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Preliminary Effectiveness of the Comprehensive Oncology Rehabilitation and Exercise (CORE) Clinical Workflow Algorithm on Exercise Engagement, Physical Function and Health-Related Quality of Life From Diagnosis and Throughout Care in Early Stage Breast Cancer

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Background: The Comprehensive Oncology Rehabilitation and Exercise (CORE) pilot trial aimed to test the feasibility and acceptability of a clinical workflow algorithm that integrated exercise and rehabilitation services from breast cancer diagnosis throughout the first 24 weeks of care. Here, we investigated the preliminary effectiveness of the CORE Algorithm compared with standard of care (SOC) on facilitating exercise engagement throughout care and improving physical function and health-related quality of life (HRQoL) in women newly diagnosed with stage I-III breast cancer with plans for surgery as first-line treatment.

Methods: Seventy-two women were randomly assigned in a 2:1 ratio to CORE or SOC. All participants completed study assessments at three timepoints that aligned with routine breast surgical oncology clinic visits, surgical consultation (i.e. baseline), postoperative, and 24-weeks post-operative. The following outcomes and associated assessments were carried out in clinic: exercise engagement- modified Godin physical activity (primary engagement assessment) and accelerometry wear for one week following each clinic visit; physical function- PROMIS physical function survey (primary function assessment), 5-time chair stand, 10-meter walk, back scratch, Quick DASH; HRQoL- FACT-B.

Results: Fifty-nine participants contained evaluable data, with the majority having stage I disease (83%), primarily white (75%), non-Hispanic (90%), and a median age and BMI of 58 years and 26.0 kg/m2, respectively. A modest advantage in exercise engagement was observed in the CORE arm (Godin: 5.46, 95% CI -1.06, 11.98; effect size: 0.36,95% CI, -0.07, 0.78; accelerometry: median difference 12 minutes, bootstrapped 95% CI -37, 40). Difference in change in PROMIS physical function score from baseline to 24-weeks post-operative between groups was not statistically significant (-1.86, 95% CI -6.02, 2.3).

Conclusion: The CORE Clinical Workflow Algorithm demonstrates promise in improving exercise engagement, an important indicator of independence linked with improved survival. More work is needed in an adequately powered trial to confirm these findings.

Keywords

Clinical Algorithm, Breast Cancer

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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