

PARTICIPATING CENTERS

St. Jude Children's Research Hospital
Memphis, TN

Ann & Robert Lurie Children's Hospital of Chicago
Chicago, IL

Children's Healthcare of Atlanta/Emory University
Atlanta, GA

Children's Hospital at Stanford
Palo Alto, CA

Children's Hospital Colorado
Aurora, CO

Children's Hospital of Los Angeles
Los Angeles, CA

Children's Hospital of Orange County
Orange, CA

Children's Hospital of Philadelphia
Philadelphia, PA

Children's Hospital of Pittsburgh
Pittsburgh, PA

Children's Hospitals and Clinics of Minnesota
Minneapolis, MN

Children's National Medical Center
Washington, DC

City of Hope National Medical Center
Duarte, CA

Cook Children's Hematology-Oncology Center
Fort Worth, TX

Dana-Farber Cancer Institute/Children's Hospital
Boston, MA

Mattel Children's Hospital at UCLA
Los Angeles, CA

Mayo Clinic
Rochester, MN

Memorial Sloan-Kettering Cancer Center
New York, NY

Miller Children's Hospital
Long Beach, CA

Nationwide Children's Hospital
Columbus, OH

Riley Hospital for Children - Indiana University
Indianapolis, IN

Roswell Park Cancer Institute
Buffalo, NY

Seattle Children's Hospital
Seattle, WA

St. Louis Children's Hospital
St. Louis, MO

Texas Children's Hospital
Houston, TX

Toronto Hospital for Sick Children
Toronto, ON

UAB/The Children's Hospital of Alabama
Birmingham, AL

University of California at San Francisco
San Francisco, CA

University of Chicago Comer Children's Hospital
Chicago, IL

University of Michigan - Mott Children's Hospital
Ann Arbor, MI

University of Minnesota
Minneapolis, MN

UT-Southwestern Medical Center
Dallas, TX

U.T.M.D. Anderson Cancer Center
Houston, TX

Investigator Meeting
June 14, 2021

CCSS

Childhood Cancer Survivor Study

*An NCI-funded resource for
outcome and intervention research*

U24 CA55727

<http://ccss.stjude.org>

Table of Contents

Agenda.....	1
Institutions and Investigators.....	3
External Advisory Committee.....	4
Project Organization/Leadership.....	5
Externally Funded Ancillary Studies	6
Demographic and Treatment Data for Participants	7
Follow-Up Survey Participation Rates	9
Follow-Up 7 Survey Status – Survivors and Siblings	10
Oragene DNA Kit Summary	11
Follow-Up 6 Subsequent Neoplasm Confirmation Status	12
Follow-Up 7 Subsequent Neoplasm Confirmation Status	13
Subsequent Neoplasm by Primary Cancer Diagnosis - Overall Cohort.....	14
Biospecimen Repository by Primary Cancer Diagnosis	15
Characteristics of Biologic Material for Subsequent Malignant Neoplasm and Meningioma.....	16
Blood/Tissue Consent and Blood Collection Status - Participants.....	17
Tissue Collection for Confirmed SMNs - Conditions.....	18
2015 - 2021 RT Data Analyses Summary	19
Radiation Therapy Record Status	34
Pre-2015 RT Data Analyses Summary	36
Applications of Intent (AOI) to Conduct Research.....	39
Cancer Control and Intervention	39
Chronic Disease	43
Epidemiology / Biostatistics.....	49
Genetics	51
Psychology	55
SMN	60
Publications and Manuscripts	63
Investigator-Initiated, Ancillary Studies for External-Funding.....	91
Ancillary Studies: Completed	91
Ancillary Studies: Active.....	94
Ancillary Studies: Proposed	100
Ancillary Studies: Unfunded	102
Statistical Center Project List.....	107
CCSS Abstracts 1997-2021.....	114
CCSS Career Development Award Winners.....	142
CCSS Trainee List.....	144
Appendix – Sample Participant Newsletters	150



Childhood Cancer Survivor Study

2021 CCSS Investigator Meeting Agenda

Monday, June 14 – All times Central Daylight Time

9:00-9:30	Welcome, Introduction to CCSS and PI report <i>Greg Armstrong, MD, MSCE – St. Jude Children’s Research Hospital, Memphis, TN</i>
9:30-9:40	Coordinating Center Report <i>Aaron McDonald, PhD – St. Jude Children’s Research Hospital, Memphis, TN</i>
9:40-9:50	Data and Statistics Center Report <i>Wendy Leisenring, ScD – Fred Hutchinson Cancer Research Center, Seattle, WA</i>
9:50-10:00	Radiation Dosimetry Center Report <i>Rebecca Howell, MD – MD Anderson Cancer Center, Houston, TX</i>
10:00-11:00	Research Presentations
1.	Prevalence and Predictors of Neurocognitive Impairment in Long-Term Survivors of Hodgkin Lymphoma: A Report from the Childhood Cancer Survivor Study <i>AnnaLynn Williams, PhD - St. Jude Children’s Research Hospital, Memphis, TN</i>
2.	Age-specific Risk Prediction for Premature Ovarian Insufficiency in Childhood Cancer Survivors <i>Yan Yuan, PhD - University of Alberta School of Public Health, Alberta, Canada</i>
3.	Comprehensive Molecular Characterization of Pediatric Treatment-Induced High-Grade Glioma: A Distinct Entity Despite the Disparate Etiologies <i>John Lucas, MD, MS – St. Jude Children’s Research Hospital, Memphis, TN</i>
4.	ASPIRES Intervention Trial: Activating Cancer Survivors and their Primary Care Providers to Increase Colorectal Cancer Screening <i>Tara Henderson, MD – University of Chicago, Chicago, IL</i>
5.	ENGAGE Intervention Trial: Engaging and Activating Cancer Survivors in Genetic Services <i>Angela Bradbury, MD – University of Pennsylvania, Philadelphia, PA</i>
6.	Exploring Clinical and Genetic Data for the CCSS Study on the St. Jude Survivorship Portal <i>Xin Zhou, PhD – St. Jude Children’s Research Hospital, Memphis, TN</i>

11:00-11:20	Cancer Control and Intervention Working Group <i>Paul Nathan, MD, MSc - The Hospital for Sick Children, Toronto, Ontario, Canada</i>
11:20-11:40	Genetics Working Group <i>Smita Bhatia, MD, MPH - University of Alabama, Birmingham, AL</i>
11:40-12:00	Epidemiology/Biostatistics Working Group <i>Yutaka Yasui, PhD - St. Jude Children's Research Hospital, Memphis, TN</i>
12:00-12:30	Lunch Break
12:30-12:50	Psychology Working Group <i>Kevin Krull, PhD - St. Jude Children's Research Hospital, Memphis, TN</i>
12:50-1:10	Chronic Disease Working Group <i>Eric Chow, MD, MPH - Fred Hutchinson Cancer Research Center, Seattle, WA</i> <i>Kevin Oeffinger, MD - Duke University, Durham, NC</i>
1:10-1:30	Second Neoplasm Working Group <i>Joe Neglia, MD, MPH - University of Minnesota, Minneapolis, MN</i>
1:30-2:30	Working Group Breakout Sessions (concurrent meetings): <ul style="list-style-type: none"> • Chronic Disease Working Group • Genetics Working Group • Epidemiology/Biostatistics Working Group
2:30-3:30	Working Group Breakout Sessions (concurrent meetings): <ul style="list-style-type: none"> • Cancer Control Working Group • Psychology Working Group • Second Neoplasm Working Group
3:30	Adjourn

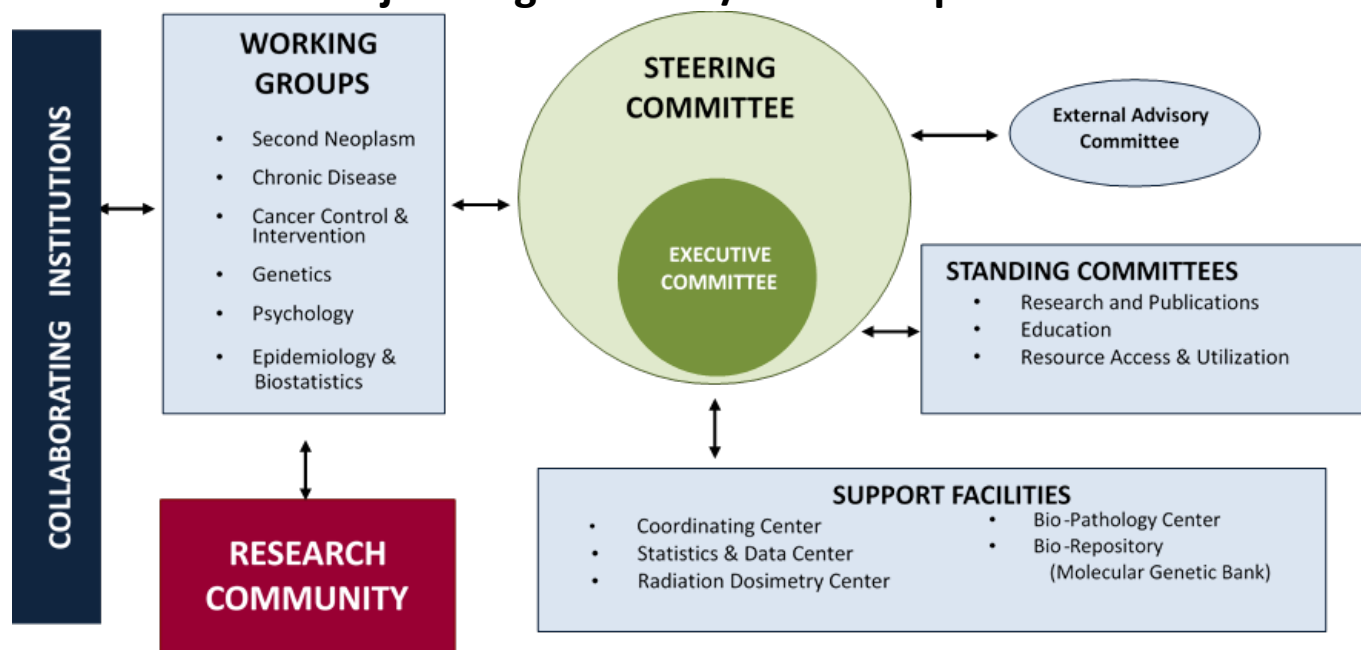
CCSS Institutions and Investigators

St. Jude Children’s Research Hospital, Memphis, TN		Greg Armstrong, MD, MSCE ^{##} , Melissa Hudson, MD ^{*+‡} , Leslie Robison, PhD [‡] , Daniel Green, MD [‡] , Kevin Krull, PhD [‡] , Aaron McDonald, PhD [‡] , Kiri Ness, PhD [‡] , Yutaka Yasui, PhD [‡]
Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL		Jennifer Reichek, MD, MSW [*]
Children’s Healthcare of Atlanta/Emory University, Atlanta, GA		Karen Effinger, MD, MS [*] , Ann Mertens, PhD [‡]
Children’s Hospitals and Clinics of Minnesota, Minneapolis, MN		Katharine Rae Lange, MD [*]
Children’s Hospital Colorado, Denver, CO		Brian Greffe, MD [*] , Michael Arnold, MD, PhD [‡]
Children’s Hospital Los Angeles, Los Angeles, CA		David Freyer, DO, MS [*]
Children’s Hospital of Orange County, Orange, CA		Lilibeth Torno, MD [*]
Children’s Hospital of Philadelphia, Philadelphia, PA		Jill Ginsberg, MD [*]
Children’s Hospital of Pittsburgh, Pittsburgh, PA		Jean Tersak, MD [*]
Children’s National Medical Center, Washington, DC		Jennifer Dean, MD [*]
Cincinnati Children’s Hospital Medical Center, Cincinnati, OH		Stella Davies, MD, PhD ^{*‡}
City of Hope Medical Center, Los Angeles, CA		Saro Armenian, DO, MPH ^{*‡}
Cook Children’s Medical Center, Ft. Worth, TX		Donald Beam, MD [*]
Dana-Farber Cancer Institute/Children’s Hospital, Boston, MA		Lisa Diller, MD ^{*‡}
Fred Hutchinson Cancer Research Center, Seattle, WA		Wendy Leisenring, ScD ^{*‡}
Hospital for Sick Children, Toronto, ON		Paul Nathan, MD ^{*‡}
Mayo Clinic, Rochester, MN		Carola Arndt, MD [*]
Memorial Sloan-Kettering Cancer Center, New York, NY		Danielle Friedman, MD [*] , Charles Sklar, MD [‡]
Miller Children’s Hospital, Long Beach, CA		Jerry Finklestein, MD [*]
National Cancer Institute, Bethesda, MD		Nita Seibel, MD [‡] , William Timmer, PhD [‡] , Lindsay Morton, PhD [‡]
Nationwide Children’s Hospital, Columbus, OH		Randy Olshefski, MD [*]
Riley Hospital for Children, Indianapolis, IN		Terry Vik, MD [*]
Roswell Park Cancer Institute, Buffalo, NY		Denise Rokitka, MD, MPH [*]
St. Louis Children’s Hospital, St. Louis, MO		Robert Hayashi, MD [*]
Seattle Children’s Hospital, Seattle, WA		Scott Baker, MD [*] , Eric Chow, MD, MPH [‡]
Stanford University School of Medicine, Stanford, CA		Sheri Spunt, MD, MBA [*]
Texas Children’s Hospital, Houston, TX		Zoann Dreyer, MD [*]
University of Alabama, Birmingham, AL		Kimberly Whelan, MD, MSPH [*] , Smita Bhatia, MD [‡]
University of California-Los Angeles, CA		Jacqueline Casillas, MD, MSHS [*]
University of California-San Francisco, CA		Robert Goldsby, MD [*]
University of Chicago, Chicago, IL		Tara Henderson, MD, MPH [*]
University of Michigan, Ann Arbor, MI		Raymond Hutchinson, MD [*]
University of Minnesota, Minneapolis, MN		Karim Sadak, MD, MPH, MSE [*] , Joseph Neglia, MD, MPH [‡]
UT-Southwestern Medical Center, Dallas, TX		Daniel Bowers, MD [*]
U.T.M.D. Anderson Cancer Center, Houston, TX		Louise Strong, MD [*] , Rebecca Howell, PhD [‡]
* Institutional Principal Investigator	# Principal Investigator + Co-Principal Investigator	‡ Member CCSS Steering Committee

CCSS External Advisory Committee

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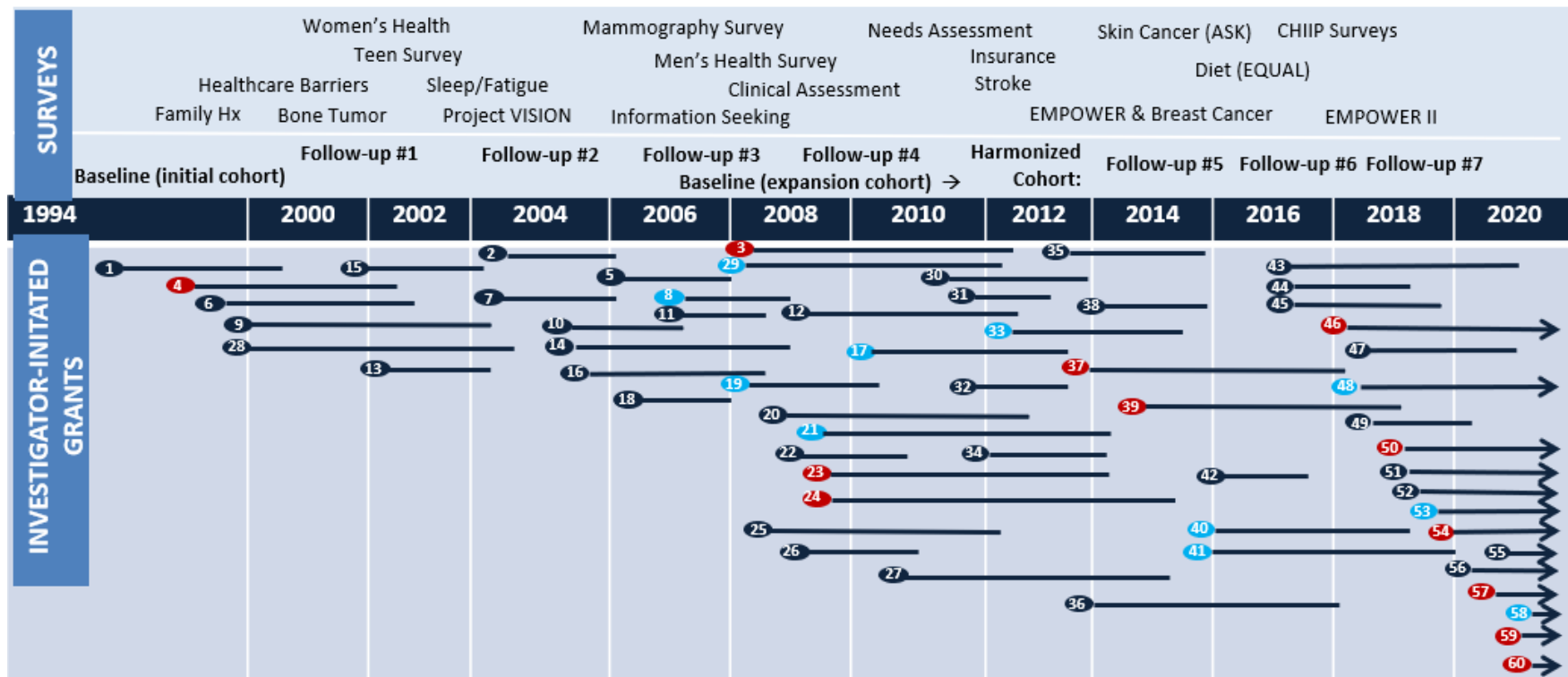
Project Organization/Leadership



ROLE	INVESTIGATOR
Study Principal Investigator	Greg Armstrong, MD, MSCE*
Study Co-Principal Investigator	Melissa Hudson, MD*
Project Director	Aaron McDonald, PhD*
<u>Working Group Chairs</u>	
Second Neoplasms	Joseph Neglia, MD, MPH*
Chronic Disease	Kevin Oeffinger, MD*/Eric Chow MD, MPH*
Cancer Control and Intervention	Paul Nathan, MD, MSC*
Genetics	Smita Bhatia, MD, MPH*
Psychology	Kevin Krull, PhD*
Epidemiology/Biostatistics	Yutaka Yasui, PhD*
<u>Standing Committee Chairs</u>	
Research and Publications Committee	Daniel Green, MD*
Education Committee	Melissa Hudson, MD*
Resource Access/Utilization Committee	Greg Armstrong, MD, MSCE*
<u>Support Facilities</u>	
Coordinating Center Director	Aaron McDonald, PhD*
Statistics & Data Support Facility Director	Wendy Leisenring, ScD*
Radiation Physics Support Facility Director	Rebecca Howell, MD*
Molecular Genetic Bank Support Facility Director	Stella Davies, MD, PhD
Bio-Pathology Center Support Facility Director	Mike Arnold, MD, PhD
<u>Steering Committee Members</u> (In addition to all listed above)	Saro Armenian, MD* John Boice, ScD Sandy Constine, MD Lisa Diller, MD Sarah Donaldson, MD Ann Mertens, PhD Lindsay Morton, PhD John Mulvihill, MD Kiri Ness, PhD* Les Robison, PhD* Nita Seibel, MD* Charles Sklar, MD* Louise Strong Bill Timmer, PhD Chris Weldon, MD, PhD Lonnie Zeltzer

*Executive Committee Member

Externally Funded Ancillary Studies



- 1 Safety/Efficacy of Growth Hormone Rx, Sklar, Genentech
- 2 Project VISION, Oeffinger, Lance Armstrong
- 3 **Randomized Trial** - Tobac. Quit Line, Klesges, NIH-R01
- 4 **Randomized Trial** - Smoking Cessation, Emmons, NIH-R01
- 5 Psychosocial, Behavioral, & Pain, Zeltzer, Lance Armstrong
- 6 Premature Menopause, Sklar, NIH-R01
- 7 Radiation Dosimetry, Mertens, Lance Armstrong
- 8 **Prognostic Genetic Biomarkers**, Onel, NIH -R21
- 9 Late Effects in Childhood AML, Nicholson, NIH-R01
- 10 Metabolic Syndrome, Gurney, NIH-R21
- 11 Testicular and Sexual Function, Meacham, Lance Armstrong
- 12 Neurobehavioral Outcome in Brain Tumors, Ris, NIH-R01
- 13 Adolescent Survivors, Mertens, American Cancer Assoc.
- 14 Health Outcomes in Hodgkin Lymphoma, Friedman, NIH-R01
- 15 Function/QOL in Bone Tumors, Nagarajan, ASCO, NCCF
- 16 Mammography in High Risk Survivors, Oeffinger, NIH-R21
- 17 **Genetic Susceptibility to Obesity**, Kamdar, Leukemia Lymph. Soc.
- 18 Radiation Dose/Risk for NMSC, Mertens, Lance Armstrong
- 19 **Genetic Predictors of Radiation Sensitivity**, Davies, NIH-U01
- 20 Health Beliefs and Behavior, Henderson, NIH-K07
- 21 **Susceptibility Alleles & DNA Damage**, Stambrook, NIH-R01
- 22 Uninsured survivors, Park, Lance Armstrong

- 23 **Randomized Trial** - Cardiovasc. Outcomes, Hudson/Cox, NIH-R01
- 24 **Randomized Trial** - Mammography Screening, Oeffinger, NIH-R01
- 25 Symptom Cluster Subgroups, Finnegan, NIH-R01
- 26 Needs Assessment, Cox, NIH-R21
- 27 Breast Cancer Prediction Model, Moskowitz, NIH-R01
- 28 Barriers to Healthcare, Oeffinger, Robert Wood Johnson
- 29 **RET/PTC in Thyroid Cancer**, Nikifurov, NIH-R01
- 30 CNS Tumors and Cognitive, Hardee, Onc. Nurse Society
- 31 Efficacy of Screening, Hodgson, POGO
- 32 Second Cancer Risk, Sivaloganathan, Canadian Inst. Health
- 33 **NF-1 and second cancer**, Nakamura, St. Baldricks Foundation
- 34 Diet in Survivors of ALL, Tonorezos, ACS Career Dev. Award
- 35 Insulin Resistance, Tonorezos, Am. Inst. For Cancer Research
- 36 Bone Deficits after BMT, Mostoufi-Moab, NIH-K0&
- 37 **Randomized Trial** - Skin Cancer Screening, Geller, NIH-R01
- 38 Astrocytoma Health Status, Effinger, ASCO Young Investigator
- 39 **Randomized Trial** - Diet & Insulin Resist., Tonorezos, NIH-R01
- 40 **Telomeres and Thyroid SMN**, Gramatages, NIH-R01
- 41 **Hyperactive RAS and SMN**, Bhatia, NIH-SPORE
- 42 Symptom Progress & Adverse Health Outcomes, Huang, R21

FUNDED DURING CURRENT AWARD PERIOD

- 43 Improving Screening Guidelines, Yeh, ACS
- 44 Methods for Recurrent Events, Zhu, NIH-R21
- 45 Prediction Modeling of Menopause, Yuan, Can. Inst. Research
- 46 **Randomized Trial**- Coordination w/ Primary Care (CHIP), Chow, NIH-R01
- 47 Cost Effectiveness Breast Cancer, Wong, ACS
- 48 **Genetic Prediction Models**, Yasui/Zhang, NIH-R01
- 49 Methods for Mixed Measures, Zhu, RO3
- 50 **Randomized Trial**- Breast Cancer Screening (EMPOWER II), Oeffinger, NIH-R01
- 51 Breast Cancer Risk International Pooling, Ronckers, Kika Foundation
- 52 Treatment for Breast Cancer, Turcotte, NIH-KO8
- 53 **Genetics to Guide Follow-up Care**, Yeh, NIH-R01
- 54 **Randomized Trial**- Health Insurance Navigation, Park, ACS
- 55 Metabolic Syndrome after TBI, Friedman, ACS
- 56 Survivor specific PRO-CTCAE, Huang/Baker, RO1
- 57 **Randomized Trial**- Intervention for Insomnia (SLEEPWELL), Brinkman/Krull, NIH-R01
- 58 **Methods for Genome Wide Data**, Zhu, RO3
- 59 **Randomized Trial**- Telehealth Delivery of Genetic Services (ENGAGE), Henderson/Bradbury, NIH-R01
- 60 **Randomized Trial** - Activating cancer Survivors and their Primary care providers to Increase colorectal cancer Screening (ASPIRE5), Henderson/Kim, NIH-R01

Main Characteristics of the Initial, Expansion, Overall and Sibling Cohort Participants

Characteristic [#]		Original Cohort ¹ (n=14,361)		Expansion Cohort ² (n=11,304)		Overall Cohort ³ (n=25,665)		Sibling Cohort (n=5,059)	
		N	(%)	N	(%)	N	(%)	N	(%)
Sex	Male	7714	(53.7)	6011	(53.4)*	13725	(53.6)*	2414	(47.7)
	Female	6647	(46.3)	5293	(46.6)	11940	(46.4)	2645	(52.3)
Race	White	13035	(90.8)	9191	(81.1)	22226	(85.8)	4558	(90.1)
	Black	713	(5.0)	991	(8.3)	1704	(6.7)	153	(3.0)
	American Indian / Alaska Native	89	(0.0)	66	(0.6)	155	(0.6)	23	(0.5)
	Asian or Pacific Islander	168	(1.2)	247	(2.4)	415	(1.8)	53	(1.0)
	Other	226	(1.6)	804	(7.5)	1030	(4.7)	92	(1.8)
	Unknown	130	(0.9)	5	(0.0)	135	(0.5)	180	(3.6)
Ethnicity	Hispanic	752	(5.2)	1293	(12.1)	2045	(8.8)	216	(4.3)
	Non-Hispanic	12961	(90.3)	9994	(87.8)	22955	(89.0)	4635	(91.6)
	Unknown	648	(4.5)	17	(0.1)	665	(2.2)	208	(4.2)
Age at cancer diagnosis	0-4 yrs	5751	(40.0)	4438	(45.1)	10189	(42.6)	-	
	5-9 yrs	3204	(22.3)	2581	(25.0)	5785	(23.7)	-	
	10-14 yrs	2915	(20.3)	2530	(18.1)	5445	(19.2)	-	
	15-20 yrs	2491	(17.3)	1753	(11.8)	4244	(14.5)	-	
Primary Cancer Diagnosis	ALL	4329	(30.1)	2286	(41.1)	6615	(35.8)	-	
	AML	356	(2.5)	571	(3.7)	927	(3.1)	-	
	Other leukemia	145	(1.0)	185	(1.2)	330	(1.1)	-	
	Astrocytoma	1182	(8.2)	1506	(9.8)	2688	(9.1)	-	
	Medulloblastoma/PNET	380	(2.6)	660	(4.3)	1040	(3.5)	-	
	Other CNS malignancy	311	(2.2)	450	(2.9)	761	(2.6)	-	
	Hodgkin lymphoma	1927	(13.4)	1180	(7.7)	3107	(10.5)	-	
	Non-Hodgkin lymphoma	1082	(7.5)	1034	(6.7)	2116	(7.1)	-	
	Kidney tumors	1258	(8.8)	1018	(6.6)	2276	(7.7)	-	
	Neuroblastoma	955	(6.6)	993	(6.5)	1948	(6.6)	-	
	Soft tissue sarcoma	1246	(8.7)	510	(3.3)	1756	(5.9)	-	
	Ewings sarcoma	405	(2.8)	335	(2.2)	740	(2.5)	-	
	Osteosarcoma	733	(5.1)	524	(3.4)	1257	(4.2)	-	
	Other bone malignancy	52	(0.4)	51	(0.3)	103	(0.3)	-	
Vital status at baseline	Alive	13186	(91.8)	10671	(95.0)	23857	(93.4)	5047	(99.8)
	Dead	1175	(8.2)	633	(5.0)	1808	(6.6)	12	(0.2)

Characteristic [#]		Original Cohort ¹ (n=14,361)		Expansion Cohort ² (n=11,304)		Overall Cohort ³ (n=25,665)		Sibling Cohort (n=5,059)	
		N	(%)	N	(%)	N	(%)	N	(%)
Treatment	Chemo + RT + Surgery	5046	(35.1)	3327	(23.7)	8373	(29.2)	-	
	Chemo + RT	1677	(11.7)	656	(8.4)	2333	(10.0)	-	
	Chemo + Surgery	2240	(15.6)	3256	(25.4)	5496	(20.7)	-	
	Chemo only	905	(6.3)	1714	(26.3)	2619	(16.6)	-	
	RT + Surgery	1504	(10.5)	504	(3.3)	2008	(6.8)	-	
	RT only	42	(0.3)	26	(0.2)	68	(0.2)	-	
	Surgery only	915	(6.4)	1247	(8.1)	2162	(7.3)	-	
	No treatment	29	(0.2)	48	(0.3)	77	(0.3)	-	
	Med. Rec. Not Available	2003	(13.9)	526	(4.3)	2529	(9.0)	-	
Current Age Among Those Alive (as of August 1, 2020)	<20	0	(0)	0	(0)	0	(0)	29	(0.6)
	20-29	0	(0)	2870	(30.8)	2870	(17.2)	289	(5.8)
	30-39	1743	(15.6)	5212	(51.9)	6955	(35.9)	1160	(23.4)
	40-49	5247	(46.9)	2206	(16.5)	7453	(29.9)	1694	(34.2)
	50-59	3521	(31.5)	105	(0.8)	3626	(14.3)	1328	(26.8)
	60+	680	(6.1)	0	(0)	680	(2.7)	453	(9.1)

¹20,687 eligible, ²17,349 eligible, ³38,036 eligible

[#]Percentages for individual characteristics calculated on total number of participants providing information for those characteristics

^{*}Percentages weighted to reflect modified sampling of ALL survivors in expansion cohort

RT = radiotherapy

Follow-Up Survey Participation (Survivors)

Questionnaire	Number of Pages	Presumed Eligible	Participation Rate	Non-Response	Refused Questionnaire	Dropout of Study	Lost to Follow-Up
Follow-Up 1	16	n = 12,884	81.0%	6.0%	2.0%	4.0%	7.0%
Follow-Up 2	24	n = 11,859	78.0%	8.0%	3.0%	5.0%	6.0%
Follow-Up 3	4	n = 11,393	78.0%	5.0%	1.0%	3.0%	13.0%
Follow-Up 4	28	n = 10,143	82.0%	9.0%	2.4%	1.6%	5.1%
Follow-Up 5	36	n = 18,041	66.0%	20.0%	1.7%	1.2%	11.1%
Follow-Up 6	8 – 16 ¹	n = 17,297	77.0%	14.0%	0.2%	0.7%	8.8%

¹ The three versions of the FU6 survey were 8, 12, and 16 pages. The return rates for each version were:

- 8 pages: 78% (n = 10,245)
- 12 pages: 77% (n = 5,426)
- 16 pages: 74% (n = 1,626)

Follow-Up 7 Survey Status (Ongoing)

Participants Invited

Survivors (N = 17,840)

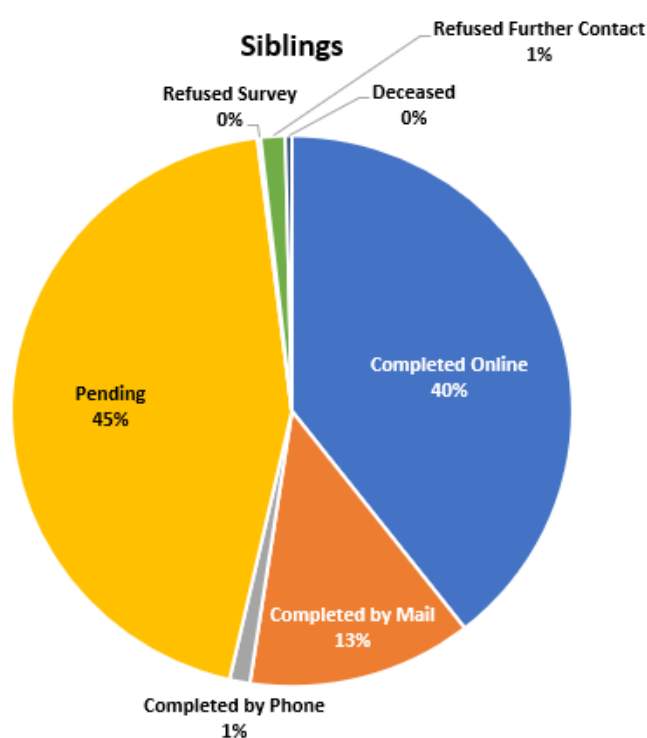
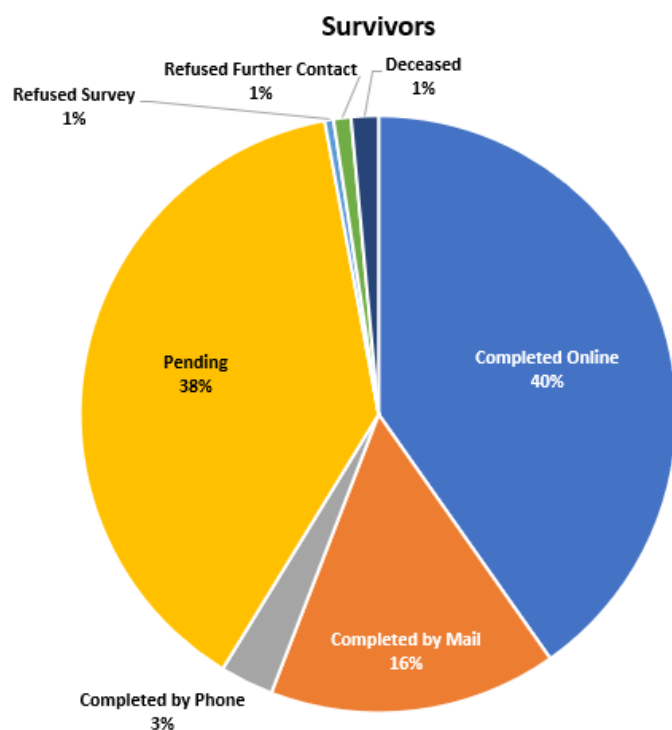
Siblings (N = 3,750)

	n	% of Invited	% of Completed
Total Completed	10,482	58.8%	
Completed Online	7,179	40.2%	68.5%
Completed by Mail/Paper	2,786	15.6%	26.6%
Completed by Phone	517	2.9%	4.9%
Pending	6,841	38.3%	
Refused Survey	85	0.5%	
Refused Further Contact	169	0.9%	
Deceased/Unavailable	263	1.5%	

	n	% of Invited	% of Completed
Total Completed	2,009	53.6%	
Completed Online	1,479	39.4%	73.6%
Completed by Mail/Paper	486	13.0%	24.2%
Completed by Phone	44	1.2%	2.2%
Pending	1,667	44.5%	
Refused Survey	7	0.2%	
Refused Further Contact	53	1.4%	
Deceased/Unavailable	14	0.4%	

Survey Period: 9/19 - Present

Survey Period: 1/20 - Present



Oragene DNA Kit Status Summary (Overall)

Kits Sent	Cases (n = 19,199)		Siblings (n = 4,002)	
	<i>n</i>	<i>% of Sent</i>	<i>n</i>	<i>% of Sent</i>
Returned	10,409	54.2%	1,643	41.1%
Refused	1,486	7.7%	325	8.1%
Pending	5,165	26.9%	1,408	35.2%
In Tracing	1,636	8.6%	581	14.5%
Deceased	503	2.6%	45	1.1%

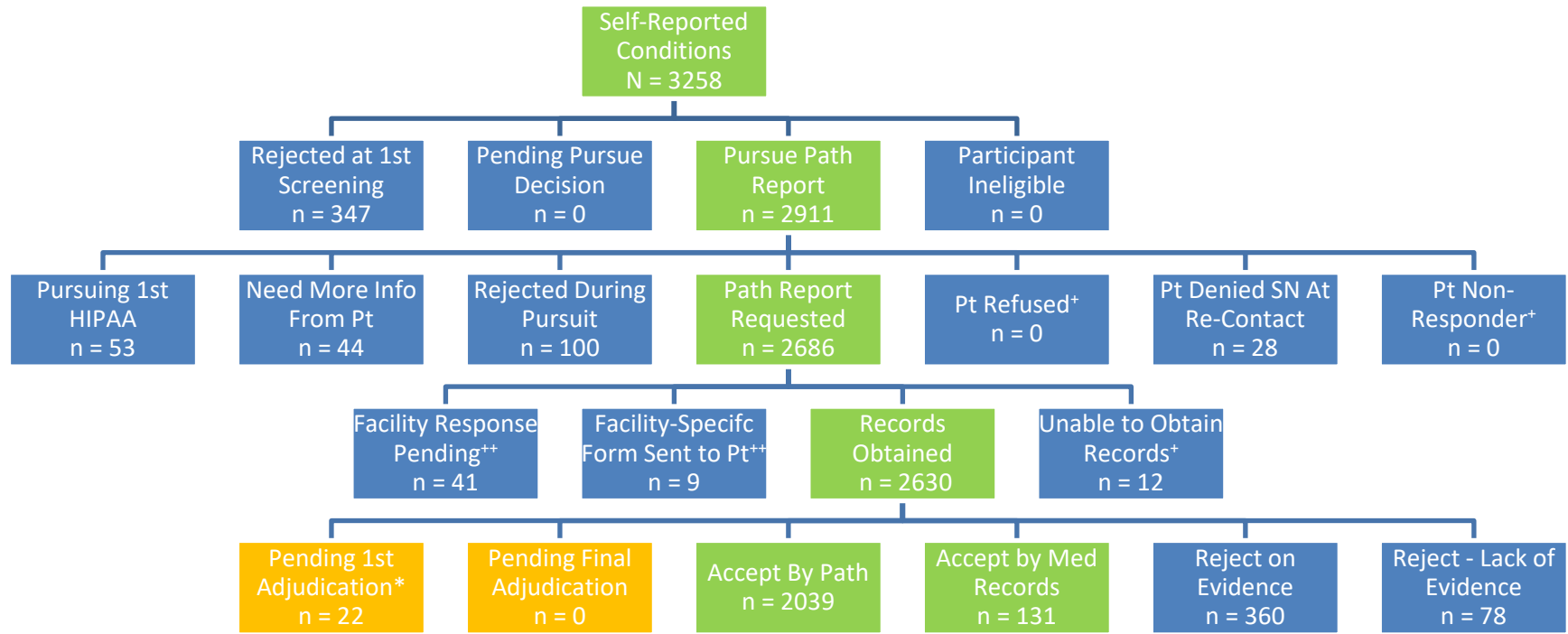
Oragene DNA Kit Status Summary by Cohort

Kits Sent	Original Cases (n = 9,566)		Original Siblings (n = 3,128)	
	<i>n</i>	<i>% of Sent</i>	<i>n</i>	<i>% of Sent</i>
Returned	5,278	55.2%	1,170	37.4%
Refused	987	10.3%	271	8.7%
Pending	2,195	22.9%	1,148	36.7%
In Tracing	720	7.5%	495	15.8%
Deceased	386	4.1%	44	1.4%

Kits Sent	Expansion Cases (n = 9,633)		Expansion Siblings (n = 874)	
	<i>n</i>	<i>% of Sent</i>	<i>n</i>	<i>% of Sent</i>
Returned	5,131	53.3%	473	54.1%
Refused	499	5.2%	54	6.2%
Pending	2,970	30.8%	260	29.7%
In Tracing	916	9.5%	86	9.8%
Deceased	117	1.2%	1	0.2%

Report Date: 6/2021

Follow-Up 6 Subsequent Neoplasm Confirmation Status Report



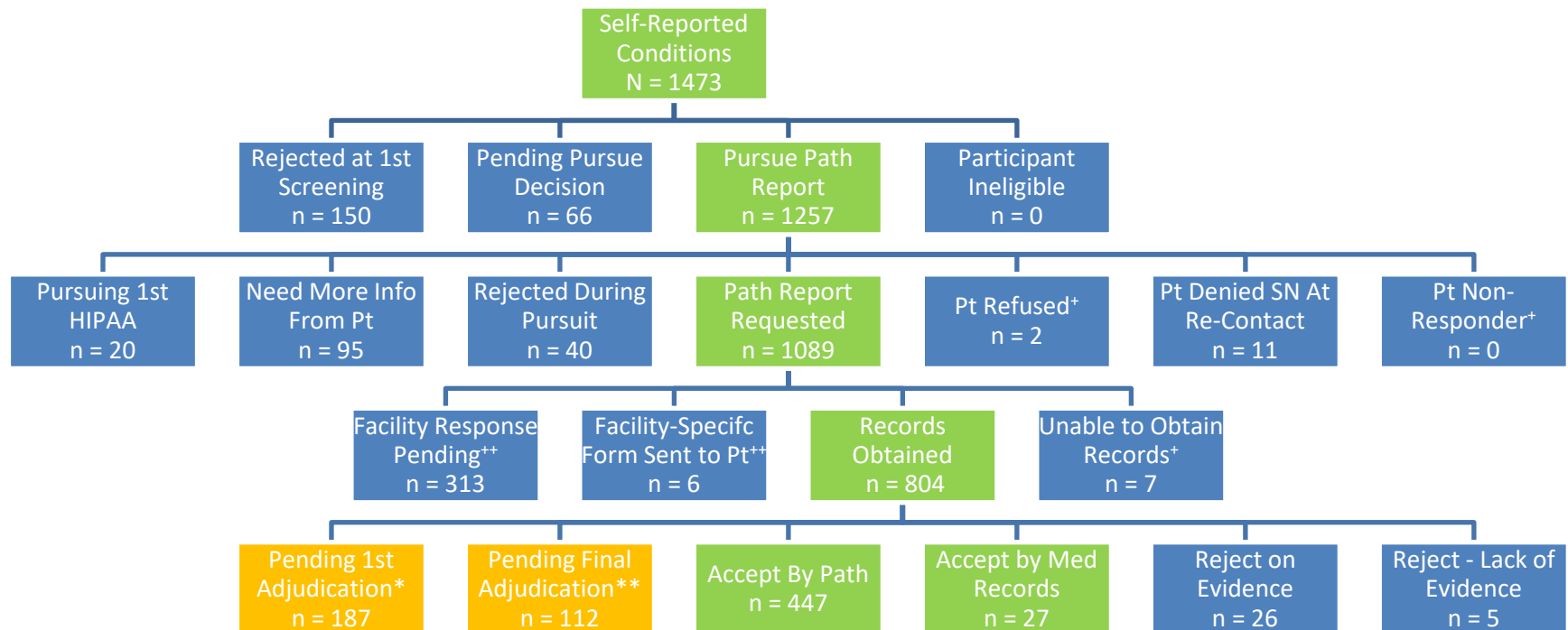
*There are 6 conditions that are ready to be reviewed but have not yet been sent to the CCSS pathologist.

*Nine conditions accepted by self-report.

**Note that multiple facilities may be pursued for a single reported condition.

Report Date: 6/2021

Follow-Up 7 Subsequent Neoplasm Confirmation Status Report (Ongoing)



*There are 15 conditions that are ready to be reviewed but have not yet been sent to the CCSS pathologist.

**There are 112 conditions that have been reviewed by the CCSS pathologist but have not yet been sent for final review.

+Conditions in this category will later be reviewed based on self-report. Numbers for rejected items will later move to the bottom row of the flowchart.

++Note that multiple facilities may be pursued for a single reported condition.

Report Date: 6/2021

Characteristics of Subsequent Neoplasms in CCSS

Subsequent Neoplasm	Total Cases Ascertained		Initial Cohort		Expansion Cohort		Ascertained during Current Grant Period	
	N	%	N	%	N	%	N	%
All Subsequent Neoplasms	9317	100.0	7252	100.0	2065	100.0	5647	100.0
Leukemia	86	0.9	60	0.8	26	1.3	22	0.4
ALL	19	0.2	16	0.2	3	0.1	4	0.1
AML	50	0.5	32	0.4	18	0.9	13	0.2
Other leukemia	17	0.2	12	0.2	5	0.2	5	0.1
Lymphoma	87	0.9	64	0.9	23	1.1	38	0.7
Hodgkin	21	0.2	15	0.2	6	0.3	5	0.1
Non-Hodgkin	65	0.7	48	0.7	17	0.8	33	0.6
Other lymphoma	1	0.0	1	0.0	0	0.0	0	0.0
CNS	919	9.9	723	10.0	196	9.5	541	9.6
Glial	145	1.6	85	1.2	60	2.9	54	1.0
Medullo/PNET	8	0.1	7	0.1	1	0.0	1	0.0
Meningioma	730	7.8	603	8.3	127	6.2	477	8.4
Other CNS	36	0.4	28	0.4	8	0.4	9	0.2
Solid Organ	1818	19.5	1369	18.9	449	21.7	816	14.5
Breast	668	7.2	547	7.5	121	5.9	284	5.0
Bone	66	0.7	50	0.7	16	0.8	12	0.2
Soft tissue sarcoma	220	2.4	159	2.2	61	3.0	78	1.4
Thyroid	389	4.2	247	3.4	142	6.9	184	3.3
Other solid organ	475	5.1	366	5.0	109	5.3	258	4.6
Skin	6003	64.4	4733	65.3	1270	61.5	3951	70.0
Melanoma	163	1.7	119	1.6	44	2.1	95	1.7
Non-melanoma Skin Cancer	5840	62.7	4614	63.6	1226	59.4	3856	68.3
Unspecified Cancer	404	4.3	303	4.2	101	4.9	279	4.9

*Restricted to subsequent neoplasm ≥ 5 years from primary cancer diagnosis; includes in-situ breast cancer and non-invasive melanoma

Report Date: 6/2021

**Biospecimen Repository by Primary Diagnosis:
Total Number of Cases with a Sample**

PRIMARY DIAGNOSIS	BUCCAL	SALIVA	BLOOD
Leukemia	1,897	3,220	1,066
CNS	704	1,704	287
Hodgkin lymphoma	753	1,332	546
Non-Hodgkin lymphoma	417	844	211
Kidney	545	975	188
Neuroblastoma	413	745	135
Soft tissue sarcoma	483	685	148
Bone cancer	444	817	266
Sibling Cohort	1,187	1,635	0
Total	6,843	11,957	2,847*

*includes only survivors with SMNs and survivors without SMNs who volunteered for blood draw

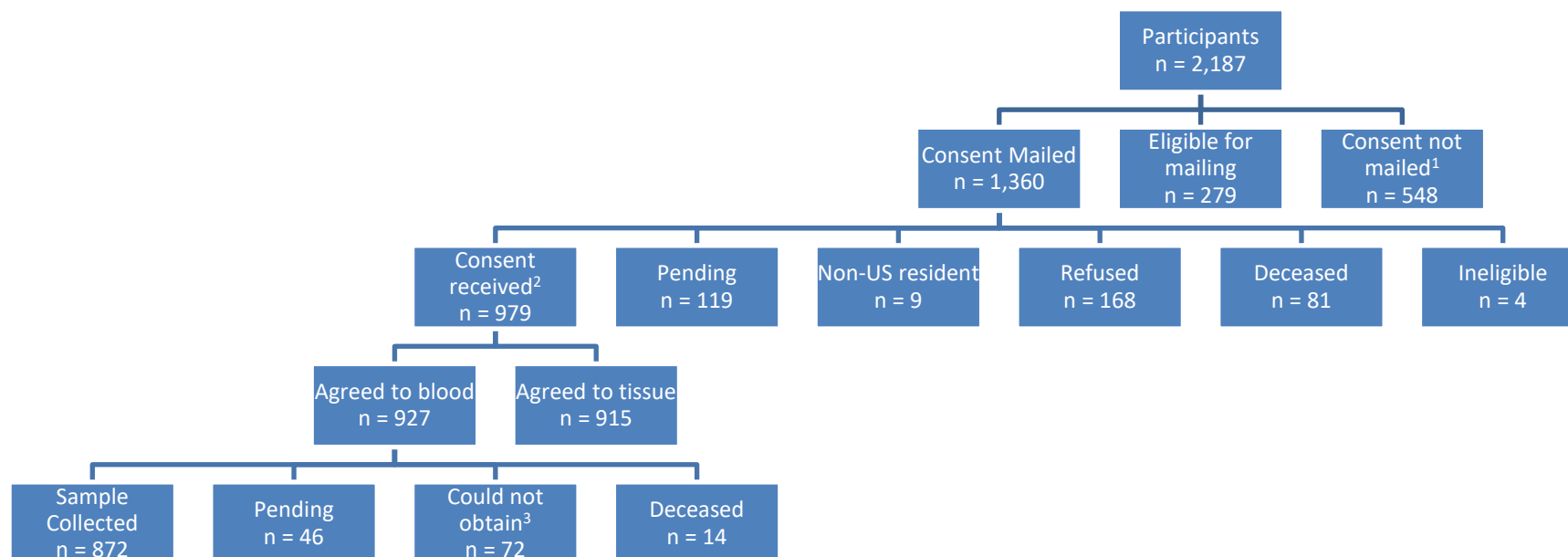
Characteristics of Biologic Material Available for Subsequent Malignant Neoplasm and Meningioma Cases

SMN	# with germline tissue			Germline Tissue (any kind) and Treatment Data	Total with SMN Tissue	Number of Cases with SMN Tissue by Type			
	Buccal Cells*	Saliva Oragene	Blood			H&E Slides	Unstained Slides	Scrolls	Blocks
Breast	309	375	312	473	243	214	124	52	80
Meningioma	357	484	310	555	120	112	65	20	51
Other CNS	43	42	26	60	27	26	13	2	6
Thyroid	135	242	198	282	124	114	86	38	37
Sarcoma	47	55	42	74	35	33	27	9	8
Leukemia	18	28	17	32	10	10	9	0	1
Bone	15	16	15	25	3	3	2	0	1
Melanoma	42	66	43	78	20	18	12	3	5
Lymphoma	28	42	30	52	14	13	7	3	4
Renal Cell	29	42	25	44	15	14	12	3	4
Other Carcinoma	158	211	135	244	102	98	49	13	49
All Other	48	40	28	65	15	12	9	3	2
TOTALS	1,229	1,643	1,181	1,984	728	667	415	146	248

SMN = Subsequent Malignant Neoplasm; CNS = Central Nervous System

*Collected using mouthwash kits

Blood/Tissue Consent and Blood Collection Status for Participants with a Confirmed SMN



¹ Reasons for consent not mailed:

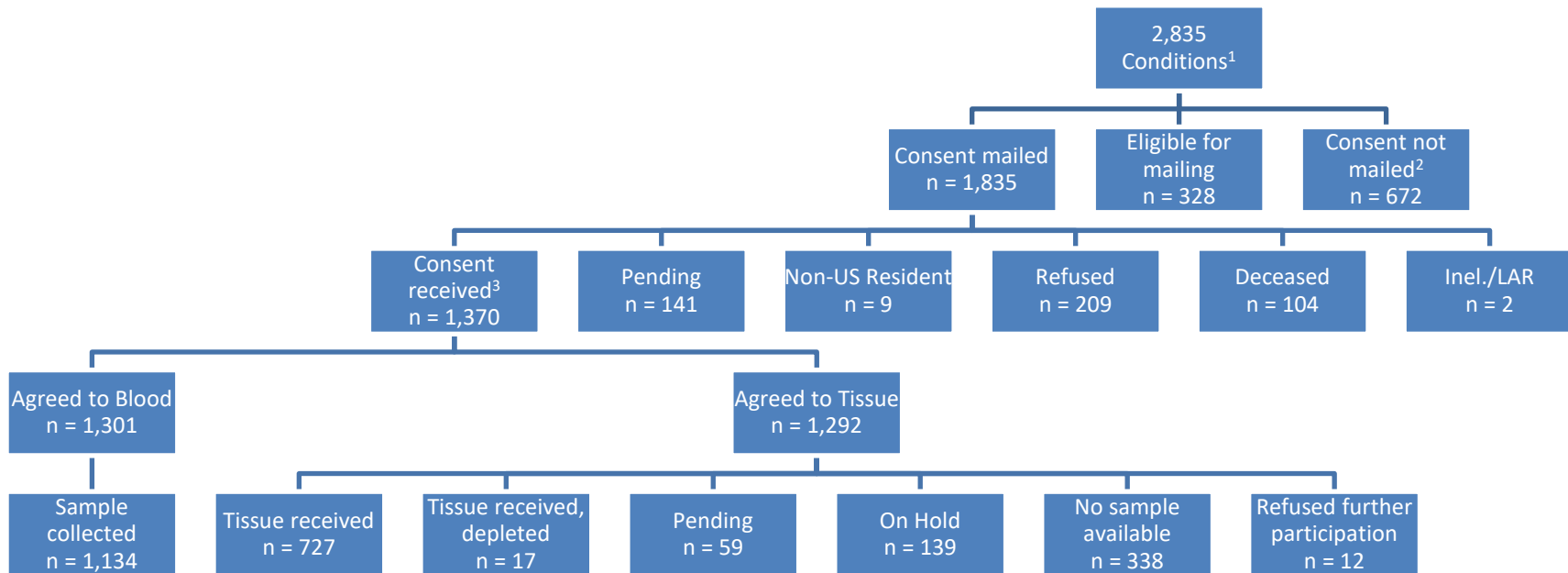
- Deceased = 442
- Canadian resident = 23
- LAR/not competent to consent = 50
- Lost to follow-up = 2
- Refused CCSS = 31

² Return rate is **71.9%** of consents mailed

³ Reasons sample could not be obtained:

- Unable to schedule/contact = 9
- Unable to draw blood = 27
- Non-US resident = 13
- Refused blood collection = 23

Tissue Collection Status for Confirmed SMN Conditions



¹ 2,187 participants

² Reasons for consent not mailed: 672

- Deceased = 470
- Non-US resident = 33
- LAR/not competent to consent = 92
- Lost to follow-up = 2
- Refused CCSS = 37
- Deceased, but have tissue sample with no consent = 38 (sample may be depleted for 1 condition)

³ Return rate is **74.6%** of consents mailed; **48.3%** of eligible conditions

2015 to 2021 RT Data Analyses Summary

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
Case control studies					
11-16	Second primary breast cancers among childhood cancer survivors: joint effects of treatment and host factors	Amy Berrington Gonzalez/ Lene Veiga (Original PI: Peter Inskip)	Original (females only)	Average dose to specific breast locations, average thyroid dose	Completed: breast 9/15; thyroid 3/16
Cohort studies					
11-20	Solid organ transplant in 5- year survivors of pediatric cancer	Amanda Termuhlen	Overall	Average doses for heart, kidney, lung; maximum TD to abdomen body region, prescribed TBI Dose	Completed 3/16
13-16	Comparison of radiation dose reconstruction methods for subsequent neoplasm studies.	Lindsay Morton	Original	Maximum TD for body regions, treatment field type(s) for each patient (requested 7/16)	Completed body region 12/13; other organs 12/14; field data 9/16
14-11	Analysis of Late Mortality by Treatment Era	Gregory Armstrong	Expanded	Maximum TD for body regions and CSI field/dose summary	Completed 3/15
15-02	Esophageal disease after childhood cancer therapy: Experience from three childhood cancer survivor cohorts.	Peter Asdahl	Original	Average dose for esophagus or maximum TD for chest, average doses for thyroid and heart	Completed: chest 3/15; thyroid 7/13; heart 1/12
15-05	Cyclophosphamide equivalent dosing and male health late effects – Infertility, erectile dysfunction, sexual function and testosterone replacement therapy in survivors diagnosed from 1970-1986: A report from the Childhood Cancer Survivor Study	Lillian Meacham	Original	Average dose for testes and pituitary	Completed 9/14

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
15-06	Exome sequencing to discover genetic variants that predispose childhood cancer survivors to the development of subsequent neoplasms.	Lindsay Morton	Original	Maximum TD for body regions, average doses for other organs and ABM for GWAS group	Completed: body region 12/13; other organs 12/14; ABM 2/14
15-07	Changes in long-term outcomes in Hodgkin lymphoma survivors with contemporary risk-adapted therapy	Kevin Oeffinger	Overall	Treatment summaries with treatment field types and maximum TD for body regions	Completed 10/15
15-08	Impact of radiation dose and volume to the pancreas on subsequent risk of diabetes mellitus in long-term survivors of childhood cancer treated with abdominal radiation: A report from the Childhood Cancer Survivor Study	Danielle Novetsky Friedman	Overall	Average dose for pancreas (entire, head, body, tail), V ₂₀ and V ₃₀ for whole pancreas	Completed 12/16
15-14	Burden of morbidity after basal cell carcinoma in childhood cancer survivors	Smita Bhatia	Original	Maximum TD for body regions	Completed 3/15
15-16	Human papillomavirus (HPV)-associated malignancies as second cancers in childhood cancer survivors: a report from the Childhood Cancer Survivor Study	Tara Henderson	Overall	Y/N for any RT	Y/N data provided by Statistics and Data Center
15-17	Risk for late effects of treatment in children newly diagnosed with mature B-cell non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study cohort	Matthew Ehrhardt	Overall	Y/N for any RT (possibly with cutoff using recurrence date); maximum TD for body regions	Completed 9/16 for maximum TD for body regions – 5-year cut-off; unable to provide doses from primary XRT only unless recurrence dates provided.

