

# Cancer Prehabilitation Programs and Their Effects on Quality of Life

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**PROBLEM IDENTIFICATION:** Cancer prehabilitation programs have been reported as effective means of improving quality of life (QOL) in people with cancer, but research is lacking. The aim of this systematic review is to explore the characteristics of cancer prehabilitation programs and their effects on QOL in people with cancer.

**LITERATURE SEARCH:** A systematic review of databases (PubMed, MEDLINE®, Cochrane Library, EMBASE, CINAHL®, Scopus®) was performed using key terms.

**DATA EVALUATION:** Data were extracted, and the Physiotherapy Evidence Database scale was used to assess the quality of the studies.

**SYNTHESIS:** 12 randomized, controlled trials with a total of 839 people with cancer were included in this review. Of these, seven cancer prehabilitation programs focused on physical interventions, three focused on psychological interventions, and two focused on multimodal interventions.

**IMPLICATIONS FOR NURSING:** Oncology nurses could provide various cancer prehabilitation programs to patients who decide to undergo cancer-related treatment. Additional research on this subject should involve careful consideration of QOL instruments and sample size when designing the intervention.

**KEYWORDS** cancer; prehabilitation; quality of life; unimodal; multimodal; systematic review

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**C**ancer is the second leading cause of death worldwide, with about 1 in 6 deaths attributable to the disease (World Health Organization, 2018). After diagnosis, many people with cancer experience physical and psychological symptoms, as well as a financial burden on themselves and their families and a decrease in quality of life (QOL) (Astrup, Rustøen, Hofsvang, Gran, & Bjordal, 2017; Große, Treml, & Kersting, 2018).

Cancer prehabilitation programs have been reported as effective ways to improve functional recovery, including functional walking capacity, reduced hospital stay after surgery, and lower morbidity and mortality rates from the primary treatment of cancer (Dunne et al., 2016; Gillis et al., 2014; Valkenet et al., 2011). Silver and Baima (2013) defined cancer prehabilitation as a process starting between cancer diagnosis and pretreatment, with interventions to decrease impairments and promote physical and psychological health along the cancer care continuum. Cancer prehabilitation programs have been studied in people with various forms of cancer, such as lung, colorectal, and breast, with findings showing that their use can decrease morbidity and readmissions and reduce healthcare costs in newly diagnosed patients (Mayo et al., 2011; Silver & Baima, 2013). Physical cancer prehabilitation programs typically consist of aerobic or resistance exercises, or a combination of both; such programs have been shown to improve exercise tolerance, QOL, and muscle strength (Dunne et al., 2016; Gillis et al., 2014; Silver & Baima, 2013). Physical cancer prehabilitation programs are often followed by psychological programs (Silver & Baima, 2013). Psychological cancer prehabilitation programs were shown to improve mood disturbance prior to treatment. In addition, people with cancer who participated in psychological cancer prehabilitation programs had better adaptation to daily life after discharge (Silver & Baima, 2013). Overall, patient participation in cancer prehabilitation programs can