

Peer Review File

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Reviewer A

I would like to congratulate the authors with their manuscript entitled “The SUPER reporting guideline suggested for reporting of surgical technique: explanation and elaboration”. The manuscript is well-written and provides an excellent and complete overview of the implementation of the novel SUPER reporting guidelines and its implications. In my opinion, the widespread use of such a guideline will tremendously improve quality of published reports on surgical techniques and allows the readership to adequately judge it on its merits.

Reply: We thank the reviewer for the positive feedback and efforts in reviewing our work.

Comment 1: Consider to move the Examples to a Supplementary materials section to improve readability of this rather long and extensive manuscript. Are there author guidelines applicable, dictating maximal word count?

Reply 1: Many thanks to the reviewer. This is really a good suggestion. We have been struggling in keeping the balance between example comprehensiveness and article readability. This could address this major issue smartly. We totally agree the reviewer and have moved all the examples to Supplementary file as advised (see Supplement 2)

Comment 2: Please double check all references. For example, reference nr. 14 is incomplete and displays duplicate authors. Reference 29: G-I-N conference?

Reply 2: Thanks for the kind check. We have reformatted our reference following the Gland Surgery formatting template (<https://gs.amegroups.com/pages/view/guidelines-for-authors#content-3-6>; <https://cdn.amegroups.cn/static/public/reference-style.ens>) and have rechecked all references as advised (see Pages 48-52 and Supplement 2).

Comment 3: What was the rationale to submit this manuscript which is of general importance to the entire surgical community to a rather specific, in-depth journal such as Gland Surgery?

Reply 3: Thank you. We planned to submit the article to another sister journal of *Gland*

Surgery that faces the entire surgical community (*AME Surgical Journal*: <https://asj.amegroups.com/>). However, the editorial office kindly transfers our manuscript to *Gland Surgery*, probably considering different indexing of the two journals. We actually agree with the reviewer that *AME Surgical Journal* would be more suitable regarding the content scope. We would leave the decision to the Editorial Office.

Reviewer B

I have read the manuscript about SUPER (surgical technique reporting checklist and standards) guideline with great interest. First of all, I want to congratulate all of you for the work and collaboration you have put into this manuscript and guideline.

I must admit it has taken me quite some time to get through the manuscript due to the sheer size of it. The manuscript is language wise well-written and I have not gone into details related to the language nor sentences or paragraphs, time does not allow for that and it is not needed.

I do have some thoughts and concerns related to the manuscript. I have looked at the paper in light of the reader, the surgeon and the journals.

Reply: We thank the reviewer so much for the tremendous effort put in reading and reviewing our work. We appreciate the valuable comments the reviewer provides from perspectives of readers, surgeons and journals.

Comment 1: I have read the manuscript and it was rather difficult for me to get through the paper even though I have extensive experience reading and writing scientific papers. When I read a paper I always ask myself, why should I read this paper, why is it important? I did have some difficulty in answering these two questions when reading this very comprehensive manuscript.

Reply 1: Sorry for the unclear message. We have added a rationale section in the Introduction to show why readers should read this paper and why it is important (see Page 5, lines 80-84).

Comment 2: I do see that it would be nice if the reporting of surgical techniques would be more homogeneous, however, if I as a reader should read this without being a reviewer, I doubt that I would ever get through the manuscript, it would not be

important enough for me to read and I would read something else, the subject and size is not important enough for me in my busy daily schedule as a surgeon/scientist.

Reply 2: Yes, we are with the reviewer regarding how busy surgeons and scientists are. We have been struggling in keeping the balance between example comprehensiveness and article readability. We have to admit that the manuscript is lengthy. We now have moved all the examples to Supplementary as suggested from your comment 5 and by another reviewer. We think this could significantly address this issue and save much time of surgeons. Now the manuscript is much shorter. If surgeons want to see what does each item mean, just read the main text. If surgeons want to directly read the examples, just go to the Supplementary. We have also used boxes to present as roadmap in finding what readers need. Please kindly see if this would help address your concern. And, we are open for more constructive suggestions on the readability and time-saving for readers.

