066	956 (86.4)	558 (90.2)	0.024
Dexamethasone	35 (31.3)	28 (30.8)	0.941	234 (21.2)	153 (32.7)	<0.001
Epipodophyllotoxin	80 (71.4)	68 (70.8)	0.925	699 (63.2)	375 (67.1)	0.118
High-dose methotrexate	37 (33.0)	33 (35.9)	0.671	654 (59.1)	362 (66.1)	0.007
Prednisone	46 (41.1)	41 (44.1)	0.664	940 (85.0)	539 (88.4)	0.050
Vincristine	45 (40.2)	46 (49.6)	0.183	973 (88.0)	559 (89.7)	0.271
Any chemotherapy	112 (100.0)	97 (99.0)	0.284	1081 (97.7)	627 (96.6F)	0.157
Relapse, N (%)						
Yes	24 (21.4)	16 (16.3)	0.348	505 (45.7)	262 (40.4)	0.031
No	88 (78.6)	82 (83.7)		601 (54.3)	387 (59.6)	
Second tumor, N (%)			0.001			<0.001
Yes	28 (25.0)	8 (8.2)		141(12.7)	9 (1.4)	
No	84 (75.0)	90 (91.8)		965(87.3)	640 (98.6)	

Abbreviations: HSCT = hematopoietic stem cell transplantation; NA = non-applicable

Supplementary Table S3: Multivariable logistic regression for risks of symptom domain prevalence and poor HRQOL between overall HSCT and conventional therapy survivors by accounting for chronic health conditions, time since cancer diagnosis and cancer treatment

Risk factors	Sensation abnormalities OR (95% CI)	Motor/ movement problems OR (95% CI)	Cardiac symptoms OR (95% CI)	Pulmonary symptoms OR (95% CI)	Pain OR (95% CI)	Fatigue OR (95% CI)
Treatment group Overall HSCT vs. conventional therapy survivors [†]	1.1 (0.6, 2.1)	1.0 (0.5, 2.3)	0.9 (0.4, 2.0)	1.1 (0.5, 2.4)	0.5 (0.3, 0.9)	0.6 (0.3, 1.3)
Age at survey	1.1 (1.0, 1.1)	1.1 (1.0, 1.1)	1.0 (1.0, 1.1)	1.0 (1.0, 1.1)	1.0 (1.0, 1.1)	1.1 (1.0, 1.1)
Gender Female vs. male[†]	1.3 (1.0, 1.7)	1.6 (1.1, 2.3)	2.4 (1.7, 3.5)	1.5 (1.0, 2.1)	1.7 (1.3, 2.3)	1.9 (1.3, 2.6)
Race/ ethnicity White, non-Hispanic vs. other[†]	1.4 (1.0, 2.0)	1.0 (0.6, 1.6)	0.9 (0.6, 1.4)	0.8 (0.5, 1.3)	1.3 (0.9, 1.9)	1.1 (0.7, 1.7)
Education < College vs. ≥ college[†]	1.4 (1.0, 1.8)	1.8 (1.2, 2.6)	1.5 (1.0, 2.3)	1.5 (1.0, 2.3)	1.8 (1.4, 2.5)	2.4 (1.6, 3.4)
Marital status Single/ divorced/ other vs. married/ living with partner[†]	1.1 (0.8, 1.4)	1.6 (1.1, 2.4)	1.0 (0.7, 1.5)	1.8 (1.2, 2.6)	0.8 (0.6, 1.1)	1.0 (0.7, 1.4)
Chronic health conditions						
Cardiovascular[‡]	1.2 (0.8, 1.9)	1.3 (0.8, 2.3)	2.9 (1.7, 4.7)	1.2 (0.7, 2.1)	1.5 (0.9, 2.7)	1.2 (0.7, 2.0)
Endocrine[‡]	1.4 (1.1, 1.9)	1.8 (1.3, 2.7)	1.1 (0.7, 1.5)	1.3 (0.9, 1.9)	1.3 (1.0, 1.8)	1.5 (1.1, 2.1)
Gastrointestinal[‡]	1.3 (0.9, 2.0)	1.4 (0.8, 2.2)	1.2 (0.7, 2.1)	1.5 (0.9, 2.5)	1.3 (0.8, 2.1)	1.2 (0.7, 1.8)
Neurology[‡]	2.0 (1.2, 3.2)	3.3 (2.0, 5.4)	1.5 (0.9, 2.8)	1.9 (1.1, 3.3)	1.3 (0.8, 2.3)	2.0 (1.2, 3.3)
Ocular[‡]	2.2 (1.0, 4.8)	2.6 (1.0, 6.7)	1.0 (0.3, 2.9)	0.5 (0.1, 1.7)	2.4 (0.9, 6.2)	2.4 (1.0, 5.9)
Pulmonary[‡]	1.0 (0.6, 1.7)	0.9 (0.4, 1.7)	2.8 (1.6, 5.0)	2.3 (1.3, 4.1)	1.8 (0.9, 3.6)	0.9 (0.5, 1.7)

