Reply: Preoperative anesthesia evaluations may affect the decision for bariatric surgery

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CORRESPONDENCE

Reply: Preoperative Anesthesia Evaluations May Affect the Decision for Bariatric Surgery

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Dear Editor,

We appreciate the letter to the editor from Toprak et al. [1] and their thoughtful feedback on our study, "The Role of Preoperative Abdominal Ultrasound in the Preparation of Patients Undergoing Primary Metabolic and Bariatric Surgery: A Machine Learning Algorithm on 4418 Patients' Records" [2]. We welcome this opportunity to clarify and expand on a few points raised by the authors.

Our study included a cohort of 4418 patients, of which 5.0% were classified as ASA 4 according to the American Society of Anesthesiologists (ASA) physical status classification. The primary objective of our research was to evaluate the outcomes of routine preoperative abdominal ultrasound (US) and to investigate how alternative radiological techniques could guide further diagnostic steps in cases requiring additional evaluation. We examined how these findings impacted decisions to proceed with surgery as planned, implement surgical modifications, or postpone or cancel the procedure.

We acknowledge the concern raised by Toprak et al. regarding the inclusion of ASA 4 patients, who represent individuals with severe systemic disease that constantly threatens life. These patients indeed require thorough preoperative assessment and multidisciplinary team (MDT) evaluation prior to surgery. However, excluding ASA 4 patients from our analysis would not have been appropriate, as this would have led to a skewed representation of the surgical decision-making process. Patients classified as ASA 4 may face delays or cancellations based on further evaluations, and this could affect the perceived role of the US in guiding the course of surgery.

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Our study was not designed to evaluate whether patients were "fit for surgery" per se, but rather to assess whether preoperative US findings influenced surgical decision-making. Excluding this subgroup would have resulted in an incomplete picture of how the US impacted overall decision-making.

It is also important to consider recent updates to the ASA Physical Status Classification System, effective on December 13, 2020 [3], which significantly alter the classification of patients with obesity. According to these new guidelines, patients with a BMI ≥ 40 are automatically classified as ASA 3, even without detailed medical assessments. This change reflects the recognition of obesity as a significant risk factor, often associated with associated medical problems such as hypertension, type 2 diabetes, and obstructive sleep apnea. To qualify for ASA 4, patients must present with severe systemic diseases, including conditions such as recent myocardial infarction (MI), cerebrovascular accidents (CVA), transient ischemic attacks (TIA), coronary artery disease (CAD) with stents, ongoing cardiac ischemia, or severe heart valve dysfunction, among others.

A study by Jatana et al. examined the differences between high-risk ASA 4 and normal-risk (ASA 2–3) classifications in 138,612 patients, finding that preoperative functional status contributes significantly more to the likelihood of severe complications but not to mortality, anastomotic leaks, or sepsis. The study findings challenge the utility of using ASA classification alone for perioperative risk stratification, raising whether a more straightforward and practical approach based on functional status should be considered. Therefore, while a patient with an ASA 4 classification carries higher risks, it is not necessarily a reason to avoid surgery [4]. This highlights the complexity of managing these patients and reinforces the importance of thorough preoperative assessments.

Regarding Toprak et al.'s second point, we believe there may have been some misinterpretation. The effect of US on the decision-making process for primary metabolic bariatric

surgery was indeed part of our analysis. We specifically included patients undergoing primary metabolic bariatric surgery, excluding those undergoing revisional surgery, as our focus was on primary surgical decision-making. However, the potential impact of preoperative US in revisional surgeries is certainly an area that merits further exploration in future studies.

Finally, the inability of machine learning models in our study to provide clear predictive outcomes based on ASA classification was primarily due to the nature of the ASA scoring system, which, as an ordinal scale, does not capture the underlying reasons why a patient may be assigned a high ASA score. Future studies focusing more intensely on MDT approaches may provide additional insights into the complex decision-making processes across all ASA classes.

We thank Toprak et al. for their valuable comments and hope our clarifications address their concerns.

Sincerely, on behalf of all the authors, M.Hany and B.Torensma

Author Contribution Author Contribution MH and BT wrote the main letter to the editor. All authors reviewed the letter to the editor.

Data Availability No datasets were generated or analysed during the current study.

Declarations

Competing Interests The authors declare no competing interests.

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