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-01	Cause-Specific mortality among childhood cancer survivors with a subsequent thyroid cancer	Dana Barnea	Overall	Average dose for right and left thyroid	Completed: expansion cohort 7/16; original cohort 7/13
16-02	Medulloblastoma and Primitive Neuroectodermal Tumor (PNET) outcomes across three decades of diagnosis	Ralph Salloum	Overall	Dose for CSI specified as: Y/N for brain, spine, TBI; Maximum TD for brain, brain four segments, spine, and TBI; Minimum CSI dose (min dose received by whole brain or spine)	Completed 9/16
16-03	Hospitalization and mortality due to Infection among survivors of childhood cancer with asplenia	Brent Weil	Overall	Average dose for upper left quadrant of abdomen (spleen surrogate)	Completed 12/16
16-04	Cognitive and behavioral outcomes in survivors of neuroblastoma	Daniel Zheng	Overall	Y/N for RT: any, cranial, TBI, and chest/neck	Completed 9/16
16-05	Long-term Incidence of venous thromboembolism among survivors of childhood cancer	Arin Madenci	Overall	Maximum TD for body regions	Completed 9/16
16-06	Psychosocial outcomes in adolescent survivors of Wilms tumor	Rebecca Foster	Overall	Y/N for RT: any, abdomen, and chest	Completed 9/16
16-07	The Impact of developmental status on radiation-associated late cardiac toxicities in long-term survivors of childhood cancer	James Bates	Overall	Average heart dose; Also of interest: V ₅ , V ₁₀ , V ₁₅ , V ₂₀ .	Completed: Average doses completed for original cohort 1/12; expanded cohort 1/16; V ₅ , V ₁₀ , V ₁₅ , V ₂₀ completed 12/16
16-08	Social adjustment in adolescent survivors of pediatric CNS tumors	Fiona Schulte	Overall	Maximum TD for brain and brain four segments	Completed 9/16
16-10	Secondary Cancers among NF1 cancer survivors	Smita Bhatia	Overall	Y/N for RT, maximum TD to body regions	Completed 9/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-11	Neurocognitive functioning in survivors of osteosarcoma	Nina Kadan-Lottick	Original	Y/N for RT, maximum TD to chest/neck	Completed 9/16
16-12	Prevalence and patterns of prescription psychoactive medication use in adolescent survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Yin Ting Cheung	Overall	Y/N for RT: any and cranial, maximum TD to Brain	Completed 9/16
16-13	Sleep behaviors and patterns and their relationship to health and mental health outcomes in adult survivors of childhood cancers	Lauren Daniel	Overall	Y/N for RT: any, cranial, and chest	Completed 9/16
16-14	Long-term incidence of anorectal complications among childhood cancer survivors	Christopher Weldon	Overall	Y/N for RT to abdomen and pelvis, maximum TD for abdomen and pelvis body regions	Completed 9/16
16-15	Incidence, predictors and impact of hearing impairment in long-term survivors of childhood cancer	Austin Brown	Overall	maximum TD for posterior fossa and temporal lobe brain segments (surrogate for cochlea)	Completed 9/16
16-16	Incidence of chronic disease among childhood cancer survivors by treatment era and temporal trends in treatment exposure	Todd Gibson	Overall	maximum TD for Body Regions, Y/N for RT: any, chest, abdominal, CSI, and/or pelvis	Completed 9/16
16-17	Psychological distress, functional dependence and neurologic morbidity among adult survivors of childhood cancer treated with CNS-directed therapies	Stephanie Vuotto	Overall	Cranial RT Y/N, maximum TD for brain and brain four segments	Completed 9/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
16-18	Incidence of cardiac outcomes by treatment era and temporal trends in treatment exposure in adult survivors of childhood cancer	Daniel Mulrooney	Expanded	Average dose to heart	Completed: Average doses completed 1/16 V ₅ , V ₁₀ , V ₁₅ , V ₂₀ completed 12/16
16-19	The Effects of neurofibromatosis type 1 on late outcomes in adult survivors of childhood cancer	Peter de Blank	Overall	Y/N for any RT	Y/N data will be provided by Statistics and Data Center
16-20	Psychological, behavioral, and educational outcomes in pediatric acute myeloid leukemia survivors	Kristen Stefanski	Overall (AML only)	Y/N for any RT, Max TD for cranial radiation, cranial and spine radiation, Total CSI radiation, and TBI dose	Data was provided in 9/16.
17-01	Exercise and late mortality in 5-year survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Lee Jones	Overall	Max TD for chest	Completed 12/16
17-02	Projections in trends in life expectancy and quality-adjusted life expectancy among childhood cancer survivors	Jennifer Yeh	Overall	Y/N for RT, maximum TD for body regions, TBI dose	Completed 12/16
17-04	Predictors of longitudinal pain in long-term survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Cynthia Karlson	Original	Y/N for any RT, Y/N for cranial RT, maximum TD for brain	Completed 12/16
17-05	Quantifying the individual absolute risk of premature ovarian failure in female survivors of childhood cancer	Yan Yuan	Overall (female)	Max TD for abdomen and pelvis body regions, and age at exposure, average dose to left ovaries and pituitary, TBI dose,	Max TD to abdomen and pelvis, and TBI dose completed 12/16 Ovary dose completed for original 5/14 and expansion 5/17 Average pituitary doses completed original (9/14) and expansion (10/17)

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-06	Subsequent neoplasms among survivors of childhood cancer not previously treated with radiation	Lucie Turcotte	Overall	Y/N for RT and maximum TD for body regions	Completed 12/16
17-07	Financial Toxicity in Survivors of Childhood Cancer and Their Siblings: A Proposal to Include a Financial Toxicity Instrument in the Follow-Up 6 Survey	Paul Nathan	Overall	Y/N for any RT	N/A
17-08	Cost-Effective Cardiomyopathy Surveillance Strategies in Childhood Cancer Survivors.	Matthew Ehrhardt	Overall	Average heart dose	Average doses completed for original cohort 1/12; expanded cohort 1/16
17-09	Adherence to Surveillance for Second Malignant Neoplasms and Cardiac Dysfunction in the CCSS Cohort.	Paul Nathan	Overall	Max TD for chest, abdomen, and pelvis body regions, spine and TBI dose; any radiation exposure to a field that includes the heart	Max TD to chest, abdomen, and pelvis, and spine TBI dose completed 12/16 Heart in-beam variable to be discussed with PI
17-10	Trends in Utility-based Health-related Quality of Life Among Childhood Cancer Survivors	Jennifer Yeh	Overall	Y/N for RT and Y/N for chest RT; if yes, chest dose	Y/N for chest RT and chest doses completed 12/16
17-11	Breast Cancer Risk in the Modern Treatment Era: A Report from the Childhood Cancer Survivor Study	Tara Henderson	Overall	Y/N for RT and Y/N for chest RT; if yes, chest dose. Type of chest field	Y/N for chest RT and chest doses completed 12/16. Field categories completed original for 01/18 and expansion 11/17
17-12	Physical activity as a predictor of neurocognitive outcomes in adult survivors of childhood cancer	Kim Edelstein	Overall	Chest body region dose and CSI dose	Data was provided in 9/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-13	Infertility, assisted reproductive technology utilization and pregnancy outcomes in childhood cancer survivor population: a CCSS and SART CORS data linkage study	Kimberly Keefe	Overall, female	Max TD for abdomen, pelvis, TBI dose, and averaged doses pituitary gland, ovaries (left and right).	Max TD for abdomen, pelvis, TBI dose completed 12/16. Average pituitary doses completed for original 9/14 and expansion 10/17 Ovary dose completed for original 5/14 and expansion 5/17
17-14	Racial/Ethnic Differences in Neurocognitive, Psychological and Quality of Life Outcomes in Adult Survivors of Childhood Cancers	Stephanie Dixon	Overall	Y/N Y/N for cranial RT and CSI dose	Completed 12/16
17-15	A Genome-Wide Association Study of Stroke and Myocardial Infarction among Long-term Survivors of Childhood Cancer	Daniel Bowers	Original	Max TD for brain, neck, and chest, average heart and pituitary doses	Max TD data completed 12/16. Average heart doses completed for original cohort 1/12 Average pituitary doses completed 9/14
17-16	Genetic Architecture of Diabetes Mellitus in Long-term Survivors of Childhood Cancer.	Nisha Rathore	Original	Y/N for RT, Y/N for brain, abdomen, and TBI, doses for brain, abdomen, and TBI Average pancreas dose will also be included in analysis	Completed 12/16
17-17	Chronic Pain in Adult Survivors of Childhood Cancer: Utilization of the Childhood Cancer Survivor Study mHealth Platform in Assessing Pain and Wearable Sensor Technology.	Nicole Alberts	Overall	Y/N for all body regions, maximum TD for body regions	Completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
17-18	Association between special education services, educational attainment, and chronic health conditions among long-term childhood cancer survivors.	Lisa Bashore	Overall	Y/N for brain; maximum TD for brain and brain four segments	Completed 12/16
17-19	Long-term Gallbladder and Biliary Disease in Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study.	Bryan Dieffenbach	Overall	Maximum TD for body regions, and TBI dose, Y/N Abdomen 4-segment	Completed 12/16 Abdomen 4-segment variable expected Q1 2019
17-20	GWAS of Childhood Cisplatin-induced Tinnitus and Meta-Analysis with Adult GWAS of Cisplatin-induced Tinnitus	M. Eileen Dolan	Overall	Max TD for brain	Completed 12/16
18-01	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma.	Caroline Hesko	Overall Neuroblastoma	Maximum TD for brain, chest, and pelvis	Completed 12/16
18-03	Temporal trends in late-onset morbidity and mortality in rhabdomyosarcoma survivors	Pooja Hingorani	Overall Rhabdomyosarcoma	Y/N for all body regions	Completed 12/16
18-04	Frailty in childhood cancer survivors.	Samah Hayek	Overall	Maximum TD for body regions	Completed 12/16
18-05	Genome-Wide Association Study (GWAS) of Late-occurring Intestinal Obstruction	Arin Madenci	Original	Maximum TD for body regions	Completed 12/16
18-06	Long-term Follow up of Survivors of Childhood Osteosarcoma: A Report from the Childhood Cancer Survivor Study (CCSS)	Kerri Beckett	Overall	Y/N for chest RT	Completed 12/16
18-07	Changes in long-term outcomes in neuroblastoma survivors treated with Contemporary therapies: A report from the Childhood Cancer Survivor Study	Danielle Novetsky Friedman	Overall Neuroblastoma	Y/N and max TD for brain, chest, and abdomen RT; TBI dose	Completed 12/16

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
18-09	Health care utilization by survivors of childhood cancer	Paul Nathan	Overall	Y/N for all body regions and TBI	Completed 12/16
18-11	The impact of chronic conditions on the psychosexual function of adult female survivors of childhood cancer	Kari Bjornard	Overall Female	Y/N and dose for brain, chest, abdomen, and pelvis body regions	Completed 12/16
18-12	Prevalence and predictors of loneliness in young adult survivors of childhood cancer	Ameera Fayad	Overall	Y/N and max TD for the brain	Completed 12/16
18-14	Long-term outcomes among survivors of childhood acute myeloid leukemia	Lucie Turcotte	Overall AML	Y/N and max TD for all body regions and TBI dose	Completed 12/16
18-15	Exercise and chronic health conditions and health care utilization in adult survivors of childhood cancer	Lee W. Jones	Overall	Y/N for RT, Y/N for chest, abdomen, or pelvis; RT, body region doses for chest	Completed 12/16
18-16	Long-term outcomes of survivors of childhood Acute Lymphoblastic Leukemia (ALL) across 30-years of treatment: a report from the Childhood Cancer Survivor Study	Stephanie Dixon	Overall ALL	Y/N for TBI and CSI, max TD for brain	Completed 12/16
18-18	Determinants of longitudinal health-related quality of life changes in adult survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Maritza Ruiz	Overall	Y/N for RT, Y/N for chest, abdomen, or pelvis	Completed 12/16
18-20	Incidence of and risk factors for late end stage renal disease in survivors of childhood cancer	Bryan Dieffenbach	Overall	Y/N for all body regions and TBI, and kidneys, maxTD for body regions, and average kidney dose (right and left)	Completed 12/16 except for kidney doses (expected 5/19)

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
19-01	Genome wide association study of modulators of pregnancy in long term survivors of pediatric cancer	Seth Rotz	Original	Y/N for all body regions	Completed 12/16
19-02	Genetic risk prediction profiles for fracture among childhood cancer survivors	Cindy Im	Original	Chest body region dose and CSI dose	Completed 12/16
19-03	Physical functioning and chronic health conditions in pediatric Acute Lymphoblastic Leukemia and Non-Hodgkin Lymphoma survivors treated with contemporary Therapy	Kari Bjornard	Overall ALL/NHL	brain body region dose and CSI dose	Completed 12/16
19-05	Genetic susceptibility to neurocognitive impairment secondary to childhood cancer treatment	Michael E. Scheurer	Original	Y/N and maxTD for all body regions	Completed 12/16
19-06	Peripheral motor and sensory neuropathy and associated outcomes in long-term survivors of childhood cancer	Rozalyn Rodwin	Overall	Y/N for RT, spine, and TBI; maxTD for brain	Completed 12/16
19-07	Thirty-five-year follow-up of childhood Wilms tumor: Impact of treatment era on long-term health outcomes	Brent Weil	Overall Wilms tumor	Y/N and dose flank RT, whole abdomen, and whole lung	In queue for summer 2019
19-08	Lung Cancer as a Subsequent Malignant Neoplasm in Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study	Taumoha Ghosh	Overall	Y/N and maxTD for chest RT; Type of chest field	Y/N and maxTD for chest completed 12/16. Field categories completed original for 01/18 and expansion 11/17

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
19-09	Outcomes of adult survivors of childhood astrocytoma and ependymoma across three decades of diagnosis and treatment, A Report from the Childhood Cancer Survivor Study	Peter de Blank	Overall astrocytoma and ependymoma	Y/N for RT and maxTD all body regions	Completed 12/16
19-10	Long-term burden of major surgical procedures in Survivors of childhood cancer: A report from the Childhood Cancer Survivor Study	Bryan Dieffenbach	Overall	Y/N for RT, and Y/N for brain, chest, abdomen, pelvis, and TBI	Completed 12/16
19-11	Predictors of neurocognitive and psychosocial outcomes in long-term survivors of Hodgkin Lymphoma: A report from the Childhood Cancer Survivor Study	AnnaLynn Williams	Hodgkin Lymphoma	maxTd for chest and neck	Completed 12/16
19-12	A genome-wide association study of hypertension in adult survivors of childhood cancer	Jeanne Pierzynski	Original	maxTD for brain, chest, abdomen, and pelvis	Completed 12/16
19-13	Neurocognitive functioning, emotional status and quality of life among Asian/Pacific Islander childhood cancer survivors	Satomi Sato	Overall (Asian/Pacific Islander descent)	maxTD brain, chest, abdomen, pelvis	Completed 12/2019
19-14	Temporal changes in therapy and neurocognitive outcomes, social attainment, and quality of life in adult survivors of pediatric brain tumors	Ingrid Tønning Olsson	Overall (with diagnosis of astrocytoma, medulloblastoma, ependymoma)	Y/N and dose for CSI, brain maxTD	Completed 12/2019
19-15	Temporal changes in unemployment of survivors of childhood cancer: A report from the Childhood Cancer Survivor Study (CCSS)	Neel Bhatt	Overall	Y/N CSI and dose, Y/N TBI	Completed 12/2019

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
19-16	Influence of radiotherapy dose to cardiac substructures on cardiac risk in long-term survivors of childhood cancer	James Bates	Overall	Average doses, V ₅ , V ₂₀ for whole heart, average doses for 13 heart substructures	Completed 08/2020
19-17	A genome-wide association study for frailty in adult survivors of childhood cancer	Melissa Richard	Original (European ancestry)	Y/N cranial RT, pelvis maxTD	Completed 12/2019
19-18	GWAS of cisplatin-induced, radiation-induced, and de novo hearing loss	M. Eileen Dolan	Overall	maxTD brain	Completed 12/2019
19-19	Genetic determinants of posttraumatic stress disorder in pediatric cancer survivors	Donghao Lu	Original	Y/N RT, TBI, and CSI	Completed 12/2019
19-20	Protein-altering variants (PAV) associated with BMI in the general population and their roles in survivors of childhood cancer	Yadav Sapkota	Original and Expansion (considered separately)	maxTD brain, chest, and pelvis	Completed 12/2019
19-21	Developing a clinical and genetic risk prediction model for diabetes mellitus among survivors of childhood cancer	Melissa Richard	Original	YN for RT, Y/N and maxTD for brain, abdomen, and pelvis, and TBI dose	Completed 12/2019
19-22	Cognitive aging in adult survivors of childhood cancer	Nicholas Phillips	Overall	maxTD for brain, neck, chest, abdomen, pelvis, age at cranial RT	Completed 12/2019
19-23	Development and validation of a prediction model for end-stage renal disease in childhood cancer survivors	Natalie Wu	Overall	maxTD for abdomen, average dose for kidneys (right and left)	maxTD for abdomen completed 12/2019; kidney doses completed 06/19
20-01	Risk factors for and outcomes of late amputation among survivors of childhood lower extremity sarcoma: a report from the Childhood Cancer Survivor Study	Erik Geiger	Overall (diagnosed with lower extremity bone or soft tissue sarcoma)	Y/N RT for extremity	Completed 12/2019

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
20-02	Disparities in cardiovascular outcomes among childhood cancer survivors	David Noyd	Overall	Average dose for heart	Completed 08/2019
20-04	Use and correlates of carotid ultrasound in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study	Emily Tonorezos	Overall	Y/N for cranium, neck, chest, and TBI, max TD for brain, neck, chest	Completed 12/2019
20-05	Genome-wide association to study dyslipidemia in adult survivors of childhood cancer	Vincent Pluimakers	Original	maxTD for brain and abdomen, TBI dose, average dose for pancreas	Completed 12/2019
20-09	Financial hardship in survivors of childhood cancer and their siblings: overview paper	Paul Nathan	Overall	Y/N RT, Y/N cranial RT	Completed 12/2019
20-10	Neurocognitive outcomes in survivors of early adolescent and young adult hematologic cancers	Amy Wang	Overall, Age ≥ 15 years at diagnosis	Y/N RT, Y/N and dose CSI, Y/N and maxTD chest, abdomen, pelvis	Completed 12/2019
20-11	Physical and psychological symptom profiles of survivors of childhood cancer and their siblings: links to health behaviors and health care utilization	Rachel Tillery	Overall	Maximum TD for body regions	Completed 12/2019
20-13	Risk and Risk Factors for Colorectal Cancers in Childhood Cancer Survivors: A Report from the Childhood Cancer Survivor Study	Constance Owens Tara Henderson Rebecca Howell	Overall	Colon average doses and dose volume metrics, colon substructure average doses	Organ model under development, dosimetry TBD
20-14	Overall and cardiac-specific survival following serious cardiovascular events in childhood cancer survivors	Eric Chow	Overall	Y/N RT, Y/N brain, neck, chest. Average doses, V5, V20 for heart, average dose substructures	Body region dosimetry completed 12/2019; Heart dosimetry completed 08/2020

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
20-15	The changing pattern of late mortality as survivors age and the impact of modifiable risk factors and markers of biologic and cognitive impairment on late mortality among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study	Stephanie Dixon	Overall	Y/N brain, neck, chest. TBI, CSI	Completed 12/2019
20-16	Late subsequent leukemia after childhood cancer	Lucie Turcotte	Overall	Maximum TD for body regions	Completed 12/2019
20-17	Long-term cost-effectiveness of cancer predisposition syndrome identification strategies in survivors of pediatric leukemia, brain tumors or bone/soft-tissue sarcomas	Catherine Goudie	Overall	Y/N RT, thyroid average dose (left and right lobes)	Thyroid completed 3/16. Note that the 4 new institutions are not included in this file, update in queue for 2021
20-18	Efficacy and cost-effectiveness of the Children's Oncology Group Long-term follow-up screening guidelines for childhood cancer survivors at risk of colorectal cancer	Van T. Nghiem	Overall	Y/N RT, Y/N and maxTD abdomen and pelvis	Completed 12/2019
20-19	Cardiometabolic Risk after Total Body Irradiation during Childhood: A Report from CCSS and CIBMTR	Danielle Friedman	Overall	Y/N TBI and TBI dose	Completed 12/2019
20-20	Progression of late medical effects and impact on financial hardship among adult survivors of childhood cancer: A Report from the Childhood Cancer Survivor Study	I-Chan Huang	Overall	Maximum TD for body regions	Completed 12/2019
20-21	Body mass index and risk of subsequent neoplasms	Lenat Joffe	Overall	Maximum TD for body regions	Completed 12/2019

Concept #	Study Title	Study PI	Cohort	Dosimetry Data Required	Dosimetry Status
20-22	Longitudinal changes in functional independence in aging adult survivors of pediatric brain tumors	Katharine Rae Lange	Overall	Maximum TD for brain, brain four segments, and CSI dose	Completed 12/2019
20-23	Predicting risk for serious chronic health conditions among female survivors in the Childhood Cancer Survivor Study	Michaela Dinan	Overall	Maximum TD for body regions	Completed 12/2019
20-24	Risk prediction of menopause-related phenotypes in childhood cancer survivors using polygenic risk scores and clinical predictors	Lin Yu	Overall	Y/N RT, Y/N (and dose) TBI, abdomen and pelvis, average dose to pituitary and ovaries	Body region dosimetry dose completed 12/2019. Ovary dose completed for original 5/14 and expansion 5/17. Ovary update in progress; Average pituitary doses completed original (9/14) and expansion (10/17)
20-25	Does sex mediate the association between treatment exposures and functional outcomes?	Rachel Peterson	Overall	Maximum TD for body regions	Completed 12/2019
20-26	Mortality due to colorectal cancer among survivors of childhood cancer	Ajay Major	Overall	Maximum TD for body regions, TBI dose, spine dose	Completed 12/2019
21-03	Late complications based on local control modalities for childhood pelvic sarcoma	Andrew Murphy	Overall	Y/N RT, Y/N and maxTD for pelvis	Completed 12/2019

Abbreviations: tumor dose (TD), radiation therapy (RT), cranial spinal irradiation (CSI)

Dosimetry Update Notes:

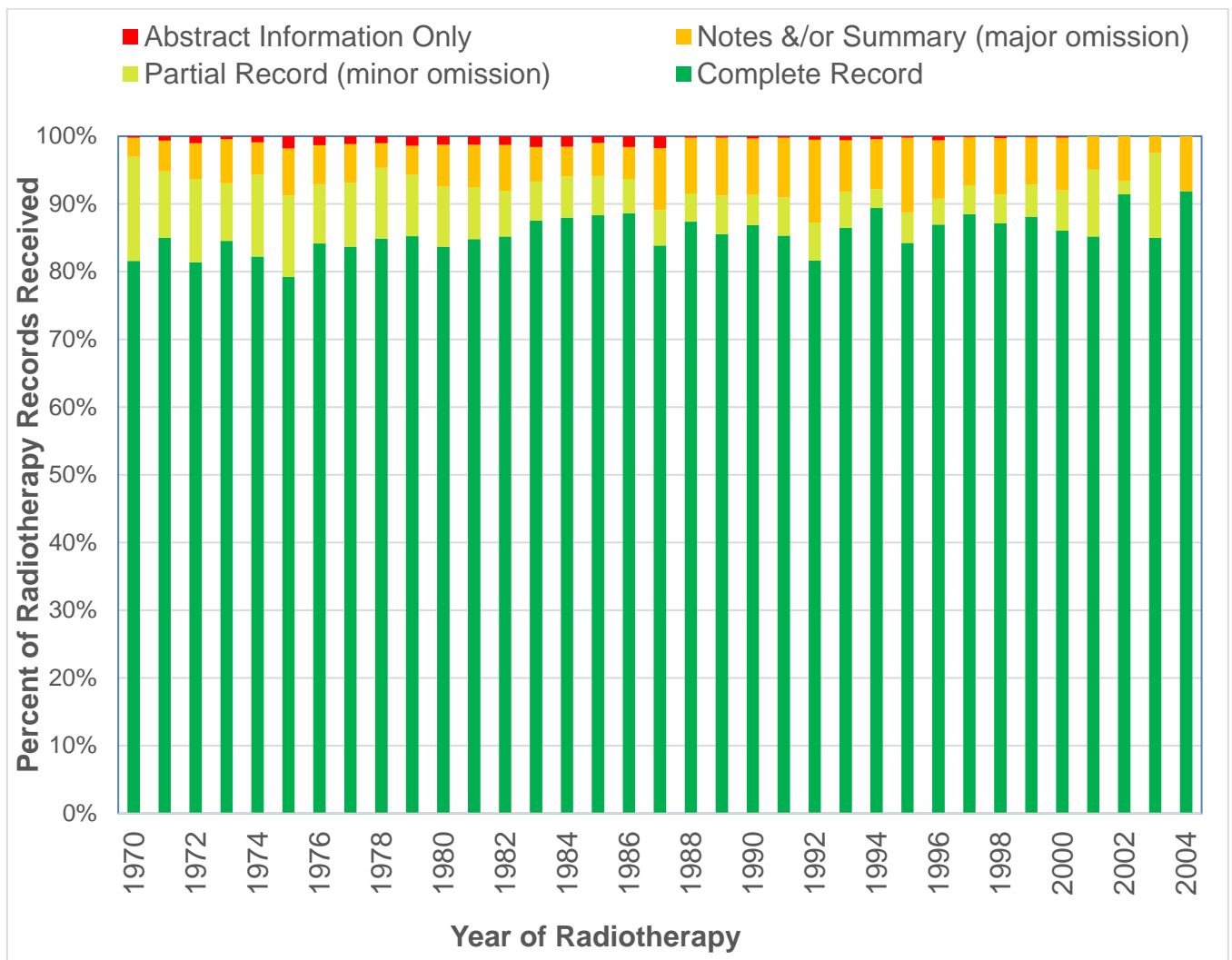
- An updated Body Region Dosimetry file submitted to statistical center 12/2019 and supersedes the 12/2016 file for all new analysis.
- An updated Heart Dosimetry file with whole heart and 13 substructures was submitted to statistical center in 08/20 and supersedes the 12/16 file for all new analysis.

Radiation Therapy Record Status as of June 2021:

Original (diagnosed 1970-1986) & Expanded Cohorts (diagnosed 1987-1999)

INSTITUTION (#)	Records received		Records processed		Body Region Dosimetry Status	
	Original	Expanded	Original	Expanded	Original	Expanded
Cohort						
Children's Hospital at Stanford University (04)	386	144	386	144	Complete	Ongoing
Nationwide Children's Hospital (16)	391	173	391	173	Complete	Complete
Children's Hospital of Los Angeles (22)	279	173	279	173	Complete	Complete
Children's Hospital of Philadelphia (20)	492	355	492	355	Complete	Complete
Children's Hospital of Pittsburgh (03)	387	254	387	254	Complete	Complete
Children's National Medical Center (07)	113	9	113	9	Complete	Complete
City of Hope (29)	-	55	-	55	-	Complete
Dana-Farber Cancer Institute (05)	428	240	428	240	Complete	Complete
Emory University (06)	69	226	69	226	Complete	Complete
Mayo Clinic (18)	299	-	299	-	Complete	-
Memorial Sloan-Kettering Cancer Center (09)	377	214	377	214	Complete	Complete
Minneapolis Children's Medical Center (19)	145	183	145	183	Complete	Complete
Riley Hospital for Children, IN University (24)	209	189	209	189	Complete	Complete
Roswell Park Cancer Institute (17)	221	96	221	96	Complete	Complete
Seattle Children's Hospital (12)	274	267	274	267	Complete	Complete
St. Jude Children's Research Hospital (15)	979	939	979	939	Complete	Complete
St. Louis Children's Hospital (21)	228	132	228	132	Complete	Complete
Texas Children's (Baylor) (10) (28)	220	104	220	104	Complete	Complete
Children's Hospital Colorado (02)	377	180	377	180	Complete	Complete
Toronto Hospital for Sick Children (13)	697	-	697	-	Complete	-
U.T.M.D. Anderson Cancer Center (08)	408	196	408	194	Complete	Ongoing
UAB/The Children's Hospital of Alabama (25)	97	91	97	91	Complete	Complete
UCLA Mattel Children's Hospital (23)	250	21	250	21	Complete	Complete
University of California at San Francisco (11)	236	109	236	108	Complete	Ongoing
University of Michigan - Mott Children's Hospital (26)	431	212	431	212	Complete	Complete
University of Minnesota (01)	370	84	370	84	Complete	Complete
UT - Southwestern Medical Center (27)	147	175	147	175	Complete	Complete
Children's Hospital of Orange County (30)	-	86	-	83	-	Ongoing
University of Chicago Comer Children's (31)	-	88	-	87	-	Ongoing
Lurie Children's Hospital of Chicago (32)	-	134	-	133	-	Ongoing
Cook Children's Medical Center (33)	-	94	-	94	-	Ongoing
Total by cohort	8510	5223	8510 (100%)	5215 (99.7%)	8510 (100%)	4879 (94%)
Combined Total	13733		13725 (99.9%)		13389 (94.1%)	

CCSS Overall Cohort: Score for Radiotherapy Information Received



Summary of RT Data Analysis Completed Prior to 2015

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
Case control studies				
CNS SMNs	<i>Neglia</i>	452	Dose to specific tumor locations	Complete Sept 2003
Thyroid SMNs	<i>Sigurdson</i>	293	Dose to thyroid and pituitary.	Complete Mar 2003
Breast SMNs	<i>Inskip</i>	463	Dose to specific breast locations	Complete Jul 2005
Pregnancy Outcomes	<i>Boice</i>	2100	Dose to gonads, uterus, pituitary	Complete Jul 2004
Bone/ Soft Tissue SMNs	<i>Henderson</i>	438	Dose to specific tumor locations	Complete Apr 2007
Non-melanoma Skin Ca	<i>Mertens</i>	612	Dose to specific tumor locations	Complete Apr 2010
Renal carcinoma	<i>Wilson / Ness</i>	~8500	Average kidney doses (left and right reported separately)	Complete Aug 2011
Cohort studies				
Thyroid Function	<i>Sklar</i>	1415	Dose to thyroid	Complete Mar 1999
Obesity	<i>Oeffinger</i>	3931	Brain dose in 500 cGy categories	Complete Nov 2000
CNS Non-Neurological Outcomes	<i>Gurney</i>	1219	Dose categories for brain, spine, thyroid, ovaries	Complete Oct 2001
CNS Neurological Outcomes	<i>Packer</i>	1219	Dose to 4 regions of brain	Complete Oct 2001
CNS Psychological	<i>Zebrack & Turk</i>	1219	Dose to 4 regions of the brain	Complete Aug 2002
Pregnancy Outcomes	<i>Green</i>	1327	Pituitary dose categories: females	Complete Sept 2002
Growth Hormone	<i>Sklar</i>	176	Dose for pituitary and direct spine	Complete Sept 2002
Premature Menopause	<i>Sklar</i>	1565	Pituitary, uterus and ovaries.	Complete Mar 2003
Stroke	<i>Oeffinger</i>	8583	Dose to 4 brain regions	Complete Dec 2003
Low birth weight and premature births	<i>Boice</i>	728	Proximity of gonads to treatment field	Complete Jun 2004
Ovarian Failure	<i>Sklar</i>	203	Dose to ovaries, uterus & pituitary	Complete Aug 2004
Wilms	<i>Breslow</i>	678	Dose to chest, abdomen, pelvis	Complete Jan 2004
Growth hormone use and meningiomas	<i>Sklar</i>	~8500	Maximum dose to any part of the brain	Complete Jul 2005
Pulmonary Function	<i>Mertens</i>	~8500	First-pass regions treated	Complete 2005
Osteoporosis and avascular necrosis	<i>Kadan-Lottick</i>	~8500	Dose to gonads and pituitary and maximum brain dose	Complete Dec 2005
Fertility among survivors	<i>Green</i>	5624	Dose to gonads and pituitary	Complete Oct 2005, Jan 2006, Sept 2007
Bone Marrow Transplant	<i>Baker/ Chow</i>	379	Dose to cranium	Complete Mar 2006
Dental Outcomes	<i>Kaste</i>	5632	Total average dose to the teeth	Complete Nov 2006
Thyroid exposure /ALL patients	<i>Chow</i>	2389	Dose to thyroid and pituitary	Complete Feb 2007
Stillbirth and neonatal death	<i>Boice / Signorello</i>	2805	Dose to ovaries, uterus, testes, pituitary	Complete Jun 2006
Menarche timing	<i>Armstrong</i>	299	Dose to ovaries and pituitary	Complete Feb 2007
Hodgkin Disease Outcomes	<i>Castellino</i>	1551	Dose range to body regions	Complete Jun 2007
Carotid Artery Dose	<i>Ness/Gurney</i>	50	Dose to the carotid artery	Complete Jul 2007

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
Thyroid exposure /entire cohort	<i>Bhatti / Sigurdson</i>	8494	Dose to thyroid	Complete Nov 2007
BRIEF neuro-psych outcomes	<i>Ness</i>	~8500	Dose to 4 brain regions	Complete Nov 2007
Cardiac outcomes	<i>Mulrooney</i>	~8500	Average dose to heart	Complete Feb 2008
Cataract cohort	<i>Chodick / Inskip</i>	~8500	Dose to lens	Complete Feb 2008
Visual complications	<i>Mertens / Whelan</i>	~8500	Dose to eye and brain	Complete Feb 2008
Breast screening	<i>Oeffinger</i>	3913	Yes/No and body region treated	Complete Feb 2008
Pain	<i>Ness</i>	~8300	Body sites, dose to 4 brain regions	Complete Apr 2008
Salivary gland tumors	<i>Inskip</i>	~8500	Dose to salivary glands or sites of treatment	Complete May 2008
Psychosexual outcomes/ females	<i>Sklar</i>	1412	Dose to ovaries and pituitary	Complete Feb 2009
Wilms Tumor long term follow-up	<i>Termuhlen</i>	717	Dose to heart and kidneys	Complete Oct 2009
TBI/BMT Leukemia Cohort	<i>Baker/ Chow</i>	2722	Dose to thyroid, gonads, brain, spine	Complete Jan 2010
Obesity	<i>Green</i>	5632	Pituitary	Complete Jan 2010
Fertility	<i>Green</i>	4023	Ovaries and pituitary	Complete Jan 2010
GI second cancers	<i>Henderson</i>	46	SMN site in/near/out treatment field	Complete Jan 2010
ECHOS	<i>Cox / Hudson</i>	883	Treatment dose and body region	Complete Jun 2010
Pregnancies during treatment	<i>Mulvihill</i>	16	Therapy records	Complete Sept 2010
GU complications	<i>Shnorhavorian / Sklar</i>	8507	Dose to kidneys, ureters, bladder	Complete Dec 2010
Stroke – first and recurrent	<i>Fullerton / Mueller</i>	8633	Maximum dose to brain – existing dosimetry CNS, HD, Leukemia	Complete Dec 2010
Functional Outcomes	<i>Ness / Marina</i>	1094	Maximum dose to limb, pelvis, chest	Complete Feb 2011
Pulmonary complications	<i>Huang</i>	1876	Average dose to heart and lungs for CNS patients	Complete Apr 2011
Cranial Radiation	<i>Brinkman</i>	6875	Maximum TD by brain region	Complete May 2011
Oocyte radiosensitivity	<i>Hamish</i>	4324	Dose to ovaries	Complete Mar 2011
CNS Longitudinal Patterns of Late Effects	<i>Hardie</i>	923	Maximum TD by brain region	Complete Oct 2011
Longitudinal Changes in Health Status	<i>Hudson / Oeffinger</i>	8507	Used existing maximum TD by region	Complete Feb 2011
Male Infertility	<i>Seidel</i>	7717	Dose to testes and pituitary	Complete Mar 2011
Obesity among ALL survivors	<i>Kamdar</i>	1215	Maximum TD to spine and brain regions	Complete Nov 2011
Cardiac Outcomes – Risk model	<i>Chow</i>	8507	Maximum TD to chest and abdomen, heart average	Complete Jan 2012
BCC SMN – Genetic Risk	<i>Davies</i>	1282	Maximum TD by body region and brain region	Complete Nov 2012

Study (Proposal #)	Study PI	Number exposed to RT or in study	Dosimetry required	Dosimetry status
NCI-GWA SMN risk	<i>Morton</i>	8507	Maximum TD by body region and brain region + specific organs and ABM for GWAS group	Complete - Body region dosimetry Dec 2013; other organs Dec 2014, ABM for GWAS subgroup Feb 2014
NCI-GWA – methods (13-16)	<i>Morton</i>	8507	Comparison of radiation dose reconstruction methods for SMN studies	Complete - Body region dosimetry Dec 2013; other organs Dec 2014
Lifestyle factors and pregnancy outcomes	<i>Gawade</i>	3567	Females. Ovary, uterus and pituitary dose previous run.	Complete Oct 2012
HL-Health Status	<i>Effinger</i>	1675	Maximum TD by body region-update	Complete Nov2012
Ewings – Longitudinal (12-09)	<i>Marina</i>	575	Maximum TD by body region	Complete Jul 2013
Exercise	<i>Jones</i>	14370	Maximum TD by body region	Complete Aug 2013
Intestinal obstruction (13-07)	<i>Mandenci</i>	14370	Maximum TD by body region	Complete Aug 2013
STS chronic disease (13-04)	<i>Mueller</i>	1726	Maximum TD by body region	Complete Oct 2013
Pulmonary (13-11)	<i>Dietz</i>	12846	Maximum TD by body region +lung dose	Complete Mar 2014
Testicular SMN	<i>Oeffinger</i>	14370	Maximum TD by body region + testes dose and testes proximity to nearest treatment field	Complete Dec 2013
Disease Burden (14-03)	<i>Yeh</i>	14364	Maximum TD by body region +heart dose	Complete Mar 2014
Alcohol consumption (13-20)	<i>Brinkman</i>	3806	Maximum TD to brain segments + TBI	Complete Apr 2014
Cost Effectiveness of COG LTFU screening guidelines for breast (12-14)	<i>Wong</i>	6645 (females)	Maximum TD to the chest, pelvis, TBI dose, Mantle Y/N, typical breast quadrant for patients with mantle treatments	Complete Aug 2014
Endocrine (14-02)	<i>Mostoufi-Moab</i>	14290	Maximum TD to body regions + thyroid, pituitary and gonads	Complete Sept 2014

Applications of Intent (AOI) to Conduct Research

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
CANCER CONTROL AND INTERVENTION						
05.21.08	The Influence of Geographical Proximity to a Cancer Center on Risk Based Care among Childhood Cancer Survivors	Caplin/Utah Oeffinger/MSKCC		06.10.08	Approved	Approved
05.27.08	Longitudinal Changes in Health Status	Hudson/SJCRH	Chronic Disease Psychology	07.16.08	Approved	Approved
06.02.08	Risk-Based Health Evaluation of CCSS Participants (CPIR)	Green/SJCRH	Chronic Disease	07.16.08	Approved	Approved
06.05.08	A Comparison of Functional Outcomes between Sarcoma Survivors with Surgery or Radiation As Their Local Control	Marina/Stanford	Chronic Disease	07.16.08	Approved	Approved
06.05.08	Physical Activity in Lower Extremity Sarcoma Survivors with Amputation	Ness/SJCRH	Chronic Disease	07.16.08	Approved	Approved
06.05.08	A Comparison of Functional Outcomes between UE and LE Sarcoma Survivors	Marina/Stanford	Chronic Disease	07.16.08	Approved	Approved
06.05.08	Neurocognitive Problems and Health Behavior Outcomes	Krull/SJCRH	Psychology	07.16.08	Approved	Approved
06.18.08	Understanding Health Care Utilization Patterns and Changes Occurring over a Decade: A Report from the Childhood Cancer Survivor Study	Casillas/UCLA		07.16.08	Approved	Approved
10.14.08	Investigating the Needs of Childhood Cancer Survivors: Understanding Residual Treatment Effects (INSURE) (Ancillary Study)	Cox/SJCRH	Chronic Disease	11.12.08	Approved	Approved
04.07.09	Predictors of Smokeless Tobacco Use among Survivors of Childhood Cancer	Klosky/SJCRH		05.12.09	Approved	Approved
06.21.09	Mental Health and Tobacco Use Among Childhood Cancer Survivors: A Longitudinal Analysis	Lown/Alcohol Research Group	Psychology	07.10.09	Approved	Approved
08.06.09	Identifying Intervention Targets to Increase Mammography Screening among At-Risk Childhood Cancer Survivors	Cox/SJCRH	SMN	09.09.09	Approved	Approved
11.13.09	Prevalence and Predictors of Smoking Cessation in Childhood Cancer Survivors	Gibson/SJCRH		12.22.09	Approved	Approved
02.12.10	Mental Health, Tobacco & Alcohol Use in Survivors and Siblings (Ancillary Study)	Lown/Alcohol Research Group		03.03.10	Approved	Not Funded
03.08.10	Determinants of Employment	Stone/UCLA			Withdrawn due to overlap	_____
06.10.10	Longitudinal Assessment of Physical Activity	Ness/SJCRH	Chronic Disease Psychology	06.25.10	Approved	Approved
03.16.11	Diet and Insulin Resistance in Survivors of Childhood Leukemia	Tonorezos/Sloan Kettering	Chronic Disease	03.29.11	Approved	Not Approved
03.16.11	Risk Reduction Strategies To Prevent Subsequent Skin Cancer	Geller/Harvard	SMN Epi/Biostats	03.29.11	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
03.22.11	Longitudinal Changes of Health Risk Factor Clusters and Relationship to Morbidity in Adult Survivors of Childhood Cancer	Hijiya/Northwestern	Chronic Disease Psychology	04.13.11	Approved	Approved
04.13.11	Modifiable Lifestyle Factors and Risk of a Secondary Breast Cancer	Rosenberg/Harvard	SMN		Withdrawn	_____
04.14.11	Cost-effectiveness of Colorectal Cancer Screening Among Survivors Treated with Abdominal Radiation Therapy	Hodgson/Princess Margaret Hospital	SMN	05.30.11	Approved	_____
06.15.11	Chronic Health Conditions and Employment Status Transitions for Childhood Cancer Survivors	Kirchhoff/Huntsman Cancer Institute Salt Lake City	Chronic Disease	07.26.11	Approved	Withdrawn
06.30.11	The Impact of Location and Type of Follow-Up Care On Morbidity and Mortality in Childhood Cancer Survivors	Nathan/Sick Kids	Chronic Disease Epi/Biostats	07.13.11	Approved	Withdrawn
08.01.11	Health Behaviors and Mammogram Utilization in the CCSS	Rosenberg/Harvard School of Public Health	Psychology	08.16.11	Approved	Approved
09.09.11	The Health System Use and Cost Implications of Amputation vs. Limb Salvage Surgery	Conti/University of Chicago	Psychology	09.23.11	Approved	Withdrawn
09.29.11	Colorectal Screening Practices of Survivors of Childhood Cancer at Risk for Secondary Colorectal Malignancies	Kohler/UAB	SMN Psychology	11.07.11	Approved	Approved
12.02.11	Health Status Outcomes in Survivors of Hodgkin Lymphoma	Marina/Stanford			Withdrawn	_____
12.06.11	Evaluation of the Association Between Lifestyle Factors and Pregnancy Outcomes	Gawade/SJCRH	Epi/Biostats Psychology	01.04.12	Approved	Approved
12.09.11	Information Needs of Childhood Cancer Survivors and their Families	Mendonca/U. of Wisconsin	Epi/Biostats	01.04.12	Approved	Not Approved
01.27.12	Influence of Lifestyle on Site-Specific Cumulative Incidence For Second Primary Malignancies in Five-Year Survivors of a Childhood Cancer	Kovalchik/NIH	SMN	03.07.12	Withdrawn	_____
03.01.12	Tobacco Use Among Adult Siblings of Childhood Cancer Survivors	Buchbinder/CHOC	Psychology	03.21.12	Approved	Approved
04.26.12	Association Between Exercise Behavior and Incidence of Non-cancer Chronic Health Conditions	Jones/Duke	Chronic Disease Psychology	05.10.12	Approved	Approved
06.07.12	Receipt of a Treatment Summary and Its Relationship to Morbidities and Premature Mortality	Ford/MSKCC		07.16.12	Approved	Approved
06.07.12	Association of Surgical Procedure to Health Status in Sarcoma Survivors	Avedian/Stanford	Chronic Disease	07.16.12	Approved	Withdrawn
06.20.12	The Consequences of Childhood Cancer on Employer-Sponsored Health Insurance and Social Security Benefits	Kirchhoff/Utah		07.16.12	Approved	Approved
07.11.12	Survival Burden in Childhood Cancer Survivors	Henderson/Univ. of Chicago	Chronic Disease SMN	08.28.12	Withdrawn	-----
09.11.12	Longitudinal Evaluation of Chronic Disease and Health Perceptions in Soft Tissue Sarcoma Survivors	Mueller/Univ. of Michigan	Chronic Disease Psychology	09.18.12	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
09.17.12	The Socio-economic Outcomes of Siblings of Childhood Cancer Survivors	Henderson/Univ. of Chicago		10.05.12	Approved	On Hold
10.24.12	Cancer Screening in Childhood Cancer Survivors: Grounded Theory and Discourse Analysis	Tripp/MD Anderson		11.20.12	Approved	Withdrawn
11.01.12	Evaluating Socioeconomic and Health-Related Pathways That Predict Smoking in Survivors of Childhood Cancer	Erinosho/UNC	Psychology	11.20.12	Approved	Withdrawn
11.19.12	Health Beliefs and Behaviors: Cohort Studies in Childhood Cancer Survivors (Ancillary Study)	Henderson/University of Chicago	SMN	01.10.13	Approved	_____
05.21.13	The Impact of Chronic Disease on Health Care Utilization in the CCSS Cohort	Nathan/Sick Kids		05.30.13	Approved	Approved
05.21.13	Health Status Among Adult Survivors of Childhood Cancer by Treatment Era	Ness/SJCRH		05.30.13	Approved	Approved
06.10.13	Social Outcomes in Aging Hodgkin Lymphoma Survivors	Effinger/Stanford		07.23.13	Not Approved	_____
07.07.13	EQUAL: Exercise and Quality Diet After Leukemia (Ancillary Study)	Tonorezos/MSKCC	SMN Psychology	07.24.13	Approved	Pending
08.05.13	Longitudinal Evaluation of Health Status and Social Functioning in Survivors of Pediatric Astrocytomas	Effinger/Stanford	Chronic Disease Psychology	08.19.13	Approved	Approved
08.06.13	Examining the Role of Transitional Care in Facilitating Quality Clinical Health Care and Preventive Services for Adults Survivors of Childhood Cancer	Mertens/Emory			On Hold	On Hold
08.09.13	Health Care Utilization for Childhood Cancer Survivors	Mueller/U. of Michigan	Chronic Disease	08.19.13	Approved	Approved
08.30.13	The Impact of Endocrine Disorders on Physical Activity and Functional Outcomes	Pradhan/ Riley	Psychology Chronic Disease	09.26.13	Approved	Approved
09.24.13	Behavioral and Psychosocial Predictors of Health Behaviors among Adolescent/Young Adult Survivors	Wu/Univ. of Utah	Psychology	10.07.13	Withdrawn	_____
10.23.13	Social Support and Health Care Utilization	Wu/Univ. of Utah	Psychology Chronic Disease	11.07.13	Approved	Withdrawn
11.02.13	Stages of Change and Predictors of Mammography Practices of Female Survivors of Childhood Cancer and Siblings	Szalda/CHOP		12.05.13	Approved	Withdrawn
01.06.14	Longitudinal Mammogram Practices	Moskowitz/MSKCC	SMN	02.11.14	Approved	Approved
01.05.14	Does Intention to Undergo Screening Mammography Predict Future Screening?	Ford/MSKCC	SMN	02.11.14	Approved	Withdrawn
04.23.14	EMPOWER Study: Promoting BC Screening in Women Who Survived Childhood Cancer (Ancillary Study)	Oeffinger/MSKCC	SMN	04.23.14	Approved	Approved
04.23.14	ECHOS (Ancillary Study)	Hudson/SJCRH		04.23.14	Approved	Approved
09.02.14	Patient-reported Concerns	Gibson/SJCRH	Epi/Biostats Psychology	09.21.14	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
10.06.14	Physical Functioning in Pediatric Leukemia and Lymphoma Survivors	Le/Yale		10.06.14	Approved	Withdrawn
10.17.14	Financial Burden of Medical Care	Fair/University of Utah	Chronic Disease	10.06.14	Approved	Approved
11.24.14	Understanding Experiences of Childhood Cancer Survivors after ACA Implementation (HINT) (Ancillary Study)	Park/Harvard	Chronic Disease	12.17.14	Approved	Approved
11.24.14	Financial Burden in Survivors of Childhood Cancer	Nip/Harvard		12.17.14	Approved	Approved
12.05.14	Health Status in Extremity Sarcoma Survivors	Marina/Stanford	Chronic Disease	12.23.14	Approved	Withdrawn
12.05.14	Trajectory of Mammography and Breast MRI among High Risk Women	Ford/MSKCC		12.23.14	Approved	Pending
06.11.15	Effects of Home-based Interval Training on Fitness and Physical Activity (Ancillary Study)	Ness/SJCRH	Chronic Disease Epi/Biostats	08.12.15	Approved	Pending
11.20.15	Return of Genomic Results to Research Participants (Ancillary Study)	Henderson/University of Chicago	Genetics Psychology	12.02.15	Approved	Withdrawn
11.20.15	Advancing Skin Cancer Screening Practices among Survivors of Childhood Cancer and Skin Cancer (ASK2) (Ancillary Study)	Geller/Harvard School of Public Health	SMN	12.02.15	Approved	Withdrawn
01.21.16	EMPOWER II Study: Promoting BC Screening in Female Survivors and Their Physicians (Ancillary Study)	Oeffinger, Ford/MSKCC	SMN	02.23.16	Approved	Pending
11.22.16	Compliance with Surveillance for SMNs and Cardiac Dysfunction in CCSS	Nathan/Hospital for Sick Children	Chronic Disease SMN	12.08.16	Approved	Approved
12.06.16	Exercise and Late Mortality in 5-Year Survivors of Childhood Cancer	Jones/MSKCC	Chronic Disease Epi/Biostats	12.16.16	Approved	Approved
03.07.17	Health Care Utilization and Estimated Costs Among Survivors of Childhood Cancer	Nathan/Sick Kids	Chronic Disease Epi/Biostats	04.04.17	Approved	Approved
06.07.17	Intervening on Reproductive Health in Young Adult Leukemia and Lymphoma Survivors (Ancillary Study)	Su/UC San Diego	Chronic Disease	07.25.17	Approved	Pending
07.28.17	Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors: A Randomized Study (ENGAGE) (Ancillary Study)	Henderson/University of Chicago	Genetics	08.11.17	Approved	Pending
12.15.17	Prevalence and Predictors of Frailty in Childhood Cancer Survivors and Siblings	Hayek/SJCRH	Chronic Disease Epi/Biostats Psychology	01.03.18	Approved	Approved
08.19.18	Symptom Assessment and Management Using mHealth for Childhood Cancer Survivors (Ancillary Study)	Huang/SJCRH		08.30.18	Approved	Pending
08.19.18	Colorectal Cancer Screening Intervention in Childhood Cancer Survivors (ASPIRES) (Ancillary Study)	Henderson/University of Chicago	Chronic Disease	08.30.18	Approved	Pending
09.25.18	Temporal Changes in Employment Outcomes of Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study (CCSS)	Bhatt/SJCRH	Chronic Disease	09.29.18	Approved	Approved
11.04.18	Internet-delivered Cognitive Behavioral Pain Management for Pediatric Cancer Survivors with Chronic Pain: RCT (Ancillary Study)	Alberts/SJCRH	Psychology	12.19.18	Approved	Pending

