

P392

**EXTRACELLULAR WATER TO TOTAL BODY WATER RATIO MAY  
MEDIATE THE ASSOCIATION BETWEEN PHASE ANGLE AND  
MORTALITY IN PATIENTS WITH CANCER CACHEXIA: A SINGLE-  
CENTER, RETROSPECTIVE STUDY**

N. Katsura<sup>1,\*</sup>, J. Kotani<sup>1</sup>

<sup>1</sup>Department of Disaster and Emergency Medicine, KOBE UNIVERSITY  
GRADUATE SCHOOL OF MEDICINE, Kobe, Japan

**Rationale:** The prognostic factor about cancer cachectic population has been researched for a long time. The aim of this study was to evaluate the predictive utility of phase angles how are mediated by several BIA factors and other anthropometric parameters.

**Methods:** 114 consecutive patients (both outpatients and inpatients) for whom the stage of cancer cachexia was determined from July 2018 to December 2019 in Fujita Health University Hospital, were included in this retrospective cohort study. Their mean age was 74.0 (standard deviation, 8.5) years; 70 were males and 44 females. Time-dependent Cox proportional-hazards regression (adjusted for age and sex) was performed to assess the following: 1) the association between potential mediators and mortality; 2) the association between five PhAs and statistically significant mediators from 1); and 3) the association between the five PhAs and mortality. Finally, Kaplan-Meier survival curves were compared between two groups based on patients' median baseline ratio of extracellular water (ECW) to total body water (TBW) using a log-rank test.

**Results:** The ECW/TBW ratio (hazard ratio [HR] per 1-interquartile range [IQR] increase: 2.87; 95% confidence interval [CI]: 1.46, 5.46;  $p < 0.001$ ) and skeletal muscle mass index (SMI; HR per 1-IQR increase: 0.67; 95% CI: 0.51-0.89;  $p = 0.001$ ) were associated with mortality. All five PhAs were associated with the ECW/TBW ratio ( $p < 0.001$ ). Before adjustment for the ECW/TBW ratio, all five PhAs were associated with mortality ( $p < 0.001$ ); after adjustment, only the PhAs of the left arm and the trunk were ( $p < 0.05$ ). The median survival times in the low (370 days; 95% CI: 168, not calculated) and high ECW/TBW groups (101 days; 95% CI: 61, 219), differed ( $p < 0.001$ )

**Conclusion:** Although PhA was associated with mortality, this association was largely mediated by the ECW/TBW ratio. Therefore, the ECW/TBW ratio is the important mediator for predicting the prognosis of patients with cancer cachexia with PhA.

**Disclosure of Interest:** None declared