

COMPARISON OF HEALTH STATUS BETWEEN UPPER AND LOWER EXTREMITY SARCOMA SURVIVORS: A REPORT FROM THE CHILDHOOD CANCER SURVIVOR STUDY

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Purpose:

To evaluate health status and participation in childhood extremity sarcoma survivors by tumor location and treatment history.

Method:

Members of the Childhood Cancer Survivor Study cohort, with history of extremity bone or soft tissue sarcomas, who completed 1995, 2003 or 2007 questionnaires, were included. Prevalence rates for poor health status in six domains: general health, mental health, functional impairment, activity limitations, pain, and anxiety, and five sub-optimal social participation categories: < college graduation, unemployment, unmarried or partnered status, annual income < \$20,000, and physical inactivity were compared by tumor location and treatment exposure with generalized estimating equations adjusted for demographic/personal factors and time/age.

Results:

Among 1094 survivors, median age at diagnosis 13 years (range 0-20), current age 33 years (range 10-53), 49% were male, 87.5% were Caucasian, and 75% had lower extremity tumors. In adjusted models, when compared to upper extremity tumor survivors, lower extremity survivors had increased risk of activity limitations [Relative Risk (RR) = 1.54 (95% CI 1.12-1.98)] and annual income < \$20,000 [RR 1.22 (95% 1.02-1.46)], but lower risk of not completing college [RR 0.9 (95% CI 0.82-0.98)]. Compared to those who did not have an amputation, treatment with below the knee amputation increased risk of poor general health [RR = 1.63 (95% CI 1.02-2.59)] and functional impairment [RR=1.61 (95% CI 1.13-2.27)]. Compared to those who did not receive radiation, treatment with abdominal irradiation was associated with increased risk of poor mental health [RR = 2.06, 95% CI 1.09-3.90], functional impairment [RR=2.03(95% CI 1.15-3.60)], and activity limitation [RR=1.79 (95% CI 1.07-2.98)]. Chest radiation also increased the risk of activity limitation [RR=1.34 (95% CI 1.07-1.67)].

Conclusion:

Tumor location in the lower extremity is associated with an increased risk for activity limitations and low income. Type of local control, particularly amputation and chest or abdominal irradiation influences health status and participation.