

Foreword to the Second Edition

J. ENGLEBERT DUNPHY, M.D.

SINCE ITS INTRODUCTION *The Craft of Surgery* has become one of the most popular comprehensive expositions of surgical technique. Despite its breadth, each subject is covered in detail appropriate for both the beginning surgical resident and the experienced surgeon. It is remarkable in a work of this size, involving so many contributors, that such high excellence is maintained throughout—an accomplishment for which the editor deserves congratulations.

Of particular value for the surgical resident is the stepwise presentation of the technique of each procedure; and because each section amounts to a series of descriptions by a panel of experts, the experienced surgeon, also, will find these volumes an indispensable vade mecum, particularly for the less common operations. Dr. Cooper has expanded his classic work to three volumes, adding a number of newer procedures not covered in the original edition, and including excellent sections on neurosurgery and orthopedic surgery. Here again the presentations are designed to contribute to the training of residents in these surgical specialties as well as to the overall education of the broadly trained general surgeon.

Finally, in these days of curricular change and reduction of time for surgical undergraduate education, medical students will welcome this work as a valuable reference. In it they can readily find the technical differences between various operative procedures, details which today are less likely to be described on ward rounds or even in the operating room, but which have important implications in the care of individual patients.

The second edition deserves a place in every medical library and operating room, and any surgeon would be happy to have it in his own personal library. The international popularity of this work will be enhanced by the new edition, and the excellence of the illustrations and the clarity of the text assure it a prominent position in world medicine and surgery for many years to come.

Foreword to the First Edition

LOUIS M. ROUSSELOT, M.D.

THE PRACTICE of surgery in our time encompasses a complex array of faculties which our surgical forebears did not have at their command. Tools were few and their capacities were in many instances incompletely utilized. For the pioneers, the essential character of surgery was necessarily manual dexterity guided to an extent by intuition. As our knowledge grew and our defenses strengthened against the surgeon's old enemies of sepsis, inadequate anesthesia, and shock, a tendency developed in some quarters to de-emphasize the importance of technical skill in the overall teaching of surgery. Less and less did it seem necessary to conclude an operation expeditiously. In some surgical clinics it became almost a fetish to extol the lengthy operation as an index of surgical craftsmanship. However, as in so many other human endeavors, the pendulum gradually is beginning to move in the opposite direction.

The well-trained surgeon of today brings to the operating room the summation of years of work in the basic sciences and in the clinical fields. His vast stores of knowledge and experience are subtly translated into a technical solution of a clinical problem—an operation.

Dr. Cooper is well aware of the complex nature of our specialty. Just as our knowledge in the basic sciences is rapidly expanding, so are our surgical skills evolving. Fine surgical craftsmanship is the sequel of a long period of formal training, great effort, and concentration. It includes not only technical skills of the quality exhibited by the master surgeons who are the contributing authors of these volumes, but also that subtle component known as judgment. Judgment is a quality of the mind involving discrimination and the proper use of knowledge and skills.

The various contributors to *The Craft of Surgery* describe and discuss techniques they personally have developed, or tested and modified, which they know will reduce complication and failure rates in their particular specialties. Great latitude has been given each author to present what he believes most important. Thus, surgical aftercare and other matters that are not strictly surgical procedures are discussed by some of the authors when they have special pertinence to the success of a designated procedure. Deliberately, Dr. Cooper has avoided rigid editing of the chapters into a single uniform structure.

Certain techniques, while ideal in the hands of those who use them regularly,

Foreword to the First Edition

may in some instances prove troublesome in the hands of others. The reader is therefore enjoined to use appropriate judgment and discrimination in reviewing and adopting the recommendations of the various authors.

Even limited surgical experience soon makes it obvious that there is usually no single immutable answer to a given surgical problem. If such were the case, the teaching of surgery would be greatly simplified. Then we might easily learn our manual skills by rote. There is nothing stereotyped in the presentations in *The Craft of Surgery*. Rather, one is constantly impressed by the versatility and finesse of the contributors.

The fare is varied. Many surgical procedures well known to our predecessors are covered from the point of view of modern concepts of these operations, as well as most of the newer fields of surgery unknown even to surgeons of only a generation ago. For example, closed and open cardiac surgery, surgery of the major vessels, extended radical procedures for malignant disease, and new methods of treatment for congenital and acquired lesions of the digestive and urinary tracts are discussed by acknowledged experts.

The craftsmanship of the surgeon contributors is equaled in the fine medical illustrations, which are of uniformly high quality. The variety of styles reflects the variety of the national origins of the artists. In fact, the visual treatment is, in itself, a panorama of surgical technique.

Not to be lightly scanned, these volumes will unfold broad vistas of stimulating experiences to both the surgeon in training and the master of our Craft of Surgery.

