Received 4.14.11
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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

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Project Title: Identification of susceptibility loci in radiation-induced breast cancer by exome and CNV analysis
Planned research population (eligibility criteria): Patints with breast cancer following thoracic radiation (eg. Hodgkin lymphoma, Wilms tumor whole lung radiation, sarcoma, etc).
Proposed specific aims: 1) Exome sequencing on peripheral blood lymphocytes or buccal swab epithelial cells to identify candidate gene loci/mutations. 2) Copy number variation analysis using Affymetrix 6.0GW SNP/CNV arrays to identify candidate susceptibilty loci from peripheral blood lymphocytes/buccal swabs. 3) Examine LOH in radiation-induced tumors based on locus detection from Aims 1 and 2. 4) Validate identification of candidate loci through analysis of germline sequences against patients who received thoracic radiation but did not develop breast cancer (if available). 4) Similar analysis to Aim 3 using patients with sporadic breast cancer as comparison population.
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?: This is one of three projects that are part of an appliction to the Canadian Institutes for Health Research (deadline June 1, 2011).

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

Additional self-reported information: No
Biological Samples: Yes
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: Secondary
Chronic Disease:
Psychology / Neuropsychology:
Genetics: Primary
Cancer Control:
Epidemiology / Biostatistics:

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:
Medical screening: Correlative Factors
Other:
If other, please specify:

Psychosocial

Insurance:
Marriage:
Education:
Employment:
Other:
If other, please specify:

Medical conditions

Hearing/Vision/Speech:
Hormonal systems:
Heart and vascular:
Respiratory:
Digestive:

Surgical procedures: Correlative Factors
Brain and nervous system:
Other:
If other, please specify:

Medications

Describe medications:

Pregnancy and offspring: Correlative Factors
Family History: Correlative Factors

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: Correlative Factors
Sex: Correlative Factors
Others:
If others, please specify:

Cancer treatment

Chemotherapy: Correlative Factors
Radiation therapy: Correlative Factors
Surgery: Correlative Factors

Anticipated sources of statistical support

CCSS Statistical Center:
Local institutional statistician: Yes
If local, please provide the name(s) and contact information of the statistician(s) to be involved.: Dr. Mohammed Akbari TEL: 416-351-3800 x 6353 Women's College Hospital Research Institute, Toronto, ON. Canada.
Will this project utilize CCSS biologic samples?: Yes

If yes, which of the following?

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

Other general comments: