




# Research priorities in pancreatic surgery

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Though magnificent technical and perioperative improvements have been made in the past decade, research in the field of pancreatic surgery continuously offers multiple opportunities for further approaches to reduce mortality and minimize the risk of potentially life-threatening complications. This is evident in the increasing quantity and improving quality of published randomized clinical trials (RCTs) on this topic<sup>1</sup>. Over the past decade, there has been an almost three-fold rise in the number of new publications per year dedicated to this topic, leading to a massive increase in available information and new data. As there are still evidence gaps that need to be addressed in pancreatic surgery research, the International Study Group of Pancreatic Surgery (ISGPS) developed the Evidence Map of Pancreatic Surgery ([www.EVIGlance.com](http://www.EVIGlance.com)) to provide a high-quality and readily accessible overview of the current evidence with regard to all aspects of pancreatic surgery and moreover to uncover the existing research gaps<sup>2</sup>.

In times of resource scarcity, research activities should be prioritized according to their clinical and political relevance. To conduct more relevant trials, it is mandatory to identify and prioritize the most important research topics and research gaps. The aim of the present survey was to list existing deficiencies in evidence and furthermore set priorities in the field of pancreatic surgery for future research projects.

Based on the Evidence Map of Pancreatic Surgery, a survey was conducted among international pancreatic societies to assess priorities for all topics in the field of pancreatic surgery and to also rank the existing evidence gaps. Pancreatic surgeons were asked to rate their 'top 5' research topics from all 76 topics from the Evidence Map of Pancreatic Surgery. Additionally, they evaluated the importance of having an RCT for the existing evidence gaps.

From January to July 2022, 149 pancreatic surgeons from 30 countries contributed to this survey. The majority were European, working in a university hospital, and had more than 12 years of surgical expertise ([Table S1](#)).

Of 76 topics covering the field of pancreatic surgery, the participants selected their top five research interests, which

were compiled into a top ten list ([Table 1](#)). The topic ranked first was 'vascular resection in pancreatic surgery', with 27.3% of the votes. The topic ranked second was 'radical antegrade modular pancreatosplenectomy (RAMPS) versus standard distal pancreatectomy', with 21.0% of the votes. Both 'time point of surgery for chronic pancreatitis' and 'coeliac axis resection in distal pancreatectomy' were ranked third, with each of these topics receiving 18.9% of the votes. See [Table S2](#) for the full list.

The topics 'resection versus non-surgical management of neuroendocrine pancreatic tumours' and 'total versus partial pancreatoduodenectomy' were ranked first and second with regard to evidence gaps, closely followed by 'frozen section analysis during pancreatic surgery' ([Table S3](#)).

The existing evidence gaps received high research prioritization among pancreatic surgeons, evident in the top ten list, and several much-needed trials are already underway on various topics. The TETRIS trial<sup>3</sup> aims to compare total versus partial pancreatoduodenectomy in high-risk patients, addressing the evidence gap ranked second. Three trials are currently recruiting patients, including the ISOP-DP trial<sup>4</sup>, all investigating the potential oncological benefits of the RAMPS approach.

**Table 1 Top ten research priorities**

Topic	Votes
1. Vascular resection in pancreatic surgery	39 (27.3)
2. Radical antegrade modular pancreatosplenectomy versus standard distal pancreatectomy	30 (21.0)
3. Time point of surgery for chronic pancreatitis	27 (18.9)
4. Coeliac axis resection in distal pancreatectomy	27 (18.9)
5. Resection versus non-surgical management of pancreatic neuroendocrine tumours	26 (18.2)
6. Spleen management in distal pancreatectomy	26 (18.2)
7. Extended versus standard lymphadenectomy in partial pancreatoduodenectomy	24 (16.8)
8. Multivisceral resection in pancreatic surgery	22 (15.4)
9. Treatment of complications after pancreatic surgery	21 (14.7)
10. Minimally invasive versus open distal pancreatectomy	21 (14.7)

Values are n (%).

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The majority of the research priorities identified in this survey pertain to the radicality of pancreatic surgery, including vascular resection and the performance of RAMPS, both of which aim to enhance R0 resection rates and thus improve oncological outcomes.

This prioritization could lead researchers to carry out more targeted and efficient research overall.

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## Disclosure

After conduct of this study, P.P. founded the company EVIglance Inc. ([www.EVIglance.com](http://www.EVIglance.com)), providing software services for researchers to produce their own evidence maps. The authors declare no other conflict of interest.

## Supplementary material

[Supplementary material](#) is available at *BJS Open* online.

## Data availability

Data that support the conclusion of the manuscript are included in the [Supplementary material](#). Further data will be shared with other researchers on reasonable request.

## Author contributions

Magdalena Holze (Conceptualization, Formal analysis, Methodology, Project administration, Writing—original draft), Anna Zlatopolskaia (Data curation, Formal analysis), Frank

Pianka (Writing—review & editing), Thomas Pausch (Conceptualization, Data curation, Investigation, Project administration, Writing—review & editing), Markus K. Diener (Supervision, Writing—review & editing), Pia Antony (Writing—review & editing), Martin Loos (Supervision, Writing—review & editing), Christoph W. Michalski (Project administration, Supervision, Validation, Writing—review & editing), Rosa Klotz (Conceptualization, Project administration, Writing—original draft, Writing—review & editing), and Pascal Probst (Conceptualization, Methodology, Project administration, Supervision, Writing—review & editing)

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