Preface to the Second Edition

THE DECISION to bring out a second edition of *The Craft of Surgery* provided a welcome opportunity to revise and expand it. Impressed by the authoritativeness, lucid presentation, and practicality of the material in the first edition, many trainees and surgeons in practice expressed a desire that comparable material on a variety of other surgical subjects be included.

On the basis of their requests, the original sections have been substantially expanded by the addition of chapters on the "artery first" technique of pulmonary resection, thoracic and abdominal trauma, transcervical thymectomy, pedicle flaps, the deltoid flap procedure for cancers of the hypopharynx and cervical esophagus, popliteal aneurysm, acute vascular occlusion, myocardial revascularization, cardiovascular injuries, transplantation of the heart and the kidneys, urinary incontinence, open prostatectomy, the preperitoneal approach and the iliopubic tract repair of groin hernias, gastrointestinal abdominal fistula, surgery of the small bowel, vermiform appendix, and female adnexa, anorectal surgery, and extended amputation surgery.

Two new sections have been included, covering the major operative approaches to important and common problems in neurosurgery and orthopedic surgery. Some of the operative techniques presented have not heretofore been described in standard texts. These sections should not only add to the armamentarium of specialists in the two fields, but should be valuable to the "complete surgeon" as well.

Contributors to the first edition carefully reviewed their chapters before re-submitting them for publication in the second edition. Often, only minor revision was needed. Some authors, however, chose to rewrite their chapters; others supplied new illustrations. Occasional duplications of material have been remedied by omitting certain chapters of the first edition and combining others.

The abundance of new material made it desirable to publish the second edition in three volumes instead of two. The table of contents and the index in each volume cover all three volumes.

Again I express my gratitude to the contributing authors, whose presentations reflect so successfully the purpose and distinguishing characteristics of *The Craft of Surgery* set forth in the preface to the first edition. I also wish to thank the talented illustrators for their valuable contribution to the usefulness of the work.

Preface to the Second Edition

It gives me special pleasure to acknowledge the unstinting assistance I have received from Fred Belliveau, General Manager of the Medical Division of Little, Brown and Company; George D. McKinnon, Managing Editor; and Clifton Gas-kill, Production Manager. I also deeply appreciate the dedication and skills that Margaret F. Mutch, a former member of the Medical Division, offered to both editions of *The Craft of Surgery* as copy editor and colleague.

PHILIP COOPER, M.D.

Preface to the First Edition

CONVENTIONAL TEXTS on surgery present in narrative or outline form the various steps recommended for the performance of operative procedures. The methods described are those most fully established and already accepted by the majority of surgeons.

But many practitioners have felt the need for a text that would assemble, describe, and stress those refinements of technique and methods which have proved of especial value in the handling of tissues, in the exposure of certain organs or body regions, and in the completion of operations in the most expeditious manner possible. The desired text would also present discussions on the clinical and operative findings that influence the surgeon's judgment in deciding on the type and the extent of surgery for a particular problem.

The Craft of Surgery is designed to meet this need. Descriptions and discussions of techniques which eminent surgeons are currently using in the performance of surgical operations form its content. Many of those techniques, developed by experience or acquired from distinguished teachers, are not readily available in the literature. Some of them have been taught orally only, often as part of the running commentary of the surgeon during operations, and therefore have benefited chiefly surgeons who have trained at or who visit the institutions where these special techniques are practiced. I have long felt that these distinctive and valuable techniques should be recorded and described in adequate detail and be made available to all surgical practitioners and to all in surgical training.

Each contributor has prepared his material with the overall plan and purpose of the book in mind, but essentially according to his own style. For this reason, in the chapters that follow there is considerable variation in the emphasis placed on manual skills, on surgical judgment in the operating room, and on other topics. Naturally, stress on some points has been influenced also by the nature of the subject under discussion. For example, the technical aspects of pancreatic surgery are presented in far greater detail than those of colonic surgery, since the latter has been more fully treated in many texts and is basically not excessively complex, whereas description of the important technical skills involved in pancreatic surgery could well bear repetition and further elaboration. The chapters are grouped by specific tissues, organs, or regions as in conventional texts, but present refinements

Preface to the First Edition

of technique rather than the standard steps followed in the performance of the particular operations considered.

The procedures detailed here did not necessarily originate with the contributing authors. Some are original, but in most cases the techniques described represent the cumulative efforts and ideas of many people. Nevertheless, each chapter does vividly reflect the approach of the contributor himself. For that reason, extensive bibliography seemed superfluous, and references for a chapter were limited to a brief list of the author's recommendations for the most profitable review of the subject.

