Ref.: Manuscript ID: nutrients-4016919, entitled “Impact of the Risk of Malnutrition and Perioperative Complications in Gastrointestinal Cancer Patients Undergoing Elective Major Surgery: A Prospective Observational Multicenter Study”, Díaz-Vico T (corresponding author) et al., revised version

AUTHORS’ COMMENTS TO SUGGESTIONS OF REVIEWER #2

- First of all, the author would like to thank the Reviewer for all suggestions which have contributed to improve the accuracy and quality of the manuscript.

[Line # 158] The manuscript states, “Qualitative variables are expressed as frequencies and percentages”; however, the term “categorical” is more appropriate than “qualitative.”

- We use the term “categorical” instead of qualitative variables.

Throughout the manuscript, the term “qualitative” is used; however, since a chi-square test or Fisher’s exact test was performed, it would be more appropriate to refer to these variables as “categorical.”

- We consistently use the term “categorical”.

[Line #162] “usedFisher’s exact test” → “used Fisher’s exact test”

- Thank you. Corrected.

[Line # 174 & Table 1] In the "Working status" category, the percentages do not sum to 100%. Please verify the numbers. Additionally, in Table 1, "Retired" is listed as 284 (60.5%), while in line 174 of the main text it is reported as 60.6%. One of these appears to be an error.

- Yes, we have corrected the error in Table 1, the percentage is 60.6%.

[Line # 177] The value is reported as "2.86 (1.81)," whereas in Table 1 it is listed as "2.9 (1.8)." This discrepancy may confuse readers. It would be better to ensure that the numerical values in the table and the main text are consistent. It appears that Table 1 rounds to one decimal place. Similarly, please report "Barthel index was 97.03 (9.36)" consistently with Table 1

- These inconsistencies are corrected and rounded to one decimal place in the text.

[Line #182] In line 182 and Table 1, the "MUST score was 0.72 (1.09)." is reported with two decimal places. Why was this the only value presented to the second decimal place? Unless there is a specific reason, it would be better to standardize the number of decimal places throughout the document.

- The MUST score was 0.7 (1.1).

[Line # 214 & Figure 1] The percentages—Grade I: 20.6%, Grade II: 49.3%, Grade III: 28.1%, Grade IVa: 2.1%—sum to 100.1%.

- Grade IVa is 2.0% and the sum is 100%. This is corrected in the text and in Figure 1.

[Line #222] In line 222, "with a 30-day complication rate of 9%" should be "with a 30-day complication rate of 9.4%."

- Yes, the complication rate is 9.4% (44/469).

[Line #228 & Figure 1] The percentages—Grade I: 34.1%, Grade II: 36.4%, Grade III: 25%, Grade IVa: 4.6%—sum to 100.1%.

- Grade IVa complications accounted for 4.5%. This is corrected in the text and in Figure 1.

[Line # 239-241] In lines 239–241, it is stated that "In the 146 patients with complications during hospitalization, the mean (SD) MUST score at hospital discharge was 0.90 (1.19), although it was significantly higher among those who received nutritional treatment (n = 105) as compared to those without nutritional support (n = 41) (1.06 [1.25] vs. 0.51 [0.90], P = 0.012)." However, this information cannot be directly found in Table 4. According to Table 4, among the 225 patients who received nutritional support during hospitalization, 105 (46.7%) developed complications, whereas among the 237 patients who did not receive nutritional support, 41 (17.3%) developed complications, with a significant difference (P = 0.0001). This suggests that a lower complication rate was observed in patients who did not receive nutritional support. In the table, the data are presented as the incidence of complications, whereas in the main text they are reported as MUST scores, resulting in inconsistent reporting. In the table, the data are presented as the incidence of complications, while in the text, it is described using MUST scores, which is inconsistent. Since the MUST score is as important as the complication rate, it is recommended to include the MUST score in the table according to whether patients received nutritional treatment.