Reproductive‡	1.3 (1.0, 1.8)	0.7 (0.4, 1.1)	0.8 (0.5, 1.3)	1.0 (0.6, 1.5)	1.4 (1.0, 2.0)	1.4 (1.0, 2.1)
Time since diagnosis	1.0 (0.9, 1.0)	1.0 (0.9, 1.0)	1.0 (1.0, 1.1)	1.0 (0.9, 1.0)	1.0 (0.9, 1.0)	1.0 (0.9, 1.0)
Chemotherapy						
Alkylators	1.1 (0.8, 1.6)	1.8 (1.1, 3.0)	1.1 (0.7, 1.9)	1.0 (0.6, 1.7)	1.1 (0.7, 1.5)	1.1 (0.7, 1.8)
Anthracyclines	0.9 (0.6, 1.4)	1.1 (0.7, 2.0)	1.2 (0.7, 2.1)	1.1 (0.6, 1.9)	0.8 (0.5, 1.2)	0.8 (0.5, 1.3)
Antimetabolites	1.2 (0.8, 2.0)	1.2 (0.6, 2.4)	0.8 (0.4, 1.4)	1.2 (0.6, 2.1)	1.0 (0.6, 1.8)	1.1 (0.6, 1.9)
Dexamethasone	0.7 (0.5, 1.1)	1.4 (0.8, 2.4)	0.6 (0.4, 1.1)	0.9 (0.5, 1.5)	0.9 (0.6, 1.3)	0.9 (0.5, 1.4)
Epipodophyllotoxin	0.9 (0.6, 1.2)	0.9 (0.5, 1.4)	0.6 (0.4, 1.0)	0.9 (0.5, 1.4)	0.9 (0.7, 1.4)	0.9 (0.6, 1.4)
High-dose methotrexate	1.2 (0.9, 1.8)	1.0 (0.6, 1.6)	1.1 (0.7, 1.9)	0.8 (0.5, 1.2)	1.1 (0.8, 1.7)	0.8 (0.5, 1.3)
Prednisone	0.7 (0.5, 1.1)	1.2 (0.7, 2.3)	0.7 (0.4, 1.3)	0.7 (0.4, 1.1)	1.1 (0.7, 1.7)	1.0 (0.6, 1.6)
Vincristine	1.1 (0.7, 2.0)	1.3 (0.6, 3.1)	1.1 (0.5, 2.3)	1.9 (0.9, 4.1)	0.8 (0.4, 1.5)	1.1 (0.5, 2.1)
Radiotherapy						
Cranial/ spinal	1.0 (0.7, 1.4)	1.1 (0.7, 1.8)	0.8 (0.5, 1.4)	0.9 (0.5, 1.5)	1.2 (0.8, 1.8)	1.2 (0.7, 1.9)
Pelvic/ abdominal	0.9 (0.4, 1.9)	1.1 (0.4, 2.9)	1.3 (0.5, 3.1)	1.0 (0.4, 2.6)	1.2 (0.5, 3.0)	0.8 (0.3, 2.0)

Abbreviations: HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio
†Reference group; ‡CTCAE grades 3-4 vs. none or 1-2

Supplementary Table S3: Multivariable logistic regression for risks of symptom domain prevalence and poor HRQOL between overall HSCT and conventional therapy survivors by accounting for chronic health conditions, time since cancer diagnosis and cancer treatment (Cont'd)

Risk factors	Nausea OR (95% CI)	Memory problems OR (95% CI)	Anxiety OR (95% CI)	Depression OR (95% CI)	PCS (Score ≤40) OR (95% CI)	MCS (Score ≤40) OR (95% CI)
Treatment group Overall HSCT vs. conventional therapy survivors[†]	0.7 (0.3, 1.5)	1.5 (0.8, 2.8)	0.9 (0.5, 1.6)	0.8 (0.4, 1.6)	1.1 (0.5, 2.6)	1.2 (0.6, 2.3)
Age at survey	1.0 (1.0, 1.0)	1.0 (0.9, 1.0)	1.0 (1.0, 1.1)	1.0 (1.0, 1.1)	1.1 (1.1, 1.1)	1.0 (1.0, 1.1)
Gender Female vs. male[†]	2.0 (1.4, 2.9)	1.6 (1.2, 2.1)	1.4 (1.1, 1.8)	1.3 (1.0, 1.7)	1.5 (1.1, 2.2)	1.5 (1.2, 2.1)
Race/ ethnicity White, non-Hispanic vs. other[†]	1.1 (0.7, 1.7)	1.9 (1.3, 2.8)	1.1 (0.8, 1.6)	0.9 (0.7, 1.3)	1.0 (0.6, 1.6)	1.1 (0.7, 1.5)
Education < College vs. ≥ college[†]	1.5 (1.0, 2.2)	2.1 (1.5, 2.9)	1.3 (1.0, 1.7)	1.5 (1.1, 2.0)	2.6 (1.7, 4.0)	2.2 (1.5, 3.0)
Marital status Single/ divorced/ other vs. married/ living with partner[†]	0.9 (0.6, 1.3)	1.4 (1.0, 1.9)	1.3 (1.0, 1.8)	2.0 (1.5, 2.7)	1.4 (0.9, 2.0)	1.7 (1.2, 2.3)
Chronic health conditions						
Cardiovascular[‡]	1.2 (0.7, 2.1)	1.0 (0.6, 1.6)	1.1 (0.7, 1.7)	1.6 (1.0, 2.5)	2.9 (1.8, 4.7)	1.7 (1.0, 2.7)
Endocrine[‡]	1.6 (1.1, 2.3)	1.1 (0.8, 1.5)	1.1 (0.9, 1.5)	1.5 (1.1, 1.9)	1.4 (0.9, 2.0)	1.3 (1.0, 1.8)
Gastrointestinal[‡]	2.0 (1.3, 3.2)	1.1 (0.7, 1.8)	1.4 (1.0, 2.1)	1.3 (0.9, 2.0)	1.3 (0.8, 2.1)	0.9 (0.5, 1.4)
Neurology[‡]	1.2 (0.7, 2.3)	2.1 (1.3, 3.4)	1.0 (0.6, 1.6)	1.4 (0.8, 2.2)	2.5 (1.5, 4.3)	1.6 (1.0, 2.6)
Ocular[‡]	1.4 (0.5, 4.0)	0.6 (0.2, 1.5)	0.7 (0.3, 1.6)	0.6 (0.2, 1.4)	2.1 (0.8, 5.4)	0.8 (0.3, 2.2)
Pulmonary[‡]	1.6 (0.8, 2.9)	2.1 (1.2, 3.6)	1.0 (0.6, 1.7)	1.1 (0.6, 1.8)	2.7 (1.5, 4.8)	1.5 (0.8, 2.6)
Reproductive[‡]	1.5 (1.0, 2.3)	1.0 (0.7, 1.5)	1.1 (0.8, 1.6)	1.2 (0.9, 1.7)	1.2 (0.8, 1.8)	0.9 (0.6, 1.3)
Time since diagnosis	1.0 (1.0, 1.1)	1.0 (1.0, 1.1)	1.0 (1.0, 1.0)	1.0 (1.0, 1.1)	1.0 (0.9, 1.0)	1.0 (0.9, 1.0)

