Effect of different types of exercise on health-related quality of life during and after cancer treatment: a protocol for a systematic review and network meta-analysis

Ubago-Guisado E.

Gracia-Marco L.

Cavero-Redondo I.

Martinez-Vizcaino V.

Notario-Pacheco B.

Pozuelo-Carrascosa D.P.

Adalia E.G.

Álvarez-Bueno C.

Introduction Cancer (and survival) is known to affect the quality of life. Strategies as physical activity and exercise during and after cancer may improve health-related qualify of life (HRQOL) outcomes and are, therefore, of clinical and public health importance. To the best of our knowledge, comparative evidence of the effect of the different types of exercise on improving HRQOL in cancer patients has not been synthesised thus far. We aim to conduct a systematic review and network meta-analysis in order to synthesise all available evidence regarding the effect of different types of exercise interventions on HRQOL during and after cancer treatment. Methods and analysis MEDLINE (via PubMed), Web of Science, Embase, The Cochrane Library and SPORTDiscus will be searched from inception to December 2018 for relevant randomised controlled trials (RCTs) and non-RCTs. Studies assessing physical activity and exercise interventions in cancer patients (during treatment) and survivors (after treatment) will be selected. Two independent reviewers will identify eligible studies. After quality appraisal and data extraction, we will conduct meta-analyses for outcomes of interest, including data from mental and physical dimensions of cancer-specific and/or generic HRQOL questionnaires. Risk of bias assessments will be completed using the Quality Assessment Tool for Quantitative Studies. Study heterogeneity will be measured by the I 2 statistic.

Bayesian (and traditional approach) network meta-analysis will be performed when possible to determine the comparative effect of the different physical activity or exercise interventions. Ethics and dissemination This systematic review and network meta-analysis will synthesise evidence on the effect of different types of exercise interventions on HRQOL during and after cancer treatment. The results will be disseminated by publication in a peer-reviewed journal and through scientific conferences and symposia. Ethical approval will not be required because the data used for this work will be exclusively extracted from published studies. PROSPERO registration number CRD42019125028.

chemotherapy

oncology

public health

radiotherapy

sports medicine

adult

article

cancer patient

cancer survival

cancer therapy

chemotherapy

Cochrane Library

controlled study

data extraction

Embase

exercise

female

human

male

Medline

meta analysis

network meta-analysis

physical activity

public health

quality assessment tool

quality of life

quantitative analysis

questionnaire

radiotherapy

randomized controlled trial (topic)

risk assessment

sports medicine

survivor

systematic review

Web of Science