- We have rewritten the text, so that number of patients and percentages are presented in Table 4, and data of MUST scores in the text only.
- Table 4 is expanded with MUST scores 0, 1 and ≥ 2, and the inclusion of GLIM criteria as well as the total number of patients for each category.
- The new text reads: As shown in Table 4, there were significant differences in the nutritional risk as discharge according to the presence of complications, with lower percentages of patients with MUST score 0 and higher percentages with MUST score ≥ 2 among those with complications (*P* = 0.0001). Differences according to GLIM criteria were not found. Also, the percentage of patients with complications was lower in participants of an ERAS program than in those who did not participate (38.4% vs. 61.6%, P = 0.361). Moreover, the percentage of patients who received nutritional support during hospitalization was lower among those with complications (46.7%) than among those without complications (53.3%) (*P* = 0.0001)."
- "The MUST score at hospital discharge in all 146 patients with complications during hospitalization was 0.9 (1.2), but it was significantly higher among those who received nutritional treatment (n = 105) as compared to those without nutritional support (n = 41) (1.1 [1.2] vs. 0.5 [0.9], *P* = 0.012)."

[Line #250-251] In lines 250–251, it is stated that "In patients with severe risk at discharge (MUST score ≥ 2), the percentage of patients with complications was 24.7% as compared to 9.2% in patients without complications (P < 0.0001)." However, this information cannot be found in Table 4. In the table, MUST scores at discharge are only categorized as 0 or ≥1 according to the presence of complications. In particular, it is unclear where the "9.2%" value comes from.

- We have added the correct information in Table 4.

[Line # 253] There were no analyses of complications in relation to the GLIM score in the main text

- Complications in relation to GLIM nutritional risk are added in Table 4, and in the text: "Differences in complication rates according to GLIM criteria were not found."

[Line #254~263] The results are described for 179 patients with available data among the 183 patients who had a MUST score ≥ 1 at the time of hospital admission. It would be preferable to present these results in a supplementary document.

- Yes, we have moved this information to Table S1 in the Supplementary Material.

[Line # 264-270] A key table presenting the results of the logistic regression analyses, which represent one of the most important findings of this study, is missing. These results should be included either in the main manuscript or provided as a supplementary table.

- Results of multivariable analysis are presented in a new Table 5.

[Line # 264] "Multivariate logistic regression" should be changed to "multivariable logistic regression." The term multivariate implies the inclusion of two or more dependent variables, whereas in this analysis a single dependent variable was modeled with multiple independent variables. These terms are often mistakenly used interchangeably, but multivariate logistic regression is incorrect in this context.

- We use the term "multivariable" instead of "multivariate".

[Table 1] The percentages within each category should sum to 100%, but Table 1 does not always reflect this. For example, the total of Men (62%) and Women (37.9%) is 99.9%. If there are other gender categories, such as "Other," they should be included.
Please check the sums and percentages for the following variables:

- *Gender*
- *Living conditions*
- *Working status*
- *Place of residence (inhabitants)*
- *Smoking habit*
- *Comorbidity*
- *Barthel index score*
- *MUST score*

- We have checked all percentages in Table 1 and the corresponding data in the text. In relation to comorbidity, sum to 100% is not accurate because of the multi-response characteristics of the variable (we have added "multi-response" and "other" category in Table 1). The sum of MUST scores was already 100%.

[Table 2] In Table 2, the percentages for "Primary tumor localization" sum to 98.2%. Should an "Other" category be added, or was there an error in the reported numbers?

- We have added "missing" data for the remaining 8 patients.

[Table 2] In Table 2, the percentages for "Surgical procedure" sum to 101.8%. If patients could have multiple procedures, this should be clearly indicated; otherwise, please verify whether the numbers are correct.

- Surgical procedure was a multi-response variable. This is now indicated in the Table.

[Table 1] Table 1 needs to be improved for better readability. Please see the example below.
[Table 2] Table 2 needs to be improved for better readability. Please see the example below.

- Thank you, both Tables are now presented as indicated by the Reviewer.

In summary,
Several inconsistencies are evident in the content.

- Inconsistencies in the sum of percentages corresponding to the study variables have been corrected.

The most important analytical results are not clearly or adequately presented.

- Results of logistic regression analysis are presented in a new Table 5.

The results do not appear to support the stated objectives.

- The characterization of perioperative complications and their relationship with nutritional risk has been adequately addressed throughout the Results section, particularly in point 3.4 and Tables 4 and 5.