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11.04.18	Cardiovascular Autonomic Dysfunction as a Late Treatment Effect in Survivors of Childhood Cancer (Ancillary Study)	Groarke/Brigham and Women's Hospital	Chronic Disease Epi/Biostats	12.19.18	Approved	Pending
01.30.19	Evaluation of Cardiovascular Health Outcomes among Survivors 2 (ECHOS-2) (Ancillary Study)	Ehrhardt/SJCRH	Chronic Disease	02.08.19	Approved	Pending
03.22.19	Screening Predictors for Thyroid Malignancy in Childhood Cancer Survivors	Mostoufi-Moab/CHOP	Chronic Disease SMN	04.10.19	Approved	Pending
04.11.19	Use and Correlates of Carotid Ultrasound in Survivors of Childhood Cancer	Tonorezos/MSKCC	Chronic Disease	04.30.19	Approved	Approved
09.18.19	Understanding Coverage Continuity, Healthcare Utilization, and Cost among Childhood Cancer Survivors Within the Medicaid System	Ji/Emory University	Psychology Chronic Disease	09.27.19	Approved	Approved
03.12.20	Adherence to and Effectiveness of Survivorship Care Guidelines in CCSS (Ancillary Study)	Ehrhardt/SJCRH	Psychology	03.23.20	Approved	Pending
04.14.20	Disparities in Adherence to Screening Guidelines in Hodgkin's Lymphoma Survivors	Shoag/University of Miami	Chronic Disease	04.27.20	Approved	Submitted
06.08.20	Managing Comorbid Conditions in Childhood Cancer Survivors: Communication, Coordination, and Continuity (Ancillary Study)	Snyder/Johns Hopkins School of Med	Chronic Disease	06.18.20	Approved	Pending
10.05.20	Financial Hardship Among Adult Survivors of Pediatric Hematopoietic Stem Cell Transplantation	Buchbinder/CHOC	Epi/Biostatistics	10.15.20	Approved	Pending
12.16.20	Impact of Community Economic Characteristics on Financial Hardship among Adolescent and Young Adult Cancer Survivors	Fauer/UCLA	Epi/Biostatistics	12.28.20	Approved	Pending
04.20.21	Assessing the Effect of Virtual Navigation Interventions to Improve Health Insurance Literacy and Decrease Financial Burden: A CCSS Randomized Trial (Ancillary Study)	Park/Mass General Hospital	Psychology	04.30.21	Approved	Pending
CHRONIC DISEASE						
05.02.08	Genitourinary Complications in Survivors of Childhood Cancer	Shnorhavorian/FHRC		06.10.08	Approved	Approved
06.05.08	The Risk of Osteoporosis and Fracture among Survivors of Childhood Cancer	Kadan-Lottick/Yale University		06.15.08	Approved	Approved
06.06.08	Cardiovascular Risk Factors and CV Events	Meacham/Emory University	Epi/Biostats	07.16.08	Approved	Approved
06.06.08	Solid Organ Transplantation in 5-year Survivors of Childhood Cancer.	Termuhlen/Nationwide Children's Hospital		07.11.08	Approved	Approved
06.11.08	Infectious Complications in Childhood Cancer Survivors	Perkins/Children's Hospitals & Clinics of Minnesota		07.11.08	Approved	Approved
06.12.08	A Comparison of Mortality and Morbidity in Hodgkin's Survivors of Contemporary Therapy	Castellino/Wake Forest University	SMN	07.11.08	Approved	Withdrawn
06.13.08	Determination of Risk Factors for Stroke Among Survivors of Childhood Hodgkin's Disease - A Case:Control Study	Bowers/U.T. Southwestern Medical Center at Dallas		07.11.08	Approved	Withdrawn
07.01.08	Adverse Neurologic Sequelae Are Predictors of Poor Outcome in Survivors of Childhood Central Nervous System Tumors and Leukemia: A Report from the Childhood Cancer Survivor Study	Ulrich/Children's Hospital Boston/Dana-Farber Cancer Center	Psychology	08.11.08	Approved	Withdrawn

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09.02.08	Long-term Outcomes in Adult Survivors of Childhood Cancer: A Comparison of Conventional Therapy and Hematopoietic Cell Transplantation (HCT)	Armenian/City of Hope	Psychology Cancer Control Epi/Biostats	09.19.08	Approved	Approved
09.25.08	Fertility of Female Survivors of Acute Lymphoblastic Leukemia	Green/SJCRH		10.14.08	Approved	Approved
11.11.08	Late DVT Risk in Cancer Survivors	Setia/Memorial Sloan Kettering		12.02.08	Approved	Withdrawn
03.11.09	Creation of a Risk Score Algorithm to Predict Individual Risk of Future Serious Cardiovascular Disease	Chow/FHRC	Cancer Control	04.03.09	Approved	Approved
06.11.09	Outcome of Pregnancies Exposed to Cancer Therapy	Mulvihill/U. of Oklahoma	Genetics	07.10.09	Approved	Approved
06.19.09	The Multifactorial Etiology of Obesity among CCSS Participants	Green/SJCRH	Psychology	07.10.09	Approved	Approved
07.14.09	Renal Outcomes	Nottage/SJCRH			Withdrawn due to overlap	—
09.08.09	Pulmonary Complications in Long-term Survivors of Childhood CNS Tumors with Craniospinal Irradiation	Tein/SJCRH	Psychology	10.06.09	Approved	Approved
11.09.09	Diseases of the Thyroid Gland Associated with Radiation Therapy: A Report from the Childhood Cancer Survivor Study	Viega/NCI	SMN	11.20.09	Approved	Approved
01.29.10	Longitudinal Assessment of Chronic Health Conditions	Armstrong/SJCRH		02.12.10	Approved	Approved
02.26.10	Health and Functional Status of Long-Term Adult Medulloblastoma Survivors	King/Wash. U.	Psychology SMN	03.31.10	Approved	Approved
03.04.10	Health Status of Older Adult Survivors of Childhood Cancer	Kenney/DFCI	Psychology Epi/Biostats	03.31.10	Approved	Withdrawn
04.20.10	Scoring Alkylating Agent Exposure: Evaluation of the Cyclophosphamide Equivalent Dose Score	Green/SJCRH	SMN Epi/Biostat	5.18.10	Approved	Approved
05.12.10	Evaluation of Long-term Outcomes in Ewing Sarcoma Survivors	Marina/Stanford	SMN	6.17.10	Approved	Approved
06.10.10	Neurologic and Neurosensory Deficits in Long-term Survivors of Childhood Brain Tumors: Occurrence of New Deficits and Effects of Aging in Occurrence as Assessed in 2007 Survey	Wells/Children's National	SMN Psychology	6.25.10	Approved	Approved
06.24.10	Premature Menopause in Survivors of Childhood Cancer	Levine/Columbia		07.06.10	Approved	Approved
11.05.10	Infertility and Use of Fertility Treatments	Barton/Brigham & Women's		11.23.10	Approved	Approved
02.18.11	BMI and Diabetes Mellitus in Survivors of ALL	Tonorezos/MSKCC	Cancer Control	03.16.11	Approved	Not Approved
04.22.11	Changes in BMI Among Adult Survivors of Childhood CNS Tumors	Chang/MD Anderson	Psychology	05.03.11	Approved	Approved
05.23.11	Longitudinal Analysis of Outcomes for Acute Lymphoblastic Leukemia Survivors	Dilley/Northwestern	Cancer Control	05.30.11	On Hold	Withdrawn
05.06.12	Chronic Medical Conditions Among Long-term Survivors of Pediatric Non-Hodgkin Lymphoma	Bluhm/Washington Hospital	Epi/Biostats Psychology		On Hold	Withdrawn
06.07.12	Longitudinal Pulmonary Complications in Survivors of Childhood Cancer	Dietz/UCSD	Epi/Biostats	07.16.12	Approved	Approved
06.07.12	Using the Cumulative Illness Rating Scale to Characterize The Burden of Chronic Conditions Among Childhood Cancer Survivors	Esbenshade/SJCRH	Epi/Biostats	07.16.12	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
06.07.12	Increasing Risk of Chronic Endocrine Disorders in Aging Survivors of Childhood Cancer	Mostoufi-Moab/ CHOP		07.16.12	Approved	Approved
06.15.12	Medical and Psychosocial Outcomes of Survivors of AYA Cancer	Suh/U. of Chicago	Cancer Control Psychology	07.16.12	Approved	Approved
06.16.12	Morbidity and Mortality Associated with the Diagnosis of Subsequent Meningiomas – Is it Necessary to Screen Adult Survivors of Childhood Cancer for Meningiomas?	Bowers/UT Southwestern	SMN	07.16.12	Approved	Approved
08.20.12	Long-term Risk of Small Bowel Obstruction in Pediatric Patients with Primary Abdominal Tumors	Diller/Harvard	Epi/Biostats	08.28.12	Approved	Approved
05.31.13	Changes in Long-Term Outcomes in Hodgkin Lymphoma Survivors with Contemporary Risk-Adapted Therapy	Oeffinger/MSKCC	Epi/Biostats SMN Cancer Control	07.23.13	Approved	Approved
06.10.13	Effects of Body Mass Index on Aging Childhood Cancer Survivors	Effinger/Stanford	Cancer Control	07.23.13	Not Approved	_____
07.31.13	Predictors of Hypertension in Adult Survivors of Childhood Cancer	Ojha/SJCRH	Psychology Epi/Biostats	08.19.13	Approved	Withdrawn
09.27.13	Anthracycline Equivalence	Feijen/Emma Children's	Epi/Biostats	10.14.13	Approved	Approved
09.27.13	Fertility following Contemporary Chemotherapy	Chow/ Univ. of Washington		10.14.13	Approved	Approved
11.07.13	Estimating the Burden of Disease Associated With Late-Effects Among Childhood Cancer Survivors	Yeh/Harvard		12.05.13	Approved	Approved
11.16.13	Updated Prevalence of Long-Term Survivors of Childhood Cancer and Estimated Burden of Morbidity Using SEER and CCSS	Phillips/NCI	Psychology	12.05.13	Approved	Approved
12.11.13	Analysis of Dose Response For Circulatory Disease in the Childhood Cancer Survivor Study Cohort with a Focus on Non-Cardiac Doses	Little/NCI	Epi/Biostats	01.16.14	Approved	Withdrawn
09.02.14	Chronic Health Conditions in Survivors Treated with Abdominal Radiation	Friedman/MSKCC	SMN	09.21.14	Approved	Approved
10.16.14	Comparison of Risks of Long-Term Outcomes with the British CCSS	Fidler/University of Birmingham, UK	SMN Epi/Biostats	10.28.14	Approved	Approved
11.11.14	Long-term Cardiovascular Mortality of Childhood Cancer Survivors - Safety and Efficacy of Percutaneous Coronary Interventions (PCI)	Iliescu/MD Anderson	Epi/Biostats	12.01.14	Approved	Withdrawn
11.11.14	Esophageal Strictures After Childhood Cancer Therapy: Experience from Three Childhood Cancer Survivor Cohorts	Asdahl/Aarhus University		12.01.14	Approved	Approved
11.25.14	Racial Variations in Renal Function after Nephrectomy for Wilms Tumor	Christison-Legay/Yale		12.23.14	Approved	Withdrawn
12.05.14	Morbidity and Mortality in Underweight Survivors of Childhood Cancer	Tonorezos/MSKCC		12.23.14	Approved	Approved
12.05.14	Long-term Morbidity in Survivors of CML	Hijiya/Northwestern			Withdrawn	
12.19.14	Improving Assessment and Treatment of Cardiovascular Risk Factors (Ancillary Study)	Chow/Univ. of Washington	Cancer Control	01.15.15	Approved	Pending
01.27.14	Cardiac Outcomes in Long-Term Survivors of Childhood Cancer	Mulrooney/SJCRH	Epi/Biostats	02.22.15	Approved	Approved
01.27.15	Chronic Health Conditions in Survivors of Non-Hodgkin Lymphoma	Ehrhardt/SJCRH	Epi/Biostats	02.22.15	Approved	Approved

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05.05.15	Assessment of Hearing Impairment in Long-Term Survivors of Childhood Cancer	Brown/Baylor	Epi/Biostats	05.25.15	Approved	Approved
05.11.15	Analysis of Non-Alcoholic Fatty Liver Disease as a Modifier of Cardiovascular Disease Risk	Raghuathan/MSKCC	Epi/Biostats	06.18.15	Approved	Withdrawn
06.09.15	Chronic Medical Conditions and Late Mortality Among Survivors of Pediatric Bone Sarcomas	Daw/MD Anderson	Epi/Biostats	07.06.15	Approved	Withdrawn
06.11.15	Incidence of Chronic Disease Among Survivors by Treatment Era and Temporal Trends in Treatment Exposure	Gibson/SJCRH	Epi/Biostats	08.12.15	Approved	Approved
07.21.15	Changes in Long-Term Outcomes in Neuroblastoma Survivors Treated with Contemporary Therapies	Friedman/MSKCC	Cancer Control/SMN	08.12.15	Approved	Approved
08.03.15	Anthracycline Equivalence II	Feijen/Emma Children's /AMC	Epi/Biostats	08.30.15	Approved	Approved
08.04.15	Impact of Childhood Cancer and Treatment on Sperm Quality (Ancillary Study)	Delbes/INRS		08.30.15	Approved	Withdrawn
08.12.15	Gallbladder Surgery Among Childhood Cancer Survivors	Barnea/MSKCC		08.30.15	Approved	Approved
08.13.15	The Role of Developmental Status in the Dose Response Relationship of Cardiac Radiation and Cardiac Toxicity	Bates/Univ. of Rochester	Epi/Biostats	08.30.15	Approved	Approved
08.21.15	Long-term Incidence of Venous Thromboembolism Among Survivors of Childhood Cancer	Madenci/Boston Children's Hosp.	Epi/Biostats	09.08.15	Approved	Approved
08.21.15	Long-term Incidence of Complications from Surgical Asplenia Among Survivors of Childhood Cancer	Weil/Boston Children's Hosp.	Epi/Biostats SMN	09.08.15	Approved	Approved
08.26.15	Dietary Intake and Risk of Subsequent Cardiometabolic Complications in Survivors of Childhood Acute Lymphoblastic Leukemia	Marcil/Sainte-Justine Univ. Health Center	Epi/Biostats	09.15.15	Approved	On Hold
08.31.15	Long-term Morbidity in Survivors of Childhood CML	Williams/Lurie Children's - Northwestern	Epi/Biostats Psychology SMN	09.15.15	Approved	Pending
09.09.15	Medulloblastoma and Primitive Neuroectodermal Tumor (PNET) Outcomes Across Three Decades of Diagnosis	Salloum/Cincinnati Children's Hospital	Epi/Biostats Psychology SMN	09.21.15	Approved	Approved
09.10.15	Mortality and Morbidity in Childhood Cancer Survivors: Comparing Results from the CCSS and a Nationwide Cohort in Taiwan	Yu/Taipei Cancer Center	Epi/Biostats SMN	09.21.15	Approved	Withdrawn
09.16.15	Incidence of Late Anorectal Complications among Childhood Cancer Survivors	Weldon/Boston Children's	Epi/Biostats	09.28.15	Approved	Approved
10.14.15	Comprehensive Comparative Analysis of Chronic Health Conditions, Health Status, Social Outcomes, and Mortality in Patients with Rhabdomyosarcoma by Treatment Era	Hingorani/Phoenix Children's Hospital	Cancer Control Epi/Biostats	11.30.15	Approved	Approved
12.08.15	Developing a Microsimulation Model of the Lifetime Clinical Course of Childhood Cancer	Yeh/Harvard School of Public Health	Genetics Epi/Biostats	01.20.16	Approved	Approved
04.08.16	Statin Therapy and Cardiovascular Disease Incidence in Childhood Cancer Survivors	Raghuathan/MSKCC	Epi/Biostats	04.22.16	Approved	Withdrawn

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04.09.16	Long-term Fertility Outcomes Following Ovarian Transposition	Glick/Cohen's Children Med Center	Epi/Biostats	04.22.16	Not Approved	_____
05.03.16	Cardiometabolic Outcomes Among Survivors of Childhood and Young Adult Cancer	Tonorezos/MSKCC	Cancer Control	05.16.16	Approved	Withdrawn
05.23.16	Health Related Outcomes After Chronic Myeloid Leukemia (comparison with contemporary treatment in COG cohort) (Ancillary Study)	Roth/Children's Hospital at Montefiore	SMN Psychology	06.10.16	Approved	Withdrawn
07.25.16	Reproductive Outcomes for Survivors of Childhood Cancer (Ancillary Study)	Woodruff/Northwestern	Epi/Biostats	08.24.16	Approved	Withdrawn
08.24.16	Infertility, Assisted Reproductive Technology Utilization and Pregnancy Outcomes: A CCSS and SART CORS data linkage study	Keefe/Brigham and Women's Hospital	Epi/Biostats	09.06.16	Approved	Approved
02.07.17	The Impact of Thyroid Hormone Replacement Therapy on the Cardiovascular Health Burden in Childhood Cancer Survivors	Kero/Turku University Hospital	Epi/Biostats	02.09.17	Not Approved	_____
06.15.17	Impact of Modifiable Lifestyle Behaviors on Risk of Serious Chronic Conditions and Evaluation of Interactions with Treatment Exposures	Gibson/SJCRH	Epi/Biostats	07.31.17	Approved	Withdrawn
07.04.17	Outcomes Across Three Decades of Diagnosis for Bone Tumors	Prasad/LSU	SMN Cancer Control Epi/Biostats	08.11.17	Withdrawn	_____
07.24.17	Changes in the Risk and Outcomes of Stroke in Survivors with Changing Treatment Protocols	Sun/Johns Hopkins	Psychology	08.11.17	Approved	Withdrawn
09.04.17	Prevalence and Risk of Frailty in Survivors of Childhood Cancer (Ancillary Study)	Gibson/SJCRH	Psychology	09.20.17	Approved	Withdrawn
09.15.17	Long-Term Outcomes among Survivors of Childhood Ewing Sarcoma	Weldon/Boston Children's	SMN Epi/Biostats	09.29.17	Approved	Pending
09.28.17	Risk Factors for Overweight and Obesity in U.S. and Swiss ALL survivors: A CCSS and SCCSS study	Kuehni/University of Bern	Epi/Biostats Psychology	10.13.17	Approved	Approved
10.19.17	Impact of Chronic Health Conditions on Sexual Dysfunction in Female Childhood Cancer Survivors	Bjornard/SJCRH	Psychology	11.01.17	Approved	Approved
11.08.17	Changes in Long-term Outcomes among Survivors of Childhood Acute Lymphoblastic Leukemia	Dixon/SJCRH	SMN, Epi/Biostats Cancer Control Psychology	11.21.17	Approved	Approved
11.20.17	Outcomes in Survivors of Astrocytoma and Ependymoma Across Three Decades of Diagnosis and Treatment	Lange/MSKCC De Blank/CCHMC	SMN, Epi/Biostats Cancer Control Psychology	12.15.17	Approved	Approved
11.21.17	Exercise and Preventive Chronic Health Conditions and Health Care Utilization	Jones/MSKCC	Cancer Control SMN	12.15.17	Approved	Approved
01.03.18	Long-term Outcomes of Pelvic Sarcoma Based on Initial Treatment	Madenci/Boston Children's Murphy/SJCRH	SMN Epi/Biostats	01.17.18	Approved	Approved
01.04.18	Risk of Adverse Cardiometabolic Outcomes in Survivors Treated with Total Body Irradiation (Ancillary Study)	Friedman/MSKCC		01.17.18	Approved	Approved

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01.29.18	Impact of Treatment Era on Long-Term Health Outcomes in Wilms Tumor Survivors	Weil/Boston Children's	SMN, Psychology Epi/Biostats	02.12.18	Approved	Approved
02.12.18	Long-term Renal Complications in Survivors of Childhood Cancer: CCSS and ALICCS	Dieffenbach/Boston Children's	Epi/Biostats	03.06.18	Approved	Approved
03.07.18	Polypharmacy and Patterns of Prescription Medication Use among Childhood Cancer Survivors	Murphy/UT Southwestern	Cancer Control Psychology	03.23.18	Approved	Pending
04.10.18	Long-Term Outcomes among Survivors of Childhood Acute Myeloid Leukemia	Turcotte/U of Minnesota	SMN Epi/Biostats	04.24.18	Approved	Approved
06.12.18	Burden of Late Surgery in Survivors of Childhood Cancer	Dieffenbach/Boston Children's	Epi/Biostats	07.23.18	Approved	Approved
07.23.18	Patterns in Motor and Sensory Neuropathy and Associated Outcomes in Long Term Survivors of Childhood Cancer	Rodwin/Yale New Haven Hospital	Cancer Control Psychology	08.06.18	Approved	Approved
08.21.18	Incidence and Risk Factors for Cesarean Delivery in Female Survivors of Childhood Cancer	Dieffenbach/Boston Children's	Epi/Biostats		Withdrawn	_____
08.21.18	Influence of Radiotherapy Dose to Cardiac Substructures on Cardiac Risk in Long-Term Survivors of Childhood Cancer	Bates/University of Florida	Epi/Biostats	08.31.18	Approved	Approved
09.24.18	Impact of ACEi and Beta Blocker Use on Cardiovascular Disease in Survivors of Childhood Cancer	Bottinor/Vanderbilt University	Epi/Biostats	09.29.18	Approved	Not Approved
03.21.19	Risk factors for and outcomes of late amputation among survivors of childhood lower extremity sarcoma	Geiger/UCSF	Epi/Biostats	04.10.19	Approved	Approved
04.11.19	Disparities in Cardiovascular Outcomes among Childhood Cancer Survivors	Noyd/Duke University	Cancer Control Epi/Biostats Genetics	04.30.19	Approved	Approved
07.18.19	Late Outcomes in Survivors of Childhood Cancer Exposed to Platinum-Based Chemotherapy	Bhatt/FHCRC	SMN	08.05.19	Approved	Not Approved
08.05.19	Development and Validation of a Prediction Model for End-stage Renal Disease in Childhood Cancer Survivors	Wu/FHCRC	Epi/Biostats	08.21.19	Approved	Approved
09.11.19	Congenital Anomalies and Chronic Health Conditions among Childhood Cancer Survivors	Janitz/Univ Oklahoma	SMN	09.24.19	Approved	Approved
10.16.19	Long-Term Outcomes of Upper Extremity (UE) Sarcoma Survivors Based Upon Local Control Measures	Becktel/Medical College of Wisconsin	Psychology SMN	10.25.19	Approved	Pending
lev	Investigating Disparities in Adoption of Novel Chemotherapy Protocols: a Historical Example in Hodgkin's Lymphoma	Shoag/University of Miami	Epi/Biostats	01.09.20	Approved	Withdrawn
02.10.20	Association of Age of Menopause with Chronic Health Conditions in Survivors of Childhood Cancer	Ketterl/Seattle Children's	Epi/Biostats	02.24.20	Approved	Pending
02.25.20	Disparities in Cardiovascular Outcomes and Risk Factors Among Hodgkin's Lymphoma Survivors	Shoag/University of Miami	Epi/Biostats	02.26.20	Not Approved	_____
04.29.20	Predicting Chronic Conditions in Adult Female Survivors of Childhood Cancer (Ancillary Study)	Oeffinger/Duke University	Psychology Epi/Biostats	05.12.20	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
05.18.20	Incidence and Outcomes of Joint Replacement Surgery in Survivors of Childhood Cancer	Cohen-Levy/University of Miami	Psychology	06.02.20	Approved	Approved
06.25.20	Estimating the Clinical Outcomes and Cost-Effectiveness of Preventive Medicines to Reduce Secondary Cancers and Cardiovascular Disease in Childhood Cancer Survivors (Ancillary Study)	Yeh/Boston Children's	SMN Psychology Epi/Biostats	07.06.20	Approved	Approved
07.31.20	BMI at Childhood Cancer Diagnosis as a Predictor for Subsequent Chronic Health Conditions	Turcotte/U of Minnesota	Epi/Biostats	08.11.20	Approved	Pending
02.17.21	Chronic Conditions in Pediatric Cancer Survivors Diagnosed During Infancy (<1 year old) Compared to Similarly Treated Survivors Diagnosed at an Older Age (1-9 years old)	Goldsby/UCSF	SMN	03.01.21	Approved	Pending
04.12.21	Association of Radiotherapy Pelvic Dose and Female Sexual Dysfunction Risk in Long-Term Survivors of Childhood Cancer	Marshall/Mt. Sinai	Psychology	04.22.21	Approved	Pending
05.12.21	Long-Term Functional, Surgical, and Socioeconomic Outcomes of Local Control (radiotherapy, amputation, or limb salvage/reconstructive options) in Patients with Primary Bone Sarcomas in the Modern Era of Orthopedic Oncology	Ramsey/Mass General	Psychology	05.21.21	Approved	Pending
05.14.21	Adverse Childhood Experiences (ACEs) and Potential Mitigating Factors in Adult Survivors of Childhood Cancer (Ancillary Study)	Schwartz/University of Chicago	Psychology Cancer Control	05.24.21	Approved	Pending
EPIDEMIOLOGY / BIOSTATISTICS						
04.21.08	Conditional Survival in Pediatric and Adolescent Malignancies	Wasilewski-Masker/Emory/CHOA		06.10.08	Approved	Approved
04.21.08	Analysis of Late Mortality by Treatment Era: Brief Report	Armstrong/SJCRH		06.10.08	Approved	Not Approved
06.19.08	Cardiac Mortality	Armstrong/SJCRH		07.16.08	Approved	Approved
09.23.08	Assessing Bias Associated with Missing Data from the Childhood Cancer Survivor Study	Huang/SJCRH		10.14.08	Approved	Withdrawn
02.12.09	Predicting Late Effects of Individual Cancer Survivors: A Pilot Methodological Study (Ancillary Study)	Yasui/Edmonton Alberta		03.16.09	Approved	Approved
05.12.09	Impact of Health Behaviors and Health Perceptions on Subsequent Mortality in Childhood Cancer Survivors (Ancillary Study)	Cox/SJCRH		05.28.09	Approved	Approved
05.26.09	Cost Effectiveness of Cardiac Guideline for Survivors of Pediatric Cancers	Wong/City of Hope		06.10.09	Approved	Approved
10.07.09	Computational Dose Reconstruction for Breast Cancer Patients after Hodgkin Lymphoma: Dose Comparison and Sensitivity Study	Lee/NCI	SMN	11.05.09	Not Approved	—
11.16.09	Congenital Heart Disease	Gruber/U. of Michigan	Genetics	12.22.09	Approved	Not Approved
11.19.10	Exercise and Prevention of Late Cardiac Outcomes After Anthracyclines	Ryerson/Emory	Chronic Disease Cancer Control	12.10.10	Approved	Approved
06.18.10	Long-term Outcomes in Survivors of Retinoblastoma (The New York Cohort): A Comparison of Survivors Versus Non-Cancer Controls	Dunkel/MSKCC		07.01.10	Approved	Approved
10.27.10	Prediction of Risk of Serious Health Conditions	Salz/MSKCC		11.10.10	Approved	Withdrawn
05.16.11	Cost Effectiveness of COG Breast Cancer Screening Guidelines for Female Survivors of Pediatric Cancers	Wong/City of Hope	SMN Cancer Control	06.02.11	Approved	Approved

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06.13.11	Predictors of Healthy Aging	Ness/SJCRH	SMN/ Chronic Disease Genetics Psychology Cancer Control	07.13.11	Approved	Withdrawn
09.08.11	Statistical Analysis of a Mixture of Recurrent Event and Panel Count data	Zhu/SJCRH		09.23.11	Approved	Approved
10.06.11	Estimating Long-Term Risks in Children Newly Diagnosed With ALL Based on Survivor Clusters in the CCSS Cohort	Essig/University of Bern	Cancer Control Chronic Disease SMN	11.07.11	Approved	Approved
05.15.12	Predicting the Risk of SMN Among Childhood Cancer Survivors With NMSC as a Second Malignancy	Ojha/SJCRH	SMN	06.13.12	Withdrawn	—
07.16.12	Access to Health Information Technology and Health Information Seeking in Adult Survivors of Childhood Cancer	Mertens/SJCRH	Cancer Control	08.28.12	Approved	Approved
12.12.12	Estimation of Risk Ratios in the Presence of Statistical Interactions	Satagopan/MSKCC		01.10.13	Approved	Approved
01.14.14	Risk of Cardiovascular Disease and Second Malignancies Attributable to Therapeutic Exposures by Treatment Era	Bhatia/UAB	SMN Chronic Disease	02.11.14	Approved	Withdrawn
01.14.14	Association Between Key Therapeutic Exposures And Outcomes - Gaps in Knowledge	Bhatia/UAB	SMN Chronic Disease	02.11.14	Approved	Withdrawn
01.20.14	Late Mortality by Treatment Era	Armstrong/SJCRH		02.11.14	Approved	Approved
04.02.14	Differences in Participant Characteristics and Changes in Treatment Characteristics from the Original to the Expanded Cohorts	Mertens/Emory		04.23.14	Approved	Approved
04.05.14	Tiled Study Design: Using Temporal Overlap as a Method to Extend Longitudinal Follow-Up Among Carefully Selected Time-Limited Cohorts	Chow/University of Washington	Chronic Disease	04.23.14	Approved	Approved
05.19.14	Use of an Incentive to Increase Biologic Sample (Oragene) Return Rate	McDonald/SJCRH		06.20.14	Approved	Approved
08.15.14	Differences in Long-Term Outcomes by Race/Ethnicity in Childhood Cancer Survivors	Liu/University of Alberta		09.04.14	Approved	Approved
11.11.14	Relationships of Persistent Symptoms with Relapse, SMN, and Mortality	Huang/SJCRH	SMN, Chronic Disease, Psychology	12.01.14	Approved	Withdrawn
04.02.15	Dosimetric Uncertainty in Radiation Dose Reconstruction Method used for CCSS	Howell/MD Anderson		04.26.15	Approved	Approved
05.29.15	Clinical Utilities of Various Prediction Performance Measures	Yuan/University of Alberta		06.18.15	Approved	Approved
07.17.15	Burden of Morbidity after Basal Cell Carcinoma	Bhatia/UAB	Chronic Disease, Genetics, SMN	08.12.15	Approved	Approved
10.04.15	Statistical Analysis for Various Outcome Measures in Recurrent Event Studies - Ancillary	Zhu/SJCRH		10.15.15	Approved	Approved
01.19.16	Individual Prediction of Premature Ovarian Insufficiency (Ancillary Study)	Yuan/University of Alberta		02.05.16	Approved	Approved
10.06.16	Trends in Life Expectancy and Quality-Adjusted Life Expectancy among Childhood Cancer Survivors	Yeh/Boston Children's Hospital	Chronic Disease Psychology	10.28.16	Approved	Approved

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10.18.16	Cost-effective Cardiomyopathy Surveillance Strategies in Childhood Cancer Survivors	Ehrhardt/SJCRH	Chronic Disease Cancer Control	11.14.16	Approved	Approved
01.05.17	Statistical Methods for GWAS Analysis of Recurrent-event Data in Cancer Study (Ancillary Study)	Zhu/University of Texas Health Science Center	Genetics	01.23.17	Approved	Withdrawn
06.28.17	A Personalized Cumulative Burden Prediction Tool for Second Neoplasms	Bhakta/SJCRH	SMN	07.31.17	Approved	Pending
11.30.17	Personalized Medicine Approach to Define the Association between Exercise and Cardiovascular Risk Profile	Scott/MSKCC	Chronic Disease Cancer Control		On Hold	
10.12.18	Effect of Hypothetical Lifestyle Interventions on Major Cardiovascular Events among Childhood Cancer Survivors	Madenci/Harvard University	Cancer Control Chronic Disease	11.07.18	Approved	Pending
12.19.18	Statistical Analysis for Genome-Wide Data with Interval-censored Outcomes in Oral Health Studies (Ancillary Study)	Zhu/University of Texas Health Science Center	Chronic Disease	01.04.19	Approved	Pending
01.15.19	Estimating the Global Burden of Childhood Cancer in the Global Burden of Disease 2019 Study	Force/SJCRH	Chronic Disease Psychology	01.25.19	Approved	Pending
01.16.19	Factors Contributing to Survival Following Second Malignant Neoplasms Diagnosed in Long-term Survivors of Childhood Cancer	Brown/Baylor College of Medicine	SMN, Chronic Disease Psychology, Cancer Control	01.25.19	Approved	Withdrawn
04.29.19	Association of Individual and Neighborhood characteristics and adverse outcomes in childhood cancer survivors	Howell/SJCRH	Chronic Disease	05.10.19	Approved	Approved
04.29.19	Socioeconomic and Rural/Urban Differences in Adverse Outcomes among Childhood Cancer Survivors	Winestone/UCSF		05.10.19	Approved	Approved
06.24.19	Overall and Cardiac-Specific Survival Following Serious Cardiovascular Events in Childhood Cancer Survivors	Chow/Univ of Washington, FHCRC	Chronic Disease	07.18.19	Approved	Approved
11.15.19	Risk Score Algorithm to Predict Individual Risk of Future Serious Late Cardiovascular Disease that includes Dose and Dose Volume Metrics for the Whole Heart and Heart Substructures (Ancillary Study)	Shrestha/MD Anderson	Chronic Disease	12.23.19	Approved	Pending
12.17.19	Impact of Aging and Modifiable Risk Factors on Late-Mortality Among Survivors of Childhood Cancer	Dixon/SJCRH	Chronic Disease Psychology	12.31.19	Approved	Approved
09.09.20	Integration of Dental Conditions in Public Genetic Compendiums with Data Infrastructure Development and In Vitro Follow-up (Ancillary Study)	Zhu/University of TX HSC	Chronic Disease Genetics	09.21.20	Approved	Pending
09.10.20	A New Perspective of the Factor Structure of the Brief Symptom Inventory 18 (BSI-18) and its Application Among Adult Survivors of Childhood Cancer	Mai/SJCRH	Psychology	09.21.20	Approved	Pending
09.16.20	Analytic Solutions to Data Problems Due to Recall Nature and Missing Age at Late Effects of CCSS	Salehabadi/SJCRH	Chronic Disease	09.28.20	Approved	Pending
GENETICS						
-	GWAS of SMNs after Hodgkin Lymphoma	Onel/U. of Chicago	SMN	-	Approved	Approved
-	Genetic Epidemiology of Basal Cell Carcinoma in Childhood Cancer Survivors	Davies/Cincinnati	SMN	-	Approved	Approved
-	Susceptibility Genes for RT-induced Breast Cancer after Hodgkin Lymphoma	Van Leeuwen/Netherlands Cancer Institute	SMN		Approved	Approved

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-	Radiation-related Thyroid Cancer	Nikiforov/U. of Pittsburgh	SMN		Approved	Approved
05.02.08	Characterization of Genomic Alterations in Radiation-Related Breast Cancer Using Array CGH (Comparative Genomic Hybridization)	Yang/NCI	SMN	06.02.08	Approved	Approved
05.27.08	Incidence of Familial Hodgkin Lymphoma	Metzger/SJCRH		06.10.08	Approved	Hold
06.05.08	Genetic Predictors of Impaired and Enhanced Neurocognitive and Psychological Functioning among Survivors of Childhood Leukemia and Lymphoma	Kadan-Lottick/Yale University	Psychology	03.16.09	Approved	Withdrawn
06.25.08	Genetic Polymorphisms and Metabolic Outcomes in Childhood Leukemia Survivors (Ancillary Study)	Kamdar/Texas Children's Hospital	Chronic Disease	08.11.08	Approved	—
09.25.08	Late Effects in Childhood Cancer Survivors and Vitamin D Polymorphisms	Ocku/Baylor	SMN	10.14.08	Approved	Not Approved
11.13.08	Long-Term Morbidity in Childhood Cancer Survivors with Down Syndrome	Raber/UCSF	Chronic Disease	12.02.08	Approved	Approved
12.02.08	Evaluation of SNPs in the EWS Breakpoint Region in People with and without Ewing Sarcoma (Ancillary Study)	DuBois/UCSF		12.18.08	Approved	Approved
06.15.09	Telomere Length and Risk for Second Malignancy in Pediatric Cancer Survivors	Gramatges/Baylor	SMN	07.10.09	Approved	Approved
10.15.09	Polymorphisms of Cardiomyocyte Genes in CCSS Participants with Congestive Heart Failure or Subclinical Left Ventricular Dysfunction After Treatment with Anthracyclines	Green/SJCRH		11.05.09	Approved	Withdrawn
07.28.10	Detecting Germ Cell Mutation by Family DNA Sequencing	Mulvihill/OU				Withdrawn
08.21.10	Genetic Alterations in Second Malignant Neoplasms	Nakamura/UCSF	SMN	11.10.10	Approved	Approved
12.15.10	Multiple SMNs & Genomic Instability/DNA Repair	Bhatia/UAB	Epi/Biostats SMN	02.03.11	Approved	Approved
02.09.11	Molecular Variation Between Spontaneous Breast Cancers and Breast Cancers Induced by Radiation in Survivors of Hodgkin's Lymphoma	Pelloski/Ohio State	SMN	03.09.11	Approved	Withdrawn
04.04.11	Genome-Wide Association Study of Subsequent Malignancies	Morton/NCI	SMN Epi/Biostats	04.21.11	Approved	Approved
04.14.11	Identification of Susceptibility Loci in Radiation-Induced Breast Cancer by Exome and CNV Analysis	Hodgson/Princess Margaret Hospital	SMN	05.03.11	Approved	Withdrawn
05.03.11	Genetic Susceptibility to Anthracycline-Related CHF	Bhatia/UAB	Chronic Disease Epi/Biostats	06.02.11	Approved	Approved
07.08.11	Genetic Susceptibilities to Second Cancers	Onel/University of Chicago	SMN	08.16.11	Approved	Withdrawn
07.08.11	PRDM1 and Somatic Mutations in SMNs after Hodgkin Lymphoma	Onel/University of Chicago	SMN	08.16.11	Approved	Withdrawn
10.05.11	Host and Demographic Factors Associated with Solid Second Malignant Neoplasms in Un-Irradiated Childhood Cancer Survivors	Henderson/University of Chicago	SMN	11.07.11	Withdrawn	—
10.18.12	Epigenomic Profiling of Metabolic Outcomes in Childhood Leukemia Survivors	Lupo/Baylor	Cancer Control	11.20.12	Approved	Approved
09.26.13	Evaluation of the Intrinsic Molecular Profiles of Radiation-Preceded Breast Cancer	Barcellos-Hoff/NYU	SMN	10.14.13	Approved	Withdrawn

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03.25.14	Shortened Telomere Length and Defects in Telomere Maintenance Associated with Thyroid SMNs in Childhood Cancer Survivors (Ancillary Study)	Gramatges/Baylor	SMN, Epi/Biostats	04.14.14	Approved	—
04.01.14	Neurofibromatosis and Second Neoplasms (Ancillary Study)	Bhatia/UAB		04.11.14	Approved	Approved
06.20.14	Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors (Ancillary Study)	Henderson/ University of Chicago	Cancer Control	10.28.14	Approved	Pending
02.19.15	Exome Sequencing to Discover Genetic Variants that Predispose to the Development of Subsequent Neoplasms	Morton/NCI	SMN, Epi/Biostats	04.26.15	Approved	Approved
05.01.15	Validation of Interactome-based Biomarkers of Inherited Susceptibility to Radiation Induced Carcinogenesis (Ancillary Study)	Amundson/Columbia University	SMN	05.11.15	Approved	Withdrawn
01.25.16	Predicting Pulmonary Late Effects in Childhood Cancer Survivors	Agrusa/Baylor College of Medicine	Chronic Disease Epi/Biostats	02.08.16	Withdrawn	—
03.14.16	Molecular Characterization of Therapy-Related Pediatric High-Grade Gliomas	Lucas/SJCRH	SMN	03.28.16	Approved	Approved
07.11.16	Late Effects Prediction Using Clinical Phenotypes and Whole Genome Sequencing (Ancillary Study)	Yasui/SJCRH	Chronic Disease SMN Epi/Biostats	07.26.16	Approved	Pending
04.21.17	Germline Genomics to Identify Genetic Variants that Predispose Childhood Cancer Survivors Diagnosed During 1987-1999 to the Development of Subsequent Neoplasms	Morton/NCI	SMN Epi/Biostats	05.09.17	Approved	—
05.24.17	Biological Mechanisms of Accelerated Aging Evidenced as Frailty in Survivors of Childhood Leukemia	Gramatges/Baylor	Chronic Disease	06.07.17	Approved	Withdrawn
06.01.17	Myocardial Infarction GWAS (via GWAS RFP process)	Morrison/Univ. Texas Health Science Center	Chronic Disease Epi/Biostats	06.12.17	Approved	Approved
06.01.17	Stroke GWAS (via GWAS RFP process)	Morrison and Bowers/UTHSC and UT Southwestern	Chronic Disease Epi/Biostats	06.12.17	Approved	Approved
06.01.17	Diabetes GWAS (via GWAS RFP process)	Lupo/Baylor College of Medicine	Chronic Disease	06.12.17	Approved	Approved
06.01.17	GWAS of Thyroid Nodules and Intestinal Polyps	Shultz/Children's Hospital of Minnesota	Chronic Disease	06.12.17	Approved	Withdrawn
06.01.17	Cardiomyopathy Simulation Model Utilizing GWAS Data (Ancillary Study)	Yeh/Boston Children's; Harvard	Chronic Disease	06.12.17	Approved	Pending
06.03.17	Late Effects Prediction Using Whole Genome Sequencing (Ancillary Study)	Yasui/SJCRH	Epi/Biostats SMN; Chronic Disease; Psychology	07.25.17	Approved	Pending
08.08.17	Immune Dysregulation and Premature Aging in Childhood Cancer Survivors (Ancillary Study)	Cozen/USC	Chronic Disease Psychology	09.01.17	Approved	Pending
10.01.17	Tinnitus GWAS (via GWAS RFP Process)	Dolan/ University of Chicago	Chronic Disease	10.16.17	Approved	Approved

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10.01.17	Intestinal Obstruction GWAS (via GWAS RFP Process)	Madenci/Boston Children's Hospital	Chronic Disease	11.12.17	Approved	Approved
10.01.17	Genetic Susceptibility to Anthracycline-Related Congestive Heart Failure (via GWAS RFP Process)	Bhatia/UAB	Chronic Disease	10.16.17	Approved	Approved
02.01.18	iPSC-Cardiomyocyte and RNAseq Identified Genes and Cardiomyopathy (via GWAS RFP Process)	Reyes/MD Anderson	Chronic Disease	02.23.17	Approved	Approved
09.18.18	Genetic Risk Prediction Profiles for Fracture among Childhood Cancer Survivors	Im/University of Alberta	Chronic Disease Epi/Biostats	09.29.18	Approved	Approved
09.24.18	Developing a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus among Survivors of Childhood Cancer	Lupo/Baylor College of Medicine	Chronic Disease Epi/Biostats	09.29.18	Approved	Approved
09.26.18	Genome Wide Association Study of Modulators of Pregnancy in Long Term Survivors of Pediatric Cancer	Rotz/Cleveland Clinic	Chronic Disease	10.25.18	Approved	Approved
09.28.18	Genetic Susceptibility to Neurocognitive Impairment Secondary to Childhood Cancer Treatment	Scheurer/Baylor College of Medicine	Psychology	10.25.18	Approved	Approved
01.08.19	Genetic Determinants of Posttraumatic Stress Disorder in Pediatric Cancer Survivors	Recklitis/Dana Farber Cancer Institute	Psychology (Co-Primary) Epi/Biostats	01.18.19	Approved	Approved
01.15.19	GWAS of Cisplatin Induced and Non-Cisplatin Induced Hearing Loss	Dolan/University of Chicago	Epi/Biostats	01.25.19	Approved	Approved
01.30.19	GWAS of Hypertension in Childhood Cancer Survivors	Pierzynski/SJCRH	Chronic Disease Epi/Biostats	02.08.19	Approved	Approved
03.07.19	Genetic Susceptibility to Certain Subsequent Neoplasms after Radiotherapy for Childhood Cancer	Morton/NCI	SMN	03.22.19	Approved	Approved
03.28.19	Whole-Genome Sequencing Analysis of Germline Mutations in DNA Repair Genes	Wang/SJCRH	SMN Epi/Biostats	04.10.19	Approved	Withdrawn
05.02.19	A Genome-Wide Association Study for Frailty in Adult Survivors of Childhood Cancer	Gramatges/Baylor College of Medicine	Chronic Disease Epi/Biostats	05.13.19	Approved	Approved
07.18.19	Genetic Association Study of Cardiac Toxicity Following Chest Radiotherapy	Kerns/University of Rochester	Chronic Disease Epi/Biostats	08.05.19	Approved	Not Approved
10.08.19	Long-Term Cost-Effectiveness of the Identification of Cancer Predisposition Syndromes in Survivors of Pediatric Leukemia, Brain Tumors and Bone/Soft-Tissue Sarcomas	Goudie/McGill University	Cancer Control Psychology SMN	10.21.19	Approved	Approved
10.16.19	Clinical and Genetic Profiling of Cataract Risk among Long-Term Childhood Cancer Survivors	Sharafeldin/UAB	Chronic Disease Epi/Biostats	10.25.19	Approved	Pending
01.13.20	Genome-wide association to study dyslipidemia in adult survivors of childhood cancer (GWAS RFP response)	Pluimakers/Princess Maxima	Genetics	05.28.20	Approved	Approved
01.23.20	Robust Genetic Predictors of Secondary Cancer Risks (Ancillary Study)	Ostrer/Einstein College of Medicine	SMN	02.07.20	Approved	Pending

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04.14.20	Biological mechanisms of early-onset cancer risk	Schumacher/Case Western Reserve	Epi/Biostats	04.16.20	Not Approved	_____
04.15.20	Investigating Genetic Alterations in Radiation-induced Secondary Malignancies (Ancillary Study)	Nakamura/UCSF	SMN	04.29.20	Approved	Pending
07.21.20	Genome-wide polygenic risk score prediction of coronary artery disease in survivors of childhood cancer	Sapkota/SJCRH	Chronic Disease Epi/Biostats	08.03.20	Withdrawn	_____
09.28.20	Risk Prediction of Menarche and Menopause-related Phenotypes in Childhood Cancer Survivors Using Polygenic Risk Scores and Clinical Predictors	Yu/University of Alberta	Chronic Disease Cancer Control Epi/Biostats	10.10.20	Approved	Approved
02.01.21	Investigation of Germline Predisposition to Pediatric Treatment-Induced High-Grade Glioma (TIHGG) (Ancillary Study)	Green/University of Colorado	SMN Epi/Biostats	02.11.21	Approved	Pending
04.21.21	The Genomic Landscape of Second Malignant Neoplasms from the Childhood Cancer Survivor Study (Ancillary Study)	Brady/SJCRH	SMN Epi/Biostats	05.03.21	Approved	Pending
05.17.21	Germline Determinants of Pediatric Tumor Immune Microenvironment Effects on Risk, Prognosis and Treatment Response	Carter/UC San Diego		05.27.21	Approved	Pending
PSYCHOLOGY						
05.05.08	Psychosexual Adjustment in Long-Term Female Survivors of Childhood Cancer	Carpentier/Indiana University School of Medicine			Withdrawn	_____
06.05.08	Predictors of Future QOL in Adolescent Survivors of Childhood Cancer	Nolan/SJCRH	Chronic Disease	07.11.08	Approved	Approved
06.07.08	Quality of Life Associated with Fertility Status in Childhood Cancer Survivors	Warwick/Medical College of Wisconsin	Chronic Disease	07.11.08	Withdrawn	_____
06.09.08	QOL in Long-Term Survivors	Schapmire/University of Louisville		07.11.08	Withdrawn	_____
06.11.08	Health Behaviors and Chronic Disease	Hudson/SJCRH			Withdrawn	_____
07.10.08	The Psychological and General Health Status Impact of Late Sibling Death: A Report from the Childhood Cancer Survivor Study	Raber/UCSF Children's Hospital		08.11.08	Withdrawn	_____
08.25.08	Impact of Chronic Disease on Neurocognitive and Psychosocial Functions	Krull/ SJCRH	Chronic Disease	09.19.08	Approved	Approved
10.10.08	An Examination of the Relationship Between Fatigue/Sleep Disturbance and Neurocognitive Functioning in Adult Survivors of Childhood Cancer	Clanton/Baylor		11.12.08	Approved	Approved
11.24.08	Outcome after Stroke among Long-Term Survivors of Childhood Leukemia and Brain Tumors	Fullerton/UCSF	Chronic Disease	12.18.08	Approved	Approved
01.26.09	Localization of CNS Directed Radiotherapy and Neurocognitive, Psychological and Quality of Life Outcomes in Survivors of CNS Tumors	Armstrong/SJCRH		02.12.09	Approved	Approved
01.27.09	Chronic Pain and Psychosexual Function in Adult Survivors of Childhood Cancer	Randolph-Frye/SJCRH		02.12.09	Withdrawn	_____
05.05.09	Dermatological Issues in Adult Survivors of Childhood Cancer	Kinahan/Northwestern	Cancer Control	05.28.09	Approved	Approved

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06.16.09	Predictors of Psychoactive Medication Use	Brinkman/SJCRH	Epi/Biostats	07.10.09	Approved	Approved
08.12.09	Causal Associations Between Psychological and Quality of Life Outcomes in CCSS	Krull/SJCRH		09.09.09	Approved	Withdrawn
08.15.09	Health Related Quality of Life in Adult Survivors of Relapsed ALL	Essig/University of Bern		09.09.09	Withdrawn	_____
01.18.10	Psychological and Neurocognitive Outcomes in Those Diagnosed with Cancer as Adolescent and Young Adults in the CCSS	Prasad/Vanderbilt		02.12.10	Approved	Approved
09.29.10	Longitudinal Patterns of Late Effects in Adult Survivors of Childhood Brain Tumors	Hardie/Drexel	Epi/Biostats Chronic Disease	10.21.10	Approved	Approved
10.21.10	Longitudinal Psychological Distress	Brinkman/SJCRH		11.10.10	Approved	Approved
04.22.11	Sensory-motor Problems and Associated Functional Outcomes in Survivors of Childhood Central Nervous System (CNS) Tumors	Walsh/ Children's National Medical Center	Chronic Disease	05.03.11	Approved	Withdrawn
06.23.11	Physical Activity and Risky Behavior Patterns Among Teenage Survivors of Childhood Cancers	Devine/U. of Rochester	Cancer Control	07.13.11	Approved	Approved
07.23.11	Measurement Invariance in Health-Related Quality of Life Between Young Adult Survivors of Childhood Cancer and Their Siblings	Huang/ University of Florida	Epi/Biostats	08.16.11	Approved	Approved
01.19.12	Post-traumatic Stress Symptoms, Adherence to Screening Guidelines and Health-Related Behaviors in Adult Survivors of Childhood Cancer	Kimberg/SJCRH	Cancer Control		Withdrawn	Withdrawn
01.19.12	Health Related Locus of Control	Kimberg/SJCRH	Cancer Control	02.02.11	Approved	Approved
03.27.12	Chronic Alcohol Consumption and Neurocognitive Function in Adult Survivors of Childhood Cancer	Brinkman/SJCRH	Cancer Control	04.26.12	Approved	Approved
04.25.12	Psychosocial and Physical Factors Influencing Fatigue in Survivors of Childhood Hodgkin Lymphoma	Crabtree/SJCRH	Epi/Biostats	05.15.12	Approved	Approved
05.07.12	Identifying Longitudinal Predictors of Quality of Life in Adolescent Survivors of Pediatric Cancer	Stern/VCU		06.13.12	Approved	Approved
05.08.12	Fatigue Reported by Childhood Cancer Survivors and Its Relationship to Health Outcomes	Lai/Northwestern University	Epi/Biostats	06.13.12	Approved	Withdrawn
10.03.12	Locus of Control and Survivorship Care	Mays/Georgetown		11.20.12	Approved	Withdrawn
10.06.12	Psychosocial Outcomes of Pediatric Cancer Survivors	Nellen/University of Virginia		10.26.12	Withdrawn	_____
10.12.12	The Impact of Vision Loss Among Childhood Survivors of Central Nervous System Astroglial Tumors	De Blank/Rainbow Babies	Chronic Disease	10.26.12	Approved	Approved
10.16.12	A Pilot Study to Investigate Stimulants to Improve Neurocognitive Impairment in Adult Survivors of Childhood Cancer	Balsamo/Yale		10.26.12	Approved	Withdrawn
10.17.12	Posttraumatic Stress and Growth in Survivors of Recurrent Pediatric Blood Cancers	Hoffman/University of Iowa		10.26.12	Withdrawn	_____
10.24.12	Neurocognitive and Psychosocial Difficulties in Survivors of Rhabdomyosarcomas	Schapiro/Washington University		11.20.12	Approved	Approved
10.29.12	Sleep and Fatigue in Survivors of Pediatric CNS Tumors	Manley/Dana-Farber	Chronic Disease	11.20.12	Approved	Withdrawn
10.30.12	Eating Disorder Behaviors in Survivors of Childhood Cancer	Zhang/Tufts University		11.20.12	Approved	Withdrawn

