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Chronic Pain and Disability in Long-Term Survivors of Childhood Cancer: A Report from the Childhood Cancer Survivor Study (CCSS).

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Background: Chronic pain has not been well characterized in survivors of pediatric cancer. The current study is the first to examine prevalence and predictors of chronic pain and pain-related disability in this population. **Methods:** Participants included 10,012 adult survivors (48.7% female; median age 31 years; *M* time since diagnosis 15.3 years) from the CCSS. Participants completed the Short-Form 36 and Brief Symptom Inventory-18 on two occasions between 2002 and 2011. Chronic pain was defined as self-report of moderate to severe pain at both time points. Pain-related disability was defined as pain that interferes with normal work at either time point. Covariates included sex, age, time since diagnosis, treatment, and grade 3-4 chronic health conditions. Multinomial logistic regression estimated relative risk (RR) and 95% confidence intervals (CI) for predictors. Structural equation models examined associations between pain, depression, anxiety, and vitality. **Results:** 29% of survivors reported moderate to severe pain at either time point, 32% reported moderate to severe pain-related disability, and 10% reported chronic pain. Compared to survivors of leukemia, survivors of sarcoma (RR 1.33, CI 1.32-1.34) and solid tumors (RR 1.04, CI 1.03-1.06) reported more chronic pain. Survivors with a history of amputation (RR 1.54, CI 1.52-1.56) and, in separate models, those with chronic health conditions (RR 1.57, CI 1.56-1.59) were more likely to report chronic pain. Survivors with symptoms of depression (RR 1.11; CI 1.09-1.12) and anxiety (RR 1.25; CI 1.24-1.27) were also more likely to report chronic pain. Similar patterns were observed for pain-related disability. Controlling for demographics, treatment, and chronic health conditions, vitality mediated the effects of depression and anxiety on chronic pain (RMSEA 0.011) and pain-related disability (RMSEA 0.000). **Conclusions:** Adult survivors of childhood cancer experience chronic pain and pain-related disability that is associated with amputation, chronic health conditions, depression, anxiety, and poor vitality. Increased screening and comprehensive treatment of pain is warranted, particularly for these risk factors.