

Cancer-related fatigue and musculoskeletal health conditions in survivors of childhood and adolescent cancer

Background: Thanks to improvement in treatments, overall childhood cancer survival has improved to approximately 80% in most high-income countries over the past decades. However, survivors of childhood cancer are at considerable risk for a wide range of health conditions, including cancer-related fatigue and musculoskeletal health conditions.

Aims: We aim to investigate the epidemiology of musculoskeletal late effects and cancer-related fatigue, and to provide a clinical practice guideline for the surveillance of cancer-related fatigue in survivors of childhood cancer.

Methods: We used data from the Swiss Childhood Cancer Survivor Study (SCCSS) and from the Swiss Childhood Cancer Registry (SCCR). The SCCSS is the long-term cohort study of all patients registered in the SCCR who survived ≥ 5 years. We will include survivors diagnosed from 1976 to 2015, in the age group of 0-20 years. The analyses will be restricted to survivors aged ≥ 15 years at study. We used the methodology of the International Guideline Harmonization Group to develop the clinical practice guideline.

Results: We included 2645 survivors (53% men; median age 24 years, range 15-59 years). Musculoskeletal health conditions (21%) were prevalent in survivors of childhood cancer. Scoliosis (8%), bone/joint pain (7%), and limited joint mobility (7%) were the most prevalent MSHC. Incidence rates of musculoskeletal health conditions were higher in more recently diagnosed cohorts. Cancer-related fatigue (23%) was prevalent among survivors. In the clinical practice guideline, we recommended regular screening of fatigue in survivors and effective interventions for fatigued survivors.

Conclusions: This study contributes to improving long-term follow-up care and rehabilitation services for survivors of childhood cancer with musculoskeletal late effects and cancer-related fatigue, to ultimately minimize the burden of disease for survivors and improve their quality of life.