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05.01.13	Social and Behavioral Phenotypes of Adolescent Survivors of Childhood Cancer	Brinkman/SCJRH		05.30.13	Approved	Approved
05.08.13	Exploring Latent Clusters of Survivors Using the BSI-18	D'Agostino/Princess Margaret Cancer Centre		05.30.13	Approved	Approved
08.19.13	Mental Health Care Service Availability and Utilization Among Childhood Cancer Survivors	Perez/Mass General	Cancer Control	09.26.13	Approved	Approved
08.23.13	The Impact of the Sibling Sociodemographic and Health Factors on Psychological Outcomes of Childhood Cancer Survivors	Buchbinder/CHOC		09.26.13	Approved	Withdrawn
11.06.13	Impact of Social Networks on Psychological and Health-Related Quality of Life Outcomes on Young Adult Survivors of Childhood Cancer	Galligan/Univ. of Florida		12.17.13	Withdrawn	—
11.14.13	Neuropsychological Outcomes in Long Term Survivors of Stem Cell Transplant	Hiniker/Stanford		12.17.13	Not Approved	—
01.20.14	Cognitive, Behavioral and Learning Problems in Survivors of Childhood ALL	Jacola/SJCRH		02.11.14	Approved	Approved
01.29.14	Adult Neurobehavioral Late Effects of Pediatric Low-Grade Brain Tumors	Ris/Baylor	Epi/Biostats	02.11.14	Approved	Approved
03.14.14	Antecedents and Consequences of Personal and Interpersonal Strengths in Young Adult Survivors	Henrich/Georgia State University		03.30.14	Approved	Approved
04.03.14	Vascular Effects of Cranial Radiation Therapy (Ancillary Study)	Mueller/UCSF	Chronic Disease Epi/Biostats	04.22.14	Approved	Withdrawn
06.30.14	Psychological Concerns Among Siblings of Childhood Cancer Survivors	Buchbinder/CHOC		08.29.14	Approved	Approved
10.06.14	Effects of Administration Modes on Patient-Reported Outcomes Assessment in CCSS	Huang/SJCRH	Epi/Biostats	10.28.14	Approved	Approved
03.05.14	Neurocognitive Function in Survivors of Osteosarcoma	Kadan-Lottick/Yale		04.26.15	Approved	Approved
05.25.15	Psychosocial Outcomes in Adolescent Survivors of Wilms Tumor	Foster/St. Louis Children's Hospital	Chronic Disease	06.18.15	Approved	Approved
08.07.15	Prevalence and Predictors of Cognitive and Behavioral Problems in Adolescent Survivors of CNS Tumors	Kunin-Batson/University of Minn.	Chronic Disease	08.30.15	Approved	Withdrawn
08.12.15	Cognitive and Behavioral Outcomes in Adolescent Survivors of Neuroblastoma	Zheng/Yale		08.30.15	Approved	Approved
08.19.15	Social Function in Adolescent Survivors of Pediatric Brain Tumors	Schulte/Alberta Children's Hosp.		09.08.15	Approved	Approved
09.09.15	Loneliness Predictors and Outcomes in Young Adult Childhood Cancer Survivors	Fayad/University at Buffalo	Cancer Control	09.21.15	Approved	Approved
09.09.15	Sleep Behaviors and Patterns and their Relationship to Health and Mental Health Outcomes in Adult Survivors	Daniel/CHOP	Chronic Disease SMN	09.21.15	Approved	Approved
09.11.15	Psychological Distress, Neurologic Morbidity and Functional Independence Among Survivors With CNS-Directed Therapy	Vuotto/SJCRH	Chronic Disease	09.28.15	Approved	Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
09.15.15	Effect of NF1 Status on Late Outcomes in Adult Survivors of Childhood Cancer	De Blank/University Hospitals Rainbow Babies	Epi/Biostats Chronic Disease SMN	09.28.15	Approved	Approved
11.11.15	Prevalence and Patterns of Prescription Psychoactive Medication Use in Adolescent Survivors of Childhood Cancer	Cheung/SJCRH		11.25.15	Approved	Approved
11.26.15	Longitudinal Patterns of Psychological Distress and Health Behaviors in Adolescents	Shin/UNC Greensboro	Cancer Control	11.30.15	Withdrawn	
12.01.15	Psychological and Behavioral Outcomes in Pediatric AML Survivors: BMT versus Chemotherapy-only	Stefanski/Cincinnati Children's Hospital Medical Center		12.14.15	Approved	Approved
02.10.16	eHealth Intervention for Insomnia in ALL Survivors (Ancillary Study)	Brinkman/SJCRH	Cancer Control/Intervention	02.22.16	Approved	Pending
02.10.16	Adolescent Risk Factors and Behavior Patterns and Future Alcohol and Psychoactive Medication Use in Young Adult Survivors	Ruiz/Harbor-UCLA Medical Center		02.22.16	Approved	Withdrawn
05.05.16	Posttraumatic Stress as a Unique Contributor to Health Outcomes and Healthcare Utilization in Adult Survivors of Childhood Cancer	Van Sickle/Florida Institute of Technology	Cancer Control	05.20.16	Approved	Approved
05.09.16	Special Education Services, Educational Attainment, and Chronic Health Conditions Among Long-Term Survivors	Bashore/Cook Children's Med. Center	Chronic Disease	05.20.16	Approved	Approved
05.16.16	Long Term Psychosocial Outcomes in Pediatric Low-Grade Glioma Survivors	Ris/Texas Children's Hospital	Epi/Biostats	06.01.16	Approved	Approved
08.26.16	The Impact of Preexisting Genetic or Congenital Medical Conditions on Long-Term Psychosocial and Psychological Outcomes	Jacola/SJCRH	Chronic Disease Genetics	09.07.16	Approved	Not Approved
09.30.16	Trends in Utility-based Health-related Quality of Life Among Childhood Cancer Survivors	Yeh/Boston Children's Hospital	Chronic Disease	10.28.16	Approved	Approved
10.27.16	Cognitive Aging in Adult Survivors of Childhood Cancer	Krull/SJCRH	Chronic Disease Epidemiology/Biostats Cancer Control	11.15.16	Approved	Approved
11.15.16	Physical Activity as a Predictor of Neurocognitive Outcomes in Adult Survivors of Childhood Cancers	Edelstein/Princess Margaret Cancer Center	Chronic Disease Cancer Control	11.30.16	Approved	Approved
12.21.16	Longitudinal Changes in Functional Independence in Aging Adult Survivors of Pediatric Brain Tumors	Lange/University of MN Brinkman/SJCRH	Chronic Disease	01.12.17	Approved	Approved
01.09.17	Suicide, Homicide and Accidental Causes of Death in Childhood Cancer Survivors	Qaddoumi/SJCRH	Epi/Biostats	01.24.17	Approved	Pending
02.01.17	Determinants of Longitudinal Health-Related Quality of Life Change in Adult Survivors of Childhood Cancer (Ancillary Study)	Huang/SJCRH	Chronic Disease Cancer Control	02.17.17	Approved	Approved
02.17.17	Effects of Radiation and Changes by Treatment Era on Neurocognitive Impairment, Social Attainment and Quality of Life in Adult Survivors of Pediatric Brain Tumors	Brinkman/SJCRH		02.28.17	Approved	Approved
02.28.17	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma	Hesko/Univ. of Chicago	Chronic Disease	04.04.17	Approved	Approved

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03.08.17	Daily and Chronic Experiences of Pain in Adult Survivors of Childhood Cancer	Alberts/SJCRH	Cancer Control	04.04.17	Approved	Approved
03.10.17	Racial/Ethnic Differences in Neurocognitive and Psychological Function in Adult Survivors of Childhood Cancers	Dixon/SJCRH	Epi/Biostats	04.04.17	Approved	Approved
07.13.17	Loss of Sight, Hearing and Peripheral Sensation and its Effect on HRQOL and Social Functioning in Childhood Cancer Survivors Across Three Decades of Diagnosis	Prasad/LSU	Chronic Disease	08.08.17	Approved	Pending
08.28.17	Mental Health Outcomes in Survivors of Childhood ALL Treated with Chemotherapy-only Protocols by Era	Nannes/Duke University	Chronic Disease	09.16.17	Approved	Approved
09.09.17	Persistence of fatigue and associated factors in adult survivors of childhood cancer	Krull/St. Jude	Cancer Control	09.28.17	Approved	Pending
09.11.17	Neurocognitive outcomes in survivors of childhood acute lymphoblastic leukemia treated with chemotherapy only	Van der Plas/Sick Kids	Chronic Disease	09.28.17	Approved	Approved
10.11.17	Neurocognitive Functioning, Emotional and Quality of Life in Asian or Pacific Islander Survivors	Sato/Ochanomizu University Japan		10.19.17	Approved	Approved
12.19.17	Psychosocial and Neurocognitive Outcomes in Survivors of Hodgkin Lymphoma	Phillips/SJCRH Williams/SJCRH	Epi/Biostats	01.03.18	Approved	Approved
05.01.18	Childhood Surgery and Post-Traumatic Stress Disorder Symptoms Among Survivors of Childhood Cancer	Madenci/Boston Children's; Harvard	Epi/Biostats	05.15.18	Approved	Pending
05.01.18	Childhood Surgery and Chronic Pain among Adult Survivors of Childhood Cancer	Madenci/Boston Children's; Harvard	Epi/Biostats	05.15.18	Approved	Pending
08.28.18	Neighborhood Socioeconomic/Environmental Disadvantage and Psychosocial Outcomes in CCSS Survivors	Bai/Emory University	Cancer Control	09.07.18	Approved	Pending
09.25.18	Temporal Changes in Employment Outcomes of Survivors of Childhood Cancer	Bhatt/SJCRH	Cancer Control (Co-Primary) Chronic Disease	09.29.18	Approved	Approved
10.24.18	Psychosomatic Profiles of Survivors of Childhood Cancer and their Siblings: Links to Health Behaviors and Health Care Utilization	Tillery/SJCRH	Cancer Control	11.07.18	Approved	Approved
01.08.19	Genetic Determinants of Posttraumatic Stress Disorder in Pediatric Cancer Survivors	Recklitis/Dana Farber Cancer Institute	Psychology (Co-Primary) Epi/Biostats	01.18.19	Approved	Approved
01.09.19	Does Sex Mediate the Relationship between Treatment Exposures and Functional Outcomes?	Peterson/Princess Margaret Cancer Center	Epi/Biostats Chronic Disease	01.18.19	Approved	Approved
06.20.19	Sleep in Long-term Cancer Survivors Relative to Siblings: Cross-sectional Comparison and Longitudinal Follow-up	Daniel/CHOP	Chronic Disease SMN	07.18.19	Approved	Submitted
08.21.19	Perceptions of Risk for Sexual Dysfunction among Adult Male Survivors of Childhood Cancer	Sopf/Univ of Colorado	Chronic Disease	09.06.19	Approved	Pending
12.17.19	Neurocognitive Outcomes in Survivors of Early Adolescent and Young Adult Cancer	Wang/Univ. of Chicago	Chronic Disease	12.31.19	Approved	Approved
02.21.20	Integrating Technological Approaches for Pain Management in Adult Survivors of Childhood Cancer (Ancillary Study)	Smith/Duke University	Cancer Control	03.06.20	Approved	Pending

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06.11.20	Accelerated Aging as an Accumulation of Deficits in Survivors of Childhood Cancer	Williams/SJCRH	Chronic Disease Epi/Biostats	06.22.20	Approved	Approved
09.15.20	Examining the Associations between Frailty and Sleep in Long-Term Survivors of Childhood Cancer	Lubas/Radford University	Chronic Disease Epi/Biostats	09.25.20	Approved	Pending
09.16.20	Psychological Distress, Social Functioning, and Phenotypic Aging in Adult Survivors of Childhood Cancer	Rentscher/UCLA	Chronic Disease	09.28.20	Approved	Pending
09.18.20	Impact of Physical Activity and Psychological Distress on Neurocognitive Functioning	Sharkey/Children's National	Epi/Biostats	09.29.20	Approved	Pending
10.27.20	Neurocognitive Predictors of Risky Health Behaviors in Pediatric Cancer Survivors: Mood and Anxiety Symptoms as Moderators of Later Substance Use	Sammons/Palo Alto Univ.	Cancer Control	11.09.20	Approved	Pending
11.24.20	Psychologic and Cognitive Outcomes in Pediatric Cancer Survivors Diagnosed in Infancy (birth- 1 year of age) Compared to Those Diagnosed in Toddlerhood (1-3 years) and Preschool age (3-6 years)	Walling/Mott Children's Hosp		12.08.20	Approved	Pending
SECOND MALIGNANT NEOPLASMS						
04.10.08	Multiple Subsequent Neoplasms	Robison/SJCRH		04.20.08	Approved	Approved
06.20.08	GH Therapy and Brain Tumors as SMNs	Patterson/Emory University	Chronic Disease	03.16.09	Approved	Not Approved
12.18.08	Colorectal Cancer as SMN	Henderson/Univ. of Chicago		01.12.09	Approved	Approved
09.11.09	Late Occurring Secondary Leukemias in Survivors of Childhood Cancers	Nottage/SJCRH		10.06.09	Approved	Approved
05.25.10	Melanoma as a Second Malignant Neoplasm	Pappo/SJCRH	Genetics	06.14.10	Approved	Approved
06.18.10	Breast Cancer Following Chest RT	Oeffinger/MSKCC	Chronic Disease	07.01.10	Approved	Approved
10.28.10	Primary Tumor Recurrence and SMN After Pregnancy	Rokitka/Roswell Park		11.10.10	Approved	Pending
11.09.10	SMN After Diabetes Mellitus	Chang/UCSF	Chronic Disease	11.23.10	Approved	Withdrawn
11.11.10	Breast Cancer Risk Factors	Inskip/NCI		12.07.10	Approved	Approved
11.16.10	Radiation Dose and Risk of Meningioma	Rajaraman/NCI	Epi/Biostats		Hold	_____
02.03.11	Renal Cell Carcinoma	Wilson/SJCRH		03.09.11	Approved	Approved
04.13.11	Gynecological Malignancies	Nathan/Sick Kids		05.03.11	Approved	Withdrawn
04.20.11	Development and Validation of an Absolute Risk Prediction Model for Thyroid Cancer in Childhood Cancer Survivors	Ronckers/Netherlands	Epi/Biostats	05.03.11	Approved	Approved
04.27.11	Testicular Cancer Following Pediatric Cancer	Oeffinger/MSKCC	Chronic Disease	05.10.11	Approved	Withdrawn
05.03.11	Development of Radiobiologic Models of Second Cancer Risk for Childhood Cancer Patients Treated with Radiation Therapy	Hodgson/Princess Margaret	Epi/Biostats	06.02.11	Approved	Approved
05.09.11	Risk of Breast Cancer in Survivors Not Exposed to Chest Radiation	Henderson/Univ. of Chicago	Genetics	06.02.11	Approved	Approved
05.30.11	Breast Cancer Following Spinal Radiation	Moskowitz/MSKCC	Cancer Control Epi/Biostats	06.22.11	Approved	Approved
08.11.11	Subsequent Neoplasms in Adult Survivors of Childhood Cancer in Relation to Weight and Physical Activity	George/NCI	Cancer Control Epi/Biostats Psychology	08.21.11	Approved	Not Approved
08.31.11	Lymphoma as SMN	Suh/University of Chicago		09.21.11	Approved	Not Approved

Date Received	Title	Author/ Institution	Secondary Working Group(s)	Date Investigator Notified	AOI Outcome	Concept to Publication Committee
04.03.12	Late Second Neoplasms in Long-Term Survivors of Childhood Cancer	Turcotte/ U of Minnesota	Epi/Biostats	04.26.12	Approved	Approved
06.07.12	Second Malignant Neoplasm in Down Syndrome Survivors of Childhood Cancer	Xavier/MUSC	Genetics	07.16.12	Approved	Withdrawn
07.03.12	Pooled International Study of Radiation Related Intracranial Tumors	Inskip/NCI		07.16.12	Approved	Approved
09.18.12	Exposure-specific Absolute Risks of Second Primary Cancer and Cardiovascular Disease for Five-Year Survivors of Childhood Hodgkin's Lymphoma	Kovalchik/NCI	Cancer Control Chronic Disease	10.05.12	Approved	Withdrawn
11.27.12	Subsequent Neoplasms in Survivors of Medulloblastoma at St. Jude Children's Research Hospital	Tsui/SJCRH	Chronic Disease	01.10.13	Approved	Approved
01.08.13	Beyond radiation: Understanding Thyroid Cancer Risk in Childhood Cancer	Turcotte/ U of Minnesota	Epi/Biostats	04.02.13	Approved	Withdrawn
04.14.13	Comparison of Radiation Dose Reconstruction Methods for Subsequent Neoplasm Studies	Morton/NCI	Epi/Biostats Genetics	05.15.13	Approved	Approved
07.24.13	HPV-related SMNs in Childhood Cancer Survivors	Alexander/University of Chicago		08.19.13	Approved	Approved
10.02.13	Radiation Dose Reconstruction Methods for Intensity Modulated Radiation Therapy (IMRT)	Howell/MD Anderson	Epi/Biostats Chronic Disease	10.14.13	Approved	Withdrawn
01.16.14	Changing Patterns of Second Neoplasms in Childhood Cancer Survivors: Comparison of Survivor Cohorts	Turcotte/ U of Minnesota	Epi/Biostats	02.11.14	Approved	Approved
01.14.14	NF1 and Second Malignant Neoplasms (Ancillary Study)	Bhatia/UAB	Genetics	02.19.14	Approved	Approved
01.30.14	Breast Cancer in the Modern Treatment Era	Henderson/Univ. of Chicago		02.11.14	Approved	Approved
04.23.14	Prediction Model: Breast Cancer in Women Irradiated for a Pediatric Malignancy (Ancillary Study)	Moskowitz/MSKCC	Cancer Control		Approved	Approved
12.05.14	Changing Patterns of Non-Melanoma Skin Cancer in Childhood Cancer Survivors Who Received Radiation Therapy	Griffith/University of Miami	Epi/Biostats	01.15.15	Approved	Withdrawn
12.25.14	The Impact of Radiation Dose Uncertainty and Heterogeneity on Subsequent Breast Cancer Risk	Berrington/NCI	Epi/Biostats	01.15.15	Approved	Withdrawn
02.09.15	Cause-specific Mortality Among Survivors with Thyroid Subsequent Malignant Neoplasm	Barnea/MSKCC	Cancer Control	04.26.15	Approved	Approved
07.17.15	Lung Cancer as Subsequent Malignant Neoplasm	Ghosh/U of Minnesota		08.30.15	Approved	Approved
09.18.15	Patterns of CNS Neoplasms in Survivors of Childhood Cancer: A Report from the CCSS	Galvin/U of Minnesota Phelan/U of Minnesota	Epi/Biostats	09.30.15	Approved	Approved
06.23.16	Subsequent Neoplasms Among Childhood Cancer Survivors Exposed to Chemotherapy and Not Radiation	Turcotte/U of Minnesota	Epi/Biostats	07.26.16	Approved	Approved
08.04.17	Treatment Modifications and Provider Decision Making in the Management of Subsequent Breast Cancers Among Survivors (Ancillary Study)	Turcotte/U of Minnesota	Cancer Control Epi/Biostats	09.01.17	Approved	Pending
10.26.17	International Pooled Analysis of Breast Cancer Risk after Treatment for Childhood and Young Adult Cancer (Ancillary Study)	Ronckers/Emma Children's Hospital/AMC	Epi/Biostats	11.08.17	Approved	Pending
10.12.18	Risk and Risk Factors for Colorectal Cancer in Survivors of Childhood Cancer	Owens/MD Anderson Henderson/Univ Chicago		11.07.18	Approved	Approved
09.11.19	Body Mass Index and Risk of Subsequent Malignant Neoplasms	Joffe/Columbia University	Chronic Disease	09.24.19	Approved	Approved

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10.21.19	Late and Very Late Acute Subsequent Leukemias among Survivors of Childhood Cancer	Turcotte/U of Minnesota	Epi/Biostats	12.23.19	Approved	Approved
04.03.20	Breast Imaging Analysis Among Childhood Cancer Survivors Treated with Chest Radiation (Ancillary Study)	Moskowitz/MSKCC	Cancer Control	04.15.20	Approved	Pending
04.08.20	Cost-effectiveness of the Children's Oncology Group Colorectal Cancer Screening Guidelines for Childhood Cancer Survivors	Nghiem/UAB	Cancer Control Epi/Biostats	04.21.20	Approved	Approved
04.14.20	Mortality after Colorectal Cancer Among Survivors of Childhood Cancer	Henderson and Major/Univ Chicago	Epi/Biostats	04.27.20	Approved	Approved
09.08.20	Subsequent colorectal cancer after a childhood, adolescent or young adult cancer: An international pooled data analysis (Ancillary Study)	Moskowitz/MSKCC	Cancer Control	09.18.20	Approved	Pending
10.12.20	Meningiomas in Survivors of Childhood Cancer	Cooney/DFCI	Cancer Control	10.22.20	Approved	Approved
01.08.21	Nonmelanoma Skin Cancer in Survivors of Childhood and Adolescent Cancer: An update from the Childhood Cancer Survivor Study	Boull/University of Minnesota	Epi/Biostats	01.19.21	Approved	Submitted
03.08.21	Melanoma among Adult Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study	Rotz/Cleveland Clinic		03.19.21	Approved	Pending
03.15.21	Radiotherapy- and Chemotherapy-Related Risks of Thyroid Cancer among Childhood Cancer Survivors	Morton/NCI	Epi/Biostats	03.25.21	Approved	Pending

Publications and Manuscripts

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Manuscripts Submitted for Publication

1. Cheung YT, Sato S, Li N, Dixon S, MD, Kato M, Zhang H, Li CK, Howell RM, Leisenring WM, Bhatia S, Oeffinger KC, Armstrong GT, Yasui Y, Krull KR. Functional outcomes and social attainment in Asian/Pacific islander survivors of childhood cancer in the united states: a report from the Childhood Cancer Survivor Study. Submitted.
2. Goush T, Chen Y, Dietz AC, Armstrong GT, Howell RM, Smith SA, Mulrooney DA, Turcotte LM, Yuan Y, Yasui Y, Neglia J. Lung cancer as a subsequent neoplasm in survivors of childhood cancer. Submitted.
3. Dieffenbach BV, Liu Q, Murphy A, Stein D, Wu N, Madenci A, Leisenring W, Kadan-Lottick N, Christison-Lagay E, Goldsby R, Howell R, Smith S, Oeffinger K, Yasui Y, Armstrong GT, Weldon C, Chow E, Weil B. Late-onset kidney failure in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. Submitted.
4. Fair D, Park ER, Nipp RD, Rabin J, Hyland K, Kuhlthau K, Perez GK, Nathan PC, Armstrong GT, Oeffinger KC, Robison LL, Leisenring WM, Kirchhoff AC. Material, behavioral, and psychological financial hardship among childhood cancer survivors in the Childhood Cancer Survivor Study (CCSS). Submitted.
5. Kadan-Lottick NS, Zheng DJ, Wang M, Bishop MW, Srivastava DK, Ross WL, Rodwin RL, Ness KK, Gibson TM, Spunt SL, Okcu MF, Leisenring WM, Robison LL, Armstrong GT, Krull KK. Neurocognitive function in adult survivors of childhood and adolescent osteosarcoma and ewing sarcoma. Submitted.
6. Krull KR, McDonald A, Goodman P, Vukadinovich C, Ford J, Leisenring WM, Chow E, Robison LL, Armstrong GT. Impact of the COVID-19 pandemic on long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. Submitted.
7. Lu D, Sapkota Y, Valdimarsdóttir UA, Koenen KC, Li N, Leisenring WM, Gibson TM, Wilson CL, Robison LL, Hudson MM, Armstrong GT, Krull K, Yasui Y, Bhatia S, Recklitis CJ. Genome-wide association study of posttraumatic stress disorder among childhood cancer survivors: results from the Childhood Cancer Survivor Study and the St. Jude Lifetime Cohort. Submitted.
8. Man T, Aubert G, Richard M, LeJeune W, Hariri E, Goltsova T, Gaikwad A, Chen Y, Whitton J, Leisenring W, Arnold M, Neglia J, Yasui Y, Robison L, Armstrong G, Bhatia S, Gramatges M. Short NK and naïve T-cell telomere length is associated with risk for thyroid cancer in childhood cancer survivors: A report from the Childhood Cancer Survivor Study. Submitted.
9. Morales S, Salehabadi SM, Srivastava D, Gibson TM, Leisenring WM, Alderfer MA, Lown EA, Zeltzer LK, Armstrong GT, Krull KR, Buchbinder D. Health-related and cancer risk concerns among siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). Submitted.
10. Wang X, Singh P, Landier W, Hageman L, Relling MV, Chen Y, Blanco JG, Sapkota Y, Yasui Y, Morton L, Armstrong GT, Oeffinger KC, Hudson MM, Chow EJ, Armenian SH, Arora M, Robison LL, Bhatia S. Prediction of cardiomyopathy in anthracycline-exposed cancer survivors: a report from the Children's Oncology Group, the Childhood Cancer Survivor Study and the Bone Marrow Transplant Survivor Study. Submitted.
11. Yeh JM, Lowry KP, Schechter CB, Diller LR, O'Brien G, Alagoz O, Armstrong GT, Hampton JM, Hudson MM, Leisenring W, Liu Q, Mandelblatt JS, Miglioretti DL, Moskowitz CS, Nathan PC, Neglia JP, Oeffinger KC, Trentham-Dietz A, Stout NK. Breast cancer screening among childhood cancer survivors treated without chest radiation: clinical benefits, harms and cost-effectiveness. Submitted.
12. Zhu L, Sun R, Li Y, Armstrong GT. Regression analysis with proportional intensity model for general mixed recurrent event data. Submitted.

Investigator-Initiated, Ancillary Studies for External-Funding that Utilize the CCSS Resource

Ancillary Studies: Completed

Principal Investigator: Charles Sklar (Memorial Sloan Kettering Cancer Center)

Title: Safety/Efficacy of Growth Hormone Therapy in Survivors of Childhood Cancer

Dates of Funding: 9/96 - 8/00

Funding Source: Genentech Foundation

Award: \$222,150

Study Aims: Evaluate the use of growth hormone therapy in survivors of childhood cancer to determine potential impact on final height, risk of cancer-recurrence, and risk of second neoplasm.

Principal Investigator: Karen Emmons (Harvard University)

Title: Smoking Cessation among Childhood Cancer Survivors

Dates of Funding: 9/98 - 7/03

Funding Source: National Institutes of Health (R01 CA77780-04S1)

Award: \$2,174,161

Study Aims: Conduct a randomized intervention trial to test a peer-based smoking cessation program for long-term survivors of childhood cancer.

Principal Investigator: H. Stacy Nicholson (Oregon Health Sciences Center)

Title: Quality of Life after Successful Treatment for Acute Myelogenous Leukemia

Dates of Funding: 7/98 – 6/04

Funding Source: National Institutes of Health (R01 CA78960-01)

Award: \$732,679

Study Aims: Evaluate the occurrence of late effects among five-year survivors of childhood acute myeloid leukemia to compare the risks associated with intensive therapy, including bone marrow transplantation.

Principal Investigator: Charles Sklar (Memorial Sloan Kettering Cancer Center)

Title: Premature Menopause in Survivors of Childhood Cancer

Dates of Funding: 9/98 – 8/01

Funding Source: National Institutes of Health (R01 CA79024)

Award: \$482,000

Study Aims: Examine the prevalence and risk factors for premature menopause and associated psychosexual functioning in a cohort of 5500 young adult female survivors of cancer diagnosed during childhood and adolescence.

Principal Investigator: Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

Title: Patient Perceived Barriers to Long-Term Follow-up for Adult Survivors of Childhood Cancer

Dates of Funding: 7/99 – 6/04

Funding Source: Robert Wood Johnson Foundation

Award: \$232,010

Study Aims: Determine the spectrum of, and characteristics predictive for barriers to cancer-related health care of adult survivors of childhood cancer.

Principal Investigator: John Boice (International Epidemiology Institute)

Title: Preconception Radiation and Reproductive Outcomes among Survivors of Childhood Cancer

Dates of Funding: 2000 - 2005

Funding Source: Westlakes Research Institute

Award: \$450,000

Study Aims: Investigate the potential risk of transgenerational effects among the offspring of survivors of childhood cancer in the USA and Denmark who were treated with radiation.

Ancillary Studies: Completed (continued)

Principal Investigator: Ann Mertens (University of Minnesota)

Title: Health Profiles in Adolescent Survivors of Childhood Cancer

Dates of Funding: 1/01 – 12/03

Funding Source: American Cancer Society

Award: \$565,000

Study Aims: Investigate the physical, cognitive and emotional development of adolescent survivors of childhood cancer to aid in development interventions to improve quality of life.

Principal Investigator: Rajaram Nagarajan (University of Minnesota)

Title: Function and Quality of Life of Survivors of Pediatric Lower Limb Tumors

Dates of Funding: 7/01 – 6/02

Funding Source: ASCO (Young Investigator Award)

Study Aims: Investigate the function, quality of life, and psychosocial outcomes of adult survivors of pediatric lower extremity bone tumors to compare amputation and limb-sparing surgeries within age-specific groups.

Principal Investigator: Ann Mertens (University of Minnesota)

Title: Radiation Dosimetry for Childhood Cancer Survivors

Dates of Funding: 1/03 – 12/05

Funding Source: Lance Armstrong Foundation

Award: \$148,984

Study Aims: Estimate tissue-specific dose of radiation received by survivors of childhood cancer who experience selected adverse outcomes within the context of a nested case-control study.

Principal Investigator: Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

Title: Feasibility Study for Project VISION: A Virtual Information Center for Survivors

Dates of Funding: 1/03 – 12/05

Funding Source: Lance Armstrong Foundation

Award: \$90,190

Study Aims: Assess the feasibility of a randomized clinical trial using a virtual information center as a cognitive-based intervention with survivors and health care providers.

Principal Investigator: James Gurney (University of Minnesota)

Title: Metabolic Syndrome in Adult Survivors of Childhood acute Lymphoblastic Leukemia

Dates of Funding: 7/04 – 6/06

Funding Source: National Institutes of Health (R21 CA1068778)

Award: \$225,000

Study Aims: Evaluate clinically the metabolic syndrome and associations with growth hormone deficiency and endothelial impairment as late effects of treatment for childhood acute lymphoblastic leukemia.

Principal Investigator: Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

Title: Mammography and High-Risk Survivors of Pediatric Cancer

Dates of Funding: 9/04 – 7/07

Funding Source: National institute of Health (R21 CA106972)

Award: \$225,000

Study Aims: Evaluate the prevalence of and factors predictive for mammography among long-term survivors of childhood cancer who are at high-risk for radiation-induced breast cancer.

Principal Investigator: Lonnie Zeltzer (UCLA)

Title: Psychosocial, Behavioral and Pain Outcomes in Survivors of Childhood Cancer

Dates of Funding: 1/05 – 12/07

Funding Source: Lance Armstrong Foundation

Award: \$150,000

Study Aims: Determine, within the CCSS cohort, the prevalence and risk factors for psychosocial outcomes in long-term survivors of childhood and adolescent cancer.

Ancillary Studies: Completed (continued)

Principal Investigator: Ann Mertens (University of Minnesota)

Title: Radiation Dose and Risk of Non-Melanoma Skin Cancer in Cancer Survivors

Dates of Funding: 1/06 – 12/08

Funding Source: Lance Armstrong Foundation

Award: \$247,500

Study Aims: Investigate radiation doses and the subsequent risk of non-melanoma skin cancer in cancer survivors.

Principal Investigator: Kenan Onel (University of Chicago)

Title: Prognostic Genetic Biomarkers for Cancer

Dates of Funding: 7/07 – 6/10

Funding Source: National Cancer Institute (R21 CA129045-02)

Award: \$220,000

Study Aims: Detailed genomic and functional analysis of inborn susceptibilities in another SMN, IR-induced SMN in Hodgkin disease survivors.

Principal Investigator: Debra Friedman (Vanderbilt University)

Title: Health Outcomes for Hodgkin Disease Survivors

Dates of Funding: 9/04 – 6/10

Funding Source: National Institutes of Health (R01 CA106750-05)

Award: \$2,279,993

Study Aims: Examine the cumulative incidence and characterize the spectrum of selected adverse physiologic and psychosocial outcomes in contemporarily treated Hodgkin disease survivors.

Principal Investigator: Yuri Nikiforov (University of Pittsburgh)

Title: Mechanisms of RET/PTC Rearrangements in Thyroid Cancer

Dates of Funding: 4/07 – 3/12

Funding Source: National Institutes of Health

Award: \$1,706,391

Study Aims: To test whether alterations in one or more DNA repair genes lead to an increased rate of RET/PTC rearrangement in vitro and to thyroid cancer in patients exposed to radiation.

Principal Investigator: Robert Klesges (St. Jude Children's Research Hospital)

Title: Efficacy of a Tobacco Quit Line for Childhood Cancer Survivors

Dates of Funding: 1/08 – 11/12

Funding Source: National Institutes of Health (R01 CA127964-04)

Award: \$3,087,994

Study Aims: To conduct a randomized intervention trial designed to test the efficacy of Pro-active versus Reactive approach for smoking cessation.

Principal Investigator: Tara Henderson (University of Chicago)

Title: Health Beliefs and Behavior: Cohort Studies in Pediatric Cancer Survivorship

Dates of Funding: 9/08 – 8/12

Funding Source: National Institutes of Health (K07 CA134935-02)

Award: \$480,000

Study Aims: Characterize barriers and facilitators of breast cancer surveillance, diagnosis and therapy in women with secondary breast cancer, and explore associations between breast cancer surveillance practices, initial method of detection, health beliefs and breast cancer outcomes.

Principal Investigator: Peter Stambrook (University of Cincinnati)

Title: Environmental Exposure: Susceptibility alleles in a DNA damage response pathway

Dates of Funding: 12/08 – 11/13

Funding Source: National Institutes of Health (1R01 ES016625-01A1)

Award: \$2,537,000

Study Aims: Define genetic changes a signaling pathway that contribute to susceptibility to breast cancer after environmental exposure.

Ancillary Studies: Completed (continued)

Principal Investigator: Stella Davies (Cincinnati Children's Hospital Medical Center)

Title: Prediction Model for Radiation Sensitivity in Children with Cancer

Dates of Funding: 7/09 – 6/11

Funding Source: National Cancer Institute (U01 CA139275-01)

Award: \$410,944

Study Aims: To identify genetic polymorphisms related to BCC following radiation.

Principal Investigator: Lorna Finnegan (University of Illinois at Chicago)

Title: Symptom Cluster Subgroups in Adult Survivors of Childhood Cancer

Dates of Funding: 7/09 – 6/11

Funding Source: National Institutes of Health (R01 CA136912-02)

Award: \$487,066

Study Aims: Identify subgroups using a five-symptom cluster including pain, fatigue, sleep disturbance, psychological stress, difficulty concentrating to determine relations with influencing factors (e.g., cancer type, treatment modality, etc.).

Principal Investigator: Cheryl Cox (St. Jude Children's Research Hospital)

Title: Investigating the needs of childhood cancer survivors: The unreported experience (INSURE)

Dates of Funding: 1/10 – 12/11

Funding Source: National Cancer Institute (R21 CA14292-01)

Award: \$401,603

Study Aims: Evaluate the psychometric and item-response performance of a needs assessment survey; evaluate sample selection participants and response rates to inform future longitudinal needs assessment surveys.

Principal Investigator: Siv Sivaloganathan (University of Waterloo)

Title: Effective estimation of second cancer risks and resultant possible improvements in treatment protocols

Dates of Funding: 4/11 – 3/14

Funding Source: Canadian Institutes of Health Research – NSERC CHRP

Award: \$468,819

Study Aims: To develop predictive models of second cancer risk among adolescent Hodgkin lymphoma patients based on 3-dimensional normal tissue radiation dosimetry.

Principal Investigator: Jean Nakamura (University of California, San Francisco)

Title: Neurofibromin and response to genotoxins

Dates of Funding: 7/12 - 6/15

Funding Source: St. Baldrick's Foundation

Award:

Study Aims: (1) Determine whether loss of heterozygosity in tumor suppressor genes identified in the *Nf1* mutant mouse model occurs in second malignant neoplasms of childhood cancer survivors, and (2) determine whether transcript levels of candidate tumor suppressor genes are reduced in second malignant neoplasms.

Principal Investigator: Karen Effinger (Stanford University)

Title: Longitudinal Evaluation of Health Status in Survivors of Pediatric Astrocytoma

Dates of Funding: 7/14 – 6/15

Funding Source: ASCO Conquer Cancer Foundation Young Investigator Award (YIA)

Award: \$50,000

Study Aims: To evaluate 1) Health status, 2) Chronic Health Conditions and 3) Treatment-related risk factors among survivors of astrocytoma.

Ancillary Studies: Active

Principal Investigator: Lillian Meacham (Emory University)

Title: Testicular and sexual dysfunction in adult survivors of childhood cancer

Dates of Funding: 1/07 – 12/09

Funding Source: Lance Armstrong Foundation

Award: \$199,715

Study Aims: Investigate the psychosexual function of male long-term survivors of childhood cancer to determine the prevalence of and risk factors for physiological and psychological adverse outcomes.

Ancillary Studies: Active (Continued)

Principal Investigator: Elyse Park (Massachusetts General Hospital)

Title: Are Adult Survivors of Childhood Cancer Underinsured?

Dates of Funding: 1/09 – 12/11

Funding Source: Lance Armstrong Foundation

Award: \$240,367

Study Aims: To compare survivor's and sibling's quality of coverage, perceptions of coverage, consequences of inadequate coverage and coverage-related concerns. To examine survivors' and siblings' knowledge regarding relevant legislations.

Principal Investigator: Douglas Ris (Baylor College of Medicine)

Title: Adult Neurobehavioral Late Effects of Pediatric Low-Grade Brain Tumors

Dates of Funding: 6/09 – 4/14

Funding Source: National Institutes of Health (R01 CA132899-01A1)

Award: \$1,827,576

Study Aims: Ascertain the presence, degree and nature of neuropsychological dysfunction in adults treated as children for low grade brain tumors and to investigate accelerated cognitive aging.

Principal Investigator: Melissa Hudson, Cheryl Cox (St. Jude Children's Research Hospital)

Title: Evaluation of Cardiovascular Outcomes Among Childhood Cancer Survivors (ECHOS)

Dates of Funding: 9/09 – 7/13

Funding Source: National Institutes of Health (R01 NR011322-02)

Award: \$2,177,710

Study Aims: Assess the efficacy of the intervention in increasing the rate of CV screening and to identify changes in survivor behavioral characteristics in response to the intervention, their mediating effects on the primary outcome, and the cost-effectiveness of the intervention.

Principal Investigator: Kevin Oeffinger (Memorial Sloan Kettering Cancer Center)

Title: EMPOWER Study: Encourage Mammography and Prevention Opportunities for Women Exposed to Radiation

Dates of Funding: 9/09 – 7/14

Funding Source: National Institutes of Health (R01 CA134722)

Award: \$2,392,669

Study Aims: Determine efficacy of stepwise two-component intervention on mammography rates and explore moderating and mediating factors.

Principal Investigator: Chaya Moskowitz (Memorial Sloan Kettering Cancer Center)

Title: Prediction model: Breast Cancer in Women Irradiated for Pediatric Malignancy

Dates of Funding: 4/10 – 1/14

Funding Source: National Institutes of Health (R01 CA136783)

Award: \$1,630,970

Study Aims: Determine association of dose of chest radiation, additional treatment factors, and traditional breast cancer risk factors associated with risk of breast cancer among childhood cancer survivors, then develop a breast cancer risk prediction tool.

Principal Investigator: Kayla Kamdar (Baylor)

Title: Genetic Susceptibility to Obesity after Treatment for Childhood Leukemia

Dates of Funding: 10/10 – 9/13

Funding Source: Leukemia & Lymphoma Society Translational Research Award

Award: \$600,000

Study Aims: Using genome-wide and candidate pathway analyses, this study aims to identify genetic variants and ultimately key biological pathways that are involved in the development of obesity.

Principal Investigator: Thomas Hardee (Drexel University)

Title: Latent Trajectories of Late Treatment Effects in Pediatric Brain Tumor Survivors

Dates of Funding: 1/11 - 1/13

Funding Source: Oncology Nurse Society Foundation

Award: \$10,000

Study Aims: Identify longitudinal patterns of psychosocial outcomes in adult survivors of childhood brain tumors

Ancillary Studies: Active (continued)

Principal Investigator: David Hodgson (University of Toronto)

Title: Secondary prevention among childhood cancer survivors: a quantitative approach to facilitate the effective use of screening

Dates of Funding: 4/11 – 3/13

Funding Source: POGO: Pediatric Cancer Outcomes Initiative (PCOI)

Award: \$115,140

Study Aims: To quantify the benefit of selected health maneuvers among childhood cancer survivors (early onset breast and colorectal cancer screening, echocardiography) using Markov transition-state models.

Principal Investigator: Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

Title: Diet and insulin resistance in survivors of childhood leukemia

Dates of Funding: 6/11 – 6/14

Funding Source: American Cancer Society (Career Development Award)

Award: \$300,000

Study Aims: 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

Principal Investigator: Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

Title: Diet and insulin resistance in survivors of childhood leukemia

Dates of Funding: 1/14 – 3/16

Funding Source: American Institute for Cancer Research

Award: \$165,000

Study Aims: 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

Principal Investigator: Sogol Mostoufi-Moab (University of Pennsylvania)

Title: Bone Deficits and Excess Adiposity after Pediatric Bone Marrow Transplantation

Dates of Funding: 6/13 – 5/18

Funding Source: National Institutes of Health (K07 CA166177)

Award: \$153,281

Study Aims: Among survivors of HSCT to characterize changes in bone density and structure, body composition and fat distribution, and associated risk factors and outcomes.

Principal Investigator: Alan Geller (Harvard School of Public Health)

Title: Advancing Survivors Knowledge About Skin Cancer (ASK)

Dates of Funding: 5/13 – 4/18

Funding Source: National Institutes of Health (R01 CA175231)

Award: \$4,117,427

Study Aims: (1) Determine the impact of a patient activation and education intervention with and without physician education and teledermatology on skin cancer early detection practices and (2) Determine the impact of patient activation and education on utilization.

Principal Investigator: Emily Tonorezos (Memorial Sloan Kettering Cancer Center)

Title: Diet and insulin resistance in survivors of childhood leukemia

Dates of Funding: 8/14 - 7/19

Funding Source: National Institutes of Health (R01)

Award: \$3,220,769

Study Aims: 1) Determine the effectiveness of a remotely delivered diet and physical activity intervention among obese ALL survivors, 2) Calculate the effect of the diet and physical activity intervention on insulin, leptin/adiponectin, and lipids.

Principal Investigator: Maria Gramatges (Baylor College of Medicine)

Title: Shortened telomere length and defects in telomere maintenance associated with thyroid second malignant neoplasm in childhood cancer survivors

Dates of Funding: 9/15 - 6/19

Funding Source: National Institutes of Health (R01)

Award: \$1,444,716

Study Aims: 1) Determine whether SNPs associated with telomere maintenance are enriched in survivors with thyroid SMN (GWAS), 2) To look at impact of defects in telomere maintenance genes upon telomerase function.

Ancillary Studies: Active (continued)

Principal Investigator: Smita Bhatia (City of Hope)

Title: Developmental HyperActive Ras Tumor SPORE, (Subsequent Malignant Neoplasms among individuals with NF1)

Dates of Funding: 7/15 - 6/20

Funding Source: National Institutes of Health (SPORE)

Award: \$2,300,000

Study Aims: 1) To implement effective targeted molecular therapies for neoplasms and cancers characterized by NF1 mutations by conducting integrated, mechanistically based translational research. 2) To describe risk of SMNs and demographic/therapeutic factors associated with SMNs in individuals with NF1 and primary cancer.

Principal Investigator: I-Chan Huang (St. Jude Children's Research Hospital)

Title: Symptom Progress and Adverse Health Outcomes in Adult Survivors of Childhood Cancer

Dates of Funding: 12/15 - 11/17

Funding Source: National Institutes of Health (R21)

Award: \$489,133

Study Aims: 1) To investigate individual symptom categories and clusters across multiple time points.
2) To investigate the prognostic value of symptoms for developing chronic conditions.

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Improving Cancer Screening Guidelines for Survivors of Childhood Cancer

Dates of Funding: 7/16 - 6/20

Funding Source: American Cancer Society

Award: \$825,000

Study Aims: 1) Develop a microsimulation model of the natural history of late-effects among childhood cancer survivors, 2) Use the model to project the disease burden, in terms of morbidity and mortality, associated with late-effects among treatment-exposure subgroups, and 3) Assess the comparative effectiveness (and cost-effectiveness) of recommended screening strategies for secondary breast and colorectal cancers to improve long-term outcomes among at-risk survivors.

Principal Investigator: Liang Zhu (St. Jude Children's Research Hospital)

Title: New Methods to Address Dilemmas in Mixed Recurrent-event and Panel-count data

Dates of Funding: 7/16 - 6/18

Funding Source: National Institutes of Health (R21)

Award: \$501,312

Study Aims: To develop semi-parametric methods for regression analysis for mixed recurrent-event data with a terminal event and compare them with alternative methods by simulation studies for application to CCSS data.

Principal Investigator: Yan Yuan (University of Alberta)

Title: Risk Prediction Model of Premature Menopause in Childhood Cancer Survivors

Dates of Funding: 7/16 - 12/18

Funding Source: Canadian Institutes of Health Research

Award: \$179,858

Study Aims: To develop a prediction model for early menopause.

Principal Investigator: Eric Chow (University of Washington)

Title: Communicating Health Issues and Improving Coordination with Primary Care (CHIIP Intervention Trial)

Dates of Funding: 3/17 - 2/22

Funding Source: National Institutes of Health (R01)

Award: \$3,720,495

Study Aims: 1) Determine prevalence of under diagnoses and under treatment of traditional cardiovascular risk factors, 2) Randomized controlled intervention to improve risk factors, 3) Determine barriers that lead to under diagnosis and under treatment.

Ancillary Studies: Active (continued)

Principal Investigator: Lennie Wong (City of Hope)

Title: Cost effectiveness of breast cancer screening guidelines for female survivors of pediatric cancers

Dates of Funding: 7/17 - 6/20

Funding Source: American Cancer Society

Award: \$527,000

Study Aims: 1) Examine the cost-effectiveness of 1) annual clinical breast examination, 2) annual breast tomosynthesis vs. MRI as adjunct to mammography.

Principal Investigator: Liang Zhu (University of Texas MD Anderson)

Title: Statistical Analysis for Mixed Outcome Measures in Recurrent Event Studies

Dates of Funding: 8/17-7/19

Funding Source: National Cancer Institute (R03)

Award: \$89,412

Study Aims: Develop a likelihood-based semiparametric estimation method for regression analysis of mixed panel-binary and panel-count data.

Principal Investigator: Kevin Oeffinger (Duke University)

Title: EMPOWER II Intervention Trial: Promoting Breast Cancer Screening in Women Who Survived Childhood Cancer

Dates of Funding: 4/18-3/22

Funding Source: National Institutes of Health (R01)

Award: \$3,072,928

Study Aims: To determine the efficacy of smart phone, text-based patient and physician activation to improve breast MRI and mammography screening rates.

Principal Investigator: Cecile Ronckers (Princess Maxima Center for Pediatric Oncology, Utrecht)

Title: Risk Factors for Female Breast Cancer After Treatment for Childhood and Adolescent Cancer: An Individual Patient Data Analysis

Dates of Funding: 7/18-6/21

Funding Source: Kika Foundation

Award: \$369,763

Study Aims: 1) Establish an internationally pooled and harmonized database for breast cancer outcomes, 2) Answer three questions identified by the International Harmonization Guidelines for risk for subsequent breast cancer including risk <20Gy, and risk associated with anthracycline exposure and attained age >50 years.

Principal Investigator: Lucie Turcotte (University of Minnesota)

Title: Breast Cancer after Treatment for Childhood Cancer

Dates of Funding: 9/18-8/22

Funding Source: National Institutes of Health (K08)

Award: \$714,138

Study Aims: 1) Quantify OS and EFS among CCSS participants with breast cancer and compare with SEER cohort of women with primary breast cancer, 2) Compare prescribed treatment and breast cancer treatment-related toxicity between CCSS participants with breast cancer and a comparison cohort of women with primary breast cancer, 3) Perform semi-structured interviews with medical and radiation oncologists to understand drivers of treatment decision-making, and use responses to create a survey for distribution to medical and radiation oncologists.

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Genetic Testing to Guide Pediatric Cancer Care and Follow-up: Using Anthracycline-Associated Cardiomyopathy as a Model for the Future

Dates of Funding: 8/18 - 8/23

Funding Source: National Institutes of Health (Provocative Questions R01)

Award: \$2,079,924

Study Aims: 1) Determine the clinical utility of a simulation model of cardiotoxicity genetic risk factors in guiding cancer care, 2) Assess how consideration of genetic markers can improve follow-up cardiomyopathy screening recommendations for at-risk survivors.

Ancillary Studies: Active (continued)

Principal Investigator: Elyse Park (Harvard School of Medicine)

Title: Developing a Health Insurance Navigation Program for Childhood Cancer Survivors

Dates of Funding: 1/19-12/21

Funding Source: American Cancer Society

Award: \$720,000

Study Aims: 1) To develop a psychoeducational health insurance navigation program (HINP), 2) To conduct a pilot randomized trial of the HINP, 3) To refine the HINP program for future use.

Principal Investigator: Danielle Friedman (Memorial Sloan Kettering Cancer Center)

Title: Metabolic Syndrome after Total Body Irradiation

Dates of Funding: 1/20- 12/22

Funding Source: American Cancer Society

Award: \$437,000

Study Aims: 1) Determine the relative risk of developing diabetes mellitus, hypertension, dyslipidemia, and obesity in childhood cancer survivors treated with total body irradiation between 1970-1999 (n=571), when compared to: (a) survivors treated with chemotherapy and/or surgery alone (n=5,434) and (b) a sibling comparison group (n=5,059).

Principal Investigator: I-Chan Huang, Justin Baker (St. Jude Children's Research Hospital)

Title: Patient-Reported Outcomes Version of CTCAE Involving Childhood Cancer Survivors

Dates of Funding: 08/19 – 07/24

Funding Source: National Cancer Institute (R01)

Award: \$3,491,488

Study Aims: 1) Conduct a symptom selection process for the PRO-CTCAE specific to survivors of childhood cancer (SCC) by identifying symptomatic adverse events in adult survivors and identifying items not included in the current PRO-CTCAE, 2) Validate the PRO-CTCAE-SCC using psychometric methods and objective clinical parameters, 3) Develop tailored versions of the PRO-CTCAE-SCC (core and target scales) for survivors of different diagnoses exposed to different cancer therapies, and establish meaningful cut-points and minimally important differences (MIDs) on symptom burden scores for clinical decision-making

Principal Investigator: Tara Brinkman, Kevin Krull (St. Jude Children's Research Hospital)

Title: Impact of eHealth intervention for insomnia on late effects of childhood cancer (SLEEPWELL Intervention Trial)

Dates of Funding: 09/19 - 08/24

Funding Source: National Institutes of Health (R01)

Award: \$4,271,243

Study Aims: To assess the impact of insomnia treatment on neurocognitive impairment, symptoms of emotional distress, and indices of cardiovascular health in survivors of childhood cancer.

