Prospective Surveillance and Risk Reduction of Cancer Treatment–Related Lymphedema: Systematic Review and Meta-Analysis

Jingyi Frances Ding, MD, Bashar Hasan, MD, Konstantinos Malandris, MD, Magdoleen H. Farah, MBBS, Apostolos Manolopoulos, MD, MSc, Pamela K. Ginex, EdD, RN, OCN®, Allison B. Anbari, PhD, RN, Tarek Nayfeh, MD, Moutie Rami Rajjoub, Raed Benkhadra, MD, Larry J. Prokop, MLS, Rebecca L. Morgan, PhD, MPH, and M. Hassan Murad, MD, MPH

PROBLEM IDENTIFICATION: Secondary lymphedema is a chronic condition that may result from cancer-related treatments. Evidence is emerging on prospective surveillance and risk reduction.

LITERATURE SEARCH: Databases were systematically searched through April 1, 2019, for comparative studies evaluating interventions aiming to prevent lymphedema in patients with cancer.

DATA EVALUATION: A random-effects model was used to perform meta-analysis, when appropriate.

SYNTHESIS: A total of 26 studies (4,095 patients) were included, with 23 providing data sufficient for meta-analysis. Surveillance programs increased the likelihood of detecting lymphedema. Physiotherapy, exercise programs, and delayed exercise reduced the incidence of lymphedema.

IMPLICATIONS FOR RESEARCH: Future research should standardize (a) evidence-based interventions to reduce the development of lymphedema and increase the likelihood of early detection and (b) outcome measures to build a body of evidence that leads to practice change.

KEYWORDS lymphedema; systematic review; meta-analysis; cancer treatment


DOI 10.1188/20.ONF.E161-E170