1828P Effect of serum albumin/globulin ratio in combination with MASCC and CISNE risk score on febrile neutropenia mortality

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Background: The aim of this study was to evaluate the effect of the serum albumin/globulin (ALG) ratio on the 30-day mortality of febrile neutropenia (FEN). The second aim of the study was to evaluate the effect of combination of the ALG ratio with the MASCC and CISNE risk indexes on 30-day mortality of FEN.

Methods: Between January 2016 and May 2020, the files of patients with a diagnosis of febrile neutropenia were retrospectively evaluated, the data of MASCC and CISNE risk indexes and serum ALG ratios at the time of admission were recorded. The patients who were received at least one cycle of chemotherapy and diagnosed with FEN were screened. Patients with diseases that may affect serum albumin and globulin levels were not included in the study (e.g. chronic liver disease, multiple myeloma, nephrotic syndrome). Patients with MASCC score < 21 and CISNE score ≥ 3 were identified as a high-risk group. The median ALG ratio value was 1.13 and patients were divided into two groups according to this value. Patients with ALG ratio value $\leq$1.13 were identified as a high-risk group.

Results: One hundred and thirty-seven FEN episodes were included in the study. Nineteen patients (14%) had exitus within the first 30 days. The 30-day mortality rate was 96% in patients with high ALG ratios and 77% in patients with low ALG ratios ($p = 0.002$). According to the MASCC and CISNE risk scores, the mortality rates were 92% and 94%, respectively, in low-risk patients and 78% and 71%, respectively, in the high-risk group ($p = 0.026$ vs $p < 0.001$). A multivariate analysis with parameters that affect 30-day mortality revealed that CISNE scores ≥ 3 (OR: 4.55, CI 95% 1.61 − 12.86, $p = 0.004$) and ALG ratios <1.13 (OR:3.94, CI 95% 1.11 − 13.93, $p = 0.033$) were associated with increased 30-day mortality. In patients with MASCC<21 and CISNE >3 scores group if the ALG ratio was > 1.13, 30-day mortality rate was 93% and in those with ALG ratios $\leq$ 1.13 mortality rate decreased to 50% ($p = 0.012$).

Conclusions: A low ALG ratio in a patient with FEN associated with an increased risk of 30-day mortality. Combining the ALG ratio with MASCC and CISNE risk indexes might increase the predictive value of the scores on mortality.

Legal entity responsible for the study: Osman Sütcüoğlu.

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

https://doi.org/10.1016/j.annonc.2020.08.1475

1829P Are patient-reported symptoms and concerns affected by body mass index (BMI) and weight loss (WL) in patients with cancer cachexia?

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Background: WL and anorexia are major clinical manifestations of cancer cachexia, a multifactorial and debilitating condition that causes morbidity, and additional distress for patients (pts) and caregivers. Other symptoms include appetite loss, early satiety, and decline in fitness status, highlighting the need for a multimodal management approach. This exploratory post-hoc analysis evaluates anorexia symptoms and concerns reported by pts with advanced non-small cell lung cancer (NSCLC) and cachexia on the basis of their BMI and WL degree.

Methods: ROMANA 1 and 2 (NCT01387269 and NCT01387282) enrolled adults with advanced NSCLC and BMI <20 kg/m^2 or WL $\geq$5% in the past 6 months. Pt-reported data (12-item Functional Assessment of Anorexia/Cachexia Therapy [FAACT] anorexia/cachexia scale) at study entry were included in this analysis. Anorexia symptoms and concerns were evaluated by the newly identified 5-item anorexia symptoms subscale (5-IASS) and the 4-item anorexia concerns subscale (4-IACS), both derived from FAACT. Lower scores for each domain denoted a higher degree of symptoms and concerns. Scores were analyzed on the basis of pts' BMI and WL, and variation among groups was computed using SAS 9.4.

Results: Mean BMI of the analyzed population (N=829) was 23.0 $\pm$ 3.6 kg/m^2 and mean overall 5-IASS and 4-IACS scores were 12.4 $\pm$ 4.5 and 9.2 $\pm$ 3.7, respectively. Scores for the groups of pts categorized according to BMI and WL are shown in the Table. 5-IASS and 4-IACS scores were statistically lower for pts with BMI <20 vs BMI $\geq$20, and lower among pts with WL >10% vs WL $\leq$10%. The combination of BMI <20 and WL >10% conferred the lowest scores.

Conclusions: Pts with BMI <20 and WL >10% report the highest degree of both symptoms and concerns, reaffirming the need for early diagnosis and intervention to prevent WL progression. Anorexia symptoms and concerns subscales represent potential outcome measures for intervention trials in cancer cachexia.