Principal Investigator: Liang Zhu (University of Texas MD Anderson)

Title: Innovative Statistical Analysis for Genome-Wide Data with Interval-Censored Outcomes of Oral Health

Dates of Funding: 05/20 - 04/22

Funding Source: National Institutes of Health (R03)

Award: \$189,729

Study Aims: Develop nonparametric screening method for ultrahigh-dimensional interval-censored data

Principal Investigator: Tara Henderson (Univ. of Chicago), Angela Bradbury (Univ. of Pennsylvania)

Title: Improving Delivery of Genetic Services to High Risk Childhood Cancer Survivors: A Randomized Study of Remote Genetic Services Versus Usual Care (ENGAGE Intervention Trial)

Dates of Funding: 7/20-6/25

Funding Source: National Institutes of Health (R01)

Award: \$3,415,882

Study Aims: 1) To Evaluate the efficacy of remote telegenetic services (telephone or videoconferencing) compared to usual care to increased uptake of genetic counseling, genetic testing and identification of germline genetic mutation carriers, 2) To evaluate the efficacy of real time video conferencing to provide greater knowledge and recall of results, decrease distress and improved satisfaction with genetic services compared to telephone delivery.

Ancillary Studies: Active (continued)

Principal Investigator: Tara Henderson & Karen Kim (Univ. of Chicago)

Title: Activating Cancer Survivors and their Primary Care Providers to Increase Colorectal Screening (ASPIRES)

Dates of Funding: 3/21-2/26

Funding Source: National Institutes of Health (R01)

Award: \$3,421,337

Study Aims: To compare the efficacy of a remote digital mHealth intervention aimed at either patient activation or patient + physician activation compared to controls on completing recommended screening colonoscopy or multitarget stool DNA testing among childhood cancer survivors at high risk for colorectal cancer due to exposure to abdominal and/or pelvic radiotherapy.

Ancillary Studies: Proposed

Principal Investigator: Monica Gramatges & Kiri Ness (St. Jude Children's Research Hospital)

Title: Biological Mechanisms of Accelerated Aging Evidenced as Frailty in Survivors of Childhood Leukemia

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: To assess the associations between physiologic frailty and telomere length (Aim 1), systemic inflammation (Aim 2), DNA methylation (Aim 3).

Status: Submitted September 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Nicole Alberts, (Concordia University, Montreal)

Title: Treating Chronic Pain After Childhood Cancer: A Digital Health Intervention

Proposed Funding Source: Canadian Institutes of Health Research

Study Aims: To determine whether mHealth-based respiratory feedback plus CBT improves pain control compared to CBT alone or control.

Status: Submitted October 2020, Unscored; Resubmission planned for October 2021.

Principal Investigator: Irene Su (University of California San Diego)

Title: A SMART approach to increasing reproductive health care in female young adult survivors of childhood cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: To evaluate the efficacy of a mobile-friendly, individualized reproductive health survivorship care plan (SCP-R) for increasing rates of fertility, family planning, and/or preconception counseling among female young adult survivors of childhood cancer who are experiencing a reproductive health need.

Status: Submitted March 2019, unscored; Resubmitted January 2020, scored 26th percentile; New Submission R01 October 2020. Scored 47; Resubmission planned for July 2021.

Principal Investigator: Chaya Moskowitz (Memorial Sloan Kettering), Kevin Oeffinger (Duke University)

Title: Evaluation of Breast Imaging of Childhood, Adolescent, and Young Adult Survivors Treated with Chest Radiation

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Characterize qualitative and quantitative imaging features and radiologists' performance on mammography and breast MRI in women with a history of chest radiation therapy for a childhood, adolescent, or young adult cancer, and 2) Develop models to predict breast cancer risk among women with a history of chest radiation therapy for a childhood, adolescent, or young adult cancer.

Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Harry Ostrer (Albert Einstein University)

Title: Robust Genetic Predictors of Subsequent Neoplasm Risk

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) To identify the magnitude of germline defects in the double strand break (DSB) repair and mismatch repair (MMR) pathways in survivors of childhood cancer by cancer type and treatment exposures using flow variant assays (FVAs), and 2) To identify the prevalence of DNA repair defects in SN and adjacent normal tissues in survivors of childhood cancer by cancer type and radiotherapy exposure using whole genome sequencing (WGS).

Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Ancillary Studies: Proposed (continued)

Principal Investigator: Sophia Smith (Duke University)

Title: Integrating Technological Approaches for Pain Management in Adult Survivors of Childhood Cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Determine the efficacy of a digital health intervention to reduce pain symptoms among adult survivors of childhood cancer, 2) Evaluate the interaction effect of mobile neurofeedback + CBT compared to mobile neurofeedback on pain outcomes, and 3) Identify moderators (e.g., participant characteristics, depression, anxiety, PTSD,) and mediators (e.g., self-efficacy) of intervention effects on pain outcomes.

Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Eric Chow (University of Washington)

Title: Study of Active Lifestyle Activation (SALSA Intervention Trial)

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: Use a sequential multiple assignment randomized trial (SMART) design to improve physical activity and diet.

Status: Submitted October 2020, Score 23; Possible resubmission planned for July 2021.

Principal Investigator: Jennifer Yeh (Harvard University)

Title: Estimating the Clinical Outcomes and Cost-Effectiveness of Preventive Medicines to Reduce Secondary Cancers and Cardiovascular Disease in Childhood Cancer Survivors

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Assess the clinical benefits, harms and harm-benefit tradeoffs of early initiation of tamoxifen to prevent breast cancer at age 25 or 5 years from time of risk recognition, 2) Evaluate the clinical benefits, harms and harm-benefit tradeoffs associated with aspirin for CRC prevention in at-risk survivors starting at younger ages, and 3) Estimate the clinical benefits and harms associated with early initiation of aspirin for CVD and CRC prevention in at-risk survivors starting at younger ages.

Status: Submitted October 2020, score 38; Resubmission planned for July 2021.

Principal Investigator: Claire Snyder (Johns Hopkins University), Paul Nathan (Hospital for Sick Kids, Toronto)

Title: Managing Comorbid Conditions in Childhood Cancer Survivors: Communication, Coordination, and Continuity

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) To describe patterns of physician visits (number of visits, types of provider specialties visited) among childhood cancer survivors with medium or greater comorbidity burden, overall and by insurance type, 2) To evaluate the quality of communication, coordination, and continuity of care received by childhood cancer survivors with medium or greater comorbidity burden, overall and by insurance type, and 3) To obtain the perspectives of childhood cancer survivors and their providers regarding the management of comorbidities, including appropriate roles and responsibilities for patients, PCPs, oncology specialists, and other specialists.

Status: Submitted October 2020, score 33; Resubmission planned for July 2021.

Principal Investigator: Kiri Ness (St. Jude Children's Research Hospital)

Title: Autonomic Dysfunction in Survivors of Childhood Cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: Enumerate the prevalence of cardiac autonomic dysfunction in childhood cancer survivors compared to siblings. We hypothesize that childhood cancer survivors will have a higher prevalence of cardiac autonomic dysfunction compared to siblings.

Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Rebecca Howell (MD Anderson), Dan Mulrooney (St. Jude Children's Research Hospital)

Title: Risk Prediction for Late Onset Cardiac Disease

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: Develop a prediction model for cardiac outcomes using cardiac substructures

Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Cindy Im (University of Alberta)

Title: Survivor Polygenic Risk Scores

Proposed Funding Source: National Institutes of Health (R21)

Study Aims: Create a reference TX-G Effects Catalog for a range of treatments and cardiovascular phenotypes among childhood/AYA cancer survivors.

Status: Submitted October 2020, scored 19; possible Resubmission planned for July 2021 if not funded.

Ancillary Studies: Proposed (continued)

Principal Investigator: Van Nghiem (University of Alabama School of Medicine)
Title: Cost Effectiveness of Colorectal Cancer Screening
Proposed Funding Source: National Institutes of Health (R21)
Study Aims: Evaluate the cost effectiveness of colorectal cancer screening.
Status: Submitted October 2020, unscored; Resubmission planned for July 2021.

Principal Investigator: Liang Zhu (MD Anderson)
Title: Integration of dental conditions in public genetic compendiums with data infrastructure development and in vitro follow-up.
Proposed Funding Source: National Institutes of Health (R21)
Study Aims: Discover variants and genes associated with periodontitis and loss of teeth using SJLIFE and the UK Biobank as two independent discovery cohorts. Validate associations discovered in Aim 1 using the independent CCSS cohort.
Status: Submitted October 2020 unscored; Resubmission planned for July 2021.

Principal Investigator: Chaya Moskowitz (Memorial Sloan Kettering) & Tara Henderson (University of Chicago)
Title: International Study of Subsequent Colorectal Cancer Among Survivors of Childhood, Adolescent, and Young Adult Cancers (I-SCRY)
Proposed Funding Source: National Institutes of Health (R01)
Study Aims: Evaluate the risk and risk factors for colorectal cancer.
Status: Submitted March 2021, unscored; Resubmission planned for July 2021.

Principal Investigator: Xu Ji (Emory University)
Title: Understanding the impact of the Affordable Care Act on Healthcare Coverage, utilization and Outcomes Among Survivors of Childhood Cancer
Proposed Funding Source: National Institutes of Health (R03)
Study Aims: Linkage with national Medicaid data to evaluate how the Affordable Care Act Medicaid expansion affects insurance coverage, health service utilization, and mortality for adult survivors of childhood cancer.
Status: Submitted February 2021.

Principal Investigator: Nicole Alberts, (Concordia University, Montreal)
Title: Internet-delivered cognitive-behaviour therapy for chronic pain in survivors of childhood cancer
Proposed Funding Source: SickKids Foundation New Investigators Research Grant
Study Aims: 1) Examine the feasibility and acceptability of internet-delivered cognitive behavioral therapy (ICBT) for chronic pain among adult survivors of childhood cancer, 2) Measure the effect of ICBT on reducing pain-related disability immediately post-treatment among adult survivors of childhood cancer with chronic pain, 3) Measure the effect of ICBT on reducing pain severity, depression, anxiety, fear of cancer recurrence, and health-related quality of life (HRQOL) among adult survivors of childhood cancer who have chronic pain.
Status: Submitted April 2021.

Ancillary Studies: Unfunded

Principal Investigator: Melissa Hudson (St. Jude Children's Research Hospital)
Title: Promoting Health Monitoring After Childhood Cancer
Proposed Funding Source: National Institutes of Health
Study Aims: Conduct a randomized trial to test generic health risk promotion versus tailored health risk promotion with proactive counseling to increase the rate of successful screening according to risk-based recommendations.

Principal Investigator: Debra L. Friedman (Fred Hutchinson Cancer Research Center)
Title: A Web-Based Approach to Familial Cancer Risk
Proposed Funding Source: Lance Armstrong Foundation
Study Aims: Develop and test a web-based strategy for the investigation of familial cancers and second cancer risks among pediatric cancer survivors.

Principal Investigator: Jin-Shei Lai (Northwestern University)
Title: Cancer Fatigue Monitoring from Childhood into Adulthood
Proposed Funding Source: National Institutes of Health (Application submitted to RFA)
Study Aims: Development of a valid, lifespan assessment of fatigue.

Ancillary Studies: Unfunded (continued)

Principal Investigator: Anne Lown (San Francisco State University)

Title: Alcohol Consumption Among Childhood Cancer Survivors

Proposed Funding Source: National Institutes of Health (K07 application)

Study Aims: Describe the prevalence and risk factors for survivors and sibling drinking and health-risk behaviors over time.

Principal Investigator: Craig Lustig (Children's Cause for Cancer Advocacy)

Title: Childhood Cancer Survivor Study Partners

Proposed Funding Source: National Institutes of Health (Application submitted for RFA)

Study Aims: Establish a formal collaboration between an informed, responsible core of CCSS participants and investigators.

Principal Investigator: Andrea Patenaude (Dana Farber Cancer Institute)

Title: Understanding Genetic Medicine: Towards a Guide for Survivors

Proposed Funding Source: Lance Armstrong Foundation

Study Aims: To evaluate the potential genetic factors that may modify risk for adverse late effects in childhood cancer survivors.

Principal Investigator: Qian Lu (UCLA)

Title: A Longitudinal Study of Pain in Long-term Survivors of Childhood Cancer

Proposed Funding Source: Lance Armstrong Foundation

Study Aims: To determine the potential impact of chronic pain on overall quality of life among cancer survivors.

Principal Investigator: Richard Sposto (Children's Hospital Los Angeles)

Title: Statistical Models for Risk/Benefit Analysis of Targeted Treatment Strategies in Childhood Cancer

Proposed Funding Source: National Institutes of Health (R21)

Study Aims: Statistical/methodological research addressing issues of acute toxicities and long-term sequelae of therapy, potentially providing new approaches for predicting the potential treatment-specific risks within pediatric cancer survivor populations.

Principal Investigator: Whitney Witt (University of Wisconsin)

Title: The Impact of Childhood Cancer Survivorship on Parental Psychosocial Outcomes, Health, and Aging

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: Identify the factors related to poor psychosocial outcomes (stress and family burden) among parents of long-term survivors of childhood cancer.

Principal Investigator: Jaya Satagopan (Memorial Sloan-Kettering Cancer Center)

Title: Evaluation of Statistical Interactions in Cancer Epidemiology Studies

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: To expand upon previous work and develop novel methods for evaluating interactions through investigating parametric link functions, shrinkage methods, and removable interactions, with subsequent software development.

Principal Investigator: Richard Sposto (Children's Hospital Los Angeles)

Title: Personalized Therapeutic Decision-making for Childhood Cancer

Proposed Funding Source: Patient-Centered Outcomes Research Institute (PCORI)

Study Aims: Statistical/methodological research addressing issues of acute toxicities and long-term sequelae of therapy, potentially providing new approaches for predicting the potential treatment-specific risks within pediatric cancer survivor populations.

Principal Investigator: Javier Blanco (University of Buffalo)

Title: Characterization of Cardiac Mitochondrial DNA in Donors with Down Syndrome

Proposed Funding Source: National Institutes of Health (K03)

Study Aims: To understand the specific alterations in cardiac mitochondrial DNA among individuals with and without Down Syndrome to inform future avenues of research to identify those factors associated with cardiotoxicity.

Principal Investigator: Smita Bhatia (City of Hope) and Yutaka Yasui (University of Alberta)

Title: Genetic predisposition to non-malignant adverse events in survivors of Pediatric Hematological Malignancies

Proposed Funding Source: Leukemia and Lymphoma Society

Study Aims: 1) Identify germline variants associated with cognitive deficits, CHF, CAD, stroke, ovarian failure, and hypothyroidism, 2) Examine role of gene-environment interactions, 3) Replication of top SNPs

Ancillary Studies: Unfunded (continued)

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Refining risk-based follow-up guidelines to improve childhood cancer survivorship

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Develop a childhood cancer survivor policy model, 2) Identify risk subgroups for identifying lifelong burden of disease

Principal Investigator: Kenneth Offit (Memorial Sloan Kettering Cancer Center) and Charles Mullighan (St. Jude)

Title: Genetic Susceptibility to Acute Lymphoblastic Leukemia

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: (1) To identify novel ALL susceptibility genes using massively parallel sequencing of familial ALL kindreds, (2) To identify underlying genetic susceptibility factors for the development of second and subsequent cancers in ALL, and (3) To determine the extent to which germline deleterious variants contribute to sporadic ALL.

Principal Investigator: Sabine Mueller (University of California San Francisco)

Title: Stroke in Survivors of Childhood Cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Direct MRI assessment of large/small vessel stroke, 2) Prevalence and factors for microbleeds

Principal Investigator: Alan Geller (Harvard School of Public Health)

Title: Advancing Skin Cancer Screening Practices among Survivors of Childhood Cancer and Skin Cancer (ASK2)

Proposed Funding Source: National Institutes of Health, RO1

Study Aims: Among 450 CCSS participants with a diagnosis of skin cancer, determine the impact of a Patient Activation and Education intervention (PAE) (tailored print materials, text messages, and tailored phone calls) compared with generic print materials and text messages on skin cancer early detection and prevention practices measured at 6 and 12 months.

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

Proposed Funding Source: Alex's Lemonade Stand Foundation

Study Aims: Evaluate how genetic testing may improve risk stratification

Status: Submitted December 2015, unfunded

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

Proposed Funding Source: NIH R01

Study Aims: Evaluate how genetic testing may improve risk stratification

Status: Submitted February 2016, unfunded

Principal Investigator: Elyse Park (Harvard School of Medicine)

Title: Understanding and improving health insurance coverage experiences of childhood cancer survivors

Proposed Funding Source: American Cancer Society

Study Aims: 1) Examine longitudinal changes in health insurance coverage following implementation of the ACA, 2) Examine health insurance challenges

Status: Scored Excellent, Resubmission May 2016, unfunded

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

Proposed Funding Source: Collaborative Pediatric Cancer Research Award

Study Aims: Evaluate how genetic testing may improve risk stratification

Status: Submitted January 2017, Unfunded

Principal Investigator: David Brenner and Sally Amundson (Columbia University)

Title: Validation of interactome-based biomarkers of inherited susceptibility to radiation-induced carcinogenesis

Proposed Funding Source: NIH U01

Study Aims: To determine if the pattern of master regulator genes underlying the susceptibility to radiation-induced cancer in an Israeli cohort will be broadly generalizable to radiation-associated second cancers occurring in survivors of childhood cancer.

Status: Unfunded

Ancillary Studies: Unfunded (continued)

Principal Investigator: Tara Henderson (Univ. of Chicago)/Angela Bradbury (Univ. of Pennsylvania)

Title: Return of Genomic Results to Research Participants

Proposed Funding Source: National Institutes of Health R01

Study Aims: To evaluate the uptake of web-based education and return of genomic results

Status: Submitted February 2016, 50th percentile. Resubmitted October 2016, Unfunded

Principal Investigator: Jennifer Yeh (Harvard School of Medicine)

Title: Identifying opportunities to Improve Childhood Cancer Survival with Genetic Testing

Proposed Funding Source: Pablove Foundation Grant

Study Aims: Evaluate how genetic testing may improve risk stratification

Status: Submitted April 2017, Unfunded

Principal Investigator: Flora van Leeuwen (Netherlands Cancer Institute)

Title: Molecular markers to improve treatment-related accelerated aging in relation to late effects among survivors of Hodgkin lymphoma

Proposed Funding Source: Dutch Cancer Society

Study Aims: Assess whether telomere length and genetic variants linked with longevity and telomere length are associated with risk of developing multiple SMNs and cardiac events.

Status: Submitted March 2017, Unfunded

Principal Investigator: Kathy Ruble (John Hopkins University)/Lee Ritterband (University of Virginia)/Kevin Krull (St. Jude Children's Research Hospital)

Title: eHealth Insomnia Intervention in Childhood Cancer Survivors: Impact on Long-Term Complications

Proposed Funding Source: NIH R01

Study Aims: To assess the impact of insomnia treatment on neurocognitive impairments in childhood cancer survivors and the impact of insomnia treatment on anxiety, depression, fatigue, and indices of cardiovascular health in CCS.

Status: Submitted November 2016, Unscored

Principal Investigator: Liang Zhu (University of Texas Health Science Center)

Title: Analyzing Cancer Studies with Complex Recurrent Event Outcomes

Proposed Funding Source: NIH R01

Study Aims: To develop semi-parametric methods for basic regression analysis (Aim 1), to address complex features of analysis (Aim 2) and for high/ultra-high-dimensional (Aim 3) mixed recurrent event data.

Status: Submitted June 2017, Unscored

Principal Investigator: Todd Gibson/Kiri Ness (St. Jude Children's Research Hospital)

Title: Prevalence and Risk of Frailty in Survivors of Childhood Cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) To determine the prevalence of frailty and pre-frailty, 2) To identify associations between treatment exposures and frailty, and 3) To evaluate associations with quality of life.

Status: Submitted October 2017, 33rd percentile score; Resubmitted, 29th percentile score; Submitted as new R01, August 2018, Unscored

Principal Investigator: Philip Lupo (Baylor College of Medicine)

Title: Developing a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus among Survivors of Childhood Cancer

Proposed Funding Source: V Foundation

Study Aims: To develop a Clinical and Genetic Risk Prediction Model for Diabetes Mellitus

Status: Submitted October 2018, Unfunded

Principal Investigator: Stephanie Dixon (St. Jude Children's Research Hospital)

Title: Long-term outcomes of survivors of childhood Acute Lymphoblastic Leukemia (ALL) across 30-years of treatment: a report from the Childhood Cancer Survivor Study

Proposed Funding Source: Conquer Cancer, Career Development Award

Study Aims: To evaluate late mortality, SMNs and chronic health conditions in survivors of childhood ALL by treatment exposure group and era.

Ancillary Studies: Unfunded (continued)

Principal Investigator: James Bates (University of Florida)

Title: Influence of Radiotherapy Dose to Cardiac Substructures on Cardiac Risk in Long-Term Survivors.

Proposed Funding Source: Conquer Cancer, Career Development Award

Study Aims: Develop a heart phantom to include cardiac substructures (including, but not limited to, the left ventricle, right ventricle, left atrium, right atrium, valvular structures, and coronary arteries) such that mean and maximum doses can be calculated for those substructures.

Principal Investigator: Wendy Cozen (University of Southern California)

Title: The Immunobiology of Long-Term Survival in Twins Discordant for Childhood Cancer

Proposed Funding Source: National Institutes of Health (R01)

Study Aims: 1) Define immunologic alterations associated with pediatric leukemia / lymphoma survivorship (encompassing the cancer and its treatment by quantifying 16 systemic biomarkers of immune activation and inflammation in pediatric cancer survivors and their unaffected identical co-twins as controls. 2) Determine whether pediatric survivors have accelerated epigenetic aging compared to their unaffected twins, 3) Determine whether the gut microbiome is adversely altered in survivors.

Principal Investigator: Eileen Dolan (University of Chicago)

Title: GWAS for discovery of genetic associations with tinnitus and hearing loss

Proposed Funding Source: National Institutes of Health (R21)

Study Aims: To identify genetic variation associated with cisplatin-induced ototoxicity in the Platinum Study and de novo ototoxicity in CCSS and eMERGE cohorts using genome-wide SNP- and gene-level (PrediXcan) analyses and meta-analyses.

Principal Investigator: Matt Ehrhardt/Melissa Hudson (St. Jude Children's Research Hospital)

Title: Evaluation of Cardiovascular Health Outcomes among Survivors Study II

Proposed Funding Source: National Institutes of Health (U01)

Study Aims: 1) Determine the effectiveness of a smartphone-based patient activation intervention and PCP activation on completion of echocardiogram screening.

Principal Investigator: James Bates (Emory University)

Title: Radiation Dose to Cardiac Substructures and Risk for Cardiotoxicity in Long-Term Survivors

Proposed Funding Source: Andrew McDonough B+ Foundation

Study Aims: Refine the heart model of current CCSS age-specific computational phantoms by defining cardiac substructures (i.e., left ventricle, right ventricle, left atrium, right atrium, cardiac valves, and coronary arteries) and compute the mean and maximum doses for each structure.

Status: Submitted October 2020.

Statistical Center Project List

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Submitted and Draft Manuscripts					
Internal	Impact of the COVID-19 pandemic on a large cohort of adult survivors of childhood cancer	Kevin Krull/Greg Armstrong	Pam	Wendy	Minor revisions for PBC
19-13	Neurocognitive Functioning, Emotional Status and Quality of Life among Asian/Pacific Islander Childhood Cancer Survivors	Satomi Sato	Nan Li	Yutaka	Submitted
18-20	Incidence of and Risk Factors for Late End Stage Renal Disease	Bryan Dieffenbach	Qi	Yutaka	Reviewed. Working on responses.
15-16	Human papillomavirus (HPV)-associated malignancies as second cancers in childhood cancer survivors: a report from the Childhood Cancer Survivor Study	Tara Henderson	Jillian	Wendy	Submitted
19-08	Lung Cancer as a Subsequent Malignant Neoplasm	Taumoha Ghosh	Yan Chen	Yutaka	Submitted
Internal	Radiation Therapy Related Cardiovascular Risk in Childhood Cancer Survivors: Updated Analysis of the Childhood Cancer Survivor Study	Suman Shrestha/Rebecca Howell	Qi	Yutaka	Reviewed. Working on responses
09-15	Genitourinary outcomes in childhood cancer survivors	Margarett Shnorhavian	Pam	Wendy	Draft manuscript
18-14	Long-term outcomes among survivors of childhood acute myeloid leukemia	Lucie Turcotte	Jillian	Wendy	Draft manuscript
17-13	Infertility, assisted reproductive technology utilization and pregnancy outcomes (CCSS and SART)	Kimberly Keefe	Kayla	Wendy	Draft manuscript
19-07	Thirty-Five Year Follow-Up of Childhood Wilms Tumor: Impact of Treatment Era on Long-Term Health Outcomes	Brent Weil	Qi	Yutaka	Draft manuscript
17-11	Breast Cancer Risk in the Modern Treatment Era	Tara Henderson	Qi	Yutaka	Draft Manuscript
14-22	Characteristics of the Expanded Childhood Cancer Survivor Study Cohort: 5-Year Survivors Diagnosed from 1970-1999	Ann Mertens/Wendy Leisenring	Jillian/Kayla	Wendy	Draft manuscript
18-07	Changes in Long-Term Outcomes in Neuroblastoma Survivors Treated with Contemporary Therapies	Danielle Friedman	Pam	Wendy	Draft manuscript
16-15	Incidence, Predictors and Impact of Hearing Impairment	Austin Brown	Kristy	Wendy	Draft manuscript
18-01	Self-Reported Neuropsychological Outcomes in Adult Survivors of Neuroblastoma	Caroline Hesko	Wei Lu	Kumar	Draft manuscript
19-11	Predictors of Neurocognitive and Psychosocial Outcomes in Long-Term Survivors of Hodgkin Lymphoma	AnnaLynn Williams	Seidi/Mengqi	Kumar	Draft manuscript
18-18	Determinants of Longitudinal Health-related Quality of Life Change	Maritza Ruiz/ I-Chan Huang	Yan Chen	Yutaka	Draft manuscript

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Submitted & Draft Manuscripts (continued)					
19-23	Development and validation of a prediction model for end-stage renal disease	Natalie Wu	Yan Chen	Yutaka	Draft manuscript
20-09	Financial Hardship in Survivors of Childhood Cancer and their Siblings: Overview paper	Paul Nathan	Yan Chen	Yutaka	Draft manuscript
19-19	Genetic determinants of posttraumatic stress disorder in pediatric cancer survivors	Donghao Lu/ Chris Recklitis	Kayla	Donghao/Wendy	Draft manuscript
15-01	Using the Cumulative Illness Rating Scale to characterize the burden of chronic conditions	Adam Esbenshade	Kiri/Lu Lu	Kiri / Wendy	Draft Manuscript
14-18	Cognitive and academic difficulties in survivors of head/neck rhabdomyosarcomas	Bob Hayashi	Wei Liu	Kumar	Manuscript in preparation
05-06	Risk of Increased Morbidity and Mortality in Underweight Survivors	Emily Tonorezos/Lillian Meacham	Wendy	Chaya	Manuscript in preparation
16-17	CCSS: Psychological distress, functional dependence and neurologic morbidity among adult survivors of childhood cancer treated with CNS-directed therapy	Tara Brinkman	Chenghong Li	Kumar	Manuscript in preparation
17-16	Genetic Architecture of Diabetes Mellitus in Long-term Survivors of Childhood Cancer	Nisha Rathore/Philip Lupo	Kayla	Local/Wendy	Manuscript in preparation
18-08	Mental health outcomes in adult survivors of childhood acute lymphoblastic leukemia treated with chemotherapy-only	Caleb Nannes	Kayla	Wendy	Manuscript in preparation
20-01	Risk factors for and outcomes of late amputation among survivors of childhood lower extremity sarcoma: a report from the childhood cancer survivor study	Erik Geiger	Wei	Kumar	Manuscript in preparation
19-22	Cognitive aging in adult survivors of childhood cancer	Nicholas Phillips	Kayla	Wendy	Manuscript in preparation
19-10	Long-term Burden of Major Surgical Procedures	Bryan Dieffenbach	Qi	Yutaka	Manuscript in preparation
19-03	Physical Functioning and Chronic Health Conditions in Pediatric ALL and NHL survivors treated with contemporary therapy	Carmen Wilson	Geehong	Kiri	Manuscript in preparation
20-02	Disparities in Cardiovascular Outcomes among Childhood Cancer Survivors	David Noyd	Nan Li	Yutaka	Manuscript in preparation
Analyses Ongoing					
13-05	Breast Cancer in Childhood Cancer Survivors: The impact of screening on morbidity	Tara Henderson	Chaya	Wendy	Analyses ongoing.
14-03	Estimating the burden of disease associated with late effects among childhood cancer survivors	Jennifer Yeh	Wendy/Pam	Jennifer Yeh/Harvard Statistician	Data sent. Paper 1 accepted, Add'l papers in analysis
12-14	Cost Effectiveness of Breast Cancer Screening Guidelines for Female Survivors	Lennie Wong	Yan Chen	Yutaka/Wendy	Data sent. Abstracts for 2021.
15-04	Risk of breast and thyroid cancer after radiotherapy for Hodgkin's Lymphoma: Can reconstructed dosimetry data be used to predict secondary malignancies	David Hodgson	Pam	Wendy	Data sent. Analyses ongoing.

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Analyses Ongoing (continued)					
13-01	Pooled International Study of Radiation related Tumors of the Brain and Nervous System	Peter Inskip / Lene Veiga	NCI statisticians	Pam	Sent data
15-11	Use of an incentive to increase biologic sample (Oragene) participation	Aaron McDonald	Mingjuan Wang	Kumar	Analyses complete
16-11	Neurocognitive functioning in survivors of osteosarcoma	Nina Kadan-Lottick	Mingjuan Wang	Kumar	Analyses complete
17-18	Associations between special education services, educational attainment, and chronic health conditions	Lisa Bashore	Chenghong Li	Kumar	Analyses complete
18-03	Temporal trends in late-onset morbidity and mortality in rhabdomyosarcoma survivors	Pooja Hingorani	Mingjuan Wang	Kumar/Kiri	Analyses ongoing
18-19	Analysis of Genetic Variants from Candidate Anthracycline-responsive Genes in iPSC-Cardiomyocytes as Predictors of Cardiotoxicity	Monica Reyes	Kayla	Wendy	Phenotype data sent
18-09	Health care utilization by survivors of childhood cancer	Valerie Arsenault	Weiyu	Yutaka	Analyses complete
18-11	The impact of chronic conditions on the psychosexual function of adult female survivors	Kari Bjornard	Kiri	Kiri	Analyses ongoing
19-01	GWAS of Modulators of Pregnancy in Long Term Survivors of Pediatric Cancer	Seth Rotz	Pam	Wendy	Phenotype data set sent
18-06	Long term follow-up of Osteosarcoma survivors	Kerri Beckett	Yan Chen	Yutaka	Analyses completed
18-12	Prevalence and predictors of loneliness in young adult survivors of childhood cancer	Ameera Fayad	Mingjuan Wang	Kumar	Analyses ongoing
Ancillary	CCSS + SJLIFE: R21 Grant Analysis: Symptoms progress and adverse health outcomes in adult childhood cancer survivors	Huang I-Chan	Wei Liu	Kumar	Analysis ongoing
19-05	Genetic Susceptibility to Neurocognitive Impairment	Michael Scheurer	Pam	Wendy	Phenotype data set sent
Ancillary	Genetic testing to guide pediatric cancer care and follow up: using anthracycline-associated cardiac toxicity as a model for the future (R01CA227576)	Jennifer Yeh	Kayla	Wendy	Analyses ongoing
19-04	Risk factors for overweight and obesity after childhood acute lymphoblastic leukemia in North America and Switzerland: A comparison of two cohort studies	Claudia Kuehni	Pam	Wendy	Data sent
19-20	Protein-altering variants (PAV) associated with BMI in the general population and their roles in survivors of childhood cancer	Yadav Sapkota	Yadav	Yutaka	Analyses ongoing
19-14	Temporal changes in therapy and neurocognitive outcomes, social attainment, and quality of life in adult survivors of pediatric brain tumors	Ingrid Tonning Olsson/Tara Brinkman		Kumar	Analyses complete
19-15	Temporal Changes in Unemployment of survivors of childhood cancer	Neel Bhatt	Pam	Wendy	Analyses ongoing

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Analyses Ongoing (continued)					
19-16	Influence of Radiotherapy Dose to Cardiac Substructures on Cardiac Risk in Long- Term Survivors of Childhood Cancer	James Bates	Qi	Yutaka	Analyses ongoing
19-17	A genome-wide association study for frailty in adult survivors of childhood cancer	Monica Gramatges	Kiri / Wendy	Wendy	Kiri redoing phenotype
19-21	Developing a clinical and genetic risk prediction model for diabetes mellitus	Melissa Richard / Philip Lupo	Pam	Wendy	Phenotype data sent
19-09	Outcomes of Adult Survivors of Childhood Astrocytoma and Ependymoma Across Three Decades of Diagnosis and Treatment	Kate Rae / Pete deBlank	Mengqi	Sedi/Kumar	Analyses ongoing
Ancillary	Pooled International Study: Risk Factors for Female Breast Cancer After Treatment for Childhood and Adolescent Cancer	Leontin Kremer / Jop Teeppen	Pam	Wendy	Data sent
20-07	Association of Individual and Neighborhood characteristics and adverse outcomes	Carrie Howell	Rik/Carrie	Kiri/Kumar	Analyses ongoing
20-02	Disparities in Cardiovascular Outcomes among Childhood Cancer Survivors	David Noyd	Nan Li	Yutaka	Analyses ongoing
20-10	Neurocognitive Outcomes in Survivors of Early Adolescent and Young Adult Hematologic Cancers	Amy Wang	Yan Chen	Yutaka	Analyses complete
20-20	Progression of Late Medical Effects and Impact on Financial Hardship among Adult survivors of childhood cancer	I-Chan Huang		Yutaka	Analyses ongoing
20-14	Overall and cardiac-specific survival following serious cardiovascular events	Eric Chow	Cindy	Yutaka	Analyses ongoing
20-15	The changing pattern of late mortality as survivors age and the impact of modifiable risk factors and markers of biologic and cognitive impairment on late mortality.	Stephanie Dixon	Qi	Yutaka	Analyses ongoing
20-11	Physical and Psychological Symptom Profiles of Survivors of Childhood Cancer and their Siblings: Links to Health Behaviors and Health Care Utilization "	Rachel Tillery		Kumar	Analyses ongoing
20-16	Late subsequent leukemia after childhood cancer	Lucie Turcotte	Lu Lu	Kiri	Analysis ongoing
20-21	Body Mass Index and Risk of Subsequent Neoplasms	Lenat Joffe	Himani Darja	Sedi	Analysis ongoing
20-24	Risk Prediction of Primary Ovarian Insufficiency in Childhood Cancer Survivors Using Polygenic Risk Scores and Clinical Predictors	Lin Yu	Lin Yu/Cindy Im	Yan Yuan	Analyses ongoing
21-03	Late complications based on local control modalities for childhood pelvic sarcoma	Andrew Murphy	Weiyu	Yutaka	Analyses ongoing
20-25	Does Sex Mediate the Association Between Treatment Exposures and Functional Outcomes?	Rachel Peterson	Yan Chen	Yutaka	Analyses ongoing

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Analyses Ongoing (continued)					
20-17	Long-term cost-effectiveness of cancer predisposition syndrome identification strategies in survivors of pediatric leukemia, brain tumors or bone/soft-tissue sarcomas	Catharine Goudie	Kayla	Wendy	Data set prep
20-18	Efficacy and cost-effectiveness of the COG long-term follow-up screening guidelines for CCS at risk of colorectal cancer	Van Nghiem	Jillian	Wendy	Data set prep - will need more info from Van
20-26	Mortality Due to Colorectal Cancer Among Survivors of Childhood Cancer	Ajay Major	Pam	Chaya/Wendy	Data set prep
21-04	Updated Epidemiology of Secondary CNS Malignancy Following Radiotherapy Exposure in Childhood Cancer Survivors	Robert Galvin	Yan	Yutaka	Analysis ongoing
21-05	Evaluation of Subsequent Meningiomas in Childhood Cancer Survivors	Tabitha Cooney	Yan	Yutaka	Analysis ongoing
Data Management					
	Merging and reconciling SN data from VPR from participating states with CCSS SNs	Greg Armstrong / Aaron McDonald	Jillian	Wendy	Ongoing June 2021
	Created whole cohort treatment and phenotype data sets for uploading to NCI dBGaP	Greg Armstrong	Pam / Jillian / Kayla	Wendy	Nov, 2020, Updates Spring 2021
	Creating radiation data set for SJL survivors also in CCSS	Kiri Ness/ Les Robison	Pam	Wendy	Ongoing June 2021
	Chronic condition coding updated to include SN data from FU6 survey	Kevin Oeffinger	Kayla Stratton	Wendy	Oct, 2020
	Cleaned and froze SN data from FU6 survey	Greg Armstrong / Joe Neglia / Lucie Turcotte	Jillian	Wendy	Aug, 2020
	Created phenotype data set for St Jude Cloud	Greg Armstrong / Kyla Shelton	Pam / Jillian / Kayla	Wendy	March, 2020, Adding survey data June 2021
	Cleaned and froze survey data from FU6 survey	Greg Armstrong / Aaron McDonald	Jillian Whitton	Wendy	Feb, 2020
	Chronic condition coding updated to include mortality data from 2017 NDI	Kevin Oeffinger	Kayla Stratton	Wendy	Jan, 2020
	Format and freeze mortality data from 2017 NDI	Aaron McDonald/Greg Armstrong/Joe Neglia	Jillian Whitton	Wendy	Dec, 2019
	Expansion cohort surgery records data base freeze	Chris Weldon and others	Jillian Whitton	Wendy	May, 2019
	Grading, coding and incorporating chronic conditions reported on FU5 for full cohort	Kevin Oeffinger and others	Kayla Stratton	Wendy	Dec, 2018, updated March 2019
	Update frozen data set on participation for use in Consort diagrams - include new sites, additional surveys	Kayla Stratton	Kayla/Aaron McDonald	Wendy	March, 2019
	Chronic condition coding updated to include baseline data for four new sites	Kevin Oeffinger and others	Kayla Stratton	Wendy	Dec, 2018, updated March 2019

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Data Management (continued)					
	Cleaned and prepared for freezing 4 new site MRAF data, pending final data corrections from sites per error checks	Kayla Stratton / Jillian Whitton	Aaron/Chris	Wendy	Dec, 2018, updated March 2019
	Cleaned and prepared for freezing 4 new site baseline survey data	Jillian Whitton	Aaron/Chris	Wendy	July, 2018
	Cleaned and incorporated SMN data reported through the FU5 survey	Jillian Whitton	Joe/Greg/Lucie	Wendy	May, 2018
	Restructured and documented combined MDA Radiation for both cohorts for distribution from Seattle to other analysts	Pam Goodman	Rebecca / Susan	Wendy	May, 2018
	Developed participation weights for IPW analyses for each survey and for time-to-event analyses	Kayla Stratton	Wendy		Sept, 2017, updated April 2021
	Cleaned and incorporated recently reported SMN data	Jillian Whitton	Joe/Greg/Lucie	Wendy	May, 2017
	Cleaned and freeze data from FU5 survey	Jillian Whitton	Jillian/Wendy	Greg, Aaron, Chris	May, 2017
	New Frozen data set - All expansion, original, siblings, SMN and mortality updates	Jillian Whitton / Kayla Stratton	Pam Goodman	Wendy	Sept, 2016
	Modify and share chronic disease SAS program files and documentation with Bhatia BMTSS	Kayla Stratton	Smita and staff	Wendy	Sept, 2016; May, 2017
	Coding of Expansion Baseline chronic conditions to CTCAE	Kevin Oeffinger and others	Kayla	Wendy	Survivors Completed January 2015, Siblings and Mortality Updated Sept, 2016
	Creation of frozen data set for DNA samples	Stella Davies	Sue Huang/Lu Lu	Kiri	Data Updated - July, 2016
	Validation, Cleaning and Freezing of Expansion Cohort SMN	Greg Armstrong / Joe Neglia	Jillian Whitton	Jillian, Aaron,	Completed April, 2015
	Conversion of SMN data from ICDO-2 to ICDO-3	Greg Armstrong / Joe Neglia	Pam Goodman	Jillian, Wendy	Completed January, 2015
	Cleaning and freezing of expansion mortality data	Greg Armstrong / Joe Neglia	Pam Goodman	Jillian, Wendy	Completed November 2014, Updated April 2015
	Creation of Frozen data sets for baseline expansion	Jillian Whitton	Jillian/Wendy	Sandrine, Pam, Aaron, Chris	Completed November 2014, Updated April 2015
	Creation of Frozen data set for expansion MRAF and MDA RT data	Kayla Stratton	Kayla/Pam/Wendy	Wendy, Aaron, Chris	Completed November 2014, Updated April 2015
	Audit and freeze of audited SMN Data	Jillian Whitton	Joe/Lucie	Wendy	Completed Dec, 2012
	Cleaning of Elyse Park RO1 Insurance Study Data	Elyse Park	Jillian/Chris Vukadinovich	Wendy	Most recent freeze May, 2013
	Created Frozen data through FU2007 data (Q's, Mortality 2007, SMN)	Jillian Whitton	Kiri/Aaron	Wendy	Data frozen, Jan, 2011
	CCSS MHQ data error check	Jillian Whitton/Chris Vukadinovich	Jillian	Kumar/Wendy	Complete.
	Creation of Web based Public Use tables	Jim Gurney	Kayla	Jillian	Complete - Tables on St Jude Website
	"Toolbox" variables creation	Jillian Whitton	Jillian	Pam/Kayla/Kristy	Ongoing

Concept	Project	Investigator	Stat Center Contact	Secondary/Sr. Statistician	Status
Data Management (continued)					
	Cleaned and prepared for freezing 4 new site MRAF data, pending final data corrections from sites per error checks	Kayla Stratton / Jillian Whitton	Aaron/Chris	Wendy	Dec, 2018, updated March 2019
	Cleaned and prepared for freezing 4 new site baseline survey data	Jillian Whitton	Aaron/Chris	Wendy	July, 2018
	Documentation of all data sets	Jillian Whitton	Pam/Kayla	Wendy	Developing comprehensive documentation for Q'naires.
	Creation of Chest RT/ Breast Ca related database	Kevin Oeffinger	Jillian	Wendy	Data set created May, 2010
	Creating frozen data set on participation for use in Consort diagrams	Kayla Stratton	Kayla/Aaron McDonald	Wendy	Survivors and siblings complete.

Childhood Cancer Survivor Study (CCSS)

Presented Abstracts 1997 – 2021

Year	Number
2021	20
2020	20
2019	36
2018	29
2017	20
2016	14
2015	25
2014	18
2013	16
2012	14
2011	13
2010	18
2009	6
2008	25
2007	9
2006	14
2005	12
2004	16
2003	6
2002	17
2001	9
2000	2
1999	6
1998	1
1997	1

2021

A2101 Ponzani C, Armstrong GT, Battaglia TA, Donelan K, Foor A, Ford J, Galbraith A, Kirchhoff AC, Kuhlthau K, Mann K, McDonald A, Park ER, Perez GK, Leisenring W, Waters A. Designing and targeting a health insurance navigation intervention: a report from the Childhood Cancer Survivor Study. Society of Behavioral Medicine Virtual Conference, April 2021, oral presentation.

A2102 Wu NL, Chen Y, Dieffenbach BV, Li N, Ehrhardt MJ, Green DM, Hingorani S, Howell RM, Jefferies JL, Mulrooney DA, Oeffinger KC, Robison LL, Weil BR, Yuan Y, Yasui Y, Hudson MM, Leisenring WM, Armstrong GT, Chow EJ. Development and validation of a prediction model for kidney failure in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2103 Bates JE, Shrestha S, Liu Q, Mulrooney DA, Smith SA, Leisenring WM, Gibson T, Chow EJ, Oeffinger KC, Robison LL, Armstrong GT, Constine LS, Hoppe BS, Lee C, Yasui Y, Howell R. Low dose radiation to cardiac substructures and late onset cardiac disease: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster discussion presentation.

A2104 Beckett K, Chen Y, Yasui Y, Phelan R, Chow EJ, Armstrong GT, Oeffinger KC, Daw NC, Weil B, Weldon C, Schwartz CL. Long-term Follow-up of Survivors of Childhood Osteosarcoma (OS): A Report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021.

A2105 Bhatt NS, Goodman P, Leisenring WM, Armstrong GT, Chow EJ, Hudson MM, Krull KR, Nathan PC, Oeffinger KC, Robison LL, Kirchhoff AC, Mulrooney DA. Health-related unemployment trends among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2106 Bottinor W, Im C, Armenian SH, Hong B, Howell RM, Ness KK, Oeffinger KC, Armstrong GT, Yasui Y, Chow EJ. Overall and cardiac-specific mortality following serious cardiovascular events in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2107 Dixon SB, Liu Q, Ehrhardt MJ, Chow EJ, Oeffinger KC, Mertens A, Nathan PC, Howell RM, Leisenring WM, Krull KR, Ness KK, Hudson MM, Robison LL, Yasui Y, Armstrong GT. Mortality among 5-year survivors of childhood cancer: results over five decades of follow-up in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2021, oral presentation.

A2108 Friedman D, Goodman PS, Leisenring WM, Diller LR, Cohn S, Tonorezos ES, Howell RM, Smith SA, Wolden SL, Neglia JP, Ness KK, Gibson TM, Nathan PC, Robison LL, Oeffinger KC, Armstrong GT, Sklar CA, Henderson TO. Late morbidity and mortality among survivors of neuroblastoma treated with contemporary therapy: A report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2109 Nathan PC, Huang IC, Chen Y, Henderson T, Park E, Kirchhoff AC, Robison LL, Krull K, Leisenring WM, Armstrong GT, Conti R, Yasui Y, Yabroff R. Financial hardship in adult survivors of childhood cancer: A report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster discussion presentation.

A2110 Noyd DH, Li N, Yasui Y, Chow EJ, Bhatia S, Gibson T, Landstrom AP, Gilchrist S, Tonorezos E, Zullig LS, Casillas J, Berkman A, Ness KK, Mulrooney DA, Leisenring WM, Howell C, Shoag J, Kirchhoff A, Howell R, Nathan P, Armstrong GT, Oeffinger KC. Disparities in cardiovascular risk factors by race/ethnicity among adult survivors of childhood cancer: a report from the Childhood Cancer Survivorship Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, oral presentation.

A2111 Phillips NS, Stratton KL, Williams A, Liu W, Ahles T, Ness K, Gibson T, Banerjee P, Yasui Y, Oeffinger KC, Chow EJ, Howell R, Robison LL, Armstrong GT, Leisenring W, Krull KR. Accelerated cognitive decline in adult survivors of pediatric central nervous system (CNS) tumors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2112 Richard MA, Mostoufi-Moab S, Rathore N, Brown AL, Chanock SJ, Friedman DN, Gramatges MM, Howell RM, Kamdar KY, Leisenring W, Meacham LR, Morton LM, Oeffinger K, Robison LL, Sapkota Y, Sklar C, Yasui Y, Armstrong GT, Bhatia S, Lupo PJ. Genetic and treatment risks for diabetes mellitus (DM) in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime (SJLIFE) cohorts. American Society of Clinical Oncology Annual Meeting, June 2021, oral presentation.

A2113 Schulte F, Chen Y, Yasui Y, Leisenring WM, Gibson TM, Nathan P, Oeffinger KC, Hudson MM, Armstrong GT, Robison LL, Krull KR, Huang IC. Predicting decreased health-related quality of life (HRQL) in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, submitted.

A2114 Tonorezos ES, Clark JM, Moskowitz CS, Ford JS, Armstrong GT, Chou J, Mubdi N, McDonald A, Sklar CA, Ramanathan L, Robison LL, Oeffinger KC. Exercise and Quality diet After Leukemia (The EQUAL Study): An intervention trial in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, oral presentation.

A2115 Wang A, Chen Y, Yasui Y, Stock W, Leisenring W, Armstrong GT, Oeffinger KC, Chow E, Krull K, Henderson T. Neurocognitive Outcomes in Survivors of Early Adolescent and Young Adult (eAYA) Hematologic Cancers from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2021, poster discussion presentation.

A2116 Wong FL, Lee JM, Leisenring WM, Neglia JP, Howell RM, Smith SA, Oeffinger KC, Moskowitz CS, Henderson TO, Mertens A, Nathan PC, Yasui Y, Landier W, Armstrong GT, Robison LL, Bhatia S. Efficacy of clinical breast examination (CBE) in chest-irradiated female survivors of childhood Hodgkin lymphoma (HL). American Society of Clinical Oncology Annual Meeting, June 2021, poster discussion presentation.

A2117 Wong FL, Lee JM, Leisenring WM, Neglia JP, Howell RM, Smith SA, Oeffinger KC, Moskowitz CS, Henderson TO, Mertens A, Nathan PC, Yasui Y, Landier W, Armstrong GT, Robison LL, Bhatia S. Efficacy and cost-effectiveness of breast cancer (BC) screening in chest-irradiated survivors of childhood Hodgkin lymphoma (HL). American Society of Clinical Oncology Annual Meeting, June 2021, poster presentation.

A2118 Shrestha S, Bates JE, Liu Q, Smith SA, Mulrooney DA, Gupta AC, Owens CA, Leisenring WM, Gibson T, Chow EJ, Oeffinger KC, Robison LL, Armstrong GT, Constine LS, Hoppe BS, Lee C, Court LE, Kry SF, Yasui Y, Howell R. Relationship between coronary artery radiation doses and risk of late coronary artery disease: a report from the Childhood Cancer Survivor Study (CCSS). American Association of Physicist in Medicine (AAPM) Annual Meeting 2021, July 2021, oral presentation.

A2119 Bates JE, Shrestha S, Liu Q, Smith SA, Mulrooney DA, Leisenring W, Gibson T, Robison LL, Chow EJ, Oeffinger KC, Armstrong GT, Constine LS, Hoppe BS, Lee C, Yasui Y, Howell R. Cardiac substructure dosimetry and late cardiac arrhythmia in the Childhood Cancer Survivor Study (CCSS). European Society of Radiotherapy & Oncology Meeting, August 2021, oral presentation.

A2120 Bates JE, Shrestha S, Liu Q, Smith SA, Mulrooney DA, Leisenring W, Gibson T, Robison LL, Chow E, Oeffinger KC, Armstrong GT, Constine LS, Hoppe BS, Lee C, Yasui Y, Howell R. Impact of cardiac substructure dosimetry on late cardiac risk: a report from the Childhood Cancer Survivor Study (CCSS). American Society for Radiation Oncology, October 2021, submitted.

2020

A2001 Lei S, Wang Z, Szlachta K, Rice SV, Rusch MC, Easton J, Zhou X, Hudson MM, Armstrong GT, Robison LL, Zhang J. The eukaryotic DNA virome in the blood and saliva samples of 7,000 survivors of childhood cancer. St. Jude/PIDS Pediatric Infectious Diseases Research Conference, March 2020, Canceled.

A2002 Zhou X, Bhakta N, Wang J, Sioson E, Patel J, Shelton K, Wang Z, Lei S, Gout AM, Wilson CI, Leisenring W, Bhatia S, Yasui Y, Hudson MM, Armstrong GT, Robison LL, Zhang J. The St. Jude survivorship portal links whole-genome genetic data with clinical therapy and outcome phenotypes for 7302 pediatric cancer survivors. American Association for Cancer Research Annual Meeting, April 2020, poster presentation.

A2003 Alberts NM, Moraveji N, Leisenring W, Flynn JS, Gibson TM, Krull KR, Jibb L, Birnie K, Dear BF, Robison LL, Stinson JN, Armstrong GT. Feasibility and acceptability of a wearable respiration-sensing device for supporting pain management in adult survivors of childhood cancer with chronic pain. Canadian Pain Society Annual Meeting, May 2020, Canceled.

A2004 Morales S, Salehabadi SM, Srivastava S, Gibson TM, Leisenring WM, Lown EA, Zeltzer LK, Armstrong GT, Krull KR, Buchbinder D. Health and cancer concerns among siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2005 Ghosh T, Chen Y, Dietz AC, Armstrong GT, Howell RM, Mulrooney DA, Turcotte LM, Yuan Y, Yasui Y, Neglia JP. Lung cancer as a subsequent neoplasm: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2006 Keefe KW, Lanes A, Stratton K, Green DM, Chow EJ, Oeffinger KC, Barton S, Diller L, Yasui Y, Leisenring WM, Armstrong GT, Ginsberg ES. Assisted reproductive technology outcomes in childhood cancer survivors: a report from the Childhood Cancer Survivors Study. American Society of Clinical Oncology Annual Meeting, May 2020, poster discussion presentation.

A2007 Trendowski MR, Baedke J, Sapkota Y, Charif OE, Wheeler HE, Leisenring WM, Robison LL, Hudson MM, Morton L, Oeffinger KC, Travis LB, Howell RM, Yasui Y, Armstrong GT, Bhatia S, Dolan ME. Clinical and genetic factors for radiation-associated ototoxicity: a report from the Childhood Cancer Survivor Study and the St. Jude Lifetime cohort. American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2008 Chow EJ, Chen Y, Armstrong GT, Baldwin L, Gibson TM, Hudson MM, McDonald A, Nathan PC, Syrjala K, Tonorezos ES, Oeffinger KC, Yasui Y. Underdiagnosis and undertreatment of modifiable cardiovascular risk factors: a Childhood Cancer Survivor Study (CCSS) report. American Society of Clinical Oncology Annual Meeting, May 2020, oral presentation.