Chemotherapy						
Alkylators	1.1 (0.7, 1.9)	1.3 (0.9, 1.9)	1.0 (0.7, 1.4)	1.2 (0.8, 1.7)	1.5 (0.9, 2.5)	0.8 (0.6, 1.2)
Anthracyclines	1.5 (0.9, 2.6)	1.9 (1.2, 3.0)	1.3 (0.9, 1.9)	1.2 (0.8, 1.7)	0.9 (0.5, 1.5)	1.0 (0.7, 1.7)
Antimetabolites	1.8 (0.9, 3.3)	0.7 (0.4, 1.2)	1.3 (0.8, 2.1)	1.2 (0.7, 1.9)	1.0 (0.6, 1.9)	1.1 (0.7, 2.0)
Dexamethasone	0.6 (0.4, 1.1)	1.6 (1.1, 2.4)	0.9 (0.6, 1.3)	0.8 (0.5, 1.2)	1.2 (0.7, 2.1)	0.9 (0.6, 1.3)
Epipodophyllotoxin	1.1 (0.7, 1.7)	0.9 (0.6, 1.3)	0.8 (0.5, 1.1)	0.6 (0.4, 0.9)	0.7 (0.4, 1.2)	0.7 (0.5, 1.1)
High-dose methotrexate	1.0 (0.6, 1.6)	1.0 (0.7, 1.5)	0.8 (0.6, 1.2)	1.1 (0.7, 1.6)	1.0 (0.6, 1.6)	1.0 (0.7, 1.5)
Prednisone	0.9 (0.5, 1.6)	1.3 (0.8, 2.2)	1.0 (0.6, 1.4)	1.0 (0.7, 1.6)	0.7 (0.4, 1.3)	1.0 (0.6, 1.7)
Vincristine	0.9 (0.4, 1.9)	0.8 (0.4, 1.5)	1.3 (0.7, 2.1)	1.2 (0.7, 2.1)	1.8 (0.8, 4.1)	1.7 (0.9, 3.1)
Radiotherapy						
Cranial/ spinal	0.7 (0.4, 1.2)	1.9 (1.3, 2.8)	1.0 (0.7, 1.4)	0.9 (0.6, 1.4)	1.3 (0.7, 2.1)	1.2 (0.8, 1.9)
Pelvic/ abdominal	1.7 (0.7, 4.1)	0.6 (0.2, 1.5)	1.2 (0.6, 2.4)	1.2 (0.6, 2.5)	0.7 (0.2, 2.0)	1.3 (0.6, 3.0)

Abbreviations: HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio
†Reference group; ‡CTCAE grades 3-4 vs. none or 1-2

Supplementary Table S4: Multivariable logistic regression for risks of symptom domain prevalence and poor HRQOL between autologous and allogeneic HSCT survivors

