

powered by



GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION

Contribution ID: 312

Type: 1 - Scientific Poster

Exercise Prehabilitation to Optimize Functional Capacity in Head and Neck Cancer Patients Planned for Definitive Chemoradiotherapy: The FIT4TREAT Trial

Thursday 23 July 2026 14:55 (20 minutes)

Objective: This study investigated the effectiveness of exercise prehabilitation on functional capacity, health-related quality of life (HRQoL), and body composition in head and neck cancer (HNC) patients initially proposed for definitive chemoradiotherapy (CRT).

Methods: In this randomized controlled trial (NCT05418842), patients were allocated to an exercise prehabilitation program (EP) or usual care (UC). The EP group completed a pre-treatment supervised program combining low-volume high-intensity cardiorespiratory and resistance exercise training (60 minutes, three times/week). Pre-treatment changes were assessed before randomization and before the start of radiotherapy for functional capacity (6-minute walk test, 6MWT; 30-second sit-to-stand test, STS; isometric handgrip strength), body composition, and HRQoL (EORTC QLQ-C30 and QLQ-HN43).

Results: Forty-one patients completed both pre-treatment assessments (EP: n=21, 63.3±8.9 years, 91% men; UC: n=20, 62.8±10.7 years, 90% men). The median duration of the pre-treatment phase was similar between groups (EP: 28 [IQR 24–28] days; UC: 29 [IQR 21–32] days; p=0.813). Compared with the UC group, the EP group showed greater improvements in 6MWT distance (+32.1 meters; 95% CI, 8.0–56.1; p=0.010) and 30-second STS performance (+3.9 repetitions; 95% CI, 1.8–6.0; p<0.001). No significant differences were observed between groups in handgrip strength, body weight, muscle mass, or body fat. Regarding HRQoL, the EP group showed less deterioration than UC in the EORTC QLQ-C30 summary score (6.4 points; 95% CI, 1.8–11.0; p=0.008), as well as in social functioning (9.9 points; 95% CI, 0.6–19.2; p=0.038), and body image (QLQ-HN43; -13.8 points; 95% CI, -24.3 to -3.3; p=0.011). No serious adverse events related to exercise occurred.

Conclusion: The EP program was safe and improved 6MWT and 30-second STS performance. Additionally, exercise prevented the decline in several HRQoL domains, including social functioning, body image, and the summary score of QLQ-C30 in HNC patients initially proposed for CRT.

Funding: SFRH/BD/149054/2019; UID/04045.

Keywords

Head and Neck Cancer; Exercise Prehabilitation; Functional Capacity; Chemoradiotherapy

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

Authors: GARCIA, Catarina (Research Center in Sports Sciences, Health Sciences and Human Development, CIDESD - University of Maia; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); LEÃO, Inês (Medical Oncology Department, Unidade Local de Saúde Santa Maria; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); PINTO, Diogo (Research Center in Sports Sciences, Health Sciences and Human Development, CIDESD - University of Maia); DIAS RATO, Nuno (Research Center in Sports Sciences, Health Sciences and Human Development, CIDESD - University of Maia; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); CAMPOLARGO, Ana (Physical Medicine and Rehabilitation Department, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); DIAS, Isabel (Nutrition Department, Unidade Local de Saúde Gaia/Espinho); MONTEIRO, Ana Raquel (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho); MONTEIRO SOARES, Adriana (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho); BASTO, Raquel (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho); DIAS, Enrique (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho); VILELA, Eduardo (Cardiology Department, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); TEIXEIRA, Madalena (Cardiology Department, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); COIMBRA, Edite (Otorhinolaryngology Department, Unidade Local de Saúde Gaia/Espinho); OLIVEIRA, Pedro (Otorhinolaryngology Department, Unidade Local de Saúde Gaia/Espinho); AMARELO, Anabela (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); CAPELA, Andreia (Medical Oncology Department, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); VIAMONTE, Sofia (North Rehabilitation Center, Unidade Local de Saúde Gaia/Espinho; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia; Institute of Biomedicine (iBiMED), Department of Medical Sciences); COSTA, Horácio (Plastic Surgery Department, Unidade Local de Saúde Gaia/Espinho); JOAQUIM, Ana (ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia); RIBEIRO, Fernando (Institute of Biomedicine (iBiMED), School of Health Sciences - University of Aveiro); ALVES, Alberto (Research Center in Sports Sciences, Health Sciences and Human Development, CIDESD - University of Maia; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia)

Presenter: GARCIA, Catarina (Research Center in Sports Sciences, Health Sciences and Human Development, CIDESD - University of Maia; ONCOMOVE®, AICSO - Associação de Investigação de Cuidados de Suporte em Oncologia)

Session Classification: Poster Session