

Smith's Textbook of **ENDOUROLOGY**

3rd Edition

VOLUME TWO

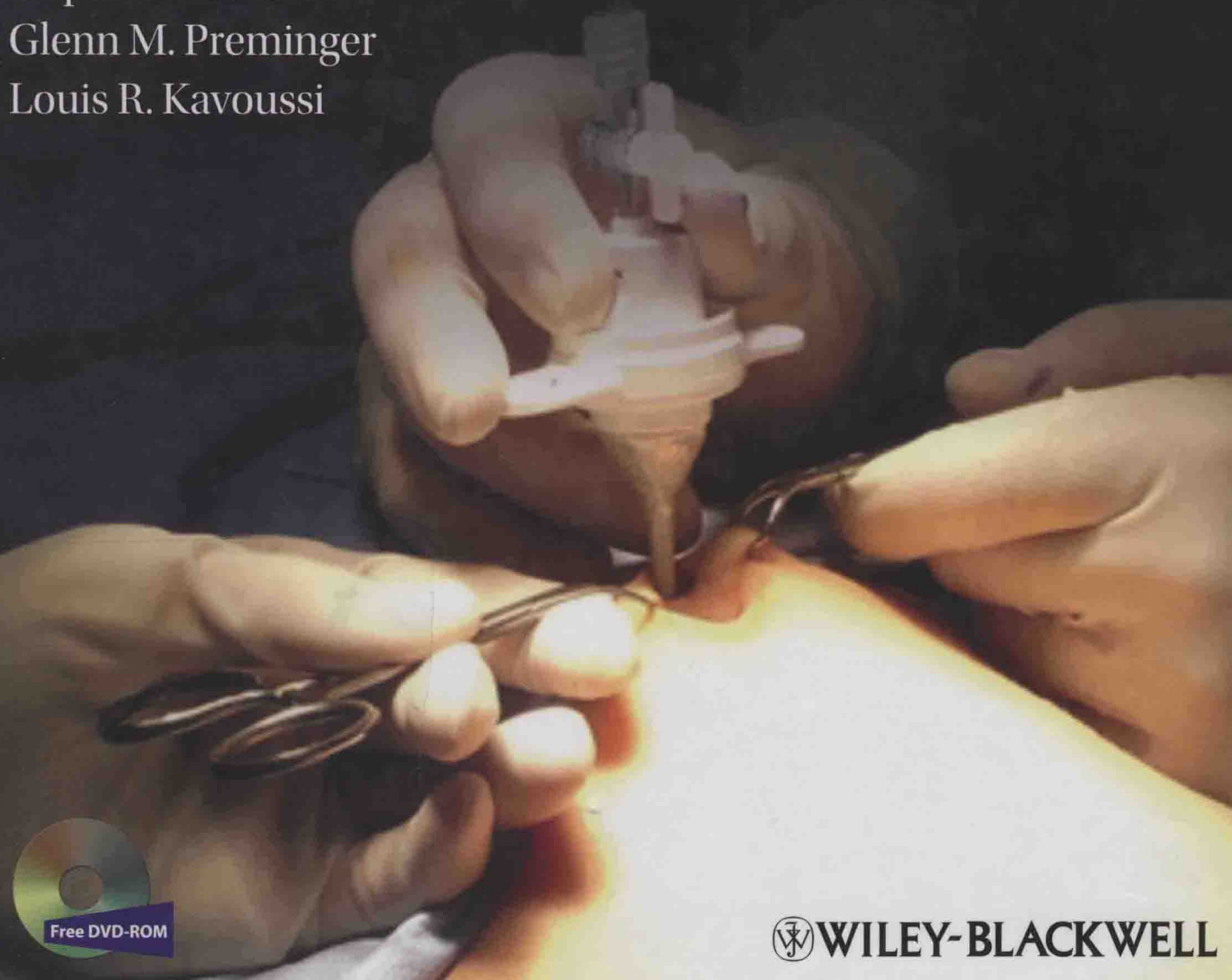
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 **WILEY-BLACKWELL**

Smith's Textbook of Endourology

VOLUME II

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3RD EDITION



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Foreword

"End of Urology," so spoke the late Richard Williams, my good friend and colleague, when as residents we witnessed a newly arrived faculty* at the University of Minnesota begin to do with tubes and wires through small holes what we could do so much more adeptly and expeditiously through our macho incisions. "A flash in the pan," so commented the renowned Victor Politano at a meeting in the mid 1980s where Endourology was being presented. "Small incisions are for small surgeons," – the words of surgeon advocates of the massive incision because exposure was king and, after all, incisions healed from "side to side."

"Endourology" was the branding brainchild of Elwin Fraley, Arthur Smith, and Paul Lange. Most felt that the Minnesota cold had finally gone beyond their defenses to create a "brain freeze" of monumental proportions. Fast forward 30 years and, today, Endourology has become Urology. From the urethral meatus to the uppermost renal calyx, the entire urogenital tract is endoscopically accessible and radiologically visualizable. From the smallest to the most complicated open procedure, urologists of talent, innovation, and persistence have supplanted standard incisional access with the endoscope or image-guided therapy. This is the age of surgical nihilism and Endourology has been at the forefront from day one.

If you are reading this foreword, then you hold in your hands a book (or CD) that contains every aspect of Urology and how it is impacted by a minimally invasive approach, be it percutaneous, ureteroscopic, laparoscopic, robotic, or image-guided. The authors are a Who's Who of experts in endourology on a global scale. The content ranges from basic to futuristic Endourology. The latest advances in supine percutaneous stone removal, endoscopic nephrostomy, laparoendoscopic single site surgery as well as natural orifice transluminal

endoscopic surgery are clearly detailed and illustrated both in still photographs and often by instructional video demonstrations.