Risk factors	Sensation abnormalities	Motor/ movement problems	Cardiac symptoms	Pulmonary symptoms	Pain	Fatigue
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
HSCT type Allogeneic vs. Autologous[†]	1.0 (0.4, 2.6)	0.6 (0.2, 1.9)	1.9 (0.4, 7.8)	1.2 (0.3, 4.5)	0.5 (0.2, 1.3)	1.2 (0.3, 4.5)
Age at survey	1.1 (1.0, 1.2)	1.0 (0.9, 1.2)	1.1 (1.0, 1.2)	1.0 (0.9, 1.1)	1.1 (1.0, 1.2)	1.1 (1.0, 1.3)
Gender Female vs. male[†]	1.2 (0.5, 2.8)	0.5 (0.1, 1.7)	0.8 (0.3, 2.7)	0.4 (0.1, 1.5)	0.9 (0.4, 2.1)	1.0 (0.3, 3.4)
Race/ ethnicity White, non-Hispanic vs. other[†]	1.1 (0.4, 3.0)	0.5 (0.1, 2.2)	0.4 (0.1, 1.6)	0.4 (0.1, 1.4)	0.9 (0.3, 2.5)	0.3 (0.1, 1.1)
Education < College vs. ≥ college[†]	0.8 (0.3, 2.0)	2.4 (0.6, 9.7)	1.7 (0.5, 6.3)	1.1 (0.3, 3.8)	1.3 (0.5, 3.4)	1.7 (0.5, 5.9)
Marital status Single/ divorced/ other vs. married/ living with partner[†]	1.1 (0.4, 2.8)	1.6 (0.4, 6.6)	3.2 (0.7, 14.0)	2.1 (0.5, 9.8)	1.5 (0.5, 4.4)	1.3 (0.3, 4.6)

Abbreviations: HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio
†Reference group

Supplementary Table S4: Multivariable logistic regression for risks of symptom domain prevalence and poor HRQOL between autologous and allogeneic HSCT survivors (Cont'd)

Risk factors	Nausea OR (95% CI)	Memory problems OR (95% CI)	Anxiety OR (95% CI)	Depression OR (95% CI)	PCS (Score ≤40) OR (95% CI)	MCS (Score ≤40) OR (95% CI)
HSCT type Allogeneic vs. autologous[†]	1.1 (0.3, 3.9)	0.9 (0.3, 2.3)	1.3 (0.5, 3.4)	0.8 (0.3, 2.4)	0.5 (0.1, 1.7)	1.0 (0.3, 3.0)
Age at survey	1.1 (1.0, 1.2)	1.0 (0.9, 1.1)	1.0 (0.9, 1.1)	1.1 (1.0, 1.1)	1.2 (1.1, 1.4)	1.0 (0.9, 1.1)
Gender Female vs. male[†]	1.0 (0.3, 3.0)	0.8 (0.3, 1.9)	0.9 (0.4, 2.1)	0.7 (0.3, 1.8)	1.2 (0.4, 3.8)	0.7 (0.2, 1.9)
Race/ ethnicity White, non-Hispanic vs. other[†]	0.8 (0.2, 3.0)	1.4 (0.4, 4.2)	0.6 (0.2, 1.5)	0.6 (0.2, 1.6)	4.1 (0.5, 37.0)	1.1 (0.3, 4.2)
Education < College vs. ≥ college[†]	1.9 (0.5, 6.9)	1.7 (0.6, 4.4)	1.7 (0.7, 4.5)	0.9 (0.3, 2.6)	2.7 (0.8, 9.6)	1.3 (0.4, 4.2)
Marital status Single/ divorced/ other vs. married/ living with partner[†]	3.4 (0.8, 14.8)	2.4 (0.8, 7.2)	1.6 (0.6, 4.6)	4.5 (1.3, 15.3)	3.4 (0.9, 12.7)	1.8 (0.5, 6.6)

Abbreviations: HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio
†Reference group

Supplementary Table S5: Multivariable logistic regression for risks of symptom domain prevalence and poor HRQOL in overall HSCT survivors by accounting for transplant-specific variables

Risk factors	Sensation abnormalities OR (95% CI)	Motor/ movement problems OR (95% CI)	Cardiac symptoms OR (95% CI)	Pulmonary symptoms OR (95% CI)	Pain OR (95% CI)	Fatigue OR (95% CI)
Age at survey	1.0 (0.9, 1.1)	0.9 (0.8, 1.1)	0.9 (0.8, 1.1)	0.9 (0.8, 1.0)	1.0 (0.9, 1.1)	1.0 (0.9, 1.2)
Gender Female vs. male[†]	0.8 (0.3, 2.0)	1.9 (0.4, 7.6)	1.1 (0.3, 3.5)	3.1 (0.8,11.3)	1.4 (0.5, 3.7)	0.8 (0.2, 3.0)
Time since Transplant	0.9 (0.8, 1.0)	0.9 (0.8, 1.2)	1.0 (0.8, 1.2)	0.9 (0.8, 1.1)	0.9 (0.8, 1.0)	1.0 (0.8, 1.2)
Disease status at transplant ≥CR2 Relapsed/ progression vs. CR1[†]	1.2 (0.4, 2.9) 1.5 (0.2, 8.4)	2.8 (0.5, 14.1) 17.5 (2.2,138.2)	0.5 (0.1, 2.2) 2.2 (0.3,15.2)	0.3 (0.0, 1.7) 3.2 (0.5,20.6)	0.4 (0.1, 1.2) NA	0.4 (0.1, 2.0) 2.2 (0.3,16.0)
Intensity of transplant experience[‡] Intermediate Severe vs. Low[†]	0.8 (0.3, 2.2) 2.2 (0.6, 8.1)	0.7 (0.1, 3.2) 0.3 (0.0, 2.6)	2.2 (0.4, 9.9) 2.0 (0.3,12.3)	1.3 (0.3, 6.3) 3.1 (0.5,17.1)	0.7 (0.2, 2.0) 1.1 (0.2, 4.6)	1.1 (0.2, 4.8) 0.7 (0.1, 4.5)

