**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: A Genome-Wide Association Study for Frailty in Adult Survivors of Childhood Cancer  
Planned research population (eligibility criteria): This study will be conducted in the 5,324 childhood cancer survivors of European ancestry who are enrolled to the CCSS original cohort (diagnosed 1970-1986) and who have available genotype data. All CCSS participants (original and expansion cohorts) who completed a follow up questionnaire by the end of 2016 and are at least 18 years old have already been characterized for frailty (n=10,899).  
Proposed specific aims:  
Aim 1: Evaluate the relationship between previously-published genetic variants associated with components of frailty and the risk for these frailty-related outcomes in survivors of childhood cancer  
Aim 2: Identify novel genetic variants associated with frailty-related outcomes and frailty status classification in survivors of childhood cancer  
Aim 3: Develop an integrated clinical and genetic risk prediction model for frailty in survivors of childhood cancer  
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
- Chronic Disease: **Secondary**
- Psychology / Neuropsychology
- Genetics: **Primary**
- Cancer Control
- Epidemiology / Biostatistics: **Secondary**

**Section: Outcomes or Correlative Factors**

Late mortality:
- Second Malignancy:

**Group: Health Behaviors**
- Tobacco:
- Alcohol:
- Physical activity:
- Medical screening:
- Other:
  - If other, please specify:

**Group: Psychosocial**
- Insurance:
- Marriage:
- Education:
- Employment:
- Other:
  - If other, please specify:

**Group: Medical Conditions**
- Hearing/Vision/Speech:
- Hormonal systems:
- Heart and vascular:
- Respiratory:
- Digestive:
- Surgical procedures:
- Brain and nervous system:
- Other: **Primary**
  - If other, please specify: **FRAILTY** (recently characterized by Hayek and Ness et al.)

**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): Secondary 
Health status: 

**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: Yes 
If local, please provide the name(s) and contact information of the statistician(s) to be involved: Analyses will be conducted by Melissa Richard under the supervision of Philip Lupo and Monica Gramatges. Replication is requested with the assistance of Dr. Yasui. 
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: 
Dr. Ness is a collaborator on this proposal and has agreed to share the frailty characterization data currently under review. Dr. Hayek is also included. I agree to share this information with St. Jude: Yes