



14_What is the pattern of diet, weight and body composition in breast cancer patients under hormone therapy?

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Objectives: Differences in breast cancer incidence suggest a significant role of environmental factors in its aetiology: obesity, central adiposity, excess body fat and dietary factors have been suggested as risk factors. Furthermore, post-diagnosis weight gain in breast cancer has been associated with increased cancer recurrence as well as mortality. Obesity may influence outcomes in women with hormone-receptor+ breast cancers, since excess fat tissue in postmenopausal women results in higher blood estrogen concentrations through conversion of androgens to estrogen by aromatase in peripheral fat tissues. While endocrine-treatment with aromatase inhibitors has markedly improved breast cancer outcomes, there is evidence that obese women may not fully benefit from these agents. This study aimed to evaluate nutritional status, body fat, and the usual diet intake of women diagnosed with breast cancer, referred for Radiotherapy.

Material and Methods: 101 consecutive breast cancer patients were included. All patients were evaluated for: height, weight, body fat (BF), body mass index (BMI), and usual diet intake was assessed by the Food Frequency Questionnaire (FFQ) validated for the Portuguese population to assess the usual diet.

Results: Assessments occurred 6 ± 2 months after diagnosis. Mean age was 56 ± 9 years old and mean BMI was 30 ± 6 kg/m² (overweight); 36% of patients were obese and 48% were overweight (25-30kg/m²), while the remainder had regular BMI (19-25kg/m²). Body composition revealed that 63% of patients had BF within the normal range. Yet, 32% presented excessive BF. The mean difference between weight before diagnosis vs Radiotherapy start was $+1.6 \pm 3.9$ kg (29% decreased weight: -2.1 ± 3.0 kg and 65% increased weight: $+3.3 \pm 4.8$ kg). Patients' mean Basal Metabolic Rate (BMR) was 1455 ± 137 kcal/day. Considering the FFQ, energy intake in the last year was 2301 ± 525 kcal/day, protein intake was $18 \pm 3\%$, carbohydrate intake was $49 \pm 7\%$ and lipid intake was $37 \pm 7\%$ of total energy intake. In detail, saturated fatty acids intake was $9 \pm 3\%$, cholesterol intake was 330 ± 115 mg, dietary fibre 33 ± 10 grams, alcohol 7 ± 9 grams and calcium intake was 1048 ± 385 mg.

Conclusion: This study in a homogeneous sample of breast cancer patients, shows a high prevalence of overweight/excess body fat among breast cancer. Additionally, the diet pattern was also significantly inadequate, with excessive intake of lipids/cholesterol, and a deficient intake of protein and of complex carbohydrates. Given the role that nutrition and diet play in the physiopathology/recurrence of breast cancer, the inadequate patterns found in these patients, indeed call for effective and integrated healthy nutritional and life style education of breast cancer patients.