Abbreviations: CR1 = first complete remission; CR2 = second complete remission; HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio; NA: non-applicable
†Reference group; ‡Low = autologous; Intermediate = allogeneic without chronic graft-versus-host disease; Severe = allogeneic with chronic graft-versus-host disease

Supplementary Table S5: Multivariable logistic regression for risks of symptom prevalence and poor HRQOL in overall HSCT survivors by accounting for transplant-specific variables (Cont'd)

Risk factors	Nausea	Memory problems	Anxiety	Depression	PCS (Score ≤40)	MCS (Score ≤40)
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Age at survey	0.9 (0.8, 1.1)	0.9 (0.8, 1.0)	0.9 (0.8, 1.0)	0.9 (0.8, 1.0)	1.1 (0.9, 1.3)	0.9 (0.8, 1.0)
Gender Female vs. male[†]	1.1 (0.3, 3.6)	1.2 (0.5, 3.0)	1.0 (0.4, 2.7)	1.2 (0.4, 3.2)	1.1 (0.3, 3.8)	1.4 (0.4, 4.5)
Time since transplant	1.0 (0.9, 1.2)	0.9 (0.8, 1.0)	1.0 (0.9, 1.1)	1.0 (0.8, 1.1)	0.9 (0.8, 1.1)	0.8 (0.7, 1.0)

Disease status at transplant
  ≥CR2
  Relapsed/ progression vs. CR1[†]
	0.7 (0.2, 2.7)
	NA
		0.9 (0.3, 2.4)
		2.0 (0.4,10.2)
			1.2 (0.4, 3.4)
			1.4 (0.2, 8.9)
				1.1 (0.3, 3.1)
				4.6 (0.8,25.6)
					1.2 (0.3, 4.6)
					6.2 (1.0,38.4)
						1.8 (0.5, 6.5)
						3.4 (0.5,21.1)

Intensity of transplant experience[‡]
  Intermediate
  Severe
  vs. Low[†]
	1.2 (0.3, 4.9)
	0.9 (0.1, 6.5)
		1.2 (0.4, 3.4)
		1.6 (0.4, 6.1)
			1.4 (0.5, 4.0)
			0.5 (0.1, 2.5)
				1.3 (0.4, 3.1)
				1.0 (0.2, 4.4)
					0.8 (0.2, 3.3)
					0.5 (0.1, 3.0)
						1.1 (0.3, 4.1)
						1.5 (0.3, 8.1)

Abbreviations: CR1 = first complete remission; CR2 = second complete remission; HRQOL = health-related quality of life; HSCT = hematopoietic stem cell transplantation; MCS = mental component summary; PCS = physical component summary; CI = confidence interval; OR = odds ratio; NA: non-applicable

[†]Reference group; [‡]Low = autologous; Intermediate = allogeneic without chronic graft-versus-host disease; Severe = allogeneic with chronic graft-versus-host disease

Supplementary Figure S2: Cumulative prevalence of symptom and HRQOL domains between overall HSCT and conventional therapy survivors[†]

[†] Conventional therapy as the reference group

Sensation abnormalities
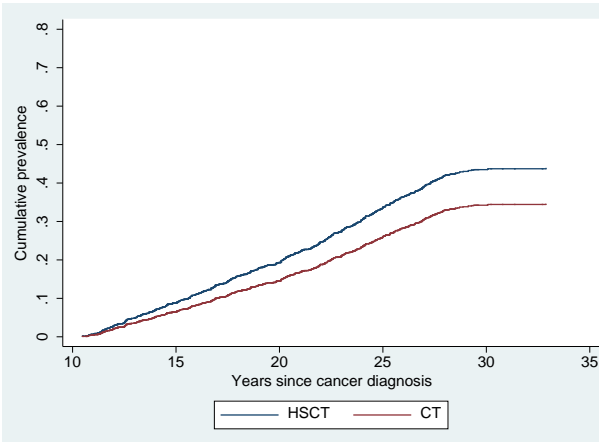
OR=1.358; *P*-value=0.065

Motor/movement problems
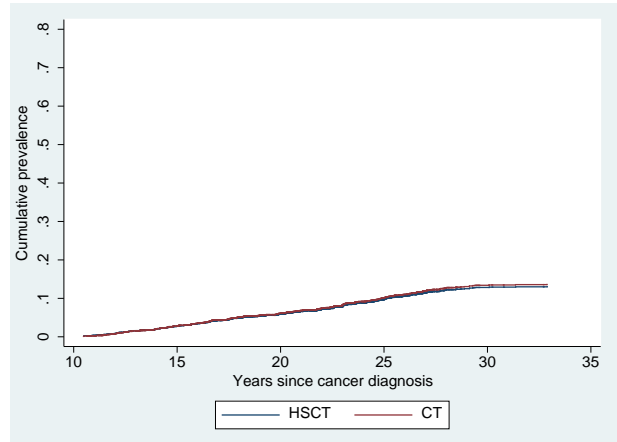
OR=0.947; *P*-value=0.847

