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**Project Title** The Multifactorial Etiology of Obesity among CCSS Participants

**Planned research population (eligibility criteria)** Survivor and sibling participants who completed the baseline +/- the second follow-up questionnaire are eligible for these analyses.

**Proposed specific aims** Aim 1: To test in univariable models the effect of age at diagnosis, age at questionnaire, sex, race/ethnicity, educational level, family income, health insurance, physical activity, hypothalamic/pituitary radiation dose (none, < 2000 cGy, 2000 to 3000 cGy, > 3000 cGy), growth hormone deficiency, BSI depression, BSI somatic distress, BSI anxiety, specific antidepressant and anti-psychotic drug use including sertraline (Zoloft), paroxetine (Paxil), fluoxetine (Prozac), citalopram (Celexa), escitalopram (Lexapro), bupropion (Wellbutrin), nefazodone (Serzone), venlafaxine (Effexor), amitriptyline (Elavil), imipramine (Tofranil), doxepin (Sinequan), desipramine (Norpramin), nortriptyline (Pamelor), olanzapine (Zyprexa), aripiprazole (Abilify), ziprasidone (Zodon), thioridazine (Mellaril), quetiapine (Seroquel), clozapine (Cloxaril) and risperidone (Risperdal) on the frequency of overweight and obesity among CCSS participants. Aim 2: To develop multivariable models based on the results of the univariable analyses in Aim 1 to determine which factors independently increase the risk of overweight or obesity in CCSS participants. Factors entered into the multivariable model will be those significant at the  $p < 0.1$  in the univariable models. Aim 3: To compare in univariable models the effect of age at questionnaire, sex, race/ethnicity, educational level, family income, health insurance, physical activity, hypothalamic/pituitary radiation dose (none, < 2000 cGy, 2000 to 3000 cGy, > 3000 cGy), growth hormone deficiency, BSI depression, BSI somatic distress, BSI anxiety, specific antidepressant and anti-psychotic drug use including sertraline (Zoloft), paroxetine (Paxil), fluoxetine (Prozac), citalopram (Celexa), escitalopram (Lexapro), bupropion (Wellbutrin), nefazodone (Serzone), venlafaxine (Effexor), amitriptyline (Elavil), imipramine (Tofranil), doxepin (Sinequan), desipramine (Norpramin), nortriptyline (Pamelor), olanzapine (Zyprexa), aripiprazole (Abilify), ziprasidone (Zodon), thioridazine (Mellaril), quetiapine (Seroquel), clozapine (Cloxaril) and risperidone (Risperdal) the frequency of overweight and obesity among CCSS participants and CCSS siblings.

**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?**

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Does this project require contact of CCSS study subjects for . . .

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**Additional self-reported information** No

**Biological Samples** No

**Medical record data** No

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

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What CCSS Working Group(s) would likely be involved? (Check all that apply)

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**Second Malignancy**

Primary - No

Secondary - No

**Chronic Disease**

Primary - Yes                      Secondary - No

**Reproductive**

Primary - No                      Secondary - No

**Neurologic**

Primary - No                      Secondary - No

**Psychology / Neuropsychology**

Primary - No                      Secondary - Yes

**Genetics**

Primary - No                      Secondary - No

**Cancer Control**

Primary - No                      Secondary - No

**Epidemiology / Biostatistics**

Primary - No                      Secondary - No

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**

Primary - No                      Secondary - No                      Correlative Factors - No

**Second Malignancy**

Primary - No                      Secondary - No                      Correlative Factors - No

## Health Behaviors

**Tobacco**

Primary - No                      Secondary - No                      Correlative Factors - No

**Alcohol**

Primary - No                      Secondary - No                      Correlative Factors - No

**Physical activity**

Primary - No                      Secondary - No                      Correlative Factors - Yes

**Medical screening**

Primary - No                      Secondary - No                      Correlative Factors - No

**Other**

Primary - No                      Secondary - No                      Correlative Factors - No

**If other, please specify**

## Psychosocial

**Insurance**

Primary - No                      Secondary - No                      Correlative Factors - Yes

**Marriage**

Primary - No

Secondary - No

Correlative Factors - No

**Education**

Primary - No

Secondary - No

Correlative Factors - Yes

**Employment**

Primary - No

Secondary - No

Correlative Factors - No

**Other**

Primary - No

Secondary - No

Correlative Factors - No

**If other, please specify** Income

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Medical conditions

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**Hearing/Vision/Speech**

Primary - No

Secondary - No

Correlative Factors - No

**Hormonal systems**

Primary - No

Secondary - No

Correlative Factors - No

**Heart and vascular**

Primary - No

Secondary - No

Correlative Factors - No

**Respiratory**

Primary - No

Secondary - No

Correlative Factors - No

**Digestive**

Primary - No

Secondary - No

Correlative Factors - No

**Surgical procedures**

Primary - No

Secondary - No

Correlative Factors - No

**Brain and nervous system**

Primary - No

Secondary - No

Correlative Factors - No

**Other**

Primary - No

Secondary - No

Correlative Factors - No

**If other, please specify**

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Medications

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**Describe medications** Anti-depressants, anti-psychotics**Pregnancy and offspring**

Primary - No

Secondary - No

Correlative Factors - No

**Family History**

Primary - No

Secondary - No

Correlative Factors - No

Psychologic/Quality of Life

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**BSI-18**

Primary - No

Secondary - No

Correlative Factors - Yes

**SF-36**

Primary - No

Secondary - No

Correlative Factors - No

**CCSS-NCQ**

Primary - No

Secondary - No

Correlative Factors - No

**PTS**

Primary - No

Secondary - No

Correlative Factors - No

**PTG**

Primary - No

Secondary - No

Correlative Factors - No

**Other**

Primary - No

Secondary - No

Correlative Factors - No

**If other, please specify**

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**Chronic conditions (CTCAE v3)**

Primary - No

Secondary - No

Correlative Factors - No

**Health status**

Primary - No

Secondary - No

Correlative Factors - No

Demographic

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**Age**

Primary - No

Secondary - No

Correlative Factors - Yes

**Race**

Primary - No

Secondary - No

Correlative Factors - Yes

**Sex**

Primary - No

Secondary - No

Correlative Factors - Yes

**Others**

Primary - No

Secondary - No

Correlative Factors - No

**If others, please specify**

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Cancer treatment

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**Chemotherapy**

Correlative Factors - No

**Radiation therapy**

Correlative Factors - Yes

**Surgery**

Correlative Factors - No

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Anticipated sources of statistical support

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**CCSS Statistical Center**

**Local institutional statistician** Yes

**If local, please provide the name(s) and contact information of the statistician(s) to be involved.** Kumar Srivastava, Ph.D. Department of Biostatistics St. Jude Children's Research Hospital 262 Danny Thomas Place Mail Stop 768 Memphis, Tennessee 38105 901-595-3372 901-595-4986 kumar.srivastava@stjude.org and Liang Zhu, Ph.D. Department of Biostatistics St. Jude Children's Research Hospital 262 Danny Thomas Place Mail Stop 768 Memphis, Tennessee 38105 901-595-5240 liang.zhu@stjude.org

**Will this project utilize CCSS biologic samples?** No

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If yes, which of the following?

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**Buccal cell DNA**

**Peripheral blood**

**Lymphoblastoid cell lines**

**Second malignancy pathology samples**

**Other requiring collection of samples**

**If other, please explain**

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**Other general comments** Will utilize HGH data developed by Chuck Sklar as the metric for GH deficiency