

Feasibility and Preliminary Efficacy of Implementing a Group-Mediated Cognitive Behavioral Resistance Exercise Intervention in Head and Neck Cancer Patients Undergoing Chemoradiation Treatment

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ABSTRACT

Head and neck cancer (HNCa) patients report some of the lowest quality of life (QOL) compared to other cancer populations, due to the clinically meaningful deficits in muscle mass, called cancer cachexia, and physical function that are associated with the established standard of care, which includes Chemoradiation therapy (CRT). **PURPOSE:** Determine the feasibility and preliminary efficacy of implementing a group-mediated cognitive behavioral (GMCB) resistance exercise (RE) intervention in HNCa patients undergoing CRT. **METHODS:** The HNCaRE study was a single-arm, pilot trial designed to evaluate the safety, feasibility, and preliminary efficacy of implementing a GMCB personalized RE intervention in nine HNCa patients undergoing CRT. Assessment of all functional, anthropometric, and patient-reported outcomes were obtained at baseline, 3-months, and 6-month follow-up visits. **RESULTS:** Findings from the initial cohort of the HNCaRE pilot trial (n=9) suggest that the GMCB RE intervention was a feasible, safe, and well-tolerated intervention for HNCa patients undergoing CRT. The Cohen's d effect sizes were calculated by taking the mean difference and dividing by the pooled standard deviation to determine the magnitude. Percent change was determined by calculating the mean difference from baseline at each assessment and dividing by the baseline value. Evaluation of the effect sizes and percent change indicate the RE intervention attenuated the deleterious effects that have been observed upon muscle mass ($d=-0.74$), physical function ($d=0.28$), and QOL ($d=-0.65$) previously among HNCa patients undergoing CRT. Patients who demonstrated the greatest adherence to the intervention sessions yielded the most favorable changes in these outcomes. **CONCLUSION:** Findings from the HNCaRE pilot trial provide evidence of the feasibility, safety, and preliminary efficacy of implementing a GMBC-based RE intervention among HNCa patients undergoing CRT. The RE intervention shows promise for countering the well-established deleterious effects upon body composition, physical function, and QOL accompanying CRT.