The first laparoscopic colorectal surgery was performed in the United States in 1990. In its 28 years of evolution this technology has constantly been optimized and experienced particularly rapid advances in recent years, with the introduction of many new emerging techniques and concepts. For instance, the conventional transabdominal approach has been replaced by the transanal approach, and the traditional multi-port surgery has been developed into single-port surgery and NOSES procedure without any incision in the abdomen. Colorectal surgeons have to face challenges from changing technologies and new ideas and move toward rebuilding their skills.

Is “minimally invasive” the core value and the only advantage of laparoscopic colorectal surgery? For me, the core advantage of laparoscopic surgery is that it enables the delivery of sophisticated surgeries in high-definition field of view, which is more conducive to high-level lymph node dissection, nerve identification, and precise separation of surgical planes. The core advantages of laparoscopic surgery are reflected in the proceduralization of the surgical steps and the transparency of the surgical process, which shorten the learning curve and help young doctors to master new technologies quickly.

How can laparoscopic technology perfectly implement the concepts of tumor surgery? In our center, the laparoscopic radical resection of rectal cancer is performed by following the idea of “vessels first, followed by planes; veins first, followed by arteries”, with vessels as the central approach, which is just based on the principles of traditional tumor surgery. In addition to treatment effectiveness, we also pay attention to the safety and functionalization of surgery. Based on the above understandings, we also pioneered the laparoscopic transanal pull-through without angled double stapling and advocated the radical surgery of rectal cancer with the preservation of left colonic artery. With these innovations, we are pursuing more minimally invasive or even non-invasive techniques.

This book was contributed by many colorectal surgeons at home and abroad. All of them are top experts in minimally invasive surgery and have their unique technologies and ideas. I believe our readers will benefit much from the insights and perspectives of these outstanding authors.

Finally, I would like to thank three of my tutors: Professor Dongpo Xu, who instructed me when I was a master candidate with his words and deeds, helping me to master solid knowledge on surgical oncology; Professor Chengzhu Zheng, my doctoral tutor, who trained me on the skills of minimally invasive surgery and the innovative way of thinking; and Professor Sanjun Cai, my professional tutor, who guided me to enter the professional hall of colorectal surgery. Their professionalism, visions, and lofty personality have been most motivating for me in my education and career.

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