Cardiac problems
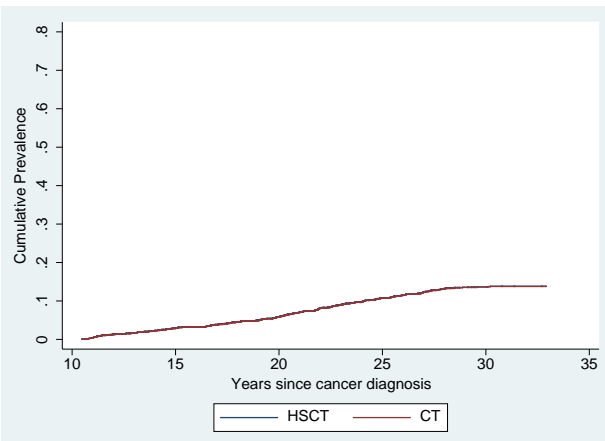
OR=1.002; *P*=0.995

Pulmonary problems
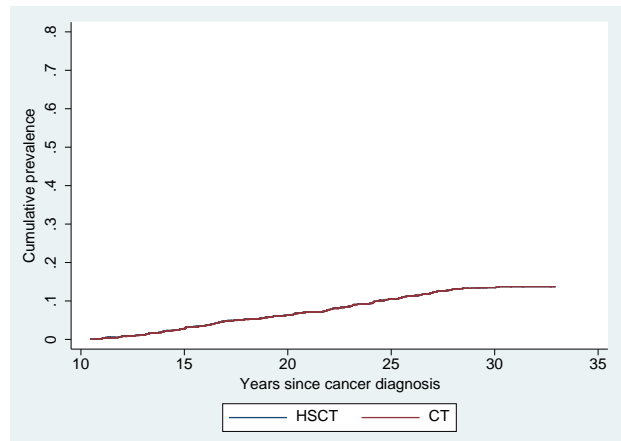
OR=0.995; *P*-value=0.986

Pain
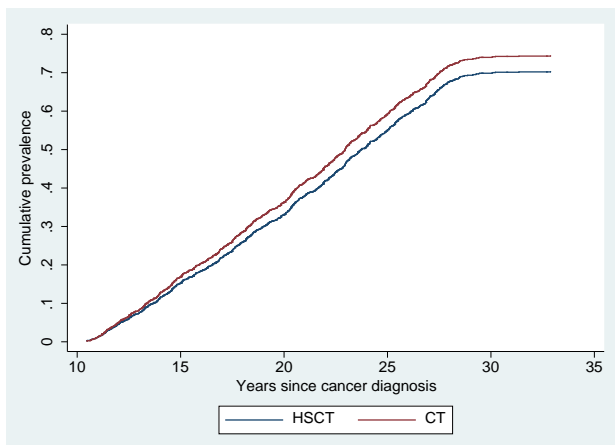
OR=0.888; *P*-value=0.382

Fatigue
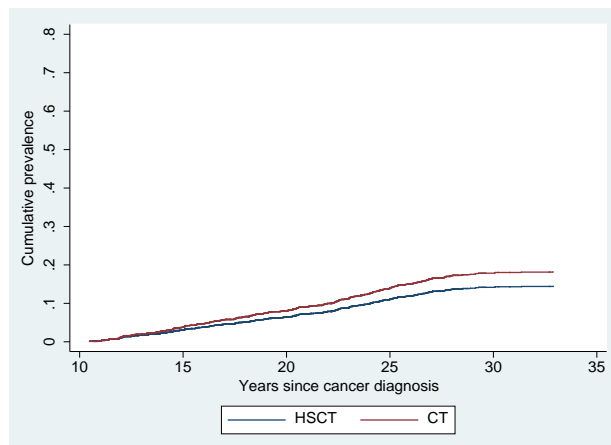
OR=0.771; *P*-value=0.338

Nausea
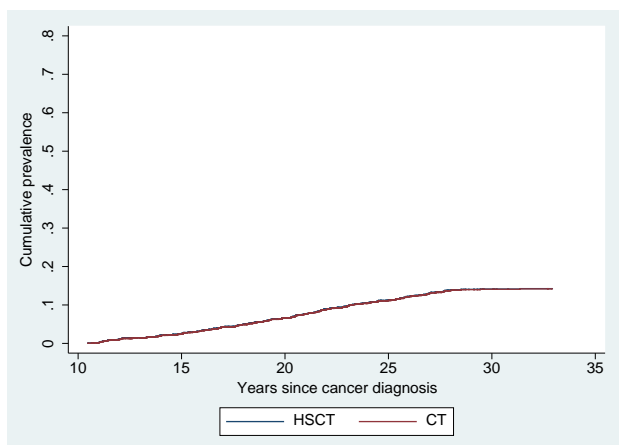
OR=1.001; *P*-value=0.996

Memory problems
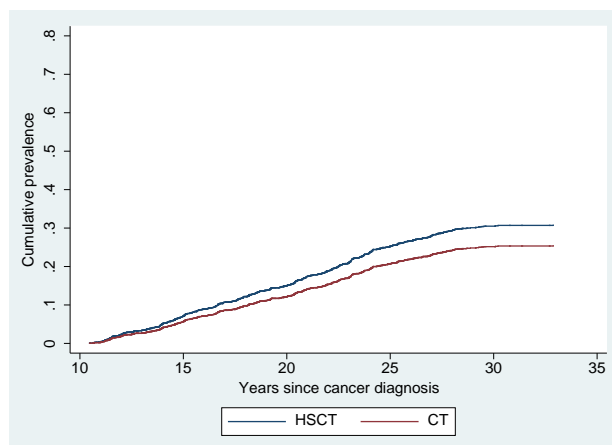
OR=1.252; *P*-value=0.244

