



## Reply to Letter to the Editor: Measuring and Defining Response and Non-response After Bariatric Surgery

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We appreciate author et al. for their interest in our review and we would like to thank them for the Letter to the Editor. In their comment, they suggest that terminologies regarding primary responder (weight loss success), primary non-responder (weight loss failure), and secondary non-responder (weight regain) should be abandoned and that instead we should focus on reporting only means/medians of weight loss outcomes with standard deviations (SD) and interquartile ranges (IQR).

The aim of our review was to analyze the currently used definitions of primary responders and primary and secondary non-responders in the recent literature, hereby determining if the situation Mann et al. described has improved [1, 2]. As we concluded, the practice has not changed; we are still comparing apples with oranges. Lauti et al. showed striking differences in the outcomes of weight loss of a cohort when applying different definitions, which might lead to manipulation of the results and also make it impossible to compare literature [3].

We respect the opinion of author et al. and do agree that everyone who publishes articles regarding weight loss after bariatric surgery should provide weight loss outcome(s) with SD and possible also IQR. SD and IQR will certainly give

more information compared to only reporting a mean or median.

However, we believe that correct use of the terms primary and secondary non-responders allows for better comparison between different cohorts and is less stigmatizing and easier to communicate to audiences other than medical professionals, specifically patients. As means/medians with SD/IQR can differ extremely between cohorts, results of individual patients can be totally different within cohorts. We believe that, especially for secondary non-responder, it is more relevant to know which percentage of the patients has a clinically relevant weight regain than to know the mean weight regain of a cohort. When reporting this percentage, we might finally know what the percentage of patients is with clinically relevant weight regain after bariatric surgery.

In addition, we believe that these three outcomes and thus certain thresholds are helpful in the formation of guidelines for treatment, for example, for additional non-surgical or surgical intervention for secondary non-responders. We do agree with author et al. that the indication for additional treatment should not only be based on the weight regain itself, as it depends on more factors. However, eligibility for primary bariatric surgery, as described by the International Federation for the Surgery of Obesity and metabolic disorders, is also based on at least two criteria that incorporate a certain weight threshold. Therefore, we believe that it is preferable to incorporate a weight loss or weight gain threshold in the assessment of eligibility for additional treatment in both primary and secondary non-responders.

We strongly believe that international consensus on how we will report weight loss outcomes is necessary to be able to compare literature regarding bariatric surgery and that definitions regarding the three outcomes should be used and not abandoned. Currently, our group is working on an international expert consensus regarding definitions for primary responder and primary and secondary non-responder. Results of this consensus project are to be expected in the spring of 2019.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethics** This article does not contain any studies with human participants or animals performed by any of the authors.

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