Section: Contact Information

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Section: Project Requirements and Description

Group: Requirements to submit AOI

A comprehensive review of previously published data has been completed. : **Yes** The specific aims are clear and focused. : **Yes**

The investigator has appropriate experience and expertise to develop the concept proposal; if not, has identified a mentor or senior co-investigator. : **Yes**

The investigator agrees to develop an initial draft of the concept proposal within 6 weeks of approval of the AOI and to finalize the concept proposal within 6 months. : **Yes**

Project Title: Exercise and Preventive Chronic Health Conditions and Health Care Utilization in Adult Survivors of Childhood Cancer

Planned research population (eligibility criteria):

- 1. >5-year cancer survivors who were diagnosed between 1970 and 1986 at age <21 years at one of 26 institutions
- 2. Histological confirmation of diagnosis with leukemia, Hodgkin disease, non-Hodgkin lymphoma, central nervous system (CNS) malignancies, Wilms tumor, neuroblastoma, soft tissue sarcoma, or bone tumors
- 3. Survivor participants who completed the baseline exercise item, and at least one of Fu2003 and Fu2007 survey.
- 4. Baseline age > 18 years, and
- 5. Participants without any major (Grade 3 to 5) non-cardiac physical health conditions at baseline
- 6. Siblings participating in the original and expansion cohort
- 7. Original and Expansion Cohort participants (survivors and siblings) who completed follow-up survey #5

Proposed specific aims:

Primary

To determine the association between vigorous exercise and the (first) composite

incidence of major (grade 3-5) preventable chronic health conditions.

Secondary

- 1. To determine the association between exercise and incidence of individual major (grade 3-5) preventable chronic health conditions, defined as follows:
- Cardiovascular (i.e., composite incidence of any major event including myocardial infarction, heart failure, and serious arrhythmia)
- Pulmonary (i.e., composite incidence of any major event including lung fibrosis, pleurisy, and emphysema)
- Endocrine and reproductive (i.e., composite incidence of any major event including renal failure / dialysis, thyroid issues, and osteoporosis);
- Cerebrovascular (i.e., composite incidence of any major event including stroke), and
- Subsequent neoplasms/malignancies (i.e., new primaries).
- 2. To determine the association between vigorous exercise and the (first) composite incidence of preventable chronic health conditions (of all grades) as well as individual conditions as defined above.
- 3. To determine the association between change in vigorous exercise and the first composite incidence of major (grade 3-5) preventable health conditions.
- 4. To compare the association between vigorous exercise and the (first) composite incidence of major (grade 3-5) preventable chronic health conditions in survivors versus the same association in siblings.
- 5. To determine the association between vigorous exercise early in adulthood as well as change in exercise on health care utilization patterns including physician visits, emergency room visits, medical tests, prescription drug use and hospitalizations.

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?:

Group: 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. :

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

Second Malignancy: Secondary

Chronic Disease : Primary

Psychology / Neuropsychology:

Genetics:

Cancer Control : Secondary Epidemiology / Biostatistics :

Section: Outcomes or Correlative Factors

Late mortality: Correlative Factors

Second Malignancy: Primary

Group: Health Behaviors

Tobacco: Correlative Factors
Alcohol: Correlative Factors
Physical activity: Primary

Medical screening: Secondary, Correlative Factors

Other:

If other, please specify: **Group: Psychosocial**

Insurance : Marriage :

Education : Correlative Factors
Employment : Correlative Factors

Other:

If other, please specify:

Group: Medical Conditions

Hearing/Vision/Speech : Correlative Factors

Hormonal systems : **Primary**Heart and vascular : **Primary**

Respiratory : Primary
Digestive : Primary

Surgical procedures: Correlative Factors

Brain and nervous system : Correlative Factors

Other:

If other, please specify: **Group: Medications**

Describe medications:

Group: Psychologic/Quality of Life

BSI-18 : SF-36 :

CCSS-NCQ:

PTS: PTG: Other:

If other, please specify:

Group: Other

Pregnancy and offspring:

Family history:

Chronic conditions (CTCAE v3): Primary

Health status : Primary

Group: Demographic

Age : Correlative Factors

Race : Correlative Factors

Sex : Correlative Factors

Other:

If other, please specify:

Group: Cancer treatment

Chemotherapy : Correlative Factors
Radiation therapy : Correlative Factors

Surgery : Correlative Factors

Section: 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?:

If other, please explain:

Section: Other General Comments

Other General Comments:

This concept was developed by Lee Jones, Paul Nathan, and Kevin Oeffinger