Clinical trial identification: NCT01387269 and NCT01387282.

Editorial acknowledgement: Editorial and medical writing assistance was provided by Sandra Mendes, PhD, CMPP, and Judith Land, PhD, from Aptitude Health, The Hague, the Netherlands, and funded by Helsinn Healthcare SA, Lugano, Switzerland. The authors are fully responsible for all content and editorial decisions for this abstract.

Legal entity responsible for the study: Helsinn.

Funding: Helsinn.

Disclosure: S. Kaasa: Honoraria (institution): Fresenius Kabi; Honoraria (institution), Research grant/Funding (institution): Nutricia; Shareholder/Stockholder/Stock options: Eir Solution. D. Currow: Advisory/Consultancy: Specialised Therapeutics Australia Pty. Ltd; Advisory/Consultancy, Licensing/Royalties: Mayne Pharma ; Advisory/Consultancy, un-paid advisory board member: Helsinn Pharmaceuticals. R.J.E. Skipworth: Advisory/Consultancy: Avidity Biosciences; Advisory/Consultancy: Helsinn; Research grant/Funding (self): NHS Research Scotland; Research grant/Funding (institution): Novartis.

https://doi.org/10.1016/j.annonc.2020.08.1476

Table: 1829P

N Mean ± SD	5-IASS	4-IACS
By BMI		
BMI <20 kg/m^2	180 11.5 $\pm$ 5.0*	180 6.8 $\pm$ 3.5**
BMI $\geq$20 kg/m^2	647 12.6 $\pm$ 4.4*	646 9.8 $\pm$ 3.5**
By WL		
WL $\leq$10%	484 13.1 $\pm$ 4.1+	484 10.2 $\pm$ 3.3++
WL >10%	343 11.4 $\pm$ 4.9+	342 7.7 $\pm$ 3.8++
By BMI and WL		
BMI <20 kg/m^2 and WL $\leq$10%	62 12.6 $\pm$ 4.4AB	62 8.2 $\pm$ 3.5B
BMI <20 kg/m^2 and WL >10%	118 10.9 $\pm$ 5.2C	118 6.1 $\pm$ 3.4C
BMI $\geq$20 kg/m^2 and WL $\leq$10%	422 13.2 $\pm$ 4.0A	422 10.5 $\pm$ 3.1A
BMI $\geq$20 kg/m^2 and WL >10%	225 11.6 $\pm$ 4.8BC	224 8.5 $\pm$ 3.8B

SD: standard deviation.
*p=0.0032, **p<0.0001 ANOVA comparison.
+p<0.0001,
++p<0.0001 ANOVA comparison.
ABCScheffe test of mean comparison; the means with same letter are not statistically different at alpha=0.05. Tests of 5-IASS and 4-IACS were performed separately.

1830P Association of body composition measured by bioelectrical impedance analysis and hematologic adverse events in early-stage breast cancer patients receiving chemotherapy

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Background: The low muscular component is associated with diminished cancer treatment outcomes and increased toxicities. Various studies focused on advanced measurement techniques using dual energy X-ray absorptiometry (DEXA) scan or CT-based analysis, while study on bioelectrical impedance analysis (BIA) was limited. This study examined the association of body composition measured by BIA on the hematologic adverse events in early-stage breast cancer (EBC) patients receiving chemotherapy.

Methods: A total of 144 female patients with EBC were enrolled in this study. Body weight (BW) and fat-free mass (FFM) were measured by BIA analyzer before starting of the first cycle of chemotherapy. BW and FFM were converted into body mass index (BMI) and fat-free mass index (FFMI) by dividing with squared height (in meter) of the patient. The association between FFMI and composite adverse events (CAE), including grade 4 neutropenia, febrile neutropenia and relative dose intensity < 85% were explored.

Results: Of the 144 patients, CAE occurred in 85 patients (59%), and point biserial correlation showed an inverse correlation between FFMI and CAE. Per the international consensus, none of these patients matched with sarcopenic criteria (FFMI < 11.4 kg/m^2). AUC analysis revealed that FFMI of < 14.85 kg/m^2 should be the cut point for low FFMI. Using this cut point, 85 patients were classified as low FFMI, and 62 patients (72.9%) had CAE with a notable relative risk (RR) of 1.86 ($p < 0.001$). After adjusting for other factors, low FFMI was significantly associated with a high CAE rate (adjusted odds ratio (OR) 4.562, $p < 0.001$).

Conclusions: A low FFMI was significantly correlated with increased risk of severe neutropenia and decreased relative dose intensity in patients with EBC receiving