Anxiety
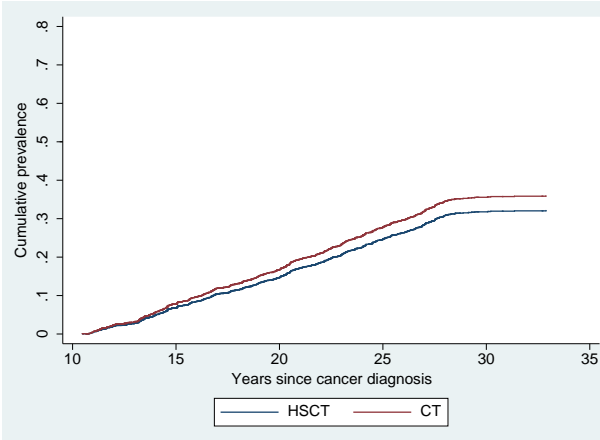
OR=0.870; *P*-value=0.456

Depression
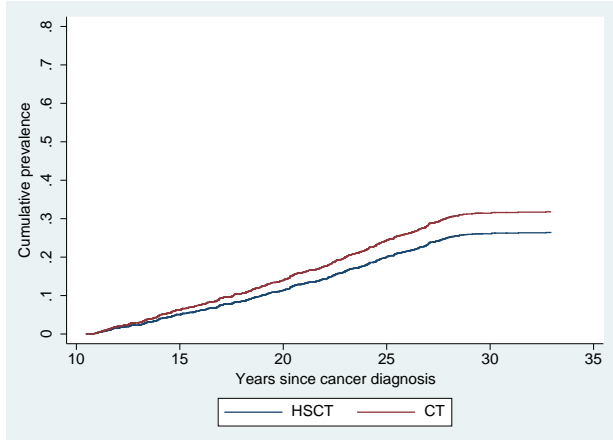
OR=0.801; *P*-value=0.284

PCS <40
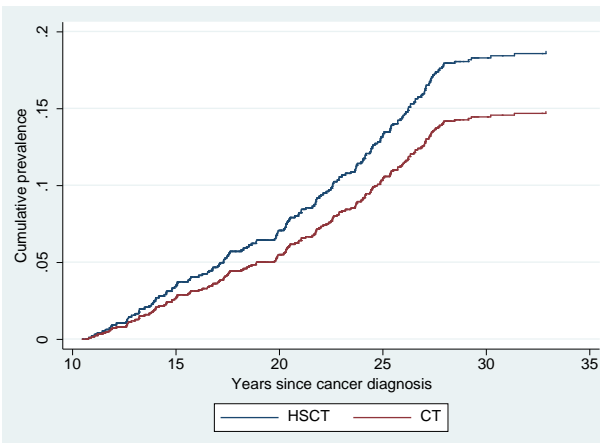
OR=1.293; *P*-value=0.296

MCS <40
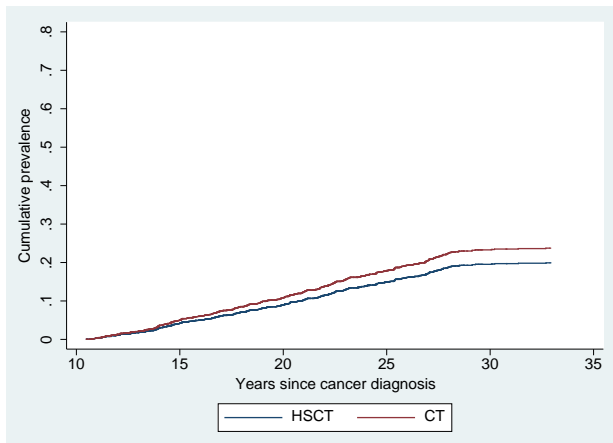
OR=0.817; *P*-value=0.399

Supplementary Figure S3: Cumulative prevalence of specific symptom and HRQOL items between overall HSCT survivors and conventional therapy survivors[†] (only list the items with *P*-values < 0.1)

