

Results of 1-year Diet and Exercise Interventions for ER+/PR±/HER2- Breast Cancer Patients Correlated with Treatment Type

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Abstract

Purpose: Many breast cancer patients gain weight during chemotherapy and antiestrogenic treatment increasing recurrence, oncologic specific and all-cause mortality risks.

Patients and Methods: 165 ER+/PR±/HER2- breast cancer patients under antiestrogenic treatment were randomly assigned to follow an at-home diet based on food naturally high in proteins, calcium, probiotics and prebiotics (D), or this diet and 4' isometric exercises (D+Ex) for 1 year. We measured weight (W), body (BF) and visceral fat (VF) using a multi-frequency bioelectrical impedance scale on the 6th and 12th month and we correlated results with chemotherapy, surgery and antiestrogenic medication type. Results were analysed using the Friedman Test, then with Wilcoxon signed-rank tests if Friedman Test was significant.

Results: Overall, the patients' 1-year results show that both D+Ex and D patients obtained statistically significant weight loss and fat loss. D patients lost 3.3 kg, 3.2% BF and 1% visceral fat. D+Ex patients lost 6.5 kg, 3.3% BF and 2% visceral fat. D+Ex patients obtained statistical significance for W, BF and VF regardless of chemotherapy, surgery or antiestrogenic treatment type. D patients with mastectomy or with aromatase inhibitors lost W, BF and VF. D patients with conservatory surgery, adjuvant or both neoadjuvant and adjuvant chemotherapy and those on Tamoxifen only lost W. D patients with neoadjuvant chemotherapy also lost VF.

Conclusion: This diet is effective for ER+/PR±/HER2- breast cancer patients on antiestrogenic medication. Adding at least a minimal exercise protocol improves patients' chances of counteracting sarcopenic obesity.

Key words: breast cancer, sarcopenic obesity, oncology nutrition, isometric exercise