

The incidence of colorectal cancer (CRC) is increasing steadily worldwide. Despite major developments in the diagnosis and treatment of CRC, more efforts are needed for substantial improvements in the screening of asymptomatic individuals, early diagnosis, and refinement in the multimodality treatment and the multidisciplinary approach of these patients especially when advanced, recurrent or metastatic disease is faced.

This book on Colorectal Surgery is a collection of articles from AME journals. It aims to address the above-mentioned topics by providing contemporary, concise and integrated views on the diagnosis and screening, surveillance, and therapeutic approaches to CRC communicated by an international cohort of eminent authors.

Early chapters address the possible relationship between gut microbiota and colorectal carcinogenesis and the potential therapeutic implications. Novel stool and blood based tests as possible first-line effective tools for the screening of asymptomatic individuals are presented. The optimal intervals and duration of surveillance colonoscopies after detection and removal of adenomas are outlined.

Surgical resection is the cornerstone of CRC treatment offering the best chance for cure in these patients. In recent years, the development of laparoscopic and robotic surgery, the advent of different minimally invasive transanal approaches and innovative combination of techniques contributed to better quality of life and patient satisfaction, improved functional results and comparable to conventional techniques oncological outcomes when performed by an experienced operative team in properly selected patients. These issues are presented and highlighted in the third section of this book.

The following section focus on the management of colorectal liver metastases (CRLM). Development of liver metastases is a crucial event in CRC progression and a major determinant of patient survival. Approximately half of CRC patients ultimately develop liver metastases with nearly 25% presenting as synchronous metastases (at presentation or within 6 months after primary tumor resection) and the remaining 25% as metachronous metastases. Modern chemotherapeutic regimens are highly effective and improve the survival of patients with CRLM but are generally not curative. Surgical resection of CRLM is the only treatment modality offering the best chance of cure and enabling long-term survival with a five-year survival rate exceeding 50% and almost 20% of patients surviving more than ten years. Better knowledge of the molecular pathways and biological behavior of CRLM, the availability of targeted agents and the use of multi-agent therapies, the combination of loco-regional and ablative treatments, and the multidisciplinary approach improved profoundly the survival of patients with CRLM. The treatment strategy has evolved and the indications for resection of CRLM have expanded considerably over the last two decades. Currently, the focus has shifted to the future liver remnant (what remains after resection) rather than to the metastatic burden (number and size of metastases) thus offering the opportunity of CRLM resection in patients who traditionally would not have been candidates for resection. More recently, the laparoscopic resection of CRLM has been introduced and rapidly overcome factors such as the number, the size, the distribution and the accessibility of the lesions and progressed from minor to major hepatectomies. This is a highly demanding technique but experienced teams have shown its feasibility, safety and oncological efficiency in CRLM resection.

The final sections focus on some distinct conditions such as dissemination of CRC into the peritoneal cavity (peritoneal carcinomatosis) which is currently considered as loco-regional rather than systemic disease, and the role of cytoreductive surgery and intraperitoneal chemotherapy in targeting this condition. The current status of neoadjuvant chemoradiation for the treatment of rectal cancer as part of a multidisciplinary approach is also presented. Finally, the effect of anastomotic leakage after rectal cancer resection on immediate postoperative outcomes, postoperative bowel function and quality of life and possibly on the oncological results is outlined.

We would like to thank the authors for their precious contribution to accomplish our aim. We consider this book to be of interest and value to healthcare providers involved in the treatment of patients with CRC, to students and trainees, and to the wide audience.

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