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: Sleep behaviors and patterns and their relationship to health and mental health outcomes in adult survivors of childhood cancers

Planned research population (eligibility criteria):
Cancer survivors and sibling controls who completed the 2002 Sleep Survey and the Expansion Baseline Measures

Proposed specific aims:
Sleep disturbances are common across the continuum of cancer treatment (Lee, 2004; Ancoli-Israel, 2001), and because sleep is closely related to quality of life, psychological status, and overall health (Breslau, 1996; Lund, 2010), it is important to understand threats to quality of life and health in an already psychologically and physically vulnerable population.

Previous work from the Childhood Cancer Survivor Study has described the occurrence of poor sleep quality relative to sibling controls and the treatment, demographic, and psychological correlates of overall sleep quality (Mulrooney et al., 2008). The focus on overall sleep quality does not account for specific sleep behaviors, sleep timing, symptoms of sleep disturbances, sleep management strategies which are important to fully characterize sleep in accordance with best practices in sleep medicine. Furthermore, garnering a greater understanding of sleep behaviors/symptoms/patterns and their relationship to health and mental
health outcomes is essential to guide sleep interventions development for cancer survivors. Thus, the current study proposes to describe sleep patterns of cancer survivors relative to controls and to examine the prospective relationship of sleep problems with later mental health and physical health outcomes.

Aim 1: Examine patterns of poor sleep quantity or altered sleep timing consistent with sleep disorders (e.g. delayed sleep onset latency combined with daytime sleepiness suggestive of insomnia) and sleep management strategies (sedative/stimulant medication use, complementary and alternative medicine use) in cancer survivors relative to sibling controls.

Aim 2: Examine the prospective relationship between specific sleep problems or altered sleep timing with subsequent psychological functioning (BSI-18) in cancer survivors relative to sibling controls.

Aim 3: Explore the association between specific sleep problems or altered sleep timing and relevant new onset health conditions (e.g. hypertension, migraines/headaches, second malignant neoplasms) in cancer survivors relative to sibling controls.

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 : Secondary
Psychology / Neuropsychology : Primary
Genetics :
Cancer Control :
Epidemiology / Biostatistics :

**Section: Outcomes or Correlative Factors**
Late mortality :
Second Malignancy : Primary
**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: **Primary**
Respiratory:
Digestive:
Surgical procedures:
Brain and nervous system: **Primary**
Other:
If other, please specify:

**Group: Medications**
Describe medications:

**Group: Psychologic/Quality of Life**
BSI-18: **Primary**
SF-36:
CCSS-NCQ:
PTS:
PTG:
Other:
If other, please specify: Pittsburg Sleep Quality Index, Epworth Sleepiness Scale, Facit

**Group: Other**
Pregnancy and offspring:
Family history:
Chronic conditions (CTCAE v3):
Health status:

**Group: Demographic**
Age: **Correlative Factors**
Race: Correlative Factors
Sex: Correlative Factors
Other:
If other, please specify:

**Group: Cancer treatment**
Chemotherapy:
Radiation therapy:
Surgery:

**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:
I plan to submit this proposal for the CCSS Career Development Award. Thank you for your consideration.