

# Preface

Few events have had as dramatic an impact on the field of urology as the introduction of robot surgery. The rapid adoption of robotics into the armamentarium of urologic surgery surpasses that of any other minimally invasive technology including shock wave lithotripsy, lasers, percutaneous surgery and laparoscopy. Most notably is the impact that robot-assisted laparoscopic radical prostatectomy has had on the practice pattern of clinically localized prostate cancer treatment in the USA as well as select centers worldwide. In only a few years, surgical practice in the USA has shifted from a predominance of open retropubic prostatectomy to robotic surgery. More recently, robotic surgery has expanded as an alternative treatment option for not only prostate cancer, but also a wide range of upper and lower urinary tract disorders.

This dramatic paradigm shift in urologic practice is a result of multiple factors, some of which relate to benefits to the operating surgeons and ultimately their patients. Robotic surgery has gained traction with urologists as it has offered the opportunity for many urologists, who have little to no experience with laparoscopy, to provide a minimally invasive surgical approach for their patients. The three-dimensional, high definition, and magnified view provided by the current robotic platform offers an unprecedented view of surgical anatomy, superior to that of open and conventional laparoscopic surgery. Along with other benefits such as motion scaling technology and articulating robotic instrumentation, surgeons are provided the opportunity of performing even more precise and meticulous surgery in a relatively bloodless operative field than ever before. Taken together, these benefits have translated in most cases into similar outcomes, but with reduced blood loss and transfusions, less pain, shorter hospital stays, and faster recovery times for patients undergoing robotic surgery as compared to traditional open surgery.

Despite the widespread adoption of robotics into urologic practice, robotic urologic procedures remain technically complex and the skill set required to perform robotic surgery differ significantly from that of traditional open surgery. Unlike open surgery where tactile feedback is often used as an intraoperative tool providing critical information, during robotic surgery, the surgeon is immersed in an environment absent of haptic feedback where operative decisions are made based instead on subtleties and nuances provided by visual cues. Visual cues such as vascularity, organ movement, distortion, and tissue adherence offer different and unique insights into the nature and behavior of organs and their interaction with surrounding structures such as blood vessels, fat, nerves and muscles. As a result, surgeons are required to think and interpret surgical dissection in a way that is unique and different from their training in open surgery.

The *Atlas of Robotic Urologic Surgery* was designed to provide a detailed, step-by-step guide to common robotic urologic procedures for the purpose of helping novice surgeons in their transition to robotic surgery and seasoned robotic surgeons to refine their surgical technique and expand their repertoire of robotic procedures. In addition, less commonly performed robotic procedures such as

those for male infertility, pelvic organ prolapse, urinary tract reconstruction, and pediatrics are included. Each chapter is written by thought leaders in robotic urologic surgery with descriptive step-by-step text, complimented by figures and intraoperative photographs detailing the nuances of each procedure. Emphasis is placed on operative setup, instrument and equipment needs, and surgical techniques for both the primary surgeon as well as the operative assistant. The use of ancillary equipment and robotic instrument and endoscope exchanges are highlighted throughout the procedural text by tables designed to aid surgeons and their teams in improving efficiency. The hope is that this atlas will provide unique insights into robotic urologic surgery and reduce the learning curve of accomplishing these increasingly popular procedures.

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