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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: Beyond radiation: Understanding thyroid cancer risk in childhood cancer Planned research population (eligibility criteria): Will compare individuals in the CCSS cohort with secondary thyroid cancers to CCSS cohort members without secondary thyroid cancer Proposed specific aims: 1. Investigate the role of gender and sex hormones in secondary thyroid cancer a. Evaluate relationship between parity and thyroid SMNs in the female CCSS population b. Assess whether use of oral contraceptives or hormone replacement therapies are associated with increased risk of thyroid SMNs c. Describe menstrual histories and female survivors and identify whether an association exists with development of thyroid SMNs 2. Investigate the role of weight, lifestyle factors and type 2 DM in thyroid SMNs a. Determine whether increased BMI is associated with increased risk of thyroid SMNs b. Evaluate possible associations between type 2 DM, as well as antidiabetic medications, and development of thyroid SMNs c. Determine whether physical activity level is associated with risk of thyroid SMNs

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?:

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.:

What CCSS Working Group(s) would likely be involved? (Check all that apply) Second Malignancy: Primary Chronic Disease: Psychology / Neuropsychology: Genetics: **Cancer Control:** Epidemiology / Biostatistics: Secondary To describe the anticipated scope of the study, please indicate the specific CCSS data to be included as outcome (primary or secondary) or correlative factors. (Check all that apply) Late mortality: Second Malignancy: Primary **Health Behaviors** Tobacco: Alcohol: Physical activity: Correlative Factors Medical screening: Other: If other, please specify: Psychosocial Insurance: Marriage: Education: Employment: Other: If other, please specify: Medical conditions Hearing/Vision/Speech: Hormonal systems: Correlative Factors Heart and vascular: Respiratory: Digestive:

Surgical procedures: Brain and nervous sy

Brain and nervous system: Other: Correlative Factors

If other, please specify: BMI/weight status

Medications

Describe medications: Oral contraceptives, sex hormone replacement therapy, fertility drugs, antidiabetic agents (metformin, insulin, sulfonylurea, etc)
Pregnancy and offspring: Correlative Factors
Family History:
Psychologic/Quality of Life
BSI-18:
SF-36:
CCSS-NCQ:
PTS:
PTG:
Other:
If other, please specify:
Chronic conditions (CTCAE v3):
Health status:
Demographic
Age: Correlative Factors
Race:
Sex: Primary
Others:
If others, please specify:
Cancer treatment
Chemotherapy:
Radiation therapy: Correlative Factors
Surgery:
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?

Buccal cell DNA:
Peripheral blood:
Lymphoblastoid cell lines:
Second malignancy pathology samples:
Other requiring collection of samples:
If other, please explain:

Other general comments: I would like to use this project as a spring board for a possible K-award. Ideally, we can describe some of the risk factors that have been identified in de novo thyroid cancers within the CCSS cohort and identify some possible reasons for gender differenes in incidence, and use that information to help formulate ideas for a study looking at some of the underlying biological mechanisms.