

**Nonmelanoma Skin Cancer (NMSC) in Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study (CCSS).** *Joanna Perkins<sup>1</sup>, Yutaka Yasui<sup>2</sup>, Yan Liu<sup>2</sup>, Sue Hammond<sup>3</sup>, Marilyn Stoval<sup>4</sup>, Joseph Neglia<sup>1</sup>, Anna Meadows<sup>5</sup>, Leslie Robison<sup>1</sup>, Ann Mertens<sup>1</sup>. CCSS, <sup>1</sup>University of Minnesota, Minneapolis, MN; <sup>2</sup>Fred Hutchinson Cancer Research Center, Seattle, WA; <sup>3</sup>Children's Hospital, Columbus, OH; <sup>4</sup>M.D. Anderson Cancer Center, Houston, TX; <sup>5</sup>Children's Hospital of Philadelphia, Philadelphia, PA.*

Increased risk of NMSC has been observed among radiation-exposed populations. Little data are available on NMSC in childhood cancer survivors. The CCSS is a multi-institutional retrospective cohort study of 5+ year survivors of childhood and adolescent cancer diagnosed between 1970-1986 before 21 years of age. Self-reported occurrence of subsequent cancers, including NMSC, undergoes pathologic confirmation. Among the 14,054 CCSS participants, 201 have reported basal cell (BCC) or squamous cell carcinoma (SCC) of the skin, 20% of whom had multiple occurrences. Thus far, 40% have been confirmed through pathology reports. Of the 201 cases, 89% were BCC, 53% occurred in males. Location of NMSC included head/neck (43%), chest (16%), back (9%), shoulders (7%), abdomen (4%), extremities (2%) and one case of labial; location is currently unknown for 17%. Among the 138 NMSC cases previously treated with radiation therapy (RT) with known RT field information and NMSC location, 83% occurred within the RT field. Overall, the rate of NMSC was 101.7 cases/10<sup>5</sup> person-years. The diagnosis-specific occurrence is provided below (Table), with Hodgkin's disease survivors having the highest age-adjusted rate of NMSC. While NMSC is generally associated with a low mortality rate, it is an important public health issue. At this time it is unclear what impact NMSC will have among childhood cancer survivors, particularly those treated with RT and survivors of Hodgkin's disease who appear to be at highest risk. Additional follow-up, evaluation and intervention of this population are recommended.

Original Diagnosis	Cohort Size (%)	NMSC Cases (%)	Relative Rate of NMSC (95% CI)
Leukemia	4,727 (33)	47 (23)	5.9 (2.3-15.1)
Hodgkin's disease	1,906 (14)	94 (47)	9.6 (3.9-23.5)
CNS tumors	1829 (13)	22 (11)	4.8 (1.8-12.8)
Soft tissue sarcoma	1615 (12)	19 (9)	2.8 (1.0-8.1)
Kidney tumors	1214 (9)	5 (3)	3.6 (1.0-12.5)
Non-Hodgkin's lymphoma	1054 (7)	10 (5)	4.0 (1.4-11.1)
Neuroblastoma	928 (7)	1 (<1)	1.1 (0.1-9.8)
Bone cancer (reference)	780 (5)	3 (2)	1.0 (1.0-1.0)