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#### Requirements to submit AOI (all answers must be "yes" to proceed)

| 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 Subsequent Malignant Neoplasms in Pediatric Survivors of

Hematopoietic Cell Transplant

### Planned research population (eligibility criteria)

Childhood cancer survivors enrolled in the St. Jude Childhood Cancer Survivor Study who were treated with an allogeneic or autologous HCT (including those who received multiple transplants) between the ages of 0 and 20 years of age for any malignant diagnosis

#### **Proposed specific aims**

AIM 1: Describe the incidence of SMNs in patients who received either an allogeneic or autologous HCT for a cancer diagnosis. We will further describe the incidence of SMN's stratified by age, race, ethnicity, underlying diagnosis, number of transplants, treatment regimens, use of radiation therapy as part of transplant preparative regimens.

Hypothesis: We hypothesize that patients who have had an HCT, have an increased incidence of SMNs compared to the general population

AIM 2: we will identify groups of patients who are at the highest risk for developing a SMN post HCT Hypothesis 1: We hypothesize that patients who received alkylating agents (particularly etoposide and cyclophosphamide, total body irradiation as part of their conditioning regimen, and/or those who received an autologous transplant will be at highest risk for developing subsequent tMNs

Hypothesis 2: We hypothesize that patients who were transplanted for underlying immunodeficiencies, received serotherapy as part of preparative regimen with significant T cell depletion are at highest risk for developing PTLD

Hypothesis 3: we hypothesize that patients who receive total body irradiation, local radiation boosts, and develop GVHD (particularly cGVHD) are at greatest risk for developing subsequent solid tumors

# 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? (Select all that apply)

|                            | Primary | Secondary |
|----------------------------|---------|-----------|
| Second Malignancy          | ✓       |           |
| Chronic Disease            |         |           |
| Psychology/Neuropsychology |         |           |
| Genetics                   |         |           |
| Cancer Control             |         |           |
| Epidemiology/Biostatistics |         |           |

# **Outcomes or Correlative Factors**

|                   | Primary | Secondary | Correlative<br>Factors |
|-------------------|---------|-----------|------------------------|
| Late Mortality    |         | ✓         |                        |
| Second Malignancy | ✓       |           |                        |

## **Health Behaviors**

|                   | Primary | Secondary | Correlative<br>Factors |
|-------------------|---------|-----------|------------------------|
| Tobacco           |         |           | ✓                      |
| Alcohol           |         |           | ✓                      |
| Physical Activity |         |           | ✓                      |
| Medical Screening |         |           |                        |
| Other             |         |           |                        |

# If other, please specify

## **Psychosocial**

|            | Primary | Secondary | Correlative<br>Factors |
|------------|---------|-----------|------------------------|
| Insurance  |         |           |                        |
| Marriage   |         |           |                        |
| Education  |         |           |                        |
| Employment |         |           |                        |
| Other      |         |           |                        |

# If other, please specify

## **Medical Conditions**

|                         | Primary | Secondary | Correlative<br>Factors |
|-------------------------|---------|-----------|------------------------|
| Hearing/Vision/Speech   |         |           |                        |
| <b>Hormonal Systems</b> |         |           |                        |
| Heart and Vascular      |         |           |                        |
| Respiratory             |         |           |                        |
| Digestive               |         |           |                        |

| Surgical Procedures      |  | ✓ |
|--------------------------|--|---|
| Brain and Nervous System |  |   |
| Other                    |  |   |

If other, please specify

# **Medications**

## **Describe medications**

# Psychologic/Quality of Life

|          | Primary | Secondary | Correlative<br>Factors |
|----------|---------|-----------|------------------------|
| BSI-18   |         |           |                        |
| SF-36    |         |           |                        |
| CCSS-NCQ |         |           |                        |
| PTS      |         |           |                        |
| PTG      |         |           |                        |
| Other    |         |           |                        |

# If other, please specify

### Other

|                                  | Primary | Secondary | Correlative<br>Factors |
|----------------------------------|---------|-----------|------------------------|
| Pregnancy and Offspring          |         |           |                        |
| Family History                   |         |           | ✓                      |
| Chronic Conditions<br>(CTCAE v3) |         |           | ✓                      |
| Health Status                    |         |           |                        |

# Demographic

|      | Primary | Secondary | Correlative<br>Factors |
|------|---------|-----------|------------------------|
| Age  | ✓       |           |                        |
| Race | ✓       |           |                        |

|       | Primary | Secondary | Correlative<br>Factors |
|-------|---------|-----------|------------------------|
| Sex   | ✓       |           |                        |
| Other | ✓       |           |                        |

#### If other, please specify

ethnicity

#### **Cancer Treatment**

|                   | Correlative<br>Factors |
|-------------------|------------------------|
| Chemotherapy      | ✓                      |
| Radiation Therapy | ✓                      |
| Surgery           | ✓                      |

#### **Anticipated Sources of Statistical Support**

| CCSS Statistical Center          | Yes |
|----------------------------------|-----|
| Local Institutional Statistician | No  |

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

## **Other General Comments**

#### **Agree**

I agree to share this information with St. Jude

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