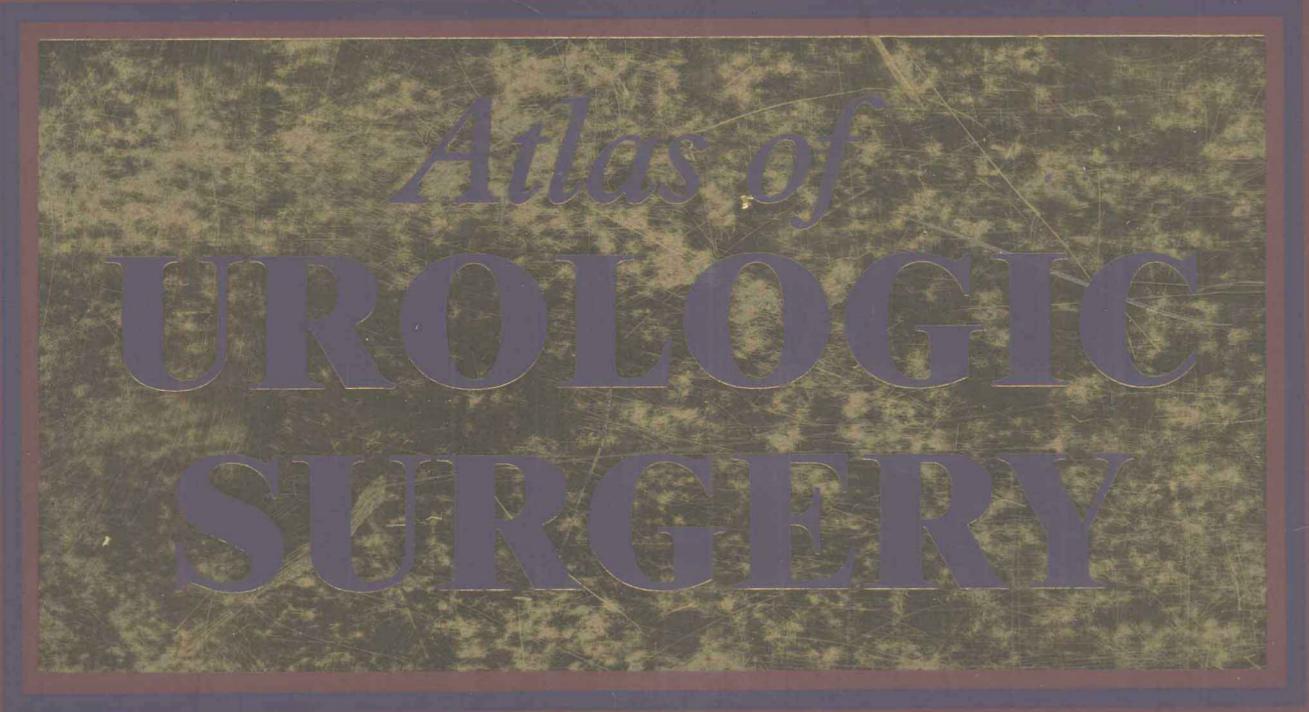


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Atlas of
**UROLOGIC
SURGERY**

FRANK HINMAN, JR.

SECOND EDITION



人民卫生出版社



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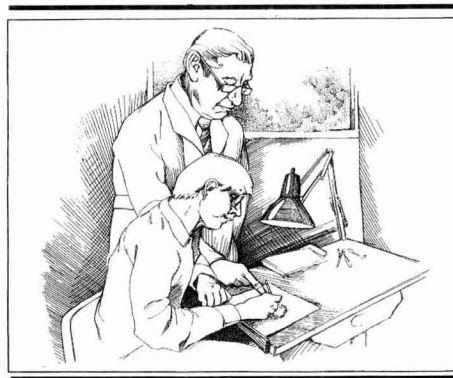
Atlas of **UROLOGIC SURGERY**

SECOND EDITION

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Joseph A. Smith, Jr., MD

William L. Bray Professor and Chairman, Department of Urologic Surgery, Vanderbilt University, Nashville, TN

