powered by

dkfz.
GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION

Contribution ID: **156** Type: **1 - Scientific Poster**

Does exercise improve survival after a cancer diagnosis? A living systematic review and meta-analysis of randomized controlled trials

Thursday 23 July 2026 12:15 (5 minutes)

Introduction: This project aims to (1) assess the effect of exercise interventions on cancer survival using data from randomized controlled trials (RCTs), and (2) establish an open-access, continuously updated resource synthesizing evidence on exercise and cancer survival.

Methods: A systematic search for this living review (PROSPERO: CRD420251081208) was conducted in October 2025 to identify RCTs evaluating the effect of exercise interventions on survival outcomes in adults diagnosed with cancer. Duplicate study screening is underway. Data extraction, risk of bias, and evidence quality will be independently completed by two authors, with integrity and trustworthiness assessed by one author. Random-effects models will generate pooled hazard ratio (HR) estimates for overall survival and other survival outcomes. When sufficient data exists, subgroup analyses will explore whether participant and intervention characteristics modify effect.

Results: To date, seven eligible trials have been identified after screening 84% of the 26,178 studies retrieved. These trials included 1,942 participants with stage 0-4 hematological, breast, colon, ovarian, or gastrointestinal cancers. Interventions were delivered during treatment (n=2), post-treatment (n=2), or across both periods (n=3), with durations ranging from 12 weeks to 3 years. Most interventions involved aerobic exercise only (n=5); one included a resistance-only arm, and two were mixed-mode. Five trials involved unsupervised exercise. Survival was an exploratory outcome in five trials, with median follow-up ranging from 1.5 to 8.3 years. Preliminary pooled analysis indicates improved overall survival in exercise versus control groups (HR: 0.66, 95% CI: 0.49-0.90; p=0.008). Updated results will be presented following completion of screening and data extraction.

Conclusion: This living review will provide researchers, clinicians, and consumers with real-time, interactive access to evolving evidence on exercise and cancer survival, supporting evidence-based decision-making and accelerating research translation.

Keywords

Survival, exercise intervention, meta-analysis, data visualisation

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

Author: SPENCE, Rosa (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia)

Co-authors: BAKER, Brooke (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia); PLINSINGA, Melanie (Australian Centre for Precision Health and Technology (PRECISE), Griffith University, Australia); JOHNSTON, Elizabeth (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia); AYRE, Susannah (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia); MARTIN, Jason (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia); FRIEDENREICH, Christine (Departments of Oncology and Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada); COURNEYA, Kerry S. (Faculty of Kinesiology, Sport, and Recreation, College of Health Sciences, University of Alberta, Edmonton, Canada); HAYES, Sandra (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia)

Presenter: SPENCE, Rosa (Viertel Cancer Research Centre, Cancer Council Queensland, Brisbane, Queensland, Australia)

Session Classification: Thematic Poster Session