There has been an explosion in minimally invasive surgery (MIS) in urology. As surgical subspecialists, urologists were slow to embrace minimally invasive surgery at its inception. However, in the last decade, the interest in MIS has grown exponentially in urology. Laparoscopic renal procedures are commonplace, and more and more complex oncologic and reconstructive procedures are performed laparoscopically. Much of this exponential growth has been due to the rapid dissemination of robotic technology, specifically for prostatectomy. Soon afterward, robotic technology was applied to other complex lower tract oncologic and reconstructive procedures. Robotic assistance has also been applied to upper tract urologic procedures such as pyeloplasty but its application for partial nephrectomy is more recent. It has become apparent that robotic technology can serve as an interface between open and laparoscopic surgery for the laparoscopically naïve surgeon. It has certainly been shown to be so for prostatectomy, and whether the same pans out for partial nephrectomy is yet to be seen.

As more experience is gained in MIS, more and more complex procedures are performed laparoscopically and robotically. Contrary to logical expectation, the incidence of complications has indeed increased with increasing experience in MIS. This is purely a reflection of the complexity of the procedures performed rather than surgical ineptitude. Increased surgical experience and surgeon volume with a certain procedure can decrease perioperative morbidity. As in open surgery, complications will be ever present in the laparoscopic management of our patients and cannot be eradicated in all instances. They can, however, be avoided and measures can be taken to decrease their incidence. Much of this knowledge is gained purely from surgical experience. Certain clinical scenarios and comorbidities predispose the patient to complications. Specific to surgical technique, certain maneuvers increase the likelihood of intra-operative and perioperative complications and increase the likelihood of adverse outcomes. On the contrary, certain precautions and maneuvers can serve to prevent complications.

This textbook is intended to familiarize the modern urologist with the common and the more eccentric complications of laparoscopic and robotic urologic surgery. Recognized urologic experts in MIS have contributed to making this the first comprehensive textbook specifically dedicated to complications in minimally invasive urologic surgery. The book is divided into three specific parts. In the first part, medical and general considerations are discussed. In the second part, generalized discussion of common surgical complications is presented. Complications specific to robotic surgery in general are emphasized in a separate unique chapter. The third part
is dedicated to procedure-specific complications. Complications of upper tract and lower tract laparoscopic and robotic procedures are discussed in different subsections. In most chapters, a brief description of the procedure is provided as well as an in-depth discussion of the diagnosis and management of complications associated with that particular procedure. In each chapter, a discussion of preventive measures is emphasized. The last segment in this section deals with special topics such as single port surgery, ablative procedures, and pediatric laparoscopy. Finally, a comprehensive chapter on medico-legal implications of laparoscopic and robotic technology is presented.

Certain complications are common in a variety of procedures and thus are emphasized and repeated in more than one chapter. Although an attempt is made to decrease repetition, the organization of this book is designed to lend itself to being a user-friendly and quick reference textbook. It also at times presents unique perspectives of different experts within the field who address the same issues in different fashions. The organization of each chapter is left to the discretion of the authors and ample illustrations and images are presented when appropriate. As more urologists embrace laparoscopy and robotics and more fellows and residents are trained in this subspecialty, the use of this technology is sure to increasingly expand in our field. Prior knowledge of potential complications is a valuable adjunct in their diagnosis and management. It is my hope that this textbook serves as a useful reference for management of complications in urologic MIS. I also believe that it can serve to educate surgeons in certain new procedures before they actually embark on performing them. I wish to thank all authors who have contributed to this textbook. It is my sincere hope that the reader finds this textbook user-friendly and that it can serve as a valuable resource for urologists who wish to incorporate MIS in their surgical armamentarium.

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