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Project Title Predicting late effects of individual cancer survivors: A pilot methodological study
Planned research population (eligibility criteria) All eligible CCSS participants who completed a baseline questionnaire.
Proposed specific aims We propose to develop methods for identifying (potentially small) subgroups of survivors who have a very high risk of developing certain late effects. Typically, in predicting late effects of survivors, we use the whole cohort, divide it into mutually-exclusive groups and compare statistically for late effects occurrences across groups. This is useful for a GROUP-level prediction of outcomes. For individual patients and their follow-up by oncologists, however, knowing 10% risk vs. 5% risk of a certain late effects event may or may not be very useful. To supplement the group-level prediction information, we propose generating information useful for specific individual prediction. Our idea is to mine the CCSS data focusing on identifying "hot spots" where a hot spot is a subgroup of survivors have a very high-risk of developing certain late effects. This will be achieved by exploring statistically a large set of outcome definitions with varying specificity together with a large definitions of exposure definitions (including demographics, tx, and clinical characteristics). This is a statistical data mining problem and, if successfully tackled, we will be able to contribute imprtantly to the long-term follow-up of survivors.
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? We would like to apply for Catalyst Grant: Cancer Survivorship (Biomedical and Clinical Approaches to Improving the Quality of Life for Cancer Survivors) from the Canadian Institutes of Health Research. The maximum amount awarded for a single grant is $100,000 per annum for up to 1 year.

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 - No Secondary - No

Chronic Disease
Primary - No Secondary - No

Reproductive
Primary - No Secondary - No

Neurologic
Primary - No Secondary - No

Psychology / Neuropsychology
Primary - No Secondary - No

Genetics
Primary - No Secondary - No

Cancer Control
Primary - No Secondary - No

Epidemiology / Biostatistics
Primary - Yes 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 - Yes Secondary - No Correlative Factors - No

Second Malignancy
Primary - Yes 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 - No

Medical screening
Primary - No Secondary - No Correlative Factors - No

Other
Primary - No Secondary - No Correlative Factors - No

If other, please specify

Psychosocial

Insurance
Primary - Yes Secondary - No Correlative Factors - No

Marriage
Primary - Yes Secondary - No Correlative Factors - No

Education
Primary - Yes Secondary - No Correlative Factors - No

Employment
Primary - Yes | Secondary - No | Correlative Factors - No

Other
Primary - No | Secondary - No | Correlative Factors - No

If other, please specify

Medical conditions

Hearing/Vision/Speech
Primary - Yes | Secondary - No | Correlative Factors - No

Hormonal systems
Primary - Yes | Secondary - No | Correlative Factors - No

Heart and vascular
Primary - Yes | Secondary - No | Correlative Factors - No

Respiratory
Primary - Yes | Secondary - No | Correlative Factors - No

Digestive
Primary - Yes | Secondary - No | Correlative Factors - No

Surgical procedures
Primary - Yes | Secondary - No | Correlative Factors - No

Brain and nervous system
Primary - Yes | Secondary - No | Correlative Factors - No

Other
Primary - No | Secondary - No | Correlative Factors - No

If other, please specify

Medications

Describe medications

Pregnancy and offspring
Primary - Yes | Secondary - No | Correlative Factors - No

Family History
Primary - No | Secondary - No | Correlative Factors - No

Psychologic/Quality of Life

BSI-18
Primary - Yes | Secondary - No | Correlative Factors - No

SF-36

Primary - Yes | 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

Chronic conditions (CTCAE v3)
Primary - Yes | Secondary - No | Correlative Factors - No

Health status
Primary - Yes | Secondary - No | Correlative Factors - No

Demographic

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 - Yes

If others, please specify

Cancer treatment

Chemotherapy
Correlative Factors - Yes

Radiation therapy
Correlative Factors - Yes

Surgery
Correlative Factors - Yes

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 Will be contacting Canadian oncologists and epidemiologists for collaboration.