[†] Conventional therapy as the reference group

Double vision
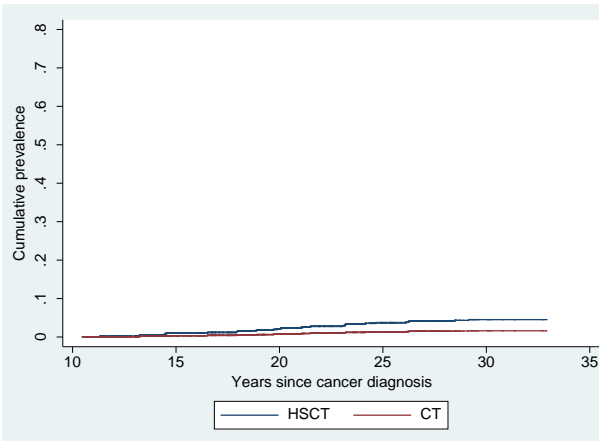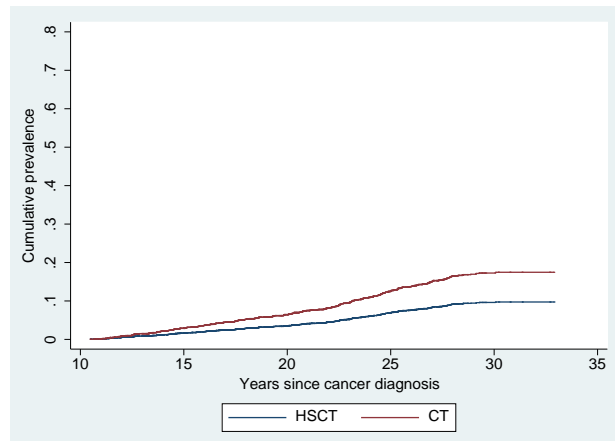

OR=2.827; *P*-value=0.041

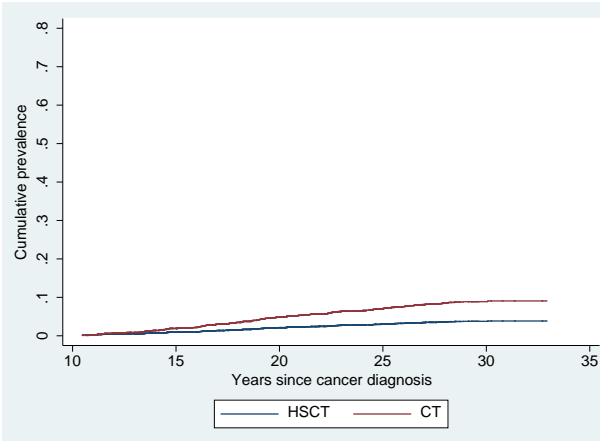### Trouble seeing when wearing glasses
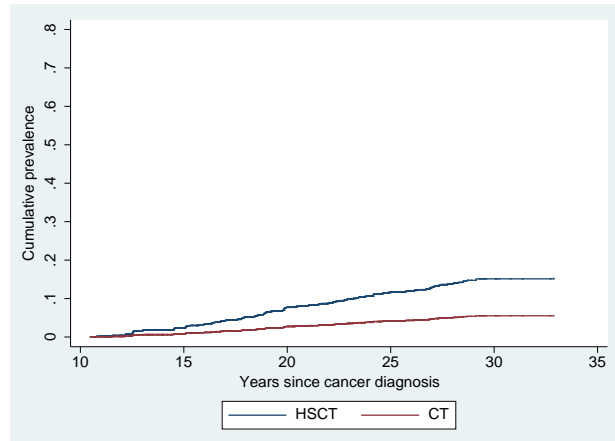
OR=2.885; *P*-value<0.0001

Very dry eyes
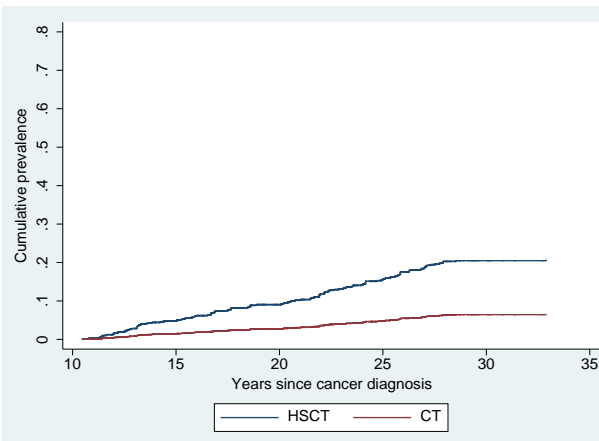
OR=3.436; *P*-value<0.0001

Numbness

OR=0.531; *P*-value=0.053

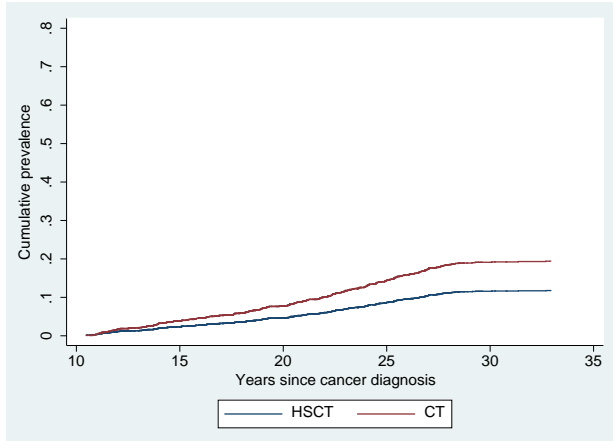## Pain in general

OR=0.402; *P*-value=0.075

Feeling blue

OR=0.575; *P*-value=0.066