Feasibility of Live Remote Exercise for Adults with Advanced Cancer and Cachexia

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BACKGROUND

- Cancer cachexia is a multifactorial syndrome characterized by an ongoing loss of skeletal muscle mass (with or without loss of fat mass)[1].
- Cancer cachexia affects 50-80% of people with advanced cancer[2] and has a profound impact on physical function, symptom burden and quality of life (QoL).
- Effective supportive care interventions remain limited, and the role exercise is mostly unknown, as few exercise trials have targeted adults with advanced cancer and cachexia.

Objective: To assess the **feasibility, acceptability, and safety** of a live remote, tailored exercise intervention for adults with advanced cancer and cachexia, and to explore preliminary effects on physical function and patient-reported outcomes.

METHODS

Adults with metastatic or locally advanced cancer meeting international cachexia criteria received an 8-week, live remote, tailored aerobic and resistance exercise program (3 sessions/week, 30-45 minutes) plus post-exercise protein supplementation (EX) or usual care (UC) (Fig 1).

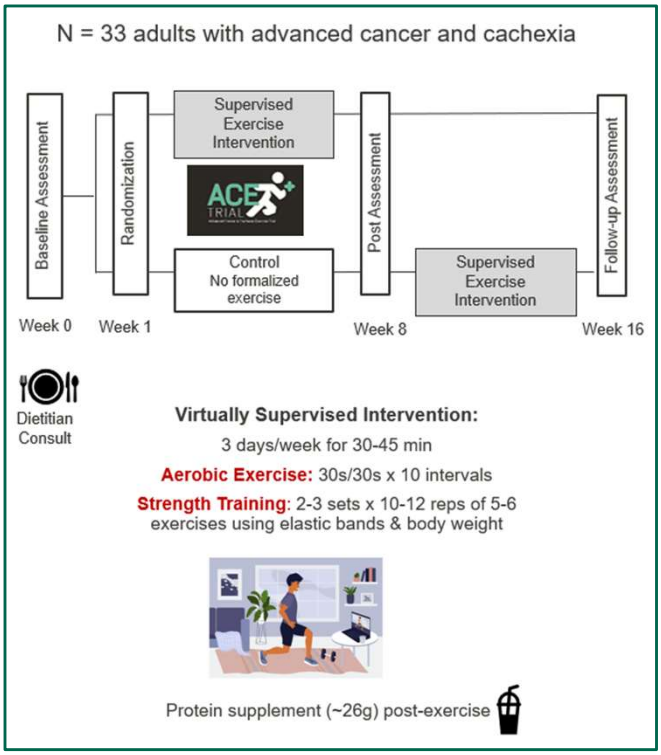

Figure 1. ACE trial study design

Primary outcomes: Feasibility (recruitment, attrition, adherence, safety) and acceptability. Secondary outcomes: Physical fitness and function (e.g., 30-s sit-to-stand), body composition, physical activity, nutritional status, QoL, fatigue, and psychological outcomes.

RESULTS

Of 107 screened, 33 participants (17 males and 16 females aged 63 ± 12 years) were randomized (EX: n=17, UC: n=16), with 30 completing the 8-week study. The most common cancer type was gastrointestinal (46%) followed by lung (12%) and breast (12%). On average, participant's six-month weight loss was 8.0 ± 3.1%.

Feasibility and safety: All feasibility targets were met (Fig 2).

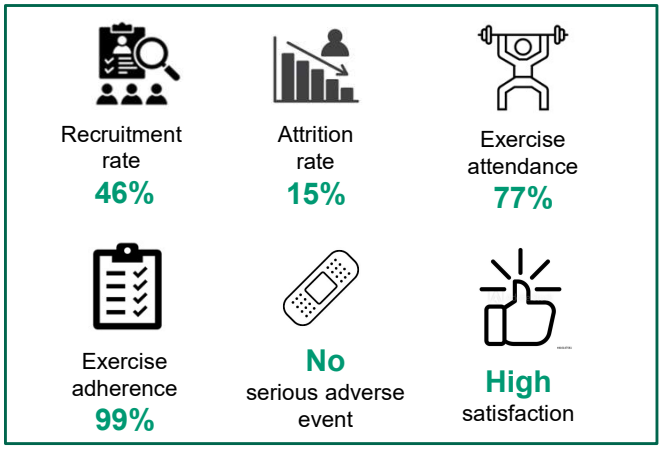

Figure 2. Feasibility and acceptability outcomes

Acceptability: **100%** felt the program met their expectations, was tailored to needs, and was beneficial

Secondary outcomes: No between-group differences. However, clinically meaningful improvements in the EX group but not the UC group over time for :

Physical function (30-s sit-to-stand):
Δ3.1 reps, (95% CI 0.4–5.8)

Health-related QoL (SF-36):
Δ13.3, (95% CI: 5.6 to 20.9)

Bodily pain (SF-36):
Δ16.7, (95% CI: 2.2 to 31.1)

"It gave me a sense of achievement and a sense of purpose"

CONCLUSION

A live remote, tailored exercise intervention was feasible, acceptable, and safe for adults with advanced cancer cachexia

ACKNOWLEDGEMENTS

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References: 1. Fearon, K. *et al. 2011. Lancet Oncol* **12**, 489-495., 2. Poisson, J. *et al.* 2-21 *J Cachexia Sarcopenia Muscle* **12**, 1477-1488.