A2009 Im C, Li N, Moon W, Morton LM, Leisenring WM, Howell RM, Oeffinger KC, Sklar CA, Wilson CL, Sapkota Y, Ness KK, Hudson MM, Robison LL, Bhatia S, Armstrong GT, Yasui Y. HAGHL genetic variants increase first fracture risk (FFR) in female childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime cohort study (SJLIFE). American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2010 Rodwin RL, Chen Y, Yasui Y, Leisenring WM, Gibson TM, Nathan PC, Howell RM, Krull KR, Mohrmann C, Hayashi RJ, Chow EJ, Oeffinger KC, Armstrong GT, Ness KK, Kadan-Lottick NS. Neuromuscular dysfunction and associated health/socioeconomic outcomes: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2011 Weil BR, Green DM, Murphy AJ, Lui Q, Howell RM, Weldon CB, Mullen EA, Madenci AL, Leisenring WM, Neglia JP, Oeffinger KC, Termuhlen AM, Mostoufi-Moab S, Levine JM, Krull KR, Yasui Y, Robison LL, Armstrong GT, Chow EJ, Armenian S. Treatment intensity and risk of chronic health conditions and late mortality among long-term survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2020, poster presentation.

A2012 Clerkin CM, Armstrong GT, Gibson TM, Skinner K, Engels E, Yu K. Where are we now? Virtual Pooled Registry Cancer Linkage System pilot testing progress. North American Association of Central Cancer Registries Webinar, September 2020, oral presentation.

A2013 Shrestha S, Liu Q, Bates J, Yasui Y, Gupta A, Owens C, Smith S, Weathers R, Lee C, Hoppe B, Leisenring W, Oeffinger K, Constone L, Mulrooney D, Armstrong G, Howell R. Impact of enhanced CT-based heart model on estimating radiation therapy related late-onset cardiac disease in the Childhood Cancer Survivor Study. The Joint AAPM / COMP Joint Meeting, July 2020, poster presentation.

A2014 Alberts NM, Leisenring WM, Whitton J, Krull KR, Flynn JS, Moraveji N, Jibb L, Dear BF, Robison LL, Stinson JN, Armstrong GT. Respiratory monitoring and feedback for chronic pain in adult survivors of childhood cancer: a mobile health pilot study from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, October 2020, poster presentation.

A2015 Henderson TO, Liu Q, Turcotte LM, Oeffinger K, Neglia JP, Leisenring WM, Hodgson D, Diller L, Kenney L, Morton L, Berrington de Gonzalez A, Arnold M, Bhatia S, Howell R, Smith S, Robison LL, Armstrong GT, Yasui Y, Moskowitz CS. Breast cancer risk by treatment era: a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, October 2020, oral presentation.

A2016 Huang I, Ehrhardt MJ, Liu W, Li C, Mulrooney DA, Chemaitilly W, Srivastava D, Armstrong GT, Robison LL, Hudson MM, Krull KR. Longitudinal symptoms predict future clinically assessed chronic health conditions (CHCs) in adult survivors of childhood cancer: a follow-up study over two decades. International Society of Paediatric Oncology Annual Meeting, October 2020, oral presentation.

A2017 Flasch DA, Davis E, Rice SV, Mulder H, Mostafavi R, Wilson CL, Easton J, Nichols KE, Wang Z, Armstrong GT, Yasui Y, Robison LL, Hudson MM, Zhang J. Germline pathogenic structural variants in 8,400 whole genomes of pediatric cancer patients and survivors. American Society of Human Genetics Annual Meeting, October 2020, oral presentation.

A2018 Lee O, Lin S, Luo W, Jones K, Brown DK, Hoover R, Armstrong GT, Bhatia S, Robison LL, Freedman N, Morton L, Chanock S, Delattre O, Grunewald T, Machiela M. Targeted long-read sequencing of the Ewing sarcoma 6p25.1 susceptibility locus identifies polymorphic GGAA microsatellite associated with EWSR1-FLI1 fusion binding. American Society of Human Genetics Annual Meeting, October 2020, oral presentation.

A2019 Kim J, Hartley SW, Kayardi DM, Wang M, Wu D, Song L, Zhu B, Armstrong GT, Bhatia S, Robison LL, Yasui Y, Carter B, Freedman N, Chanock SJ, Morton LM, Savage SA, Stewart DR. Toward understanding inflated type I errors in rare-variant analyses using publicly available sequence resources. American Society of Human Genetics, October 2020, poster presentation.

A2020 Williams A, Xing M, Phillips N, Yasui Y, Ehrhardt MJ, Howell R, Oeffinger K, Gibson T, Chow EJ, Leisenring WM, Mirzaei S, Srivastava DK, Robison LL, Armstrong GT, Krull K. Prevalence and predictors of neurocognitive impairment in long-term survivors of childhood Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Hematology Annual Meeting & Exposition, December 2020, oral presentation.

2019

A1901 Barlow-Krelina E, Chen Y, Yasui Y, Gibson T, Ness K, Leisenring WM, Howell R, Nathan P, Oeffinger KC, Robison LL, Armstrong GT, Krull KR, Edelstein K. Physical activity and neurocognitive outcomes in adult survivors of childhood cancers: a report from the Childhood Cancer Survivor Study (CCSS). International Neuropsychology Society Annual Meeting, February 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1902 Gramatges MM, Aubert G, Hariri E, Chen Y, Whitton JA, Leisenring WM, Arnold MA, Neglia JP, Yasui Y, Robison LL, Armstrong GT, Bhatia S. Shorter naïve T cell telomere length is associated with thyroid subsequent malignant neoplasm: a report from the Childhood Cancer Survivor Study (CCSS). American Association for Cancer Research Annual Meeting, March 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster.

A1903 Wang Z, Chang TC, Wilson CL, Kesserwan CA, Gibson TM, Li N, Easton J, Mulder H, Wu G, Edmonson MN, Rusch MC, Downing JR, Nichols KE, Bhatia S, Armstrong GT, Hudson MM, Zhang J, Yasui Y, Robison LL. Germline mutations in BRCA2 and pediatric/adolescent non-Hodgkin's Lymphoma: a report from the St. Jude Lifetime (SJLIFE) and Childhood Cancer Survivor Study (CCSS) cohorts. American Association for Cancer Research Annual Meeting, March 2019, poster presentation.

A1904 Richard MA, Lupo PJ, Morton LM, Yasui Y, Arnold MA, Neglia JP, Turcotte LM, Leisenring WM, Chanock SJ, Sampson JN, Armstrong GT, Robison LL, Bhatia S, Gramatges MM. A functional POT1 variant and risk of thyroid subsequent malignant neoplasm: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research Annual Meeting, March 2019, poster presentation.

A1905 Howell R, Bates J, Qi L, Hoppe B, Lee C, Smith SC, Oeffinger KC, Constine LS, Leisenring WM, Mulrooney DA, Gibson TM, Armstrong GT, Yasui Y. Effect of heart anatomy on radiation related cardiac risk in the Childhood Cancer Survivor Study. European Society for Radiotherapy & Oncology 38th Meeting, April 2019, oral presentation.

A1906 Arsenault V, Qiu W, Liu Q, Yeh J, Leisenring W, Ness KK, Armstrong GT, Henderson TO, Walsh A, Yabroff KR, Oeffinger KC, Hudson MM, Yasui Y, Nathan PC. Emergency department (ED) visits and hospitalizations in survivors of childhood cancer in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1907 Wang X, Chen Y, Hageman L, Singh P, Landier W, Blanco JG, Hawkins D, Ritchey AK, Ginsberg J, Winick N, Sapkota Y, Morton L, Armstrong GT, Oeffinger K, Hudson MM, Chow EJ, Robison LL, Relling MV, Bhatia S. Risk prediction of anthracycline-related cardiomyopathy (AC) in childhood cancer survivors (CCS): a COG-ALTE03N1 and CCSS report. American Society of Clinical Oncology Annual Meeting, June 2019, oral presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1908 Friedman DN, Goodman PS, Leisenring WM, Diller LR, Cohn S, Tonorezos ES, Howell RM, Smith SA, Wolden SL, Neglia JP, Ness KK, Gibson TM, Nathan PC, Robison LL, Oeffinger KC, Armstrong GT, Sklar CA, Henderson TO. Long term morbidity and mortality among survivors of infant neuroblastoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1909 Dieffenbach BV, Li N, Madenci AL, Barnea D, Murphy AJ, Tonorezos ES, Gibson TM, Liu Q, Yasui Y, Leisenring WM, Howell RM, Diller LR, Armstrong GT, Oeffinger KC, Weldon CB, Weil BR. Late cholecystectomy in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1910 Dixon SB, Chen Y, Yasui Y, Pui C, Hunger S, Silverman L, Green D, Kadan-Lottick N, Ness KK, Leisenring W, Howell RM, Oeffinger K, Neglia J, Krull KR, Hudson MM, Robison LL, Mertens A, Armstrong GT, Nathan P. Chronic health conditions (CHC) and late mortality in survivors of Acute Lymphoblastic Leukemia (ALL) in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, oral presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1911 Ehrhardt MJ, Ward ZJ, Liu Q, Chaudhry A, Nohria A, Border W, Robison LL, Armstrong GT, Yasui Y, Hudson MM, Diller LR, Armenian SH, Yeh JM. Cost-effectiveness of screening guidelines to prevent heart failure in childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation. International Society of Paediatric Oncology Annual Meeting, October 2019, oral presentation.

A1912 Fidler MM, Oeffinger KC, Yasui Y, Winter DL, Leisenring W, Robison LL, Reulen RC, Chen Y, Armstrong GT, Hawkins MM. Comparing late mortality risks among childhood cancer survivors: a report from the Childhood Cancer Survivor Study and British Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, oral presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1913 Hayek S, Gibson TM, Leisenring WM, Guida JL, Gramatges MM, Lupo PJ, Howell RM, Oeffinger KC, Bhatia S, Edelstein K, Hudson MM, Robison LL, Nathan PC, Yasui Y, Krull KR, Armstrong GT, Ness KK. Frailty among childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1914 Hesko C, Liu W, Srivastava D, Brinkman TM, Diller L, Gibson TM, Oeffinger KC, Leisenring W, Howell RM, Armstrong GT, Krull KR, Henderson TO. Neurocognitive outcomes in adult survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1915 Hingorani P, Wang M, Srivastava K, Nathan P, Oeffinger K, Yasui Y, Leisenring W, Howell R, Mueller E, Gibson T, Wolden S, Bjornard K, Meyer WH, Arndt C, Robison LL, Green D, Armstrong GT, Ness KK. Temporal trends among survivors of rhabdomyosarcoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation.

A1916 Morton LM, Karyadi DM, Hartley S, Frone M, Sampson JN, Howell R, Neglia JP, Arnold MA, Dagnall CL, Hicks B, Jones K, Zhu B, Leisenring WM, Yasui Y, Berrington de González A, Bhatia S, Robison LL, Tucker MA, Armstrong GT, Chanock SJ. Subsequent neoplasm risk associated with rare variants in DNA repair and clinical radiation sensitivity syndrome genes: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1917 Moskowitz CS, Chou JF, Ronckers CM, Smith SA, Novetsky Friedman D, Barnea D, Wolden SL, Henderson TO, van der Pal HJH, Kremer LCM, Turcotte LM, Howell RM, Arnold MA, Leisenring WM, Begg CB, Robison LL, Pike MC, Armstrong GT, van Leeuwen FE, Oeffinger KC. Predicting breast cancer risk in childhood cancer survivors treated with chest radiation: a report from the Childhood Cancer Survivor Study (CCSS), and the Dutch Hodgkin Late Effects and DCOG-LATER Cohorts. North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1918 Mulrooney DA, Hyun G, Ness KK, Ehrhardt MJ, Yasui Y, Duprez DA, Howell R, Leisenring WM, Constine LS, Oeffinger KC, Gibson TM, Tonorezos E, Robison LL, Hudson MM, Armstrong GT. Reduction in cardiac events for survivors of childhood cancer treated in more recent eras: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1919 Sapkota Y, Liu Q, Shelton K, Wang X, Wilson CL, Wang Z, Mulrooney DM, Jefferies JL, Oeffinger KC, Morton LM, Zhang J, Armstrong GT, Bhatia S, Hudson MM, Robison LL, Yasui Y. Genome-wide association study using whole-genome sequencing identifies a novel locus associated with increased risk of cardiomyopathy in adult survivors of childhood cancer: utility of a 2-stage analytic approach. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1920 Veiga LH, Curtis RE, Morton LM, Withrow DR, Howell RM, Smith SA, Weathers RE, Oeffinger KC, Moskowitz CS, Henderson TO, Arnold MA, Gibson TM, Leisenring WM, Neglia JP, Turcotte LM, Whitton JA, Robison LL, Armstrong GT, Inskip PD, Berrington de Gonzalez A. Combined effect of radiotherapy and anthracyclines on risk of breast cancer risk among female childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation.

A1921 Wang Z, Liu Q, Wilson CL, Sapkota Y, Gibson T, Morton LM, Sampson J, Neglia J, Arnold MA, Rusch MC, Mulder H, Easton J, Zhang J, Downing JR, Bhatia S, Armstrong GT, Chemaillilly W, MD1, Hudson MM, Robison LL, Yasui Y. Polygenic risk of subsequent thyroid cancer after childhood cancer: a report from St. Jude Lifetime Cohort (SJLIFE) and Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation.

A1922 Yeh JM, Lowry K, Schechter C, Diller LR, Alagoz O, Armstrong GT, Hampton JM, Leisenring W, Liu Q, Mandelblatt J, Miglioretti DL, Moskowitz C, Oeffinger KC, Trentham-Dietz A, Stout NK. Clinical outcomes and cost-effectiveness of breast cancer screening for childhood cancer survivors treated with chest radiation: a comparative modeling study. American Society of Clinical Oncology Annual Meeting, June 2019, poster presentation; North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1923 Bashore L, Li C, Merchant Z, McDonald AJ, Lupo PJ, King A, Hamby T, Srivastava D, Leisenring WM, Howell RM, Gibson TM, Oeffinger KC, Armstrong GT, Bowman WP, Krull KR. Educational attainment in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1924 Gilleland-Marchak J, Seidel KD, Ritenour CWM, Leisenring W, Mertens AC, Sklar CA, Ford J, Krull KR, Stovall M, Robison LL, Armstrong GT, Meacham LR. Sexual functioning among male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1925 Kamdar KY, Richard MA, Brown AL, Arroyo VM, Belmont JW, Scheurer ME, Foster KL, Kern KD, Hudson MM, Leisenring WM, Okcu MF, Yasui Y, Morton LM, Chanock SJ, Robison LL, Armstrong GT, Bhatia S, Oeffinger KC, Lupo PJ. A genome-wide association study (GWAS) of body mass index (BMI) in adult survivors of childhood acute lymphoblastic leukemia (ALL): a report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime Cohort (SJLIFE). North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1926 Madenci AL, Dieffenbach BV, Liu Q, Yoneoka D, Knell J, Gibson TM, Yasui Y, Leisenring WM, Howell RM, Diller LR, Krull KR, Armstrong GT, Oeffinger KC, Murphy AJ, Weil BR, Weldon CB. Late-onset anorectal disease and psychosocial impact in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1927 Rathore N, Richard M, Armstrong G, Brown A, Friedman D, Hanis C, Kamdar K, Leisenring W, Machiela M, Meacham L, Morton L, Mostoufi-Moab S, Chanock S, Oeffinger K, Robison L, Scheet P, Sklar C, Yasui Y, Bhatia S, Lupo P. Population-based genetic risk loci and the risk for diabetes mellitus in the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1928 Weinstein AG, Henrich CC, Armstrong GT, Stratton KL, Leisenring WM, Krull KR. Positive psychological outcomes for pediatric cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1929 Clark RA, Vu NK, Lu Z, Yasui Y, Mostoufi-Moab S, Sklar C, Howell R, Hudson MM, Gibson T, Oeffinger KC, Armstrong GT, Nathan P, Yuan Y. Predicting acute ovarian failure in female childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, oral presentation.

A1930 van der Plas E, Qiu W, Nieman B, Yasui Y, Liu Q, Dixon S, Kadan-Lottick N, Jacola L, Gibson T, Leisenring W, Oeffinger K, Hudson M, Robison L, Armstrong GT, Krull KR. Associations between chemotherapy exposures, chronic conditions and neurocognitive impairments in pediatric ALL survivors treated with chemotherapy only vary with sex: a report from the Childhood Cancer Survivor Study (CCSS). North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1931 Ehrhardt MJ, Chen Y, Sandlund JT, Bluhm EC, Hayashi RJ, Bechtel K, Leisenring WM, Metzger ML, Ness KK, Krull KR, Oeffinger KC, Gibson TM, Cairo MS, Gross TG, Robison LL, Armstrong GT, Yasui Y, Hudson MM, Mulrooney DA. Late health outcomes following contemporary Lymphome Malin de Burkitt therapy for mature B-cell non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study. North American Symposium on Late Complications after Childhood Cancer, June 2019, poster presentation.

A1932 Alberts NM, Krull KR, Leisenring W, Gibson TM, Olgin JE, Jibb L, Birnie K, Robison LL, Stinson JN, Armstrong GT. Leveraging mHealth to examine chronic pain in the Childhood Cancer Survivor Study. International Psycho-Oncology Society Annual Meeting, September 2019, poster presentation.

A1933 Gianferante M, Kim J, Karyadi D, Hartley S, Frone M, Robison LL, Armstrong GT, Bhatia S, Dean M, Yeager M, Zhu B, Song L, Brodie SA, de Andrade K, Forte F, Goldstein A, Khincha PP, Machiela MJ, McMaster ML, Nickerson ML, Oba L, Pemov A, Pinheiro M, Rotunno M, Santiago K, Wegman-Ostrosky T, Hicks BD, Zhu B, Wang M, Jones K, Hutchinson AA, Dagnall C, Tucker M, Morton L, Chanock SJ, Savage SA, Stewart DR, Mirabello L. Frequency of pathogenic germline variation in pediatric pan-cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society for Human Genetics Annual Meeting, October 2019, Submitted.

A1934 Dixon SB, Chen Y, Yasui Y, Pui C, Hunger S, Silverman L, Green D, Kadan-Lottick N, Ness KK, Leisenring W, Howell RM, Oeffinger K, Neglia J, Krull KR, Hudson MM, Robison LL, Mertens A, Armstrong GT, Nathan P. Effect of risk-stratified therapy on health status and sociodemographic outcomes in survivors of acute lymphoblastic leukemia (ALL) in the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, October 2019, poster presentation.

A1935 Gramatges MM, Aubert G, Hariri E, Chen Y, Whitton JA, Leisenring WM, Arnold MA, Neglia JP, Yasui Y, Robison LL, Armstrong GT, Bhatia S. Naïve t cell immunosenscence associated with thyroid subsequent malignant neoplasm in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, October 2019, oral presentation.

A1936 Bagherzadeh-Khiabani F, Krull KR, Armstrong GT, Hudson MM, Robison LL, Yasui Y, Huang IC. Prediction of health-related quality of life from longitudinal self-reported symptom patterns in adult survivors of childhood cancer. Neural Information Processing Systems Conference, December 2019, poster presentation.

2018

A1801 Lupo PJ, Morton LM, Yasui Y, Leisenring WM, Armstrong GT, Robison LL, Bhatia S, Gramatges MM. Telomere length-associated genetic variants and the risk of thyroid cancer after childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Association for Cancer Research Annual Meeting, April 2018, poster presentation.

A1802 Lupo PJ, Morimoto L, Karlins E, Shao X, Morton LM, Scheurer ME, Bhatia S, Robison LL, Armstrong GT, Hettmer S, Khan J, Chanock SJ, Freedman ND, Wyatt K, Hicks BD, Dangall CL, Li SA, Yeager M, Skapek SX, Hawkins DS, Metayer C, Mirabello L. A genome-wide scan identifies a new locus association with pediatric rhabdomyosarcoma. American Association for Cancer Research Annual Meeting, April 2018, oral presentation.

A1803 Machiela MJ, Grünewald TGP, Surdez D, Reynaud S, Mirabeau O, Karlins E, Rubio RA, Zaidi S, Grossetete-Lalami, Ballet S, Lapouble E, Laurence V, Michon J, Pierron G, Kovar H, Gaspar N, Kontry U, González-Neira A, Picci P, Alonso J, Patino-Garcia A, Corradini N, Freedman ND, Rothman N, Dangall CL, Burdett L, Jones K, Manning M, Wyatt K, Zhou W, Yeager M, Cox DG, Hoover RN, Khan J, Armstrong GT, Leisenring WM, Bhatia S, Robison LL, Dirksen U, Metzler M, Hartmann W, Strauch K, Kirchner T, Kulozik AE, Morton LM, Mirabello L, Tucker MA, Tirode F, Chanock SJ, Delattre O. Multiple new susceptibility loci identified in genome-wide association study of Ewing sarcoma. American Association for Cancer Research Annual Meeting, April 2018, oral presentation.

A1804 Stefanski K, Anixt J, Goodman P, Bowers K, Leisenring W, Baker S, Burns K, Howell R, Davies S, Armstrong GT, Krull K, Recklitis C. Neurocognitive, emotional, and quality of life outcomes in survivors of pediatric acute myeloid leukemia: a report from the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies Annual Meeting, May 2018, oral presentation.

A1805 Daniel L, Wang M, Srivastava D, Schwartz L, Brinkman T, Edelstein K, Mulrooney D, Zhou E, Howell R, Gibson T, Leisenring W, Armstrong GT, Krull K. Sleep behavior patterns in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Associated Professional Sleep Societies Annual Meeting, June 2018, oral presentation.

A1806 DeSisto J, Lucas JT, Donson A, Sanford B, Wu G, Armstrong GT, Arnold M, Bhatia S, Flannery P, Lemma R, Hardie L, Hoffman L, Dorris K, Lui A, Foreman N, Vibhakkar R, Jones K, Allen S, Baker SJ, Merchant TE, Orr MB, Green AI. Comprehensive molecular characterization of pediatric treatment-induced glioblastoma: germline DNA repair defects as a potential etiology. 18th International Symposium on Pediatric Neuro-Oncology, June 2018, oral presentation.

A1807 Scott JM, Li N, Liu Q, Yasui Y, Leisenring W, Nathan PC, Gibson T, Armemian SH, Nilsen TS, Oeffinger KC, Ness KK, Adams SC, Robison LL, Armstrong GT, Jones LW. Association of exercise with late mortality in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

A1808 de Blank P, Li N, Ulrich N, Fisher MJ, Bhatia S, Yasui Y, Sklar C, Leisenring W, Howell R, Oeffinger K, Hardy K, Okcu MF, Gibson T, Robison LL, Armstrong GT, Krull K. Neurofibromatosis type 1 and risk of late outcomes after a primary tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018 poster presentation; 18th International Symposium on Pediatric Neuro-Oncology Annual Meeting, June 2018, oral presentation.

A1809 Yan AP, Chen Y, Hudson MM, Gibson TM, Neglia P, Oeffinger KC, Leisenring WM, Ness KK, Ford J, Henderson TO, Robison LL, Armstrong GT, Yasui Y, Nathan PC. Impact of survivorship care plans (SCPs) on adherence to surveillance for second malignant neoplasms (SMNs) and cardiac dysfunction in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

A1810 Dixon S, Li N, Yasui Y, Bhatia S, Casillas JN, Gibson TM, Leisenring W, Ness KK, Porter J, Robison LL, Hudson MM, Krull KR, Armstrong GT. Racial/Ethnic differences in neurocognitive, emotional and quality of life outcomes in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

A1811 Friedman DN, Hilden P, Moskowitz CS, Howell R, Weathers RE, Smith SA, Wolden SL, Tonorezos ES, Mostoufi-Moab S, Chow EJ, Meacham LR, Whitton JA, Leisenring WM, Robison LL, Armstrong GT, Oeffinger KC, Sklar CA. Radiation dose and volume to the pancreas and subsequent risk of diabetes mellitus: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

A1812 Tonorezos ES, Ford JS, Wang L, Ness KK, Yasui Y, Leisenring W, Sklar CA, Robison LL, Oeffinger KC, Nathan PC, Armstrong GT, Krull K, Jones LW. Impact of exercise on psychological burden, quality of life, and cognitive dysfunction in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

A1813 Moskowitz CS, Chou J, Neglia JP, Howell RM, Diller LR, Partridge AH, Leisenring WL, Armstrong GT, Robison LL, Oeffinger KC, Henderson TO. Mortality following breast cancer in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

A1814 Turcotte L, Liu Q, Yasui Y, Henderson TO, Gibson T, Leisenring WM, Arnold M, Howell R, Green D, Armstrong GT, Robison LL, Neglia J. Subsequent malignant neoplasms (SMNs) among non-irradiated survivors of childhood cancer treated with chemotherapy in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

A1815 Huang IC, Ehrhardt MJ, Li C, Mulrooney DA, Chemaitilly W, Srivastava D, Armstrong GT, Robison LL, Hudson MM, Krull KR. Longitudinal assessment of patient-reported cumulative symptom burden as an indicator of chronic health conditions in adult survivors of childhood cancer: a joint report of the St. Jude Lifetime Cohort (SJLIFE) and the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation; International Society for Quality of Life Research Annual Conference, October 2018, oral presentation.

A1816 Vuotto SC, Krull KR, Li C, Okcu F, Bowers DC, Ullrich NJ, Srivastava D, Howell R, Gibson TM, Leisenring WM, Oeffinger KC, Robison LL, Armstrong GT, Brinkman TM. Neurologic morbidities, emotional distress, and functional independence in adult survivors of childhood cancer treated with CNS-directed therapies: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

A1817 Karlson CW, Alberts NM, Liu W, Brinkman TM, Annett R, Mulrooney DA, Schulte F, Leisenring W, Gibson TM, Howell RM, Srivastava D, Oeffinger KC, Armstrong GT, Zeltzer LK, Krull KR. Chronic pain and disability in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, poster presentation.

A1818 Oeffinger KC, Stratton K, Hudson MM, Leisenring WM, Howell WM, Wolden SL, Constine LS, Diller L, Henderson TO, Sklar CA, Nathan PC, Castellino SM, Smith SA, Armstrong GT, Robison LL. Risk-adapted therapy for pediatric Hodgkin lymphoma (HL) results in lower risk of late effects: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2018, oral presentation.

A1819 Lucas JT, DeSisto J, Donson A, Sanford B, Wu G, Armstrong GT, Arnold M, Bhatia S, Flannery P, Lemma R, Hardie L, Hoffman L, Dorris K, Liu A, Foreman N, Vibhakkar R, Jones K, Allen S, Baker SJ, Merchant TE, Green AL, Orr BA. Pediatric treatment-included high-grade gliomas are enriched for a specific methylation subgroup and recurrent genomic abnormalities. American Association of Neuropathologists (AANP) Meeting, June 2018, oral presentation.

A1820 Cheung YT, Liu W, Brinkman TM, Srivastava D, Leisenring WM, Howell RM, Ullrich NJ, Lommel KM, Brouwers P, Gibson TM, Robison LL, Armstrong GT, Krull KR. Prevalence of prescription psychoactive medication use in adolescent survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Multinational Association of Supportive Care in Cancer Annual Meeting, June 2018, oral presentation.

A1821 Daniel L, Wang M, Srivastava D, Schwartz L, Brinkman T, Edelstein K, Mulrooney D, Zhou E, Howell R, Gibson T, Leisenring W, Armstrong GT, Krull K. Sleep behaviors and patterns in adult survivors of childhood cancers: a report from the Childhood Cancer Survivor Study (CCSS). Associated Professional Sleep Societies Annual Meeting, June 2018, oral presentation.

A1822 Schonfeld SJ, Howell RM, Smith SA, Neglia JP, Turcotte LM, Arnold MA, Inskip PD, Oeffinger KC, Moskowitz CS, Henderson TO, Leisenring WM, Gibson TM, Berrington de González A, Sampson JN, Chanock SJ, Tucker MA, Bhatia S, Robison LL, Armstrong GT, Morton LM. Comparison of radiation dose reconstruction methods to investigate late adverse effects of radiotherapy for childhood cancer: A report from the Childhood Cancer Survivor Study. Conference on Radiation and Health Annual Meeting, September, 2018, poster presentation.

A1823 Schulte F, Brinkman T, Li C, Fay-McClymont T, Srivastava D, Ness KK, Howell R, Mueller S, Wells E, Strother D, Lafey-Cousin L, Leisenring W, Robison LL, Armstrong GT, Krull KR. Social adjustment in adolescent survivors of pediatric CNS tumors: a report from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.

A1824 Lupo PJ, Brown AL, Arroyo VM, Belmont JW, Scheurer ME, Foster KL, Kern KD, Leisenring WM, Okcu MF, Yasui Y, Morton LM, Chanock SJ, Robison LL, Armstrong GT, Bhatia S, Oeffinger KC, Kamdar KY. Genome-wide association study to identify obesity susceptibility loci in survivors of childhood Acute Lymphoblastic Leukemia (ALL): a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.

A1825 Brown AL, Seidel KD, Hayashi S, Lupo PJ, Henderson TO, Howell RM, Krull KR, Robison LL, Leisenring WM, Oeffinger KC, Armstrong GT, Hayashi R. Hearing impairment among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, poster presentation.

A1826 Esbensen AJ, Friedman DL, Lu L, Oeffinger KC, Armstrong GT, Krull KR, Neglia JP, Leisenring W, Stovall M, Robison LL, Ness KK. Using the cumulative illness rating scale to characterize the burden of chronic conditions among childhood cancer survivors and to predict mortality. International Society of Paediatric Oncology Annual Meeting, November 2018, poster presentation.

A1827 Yeh J, Ward ZJ, Liu Q, Yasui Y, Chaudhry A, Leisenring WM, Oeffinger KC, Hudson MM, Krull KR, Gibson TM, Howell R, Armstrong GT, Diller L. Projected improvement in life expectancy across three treatment decades: insights from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology Annual Meeting, November 2018, oral presentation.

A1828 Bhatia S, Chen Y, Wong FL, Neglia JP, Arnold M, Turcotte L, de Blanc P, Armstrong GT, Robison LL, Clapp DW, Shannon K, Nakamura J, Fisher M. Risk of subsequent neoplasms (SNs) after a primary tumor in patients with NF1. Joint Global Neurofibromatosis Annual Conference, November 2018, oral presentation.

A1829 de Blank P, Li N, Fisher M, Ullrich N, Bhatia S, Yasui Y, Sklar C, Leisenring W, Howell R, Oeffinger K, Hardy K, Okcu MF, Gibson T, Robison LL, Armstrong GT, Krull K. Risk of psychological, cognitive and health impairments in adult survivors of childhood glioma with neurofibromatosis type 1. Joint Global Neurofibromatosis Annual Conference, November 2018, oral presentation.

A1701 Tonorezos ES, Meacham L, Chou J, Moskowitz CS, Leisenring WM, Friedman DN, Sklar CA, Dilley KJ, Hudson M, Mertens A, Armstrong GT, Robison LL, Oeffinger KC. Increased late mortality in underweight survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Survivorship Symposium, January 2017, poster presentation.

A1702 Weil B, Madenci A, Liu Q, Gibson T, Yasui Y, Neglia J, Leisenring W, Howell R, Tonorezos E, Friedman D, Tinkle C, Diller L, Armstrong GT, Oeffinger K, Weldon C. Infection related late mortality in survivors of childhood cancer with asplenia or radiation-induced hyposplenism: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1703 Madenci AL, Weil BR, Liu Q, Gibson TM, Yasui Y, Leisenring WM, Howell RM, Tinkle C, Nekhlyudov L, Diller L, Armstrong GT, Oeffinger KC, Weldon CB. Long-term incidence of venous thromboembolism (VTE) among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

A1704 Gibson TM, Mostoufi-Moab S, Stratton K, Barnea D, Chow EJ, Donaldson SS, Howell R, Hudson MM, Leisenring WM, Mahajan A, Nathan PC, Ness KK, Sklar CA, Tonorezos ES, Weldon CB, Wells EM, Yasui Y, Armstrong GT, Robison LL, Oeffinger KC. Temporal trends in chronic disease among survivors of childhood cancer diagnosed across three decades: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1705 Bates JE, Liu Q, Yasui Y, Howell RM, Mulrooney DA, Dhakal S, Leisenring WM, Indelicato DJ, Gibson TM, Armstrong GT, Oeffinger KC, Constine LS. Age-associated vulnerability to treatment-related late cardiotoxicity: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation.

A1706 Salloom R, Chen Y, Yasui Y, Packer R, Leisenring W, Wells E, King A, Howell R, Gibson TM, Krull KR, Robison LL, Oeffinger KC, Fouladi M, Armstrong GT. Temporal trends in late-onset morbidity and mortality after medulloblastoma diagnosed across three decades: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation.

A1707 Henderson TO, Nathan PC, Whitton J, Leisenring W, Neglia J, Fowler B, Arnold MA, Howell RM, Robison LL, Armstrong GT, Alexander K. Human papillomavirus (HPV)-associated malignancies as subsequent malignant neoplasms (SMN) in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

A1708 Brooke RJ, Chemaitilly W, Wilson CL, Krasin MJ, Li Z, Im C, Morton LM, Wu G, Wang Z, Chen W, Howell RM, Armstrong GT, Bhatia S, Chanock SJ, Zhang J, Green DM, Sklar CA, Hudson MM, Robison LL, Yasui Y. A high-risk genetic profile for premature menopause (PM) in childhood cancer survivors (CCS) exposed to gonadotoxic therapy: a report from the St. Jude Lifetime Cohort (SJLIFE) and Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, oral presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1709 Dietz AC, Seidel K, Leisenring WM, Mulrooney DA, Tersak JM, Glick RD, Burnweit CA, Green DM, Diller L, Oeffinger KC, Smith SA, Howell RM, Stovall M, Robison LL, Armstrong GT, Termuhlen AM. Solid organ transplant after treatment for childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1710 Feijen EA, Leisenring WM, Stratton KL, Ness KK, Van der Pal HJH, van Dalen EC, Armstrong GT, Aune GJ, Green DM, Hudson MM, Loonen J, Oeffinger KC, Robison LL, Yasui Y, Kremer LC, Chow EJ. Equivalence ratios for late cardiomyopathy after doxorubicin and other anthracyclines/anthraquinones. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1711 Huang I, Hyun G, Gibson TM, Yasui Y, Leisenring W, Armstrong GT, Hudson MM, Robison LL, Krull KR. The Impact of administration modes on patient-reported outcome survey: a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

A1712 Lupo PJ, Brown AL, Kamdar KY, Belmont JW, Armstrong GT, Leisenring WM, Oeffinger KC, Okcu F, Robison LL, Scheurer ME, Yasui Y, Bhatia S. DNA methylation and obesity in survivors of pediatric Acute Lymphoblastic Leukemia (ALL): a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

A1713 Moskowitz CS, Chou JF, Sklar CA, Barnea D, Ronckers CM, Friedman DN, Neglia JP, Turcotte L, Howell RM, Henderson TO, Armstrong GT, Leisenring WM, Robison LL, van Leeuwen FE, Pike MC, Oeffinger KC. Radiation-associated breast cancer and hormone exposure: a report from the Childhood Cancer Survivor Study (CCSS). 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1714 Zheng DJ, Krull KR, Chen Y, Diller L, Yasui Y, Brouwers P, Howell R, Lai JS, Balsamo L, Oeffinger KC, Robison LL, Armstrong GT, Kadan-Lottick NS. Long-term psychological outcomes in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1715 Morton LM, Veiga L, Curtis RE, Withrow D, Inskip PD, Oeffinger KC, Moskowitz CS, Neglia JP, Turcotte LM, Howell R, Weathers RE, Smith SA, Henderson TO, Leisenring WM, Whitton JA, Gibson TM, Robison LL, Armstrong GT, Berrington A. Risk of subsequent breast cancer after radiotherapy according to hormone-receptor status: a nested case-control study in Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2017, poster presentation.

A1716 Foster RH, Hayashi R, Liu W, Mohrmann C, Howell RM, Smith SA, Gibson TM, Srivastava DK, Green DM, Oeffinger KC, Leisenring WM, Robison LL, Armstrong GT, Krull KR, Hardy KK. Social outcomes among adolescent long-term survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. International Society of Paediatric Oncology Annual Meeting, October 2017, oral presentation.

A1717 Foster RH, Hayashi R, Wang M, Liu W, Mohrmann C, Howell RM, Smith S, Gibson TM, Srivastava K, Green DM, Oeffinger K, Leisenring W, Robison LL, Armstrong GT, Krull K Hardy KK. Psychological and educational outcomes among adolescent survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June 2017, poster presentation; 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, poster presentation.

A1718 Tonorezos ES, Meacham L, Chou JF, Moskowitz CS, Leisenring WM, Freidman D, Sklar CA, Dilley KJ, Hudson M, Mertens A, Armstrong GT, Robison LL, Oeffinger KC. Risk of increased mortality in underweight survivors: a report from the Childhood Cancer Survivor Study. 15th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2017, oral presentation.

A1719 Bates JE, Howell RM, Liu Q, Yasui Y, Mulrooney DA, Dhakal S, Leisenring WM, Indelicato DJ, Gibson TM, Armstrong GT, Oeffinger KC, Constine LS. Volumetric dose-effect analysis of late cardiotoxicity: a report from the Childhood Cancer Survivor Study (CCSS). American Society for Radiation Oncology Annual Meeting, oral presentation, September 2017.

A1720 Mueller S, Chen Y, Yasui Y, Fullerton HJ, Howell R, Oeffinger K, Robison LL, Armstrong GT, Krull KR. Impact of stroke and stroke recurrence on late mortality as well as psychological and socioeconomic outcomes in childhood cancer survivors. Pediatric Neuro-Oncology Basic and Translational Research Conference, June 2017, poster presentation.

2016

A1601 Vuotto SC, Brinkman TM, Li C, Lown A, Marchak JG, Srivastava D, Nathan PC, Robison LL, Armstrong GT, Krull KR. The impact of alcohol consumption on neurocognitive dysfunction in adult survivors of childhood cancer. 44th International Neuropsychological Society Annual Meeting, February 2016, oral presentation.

A1602 Fair D, Kirchhoff AC, Nipp P, Leisenring W, Oeffinger K, Armstrong GT, Robison LL, Park E. How costs of healthcare affect utilization in the Childhood Cancer Survivor Study. ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

A1603 Keske R, Armstrong GT, Davine J, McDonald A, Gibson T, Daniel C, Mertens A, Marghoob A, Geller A. Advancing Survivors' Knowledge (ASK) About Skin Cancer Study: a randomized intervention within the Childhood Cancer Survivor Study (CCSS). ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

A1604 D'Agostino N, Edelstein K, Zhang N, Recklitis C, Srivastava K, Leisenring W, Robison LL, Armstrong GT, Krull KR. Predicting patterns of distress in adult survivors of childhood cancer: a latent profile analysis from the Childhood Cancer Survivor Study. ASCO Cancer Survivorship Symposium, January 2016, poster presentation.

A1605 Morton LM, Sampson JN, Armstrong GT, Chen T, Hudson MM, Karlins E, Dagnall CL, Li S, Wilson CL, Srivastava K, Liu W, Kang G, Oeffinger KC, Henderson TO, Moskowitz CS, Gibson TM, Merino DM, Wong JR, Hammond S, Neglia JP, Turcotte LM, Miller J, Bowen L, Wheeler WA, Leisenring WM, Whitton JA, Burdette L, Chung C, Hicks BD, Jones K, Machiela MJ, Vogt A, Wang Z, Yeager M, Neale G, Lear M, Strong LC, Yasui Y, Stovall M, Weathers RE, Smith SA, Howell R, Davies SM, Radloff GA, Berrington de González A, Inskip PD, Rajaraman P, Fraumeni JF Jr., Bhatia S, Chanock SJ, Tucker MA, Robison LL. Genome-wide association study identifies two susceptibility loci that modify radiation-related risk for breast cancer after childhood cancer: a report from the Childhood Cancer Survivor Study and St. Jude Lifetime cohort. American Association of Cancer Research Annual Meeting, April 2016, oral presentation.

A1606 Morton LM, Sampson JN, Bhatia S, Hudson MM, Chen TH, Neglia JP, Yasui Y, Karlins E, Dagnall CL, Gibson TM, Wilson CL, Srivastava DK, Liu W, Kang G, Weathers RE, Smith SA, Tucker MA, Robison LL, Chanock SJ, Armstrong GT. Genome-wide association study of meningioma as a subsequent neoplasm: a report from the Childhood Cancer Survivor Study (CCSS) and St. Jude Lifetime cohort (SJLIFE). American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

A1607 Turcotte LM, Yasui Y, Liu Q, Hammond S, Arnold MA, Howell RM, Gibson TM, Leisenring WM, Armstrong GT, Robison LL, Neglia JP. Changing patterns of subsequent malignancies in the Childhood Cancer Survivor Study cohort. American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

A1608 Oeffinger KC, Ford J, Moskowitz CS, Chou JF, Henderson TO, Hudson MM, Diller L, McDonald A, Ford J, Mubdi NZ, Rinehart D, Vukadinovich C, Gibson TM, Anderson N, Elkin EB, Garret K, Rebull M, Armstrong GT. The EMPOWER Study: promoting breast cancer screening: a randomized controlled trial (RCT) in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

A1609 Gibson TM, Li C, Armstrong GT, Srivastava DK, Leisenring WM, Mertens A, Brinkman TM, Diller L, Nathan PC, Hudson MM, Robison LL. Patient-reported levels of concern in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2016, poster presentation.

A1610 Levine JM, Armstrong GT, Ginsberg J, Green DM, Leisenring WM, Robison LL, Stovall M, Whitton J, Sklar CA. Non-surgical premature menopause (NSPM) in the Childhood Cancer Survivor Study (CCSS): prevalence, risk factors, and reproductive outcomes. American Society of Clinical Oncology Annual Meeting, June 2016, oral presentation.

A1611 Machiela MJ, Karlins E, Zhou W, Khan J, Ballet S, Lapouble E, Laurence V, Michon J, Pierron G, Mirabello L, Morton L, Armstrong GT, Robison LL, Bhatia S, Hoover R, Tucker MA, Tirode F, Delattre O, Chanock SJ. Genome-wide association study identifies new susceptibility regions associated with Ewing sarcoma risk. The American Society of Human Genetics Annual Meeting, October 2016, poster presentation.

A1612 Moskowitz CS, Chou JF, Barnea D, Sklar CA, Leisenring WM, Neglia JP, Turcott L, Howell RM, Freidman DN, Henderson TO, Ronckers CM, van Leeuwen F, Pike MC, Armstrong GT, Oeffinger KC. Gonadal hormone exposure and radiation-associated breast cancer risk: a report from the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer, September 2016, poster presentation.

A1613 Turcotte L, Liu Q, Yasui Y, Hammond S, Howell R, Gibson TM, Leisenring WM, Armstrong GT, Robison LL, Neglia J. Therapeutic modifications and changing patterns of subsequent neoplasms in the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer, September 2016, oral presentation.

A1614 Ehrhardt MJ, Chen Y, Sandlund JT, Bluhm EC, Hayashi R, Leisenring WM, Metzger M, Ness KK, Krull KR, Oeffinger KC, Robison LL, Yasui Y, Armstrong GT, Hudson MM, Mulrooney DA. Estimated late health outcomes in children diagnosed with B-cell non-Hodgkin lymphoma treated with contemporary LMB chemotherapy: a report from the Childhood Cancer Survivor Study (CCSS). Annual American Society of Hematology, December 2016, poster presentation.

2015

A1501 Park ER, Kirchhoff AC, Perez GK, Leisenring W, Weissman JS, Donelan K, Hyland K, Armstrong GT, Robison LL, Kuhlthau KA. Childhood Cancer Survivor Study participants' health insurance coverage experiences. 36th Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, April 2015, poster presentation.

A1502 Buchbinder D, Oeffinger KC, Franco-Villalobos C, Yasui Y, Alderfer MA, Armstrong GT, Casillas J, Ford J, Krull KR, Leisenring W, Recklitis C, Robison LL, Zeltzer LK, Lown EA. Tobacco use behaviors of siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. 28th Annual Meeting of American Society of Pediatric Hematology/Oncology, May 2015, poster presentation.

A1503 Gibson TM, Liu W, Armstrong GT, Srivastava K, Hudson MM, Leisenring WM, Mertens AC, Klesges RC, Oeffinger KC, Nathan PC, Robison LL. Longitudinal smoking patterns in survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS) update. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1504 Ness KK, Hudson MM, Jones KE, Leisenring WM, Stovall M, Green DM, Neglia JP, Henderson TO, Casillas J, Ford JS, Effinger KE, Oeffinger KC, Armstrong GT, Robison LL, Nathan PC. Temporal trends in health status among adults in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster discussion session.

A1505 Bowers DC, Moskowitz CS, Chou JF, Mazewski CM, Neglia J, Armstrong GT, Leisenring WM, Robison LL, Oeffinger KC. Morbidity and Mortality associated with subsequent meningioma among Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, oral presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1506 D'Agostino NM, Edelstein K, Zhang N, Recklitis CJ, Brinkman TM, Srivastava DK, Leisenring WM, Robison LL, Armstrong GT, Krull KR. Patterns and predictors of psychological distress in adult survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1507 Perez G, Kirchhoff A, Krull K, Leisenring W, Recklitis C, Armstrong GT, Nathan P, Robison LL, Kuhlthau K, Park E. Mental health care insurance coverage, utilization and perceived value among childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). 2015 World Congress of Psycho-Oncology, July 2015, poster presentation.

A1508 Bhatia S, Liu Q, Leisenring WM, Ness KK, Gibson TM, Robison LL, Armstrong GT, Yasui Y. Long-term outcomes by race/ethnicity in the Childhood Cancer Survivor Study (CCSS) Cohort. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation.

A1509 Mostoufi-Moab S, Seidel K, Leisenring WM, Armstrong GT, Oeffinger KC, Green DM, Stovall M, Meacham LR, Ginsberg J, Robison LL, Sklar CA. Endocrine disorders in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1510 Mueller EL, Hutchinson R, Goodman P, Leisenring WM, Sklar CA, Hudson MM, Ness KK, Armstrong GT, Robison LL, Stovall M, Oeffinger KC, Nathan PC. Long-term risks for chronic medical conditions and premature mortality in survivors of pediatric soft tissue sarcoma: a Report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, oral presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1511 Brinkman, TM, Vuotto, SC, Li C, Oeffinger KC, Green DM, Patel S, Srivastava DK, Stovall M, Ness KK, Armstrong GT, Robison LL, Krull KR. Impact of chronic disease on psychological distress in adult survivors in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1512 Brinkman, TM, Li C, Vannatta KA, Marchak JG, Lai J, Kimberg C, Prasad PK, Di C, Srivastava DK, Robison LL, Armstrong GT, Krull KR. Emotional and behavioral phenotypes of adolescent survivors in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1513 Leisenring WM, Whitton J, Neglia JP, Green DM, Gibson T, Stovall M, Hudson MM, Robison LL, Armstrong GT, Yasui Y, Mertens AC. Temporal changes in treatment exposures in the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1514 Effinger KE, Fisher PG, Ness KK, Krull K, Marina N, Stovall M, Oeffinger KC, Armstrong GT, Robison LL, Nathan PC, Leisenring WM, Hudson MM. Longitudinal Evaluation of Health Status and Chronic Conditions in Aging Pediatric Astrocytoma Survivors: A Childhood Cancer Survivor Study (CCSS) Report. American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1515 Schapiro M, Hayashi R, Liu W, Srivastava DK, Jeffe D, Perkins S, Armstrong GT, Robison LL, Stovall M, Leisenring W, Krull K. Neurocognitive, emotional, and quality of life outcomes in long-term survivors of rhabdomyosarcoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1516 Madenci AL, Fisher S, Diller L, Goldsby R, Leisenring W, Oeffinger KC, Robison LL, Sklar C, Stovall M, Weathers RE, Armstrong GT, Yasui Y, Weldon CB. Intestinal obstruction in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, poster presentation.

A1517 Armstrong GT, Yasui Y, Chen Y, Leisenring W, Gibson TM, Mertens A, Stovall M, Hudson MM, Oeffinger KC, Bhatia S, Krull K, Nathan PC, Neglia J, Green D, Robison LL. Reduction in late mortality among five-year survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2015, plenary session presentation; 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1518 Gilleland-Marchak J, Seidel KD, Mertens AC, Ritenour CWM, Wasilewski-Masker K, Leisenring W, Sklar CA, Ford J, Krull KR, Stovall M, Robison LL, Armstrong GT, Meacham LR. Perceptions of risk for infertility among male survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1519 Daniel C, Armstrong GT, Keske R, Davine J, McDonald A, Sprunck-Harrild K, Coleman C, Haneuse S, Mertens A, Emmons K, Marghoob A, Elkin E, Dusza S, Robison LL, Gibson T, Geller A. Advancing Survivors' Knowledge (ASK) About Skin Cancer Study: a randomized intervention within the Childhood Cancer Survivor Study (CCSS). New England Cancer Survivorship Research Conference: Focus on Intervention, April 2015, poster presentation.

A1520 de Blank P, Fisher MJ, Lu L, Leisenring WM, Ness KK, Sklar CA, Stovall M, Vukadinovich CM, Robison LL, Armstrong GT, Krull KR. The Impact of vision loss among survivors of childhood central nervous system astroglial tumors. Children's Tumor Foundation NF Conference, June 2015, oral presentation.

A1521 Mertens A, Whitton J, Gibson TM, Stovall M, Hudson MM, Robison LL, Armstrong GT, Yasui Y, Leisenring WM, Green D. Temporal changes in treatment exposures in the Childhood Cancer Survivor Study (CCSS). Children's American Society of Clinical Oncology Annual Meeting, June 2015, poster presentation.

A1522 Feijen EAM, Stratton KL, Ness KK, Van der Pal HJH, Caron HN, Armstrong GT, Green D, Hudson MM, Leisenring W, Oeffinger KC, Robison LL, Stovall M, Kremer LCM, Chow EJ. Equivalence ratio for daunorubicin to doxorubicin in relation to late heart failure. 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.

A1523 Yeh JM, Hanmer J, Ward Z, Leisenring W, Armstrong GT, Hudson M, Stovall M, Robison LL, Oeffinger K, Diller L. Health utility scores in childhood cancer survivors: insights from the Childhood Cancer Survivor Study. 37th Annual Meeting of the Society of Medical Decision Making, October 2015, oral presentation.

A1524 Nipp RD, Kirchhoff AC, Fair DB, Kuhlthau K, Hyland K, Perez GK, Armstrong GT, Nathan PC, Oeffinger KC, Leisenring WM, Park ER. Financial burden among survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Palliative Care in Oncology Symposium, October 2015, poster presentation.

A1525 Jacola LM, Edelstein K, Lui W, Pui CH, Hayashi R, Kadan-Lottick N, Srivastava D, Henderson T, Robison LL, Armstrong GT, Krull KR. Cognitive, behavior and academic problems in adolescent survivors of childhood acute lymphoblastic leukemia (ALL): a report from the Childhood Cancer Survivor Study. 57th American Society of Hematology Annual Meeting and Exposition, December 2015, oral presentation.

2014

A1401 Effinger KE, Leisenring W, Oeffinger KC, Hudson MM, Ness KK, Marina N, Castellino SM, Stovall M, Armstrong GT, Robison LL, Sainani K, Whittemore AS. Longitudinal Evaluation of health status in aging pediatric Hodgkin lymphoma survivors: report from the Childhood Cancer Survivor Study. 2nd International Symposium on Childhood, Adolescent and Young Adult Hodgkin Lymphoma, May 2014, oral presentation.

A1402 Zhou R, Ng A, Withers R, McDonald A, Leisenring W, Goodman P, Stovall M, Armstrong GT, Robison LL, Hodgson D. The evolution of pediatric Hodgkin lymphoma therapy: contemporary protocols significantly reduce radiation exposure of normal tissues. 2nd International Symposium on Childhood, Adolescent and Young Adult Hodgkin Lymphoma, May 2014, oral presentation.

A1403 Suh E, Stratton KL, Ford JS, Nathan PC, Freyer DR, McNeer J, Stock W, Leisenring W, Stovall M, Krull KR, Sklar CA, Armstrong GT, Oeffinger KC, Robison LL, Henderson TO. Chronic health conditions and premature mortality in long-term survivors of cancer diagnosed between the ages of 15 and 20 years: a report from the Childhood Cancer Survivor Study. 7th Biennial Cancer Survivorship Research Conference, June 2014, poster presentation.