Comment 3: As a surgeon, a busy surgeon as we all are, doing many different surgical procedures, I doubt that I would have the time for reading this manuscript/paper. As you write, surgical procedures can be divided into three categories overall, in my interpretation, 1) the novel surgical technique, 2) the refined surgical technique and 3) reporting of results/science using a known surgical technique. These three types of surgical procedures also reflect different types of surgeons, 1) The innovative and creative, 2) The somewhat creative surgeon and 3) the productive surgeon with attention to detail. Now, why should these surgeons want to report their surgical techniques using SUPER, what would motivate them?

1) Novel surgical technique: The Innovative and creative surgeon is distinguished by having ideas all the time and maybe a bit impulsive. This surgeon does not have the patience to read the SUPER guideline and after describing his technique in his own way, start over and put the technique/text into the boxes that fit SUPER. This type of surgeon is known for thinking out of the box and do not like to put things/text in boxes.

2) Refined surgical technique: The somewhat innovative surgeon may be convinced to look at SUPER for reporting the refined known surgical technique. However, the challenge is that the technique presented is very close to a very-well described and known technique and in a busy scheduled I think the surgeon would tend to refer to earlier description of the known techniques and just describe the changes made, the

novel refinements. Again, I doubt that SUPER will be used on a large scale.

3) The Reporting Results/Science: The productive surgeon with attention to detail may want to use SUPER. However, the question is what is the need of describing a very well-known surgical technique that everyone knows and is well described in literature? I think many surgeons, again, will just refer to published literature.

Reply 3: Thank you for your very detailed discussion. Yes, we fully agree with you. In fact, it is not just surgeons, but all kinds of authors, when we conduct any type of research, it is a significant workload to complete many details according to the prescribed report requirements. We believe that this is not just a surgeon's style, although surgeons are more unconventional. This is also why we found in our previous protocol (PMID 34527570) and scoping review (PMID: 36574532) (as well as many systematic reviews conducted by peers, such as PMID: 17060758, PMID: 27511619, PMID: 32511126) that the reporting in the field of surgical technique is poor, greatly limiting the reproducibility of surgical technique. The following is our understanding for discussion with you. 1) 2) For completely innovative or modified surgical techniques, if surgeons report better according to SUPER, these innovations and improvements can be spread more comprehensively and accurately around the world, which is undoubtedly beneficial for authors/surgeons themselves, as well as for peers and patients. Of course, the cost is to pay more effort when writing, and we believe that surgeons' efforts are fully worthwhile. 3) If it is a routine surgery, as an article, this type of surgery often appears in other types of literature, such as comparing the effectiveness of this surgical technique with some other interventions. This type of article, which provides more detailed reports on routine surgery, is an important reference for us to objectively evaluate the bias of such research results in the future. For example, if an RCT is conducted in multiple centres, and multiple centres are not unified when performing this routine surgery, it will inevitably lead to significant heterogeneity in the results and have a significant impact on evaluating the final treatment effect of RCT. Moreover, for this routine surgery, our SUPER item also states that if there is already a detailed description in the literature, the author does not need to describe it in detail, just remember to quote (see SUPER item 2 in supplement 1 and “In scenario 3, the authors could briefly describe the surgical technique involved, but need to cite the literature that has a detailed description of the surgical technique involved” on lines 136-137).

Comment 4: From a journal's perspective, it is also a challenge how SUPER should be used. If an author has written a paper, adding SUPER to the paper would increase the size of the manuscript quite extensively. Almost all journals have limitations to the number of words allowed. So, it is difficult to see how papers can entail SUPER and all the other contents needed within the current limitations. Another solution would be if the author/surgeon published two papers, one paper with the usual contents regarding, 1) a novel surgical technique, 2) Refined surgical technique and 3) Reporting result, and then a second paper describing SUPER. Similar/analogously to publishing generic trials methodology prior to or early in the study phase of randomized trials.

