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First Name Nina
Last Name Kadan-Lottick
Institution Yale University
Address 1 333 Cedar Street, LMP 2073
Address 2
City New Haven
State CT
Zip 06525
Phone 203 785 4640
Email nina.kadan-lottick@yale.edu

Project Title The risk of osteoporosis and fracture among survivors of childhood cancer **Planned research population (eligibility criteria)** -all CCSS cases with FU3 data (the survey that asked specifically about fracture history) -sibling controls with FU3 data **Proposed specific aims** - To describe the fracture risk of childhood cancer survivors compared

Proposed specific aims - To describe the fracture risk of childhood cancer survivors compared to sibling controls, overall and stratified by cancer diagnosis category -To identify patient, treatment, and health bevaviors that are predictive of higher fracture risk. We hypothesize that increased risk will be associated with females, steroid history, cranial radiation, history of hypogonadism, ifosfimide or cisplatinum history, lower calcium history, limb sparing surgery, and less physical activity -Describe the distribution and timing of reported fractures.

Will the project require non-CCSS funding to complete? No If yes, what would be the anticipated source(s) and timeline(s) for securing funding?

Does this project require contact of CCSS study subjects for . . .

Additional self-reported information No Biological Samples No Medical record data No

If yes to any of the above, please briefly describe.

What CCSS Working Group(s) would likely be involved? (Check all that apply)

Second Malignancy

Primary - No Secondary - No

Chronic Disease

Primary - Yes Secondary - No

Reproductive

Primary - No Secondary - No

Neurologic

Primary - No Secondary - No

Psychology / Neuropsychology

Primary - No Secondary - No

Genetics

Primary - No Secondary - No

Cancer Control

Primary - No Secondary - No

Epidemiology / Biostatistics Primary - No Secondary - No

To describe the anticipated scope of the study, please indicate the specific CCSS data to be included as <u>outcome</u> (primary or secondary) or <u>correlative factors</u>. (Check all that apply)

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Late mortality Primary - No	Secondary - No	Correlative Factors - No		
Second Malignancy Primary - No	Secondary - No	Correlative Factors - No		
Health Behaviors				
Tobacco Primary - No	Secondary - No	Correlative Factors - Yes		
Alcohol Primary - No	Secondary - No	Correlative Factors - Yes		
Physical activity Primary - No	Secondary - No	Correlative Factors - Yes		
Medical screening Primary - No	Secondary - No	Correlative Factors - Yes		
Other Primary - No	Secondary - No	Correlative Factors - No		
If other, please specify c	alcium intake			
Psychosocial				
Insurance Primary - No	Secondary - No	Correlative Factors - No		
Marriage Primary - No	Secondary - No	Correlative Factors - No		
Education Primary - No	Secondary - No	Correlative Factors - No		
Employment Primary - No	Secondary - No	Correlative Factors - No		
Other Primary - No	Secondary - No	Correlative Factors - No		
If other, please specify				
Medical conditions				

Hearing/Vision/Speech

Primary - No	Secondary - No	Correlative Factors - No			
Hormonal systems Primary - No	Secondary - No	Correlative Factors - Yes			
Heart and vascular Primary - No	Secondary - No	Correlative Factors - No			
Respiratory Primary - No	Secondary - No	Correlative Factors - No			
Digestive Primary - No	Secondary - No	Correlative Factors - No			
Surgical procedures Primary - No	Secondary - No	Correlative Factors - Yes			
Brain and nervous system Primary - No	Secondary - No	Correlative Factors - No			
Other Primary - No	Secondary - No	Correlative Factors - No			
If other, please specify renal disease as correlative factors					
Medications					
Describe medications calcium supplements, sex hormone replacement, bisphosphonates, vitamin D					
	um supplements, sex hormone	replacement, bisphosphonates,			
	um supplements, sex hormone	replacement, bisphosphonates,			
	um supplements, sex hormone Secondary - No	Correlative Factors - No			
vitamin D Pregnancy and offspring					
Pregnancy and offspring Primary - No Family History	Secondary - No	Correlative Factors - No			
Pregnancy and offspring Primary - No Family History Primary - No	Secondary - No	Correlative Factors - No			
Pregnancy and offspring Primary - No Family History Primary - No Psychologic/Quality of Life BSI-18	Secondary - No Secondary - No	Correlative Factors - No Correlative Factors - No			
Pregnancy and offspring Primary - No Family History Primary - No Psychologic/Quality of Life BSI-18 Primary - No SF-36	Secondary - No Secondary - No Secondary - No	Correlative Factors - No Correlative Factors - No Correlative Factors - No			
Pregnancy and offspring Primary - No Family History Primary - No Psychologic/Quality of Life BSI-18 Primary - No SF-36 Primary - No CCSS-NCQ	Secondary - No Secondary - No Secondary - No Secondary - No	Correlative Factors - No Correlative Factors - No Correlative Factors - No Correlative Factors - No			

Other Primary - No	Secondary - No	Correlative Factors - No
If other, please specify		
Chronic conditions (CTCAL Primary - No	E v3) Secondary - No	Correlative Factors - No
Health status Primary - No	Secondary - No	Correlative Factors - No
Demographic		
Age Primary - No	Secondary - No	Correlative Factors - Yes
Race Primary - No	Secondary - No	Correlative Factors - Yes
Sex Primary - No	Secondary - No	Correlative Factors - Yes
Others Primary - No	Secondary - No	Correlative Factors - No
If others, please specify		
Cancer treatment		
Chemotherapy Correlative Factors - Yes		
Radiation therapy Correlative Factors - Yes		

Correlative Factors - Yes

Surgery

Correlative Factors - Yes

Anticipated sources of statistical support

CCSS Statistical Center Yes

Local institutional statistician

If local, please provide the name(s) and contact information of the statistician(s) to be involved.

Will this project utilize CCSS biologic samples? No

If yes, which of the following?

Buccal cell DNA Peripheral blood Lymphoblastoid cell lines

Second malignancy pathology samples Other requiring collection of samples If other, please explain

Other general comments Please also refer to my previous concept proposal based on FU2 data where we had planned to include fracture questions that became accidentally ommitted. We plan to also examine self report of osteoporosis and osteopenia as surrogate outcomes. Other investigators that would like to work on this project include Kim Dilley at Northwestern