

A supervised prehabilitation program for patients with pancreatic cancer.

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Background: Individuals who develop pancreatic cancer tend to be older, with 70% of pancreatic diagnoses occurring in those ≥ 65 years (2). Older patients are at increased risk for sarcopenia which is the progressive loss of skeletal muscle mass, tone, quality and strength and has been reported to affect 65% of pancreatic cancer patients (4). PREHAB is the process of improving the functional capability and psychological health of the individual to reduce the incidence and/or severity of future impairments (6). The foundation of PREHAB is functional exercise although components of nutrition and stress reduction may be included (9). PREHAB sessions are typically delivered through structured programs and have been shown to have a number of benefits such as improvements in functional activity and decreased postoperative complications (8). In a study by Ngo-Huang et al, 50 pancreatic cancer participants participated in a home-based multimodal program resulting in improved physical function and health related quality of life (15). Given the numerous benefits, the purpose of this study is to demonstrate the feasibility of a multimodal supervised PREHAB program in pancreatic cancer patients which we believe could have greater benefits than unsupervised programs. **Methods:** This is a single arm pilot study assessing the feasibility of a supervised prehabilitation program for patients with pancreatic cancer. Inclusion criteria include a diagnosis of any stage pancreatic cancer, independence with ambulation, and a lower level of physical activity as assessed by the Godin-Shepard Leisure-Time Physical Activity Questionnaire. To our knowledge, this is the first study in which all exercises sessions are in-person and supervised by exercise technicians in pancreatic cancer. Additionally, while prehabilitation typically takes place during the neo-adjuvant therapy period, this study will also include patients with metastatic disease on continuous chemotherapy. Participants will undergo baseline evaluations testing strength, endurance, balance, subjective measures and sarcopenia measures. This will be immediately followed by one-hour long supervised exercise sessions 3x per week for 6 weeks in which participants will engage in aerobic training and resistance training targeting major muscle groups. Following the intervention, measures will be collected immediately afterwards and at 3 month follow-up. The primary analysis will test the hypothesis of feasibility using an one-sided exact Binomial test at 25% significance level. If 10 or more patients attend a minimum of 60% of exercise sessions during the initial 6-week period, then the study will be declared feasible. 11 of 16 patients have been enrolled to date. Clinical trial information: NCT05692323. Research Sponsor: Cedars Sinai Medical Center (Internal Funding).