Reply 4: Than you. Yes, we agree. That is why we have also stated in the published SUPER article (<https://hbsn.amegroups.com/article/view/107955/pdf>) that for inappropriate situations, authors can choose to process the required content in the Supplement instead of reporting them in Methods in detail.

Comment 5: I have some thought about the manuscript itself. I think it is too extensive to read in the current form. I would recommend, that the examples be moved out of the manuscript and added as supplementary digital contents, in this way the reader would get a better reading flow through the manuscript and can then look at the examples, when needed. Another suggestion would be to publish 4 papers, the main paper describing SUPER without examples, and then invite authors/author groups to publish three papers using SUPER as examples, 1) The Innovative, 2) The Refined and 3) The Reporting (As described above) and refer from the main paper to the three added papers and published in the same issue of course.

Reply 5: Many thanks to the reviewer. This is really a good suggestion. We have moved all the examples to Supplementary file as advised (see Supplement 2). The second suggestion on the four articles (one to explain and three examples) is also excellent. In fact, before we started preparing this explanation and elaboration document, we have also thought this way. However, we failed to find any existing articles (or any in our hand) that can perfectly present as examples when drafting. Therefore, we decided to publish the explain paper first, and then collect the rest three on our Website (Please see: https://www.thesuper.org/endorse#endorse_super). On this SUPER website, we will gather rich examples from the perspectives of the three innovative categories.

When revising the manuscript, we found one article that has followed SUPER checklist (See changes on page 6, line 102 <https://jss.amegroups.com/article/view/6016/pdf>) and planned to put it on the website later on.

Comment 6: I would also recommend that the explanations of the individual items be reduced or refined. As a non-thoracic surgeon, I would also recommend that the examples be changed for more general examples, which means less specific descriptions, which is easier for other surgeons to relate to, this would make the paper/manuscript more accessible/appealing for all surgeons.

Reply 6: Thank you for your suggestion. We have tried to reduce the explanation of most items. However, we failed to identify any more general examples that can meet the requirements of the SUPER item. The current examples come from multiple disciplines, such as general surgery, orthopaedical surgery, cardiac surgery, thoracic surgery, gastrointestinal surgery, neurological surgery, oncogenic surgery, emergency surgery etc. We would be grateful if the reviewer could help recommend more suitable general examples.

Comment 7: The advantage of many authors adding knowledge to a paper is the synergy, however, the disadvantage is the risk of too many details being included in the manuscript. It makes it difficult to remove parts of the text and the text ends up being too long. I think the manuscript can be reduced significantly, which would be beneficial to the recipient/reader. I am concerned that the size of the manuscript will “scare off” many readers/surgeons.

Reply 7: Thank you for suggesting shorten the article. We have tried and reduced the main text from 26,530 words to 9,419 words now, under the effort not to lose any essential information and moving examples to Supplement 2. Please kindly re-check if it is still lengthy to you.

Comment 8: I am concerned if SUPER will be used. The problem is that a well narrated video explains any surgical technique better than any written words. Even if journals demands that SUPER be used, surgeon will just publish their techniques on social media elsewhere, there is a challenge to be met.

Reply 8: Your concern is entirely justified. Indeed, we fully agree that a well narrated

video can better explain any surgical technique than any written text. Therefore, in the SUPER, we have made separate requirements for surgical visualization (item 15, video or image visualization). Considering that surgical videos will be transmitted separately, we also require video narratives and subtitle interpretation, as well as stating the informed consent, to facilitate the separate transmission of the video. The surgeons love to share their surgical technique on social media elsewhere. However, SUPER only focuses on peer-reviewed articles related to surgery, including the videos in these articles. For surgical videos on other social media, perhaps we can only expand the impact of SUPER to expect surgeons to use SUPER's item 15 to improve their videos, but this is already outside our scope. We added an appeal in the explanation of item 15.