Bowel Stapling Techniques

Joseph C. Smith, MA, MS, FRCS

Consultant Urological Surgeon, Churchill Hospital, Oxford, England

Ureteroureterostomy and Transureteroureterostomy

M. J. Vernon Smith, MD, PhD

Professor of Urology, Medical College of Virginia, Richmond, VA

Repair of Ureterovaginal Fistula

Howard M. Snyder, III, MD

Associate Director of Pediatric Urology, Children's Hospital of Philadelphia; Professor of Surgery in Urology, University of Pennsylvania School of Medicine, Philadelphia, PA

Inguinal Orchiopexy

Mark S. Soloway, MD, FACS

Chairman, Department of Urology, University of Miami, Miami, FL

Partial Cystectomy

Gary D. Steinberg, MD

Assistant Professor of Surgery, Section of Urology, University of Chicago, Chicago, IL

Excision of Vesical Diverticulum

Mitchell S. Steiner, MD

Associate Professor of Urology and Pharmacology and Director of Urologic Oncology and Urological Research, University of Tennessee, Memphis, TN

Laparoscopic and Minilaparotomy Pelvic Lymph Node Dissection

F. Douglas Stephens, AO, DSO, MB, MS, FRACS

Emeritus Professor, Urology and Surgery, Northwestern University; Honorary Senior Research Fellow, Royal

Children's Hospital Research Foundation, Melbourne,
Victoria, Australia
Orchiopexy with Vascular Division

Marshall L. Stoller, MD

Associate Professor of Urology, University of California,
San Francisco, San Francisco, CA
Ureteral Stents

Lynn Stothers, MD

Assistant Professor of Urology, University of British
Columbia, Vancouver, British Columbia, Canada
Vaginal Needle Suspension

Ralph A. Straffon, MD, FACS

Vice-Chairman, Board of Governors, and Chief of Staff,
The Cleveland Clinic Foundation, Cleveland, OH
Repair of Vascular Injuries

Ray E. Stutzman, MD, FACS

Associate Professor, Urology, Johns Hopkins University
School of Medicine, Baltimore, MD
Suprapubic Prostatectomy

Emil A. Tanagho, MD

Professor of Urology, University of California, San
Francisco, San Francisco, CA
Vesical Neck Tubularization

Joachim W. Thüroff, MD

Professor of Urology, Witten/Herdecke University,
Klinikum Barmen, Wuppertal-Barmen, Germany
Ileocecal Bladder Substitution

Donald D. Trunkey, MD, FACS

Chairman, Department of Surgery, Oregon Health
Sciences University, Portland, OR
Suture Techniques; Gastrostomy

Paul J. Turek, MD

Assistant Professor-in-Residence, Department of Urology;
Assistant Chief of Urology, Veterans Affairs Hospital,
University of California, San Francisco, San Francisco,
CA
Varicocele Ligation

**Richard Turner-Warwick, CBE, DMDSc, FRCP,
FRCS, FRCOG, FACS, FRACS (Hon), FACS (Hon)**

Emeritus Surgeon, The Middlesex Hospital; Senior
Lecturer, London University, Institute of Urology,
London, England
Mobilization of the Omentum; Suprapubic V-Incision

E. Darracott Vaughan, Jr., MD

Chairman, Department of Urology and James J. Colt
Professor of Urology, The New York Hospital-Cornell
Medical Center, New York, NY
Posterior Approach to the Adrenal Gland

Jeffrey Wacksman, MD

Associate Professor of Clinical Surgery, University of
Cincinnati Medical Center; Associate Director, Division
of Pediatric Urology, Children's Hospital Medical Center,
Cincinnati, OH
Meatotomy

George D. Webster, MB, FRCS

Professor of Urologic Surgery, Duke University Medical
Center, Durham, NC
Bulbomembranous Urethral Strictures

Robert M. Weiss, MD, FAAP, FACS

Professor and Chief, Section of Urology, Yale University
School of Medicine, New Haven, CT
Calicoureterostomy

Eric Wespes, MD, PhD

Professor of Urology, University Clinic of Brussels,
Brussels, Belgium
Correction of Penile Venous Leakage

Hugh N. Whitfield, MA, MChir, FRCS

Senior Lecturer, Institute of Urology and Nephrology,
London, England
Open Renal Biopsy

Howard N. Winfield, MD, FACS, FRCS(C)

Associate Professor of Urology, University of Iowa
College of Medicine, Iowa City, IA
*Laparoscopic and Minilaparotomy Pelvic Lymph Node
Dissection*

**Ross O'Neil Witherow, MB, BS, MS, FRCS,
FEBU**

Consultant Urologist and Clinical Senior Lecturer, St.
Mary's Hospital, London, England
Retropubic Prostatectomy

