Author’s response to reviews

Title: Obesity, Diabetes and the Risk of Colorectal Adenoma and Cancer

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RE: Response to Reviewers

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Reviewer reports:

Aldo Ferreira-Hermosillo, MD, MSc (Reviewer 1): In general terms the manuscript has improved and in its current form it better highlight the relevance of this study. I have only some comments:

Comment 1: In the methods section: It could be useful describing what the term "Positive Hx of drug" refers to. What type of drug?
Response 1: It refers to “opium”. It has been highlighted and mentioned in the (Methods section, line 25, page 6)
Comment 2: Table 1 is still quite long. I suggest eliminating the variable "education" and summarize the "medical history of any disease" (i.e. those variables with frequency lesser than 1%). I suggest adding in the footnote that presented results are reported as n (%).

Response 2: As requested, the variable "education" has been removed from the table and the "medical history of any disease" has been summarized. A footnote has been added.

Comment 3: The data content in Table 5 could be described in text form. This table is unnecessary.

Response 3: Table 5 has been removed from the manuscript and its data content has been added to the text (the Results section, line 20, page 9) as below:

“In figure 3, the hierarchical structure generated by DT method could be used to classify individuals based on risk factors identified as BMI (kg/m2) ≥25, age (11-85 yr) as well as diabetes, family history of colon cancer and drug abuse, which are binary variables to normal or adenoma positive groups.”

Comment 4: Figure 1 describes the location of the polyps and adenocarcinomas through the colon. However it lacks of comparison among them. Do location are statistically different? Additionally I suggest adding a description in the figure legends (not only the Figure's name)

Response 4: The authors have added stats in regard to the location of polyp or tumor as below (Results section, line 21, page 8). Besides, they have added a description for each of the figure legends as requested.

“Most patients (58.57%) had polyp or tumor in rectum and sigmoid (rectosigmoid) and only 41.42% of cases had polyp or tumor in the rest of colon which was not statistically significant (p value= 0.1615) (Figure 1).”

Comment 5: There is a mistake in the Figure 5: "cancer" appears twice

In the discussion section I suggest to avoid the term "cancerous patients". I suggest changing it to "patients with cancer".

Response 5: The "cancerous patients" has been changed to "patients with cancer" in the entire manuscript (the Discussion section, line 32, page 9) and cancer has been removed from figure 5 as a duplicate.
Sandra Ferreira, Ph.D. (Reviewer 2): The answers and alteration performed by the authors were satisfactory. However, some formatting errors need to be fixed. In the method section, some sentences present different size font:

Page 11, line 28 - 36: "neural network…connections"

Page 11, line 44: "support vector machine"

Page 11, line 54: "misclassification produced by the method"

Page 12, line 4: "statistical analysis"

Response: In the section method the different size font has been revised.