

Section: Contact Information

First Name : **Jennifer**
Last Name : **Agrusa**
Institution : **Baylor College of Medicine**
Address 1 : **1102 Bates St**
Address 2 : **Ste 1200**
City : **Houston**
State/Province/Region : **TX**
Country : **US**
Zip/Postal Code : **77030**
Phone Number : **832-824-4678**
Alternate Phone Number :
Email Address : jeagrusa@txch.org

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 : **Predicting Pulmonary Late Effects in Childhood Cancer Survivors**

Planned research population (eligibility criteria) :

Original and extended CCSS cohort with primary diagnosis of Hodgkin Lymphoma. Eligibility criteria is as noted below, with the number of respondents to the LTFU 2007 questionnaire provided by Yan Chen (Table 1).

**SA2 (telomere length): All subjects must have viably frozen lymphocytes available for analysis. The groups analyzed will include the following:
Cases: HL survivors exposed to either bleomycin and/or chest irradiation and answering in the affirmative to both LTFU 2007 questions H3 and H6 (event occurring at least 5 years off therapy)**

Control Group 1: Matched HL survivors answering in the negative to all questions related to pulmonary function

SA3 (biomarkers): All subjects must have buccal DNA available for analysis. The groups analyzed will include the following:

Cases: HL survivors exposed to either bleomycin and/or chest irradiation and answering in the affirmative to both LTFU 2007 questions H3 and H6 (event occurring at least 5 years off therapy)

Control Group 1: Matched HL survivors answering in the negative to all questions related to pulmonary function

Control Group 2: Matched healthy sibling controls

Matching variables for Cases and Control Group 1 (SA2 and SA3) will include the following:

Gender

Age (± 10 years)

Bleomycin exposure

Radiation dose/fields

Time from diagnosis (± 10 years)

Bone marrow transplant yes/no

Matching variables for Cases and Control Group 2 (SA3) will include:

Gender

Age (± 10 years)

Proposed specific aims :

To characterize the relationship between telomere length, serum biomarkers, therapeutic exposures, and clinical pulmonary dysfunction in HL survivors enrolled in the CCSS by:

1. Determining the relationship between therapy exposures (radiation dose and fields/bleomycin dose) and clinical pulmonary dysfunction, as defined by reports of oxygen requirement AND pulmonary fibrosis from the 2007 Long Term Follow Up Questionnaire.

2. Determining if off therapy telomere length, measured by telomere flow FISH, predicts pulmonary symptoms.

3. Determining if a customized pulmonary fibrosis panel of serum biomarkers are associated with incidence of pulmonary fibrosis or other reported pulmonary diseases.

HYPOTHESIS

Short telomeres, among other serum biomarkers, may be associated with clinical pulmonary disease and predict survivors at risk for pulmonary dysfunction.

Will the project require non-CCSS funding to complete? : **Yes**

If yes, what would be the anticipated source(s) and timeline(s) for securing funding? :

Sufficient unrestricted funds are available to complete this project, allocated to fellow research mentor, M. Monica Gramatges, MD, PhD. However, we also anticipate submitting this project for an early career/fellowship award both internally and from a private foundation.

Group: Does this project require contact of CCSS study subjects for:

Additional self-reported information : **Yes**

Biological samples : **Yes**

Medical record data : **Yes**

If yes to any of the above, please briefly describe. :

Exploratory variables: The following information will be requested from CCSS

Medical Records Abstraction Form (MRAF) or questionnaire data:

Primary cancer diagnosis: only Hodgkin lymphoma survivors

Chronic health conditions: respiratory, all grades

Age at primary cancer diagnosis

Age at diagnosis of chronic health conditions

Age at most current questionnaire completion

Current and past medications

Ever smoked: yes/no

Currently insured: yes/no

Date of death (and cause)

Gender

Race/ethnicity

Treatment history, including:

Radiation field and dose to prescribed radiation field

Chemotherapy bleomycin: cumulative dose

Surgery thoracic: yes/no

2007 LTFU questionnaire responses to H1-H7 (pulmonary outcomes)

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 : **Secondary**

Second Malignancy :

Group: Health Behaviors

Tobacco : **Correlative Factors**

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 : **Primary**

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 : **Correlative Factors**

Chronic conditions (CTCAE v3) : **Primary**

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 :

If local, please provide the name(s) and contact information of the statistician(s) to be involved. :

Will this project utilize CCSS biologic samples? : **Yes**

If yes, which of the following? : **Buccal cell DNA, Peripheral blood**

If other, please explain : **Biologic samples requested include both viably frozen lymphocytes (SA2) and DNA (SA3).**

Section: Other General Comments

Other General Comments :