John R. Woodard, MD, FACS, FAAP

Clinical Professor of Surgery (Urology), Emory
University School of Medicine, Atlanta, GA
Two-Stage Orchiopexy

Ernst J. Zingg, MD

Professor of Urology (Emeritus), Department of Urology,
Inselspital, University of Berne, Berne, Switzerland
Radical Nephrectomy

Leonard M. Zinman, MD, FACS

Associate Clinical Professor, Harvard Medical School,
Boston; Attending Urological Surgeon, Lahey Clinic
Medical Center, Burlington, MA
Cecocystoplasty and Antireflux Cecocystoplasty

Foreword

When, in 1989, the Royal College of Surgeons of England presented its Honorary Fellowship to Frank Hinman, Jr.—a rare honor indeed for a urologic surgeon—the late Dr. Harry Spence of Dallas, who was then widely regarded as the current “Father of Urology,” wrote, specially for inclusion in the citation, “His pre-eminence in all facets of urology, including its surgical writings and organizational activities, plus versatility in his many interests, entitle Frank Hinman, Jr. to be known as ‘a Man for all Seasons.’”

For more than 80 years “The Hinmans of San Francisco”—father and son—have together created an era of outstanding contribution and devotion to urology that has virtually spanned the duration of its history. Frank Hinman, Sr. was appointed Founder Chairman of the Department of Urology at the University of California in 1916 and his book, *The Principles and Practice of Urology*, was a pioneer urologic text. Like Frank, Jr., he was an insatiable clinical investigator. It is recorded that, as a junior physician, Frank found his father working in an attic laboratory on a fine summer day; when Frank asked him why he was not out playing golf, or some such, his father’s response was, “A man is entitled to some fun, isn’t he?”

One of the hallmarks of the pinnacle of success in the urologic world—in the sense of peer review, approbation, and appreciation—is election to the presidency of the American Association of Genitourinary Surgeons. Frank, Sr. was president of this august body in 1937, and Frank, Jr. was its president in 1981.

Frank, Jr. qualified in 1937 and his personal catalog of appointments, contributions, and honors has spanned an extraordinarily active 60 years—and still there is no sign of its waning. His career was punctuated by military service in the Pacific as a surgeon on the much-hit aircraft carrier *Intrepid*. In 1962, like his father, he became Chief of Urology at San Francisco General Hospital. In the course of time he was elected President of the Society of Pediatric Urologists, a Regent of the American College of Surgeons, and, eventually, Vice President of the American College of Surgeons. He was awarded the Barringer Medal of the GU Surgeons, the Guiteras Medal of the American Urological Association, and in 1991, the St. Paul’s Medal of the British Association of Urological Surgeons.



Frank Hinman, Sr.



Frank Hinman, Jr.

The demand for a second edition of the *Atlas of Urologic Surgery* with updating of its excellent instructional details of more than 200 operations, together with comments on each by national or international authorities, every one a personal friend, is a fine tribute in itself. But such things do not just happen, they have to be made to happen. The accomplishment of this reflects not only Frank's immense surgical experience in both adult and pediatric urology and his personal innovative contributions, but also his outstanding talent as a teacher and his immense enthusiasm—always tempered, wise, and enduring.

The creation of such an atlas is naturally dependent upon a particularly skilled and devoted medical artist, and Frank certainly regards himself as most fortunate in his association with Paul Stempen. However, the special key is his own ability as an artist that has enabled him to select and sketch the illustrations that best demonstrate the critical stages of every operation he describes—a formidable accomplishment indeed.

But what of the man? Outstandingly kind and a friend of all who know him, an accomplished skier, an ardent duck hunter, a fine carpenter, a talented artist of "one-man show" caliber, and national yacht racing champion in the Triton Class on three occasions. In 1948, he met and married Marion Modesta Eaves, herself a fine sailor, a skier, a duck hunter, a gardener, and subsequently a civic organizer—equal in caliber to Frank and a constant companion.

Frank is clearly the modern equivalent of the ever-youthful Peter Pan and just as surely our current "Father of Urology." We are all immensely grateful to him for his latest offspring—*Atlas of Urologic Surgery*—its gestation and his prolonged labor will be greatly appreciated worldwide.

