First Name Rose Last Name Yang Institution Genetic Epidemiology Branch, Division of Cancer Epidemiology & Genetics, National Cancer Institute Address 1 6120 Executive Blvd, Rm 7014 Address 2 City Bethesda State MD Zip 20892 Phone 301 594 7804 Email royang@mail.nih.gov

Project Title Characterization of genomic alterations in radiation-related breast cancer using arrayCGH (comparative genomic hybridization)

Planned research population (eligibility criteria) Breast cancer cases secondary to a childhood cancer

Proposed specific aims 1. To characterize genomic alterations in breast tumor tissues among patients with protracted (childhood cancer survivors) and acute (Japanese A-bomb survivors) radiation exposures using high-resolution arrayCGH 2. To relate identified genomic alterations to radiation doses to investigate molecular/genetic mechanisms underlying radiation-caused breast cancer

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? NCI intramural Fiscal year 2008-2009

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 - Yes Chronic Disease Primary - No Secondary - No Reproductive Primary - No Secondary - No Neurologic Primary - No Secondary - No Psychology / Neuropsychology Primary - No Secondary - No Genetics Primary - Yes 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 <u>outcome</u> (primary or secondary) or <u>correlative factors</u>. (Check all that apply)

Late mortality Primary - No 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

Psychosocial

Insurance Primary - No Secondary - No Correlative Factors - No Marriage Primary - No Secondary - No Correlative Factors - No Education Primary - No Secondary - No Correlative Factors - No Employment Primary - No Secondary - No Correlative Factors - No Other Primary - No Secondary - No Correlative Factors - No If other, please specify

Medical conditions

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

Medications

Describe medications

Pregnancy and offspring Primary - No Secondary - No Correlative Factors - Yes **Family History** Primary - No Secondary - No Correlative Factors - Yes

Psychologic/Quality of Life

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

Chronic conditions (CTCAE v3) Primary - No Secondary - No Correlative Factors - No Health status Primary - No 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 - No Others Primary - No Secondary - No Correlative Factors - No 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 Local institutional statistician Yes If local, please provide the name(s) and contact information of the statistician(s) to be involved. Dr. Ruth Pfeiffer, Senior Investigator Biostatistics Branch Division of Cancer Epidemiology & Genetics NCI Will this project utilize CCSS biologic samples? Yes

If yes, which of the following?

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

Other general comments