- A1404** Chow EJ, Chen Y, Armstrong GT, Border WL, Meacham LR, Mulrooney DA, Oeffinger KC, Sklar CA, Stovall M, Robison LL, Yasui Y. Individual risk prediction of major cardiovascular events after cancer: a Childhood Cancer Survivor Study report. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.
- A1405** Jones LW, Liu Q, Armstrong GT, Ness KK, Yasui Y, Devine K, Tonorezos E, Soares-Miranda L, Sklar CA, Douglas PS, Robison LL, Oeffinger KC. Exercise and risk of major cardiovascular events in adult survivors of childhood Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation, European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.
- A1406** King AA, Perkins SM, Seidel K, Di C, Leisenring WM, Krull KR, Green DM, Armstrong GT, Zelter LK, Wells E, Stovall M, Ullrich N, Oeffinger KC, Robison LL, Packer R. Health and functional status of long term adult medulloblastoma/PNET survivors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.
- A1407** Henderson TO, Moskowitz CS, Onel K, Bradbury AR, Friedman DN, Chou JF, Bhatia S, Strong LC, Neglia JP, Stovall M, Leisenring WM, Robison LL, Armstrong GT, Diller L, Oeffinger KC. Breast cancer in childhood cancer survivors not treated with chest-directed radiation in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, oral presentation.
- A1408** Moskowitz CS, Malhotra J, Chou JF, Wolden SL, Stovall M, Armstrong GT, Leisenring WM, Neglia JP, Robison LL, Oeffinger KC. Breast cancer following spinal radiotherapy for a childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.
- A1409** Huang IC, Brinkman TM, Armstrong GT, Robison LL, Krull KR. Mediating role of emotional symptoms on assessment of health-related quality of life of adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.
- A1410** Dietz AC, Chen Y, Ness KK, Hagood JS, Chow EJ, Yasui Y, Stovall M, Neglia JP, Oeffinger KC, Mertens AC, Robison LL, Armstrong GT, Mulrooney DA. Risk and Impact of pulmonary complications in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation, 14th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2015, oral presentation.
- A1411** Turcotte LM, Whitton J, Friedman DL, Hammond S, Armstrong GT, Leisenring WM, Robison LL, Neglia JP. Subsequent neoplasms in the 5th and 6th decades of life in the Childhood Cancer Survivor Study cohort. American Society of Clinical Oncology Annual Meeting, May 2014, poster presentation.
- A1412** Cox CL, Leisenring WM, Stratton KL, Steen BD, Ogg SW, Robison LL, Hudson MM. Combining eHealth and mHealth strategies to promote risk-based cardiovascular screening in adult survivors of childhood cancer. 7th Biennial Cancer Survivorship Research Conference, June 2014, oral presentation.
- A1413** Wells EM, Ullrich NJ, Seidel K, Leisenring W, Sklar C, Armstrong GT, Diller L, King A, Krull K, Neglia JP, Stovall M, Whelan K, Robison LL, Packer RJ. Neurologic sequelae in brain tumor survivors in the Childhood Cancer Survivor Study (CCSS). 16th International Symposium on Pediatric Neuro-Oncology (ISPNO), June 2014, oral presentation.
- A1414** Hudson MM, Leisenring WM, Stratton K, Tinner N, Steen B, Ogg S, Barnes L, Robison LL, Cox CL. Increasing cardiovascular screening in at-risk adult survivors of pediatric malignancies: a randomized controlled trial. American Society of Clinical Oncology Annual Meeting, May 2014, oral presentation.
- A1415** Cox C, Leisenring W, Stratton K, Steen B, Ogg S, Tinner N, Robison LL, Hudson MM. Motivating behavior change in adult survivors of childhood cancer: a randomized controlled trial (RCT) from the Childhood Cancer Survivor Study (CCSS). 142nd American Public Health Association Annual Meeting and Exposition, November 2014, oral presentation.
- A1416** Tsui K, Gajjar A, Li C, Srivastava D, Broniscer A, Wetmore C, Kun LE, Merchant TE, Ellison DW, Orr B, Boop FA, Klimo Jr P, Ross JD, Robison LL, Armstrong GT. Subsequent neoplasms in survivors of central nervous system tumors: risk after modern multi-modal therapy. 16th International Symposium on Pediatric Neuro-Oncology (ISPNO), June 2014, poster presentation.
- A1417** Feijen EAM, Stratton KL, Ness KK, Van der Pal HJH, Caron HN, Armstrong GT, Green D, Hudson MM, Leisenring W, Oeffinger KC, Robison LL, Stovall M, Kremer LCM, Chow EJ. Equivalence ratio for daunorubicin to doxorubicin in relation to late heart failure. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.
- A1418** Ford JS, Chou JF, Moskowitz C, Candela J, Henderson TO, Nathan P, Hudson MM, Leisenring W, Robison LL, Armstrong GT, Oeffinger KC. Cancer treatment summaries and long-term childhood cancer survivors: a report from the Childhood Cancer Survivor Study. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2014, poster presentation.

A1301 Kirchhoff AC, Leisenring W, Oeffinger K, Armstrong GT, Robison LL. Labor force transitions in the Childhood Cancer Survivor Study. 34th Annual Meeting & Scientific Sessions of the Society of Behavior Medicine, March 2013, poster presentation.

A1302 Kirchhoff AC, Kuhlthau K, Leisenring W, Warner EL, Armstrong GT, Oeffinger K, Robison LL, Park ER. Childhood cancer survivors and social security benefit coverage: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Preventive Oncology, March 2013, poster presentation.

A1303 Daniel CL, Kohler C, Nathan P, Oeffinger K, Stratton K, Leisenring W, Whelan K, Waterbor J, Henderson T, Armstrong GT, Krull K, Robison LL. Predictors of colorectal cancer screening among high-risk survivors of childhood cancer. American Society of Preventive Oncology, March 2013, oral presentation.

A1304 Prasad PK, Hardy KK, Zhang N, Srivastava DK, Edelstein K, Zeltzer L, Stovall M, Leisenring W, Seibel NL, Armstrong GT, Robison LL, Krull KK. Psychological and Neurocognitive outcomes in survivors diagnosed with cancer as adolescents and young adults: a Report from the Childhood Cancer Survivor Study. American Society of Pediatric Hematology-Oncology, April 2013, poster presentation.

A1305 Park ER, Kirchhoff AC, Perez-Lougee G, Leisenring W, Weissman JS, Donelan K, Mertens AC, Reschovsky J, Armstrong GT, Robison LL, Diller LR, Recklitis CJ, Kuhlthau KA. Childhood cancer survivor familiarity with the Affordable Care Act. New England Cancer Survivorship Research Conference, May 2013, poster presentation.

A1306 Wilson CL, Leisenring WL, Oeffinger K, Nathan PC, Wasilewski-Masker K, Hudson MM, Castellino S, Stovall M, Armstrong GT, Brinkman TM, Robison LL, Ness KK. Predictors of declining levels of physical activity among adult survivors of childhood cancer. American Society of Clinical Oncology Annual Meeting, June 2013, poster presentation; 13th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation.

A1307 Essig S, Qiaozhi L, Chen Y, Hitzler J, Leisenring W, Greenberg M, Sklar C, Hudson MM, Armstrong GT, Krull K, Neglia JP, Oeffinger KC, Robison LL, Yasui Y, Nathan PC. Estimated long-term outcomes in children newly diagnosed with standard risk acute lymphoblastic leukemia (ALL) based on similarly treated members of the Childhood Cancer Survivor Study (CCSS) cohort. American Society of Clinical Oncology Annual Meeting, June 2013, poster presentation.

A1308 Soriano S, Bashore L, Ross G, Proffitt-Leyva R, Armstrong GT, Robison LL, Bowman WP. Recruitment of an ethnically diverse population of childhood cancer survivors: a single institution experience. 13th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation.

A1309 Gawade PL, Oeffinger KC, Sklar CA, Green DM, Krull KK, Chemaityly W, Stovall M, Leisenring WM, Robison LL, Ness KK. Pre-pregnancy lifestyle factors, psychological distress and adverse pregnancy outcomes among female survivors in the Childhood Cancer Survivor Study (CCSS) cohort. 13th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, oral presentation.

A1310 Gramatges MM, Liu Q, Yasui Y, Okcu F, Neglia JP, Strong LC, Armstrong GT, Robison LL, Bhatia S. Telomere length and risk of second malignant neoplasms (SMNs) in survivors of childhood cancer: a Childhood Cancer Survivor Study (CCSS). 13th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, oral presentation.

A1311 Goldsby R, Raber S, Stratton K, Ablin A, Li L, Strong L, Leisenring W, Oeffinger K, Sklar C, Armstrong GT, Robison LL, Bhatia S. Long-term sequelae in survivors of childhood leukemia with Down syndrome: a matched cohort study from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), September 2013, poster presentation.

A1313 Mueller S, Fullerton HJ, Stratton K, Leisenring W, Armstrong GT, Weathers RE, Stovall M, Goldsby RE, Sklar CA, Robison LL, Krull KR. Recurrent stroke risk in childhood cancer survivors. Society for Neuro-Oncology, November 2013, oral presentation.

A1314 Van den Berg A, Cozen W, Li D, Timofeeva M, Diepstra A, Hazelet D, Delahaye-Sourdeix M, Edlund CK, Rostgaard K, Van Den Berg DJ, Glaser SL, Robison LL, Mack TM, Ghesquieres H, Salle G, Bhatia S, Strong LC, Hwang AE, Nieters A, Smedby K, de Sanjose S, Cortessis VK, Lightfoot T, Roman E, Becker N, Foretova L, Benavente Y, Maynadie M, Visser L, Veenstra RN, Staines A, Cocco PL, Boffetta P, Kiemeny L, Lake A, Montgomery D, Slager SL, Cerhan JR, Gallagher A, Taylor GM, Brennan P, Conti DV, Coetzee GA, Onel K&, Jarrett RF, Hjalgrim H, McKay JD. TCF3/E2A (19p13.3) is a novel Hodgkin lymphoma susceptibility locus: a meta-GWAS study from the Interlymph Hodgkin lymphoma consortium. 9th International Symposium on Hodgkin Lymphoma, October 2013, oral presentation.

A1315 Cox CL, Nolan V, Leisenring W, Yasui Y, Ogg S, Neglia J, Ness K, Robison LL. Health perceptions, behavior, and medical care utilization: Links to mortality in adult survivors of childhood cancer. American Public Health Association, November 2013, oral presentation.

A1316 Ritenour CWM, Seidel KD, Leisenring W, Mertens A, Wasilewski-Masker K, Shnorhavorian M, Sklar CA, Whitton JA, Stovall M, Constine LS, Armstrong GT, Robison LL, Meacham L. Sexual health in male childhood cancer survivors: a Report from the Childhood Cancer Survivor Study (CCSS). 13th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2013, poster presentation; Sexual Medicine Society of North America, November 2013, poster presentation.

A1317 Effinger KE, Leisenring W, Oeffinger KC, Hudson MM, Ness KK, Marina N, Stovall M, Armstrong GT, Robison LL, Sainani K, Whittemore AS. Longitudinal evaluation of health status in aging pediatric Hodgkin lymphoma survivors: report from the Childhood Cancer Survivor Study. American Society of Hematology-Oncology, December 2013, oral presentation.

2012

A1201 Mueller S, Fullerton HJ, Stratton K, Leisenring W, Weathers R, Stovall M, Armstrong GT, Goldsby RE, Packer RJ, Robison LL, Krull KR. Radiation and modifiable stroke risk factors in adult survivors of pediatric cancer: results from the Childhood Cancer Survivor Study. 2012 International Stroke Conference, February 2012, oral presentation, 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

A1202 Wasilewski-Masker K, Seidel KD, Leisenring W, Mertens A, Shnorhavorian M, Ritenour MD, Stovall M, Green DM, Sklar CA, Armstrong GT, Robison LL, Meacham LR. Male Infertility in childhood and adolescent cancer survivors diagnosed from 1970-1986: a report from the Childhood Cancer Survivor Study. 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

A1203 Wilson CL, Ness KK, Neglia JP, Hammond S, Leisenring W, Srivastava DK, Stovall M, Robison LL, Armstrong GT. Renal carcinoma following therapy for cancer in childhood: a report from the Childhood Cancer Survivor Study. 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation; American Society of Clinical Oncology Annual Meeting, June 2012.

A1204 Chow EJ, Chen Y, Armstrong GT, Border W, Meacham L, Meeske KA, Mulrooney D, Oeffinger KC, Sklar CA, Stovall M, Robison LL, Yasui Y. Predicting future cardiovascular disease after cancer: a Childhood Cancer Survivor Study report. 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

A1205 Shnorhavorian M, Leisenring W, Goodman P, Friedman D, Stovall M, Meacham LR, Chow E, Sklar CA, Diller L, Ferrer F, Armstrong GT, Robison LL. Genito-urinary second malignant neoplasms in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation; American Academy of Pediatrics National Conference and Exhibition, 2012.

A1206 Wong FL, Bhatia S, Kurian Seira, Landier W, Francisco L, Leisenring W, Hudson, MM, Armstrong GT, Mertens A, Stovall M, Robison LL, Lipshultz ST, Armenian S. Cost-effectiveness of the Children's Oncology Group (COG) Long-Term Follow-Up (LTFU) guidelines in reducing the risk of congestive heart failure (CHF) in long-term childhood cancer survivors (CCS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

A1207 Wong FL, Bhatia S, Kurian Seira, Landier W, Francisco L, Leisenring W, Hudson, MM, Armstrong GT, Mertens A, Stovall M, Robison LL, Lipshultz ST, Armenian S. Efficacy of the Children's Oncology Group (COG) Long-Term Follow-Up (LTFU) guidelines in reducing the risk of congestive heart failure (CHF) in long-term childhood cancer survivors (CCS). American Society of Clinical Oncology Annual Meeting, June 2012, oral presentation.

A1208 Perkins JL, Chen Y, Harris A, Sklar C, Diller L, Stovall M, Armstrong GT, Yasui Y, Robison LL. Infectious complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivors Study (CCSS). 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

A1209 Casillas J, Liu Q, Hudson MM, Greenberg ML, Yeazel MW, Ness K, Robison LL, Armstrong GT, Leisenring W, Yasui Y, Oeffinger KC, Nathan PC. Longitudinal changes in health care utilization by adult survivors of childhood cancer in the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2012; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

A1210 Buchbinder D, Mertens AC, Zeltzer LK, Leisenring W, Goodman P, Lown EA, Alderfer MA, Recklitis C, Oeffinger K, Armstrong GT, Hudson MM, Robison L, Casillas J. Cancer prevention and screening practices of siblings of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

A1211 Moskowitz CS, Chou JF, Wolden SL, Bernstein JL, Malhotra J, Friedman DN, Mubdi NZ, Henderson TO, Leisenring WM, Stovall M, Hammond S, Boice JD, Hudson MM, Diller LR, Bhatia S, Neglia JP, The WECARE Study Collaborative Group, Begg CB, Robison LL, Oeffinger KC. New insights into the risk of breast cancer in childhood cancer survivors treated with chest radiation: a report from the Childhood Cancer Survivor Study (CCSS) and the Women's Environmental Cancer and Radiation Epidemiology (WECARE) Study. ASCO Annual Meeting, June 2012, oral presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

A1212 Armstrong GT, Kawashima T, Leisenring W, Stovall M, Sklar CA, Robison LL, Oeffinger KC. Increasing risk of severe, life-threatening and fatal chronic health conditions in aging survivors of childhood CNS tumors: A Report from the Childhood Cancer Survivor Study. International Symposium on Pediatric Neuro-Oncology, June 2012, oral presentation.

A1213 Wells EM, Seidel K, Ullrich NJ, Leisenring WM, Armstrong GT, Diller LR, King AA, Krull KR, Neglia JP, Stovall M, Whelan K, Sklar C, Packer RJ. Neurologic sequelae in long-term survivors of childhood brain tumors: a Childhood Cancer Survivor Study (CCSS) Update and Expanded Risk Factor Analysis. International Symposium on Pediatric Neuro-Oncology, June 2012, oral presentation.

A1214 Armstrong GT, Kawashima T, Leisenring W, Stovall M, Sklar CA, Robison LL, Oeffinger KC. Increasing risk of chronic health conditions in aging survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. ASCO Annual Meeting, June 2012, oral presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012, oral presentation.

2011

A1101 Park ER, Kirchoff AC, Pandiscio BA, Armstrong GT, Robison LL, Mertens A, Recklitis C, Diller L, Kuhlthau K. Childhood Cancer Survivor Study participants' perceptions and knowledge of health insurance coverage: implications for the 2010 Health Care Reform Law. 32nd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, April 2011, platform presentation.

A1102 Kinahan KE, Sharp LK, Didwania A, Seidel K, Leisenring W, Lacouture ME, Stovall M, Robison LL, Krull KR, Lurie RH. Scarring, disfigurement and quality of life in long-term survivors of childhood cancer: a report from the childhood cancer survivor study. 2011 ASCO Annual Meeting, June 2011, poster presentation; 12th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2012.

A1103 Pappo AS, Armstrong GT, Liu W, Srivastava DK, Leisenring W, Hammond S, Stovall M, Neglia JP, Robison LL. Melanoma as a subsequent neoplasm in survivors of childhood cancer: a report from the childhood cancer survivor study. 2011 ASCO Annual Meeting, June 2011, oral presentation.

A1105 Armstrong GT, Chen Y, Kawashima T, Sklar C, Mulroney DA, Chow E, Border W, Durand JB, Mertens A, Stovall M, Leisenring W, Yasui Y, Robison LL, Oeffinger K, Meacham L. Impact of traditional cardiovascular disease risk factors on long-term cardiovascular outcomes in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. 2011 ASCO Annual Meeting, June 2011, oral presentation.

A1106 Mueller S, Fullerton, HJ, Stratton K, Leisenring W, Weathers R, Stovall M, Armstrong GT, Goldsby RE, Packer RJ, Robison LL, Krull KR. Excess strong risk in adult survivors of childhood CNS tumors, leukemia and Hodgkin's lymphoma: results of the Childhood Cancer Survivor Study. 2011 Child Neurology Annual Meeting, October 2011.

A1107 Meacham L. Longitudinal assessment of cardiovascular risk factors (CVRf) in adult survivors of pediatric cancer: a report from the childhood cancer survivor study (CCSS). 50th Annual Meeting of the European Society for Pediatric Endocrinology (ESPE), September 2011, oral presentation.

A1108 Hudson M, Oeffinger K, Nathan P, Mertens A, Castellino S, Casillas J, Mulrooney D, Gurney J, Armstrong G, Leisenring W, Robison LL, Ness K. Longitudinal changes in health status of the Childhood Cancer Survivor cohort. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

A1109 Wong FL, Bhatia S, Surian S, Landier W, Francisco L, Leisenring W, Hudson M, Armstrong GT, Mertens A, Stovall M, Yasui Y, Robison LL, Lipshultz SE, Armenian S. Evaluation of the effectiveness of the Children's Oncology Groups (COG) long-term follow-up guidelines in reducing the risk of Anthracycline-related congestive heart failure (CHF) in long-term survivors of childhood cancer. European Symposium on Late Complications after Childhood Cancer (ESLCCC), September 2011, oral presentation.

A1110 Marina N, Hudson M, Mulrooney DA, Avedian R, Donaldson S, Fisher P, Leisenring W, Stovall M, Robison LL, Ness KK. Comparison of health status between upper and lower extremity sarcoma survivors: a report from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

A1111 Klosky JL, Howell C, Li Z, Foster R, Mertens AC, Robison LL, Ness KK. Risky health behavior in adolescent survivors of childhood cancer and their siblings: a report from the Childhood Cancer Survivor Study. Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

A1112 Klosky JL, Hum A, Zhang N, Ali K, Srivastava DK, Klesges RC, Ness KK, Robison LL, Hudson MM. Smokeless and dual tobacco use among males surviving childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Congress of the International Society for Pediatric Oncology (SIOP), October 2011, oral presentation.

A1113 Cox CL, Zhu L, Steen BD, Hudson MM, Robison LL, Oeffinger KC. Survivor profiles of health-related concerns, fear and motivation predict participation in medical surveillance: the Childhood Cancer Survivor Study. American Public Health Association 139th Annual Meeting and Exposition, October 2011, platform presentation.

A1114 Kirchhoff AC, Krull KR, Robison LL, Leisenring W. Physical, mental and neurocognitive status and employment outcomes in the Childhood Cancer Survivor Study cohort. Society for Behavioral Medicine, April 2011, oral presentation.

2010

A1001 Clanton NR, Morris B, Pan Z, Mulrooney D, Jain N, Srivastava DK, Zeltzer L, Stovall M, Robison LL, Krull KR. Fatigue, vitality, sleep quality, and neurocognitive functioning in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Neuropsychological Society, February 2010, platform presentation; International Society of Pediatric Oncology, October 2010, oral presentation.

A1002 Henderson TO, Whitton J, Leisenring W, Neglia J, Meadows A, Crotty C, Oeffinger KC, Diller L, Inskip P, Stovall M, Armstrong G, Robison LL, Nathan PC. Gastrointestinal malignancies as a second malignant neoplasm in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, 2010; American Society of Clinical Oncology Annual Meeting, June 2010, platform presentations.

A1003 Kirchhoff AC, Krull KR, Ness KK, Park ER, Friedman DL, Armstrong GT, Stovall M, Oeffinger KC, Hudson M, Robison LL, Leisenring W. Occupational status of adult survivors of childhood cancer: a report from the Childhood Cancer Survivors Study. American Society of Preventive Oncology, March 2010, poster presentation.

A1004 Meacham LR, Ford J, Ritenour C, Wasilewski-Masker K, Shnorhavorian M, Leisenring W, Whitton J, Armstrong G, Stovall M, Sklar C, Robison LL, Mertens A. Male health and perceptions of risk for testicular/sexual dysfunction: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

A1005 Termuhlen A, Tersak J, Liu Q, Yasui Y, Stovall M, Deutsch M, Sklar CA, Robison LL, Green DM. Chronic medical conditions, health status, and health care practices at 25 years in 5-year survivors of Wilms tumor: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2010; International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentations.

A1006 Armstrong GT, Liu W, Hammond S, Bhatia S, Neglia J, Stovall M, Leisenring W, Yasui Y, Srivastava D, Robison LL. Multiple subsequent neoplasms in the Childhood Cancer Survivor Study (CCSS) cohort. American Society of Clinical Oncology Annual Meeting and International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentations.

A1007 Vrooman LM, Najita J, Goodman P, Armstrong G, Hudson M, Kenney L, Laverdière C, Leisenring W, Mody R, Nathan P, Oeffinger K, Sklar C, Diller L. Long-Term outcomes after cancer in infancy: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, platform presentation.

A1008 Ford J, Kawashima T, Whitton J, Leisenring W, Laverdière C, Stovall M, Zeltzer L, Randolph-Frye M, Robison LL, Sklar C. Psychosexual functioning among women in the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

A1009 Green DM, Nolan VG, Kawashima T, Stovall M, Donaldson SS, Sklar CA, Robison LL. Effect of hypothalamic/pituitary radiation exposure in low doses on fertility in female Childhood Cancer Survivor Study (CCSS) participants. American Society of Clinical Oncology Annual Meeting, June 2010, poster presentation.

A1010 Green DM, Zhu L, Stovall M, Nolan V, Ness K, Donaldson SS, Cox C, Oeffinger K, Meacham LR, Sklar CA, Krull K, Armstrong GT, Robison LL. Association of antidepressant use and obesity among Childhood Cancer Survivor Study (CCSS) participants. International Conference on Long-Term Complications of Treatment of Children and Adolescents with Cancer, June 2010, poster presentation.

A1011 Kunin-Batson A, Kadan-Lottick N, Zhu L, Bordes V, Srivastava DK, Zeltzer L, Robison LL, Krull KR. Predictors of independent living status in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting June 2010, poster presentation.

A1013 Bhatti P, Veiga LHS, Ronckers CM, Sigurdson AJ, Stovall M, Smith SA, Weathers R, Leisenring W, Mertens AC, Hammond S, Friedman DL, Neglia JP, Meadows AT, Donaldson SS, Sklar CA, Robison LL, Inskip PD. Radiotherapy for childhood cancer and risk of thyroid cancer in a large cohort study. SER, June 2010, submitted.

A1014 Goldsby R, Chen Y, Yasui Y, Raber S, Li L, Diefenbach K, Shnorhavorian M, Kaden-Lottick N, Kastrinos F, Stovall M, Oeffinger K, Diller L, Armstrong GT, Robison LL, Sklar C. Late gastrointestinal sequelae in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, oral presentation.

A1015 Brackett J, Krull K, Scheurer M, Liu W, Srivastava K, Stovall M, Merchant T, Packer R, Robison LL, Ocku MF. Antioxidant enzyme polymorphisms and neuropsychological outcomes in Medulloblastoma survivors: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, poster presentation.

A1016 Kunin-Batson A, Kadan-Lottick N, Zhu L, Cox C, Border V, Srivastava DK, Zeltzer L, Robison LL, Krull KR. Predictors of independent living after childhood cancer: a report from the Childhood Cancer Survivor Study. International Society of Pediatric Oncology, October 2010, oral presentation.

A1017 Best T, Skol AD, Gamazon E, Onel K. A functional analysis of variants associated with therapy-induced second malignancies after Hodgkin lymphoma identified by genome-wide scan. 52nd American Society of Hematology Annual Meeting and Exposition, December 2010, poster.

A1018 Cozen W, Li D, Best T, Van Den Berg D, Skol AD, Cortessis VK, Mack TM, Glaser SL, Schumacher G, Weiss LM, Nathwani BN, Edlund CK, Hwang A, Bhatia S, Strong LC, Robison LL, Conti DV, Onel K. A Meta-analysis of nodular sclerosis Hodgkin lymphoma identifies risk Loci at 6p21.32. 52nd American Society of Hematology Annual Meeting and Exposition, December 2010, poster.

A1019 Cozen W, Li D, Best T, Van Den Berg D, Skol AD, Cortessis VK, Mack TM, Glaser SL, Schumacher G, Weiss LM, Nathwani BN, Edlund CK, Hwang A, Bhatia S, Strong LC, Robison LL, Conti DV, Onel K. A Meta-analysis of nodular sclerosis Hodgkin lymphoma identifies risk Loci at 6p21. 32nd International Lymphoma Epidemiology Consortium, April 2010, oral presentation.

2009

A0901 Nathan PC, Ness KK, Hudson MM, Mahoney M, Ford JS, Landier W, Armstrong GT, Henderson T, Robison LL, Oeffinger KC. Cancer screening in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology Annual Meeting, June 2009, platform presentation.

A0902 Boukheris H, Neglia JP, Stovall M, Hammond S, Mertens AC, Meadows AT, Donaldson SS, Armstrong GT, Stratton KL, Robison LL, Inskip PD. Risk of salivary gland carcinoma among childhood cancer survivors: role of treatment and cigarette smoking. ISS Conference, May 2009.

A0903 Bornstein MH, Haynes OM, Leisenring W, Hayashi R, Armstrong GT, Robison LL, Zeltzer L. Mental retardation and learning disability in survivors of childhood cancer diagnosed in infancy: a report from the Childhood Cancer Survivor Study. Society for Research in Child Development, 2009.

A0904 Stuber M, Meeske K, Zebrack B, Krull K, Stratton K, Leisenring W, Robison LL, Zeltzer L. Prevalence and predictors of Posttraumatic Stress Disorder in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2009, platform presentation.

A0905 Krull KR, Huang S, Hudson MM, Gurney JG, Srivastava DK, Klosky J, Ness KK, Leisenring W, Termuhlen A, Robison LL. Adolescent psychopathology and adult health behaviors in long-term survivors of childhood cancer: Findings from the Childhood Cancer Survivors Study. American Society of Clinical Oncology, 2009.

A0906 Kirchhoff AC, Leisenring W, Ness KK, Park ER, Friedman DL, Oeffinger KC, Armstrong GT, Krull KR, Robison LL, Wickizer T. Health-related unemployment among survivors and siblings in the Childhood Cancer Survivor Study (CCSS). National Research Service Award trainees meeting at Academy Health, June 2009, oral presentation.

2008

A0801 Mulrooney DA, Yeazel M, Mitby P, Kawashima T, Leisenring WM, Stovall M, Green DM, Sklar CA, Robison LL, Mertens AC. Cardiovascular disease in adult survivors of childhood and adolescent cancer: a report from the CCSS. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

- A0802** Armstrong GT, Ness KK, Whitton J, Leisenring W, Yasui Y, Zeltzer L, Donaldson SS, Hudson M, Robison LL, Packer R. Long-term outcomes among survivors of childhood central nervous system tumors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, June, 2008, oral presentation; International Symposium on Pediatric Neuro-Oncology, June 2008; Child Neurology Society, 2008.
- A0803** Armstrong GT, Whitton J, Chow E, Leisenring W, Gajjar A, Kun L, Robison LL, Sklar C. Abnormal timing of menarche in survivors of childhood central nervous system tumors. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; ISPNO 13th Annual Meeting, June 2008.
- A0804** Ellenberg L, Gioia G, Liu Q, Yasui Y, Packer R, Mertens A, Donaldson S, Kaden-Lottick N, Armstrong GT, Robison LL, Zeltzer LK. Executive functioning in long-term survivors of childhood brain tumors: a report from the Childhood Cancer Survivor Study (CCSS). International Neuropsychosocial Society Annual Meeting, February 2008.
- A0805** Laverdière C, Liu Q, Yasui Y, Nathan P C, Gurney JG, Stovall M, Diller LR, Cheung NK, Wolden S, Robison LL, Sklar CA. Long-term outcomes in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0806** Lown EA, Goldsby R, Mertens AC, Greenfield T, Bond J, Whitton J, Korcha R, Robison LL, Zeltzer LK. Alcohol consumption patterns and risk factors among childhood cancer survivors compared to siblings and general population peers. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0807** Bluhm E, Oeffinger K, Sklar CA, Meadows A, Hayashi R, Mertens AC, Kawashima T, Donaldson S, Meacham L, Stovall M, Robison LL, Inskip P. Risk factors for common health conditions occurring five years after NHL: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0808** Ginsberg JP, Ness K, Goodman P, Leisenring W, Robison LL, Oeffinger KC. Long-term follow-up among survivors of childhood Ewing's sarcoma: a report of the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0809** Ness KK, Leisenring WM, Huang S, Hudson MM, Gurney JG, Whelan K, Hobbie WL, Lanctot JQ, Armstrong GT, Robison LL, Oeffinger KC. Physical activity – patterns and predictors of sedentary lifestyle among adult survivors of childhood cancer. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0810** Meacham LR, Chow EJ, Kamdar KY, Ness KK, Chen Y, Yasui Y, Oeffinger KC, Sklar CA, Robison LL, Mertens AC. Cardiovascular risk factor cluster in adult survivors of pediatric cancer: a report of the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0811** Oeffinger KC, Ford JS, Moskowitz CS, Diller L, Hudson MM, Chou JF, Smith S, Mertens AC, Robison LL. Mammogram practices of women at risk for breast cancer following chest radiation for a pediatric cancer: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0812** Smith S, Ford JS, Rakowski W, Moskowitz CS, Robison LL, Oeffinger KC. Decisional balance, stages of adoption, and screening mammography among women at risk of breast cancer following a pediatric malignancy: a report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0813** Mertens A, Leisenring W, Mitby P, Hammond S, Perkins J, Robison LL, Hudson M, Meadows A. Sun sensitivity, sun exposure and risk of skin cancer in a cohort of adult survivors of childhood and adolescent cancer. A report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; 4th Biennial Cancer Survivorship Research Conference, June 2008.
- A0814** Bornstein MC, Haynes M, Hayashi R, Leisenring W, Armstrong GT, Robison LL, Zeltzer L. Mental retardation and learning disability in survivors of childhood cancer diagnosed in infancy: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008.
- A0815** Henderson T, Rajaraman P, Stovall M, Olive A, Smith S, Mertens A, Meadows A, Neglia J, Whitton J, Inskip P, Robison LL, Diller L. New primary sarcomas in survivors of childhood cancer: a detailed analysis of the effects of treatment: a report from the Childhood Cancer Survivor Study. International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008; American Society of Clinical Oncology, June 2008, oral presentation.
- A0816** Lown EA, Goldsby R, Mertens AC, Korcha R, Greenfield T, Bond J, Whitton J, Robison LL, Zeltzer LK. Adult siblings of childhood cancer survivors are heavy drinkers: which siblings are at risk? A report from the Childhood Cancer Survivor Study. American Public Health Association, October 2008, poster presentation.

A0817 Lu Q, Tsao JCI, Leisenring W, Armstrong GT, Robison LL, Zeltzer LK. Posttraumatic stress symptoms, pain and related impairment among adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 4th Biennial Cancer Survivorship Research Conference, June 2008.

A0818 Castellino SM, Tooze J, Geiger A, Leisenring W, Goodman P, Mertens A, Stovall M, Robison LL, Hudson M. Risks of mortality in 5-year survivors of Hodgkin's lymphoma in the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

A0819 Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson S, Sklar CA, Byrne J, Robison LL. Fertility of females after treatment for childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology Annual Meeting, June 2008, oral presentation.

A0820 Cox CL, Montgomery M, Oeffinger K, Leisenring W, Zeltzer L, Whitton J, Mertens A, Hudson MM, Robison LL. Childhood cancer survivors: patient and provider influences on physical activity participation. 4th Biannual Cancer Survivorship Research Conference, June 2008.

A0821 Cox CL, Hudson M, Oeffinger K, Whitton J, Montgomery M, Mertens A, Robison LL. Determinants of participation in recommended medical screening by at-risk adult survivors of childhood cancer. American Public Health Association Meeting & Exposition, October 2008, oral presentation.

A0822 Mertens AC, Leisenring W, Mitby P, Meadows A, Robison LL, Hudson M. Sun protection behaviour in a cohort of adult survivors of childhood and adolescent cancer. A report from the Childhood Cancer Survivor Study (CCSS). International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer, June 2008, platform presentation.

A0823 Klesges LM, Ness KK, Lancot JQ, Lown A, Whalen K, Huang S, Leisenring W, Stovall M, Oeffinger K, Robison LL, Hudson M. Prevalence and clustering of multiple behavioural risk factors in adult survivors of childhood cancer. 4th Biennial Cancer Survivorship Research Conference: Mapping the New Challenges, June 2008, poster presentation.

A0824 Goldsby R, Nathan P, Bowers D, Yeaton-Massey A, Raber S, Hill D, Robison LL, Liu Q, Yutaka Y, Zeltzer L, Armstrong GT, Packer R. Long-term neurologic outcomes in adult survivors of childhood acute lymphoblastic leukaemia: results from the Childhood Cancer Survivor Study (CCSS). Child Neurology Society, 2008.

A0825 Cox CL, Mertens A, Hudson M, Whitton J, Montgomery M, Robison LL. Determinants of mammography screening participation in adult female survivors of childhood cancer. 2008 ASCO Breast Cancer Symposium, September 2008, poster presentation.

2007

A0701 Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson SS, Sklar CA, Byrne J, Robison LL. Fecundity of males after treatment for childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, 2007.

A0702 Green DM, Kawashima T, Leisenring W, Stovall M, Donaldson SS, Sklar CA, Byrne J, Robison LL. Fertility of males after treatment for childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). SIOP 2007.

A0703 Lown EA, Goldsby R, Mertens AC, Greenfield T, Bond J, Whitton J, Korcha R, Robison LL, Zeltzer LK. Alcohol Consumption patterns and risk factors among childhood cancer survivors compared to siblings and general population peers. American Psychosocial Oncology Society, 2007.

A0704 Nathan PC, Greenberg ML, Ness KK, Mahoney MC, Gurney JG, Hudson MM, Donaldson SS, Leisenring WM, Robison LL, Oeffinger KC. Risk-based care in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, June 03, 2007.

A0705 Wasilewski-Masker K, Leisenring W, Meacham LR, Hammond S, Meadows AT, Robison LL, Mertens AC. Late recurrence in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). ASCO Annual Meeting, 2007

A0706 Kaste SC, Baker S, Goodman P, Leisenring W, Stovall M, Hayashi R, Yeazel M, Hudson MM, Sklar C, Robison LL. Dental health of long-term survivors of childhood cancer: the childhood cancer survivor study (CCSS). ASCO Annual Meeting, 2007

A0707 Garney EG, Liu Q, Sklar CA, Meacham LR, Stovall M, Yasui Y, Robison LL, Oeffinger KC. Obesity in adult survivors of childhood acute lymphoblastic leukemia: a follow-up report from the childhood cancer survivor study. ASCO Annual Meeting, 2007.

A0708 Laverdiere C, Liu Q, Yasui Y, Nathan PC, Gurney J, Stovall M, Diller L, Cheung NK, Wolden S, Robison LL, Sklar CA. Long-term complications of neuroblastoma: A report from the childhood cancer survivor study. ASCO Annual Meeting, 2007.

A0709 Bluhm EC, Ronckers C, Hayashi RJ, Neglia JP, Mertens AC, Meadows AT, Mitby PA, Stovall M, Robison LL, Inskip PD. Cause-specific mortality and second cancer incidence after non-Hodgkin lymphoma: a report from the Childhood Cancer Survivor Study. ASH Annual Meeting, 2007.

2006

A0601 Baker SK, Leisenring W, Hayashi R, Mertens A, Stovall M, Donaldson S, Robison LL, Sklar C. Impact of hematopoietic cell transplantation with total body irradiation on the health status of childhood leukemia survivors: a Report for the CCSS. American Society of Hematology, 2006.

A0602 Casillas J, Brooks S, Mertens A, Hudson M, Robison LL, Oeffinger K. The impact of psychosocial factors on access to care in adult minority survivors: a Childhood Cancer Survivor Study. Western Society for Pediatric Research, 2006, platform presentation.

A0603 Henderson T, Whitton J, Hammond S, Stovall M, Meadows A, Mertens A, Neglia J, Robison LL, Diller L. Sarcoma as a subsequent malignancy in survivors of childhood malignancy: a report from the CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, poster presentation.

A0604 Lansdale M, Marina N, Castellino S, Goodman P, Hudson MM, Mertens AC, Sklar CA, Leisenring W, Robison LL, Oeffinger KC. Screening for Hepatitis C Virus (HCV) Infection in long-term pediatric cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). Third biennial NCI Cancer Survivorship Conference, 2006, poster presentation.

A0605 Laverdiere C, Liu Q, Yasui Y, Nathan PC, Gurney J, Stovall M, Diller L, Cheung N, Wolden S, Robison LL, Sklar CA. Long-term complications in survivors of neuroblastoma: a report from the Childhood Cancer Survivor Study. ASCO, 2006.

A0606 Lu Q, Tsao JCI, Leisenring W, Robison LL, Zeltzer LK. Pain prevalence among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Third biennial NCI Cancer Survivorship Conference, 2006, poster presentation.

A0607 Mertens AC, Schultz KA, Ness KK, Whitton J, Recklitis C, Zebrack B, Zeltzer L, Robison LL. Social adjustment in survivors of childhood cancer: a report from the CCSS. American Psychosocial Oncology Society, 2006, poster presentation.

A0608 Mertens AC, Steele JR, Goodman P, Oeffinger KC, Robison LL, Hudson MM. Follow-Up care in cancer survivors: newsletters can't do it alone - a report from the Childhood Cancer Survivor Study. American Psychosocial Oncology Society, 2006, platform presentation.

A0609 Mitby PA, Mertens AC, Hudson MM, Eshelman DE, Jacox C, Jones JK, Kamani S, Allam RK, Oeffinger KC. Does a cognitive-based intervention increase the likelihood of screening for serious late effects in adult survivors of childhood cancer? Project vision: a report from CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

A0610 Mulrooney DA, Dover DC, Yasui Y, Ness K, Mertens AC, Neglia JP, Sklar CA, Robison LL, Davies SM. Twenty years of follow-up among survivors of childhood and young adult Acute Myeloid Leukemia (AML): a report from the Childhood Cancer Survivor Study (CCSS). American Society of Hematology, 2006, media platform presentation.

A0611 Ness K, Mertens AC, Zeltzer L, Gurney J, Leisenring W, Robison LL. Physical performance and health related quality of life in adult survivors of childhood cancer. Psychosocial and Neurocognitive Consequences of Childhood Cancer, 2006, platform presentation.

A0612 Schultz KAP, Ness KK, Whitton J, Recklitis C, Zebrack B, Robison L, Zeltzer L, Mertens AC. Social adjustment of adolescent survivors in the Childhood Cancer Survivor Study. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

A0613 Whelan KF, Kawashima T, Mitby P, Blatt J, Waterbor J, Castleberry R, Sande J, Packer R, Sklar C, Robison LL, Mertens A. Auditory and speech complications on childhood cancer survivors: a report from CCSS. 9th International Conference on Long Term Complications of Treatment of Children and Adolescent for Cancer, 2006, platform presentation.

A0614 Whelan K, Mertens A, Castleberry R, Mitby P, Kawashima T, Sklar C, Packer R, Waterbor J, Blatt J, Robison LL. Visual complications in childhood cancer survivors: a Childhood Cancer Survivor Study report. American Society of Clinical Oncology, 2006, platform presentation.

2005

A0501 Owen JE, Kawashima T, Myers CD, Lu Q, Zebrack B, Mertens A, Robison LL, Zeltzer LK. Pain prevalence and retrospective incidence in childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Society of Psychosocial Oncology, January 2005, platform presentation.

A0502 Nagarajan R, Clohisy DR, Neglia JP, Sklar C, Robison LL. Amputation in pediatric lower extremity bone sarcoma survivors: predictors of function and quality of life. American Society of Pediatric Hematology-Oncology meeting May 2005, poster presentation.

A0503 Ness KK, Mertens AC, Hudson MM, Wall MM, Leisenring WM, Oeffinger KC, Sklar CA, Robison LL, Gurney JG. Physical performance limitations and participation restrictions among long-term childhood cancer survivors: the Childhood Cancer Survivor Study. American Society of Pediatric Hematology-Oncology, May 2005, poster presentation.

A0504 Gurney JG, O'Leary M, Ness KK, Shalamar SD, Baker KS. Metabolic syndrome and growth hormone deficiency in adult survivors of childhood leukemia. American Society of Pediatric Hematology-Oncology, May 2005, submitted.

A0505 Oeffinger K, Mertens A, Sklar C, Kawashima T, Hudson M, Meadows A, Marina N, Kadan-Lottick N, Leisenring L, Robison LL. Prevalence and severity of chronic diseases in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation, plenary session.

A0506 Mertens A, Yasui Y, Liu Y, Neglia J, Robison LL. Late cause-specific mortality in long-term survivors of childhood and adolescent cancer: an update from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, May 2005, poster presentation.

A0507 Henderson T, Whitton J, Hammond S, Stovall M, Meadows A, Mertens A, Neglia J, Robison LL, Cook F, Diller L. Sarcomas as a subsequent malignancy in survivors of pediatric malignancy: the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation.

A0508 Bowers DC, McNeil DE, Liu Y, Leisenring W, Gurney J, Stovall M, Donaldson SS, Packer RJ, Robison LL, Oeffinger KC. Risk of stroke among >5 year survivors of childhood leukemia and brain tumors: A report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, May 2005, platform presentation.

A0509 Casillas J, Castellino DM, Hudson MM, Mertens AC, Whitton J, Brooks SL, Zeltzer LK, Ablin A, Robison LL, Oeffinger KC. The effect of insurance and ethnicity on healthcare access and health behaviors: the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, May 2005, poster presentation.

A0510 Mertens AC, Neglia JP, Hammond S, Perkins JL, Liu Y, Robison LL. Incidence rates of keratinocyte carcinoma (KC) in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society of Investigative Dermatology, May 2005, platform presentation, plenary session.

A0511 Ergun-Longmire B, Mertens AC, Mitby P, Quin J, Heller G, Yasui Y, Robison LL, Sklar CA. Risk of second neoplasms in survivors of childhood cancer treated with growth hormone: an updated report from the Childhood Cancer Survivor Study. Endocrine Society, 2005, platform presentation.

A0512 Chemaitilly W, Mertens AC, Mitby P, Whitton J, Stovall M, Yasui Y, Robison LL, Sklar CA. Acute ovarian failure in survivors of childhood and adolescent cancer: data from the Childhood Cancer Survivor Study. Endocrine Society, 2005, poster presentation.

2004

A0401 Sigurdson A, Ronckers C., Mertens A, Sklar C, Stovall M, Smith S, Liu Y, Hammond S, Berkow R, Neglia J, Meadows A, Robison LL, Inskip P. Second primary thyroid cancer after a first childhood malignancy: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research, 2004, oral presentation.

A0402 Lu Q, Myers CD, Owen J, Zebrack BJ, Zevon MA, Mertens A, Robison LL, and Zeltzer LK. Pain prevalence among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Pain Society, 2004, poster presentation.

A0403 Recklitis CJ, Hudson MM, Zebrack BJ, Mertens AC, Mitby PA, Nagarajan R, Robison LL, Zeltzer L. Psychosocial functioning in a large-scale cohort of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Psychosocial Oncology Society, 1st annual conference, 2004, oral presentation.

A0404 Bassal M, Kadan-Lottick NS, Neglia J, Taylor L, Yasui Y, Friedman DL, Mertens AC, Robison LL, Meadows AT. Risk of rare adult-type carcinomas as a subsequent neoplasm in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0405 Bowers DC, McNeil DE, Liu Y, Yasui Y, Stovall M, Gurney JG, Hudson MM, Robison LL, Oeffinger KC. Stroke following therapy for Hodgkin Disease (HD): a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

A0406 Friedman DL, Whitton J, Yasui Y, Mertens AC, Hammond S, Stovall M, Donaldson SS, Meadows AT, Robison LL, Neglia JP. Risk of second malignant neoplasms (SMN) 20 years after childhood cancer: the updated experience of the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, oral presentation.

A0407 Friedman DL, Whitton J, Yasui Y, Mertens AC, Hammond S, Stovall M, Donaldson SS, Meadows AT, Robison LL, Neglia JP. Second malignant neoplasms in five-year survivors of childhood cancer: an update from the Childhood Cancer Survivor Study (CCSS). 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

A0408 Termuhlen A, Tersak J, Hudson M, Mertens A, Gimpel N, Bleyer W, Yasui Y, Robison LL, Oeffinger K. Health status, medical care, preventive screening, and risk behaviors in adult survivors of cancer diagnosed during adolescence: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0409 Meacham LR, Gurney JG, Mertens AC, Ness KK, Sklar CA, Robison LL, Oeffinger KC. Body mass index (BMI) and final height in adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

A0410 Meacham LR, Gimpel N, Overa R, Whitton JA, Sklar CA, Robison LL, Oeffinger KC. Diabetes mellitus in long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0411 Sklar C, Mertens A, Mitby P, Whitton J, Stovall M, Mulder J, Green D, Nicholson S, Yasui Y, Robison LL. Premature menopause in survivors of childhood and adolescent cancer: data from the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Research, 2004, oral presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

A0412 Castellino SM, Hudson MM, Mertens AC, Yeazel M, Whitton J, Brooks S, Ablin A, Castleberry RP, Hobbie WL, Kaste S, Robison LL, Oeffinger KC. Comparison of long-term outcomes, health care utilization, and health behaviors in young adult African-American (AA) survivors of childhood cancer with white, non-Hispanic (WNH) survivors: a Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0413 Perkins JL, Liu Y, Mitby PA, Neglia JP, Hammond S, Stovall M, Meadows AT, Hutchinson R, Dreyer Z, Robison LL, Mertens AC. Nonmelanoma skin cancer (NMSC) in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, oral presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, oral presentation.

A0414 Mulrooney DA, Mertens AC, Neglia JP, Green DM, Zeltzer L, Robison LL. Fatigue and sleep in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2004, poster presentation; 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0415 Owen JE, Myers CD, Lu Q, Zebrack B, Zevon M, Mertens AC, Robison LL, Zeltzer LK. Pain prevalence in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 8th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2004, poster presentation.

A0416 Mertens A, Riley A, Patenaude A, Bursch B, Robison LL, Zeltzer L. Health and well-being in adolescent survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. Cancer Survivorship: Pathways to Health after Treatment Symposium, 2004, poster presentation.

2003

- A0301** Neglia J, Inskip P, Liu Y, Yasui Y, Hammond S, Stovall M, Packer R, Meadows A, Mertens A, Robison LL. Subsequent neoplasms (SNS) of the central nervous system (CNS) in survivors of childhood cancer: a case/control study from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, oral presentation.
- A0302** Brownstein C, Mertens A, Mitby P, Stovall M, Qin J, Heller G, Robison LL, Sklar C. Factors that affect final height and change in height SDS in survivors of childhood cancer treated with growth hormone (GH): a report from the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies' Annual Meeting, 2003, poster presentation.
- A0303** Yeazel M, Oeffinger K, Gurney J, Mertens A, Hudson M, Emmons K, Chen H, Robison LL. The cancer screening practices of long-term childhood cancer survivors. American Association for Cancer Research, 2003, poster presentation.
- A0304** Perkins J, Yasui Y, Liu Y, Hammond S, Stovall M, Neglia J, Meadows A, Robison LL, Mertens A. Nonmelanoma skin cancer (NMSC) in survivors of childhood cancer: A report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, oral presentation.
- A0305** Mertens A, Mitby P, Radloss G, Perentesis J, Kiffmeyer W, Neglia J, Meadows A, Jones I, Potter J, Friedman D, Yasui Y, Robison L, Davies S. XRCC1 and glutathione s-transferase polymorphism and susceptibility to therapy-related cancer in Hodgkin's disease survivors: a report from the Childhood Cancer Survivor Study. American Association for Cancer Research, 2003, oral presentation.
- A0306** Mulrooney D, Mertens A, Neglia J, Green D, Zeltzer L, Robison L. Fatigue and sleep disturbance in survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2003, poster presentation.

2002

- A0201** The Investigators of the Childhood Cancer Survivor Study (CCSS). Long-Term outcomes among 5-year survivors of childhood and adolescent cancers. American Society of Pediatric Hematology/Oncology, 2002, oral presentation.
- A0202** Nagarajan R, Clohisey D, Greenberg M, Neglia JP, Sklar C, Yasui Y, Zeltzer L, Robison LL. Limb function and quality of life (QOL) of survivors of pediatric lower limb bone tumors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.
- A0203** Mitby PA, Robison LL, Whitton JA, Zevon MA, Gibbs IC, Tersak JM, Meadows AT, Stovall M, Zeltzer LK, Mertens AC. Utilization of special education (SE) services and educational attainment (EA) among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.
- A0204** Hudson MM, Oeffinger K, Mertens A, Hobbie W, Chen H, Gurney J, Yeazel M, Robison LL. General health status of long-term childhood cancer survivors: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, oral presentation.
- A0205** Kadan-Lottick N, Robison LL, Gurney J, Neglia J, Yasui Y, Hayashi R, Hudson M, Greenberg M, Mertens A. What do childhood cancer survivors know about their past diagnosis and treatment? A report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2002, poster presentation.
- A0206** Oeffinger KC, Mertens A, Sklar C, Yasui Y, Fears T, Stovall M, Robison LL. Obesity in Adult survivors of childhood acute leukemia: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2002, poster presentation.
- A0207** Mertens A, Yasui Y, Liu Y, Stovall M, Hutchinson R, Sklar C, Robison LL. Pulmonary complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2002, poster presentation.
- A0208** Nagarajan R, Clohisey DR, Greenberg M, Neglia JP, Sklar C, Zeltzer L, Yasui Y, Robison LL. Limb Function and quality of life (QOL) of survivors of pediatric lower extremity bone tumors: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.
- A0209** Kenney LB, Diller L, Friedman D, Neglia J, Yasui Y, Mertens A, Inskip P, Meadows A, Robison LL. Risk factors for breast cancer (BC) in women from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0210 Oeffinger K, Mertens A, Hudson M, Castillo J, Gurney J, Yeazel M, Chen H, Robison LL. Health care utilization of adult survivors of childhood cancer: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0211 Oeffinger K, Mertens A, Sklar C, Yasui Y, Fears T, Stovall M, Vik T, Robison LL. Acute lymphoblastic leukemia and obesity: a report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0212 Pang JWY, Friedman DL, Whitton J, Weiss NS, Mertens A, Robison LL. Employment status of adult survivors of pediatric cancers: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0213 Mertens A, Yasui Y, Liu Y, Stovall M, Hutchinson R, Sklar C, Robison LL. Pulmonary complications in survivors of childhood and adolescent cancer: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0214 Yasui Y, Liu Y, Neglia J, Friedman D, Bhatia S, Meadows A, Mertens A, Whitton J, Robison LL. A cautionary note on the methodology for the analysis of second malignant neoplasm (SMN) risk in childhood cancer survivors: breast SMN after Hodgkin disease as an example. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0215 Mitby P, Robison LL, Whitton J, Zevon M, Gibbs I, Tersak J, Meadows A, Stovall M, Zeltzer L, Mertens A. Utilization of special education services and educational attainment among long-term survivors of childhood cancer: a report from the Childhood Cancer Survivor Study (CCSS). 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0216 Gurney JG, Punyko J, Neglia J, Packer R, Sklar C, Kadan-Lottick N, Nicholson HS, Wolden S, McNeil DE, Mertens A, Robison LL. Non-neurological late effects among childhood brain tumor survivors: an analysis from the childhood cancer survivors study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

A0217 Kadan-Lottick N, Robison LL, Gurney J, Neglia J, Yasui Y, Hayashi R, Hudson M, Greenberg M, Mertens A. What do childhood cancer survivors know about their past diagnosis and treatment? A report from the Childhood Cancer Survivor Study. 7th International Conference on Long-Term Complications of Treatment of Children and Adolescents for Cancer (Niagara-on-the-Lake), 2002, oral presentation.

2001

A0101 Sklar C, Mertens A, Mitby P, Qin J, Heller G, Yasui Y, Robison LL. Risk of Disease recurrence and second neoplasms (SN) in survivors of childhood cancer treated with growth hormone (GH): data from the Childhood Cancer Survivor Study (CCSS). Pediatric Endocrine Society, 2001, oral presentation.

A0102 Green D, Whitton J, Stovall M, Mertens A, Donaldson S, Ruymann F, Pendergrass T, Robison LL. Pregnancy outcome of partners of male survivors of childhood cancer. A report from the Childhood Cancer Survivor Study (CCSS). American Association of Cancer Research, 2001, poster presentation.

A0103 Kadan N, Friedman D, Mertens A, Yasui Y, Whitton J, Robison LL, Strong L. Clarification of Self-Reported Family history data by telephone interview: a report from the Childhood Cancer Survivor Study (CCSS). American Association of Cancer Research, 2001, poster presentation.

A0104 Friedman D, Kadan-Lottick N, Liu Y, Mertens A, Robison LL, Strong L. History of Cancer among First-Degree relatives of childhood cancer survivors: a report from the Childhood Cancer Survivor Study. American Society of Clinical Oncology, 2001, poster presentation.

A0105 Neglia J, Yasui Y, Mertens A, Friedman D, Hammond S, Donaldson S, Stovall M, Meadows A, Robison LL. Second primary neoplasms (SPNs) of the central nervous system (CNS) in five year survivors of childhood cancer — a report from the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 2001, oral presentation.

A0106 Gurney JG, Packer R, Punyko J, Sklar C, Kadan-Lottick N, Neglia J, Nicholson S, Wolden S, McNeil E, Mertens A, Robison LL. Non-neurological late effects among childhood brain tumor survivors: a preliminary analysis from the Childhood Cancer Survivor Study. Society for Neuro-Oncology, 2001, oral presentation.

A0107 The Investigators of the Childhood Cancer Survivor Study (CCSS). Long-term outcomes among survivors of cancer during childhood and adolescence. Society for Epidemiologic Research, 2001, poster presentation.

A0108 Mulvihill JJ, Strong LC, Robison LL. Genetic disease in offspring of survivors of childhood and adolescent cancer. American Society of Human Genetics, 2001, poster presentation.

A0109 Hammond S, Neglia J, Qualman S, Mertens A, Yasui Y, Meadows A, Robison LL. Tissue archive of second malignant neoplasms (SMN) in the Childhood Cancer Survivor Study (CCSS). Pediatric Academic Societies, 2001, poster presentation.

2000

A0001 Packer RJ, Gurney J, Zeltzer L, Mertens A, Robison LL. Long-Term Neurologic and Neurocognitive status of childhood brain tumors: a Childhood Cancer Survivor Study (CCSS) Report. Society for Neuro-Oncology, 2000, oral presentation.

A0002 Neglia J, Yasui Y, Mertens A, Friedman D, Hammond S, Donaldson S, Stovall M, Meadows A, Robison LL. Second primary neoplasms (SPNs) of the central nervous system (CNS) in five year survivors of childhood cancer--a report from the Childhood Cancer Survivor Study (CCSS). International Pediatric Neuro-Oncology Symposium, 2000, oral presentation.

1999

A9901 Sklar C, Whitton J, Mertens A, Stovall M, Green D, Marina N, Greffe B, Wolden S, Robison LL. Thyroid dysfunction in survivors of Hodgkin's disease (HD): data from the Childhood Cancer Survivor Study (CCSS). American Pediatric Society and Society for Pediatric Research, 1999, oral presentation.

A9902 Mertens A, Neglia J, Yasui Y, Potter J, Nesbit M, Ruccione K, Smithson A, Robison LL. Mortality rates and causes of death in 5-year survivors of childhood and adolescent cancer. American Society of Clinical Oncology, 1999, oral presentation.

A9903 Neglia J, Mertens A, Yasui Y, Hammond S, Friedman D, Donaldson S, Meadows A, Robison LL. Risk of second primary neoplasms (SPNs) in survivors of childhood cancer--initial analysis of the Childhood Cancer Survivor Study (CCSS). American Society of Clinical Oncology, 1999, oral presentation.

A9904 Neglia J, Mertens A, Yasui Y, Hammond S, Friedman D, Donaldson S, Meadows A, Robison LL. Risk factors for second primary neoplasms (SPNs) in long-term survivors of childhood cancer--initial analysis of the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, oral presentation.

A9905 Mertens A, Neglia J, Yasui Y, Potter J, Nesbit M, Ruccione K, Smithson A, Robison LL. Mortality in five-year survivors of childhood and adolescent cancer — preliminary analysis of the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, poster presentation.

A9906 Green DM, Whitton J, Stovall M, Mertens A, Ruymann F, Pendergrass T, Robison LL. Pregnancy outcome after treatment for cancer during childhood or adolescence: a report from the Childhood Cancer Survivor Study (CCSS). International Society of Paediatric Oncology-American Society of Pediatric Hematology-Oncology meeting, 1999, oral presentation.

1998

A9801 Hammond S, Qualman S, Neglia J, Meadows A, Robison LL. Mucoepidermoid carcinoma (MEC) of the salivary gland occurring as a second malignant neoplasm (SMN) in the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Pathology, 1998, oral presentation.

1997

A9701 Hammond S, Qualman S, Neglia J, Meadows A, Robison LL. Assessment and validation of second neoplasms in the Childhood Cancer Survivor Study (CCSS). Society for Pediatric Pathology, 1997, oral presentation.

CCSS Career Development Award Winners

Category	Awardee	Application Title	CCSS Working Group	Primary Mentor	Status
2013					
Junior Faculty	Sogol Mostoufi-Moab, MD Children's Hospital of Phil.	Overall risk of chronic endocrine disorders in adult survivors of childhood cancer	Chronic Disease	Mary Leonard	J Clin Oncol 2016
2014					
Junior Faculty	Philip Lupo, PhD Baylor College of Medicine	Epigenomic profiling of metabolic outcomes in childhood leukemia survivors	Genetics	Smita Bhatia	Genes Chrom Cancer 2018
Junior Faculty	Rebecca Howell, PhD UT MD Anderson Cancer Center	Radiation dose reconstruction methods for intensity modulated radiation therapy	Second Malignancies	Marilyn Stovall	Analysis Underway
Trainee	Giselle Perez, PhD Massachusetts General Hospital	Mental healthcare service availability and utilization among childhood cancer survivors	Psychology; Cancer Control	Elyse Park	J Cancer Surviv 2018
Trainee	Melissa Schapiro, MD St. Louis Children's Hospital	Cognitive and academic difficulties in survivors of head/neck rhabdo	Psychology	Robert Hayashi	Manuscript Drafted
2015					
Junior Faculty	Danielle Novetsky Friedman, MD Memorial Sloan Kettering	Impact of radiation dose to the pancreas on subsequent risk of diabetes mellitus	Chronic Disease	Charles Sklar	JNCI 2019
Junior Faculty	Adam Esbenshade, MD Vanderbilt University	Using the Cumulative Illness Rating Scale to characterize the burden of chronic conditions	Chronic Disease	Kirsten Ness	Abstract Presented, Manuscript Drafted
Trainee	Douglas Fair, MD University of Utah	Health care financial burden and missed opportunities for care	Chronic Disease	Anne Kirchhoff	Cancer 2021
Trainee	Aurelie Weinstein, Georgia State University	Predictors and outcomes of personal strengths in young adult cancer survivors	Psychology	Chris Heinrich	Psychooncology 2018
International Trainee	Miranda Fidler, University of Birmingham, UK	Comparison of risks for mortality and subsequent cancers in the CCSS and BCCSS	Chronic Disease	Mike Hawkins	JNCI 2020
2017					
Junior Faculty	Ralph Salloum, MD, Cincinnati Children's Hospital Medical Center	Medulloblastoma and PNET outcomes across three decades of diagnosis	Chronic Disease	Maryam Fouladi; Greg Armstrong	J Clin Oncol 2018
Trainee	Stephanie Vuotto, PhD, St. Jude Children's Research Hospital	Psychological distress, neurologic morbidity and functional independence among adult survivors treated with CNS-directed therapies	Psychology	Tara Brinkman	Abstract Presented, Manuscript Drafted

Category	Awardee	Application Title	CCSS Working Group	Primary Mentor	Status
2018					
Junior Faculty	Nicole Alberts, PhD St. Jude Children's Research Hospital	Chronic pain in adult survivors of childhood cancer: Utilization of the CCSS mHealth platform in assessing pain and wearable technology	Psychology	Greg Armstrong	JCO Clinical Cancer Informatics 2020
Trainee	Kerri Beckett Medical College of Wisconsin	Long-term follow-up of survivors of osteosarcoma	Chronic Disease	Cindy Schwartz	Analysis Underway
Trainee	Kari Bjornard St. Jude Children's Research Hospital	The impact of chronic health conditions on sexual dysfunction in female childhood cancer survivors	Chronic Disease	Kiri Ness	Analysis Underway
2019					
Junior Faculty	Cindy Im, PhD, University of Alberta	Genetic risk prediction profiles for fracture risk among childhood cancer survivors	Genetics	Yutaka Yasui	Bone Miner Res 2020
Trainee	Suman Shrestha, MS, MSc UT MD Anderson Cancer Center	Enhancing heart model of current CCSS age-specific computational phantoms by defining cardiac substructures and dose reconstruction	Chronic Disease	Rebecca Howell	Radiother Oncol 2020
2020					
Junior Faculty	Catherine Goudie, MD MCGill University Health Center	Long-term cost-effectiveness of cancer predisposition syndrome identification strategies in survivors of pediatric leukemia, brain tumors or bone/soft tissue sarcomas	Genetics	Paul Nathan	Analysis Underway
Trainee	Natalie Wu, MD Fred Hutchinson Cancer Research Center	Development and validation of a prediction model for end-stage renal disease in childhood cancer survivors	Chronic Disease	Eric Chow	Analysis Underway
2021					
Junior Faculty	Kelly Rentscher, PhD UCLA	Psychological distress, social functioning, and phenotypic aging in adult survivors of childhood cancer	Psychology	Kiri Ness	Analysis Underway
Trainee	Christina Sharkey, PhD Children's National Hospital	The impact of physical activity and psychological distress on neurocognitive functioning over time	Psychology	Kristina Hardy	Analysis Underway

CCSS Trainee List

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Nina Kadan-Lottick, MD, MSPH	Post-doctoral Fellowship	Associate Professor Division of Pediatric Hematology-Oncology Yale University New Haven CT	JAMA 2002 Epidemiology 2003 Blood Cancer 2006 J Clin Oncol 2008 J Natl Cancer Inst 2010
Brad Zebrack, PhD	Post-doctoral Fellowship	Associate Professor School of Social Work University of Michigan Ann Arbor, MI	Pediatr 2002 J Clin Oncol 2004 Pediatr Blood Cancer 2007 Psychooncology 2012
Pauline Mitby, MPH	Graduate Training	Clinical Research Associate Division of Pediatric Hematology-Oncology Children's Hospital of Minnesota Minneapolis, MN	Cancer 2003
Rajaram Nagarajan, MD, MS	Post-doctoral Fellowship and Graduate Training	Associate Professor Division of Pediatric Hematology-Oncology Cincinnati Children's Hospital Cincinnati, OH	Cancer 2003 Br J Cancer 2004 J Cancer Surviv 2009 Cancer 2011
Carrie M. Brownstein, MD	Post-doctoral Fellowship	Senior Clinical Scientist and Sr. Associate Clinical Director Roche Pharmaceuticals Assistant Clinical Professor Department of Pediatric Hematology-Oncology New York-Presbyterian/Columbia New York, NY	J Clin Endocrinol Metab 2004
Lisa Kenney, MD, MPH	Post-doctoral Fellowship	Assistant Professor Department of Pediatrics Harvard Medical School Pediatric Oncology Dana-Farber Cancer Institute Boston MA	Ann Intern Med 2004
Elyse Park, PhD	Graduate Training	Associate Professor Harvard Medical School Department of Psychiatry Massachusetts General Hospital Boston MA	J Clin Oncol 2005 Prev Med, 2006 J Cancer Surviv, 2012 J Clin Oncol, 2015 JAMA Intern Med 2018 American Cancer Society Grants (2009, 2019)
Sharon Castellino, MD, MS	Graduate Training	Associate Professor Department of Pediatrics Wake Forest University Winston-Salem, NC	J Clin Oncol 2005 Blood 2011
Joanna Perkins, MD, MS	Post-doctoral Fellowship and Graduate Training	Hematology-Oncology Children's Hospital of Minnesota Minneapolis, MN	J Clin Oncol 2005 Cancer 2014
Judy Punyko, PhD	Graduate Training	State Maternal and Child Health Epidemiologist Minnesota Department of Health St Paul, MN	Pediatr Blood Cancer 2005
Wassim Chemaitilly, MD	Post-doctoral Fellowship	Assistant Member Endocrinology St. Jude Children's Research Hospital Memphis, TN	J Clin Endocrinol Metab 2006
Mylene Bassal, MD	Post-doctoral Fellowship	Assistant Member Department of Pediatrics University of Ottawa Ottawa, Canada	J Clin Oncol 2006

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Berrin Ergun-Longmire, MD	Post-doctoral Fellowship	Assistant Professor Division of Pediatric Endocrinology Robert Wood Johnson Medical School New Brunswick, NJ	J Clin Endocrinol Metab 2006
Cecile Ronckers, PhD	Post-doctoral Fellowship	Epidemiologist AMC/Emma Children's Hospital Amsterdam, Netherlands	Radiat Res 2006 Kika Foundation Grant (2018)
Tara Henderson, MD, MPH	Fellowship and Graduate Training	Assistant Professor Department of Pediatrics University of Chicago Chicago, IL	JNCI 2007 Ann Intern Med, 2012 Int J Radiat Oncol Bio Phys, 2012 J Clin Oncol 2016 NIH RO1 (two in 2020)
Eric Chow, MD, MPH	Fellowship and Graduate Training	Medical Director Pediatric Cancer Long Term Follow-up Program Seattle Children's Hospital Seattle, WA	J Pediatr 2007 Pediatr Blood Cancer 2008 Pediatr Blood Cancer 2009 Pediatr Blood Cancer 2013 J Clin Oncol 2015 Lancet Oncol 2017 J Clin Oncol 2018 Contemp Clin Trials 2019 NIH RO1 (2017)
Todd Florin, MD	Medical Student	Assistant Professor Cincinnati Children's Hospital Cincinnati, OH	CEBP 2007
Kris Ann Schultz, MD, MS	Fellowship and Graduate Training	Hematology-Oncology Children's Hospital of Minnesota Minneapolis, MN	J Clin Oncol 2007 Pediatr Blood Cancer 2014
Jenny Pang, MD, MPH	Fellowship and Graduate Training	Clinical Assistant Professor School of Public Health University of Washington Seattle, WA	Pediatr Blood Cancer 2008
Irina Dinu, PhD	Post-doctoral Fellowship	Assistant Professor Department of Public Health Sciences University of Alberta Edmonton, Alberta	Pediatr Blood Cancer 2008
Daniel Mulrooney, MD, MS	Fellowship and Graduate Training	Assistant Member St. Jude Children's Research Hospital Memphis, TN	Sleep 2008 Cancer 2008 Br Med J 2009 Br Med J 2020
Elizabeth Bluhm, MD, MPH	Post-doctoral Fellowship	Department of Internal Medicine Washington Hospital Medical Center Washington, DC	Blood 2008
Anne Lown, DrPH	Post-doctoral Fellowship	Assistant Clinical Professor Depart. of Family Health Care Nursing UCSF San Francisco, CA	Addiction 2008 Psychooncology 2013
Edward Garmey, MD	Post-doctoral Fellowship	Chief Medical Officer and Senior Vice President Cerulean Pharma Inc. Cambridge, MA	J Clin Oncol 2008
Natasha Buchanan, PhD	Post-doctoral Fellowship	Behavioral Scientist Centers for Disease Control Atlanta, GA	Cancer, 2009
Meagan Lansdale, MD	Medical Student	Assistant Professor UCSF School of Medicine San Francisco, CA	Cancer, 2009

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Caroline Laverdiere, MD	Fellowship Training	Assistant Professor Department of Pediatrics University of Montreal Montreal, QC	JNCI 2009
Christopher Janson, MD	Medical Student	Assistant Professor Children's Hospital of Montefiore Albert Einstein College of Medicine Bronx, NY	CEBP2009
Karen Wasilewski-Masker, MD, M.Sc.	Fellowship Training	Assistant Professor Department of Pediatrics Emory University School of Medicine Atlanta, GA	JNCI 2009 J Cancer Surviv, 2014
Lisa Kahalley, PhD	Post-doctoral Fellowship	Assistant Professor Baylor College of Medicine Houston, TX	Nicotine Tob Res, 2010 Pediatr Blood Cancer, 2012
Beth Kurt, MD, MS	Fellowship and Graduate Training	Pediatric Oncologist Helen DeVos Children's Hospital Grand Rapids, MI	Pediatr Blood Cancer, 2011
Timothy Best, PhD	Graduate degree (PhD)	Medical Science Liaison Ipsen Chicago, IL	Nat Med, 2011
Anne Kirchhoff, PhD, MPH	Post-doctoral Fellowship	Assistant Professor University of Utah Salt Lake City, UT	Med Care, 2010 CEBP, 2011 Cancer, 2011 Med Care, 2010 Support Care Cancer, 2013 J Natl Cancer Inst, 2015 JAMA Oncol 2018
Michele Montgomery, PhD	Graduate degree (PhD)	Assistant Professor University of Alabama Tuscaloosa, AL	J Cancer Surv 2011
Nancy Clanton, PhD	Post-doctoral training	Pediatric Neuropsychologist LeBonheur Children's Hospital Memphis, TN	Cancer 2011
Kerri Nottage, MD	Fellowship training	Assistant Member St. Jude Children' Research Hospital Memphis, TN	Blood 2011
Carmen Wilson, PhD	Post-doctoral Fellowship	Research Associate St. Jude Children' Research Hospital Memphis, TN	Cancer 2012 JNCI 2013 CEBP 2014
Houda Boukheris, MD	Post-doctoral Fellowship		Int J Radiat Oncol Biol Phys 2012
Tanya Watt, MD	Fellowship training	Assistant Professor UT Southwestern Dallas, TN	J Natl Cancer Inst, 2012
Julienne Brackett, MD	Fellowship training	Assistant Professor Texas Children's Hospital Houston, TX	Neuro Oncol 2012
Tien Huang, PhD	Post-doctoral Fellowship	Instructor University of Oklahoma Norman, OK	Pediatr Blood Cancer 2013
Lucie Turcotte, MD, MPH	Fellowship training	Assistant Professor University of Minnesota Minneapolis, MN	J Clin Oncol, 2015 JAMA 2017 J Clin Oncol, 2019 NIH K08 (2016)
Jeanne Steele, PhD	Post-doctoral Fellowship	Program Consultant Office of Health Improvement State of Minnesota	J Cancer Surviv 2013

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Casey Daniel, PhD	Graduate degree (PhD)	Research Fellow Harvard School of Public Health Boston, MA	Cancer 2015 Trials 2015
Prasad Gawade, PhD	Fellowship training	Observational Research Sr. Manager Amgen Thousand Oaks, CA	Am J Obstet Gynecol 2015
Sara Barton, MD	Assistant Professor	Assistant Professor University of Nebraska Heartland Center for Reproductive Medicine Omaha, NE	Lancet Oncol 2013
Stefan Essig, MD, PhD	Research Fellow	Research Fellow University of Bern Bern, Switzerland	Lancet Oncol 2014
Pinki Prasad, MD, MPH	Fellowship training	Assistant Professor Louisiana State University New Orleans, LA	J Clin Oncol 2015
Karen Tsui, MD	Fellowship training	Assistant Professor Starship Hospital Auckland, New Zealand	Neuro Oncol 2014
Eugene Suh, MD	Fellowship training	Assistant Professor Loyola University Chicago, IL	Lancet Oncol 2020
Giselle Perez, PhD	Post-doctoral Fellowship	Fellow Massachusetts General Hospital Boston, MA	J Cancer Surviv 2018
Melissa Schapiro, MD	Fellowship training	Assistant Professor Memorial Sloan Kettering Cancer Center New York, NY	Analysis underway
Dava Szalda, MD	Fellowship training	Fellow Children's Hospital of Philadelphia Philadelphia, PA	Analysis underway
Elizabeth Feijen	Graduate Training	Graduate Student Princess Maxima Amsterdam, The Netherlands	J Clin Oncol, 2015 JAMA Onc 2019
Huiru Dong, MSc	Graduate Training	Graduate Student University of Alberta Edmonton, Alberta, Canada	Am J Epidemiol 2015
Kelly Kenzik, PhD	Graduate Training	Post-doctoral Fellow University of Alabama Birmingham, Alabama	Neuropsychology 2014
Douglas Fair, MD	Fellowship Training	Assistant Professor University of Utah Salt Lake City, UT	Cancer 2021
Aurelie Weinstein	Graduate Training	Graduate Student Georgia State University Smyrna, GA	Psycho-Oncology 2018
Miranda Fidler	Graduate Training	Research Scientist University of Calgary Alberta, Canada	J Natl Cancer Inst 2020
Arin Madenci, MD	Fellowship Training	Fellow, Pediatric Surgery Boston Children's Hospital Boston, MA	J Clin Oncol 2015 J Clin Oncol 2018
Karen Effinger, MD	Fellowship Training	Assistant Professor Children's Hospital of Atlanta Atlanta, GA	Eur J Cancer 2018 ASCO Young Investigator Award (2014)

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Ryan Nipp, MD	Fellowship Training	Fellow Mass General Hospital Boston, MA	J Clin Oncol 2018
Stephanie Vuotto, PhD	Post-doctoral Fellowship	Assistant Professor College of Mount Saint Vincent New York, NY	Cancer 2016
Austin Brown, PhD	Graduate Training	Assistant Professor Baylor College of Medicine Houston, TX	Analysis underway
Peter Asdhal, MD	Graduate Training	Faculty Aarhus University Aarhus, Denmark	Pediatr Blood Cancer 2021
Daniel Zheng	Medical Student	Medical Student Yale University New Haven, CT	Cancer 2018
Laura Daniel, PhD	Post-doctoral Fellowship	Instructor Children's Hospital of Philadelphia Philadelphia, PA	Psycho-Oncology 2019
Yin Ting Cheung, PhD	Post-doctoral Fellowship	Faculty of Medicine Chinese University of Hong Kong Hong Kong, China	J Natl Cancer Inst 2018 JNCI Cancer Spect 2020
James Bates, MD	Fellowship Training	Assistant Professor Emory University Atlanta, GA	J Clin Oncol 2019
Matt Ehrhardt, MD	Fellowship Training	Assistant Member St. Jude Children's Research Hospital Memphis, TN	J Clin Oncol 2020
Kristen Stefanski	Fellowship Training	Fellow Cincinnati Children's Hospital Cincinnati, OH	J Natl Cancer Inst 2020
Stephanie Dixon	Fellowship Training	Instructor St. Jude Children's Research Hospital Memphis, TN	Cancer 2019 J Clin Oncol 2020
Kerri Beckett	Fellowship Training	Fellow Medical College of Wisconsin Milwaukee, WI	Analysis underway
Kari Bjornard	Fellowship Training	Instructor St. Jude Children's Research Hospital Memphis, TN	Analysis underway
Valerie Arseneault	Fellowship Training	Fellow Hospital for Sick Kids Toronto, ON	Analysis underway
Caleb Nannes	Fellowship Training	Fellow Duke University Durham, NC	Analysis underway
Nisha Rathore	Fellowship Training	Fellow Texas Children's Hospital Houston, TX	Analysis underway
Ameera Fayad	Graduate Training	Student University of Buffalo Buffalo, NY	Analysis underway
Samah Hayek	Post-doctoral Fellowship	Senior Epidemiologist/Researcher Clalit Research Institute Israel	JCO 2020
Bryan Dieffenbach	Fellowship Training	Fellow Brigham and Women's Hospital Boston, MA	Eur J Cancer 2020

Trainee/Mentee	Training Experience	Current Position	First Authored CCSS Publications and Grants
Suman Shrestha	Graduate Training	Student UT Health Graduate School Houston, TX	Radiother Oncol 2020
Monica E. Reyes	Post-doctoral Fellowship	Fellow UT MD Anderson Houston, TX	Analysis underway
Rozalyn Rodwin	Fellowship Training	Fellow Yale University New Haven, CT	Manuscript Submitted
Taumoha Ghosh	Fellowship Training	Fellow University of Minnesota Minneapolis, MN	Manuscript Submitted
Natalie Wu	Fellowship Training	Fellow Fred Hutchison Cancer Center Seattle, WA	Analysis underway
Matthew Trendowski	Medical Student	Student University of Chicago Chicago, IL	Manuscript Submitted
Amy Wang	Fellowship Training	Fellow University of Chicago Chicago, IL	Analysis underway
Vincent Pluimakers	Medical Student	Graduate Student Princess Maxima Medical Center Utrecht, The Netherlands	Analysis underway
Eric Geiger	Fellowship Training	Fellow Univ. of California San Francisco San Francisco, CA	Analysis underway
Ingrid Tonnig Olsson	Post-doctoral Fellowship	Post-doctoral Fellow St. Jude Children's Research Hospital Memphis, TN	Analysis underway
AnnaLynn Williams	Post-doctoral Fellowship	Post-doctoral Fellow St. Jude Children's Research Hospital Memphis, TN	Manuscript Submitted
Ajay Major	Fellowship Training	Fellow University of Chicago Chicago, IL	Concept approved
Lin Yu	Student	Student University of Alberta Edmonton, Canada	Concept approved

Appendix

Sample LTFU Participant Newsletters

RESEARCH RESULTS

SLEEPWELL Study

An ehealth intervention for late effects of childhood cancer

Apps and wearable technologies explore the potential benefits of a good night's sleep on cognitive function.

About 40%-50% of survivors live with impaired brain function that was caused by their cancer and/or treatment. "We know we can't go back in time and undo treatment-related brain injury," says Kevin Krull, PhD, Endowed Chair in Cancer Survivorship at St. Jude Children's Research Hospital and Chair of the LTFU Study's Psychology Committee.

"But other factors, like sleep, also affect cognitive function, including attention, learning, and memory. Sleep is often overlooked as a health behavior, compared to things like exercise and eating well. The SLEEPWELL Study is exploring whether better sleep might help survivors' brains to function better."

SLEEPWELL grew out of an earlier study, led by Tara Brinkman, PhD, also a survivorship researcher at St. Jude

continued on page 3



Kevin Krull, PhD, and Tara Brinkman, PhD, are leading new research on the relationship between sleep and survivors' brain function.

I'm a childhood cancer survivor... I have questions about the COVID-19 vaccine

As COVID-19 vaccines continue to become more available, many childhood cancer survivors may have concerns and questions. Here is guidance for you from the LTFU Study Education Committee.

Should I get the COVID-19 vaccine?

Yes! We encourage you to get the vaccine as soon as it is offered to you. If you have a weakened immune system, talk with your provider to identify the best time for you to get the vaccine.

Which vaccine should I get?

All of the approved vaccines are safe and highly effective in preventing severe illness, hospitalization, or death from COVID-19. The "best" vaccine is the one that is readily available. "Get the vaccine that is offered to you, as soon as you can," says Melissa Hudson, MD, Director, Cancer Survivorship, St. Jude Children's Research Hospital.

Caution for leukemia survivors

Leukemia survivors should talk to their pediatric cancer care teams about precautions to take if, during treatment, they had a severe reaction to PEG-asparaginase. This is usually *not* a reason to avoid the COVID vaccine.

When you arrive to receive your vaccine, let your vaccine provider know about any allergies, and stay for the full observation period. Vaccine sites are prepared to respond to any adverse reactions quickly and

continued on page 3

More information about COVID-19 vaccines

Experts at St. Jude Children's Research Hospital have compiled detailed, up-to-date information about COVID-19 and survivorship in response to the many inquiries they've received from survivors. You can find more information here:
<https://together.stjude.org/en-us/life-after-cancer/survivors-covid-19-vaccine.html>

LTFU Study is the model for a national childhood cancer cohort



Greg Armstrong, MD, Principal Investigator of the LTFU Study, is co-chair of the National Childhood Cancer Cohort working group.

An exciting new national initiative aims to gather data from every child diagnosed with cancer in the US. The National Cancer Institute (NCI) has awarded \$50 million in funding annually for the next 10 years to establish the Childhood Cancer Data Initiative (CCDI), which will track childhood cancer patients and follow them long-term. NCI describes learning from the experiences of the LTFU

Study as “essential to the success of this effort to create a truly national resource.”

Greg Armstrong, Principal Investigator of the LTFU Study, has been named co-chair of the CCDI’s National Childhood Cancer Cohort working group. “NCI is tapping our expertise in order to take the LTFU Study’s efforts into the

future,” says Dr. Armstrong. “Thanks to dedicated participants like you, the LTFU Study has become the biggest survivorship resource in the country. This is impressive testimony to the difference you make.”

A NOTE FROM US

Your voice is making a difference

In this issue, you’ll read about a new, unprecedented national initiative that is being modeled on the LTFU Study. You’ll also read about innovative research exploring how improved sleep may enhance survivors’ brain function, and our current expansion of the study’s collection of biospecimens.

The old proverb, “Mighty oaks from tiny acorns grow,” comes to mind. None of this would exist without you. Your dedication to the first large-scale scientific community of childhood cancer survivors has led to life-changing advances. I hope you share my enormous excitement at this evidence of our study’s success.

Completing the current follow-up survey is vitally important

We need your voice because there is still so much to learn about childhood cancer survivorship.

Each participant’s survey response is vitally important. Please take the time to return your current survey so we can continue to make a difference.

It’s not too late to be heard

You can complete your survey online, through the myLTFU portal, or on paper. Contact us with any questions about your survey: ltfu@stjude.org or 1-800-775-2167.

Greg Armstrong, MD
Principal investigator

A handwritten signature in black ink, appearing to be 'JA' or similar, written over a light blue background.

Mobile phlebotomy expands research

Without leaving their homes, more than 1,350 LTFU Study participants across the country are helping to expand our biological sample collection. This new effort significantly enhances resources for molecular and genetic research on survivorship.

“Recruitment response for this study has been strong,” says Aaron McDonald, PhD, Project Director. “As part of our planning, we emailed a sample of study participants to explore how they felt about having a mobile phlebotomy technician come to their homes to draw a blood sample. They were overwhelmingly enthusiastic, even with the COVID-19 pandemic.”

After participants provide consent, study staff arrange for technicians to come to their homes and draw a small amount of blood, following strict COVID-19 safety guidelines. Samples are stored in a central biobank with ultra-low temperature freezers that are secure and protected. A participant’s name is not attached to the sample at any time.

“Large numbers of high-quality samples are essential to research,” says Dr. McDonald. “As ever, we are grateful to everyone for their contributions.”



Biological samples contributed by LTFU participants from across the country are stored in freezers like these that protect this important research resource.

SLEEPWELL Study

continued from page 1

Children's Research Hospital. She found that participants whose sleep improved over the course of six months showed improved cognitive functioning.

"We realized that if we could improve sleep, we might be able to improve survivors' functioning," says Dr. Brinkman. That scientific insight paved the way for SLEEPWELL's five-year effort, which is supported by \$4.3 million in funding from the National Cancer Institute. Drs. Brinkman and Krull are the study's lead researchers.

Sleepless in survivorship

Insomnia (difficulty falling or staying asleep) has been around for centuries—it's described in the earliest written records—and causes significant problems. In the general population, research has shown the extent to which poor sleep affects work productivity and relationships. Exhausted employees have more trouble concentrating, learning, communicating, and remembering. They have more accidents and often feel unhappy.

Generally, the "gold standard" of insomnia treatment is Cognitive Behavioral Therapy (CBT). CBT helps people identify and explore the ways their emotions and thoughts can affect their sleep. The SLEEPWELL Study is testing the effect of this approach on the cognitive function of survivors with insomnia. "There's a lot of evidence showing that the CBT insomnia program we're using is effective," says Dr. Krull. "We're confident that it will improve participants' sleep. The big question is: Will it also improve cognitive function?"

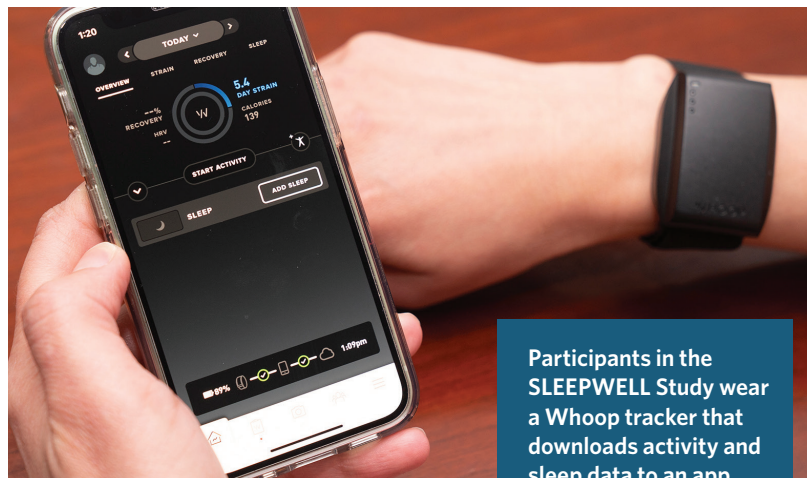
How the study works

The research team is recruiting a group of 400 LTFU participants who have trouble falling asleep or staying asleep, and have problems with thinking and learning.

People who join will be randomly assigned to one of two study arms: "Active" or "Educational." All participants will complete online sleep diaries and computerized training modules designed to improve their sleep habits. The "Active" arm will receive recommendations based on their specific difficulties; the "Educational" arm will receive more generalized guidance.

Whoop, SHUTi, and CNS Vital Signs

New technologies are key to this intervention. Participants will wear a fitness tracker, called Whoop, for one week at three time points: the beginning and end of the intervention, and six months after



Participants in the SLEEPWELL Study wear a Whoop tracker that downloads activity and sleep data to an app.

completing the intervention. Whoop will measure their sleep and provide information about their heart health.

Another of the study's innovations is SHUTi, a scientifically validated program of internet-based CBT for insomnia. "SHUTi's recommendations include targeted and straightforward behavioral changes that people can easily make," says Dr. Brinkman.

Participants will also complete brief tests of attention, memory, and thinking skills through CNS Vital Signs, which they can link to from home via their laptops or desktop computers. The tests take a total of 15 minutes and will be done three times, at the same times as when they wear the Whoop device.

How this study will help survivors

"Sleep is an extremely important behavior," says Dr. Krull. "We spend one-third of our lives in bed sleeping (or trying to sleep), but we know very little about it. This study will help address some of the issues experienced by survivors who have sleep difficulties, including how sleep affects their short- and long-term brain and body health."

Questions about the vaccine

continued from page 1

safely, and can advise you about which vaccine is the safest and what precautions to take after vaccination.

"Don't be afraid!"

Julia Stepenske, RN, a childhood cancer survivor, encourages other survivors to embrace this opportunity to protect themselves. "Don't be afraid of the COVID-19 vaccine," she says. "If you have concerns, discuss them with your health care provider. When you arrive at your vaccination site, make sure your vaccine provider is aware of any allergies or other possible issues, and be sure to remain for the full observation period recommended for you (usually 15-30 minutes)."

A NOTE FROM US

As 2021 begins with the roll out of an effective vaccine against COVID-19, we can finally see a glimmer of light at the end of the tunnel. The pandemic has impacted our lives, work, relationships, and mental health. As a childhood cancer survivor, you may have been challenged by worries about becoming sick, difficulties in seeing health care providers, and isolation from your usual support systems.

During this stressful period, completing your LTFU survey may not feel like a pressing priority. But your survey response, amidst a global health crisis, is critically important to help us learn how the pandemic is affecting the health and wellbeing of childhood cancer survivors.

The information you provide will advance clinicians' and researchers' understanding of the pandemic's effect on all aspects of your health, including your physical, emotional, and social wellbeing.

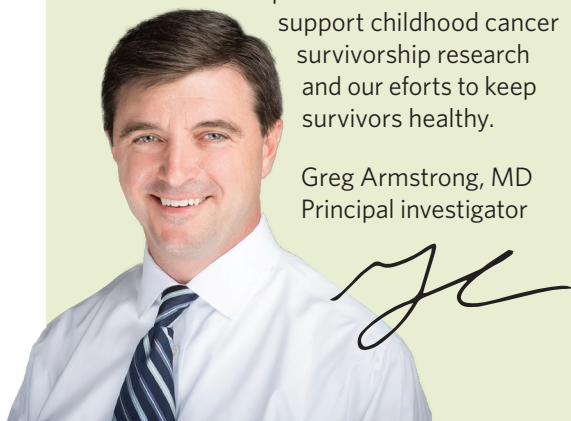
This is a unique opportunity to "give back" to the survivorship community and help others at a time when we have all, at times, felt helpless.

Please complete your survey, if you have not done so. If you didn't receive the survey or need another copy, please contact us at 1-800-775-2167 or ltfu@stjude.org.

For those of you who have already completed it, know that we are grateful. Your

responses will continue to support childhood cancer survivorship research and our efforts to keep survivors healthy.

Greg Armstrong, MD
Principal investigator



RESEARCH RESULTS

Pain and survivorship

Nearly one-third of LTFU Study participants reported moderate to severe pain more than 10 years after completing treatment. For many, pain significantly affects their daily life.

Pain is a serious medical concern that can affect relationships, work, and everyday experiences. Many options are available to help manage pain, but often survivors are not aware of them. "We conducted this study because, up until now, we lacked data on pain among survivors," says Cynthia W. Karlson, PhD, University of Mississippi Medical Center, who led the research team.

Comparing responses from 10,012 survivors and 3,173 of their siblings from the 2002 and 2007 LTFU Study surveys, researchers found that more than 10 years after treatment:

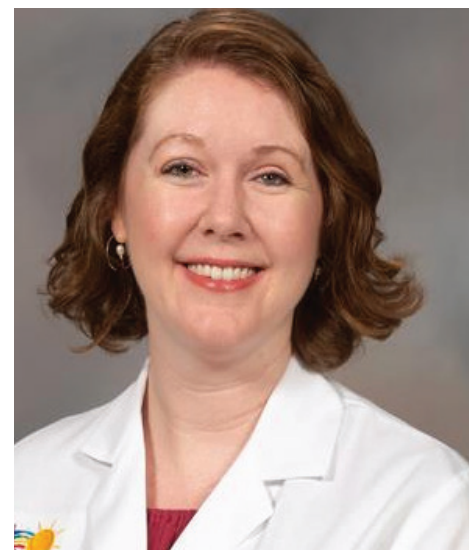
- 29% of survivors reported moderate to severe pain
- 20% of survivors reported that pain significantly interferes with their daily activities

The study also identified factors that were associated with pain in daily life, such as:

- Demographic: Female sex, minority race/ethnicity, older age at diagnosis
- Cancer-related: Sarcomas/bone tumors, platinum-based chemotherapy, amputation surgery
- Medical: Chronic conditions
- Psychological: Depression, anxiety, fatigue

Predictors of pain

"Although some of these predictors, like a survivor's sex or cancer diagnosis, can't be changed, the study highlights lifestyle factors that are very effective for reducing and managing pain," Dr. Karlson says. "We can manage pain by decreasing stress and anxiety, and getting good sleep. When we're more stressed or not sleeping well, our pain is worse."



This is the first longitudinal study of pain among childhood cancer survivors. Thanks to the LTFU Study, researchers can keep moving the field forward.

Cynthia Karlson, PhD, is a pediatric psychologist at University of Mississippi and a childhood cancer survivor.

LTFU Study: Year in review

2020 will be remembered as the year in which the world grappled with a new health crisis—the COVID-19 pandemic. But thanks to the dedication of LTFU Study participants, we have continued to make important contributions to what is known about survivorship and health.

Advancing the science

In 2020, the LTFU Study published 33 new studies and presented 20 abstracts at virtual scientific conferences.

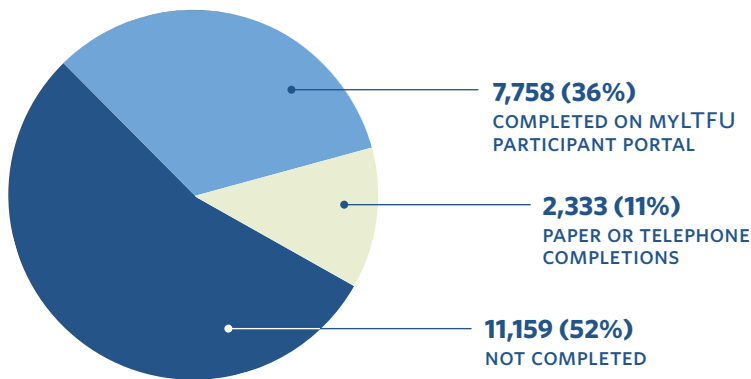
DID YOU KNOW? Survivors and their siblings have contributed to a total of 387 publications since the LTFU Study launched in 1996. Search them by topic on the LTFU Study website (in the Resources section): ltfu.stjude.org

LTFU Study Follow-up Survey

We began rolling out the most recent follow-up survey in August 2019 with an initial focus on the myLTFU portal. Mailing print versions was delayed because of COVID-19, but is currently underway.

As of December 30, 2020 the response rate for the current survey was 48%. Here's the breakdown:

SURVEY RESPONSE (TOTAL OF 21,546 PARTICIPANTS)

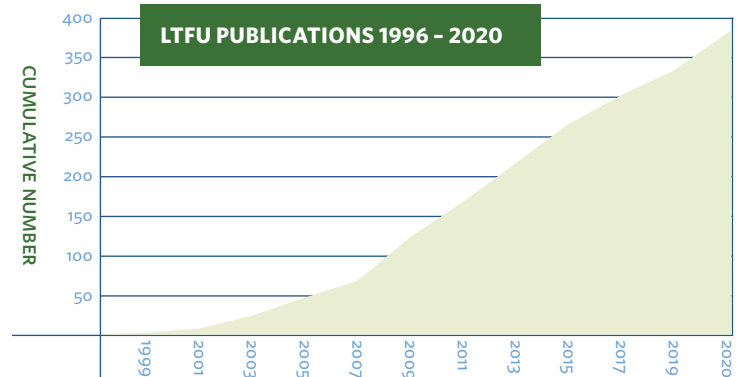


We need to hear from everyone. That's why the 13 staff working in our Coordinating Center and 14 Survey Interviewers make such an effort to follow up with every participant if we don't receive their completed survey.

Here's how often we many times we reached out to participants in 2020:

- 29,146 phone calls
- 216,953 emails
- 36,011 text messages

DID YOU KNOW? If you haven't completed your survey, it's not too late. Please contact us and let us know how we can help: Email: ltfu@stjude.org Phone: 1-800-775-2167



First myLTFU study completed

We recently completed the first study conducted through the myLTFU portal. In the study, titled “Symptom Assessment and Management using mHealth (SAM),” more than 40 participants used the portal to rate the presence and severity of 20 symptoms and their quality of life.

At the end of the study, the participants, who completed 90% of their reports (which is considered excellent!), reported that it was easy to provide data using the portal. What we learned will help us further integrate myLTFU in survivorship research.



DID YOU KNOW? If you have not yet activated your myLTFU portal, it's easy to do. Start here (ltfu.stjude.org/myltfu) and complete a few brief steps.

Participant Advisory Council (PAC)

Last year we put out the call to participants: “We need your input!” and 121 people volunteered to be part of a new Participant Advisory Council. In 2020, PAC volunteers:

- Provided feedback on how to enhance the study experience
- Helped test the myLTFU participant portal before we launched it with the whole cohort
- Contributed to the design of a colorectal cancer screening study and creation of educational materials for a new genetic counseling study

DID YOU KNOW? We still welcome new PAC members. There's no time commitment. To join, email us at ltfu@stjude.org.

Pain and survivorship continued from page 1

Implications for survivors

The study is important because it confirms that many adult survivors are affected by moderate to severe pain more than 10 years after their diagnosis. Screening for pain among survivors can help address it.

“Survivors who experience pain after treatment should talk to their medical providers about treatments that we know are effective,” says Dr. Karlson. “These options include both medical and lifestyle approaches, like physical therapy, relaxation training, and cognitive-behavioral pain management.

Shout-out to survivors and their siblings

Dr. Karlson is a survivor of childhood cancer. She didn’t originally plan on cancer becoming the focus of her career, however. “I started in rheumatology,” she says, “Then I fell into cancer during internship. My personal experience makes me passionate about trying to improve evidence-based care and provide the highest quality support to survivors.

“As a researcher, I am deeply grateful to everyone who is part of the LTFU Study. Because you take the



Photo courtesy
St. Jude Children's Research Hospital

A cancer survivor who creates jewelry as one of many tactics she uses to provide a distraction from pain shows her handcrafted bracelets to Doralina Anghelescu, MD.

time to answer all those questions, year after year, we can keep moving the survivorship field forward.”

Cancer

Citation: “Longitudinal Pain and Pain Interference in Long-Term Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study.” *Cancer*, June 2020.

Understanding pain and ways to address it

The brain plays an important role in our experience of pain, and is key to helping us manage it. Signals from the source of pain travel along pathways in the nervous system to the brain. If those signals send the message, “Yikes, that’s hot and it hurts!” we are prompted to move our hand away from the stove.

Pain signals then make a return trip from the brain to the original source. Pain management strategies can affect the signals in either direction and ease the pain.

Pain is not just physical—it has psychological and social components that can increase or reduce the way we experience pain. Managing pain requires an approach called “biopsychosocial” because it includes all of these areas.

“Biopsychosocial”: Breaking it down

“The biopsychosocial model looks at pain holistically and considers each person’s medical, emotional, and social situation,” says Doralina Anghelescu, MD, who directs the Pain Management Service at St. Jude Children’s Research Hospital.

Biological factors that cause pain include nerves, bones, and scarring. “Sometimes medications like acetaminophen or anti-inflammatories can help,” Dr. Anghelescu says, “But I always prefer to encourage non-medical approaches—physical therapy, yoga, stretching, swimming, or any comfortable and enjoyable physical activity.”

Psychological approaches, particularly cognitive-behavioral therapy (CBT), can help patients “reframe” pain and focus on their abilities rather than their limitations. Meditation and deep breathing exercises can promote relaxation and lower stress.

Social factors can affect how we feel pain by promoting a positive or negative mental attitude. “Supportive, reassuring relationships help us feel good about ourselves,” says Dr. Anghelescu. “On the other hand, if the people around us are anxious or overly focused on our pain, that can make the pain feel worse or prevent us from doing things that help pain improve.”

You don’t need to put up with pain

This study confirms that pain is common among childhood cancer survivors, who may not realize that they don’t need to accept it as part of their lives. Survivors experiencing pain are encouraged to explore available options with their primary care providers, who can help them find solutions.

Resources

For survivors: Chronic Pain after Childhood Cancer Health Link (Children’s Oncology Group): bit.ly/3ocA7oj

Understanding pain (How Stuff Works): bit.ly/3dM6obo

For health care providers: Guidelines for Survivors of Childhood, Adolescent and Young Adult Cancers (Children’s Oncology Group): www.survivorshipguidelines.org

50 years of survivorship: “Living the best life I can, each and every day”

Nancy Getsi, LTFU Study participant, shares her story.

It's been 50 years since I was diagnosed with Ewing sarcoma. I was 10 years old and living in Tennessee. At first, my pediatrician said my pain was hypochondria.

After X-rays and a biopsy, my doctor had difficulty sharing the bad news with us. Fortunately, a pathologist put us in touch with the Mayo Clinic in Rochester, MN. I went there for surgery and radiation, then we returned home.

My chemotherapy drugs were shipped to my local pediatrician, who infused them straight into my veins (ports hadn't been developed yet). It made me very ill, and I continued to get chemo through all three years of junior high, but I was a typical teen in most regards.

continued on page 3



I'm a big believer in the LTFU Study," says Nancy Getsi. "I need to know I'm doing my part."

A NOTE FROM US

The coronavirus has changed many things in our lives, but the Long-Term Follow-Up Study continues to move forward, thanks to dedicated participants like you. This issue shares one participant's story, and I think her resilience can inspire all of us. On page 2, you'll find our thoughts

and advice on survivorship in the pandemic, including links to helpful resources.

SURVEY UPDATE

Paper surveys Participants who did not complete the current follow-up survey via their personal myLTFU portal have all been sent a paper version. COVID-19 paused our survey mailout in April, but we have returned to the St. Jude campus on a limited basis to print and mail them. **We need to hear from everyone**, so please call **1-800-775-2167** or email ltfu@stjude.org if you'd like us to send you another copy.

myLTFU portal The survey is also open in the study portal. One of the great things about completing it here (in addition to saving trees and research dollars) is that you can compare some of your responses to more than 7,000 other participants and get early access to lots of interesting data.

Our important work continues. We thank all of you for being our research partners, and we wish you good health.

Greg Armstrong, MD
Principal investigator

Survivorship in a pandemic

Survivors are experiencing a range of physical and emotional challenges related to COVID-19. Members of the LTFU Study Education Committee share their experiences, encouragement, and expert advice.



Linda Rivard, RN, LTFU Study Education Committee member, and her son Billy, a cancer survivor.

For many cancer survivors, the ways in which the COVID-19 pandemic changed their lives feels strangely familiar. “I’m hearing people say, ‘It feels like when I was first diagnosed,’” says Melissa Hudson, MD, Director of the Cancer Survivorship Division at St. Jude Children’s Research Hospital.

“It relates back to their original experience—losing control, not being able to be around their support

system. Their lives have been turned upside down again,” she explains.

New options emerge amid disrupted care

Many survivors have health issues related to their cancer or its treatment that have been linked to higher COVID-19 risk. Follow-up care is as important as ever, but many people are postponing clinical visits as they try to evaluate the risks of in-person appointments.

“One good thing to come out of this is telehealth,” says Linda Rivard, RN, a survivorship nurse at Advocate Aurora Children’s Hospital in Oak Lawn, IL.

Use of telemedicine efforts increased dramatically during the early days of COVID-19. Because of its

success, it may be here to stay—not to replace in-person care, but to offer an effective, efficient, and safe alternative to in-person care when a physical exam is not needed.

“Things are different

now,” Linda says. “If you have an immediate concern or are scheduled for a follow-up appointment, communicate with your team. Even if you don’t see

them in person, you can stay on top of things with a phone call or a remote visit.”

Meanwhile, outpatient health care settings are reopening with new safety precautions in place, and are working hard to educate and reassure the public. If you have concerns, call your health care facility and ask what systems are in place to ensure that you can safely receive the care you need.

Staying home doesn’t mean staying still!

Even when restrictions are eased, many people are choosing to avoid gyms, crowded parks and trails, and other places where they could be active. “Physical activity is more important than ever,” says Kathy Ruccione, PhD, RN, co-author of *Childhood Cancer Survivors: A Practical Guide to Your Future*.

“Don’t sit on the couch or work at your kitchen table all day. Put on your mask, go outside, and walk around. Or do things inside your house. We all still have to move!”

Keeping calm during COVID-19

Anxiety, depression, and sleep issues often worsen when we’re living with uncertainty and missing in-person contact with other people.

“Survivors may find it useful to explore some of the mindfulness websites and apps that are available. A good one to explore is HeadSpace (www.headspace.com). I also like Calm (www.calm.com),” Kathy says. “And if you’re struggling, reach out for support, either from family, a friend, or a professional.”



Kathy Ruccione, PhD, RN, is a member of the LTFU Study’s Education Committee.

Resources

Resources on COVID-19 and survivorship are available by logging into your [myLTFU portal](https://myLTFU.org) and on our website lifu.stjude.org

50 years of survivorship continued from page 1

Getting through & moving forward

My mother made sure I had a normal childhood. I didn't lose my hair, so most people didn't know what was happening. Mom would put me into a lawn chair in the sun and say, "Fresh air and sunshine are going to make you better." She loved the outdoors, so we went for lots of hikes. She didn't dwell on what could happen. Her attitude was, "We're getting through this and moving forward."

I married my high school sweetheart. Today, 43 years later, we're still married with three grown kids.

I didn't know if I'd be able to have children—there wasn't a lot of information available about the effects of treatment back then. But I had my first child right before finals of my college sophomore year and my second child two weeks after I graduated. I had to get an extra-large graduation gown, I was so big!

After graduation, I got a full-time job and two years later had my third child. I had a great career in computer programming and over the last 15 years was the VP of software development for three different companies, recently retiring.

The importance of resilience

When I was 44, my mother was going through chemotherapy for an aggressive cancer, and I found a lump in my breast—but I was so stressed about her that I didn't do anything about it. Two weeks after she passed away, I went to my doctor. I had a lumpectomy and was told it was cancer again, but they weren't able to remove all of it. I could have had a single mastectomy, but decided I wanted the whole works done. Given my family's history, there was no point in not being aggressive. And that was the right decision—even though the MRI showed my other breast was clear, when they did the pathology, they found cancer so small it hadn't shown up.

Going through chemo again was tough. I lost all my hair, and I was sick and weak. As an adult, I understood the risks more clearly. When I looked in the mirror, I had no hair and no breasts. What got me through was the same resilience my mom drilled into me when I had Ewings: "Keep putting one foot after the other. I will have hair again, I will be around to see my kids graduate." And it's been 16 years now!

I have some health limitations. I've had amputations in my rib cage, and one of my lungs is not as strong as the other. When I go hiking, I can't quite keep up with the others, but I'm slow and steady, and it's something I'm used to.

Getting over guilt, giving back through LTFU

My challenges now are more emotional than physical. I've always felt some guilt. I know it's not my fault I got cancer, but because of the financial hit, my parents sold their car and our home. My brother and sister had to change schools, move away from their friends, and miss out on a lot of our parents' attention. My teenage kids had to deal with my cancer right after seeing their grandmother go through chemo and pass away.

I'm a big believer in the LTFU Study. Maybe it's just me trying to get over my guilt, but I need to know I'm doing my part. I love getting the surveys, and I've done just about all of them. I'm thrilled with the myLTFU portal! I'm a former web developer, and I found it really nice to use. I like reading about the results—once we have results, we are armed with information that is helpful.

This is a banner year. I've retired, and I hit the 50-year survivorship mark. It feels fantastic to not need to get up to an alarm clock, though I still get up early. My husband and I make and sell dove houses through our small business, Lovey Dovey Birdhouses.

Sometimes I wonder, why me and not others? I know I can't answer that question, but to honor everyone who has had cancer and the incredible efforts of all the medical personnel who fought to save me, I know I must keep living the best life I can, each and every day.



Nancy Getsi was 10 years old when she was diagnosed with Ewing sarcoma 50 years ago.

Enjoying retirement, Nancy keeps busy creating and selling birdhouses with her husband, Jean.



Photo: Jenna Getsi