A wise mentor* once informed me that "You are only as good as tomorrow." That single daunting sentence should haunt each of us as we arise every morning to provide relief to those who suffer. To that end, we must seek methods to relieve suffering without causing it, to heal without harming, to cure without creating another, sometimes worse, malady. Endourology empowers every urologic surgeon with the knowledge and tools to provide all individuals seeking our care with a kinder gentler solution to their problem...one that neither disfigures nor maims in the name of treatment. In the words of Sir William Osler "Diseases that harm, require treatments that harm less." A century later, his dictum has become commonplace practice for the endourologist.

My heartfelt congratulations go out to Drs Smith, Badlani, Kavoussi, and Preminger – friends all – to me, to you, and to your patients. So read *Smith's Textbook of Endourology* well, apply its principles earnestly, and if opportunity presents, seek to innovate and improve. The text is not an end in and of itself, rather it is another paver in the surgical journey in which each of us plays a role – using techniques born of today's technology to ever reduce the burden of the "surgical" cure.

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Preface

In 1978 the concept of Endourology was launched. It was defined as closed controlled manipulation within the urinary tract. The word "closed" was used to indicate either a minimal incision or no incision at all and the "control" was achieved either endoscopically or by non-invasive imaging. Until then, residents had been taught that the only way to get good exposure was through a large incision and now the ultimate goal is good exposure with no incision at all. It is achieved with a combination of endoscopy and all the new modalities of imaging. Now there are relatively few accepted open urological surgical procedures and this has had the gratifying result of a dramatic decrease of the morbidity in our patients recuperating after treatment. Because the field has expanded exponentially over the past three decades, the need has arisen for a new updated edition of this textbook.

From the outset, it has been policy of Endourologists to embrace, and evaluate fairly, all new tools and equipment. Consequently we have always been at the cutting edge of new technology. As technology has evolved, courses have been organized, to train not only residents and fellows, but also the practicing urologist, so that their learning curve has been accelerated enabling them to practice endourologic techniques comfortably and with the required expertise. The number of stone cases treated by open surgery today is minimal. Similarly open nephrectomy has almost exclusively been replaced by laparoscopic, robotic or percutaneous ablative techniques.

In this era of fewer working hours for residents, the amount of time that the residents spend in the operating room has decreased dramatically, and the necessary skills have to be taught using a combination of additional educational modalities. In addition to books and journals, there are an abundance of videos on surgical techniques, animal laboratories, teaching models and virtual reality simulators. Fortunately endourologic techniques are uniquely suited to these modalities and

the student can become quite adept before being instructed in the operation room. These learning tools have helped urologists all over the world to become competent endourologists.

This 3rd edition has been completely re-written as the field has expanded to incorporate so many applications. The contributors to each chapter are either the innovators of the procedure they describe or alternatively have had vast experience with that technology. Wherever possible we have included videos to enhance the description of the various techniques and the readers will have the opportunity to watch experts doing the procedures. These videos are on portable computer discs which can be seen shortly before any intended endourologic operation as a "re-fresher."

The "Textbook" consists of 2 volumes – the 1st one on stones in the upper tract and the 2nd on laparoscopic and robotic surgery, image guided diagnostics and therapeutics and minimally invasive therapy of the lower urinary tract. The 1st volume has 5 parts:

Section 1 discusses basic principles of the care of instruments, how to protect oneself from radiation exposure, video imaging and documentation which has become so important in the area of electronic medical records. As gram negative septicemia is still prevalent in the management of stone patient's, antibiotic usage in the prevention of sepsis is included in the section. There is a chapter on anti-coagulant therapy which is so prevalent today in patients with coronary artery stents.

Section 2 is devoted to percutaneous renal surgery, from pre-operative evaluation to access, stone removal, other uses of the nephrostomy tract and the exit strategy and complications.

Section 3 discusses all the intricacies of ureteroscopy and Section 4 is devoted to shock-wave lithotripsy. We were cognizant that there is no single modality for treating stones and hence Section 5 describes the management of the patient with various stone related problems in a composite format.

As there is so much overlap between laparoscopic and robotic surgery we combined them in Section 6. At present, the dividing line between the techniques is primarily related to technical experience and availability of the robot together with financial considerations.

Section 7 which discusses image-guided diagnostics and therapeutics, is an important addition to this textbook on Endourology as it is an essential component of the armamentarium of the practicing urologist.

We are moving into an era of "no incisions", and if the procedures described in this section are not performed by urologists, they will be taken over by radiologists. This would result in the loss of continuity of care of our patients.

Finally, Section 8 discusses management of the lower urinary tract. Emphasis has been placed on many ambulatory procedures, as this is an escalating trend endorsed by medical insurance plans.

I would like to thank each of the contributors for the many hours they devoted to writing, illustrating and creating videos for their chapters.

Hopefully they will be as delighted with the results as the editors and publishers of this "Textbook." I am also deeply indebted to my co-editors who have

reviewed edited and re-reviewed chapters countless times. I thank not only them but their families as well, for the time spent on the book could have been devoted to them.

The staff at Wiley-Blackwell have been highly efficient, professional and encouraging. When one deals with a large organization it is reassuring to know that as the book passes from one stage to the next and hence to separate departments there is "continuity of care" throughout the operation. They are a great team and we, the editors, appreciate all the help we received from them.

Finally I would like to thank my wife, Kay, who inspired me to edit this 3rd edition and has repeatedly helped me with this text and countless other projects throughout my academic career. If I am regarded as the "father" of Endourology, she is unquestionably the "mother" that helped nurture this field of urology.

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