

## **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 : **Long-Term Psychosocial Outcomes in Pediatric Low Grade Gliomas**

Planned research population (eligibility criteria) :

**Survivors of pediatric ( $\leq 18$  at first diagnosis) low grade brain tumor who participated in the NIH R01-funded study "Adult Survivors of Pediatric Low Grade Brain Tumors: Neuropsychological, Educational, and Occupational Outcomes" (PIs: Ris, Armstrong, Leisenring, & Robison).**

Proposed specific aims :

**Aim 1. Establish if BSI-18 scores in long-term survivors of low-grade brain tumor are elevated relative to siblings, as is found in aggregate brain tumor survivors in previous CCSS studies.**

**Aim 2. Examine the longitudinal trajectory of psychological distress (BSI-18 GSI scores) in adult survivors of low-grade brain tumor by comparison between the most recent CCSS-collected BSI-18 scores and those obtained in the separate study: "Adult Neurobehavioral Late Effects of Pediatric Low Grade Brain Tumors"**

**Aim 3. Determine if longitudinal trajectories in BSI-18 GSI Depression, Anxiety, and Somatization scores are moderated by demographic, disease, and treatment-related factors to predict which low-grade brain tumor survivors may be at greatest risk for persistent psychological distress.**

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 :

Psychology / Neuropsychology : **Primary**

Genetics :

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 : **Correlative Factors**

Marriage : **Correlative Factors**

Education : **Correlative Factors**

Employment : **Correlative Factors**

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 :

If other, please specify :

**Group: Medications**

Describe medications :

n/a

**Group: Psychologic/Quality of Life**

BSI-18 : **Primary**

SF-36 :

CCSS-NCQ :

PTS :

PTG :

Other :

If other, please specify :

**Group: Other**

Pregnancy and offspring :

Family history :

Chronic conditions (CTCAE v3) :

Health status : **Correlative Factors**

**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 :

Dr. Ris is proposing to use data from the CCSS questionnaires in addition to the data specifically collected in his R01 study. Since this was not specified in the Aims, it requires a separate AOI.

Please note, some of these measures were acquired as part of the R01 "Low Grade Study" and in some cases will be used instead of the CCSS dataset variables. Please see below for the abstract of the "low grade study" for clarification.

**\*\*Abstract from manuscript currently under review by the CCSS statistical center\*\***

**"Adult Survivors of pediatric low grade brain tumors: neuropsychological, educational, and occupational outcomes"**

**Authors:**

**M. Douglas Ris, Chongzhi Di, Wendy Leisenring, Pam Goodman, Jennie Noll, Wendy Levy, Les Robison, & Greg Armstrong**

**ABSTRACT:**

**Purpose: to determine the neuropsychological and socioeconomic (SES) remote outcomes of survivors of pediatric low grade brain tumors.**

**Patients and Methods: one hundred and eighty one adults ranging in age from 27 to 61 years (mean age = 40.7 years) who are part of the Childhood Cancer Survivor Study and had an original diagnosis in childhood of low grade brain tumor were administered a battery of neuropsychological tests. Income, educational and occupational attainment were also ascertained. Survivors treated with radiation therapy (N=96) and those treated with surgery only (N=85) were compared to each other and also to a matched group of 105 healthy siblings. Results: on all neuropsychological outcomes, survivors scored lower than siblings. Among survivors, those treated without radiation did better than those treated with radiation. Similar effects were found on measures of socioeconomic status. A weak effect of age at treatment was found with those treated at younger ages having poorer outcomes. With some exceptions, location of tumor was not strongly related to outcome.**

**Conclusions: this is the largest sample yet reported studied of remote outcomes in pediatric low grade brain tumors including detailed neuropsychological tests and SES. Several decades after treatment, clear effects on both standardized and real life outcomes are discernable. Treatment with radiation continues to be a clear risk factor. Children treated at younger ages tend to have lower composite neuropsychological scores, and lower SES. Nevertheless, the means of most neuropsychological outcomes for survivors as a group fell within the conventionally designated "average" range.**