

Peer Review File

Article information: <https://dx.doi.org/10.21037/dmr-22-73>

Reviewer A

The manuscript reviews current developments regarding minimal invasive and especially robotic pancreatic surgery. The manuscript is well written and state-of-the-art. Congratulations on an interesting piece of work.

Reply: Thank you very much.

Reviewer B

This is a comprehensive review about the history of MIPS.
some suggestions for improvements

1) summary tables of current studies on the various permutations of lap vs open, robot vs open PD and DP as the studies selected for discussion in the review are not completely representative of the body of literature available

Reply 1: The tables are meant to show randomized controlled trials, not all important studies.

2) some typographical errors references DP where it should be PD - eg line 211, 213.
please check for further errors carefully

Reply 2: Thank you for noticing. The errors have been corrected, and no further typos identified on review of the manuscript.

Reviewer C

The authors, an experienced group of pioneers in minimally invasive pancreatic surgery, present an informative review which I enjoyed reading very much. It is well illustrated how new techniques are usually implemented (from case reports, case series, comparative retrospective studies and finally RCTs) in surgery.

Just recently, a IPD meta-analysis was published pooling results of the already cited RCTs. I suggest the authors consider adding this high-level piece of evidence to clarify the, at least for some, questionable use of laparoscopy for pancreatoduodenectomies (PMID: 35641405).

Reply 1: Thank you for the feedback. The mentioned IPD meta-analysis was considered for inclusion in the text. However, it analyzes data from three RCTs on open vs LPD, and as such does not include data from the latest (and largest) RCT published in 2021. The meta-analysis analyzes 224 patients, and the fourth RCT not included analyzes 594 patients. As such the authors felt that the meta-analysis is somewhat outdated and, since it excludes a significant number of patients in the analysis, would not be the most accurate to present as a representation of the most current evidence. Nonetheless, the conclusions reached by the meta-analysis regarding benefits of the MIS approach are generally in-line with other investigations, including those in the latest RCT.

Reviewer D

The manuscript is a well-written overview of the development of minimally invasive pancreatic surgery (MIPS), initiated by a historical overview, which offers a very wide perspective. The “downside” of this strategy is lack of depth when it comes to scientific evidence. An illustrating example is the interpretation of endpoint in the DIPLOMA-study (ref 24), comparing outcome of minimally invasive and open distal pancreatectomy in a propensity-score matched study. Rate of R0 resection and lymph node retrieval are referred as valid endpoint without any question. But Verbeke et al have documented that R0 lack a pathological definition in specimens from the distal pancreas, and also lymph node retrieval depend heavily on how specimens are handled by pathologists. A brief discussion of the limitations of the author’s interpretations would improve the presentation.

The list of references is comprehensive, and most important patient series are well summarized and the tables gives appropriate focus on available RCTs. Only minor modifications should be incorporated, making the conclusions less bombastic.

Reply 1: The authors appreciate the feedback. We agree that there are many debatable points in discussion of the DIPLOMA study. However, arguments can be made for an against the points mentioned here, and there are similar points of debate for essentially all studies presented. Just as all details of the study outcomes are not presented, those points of debate are also purposefully not included, as the purpose of the paper is to deliberately provide a wider scope (even if at the expense of forfeiting a degree of depth). The introduction is expanded to emphasize the limitations of the paper to delve into all nuances of the presented papers.