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IMPACT OF A COMMUNITY-BASED EXERCISE PROGRAM ON PHYSICAL FITNESS IN CANCER PATIENTS

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INTRODUCTION:Physical exercise has been shown to attenuate cancer treatment–related side effects and improve quality of life in people with cancer. Based on this evidence, the Exercise Oncology Unit (EOU) of the Spanish Cancer Association (AECC) was created to facilitate the integration of structured exercise programs into routine cancer care.
PURPOSE: To evaluate the feasibility and effectiveness of an 8-week clinical exercise program on physical fitness outcomes in cancer patients within a community-based setting.
METHODS:A pre–post intervention study without a control group was conducted at the AECC EOU in Madrid between 2020 and 2025. Participants completed an 8-week individualized, supervised, moderate-to-vigorous concurrent training program. Outcomes assessed at baseline and post-intervention included functional capacity (30-second sit-to-stand test), maximal strength (bench press and leg press), cardiorespiratory fitness (VO_2max estimated from a submaximal treadmill test), body composition (bioelectrical impedance), and patient-reported outcomes (IPAQ, FACT-G, FACT-F, EQ-5D-5L). Normality was verified prior to analysis. Pre–post changes were analyzed using paired t-tests, with statistical significance set at $p < 0.05$.
RESULTS:A total of 300 cancer patients completed the program and post-intervention assessments (mean age: 51.8 ± 10.0 years; 88% women). The most prevalent diagnoses were breast cancer (57.7%), lung (8.3%), ovarian (6%), colorectal (4.3%), and other cancers (23.7%). At enrollment,49.6% were undergoing active treatment, 15.7% had metastatic disease, and 34.7% had completed treatment within the previous two years; 78% had undergone surgery. Significant improvements were observed in VO_2max (+8.86 $ml \cdot kg^{-1} \cdot min^{-1}$),upper-body strength (+10.38 kg), lower-body strength (+28.10 kg), lower-body functional performance (+5.27 repetitions), lean body mass (+0.61 kg), skeletal muscle mass (+0.39 kg),skeletal muscle index (+0.07), phase angle (+0.06°), body fat percentage (−0.51%), and waist-to-hip ratio (−0.006) (all $p \leq 0.016$)
CONCLUSIONS:An 8-week supervised, moderate-to-vigorous, multicomponent exercise program is feasible and effective for improving physical fitness and body composition in cancer patients within a community oncology care model.

Keywords

Concurrent training, feasibility, effectiveness, all stages disease.

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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