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930 – Association between upper limb dysfunction, phase angle, and body composition in breast cancer survivors

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Introduction: Breast cancer surgery leads to changes in body composition and to upper limb dysfunction, with a direct impact on survivors' health. Although phase angle is recognized as a marker of cellular integrity and upper limb dysfunction is frequently reported in this population, the association between these variables remains unknown.

Objective: This study aimed to investigate the association of upper limb dysfunction with phase angle and body composition in breast cancer survivors (BCS).

Methods: This cross-sectional study was conducted with 45 BCS, with a mean age of 58.7 years (standard deviation ± 9.2 years) who had undergone mastectomy or quadrantectomy and were recruited from the Breast Clinic Service of the Hospital das Clínicas in Goiânia, Goiás, Brazil, between January and December 2025. Upper limb dysfunction was assessed using the Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire, a validated instrument that measures the degree of functional disability on a scale of 0–100, with higher scores indicating greater dysfunction. Body composition and phase angle were assessed by segmental octopolar bioelectrical impedance analysis (Sanny BIA1012-8S, São Paulo, Brazil). Normality was assessed using the Shapiro–Wilk test, and correlations were examined using Spearman's correlation coefficient ($p < 0.05$).

Results: No statistically significant correlations were observed between DASH scores and phase angle ($p = 0.067$; $p = 0.66$), skeletal muscle mass ($p = -0.19$; $p = 0.20$), or total fat mass ($p = 0.075$; $p = 0.62$).

Conclusion: No statistically significant associations were observed among the variables investigated. However, the study sample size should be considered a limitation when interpreting the findings.

Ethics: Research Ethics Committees of the Federal University of Goiás (CAAE 50717115.4.0000.5083) and Hospital das Clínicas (CAAE 50717115.4.3001.5078).

Keywords: breast neoplasms; body composition; upper extremity; cancer survivors; bioelectrical impedance.