editorial

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# Advances in the surgical management of pancreatic disease

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Dear valued reader,

Management of pancreatic diseases has substantially evolved over the past decades, not only concerning surgical, radiological, interventional and radiation-oncology techniques, but also in terms of understanding the underlying pathophysiology and molecular biology to guide systemic treatment options. Surgical procedures have become standardized in many centres worldwide and ongoing centralisation has led to markedly decreased postoperative mortality accompanied by improved complication management. While surgery still plays a major role in pancreatic malignancy—being the only potentially curative treatment—multimodal management and deeper understanding of the disease might change old dogmatic approaches: Neoadjuvant chemotherapy for resectable tumours? Resection of oligometastatic disease? To name just two potential scenarios.

This special issue of *European Surgery* illuminates the complexity, challenges and fascinations in the field of pancreatic disease management involving state-of-the-art pancreatic surgery and interdisciplinary collaboration.

The current status of pancreatic procedures in Austrian centres is highlighted by our own group from the Medical University of Innsbruck [1]. We report resection numbers and postoperative outcomes including the hot topic of "failure to rescue" data and compare these key indicators to nationwide, official up-to-date numbers acquired from Statistik Austria. Pancreatic surgery is performed with low mortality within the range of internationally accepted rates in many Austrian centres, which can only be achieved by substantial effort with appropriate multidisciplinary management of associated complications. Intriguingly, nationwide analysis provides a very inhomogeneous picture between a total of >60 departments performing pancreatic surgery.

One of the effects of centralisation is standardisation of technical procedures. *Wundsam et al.* from a large pancreatic centre in Linz provide an in-depth picture of technical aspects concerning pancreatic anastomosis—the Achilles heel of pancreatic surgery (Fig. 1; [2]). The renowned group from the Oslo Intervention Centre, innovators in many fields of surgery, reviews the current state of minimally invasive pancreatic surgery (MIPS, *Sahakyan et al.*; [3]). There is a lot to be expected in the near future—robotic versus laparoscopic et cetera.

Another piece in the puzzle of interdisciplinary pancreatic management is interventional radiology—playing a major role for the safety of our patients. The experienced Innsbruck group provides a comprehensive overview, highlighting also the necessity of around the clock availability of these services to resolve many of our surgical complications (*Putzer et al.*; [4]). The underestimated but important role of surgeons in treatment of chronic pancreatitis is illuminated by *Frola et al.* from the Royal London Hospital, presenting the current literature and their clinical algorithm on how to deal with these complex patients [5]. Furthermore, the broad and emerging field of cystic pancreatic tumours including precursor lesions is reviewed by the Vienna group (*Sahora and Schindl*; [6]). They clearly show, that early detection of premalignant lesions is crucial to further improve oncological outcomes in the entire cohort of pancreatic

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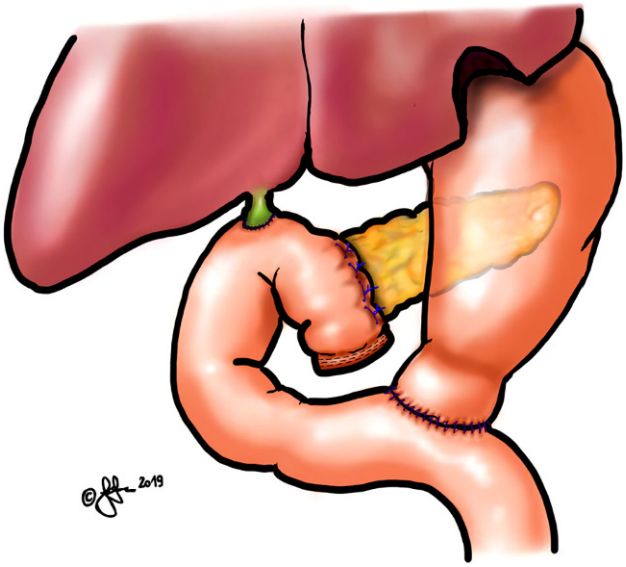

**Fig. 1** Progress in surgical oncology. Symbolic picture of a pylorus-preserving partial pancreatoduodenectomy after the reconstruction phase. A synchronous non-anatomical liver resection in segment 3 has been performed—future directions of multimodal treatment strategies. (The picture was thankfully provided by Dr. Stefan Scheidl, Consultant Visceral and Transplant surgeon at the Department of Visceral, Transplantation and Thoracic Surgery, Medical University of Innsbruck)

cancer patients, and the paper provides a practical algorithm on how to treat these conditions.

To draw a bow from early genetic alterations to pancreatic malignancy with its broad molecular heterogeneity, *Søreide et al.* collaborated with us to review the fascinating field of new personalized markers and future treatment options based on molecular profiling [7]. These new insights will hopefully further extend treatment options for pancreatic cancer in the near future.

Multimodal therapy is key and big steps forward have been made recently. Overall survival with adjuvant treatment after R0 resection with modified triple chemotherapy can now surpass 50 months. Systemic oncology and local radiotherapy are outlined by *Djanani et al.* and *Jäger et al.* from Innsbruck, reviewing options especially for patients with locally advanced tumours, who might benefit from neoadjuvant treatment and subsequent resection—raising a spark of hope for up to 30% of patients diagnosed at this stage of disease [8, 9]. The paper from *Gassner et al.* fits exactly into this hot topic—response evaluation after neoadjuvant therapy [10]; crucial for us surgeons to avoid unnecessary laparotomies. Finally, in an effort to provide an overview of the most recent successes we wanted to take a look at current options and outcomes of extended pancreatic resections including oligometastatic disease on the backbone of neoadjuvant and adjuvant systemic treatment. *Niesen et al.* from the renowned Heidelberg group bundled forced with our group to report extensively on available data and future trends in resection of metastatic pancreatic cancer [11].

A summary and time trend of evidence-based treatment strategies is finally provided by *John Neoptolemos*, the founder of the ESPAC group [12].

It was quite some work setting up this special edition on surgical pancreatic diseases, we would therefore like to thank all the contributors and reviewers for their great efforts! We would also like to thank Springer for their great help and supportive correspondence. Last but not least, we wish our valued readers a good and informative time with this special edition of *European Surgery*.

Sincerely

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**Conflict of interest** S. Stättner and F. Primavesi declare that they have no competing interests.

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