Referring patients with early-stage breast cancer to exercise programmes prior to surgery not only improves health-related quality of life measures but also lowers overall healthcare costs. The study, abstract 1385675, was presented at the American Society of Breast Surgeons Annual meeting, held in Boston April 27–30, 2023. A second study, abstract 1387186, also in patients with breast cancer, demonstrated that introducing prehabilitation exercises prior to surgery improved functional walking capacity and quality of life six months after surgery.

Commenting on the findings Sarah Blair, from US San Diego Health, California, said in a press briefing, "Many of my patients ask me what they can do to improve their outcomes. Now I can recommend that they add moderate exercise to their routine, with real tangible benefits."

For the first study, abstract 1385675, Karen Wonders from Wright State University, Ohio, and colleagues examined the impact of a 12-week post-surgical programme of individualised exercise on health-related quality of life measurements.
"In the year following a cancer diagnosis up to half of all hospitalisations are unplanned, with fever accounting for 15.8%, gastrointestinal distress 5.8%, cardiovascular distress 5.8% and pulmonary distress 4.3%," said Wonders, adding that this was the first study to examine the relationship between exercise interventions and utilisation of healthcare resources.

In the open-label study, 243 women with early-stage breast cancer (stage I and II) were randomised to exercise (n=123) and control groups (n=120). The exercise intervention, which aligned with American College of Sports Medicine exercise guidelines for cancer survivors, consisted of 150 minutes of cardiovascular exercise weekly (primarily walking or recumbent bicycling at low to moderate intensity), with the group additionally engaging in two to three 60-minute sessions of full body workouts using free weights or stretch bands. The control group received the current standard of care, including a resource guide detailing the options available to cancer survivors. Both groups were assessed pre- and post-intervention using the Functional Assessment of Cancer Therapy–Breast (FACT-B), the Short Form-36 Health Survey (SF-36), and the Brief Fatigue Inventory (BFI).

Results showed that breast-cancer specific quality of life improved significantly across each of the categories for the exercise group in comparison to the control group (P<0.001).

For patients in the exercise programme researchers found decreases of 32.2% in emergency department visits, 21.5% in hospital outpatient visits, and 41.8% in office-based visits.

"These results signify that all dimensions of health-related quality of life items studied were positively impacted by exercise and can be used as indicators to decrease health care costs among patients with early-stage breast cancer," wrote the authors.

"Our study adds to the body of literature supporting [exercise], not only by demonstrating benefits but also showing that exercise can help cut health-care costs," said Wonders.

In a second study presented at the meeting, abstract 1387186, Frances Wright, from Sunnybrook Health Sciences Center, Toronto, explored the impact of individualised prehabilitation programmes combining exercise with dietary and stress management counselling for breast cancer patients as they underwent neoadjuvant chemotherapy prior to surgery.

"The goal of prehabilitation before surgery is to reduce the incidence and severity of both current and future impairments. No previous work has looked at prehabilitation for this group of patients, which makes this study quite unique," Wright told a press briefing.

For the study, 72 participants with stage I–III breast cancer, aged between 18 and 80 years, were

randomised to the prehabilitation intervention (n=35) or usual care (n=35). Prehabilitation consisted of an individualised counselling session with a nutritionist and psychiatrist, after which, following evaluation by a physiotherapist, participants were assigned a customised exercise programme consisting of several 30-minute cardiovascular exercise sessions each week complemented by upper body strength training.

With almost half the women approached agreeing to participate and 87% completing the programme, the authors conclude that prehabilitation is “feasible and well-received by patients”.

Results showed that, compared with women assigned to usual care, those in the prehabilitation arm experienced better functional walking capacity following chemotherapy (between-group difference: 49.43 metres +/- 23.9 metres; 95%CI 118.07–19.22) as well as at six months after surgery (between-group difference: 27.25 metres +/- 23.9 metres; 95%CI 96.8–42.18).

In addition, women in the prehabilitation group reported better quality of life and less fatigue when compared with the usual care group at both timepoints after neoadjuvant chemotherapy.

“Prehabilitation during NACT [neoadjuvant chemotherapy] in women with breast cancer is feasible and well received. Our pilot study suggests that multimodal prehabilitation may improve clinically relevant outcomes including physical fitness, quality of life, and fatigue,” wrote the authors.

“Going forward, we need a bigger powered trial to assess this, but we have implemented the intervention in our centre as a standard of care now,” Wright told the press briefing.