RICHARD TURNER-WARWICK

Preface to the Second Edition

In the eight years since the first edition of the *Atlas of Urologic Surgery* was published, two companion volumes, one on urosurgical anatomy and one on pediatric urologic surgery, have been published that may be used to supplement this surgical atlas. The original *Atlas* was translated into Spanish, German, Italian, and Chinese.

The basic premise for this *Atlas* has not changed. It is to give you, the urologic surgeon, a practical book that instructs, guides, reminds, and warns.

New procedures, improvements in standard techniques, and entirely new methodologies have made a second edition necessary. For example, when the first edition was being prepared in the mid-1980s, laparoscopic methods were still experimental. Now these new techniques are being applied generally. As a consequence, much of the text has been either rewritten or revised. Many of the illustrations have been modified or redrawn, and over 200 new illustrations have been added, bringing the number of figures to over 1800. To provide a more anatomic approach, we have placed illustrations of the relevant structures before the description of the operation.

As a result, we think the contents of the *Atlas* have changed for the better. I have gone over each of the standard operations to amplify and modernize it and have asked a different Commentator to review the steps of the operation and give another point of view. New technical developments that are just now coming into general use have been inserted in the operative instructions. Because urologic surgery has progressed, many new operations have been added, described in detail, and given focus by a knowledgeable Commentator.

You will find that you will use this edition of the *Atlas*, as the first one, in several ways. When confronted with a new operation or one performed infrequently, you can review it and orient it in your mind step-by-step the night before. In this way, the operation not only will flow smoothly without wasted time but also will be improved by the addition of important fine points and the avoidance of pitfalls. We expect in the near future to have the book on a CD ROM so that the relevant page can be displayed over the operating table for the education of assistants and students, if not for the surgeon. Even for a familiar operation, the *Atlas* can provide the opportunity to branch out and discover a better way to do it. However the book is used, Paul and I trust it will improve the practice of urologic surgery.

FRANK HINMAN, JR.

Preface to the First Edition

Soon after completing residency training, I began to record with sketches and brief notations the techniques I was learning and teaching to the residents, as we worked in the operating rooms of the University of California (UC) and the old San Francisco General Hospitals. At that time, I intended to put together a "how-to" atlas, modeled after that of my fourth year surgery teachers, Cutler and Zollinger. Soon I became busy with other academic pursuits. It wasn't until later when my private practice was cut back that time was found.

Today, as more urologists do fewer operations, a ready source of technical review before some operations is needed. Many procedures that have been routine will now be only occasionally performed. Changes in methods of reimbursement for care of patients may make fewer cases available for resident teaching. Remarkable advances, such as the lithotripter, have already greatly reduced the frequency of several open operations; more are liable to be done rarely, except in remote areas. Still, they must be done well.

This atlas is written primarily for review by the trained urologist. I trust residents and registrars as well as the operating room staff will also make good use of it.

There are many excellent texts on urologic surgery. However, most are multi-authored; thus, the quality of the chapters varies greatly. Space is given to matters such as descriptions of diseases, "work-ups," and indications for operations, at the expense of the precise description of technique that this atlas provides.

The fortunate confluence of a long-considered format, enough time, an enthusiastic publisher, and the availability of the most promising graduate of our UC medical illustration program, who is also accomplished in the fine arts, made possible this single-authored atlas of urologic operations.

The method of constructing this atlas was complex but logical. First, I made a list of the important operations that should be described, a list that became longer as the work progressed. I reviewed my sketches and postoperative notes made over the last 35 years. Current and classic publications were then consulted to be sure that each important step of every operation was covered. References are not cited in the text, but all are included in the reference section and listed separately for each operation. By combining this previously published information with my notes, made at urologic meetings, and conceptions from my own experiences, I was able to compose written protocols. In these, I described the operation step by step, just as I would tell you how to do it at the operating table, "Cut here, suture there." I hope the user won't take offense at this approach. A deliberate attempt was made to use the simplest words possible to make each segment of the text easy to follow for all readers, including those surgeons who do not speak English as their native language. Each of the steps of the operation was

numbered. For each, I either made a rough sketch, as painting is my avocation, or pasted an appropriately revised photocopy alongside my surgical instructions.

