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Association between body composition and physical activity level with quality of life of women with hormone receptor-positive breast cancer undergoing adjuvant endocrine therapy

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Objective: To evaluate associations between body composition, physical activity level, and quality of life in women with hormone receptor-positive breast cancer undergoing adjuvant endocrine therapy. **Methods:** Recruitment was carried out in two tertiary hospitals: one public and one private, with women under adjuvant endocrine therapy for at least six months. Analyses included: sociodemographic data; weight and height; body composition by electrical bioimpedance; level of physical activity by the short version of the International Physical Activity Questionnaire; and quality of life by scales EORTC QLQ-C30 and EORTC QLQ-BR23. **Results:** A total of 107 women were included, with a mean age of 56.9 years and a mean hormone therapy of 3.4 years. In the analyses between body mass index, body fat percentage, and independent variables, the EORTC QLQ-C30 score of physical function and the EORTC QLQ-BR23 score of pain were considered significant predictors. For each increase of 1% in physical function (p=0.0365) and pain (p=0.0046) scores, there was a significant increase in body mass index. For each increase in physical function score, there was a significant reduction in fat percentage (p=0.0025). The association between physical activity levels and independent variables showed that the EORTC QLQ-C30 global quality of life score was considered a significant predictor. With an increase in the global quality of life score, the likelihood of a patient being in a lower physical activity category rather than a higher one decreased significantly (p=0.0175). **Conclusion:** Both physical function and pain scores played significant roles as predictors of body mass index and body fat percentage in the patients analyzed. In addition, quality of life was a significant predictor of physical activity levels.

Keywords: body composition; physical activity; quality of life; breast cancer.