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Predictors of Adherence in a Personalized Lung Cancer Exercise Trial: Results from the PEP Study

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Background: Exercise programs benefit lung cancer patients undergoing surgery but are rarely incorporated into clinical practice. Predictors of adherence to a perioperative remotely delivered, pragmatic, and personalized exercise intervention in lung cancer patients were assessed.
Methods: Patients randomized to the exercise group in the Precision Exercise Prescription (PEP) Study were included in the analyses. The exercise intervention was tailored to patients'mobility starting in the pre-surgery period. Weekly Motivation And Problem-Solving (MAPS) calls were conducted for motivational purposes and to discuss barriers, exercise modifications, and self-reported exercise adherence with participants. Median scores derived from MAPS call notes were used to classify patients as non- (1: no activity) or partially (2: <3 days/week) vs. fully adherent (3: 3 or more days/week) from pre-surgery to 2 months and 2–6 months post-surgery. We investigated baseline predictors, clinicodemographic characteristics, 6-minute walk test (6MWT) distance, fatigue (FACIT-F), and quality of life (FACT-L), using forward stepwise logistic regression models.
Results: From baseline to 2-months, 41% of participants were fully adherent (N=34), 50% were partially-adherent (N=41) and 9% of participants were non-adherent (N=7). During the 2-to-6-month timeframe, 33% of participants were fully adherent (N=23), 61% were partially-adherent (N=42), and 6% of participants were non-adherent (N=4). From 2-6 months, fully adherent patients were older (69±9 years vs. 62±15 years) and had primary vs. secondary lung cancer diagnoses (96% vs. 70%) relative to non/partially-adherent patients. Baseline fatigue (OR:0.93, 95%CI:0.86–0.99, p=0.04) and secondary lung cancer (OR:0.11, 95%CI:0.01–0.63, p=0.04) were significant predictors of adherence for 2-6-month timeframe. Fatigue remained a significant predictor after adjusting for age, cancer type, and body mass index (OR: 0.92, 95%CI: 0.85–0.99, p=0.03). No significant predictors emerged for baseline to 2 months post-surgery.
Conclusions: Adherence to the PEP Study intervention was greater among older, primary lung cancer patients with lower fatigue at baseline.

Keywords

Adherence, intervention, randomized clinical trial, lung cancer

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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