About the Editors

Helmut Friess

Helmut Friess is Professor of Surgery and Chairman of the Department of Surgery at the Technische Universität München, Munich, Germany. From 2001 to 2007 he held the post of Vice Chairman of the Department of General Surgery at the University of Heidelberg, Germany, and from 2003 to 2007, he was also Professor of Pancreatic Surgery and Molecular Pancreatic Research at this institution. He has authored more than 800 original peer-reviewed publications, is Co-Editor of *Langenbeck's Archives of Surgery* since 2007, Assistant Editor of the *Journal of Digestive Surgery* and serving on the editorial boards of the *Journal of the Pancreas*, *Molecular Cancer*, *British Journal of Surgery* and *Pancreatology*. He is a council member at large for the International Hepato-Pancreato-Biliary Association (IHPBA) and a member of the General Assembly, United European Gastroenterology Federation (UEGF) since 2003. He is Secretary of European Digestive Surgery (EDS) and the European Pancreatic Club (EPC).

Norbert Hüser

Norbert Hüser is a Consultant Surgeon with special clinical interest and scientific emphasis in hepato-pancreato-biliary surgery, transplantation and microsurgery. Many years of surgical experience and scientific work in the Munich Hepato-Pancreato-Biliary Group of the Pancreatic Center at the Klinikum rechts der Isar der Technischen Universität München, Munich, Germany, evidence his experience in this field.

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Foreword

Advances in pancreatic cancer treatment

Helmut Friess & Norbert Hüsér

Pancreatic cancer is a major health issue, with an estimated 43,140 new cases and 36,800 deaths in the USA, making it the tenth most common cancer diagnosis and the fourth most common cause of cancer-related deaths. This disproportion already hints at the poor prognosis of this disease, with a 5-year survival <5% for all stages. Approximately 80% of the patients are already unresectable at time of diagnosis, and of those who undergo curative resection, many will relapse locoregionally and/or with distant metastases. These facts make clear that treatment of this disease requires a multidisciplinary approach to improve its prognosis.

The focus of this book is on diagnostics and therapy for patients with pancreatic ductal adenocarcinoma (PDAC), having a close look on what is evidence-based at the moment and the numerous consensus guidelines, as well as on promising future diagnostic modalities and treatment strategies.

Today, the tumor biology and pathophysiology of PDAC is rather well understood; however, insights unfortunately could not be transformed into substantial progress in therapy. Chapter 1 sums up the mechanisms involved in tumor development, the associated microenvironmental changes and their consequences for the patient with pancreatic cancer. State-of-the-art methods for preoperative staging and their accuracy in the preoperative identification of resectable disease are discussed in Chapter 2. One big issue in oncology is the individualization of tumor therapy, which also holds true

for pancreatic cancer. This chapter therefore deals with the stratification of PDAC patients for specific therapies using molecular diagnostics.

The mainstay of potentially curative treatment in pancreatic cancer is surgical resection. Regrettably, only a small portion of patients still qualify for curative resection at diagnosis. In Chapter 3, state-of-the-art procedures of resectable PDAC are discussed. It outlines the key points fundamental for a differentiated surgical approach to this disease in curative, as well as palliative intent.

With increasing evidence for its effectiveness from Phase III studies, multimodal tumor therapy has advanced to the standard of care for many gastrointestinal cancers. While adjuvant chemotherapy can be considered as standard for PDAC, the role of other adjuvant modalities and neoadjuvant strategies is less clear. Chapter 4 discusses neoadjuvant and adjuvant treatment strategies against the background of current trial data.

Since no universal guideline exists for diagnosis and management of pancreatic cancer, Chapter 5 tries to develop a consensus from the plethora of guidelines from different national and international societies and organizations, such as the National Comprehensive Cancer Network, the Pancreatic Section of the British Society of Gastroenterology, the Pancreatic Society of Great Britain and Ireland, the Royal College of Pathologists, the Special Interest Group for Gastro-Intestinal Radiology, the Japan Pancreas Society and the European Society of Medical Oncology.

Last but not least, Chapter 6 introduces ongoing clinical trials on therapeutic strategies for pancreatic cancer and discusses combined regimens using chemotherapy agents, monoclonal antibodies, small-molecule inhibitors, cancer stroma-targeting drugs, as well as other methods. It also gives an outlook on future treatment strategies, as knowledge about this disease is continually evolving.

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