



Letter to the Editor

Reply-letter to the editor-harm associated with higher energy intake in patients with Low-mNUTRIC score should not be ignored



Keywords:

NUTRIC
Nutrition support
Critical illness
Mortality
Nutrition risk

Dear Professor Deutz,

We are pleased to submit a response to the letter to the editor you have received from Lee et al. [1] and wish to thank Dr Lew and Dr. Lee for their interest in our most recent study [2] exploring the relationship between nutrition and outcome among low m-Nutric-score patients.

Regarding their major concern, Lee et al. stated [1], “Chourdakis and colleagues recommend clinicians to provide higher calories for patients with low-mNUTRIC scores” and “[authors ...] suggested that achieving adequate nutrition should still be prioritized for these patients ...” Indeed, our study failed to demonstrate favorable outcomes with the provision of increased nutrition prescription among any of the examined low-NUTRIC patient groups. However, a more careful look at our manuscript clearly shows that we tried to raise the issue of an appropriate way of providing nutritional support among low-m-Nutric-score patients, rather than making any recommendation on what should be prioritized for them (“Although no improvements in mortality were observed with increased nutritional intake, this should not be construed as a rationale for withholding artificial nutrition among these patients. Increased nutritional intake could still confer benefits in other clinical outcomes except mortality”).

Additionally, Lew et al., re-analyzed our data [2] together with previously published data of them [3,4] and state that they found a “significant positive association between each 20% increment in energy adequacy and mortality.” As can be seen in their, 97.3% of the total weight of the estimates comes from our INS data, and this is it is difficult for us to understand the rationale of aggregating them together. Nevertheless, it can be still seen as a valid hypothesis -NOT statement of fact-that “more calories in low risk patients may cause harm”. On the other hand the post-hoc analysis by Al Arabi et al. [5] showed that “In patients at high and low nutritional risk defined by the NUTRIC score, enteral feeding to deliver moderate non-protein calories was associated with similar mortality compared with planned delivery of full non-protein caloric requirements”. Hence, this higher level of evidence does not support the assertion

that feeding more calories to low NUTRIC patients results in increased mortality.

Moreover, as also stated in our manuscript, refeeding syndrome could be altering the results. Refeeding can occur in apparently well-nourished patients even after short periods of fasting, with risk of mortality due to the associated shifts of electrolytes intracellularly with glucose in response to feeding. A classic characteristic of refeeding syndrome, hypophosphatemia, is reported in more than 50% of the high-NUTRIC and more than 60% of the low-NUTRIC patients [5]. Additionally, the results by Lee and associates [3] in conjunction to the positive trend between increased energy/protein provision and mortality noted in our results, could be indicative of undiagnosed refeeding syndrome among a large proportion of patients in both studies, irrespectively of the low nutritional risk of participants. It is known that during the early phase of critical illness, nutrient delivery may lead to the development of refeeding syndrome [6]. In these patients trophic underfeeding appears to be more effective in reducing mortality compared to standard caloric intake [7], but in the our study [2] diagnosis of refeeding syndrome was not included in the exclusion criteria.

Last but not least, we can agree to the comment by Lee et al. [1], that clinicians should focus their efforts on providing more nutrients to those in a high risk, but we still feel the need to emphasize that due to the fact that many low-mNUTRIC-score patients experience extended ICU stays and significant mortality rates, while demonstrating a variety of malnutrition risk factors, advocating for constraining nutritional support among these patients would be precarious. Further exploration of the effects of nutritional support is warranted among more homogenous samples of low-NUTRIC patients, particularly on the effect of feeding practices on more functional outcomes.

Thank you for your giving us the opportunity to respond.

Yours sincerely,

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