

It is a great pleasure for me to be invited as Co-Editor of this book on Colorectal Surgery, presented as a themed collection of related articles from journals of AME recently published. The authors are comprised of estimated collaborators in the field of colorectal cancer research worldwide.

Colorectal cancer is one of the most common cancers in the world and, in particular, in western populations. There are different known risk factors for colorectal cancer, including germline genetic mutations. Some types of polyps, mostly adenomas, are established pre-neoplastic lesions and their identification with endoscopy allows effective screening and early diagnosis, with good possibilities to address patients to the best treatment. The screening for colorectal cancer has gained importance in the last years, because it identifies pre-neoplastic lesions or early stage tumors and permits to perform an efficacious oncologic treatment. Surgery still represents the mainstay therapy for colorectal cancer and this book is focused in particular on this field. The type of surgery depends on the stage and location of the tumor: usually a colectomy is needed and a good surgical treatment includes adequate resection margins and an appropriate lymphadenectomy. To be oncologically correct, a colonic resection must comprise at least 12 lymph nodes, which must be harvested till the origins of the principal mesocolic arteries of the specimen. This is the most important oncologic principle of colorectal surgery and all surgeons who want to perform an appropriate resection must respect it. In rectal surgery this concept is extended to all the mesorectum and in this field the most important oncologic principle is the respect of the total mesorectal excision (TME). Described for the first time in the 1982 by Prof. Heald, this concept is at the basis of the modern colorectal cancer surgery and it has become the "gold standard" for the treatment of rectal cancer worldwide. Even after the introduction of minimally invasive techniques, these basic oncologic principles have not changed and continued to constitute the fundamentals of colorectal oncologic surgery. In effect minimally invasive surgery has gained importance over the past two decades. From the first colorectal laparoscopic procedure described by Jacobs in 1991, many authors have given further evidence on the non-inferiority of laparoscopy over open surgery, focusing on morbidity and mortality and on the effectiveness of this approach in terms of oncologic outcomes. However this approach has been adopted very slowly, especially for rectal cancer resections, maybe for some critical issues, like the lack of dexterity, a challenging learning curve and a difficulty in the approach of narrow anatomic fields such as the pelvis. To overcome these limitations, robotic surgical systems have been introduced and quickly adopted in colorectal surgery. Actually this technique can overtake the limitations of laparoscopy with comparable results in terms of surgical and oncologic outcomes. Nevertheless the adoption of this approach has been slow and not so widespread mainly due to its high costs and the absence of clear advantages over standard laparoscopy.

Over 50% of colorectal cancer patients will present with liver metastases either at the time of diagnosis or after resection of the primary tumor. In addition to the advances of surgery, chemotherapy and targeted biologic therapies have progressively and significantly improved the prognosis of patients with hepatic metastases in the last years. It is for this reason that a multimodal management is at the basis of the modern treatment of colorectal cancer. This approach includes the collaboration of surgeons, oncologists, radiotherapists as well as those specialists involved in pain management, diagnostic imaging, and complementary medicine in order to offer a complete and effective approach to this disease.

For these reasons this book, even if focused on the role of surgery, is composed of a series of discussions about the importance of the multimodal management of colorectal cancer.

So, after an introduction on the etiology and screening of colorectal cancer, the book directly focuses on all the aspects of colorectal surgery, including the treatment of hepatic metastases. In the last part there is a discussion about the complementary treatments, neoadjuvant and adjuvant chemo-radiotherapy, which today play an important role in the multimodal management of this disease.



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