Illustrator Paul Stempen reviewed each protocol before witnessing the selected operation so that he could appreciate which steps were important. He photographed each procedure, using a Nikon single-lens reflex camera with a 35-105 mm zoom lens and Ektachrome 160 film with ambient light. For supplementation, he worked from still frames of movies made by accomplished urologic surgeons and from cadaver dissections in our laboratory. At the drawing board, Mr. Stempen made a series of realistic, yet still generally applicable, pencil drawings of the operation from the viewpoint of the surgeon to coincide with the steps described in the protocol. Every attempt was made to have each drawing an original one. At 4 o'clock in the afternoon I joined him in our workroom and checked his sketches against the protocol. We reviewed the day's work for accuracy and clarity. It was similar to teaching a new resident, yet at the same time I learned from him by being forced to clarify my concepts. As in the operating room, we learned together.

Early samples of operations were prepared, taken to the W.B. Saunders Company in Philadelphia, and reviewed with the staff.

The protocol text was processed into an IBM-XT computer by Miss Mary Jane Still and then edited by Miss Aileen Andrus. As the work proceeded, a great many notes on new ideas were obtained at meetings and from current journals. These and previously overlooked points were filed to be added to the protocols in due course.

Photocopies of the drawings and text were sent to almost 200 friends and colleagues whom I knew to have contributed, usually to a particular operation. These authorities included not only urologists, but also general, plastic, vascular, pediatric, and gynecologic surgeons. I asked each of them to use a red pencil liberally on both text and drawings to eliminate inaccuracies and ambiguities. I also asked them to write a personal *Commentary* to follow the text. When these were returned to me, the text and drawings were revised appropriately. Mr. Stempen then redrew the corrected pencil drawings in the clear pen-and-ink technique required for publication.

The team at Saunders composed the pages from the text and drawings, for continuity and readability. The effort was very successful, as you can see. In this atlas you will find precautions on the preparation of the patient and on the surgical procedure itself and assistance with the management of problems in the immediate post-operative period. Long-term follow-up and management of late complications are left to other sources. A list of instruments specific to the procedure is included for the use of the operating room staff as well as the surgeon.

You will not find the history of operations or much discussion of the diseases requiring surgery. The diagnostic steps and assessments and the indications and contraindications are only briefly touched upon; this information can be found in the bibliography, where articles and texts cover these aspects thoroughly. *Advice:* It is safer to read the appropriate references before attempting an unfamiliar procedure. Finally, an atlas can't teach judgment, yet this is the most important ingredient of a successful operation.

The illustrations depict a right-handed surgeon but can be adapted by any surgeon who is left-handed or ambidextrous. Warnings have been inserted wherever there seemed a possibility for going astray.

There are other ways of performing many of the operations. However, after some 5600 operations, I have taken the prerogative of telling others how I would do it. In these instances, I have the support of published surgical descriptions of hundreds of surgeons, for whom credit is given in the reference section, along with the backing of my collaborators who reviewed the individual protocols and sketches.

These open operations are as close to "standard" as they can be described. (Endoscopic procedures are not included.) Some operations that appeared to me to be no longer useful are omitted, but some older operations based on useful principles are included. As John Duckett has pointed out, it is important to know about historical techniques when you have to operate on a patient who was subjected to such a procedure in the past. Newer operations that have yet to prove themselves are in-

cluded; some will be out of date by the time of publication, others may be discredited, to be deleted in a future edition. Certain incisions and approaches appear more than once but with different drawings in order to make a particular operation clear without the need to refer repeatedly to other procedures. The space devoted to several operations is not proportional to the frequency of their performance.

Although I believe all descriptions and directions in the atlas have been "kitchen tested" and are correct, it does not mean that one can read the book and then perform the operation. Thorough training in urologic surgery is a prerequisite before trying any operation, including those described here. Even then, experience with similar operations or performing these operations under supervision is necessary if the patient is not to be at risk of harm. Complicated or difficult operations that occur infrequently in general urologic practice, such as neonatal procedures, repair of severe hypospadias or complicated urethral strictures, and radical excisions for cancer, might best be referred to a subspecialist who has performed enough of these types of operations to have gained special expertise.

You may use this atlas in several ways. Usually, review the appropriate protocol just before doing an infrequently performed operation, thus obtaining a refresher course. You can use the atlas to discover if there is a better way to do a routine operation, expanding your surgical horizon. I hope that each procedure will contain at least a few suggestions or precautions that you have not yet encountered and so provide solutions to immediate problems, before they become insoluble.

FRANK HINMAN, JR.