

## **Abstract**

**Introduction:** According to epidemiological findings, breast cancer is the second most common cancer in women. The typical age of Czech breast cancer patients should be 60-74 years, but it is estimated that up to 35 % of them are younger than 60 years. Rehabilitation, dietary interventions to prevent obesity and psychosocial care are an important part of follow-up care for these patients. The aim of this follow-up care is to improve mental and physical fitness, to facilitate the return to normal life, to prolong survival, to prevent recurrence and to treat various complications associated with both the aggressive treatment and the tumour itself.

**Aim:** Description of changes in nutrition, physical activity and body weight in breast cancer patients who participated in the ONKOFIT – SPA programme.

**Methodology and characteristics of the group:** ONKOFIT – SPA is a programme that lasts for six months with the aim to determine the effect of the nutritional and physical intervention after this period. Women who were diagnosed with breast cancer were enrolled in the program. It was necessary to include data for patients who have completed 3 months of the program. Currently, 38 patients have started the program. Patients who have not yet been in the program for 3 months number 11 and are continuing the intervention. Data were completely evaluated for 14 patients and the remaining 13 patients could not be included in this work because they did not have complete data to evaluate. Six of the 14 patients were obese with a BMI above 30. The age distribution here ranged from 41 to 56 years with a mean age of  $47 \pm 4$  years. The mean BMI of all patients was  $25.69 \pm 4.91$  kg/m<sup>2</sup> and the mean BMI of the obese patients was  $30.86 \pm 0.53$  kg/m<sup>2</sup>. Patients continue to be followed intensively in the Time for Health app further through online consultations or in face-to-face consultations with a physician, nutrition therapist and exercise instructors.

**Results:** Based on the statistics performed, it was found that nutritional and exercise intervention for 3 months was beneficial due to weight loss. A statistically significant change in body weight was found in the entire cohort of patients. The mean value before intervention was  $71.39 \pm 13.36$  kg and after intervention the mean value was  $70.43 \pm 12.91$  kg. The 6 obese patients also showed a statistically significant change in body weight, with a mean of  $83.40 \pm 10.13$  kg before intervention and a mean of  $81.85 \pm 9.93$  kg after intervention.

**Conclusion:** The group of patients is still being monitored, and at the end of the programme, after six months, they will go for a weekend stay at the Mariánské lázně, where the exit measurements will be carried out. These results support that the nutritional intervention was beneficial for these patients.

**Keywords:** breast cancer, nutrition, exercise, obesity, physical activity