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Feasibility and Effects of a Supervised Exercise Program in Patients Receiving Active Oncologic Therapies: Data from a Prospective Interventional Study

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Introduction: Exercise in patients undergoing anticancer treatments is recognized for attenuating side effects, improving symptoms, and enhancing quality of life (QoL). However, its implementation in real-world settings remains limited. This study assessed the feasibility and the impact of a structured EX program in patients receiving anticancer therapies on physical fitness and QoL.
Methods: A 12-week supervised exercise program, including moderate-intensity aerobic (10–30 min/session) and resistance training (2–3 sets of 8–12 reps across six exercises), was proposed at the University of Verona. The primary endpoint was feasibility (i.e., recruitment, adherence, and retention). Secondary endpoints included functional capacity (6-minute walk test, 6MWT), muscle strength (handgrip strength test, HST; leg press test), waist-hip ratio (WHR), and QoL (EORTC QLQ-C30). Descriptive analysis and paired t-tests were applied.
Results: Overall, 180 patients participated in the study (out of 214 approached). The most frequent cancer types were gastrointestinal (37.8%) and breast (34.4%), and 50% had a metastatic disease. The median exercise attendance was 88%. The dropout rate was 32%, mainly due to personal reasons or disease progression. No serious adverse events occurred. Significant improvements were observed in the 6MWT (+39 m, $p<0.001$), leg press strength (+7.1 kg, $p<0.001$), and HST (+1.0 kg, $p=0.003$). QoL improved in physical, role, emotional, and social functioning (all $p<0.05$). Fatigue, nausea, dyspnea, insomnia, and appetite loss were significantly reduced. Financial burden and global health status also improved significantly. Among the subgroup analyses, patients with gastrointestinal cancer, stage III-IV disease, or undergoing chemotherapy showed the largest gains.
Conclusion: A tailored and supervised EX program is feasible and beneficial for cancer patients during active treatment. The intervention led to measurable gains in physical fitness and almost all domains of QoL, supporting integration of EX into oncological care.

Keywords

Exercise; Anticancer treatments; Feasibility; Real-world;

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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