**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: Genetic association study of cardiac toxicity following chest radiotherapy

Planned research population (eligibility criteria): Receipt of chest radiotherapy and availability of genome-wide SNP data.

Proposed specific aims:
1. Identify SNPs associated with development of cardiac valvular disease or arrhythmias following chest radiotherapy
2. Determine whether a polygenic risk score for cardiac disease is associated with increased risk of cardiac valvular disease or arrhythmia in survivors treated previously with chest radiotherapy
3. Explore mechanisms of radiotherapy related cardiac valvular disease or arrhythmia using genetically predicted gene expression patterns

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? While external funding is not required due to availability of existing institutional research support for the applicants, NIH R21 funding will be sought to alleviate the need for such institutional support.

**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: Correlative Factors
Alcohol: Correlative Factors
Physical activity: Correlative Factors
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: Primary
Respiratory:
Digestive:
Surgical procedures:
Brain and nervous system:
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): Correlative Factors
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:

**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.
Statistical analysis will mainly be performed by the applicant (Sarah Kerns) working together with collaborator Carmen Bergom, Assistant Professor of Radiation Oncology at the Medical College of Wisconsin. In addition, Dr. Kerns has local statistical support through her department at the University of Rochester.
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:
I agree to share this information with St. Jude: Yes