In recent years, the *craft* of surgery has been relegated to a position of lesser importance in the training of surgeons, but the time has come, I strongly believe, to re-emphasize it, and also to recognize that the manual dexterity necessary for the skillful execution of surgical procedures can be acquired only by conscientious effort and practice. Our current training programs rightly include instruction in the basic sciences, in preoperative and postoperative care, and in the fundamentals of medical practice, but a more thorough program should, in its more advanced phases, emphasize the craft of surgery as well. The goal in gaining greater technical ability and in further developing surgical judgment is the performance of operations that are more appropriate, less traumatic to tissue, more expeditious, and safer. It is my hope, and the hope of all the other authors, that these volumes will contribute to the reader's efforts to reach that goal.

I wish to express my personal gratitude to the many contributors for their enthusiastic cooperation and for the great care, thought, and effort they put into the planning and design of their material so that the book might best fulfill its aim; to the talented illustrators who worked closely with the authors; and finally to Fred Belliveau, George D. McKinnon, Clifton Gaskill, Margaret F. Mutch, and other members of the Medical Book Department of Little, Brown and Company, for their determination to produce a book whose format would project to best advantage the variety of the material in the individual chapters.

PHILIP COOPER, M.D.

Contributing Authors

Herbert D. Adams, M.D.

*Staff Member, Lahey Clinic Foundation, Boston, Massachusetts
Surgeon, New England Baptist Hospital and New England Deaconess Hospital, Boston*

CHAPTER 11

Ralph D. Alley, M.D.

*Clinical Professor of Thoracic Surgery, Albany Medical College, Albany, New York
Attending Thoracic Surgeon, Albany Medical Center Hospital and St. Peter's Hospital,
Albany*

CHAPTERS 2, 17, 55

Thomas G. Baffes, M.D.

*Professor of Surgery, Chicago Medical School, Chicago, Illinois
Department of Surgery, Mount Sinai Medical Center and Children's Hospital, Chicago*

CHAPTER 53

Vahram Y. Bakamjian, M.D.

*Assistant Research Professor, Department of Surgery, State University of New York at
Buffalo School of Medicine, Buffalo, New York*

*Associate Chief, Department of Head and Neck and Reconstructive Surgery, Roswell
Park Memorial Institute, Buffalo*

CHAPTER 34

William O. Barnett, M.D.

*Professor of Surgery, University of Mississippi Medical Center, Jackson, Mississippi
Attending Surgeon, Hospital of the University of Mississippi, Jackson*

CHAPTER 84

John M. Beal, M.D.

*Professor and Chairman, Department of Surgery, Northwestern University Medical
School, Chicago, Illinois*

*Chief, Division of Surgery, Chicago Wesley Memorial Hospital and Passavant Memorial
Hospital, Chicago*

CHAPTER 89

Contributing Authors

Arthur C. Beall, Jr., M.D.

Associate Professor of Surgery, Baylor University College of Medicine, Houston, Texas
Associate Attending Surgeon, Methodist Hospital, Houston

CHAPTER 56

Jerrold M. Becker, M.D.

Associate Clinical Professor of Surgery, Mount Sinai School of Medicine, New York, New York

Associate Attending Surgeon in Charge of Division of Pediatric Surgery, Mount Sinai Hospital, New York

CHAPTERS 129, 130

William H. Bickel, M.D.

Professor of Orthopedic Surgery, Mayo Graduate School of Medicine, University of Minnesota (Rochester), Rochester, Minnesota

Senior Consultant, Department of Orthopedics, Mayo Clinic, Rochester

CHAPTER 110

Alan G. Birtch, M.D.

Assistant Professor, Department of Surgery, Harvard Medical School, Boston, Massachusetts

Associate in Surgery, Peter Bent Brigham Hospital, Boston

CHAPTER 122

B. Marden Black, M.D.

Professor of Surgery, Mayo Graduate School of Medicine, University of Minnesota (Rochester), Rochester, Minnesota

Consultant, Department of Surgery, Mayo Clinic, Rochester

CHAPTER 12

Robert D. Bloodwell, M.D.

Assistant Professor of Surgery, Baylor University College of Medicine, Houston, Texas
Consultant, Cardiovascular Surgery, Texas Children's Hospital, Houston

CHAPTER 50

David P. Boyd, M.D.

Chairman, Department of Thoracic Surgery, Lahey Clinic Foundation, Boston, Massachusetts

Surgeon, General and Thoracic Surgery, New England Baptist Hospital and New England Deaconess Hospital, Boston

CHAPTERS 26, 52

Ralph R. Braund, M.D.

Associate Professor of Surgery, University of Tennessee College of Medicine, Memphis, Tennessee

Consultant, St. Joseph's Hospital, Baptist Hospital, Le Bonheur Children's Hospital, Methodist Hospital, Memphis

CHAPTER 7

Eugene M. Bricker, M.D.

Professor of Clinical Surgery, Washington University School of Medicine, St. Louis,
Missouri
Assistant Surgeon, Barnes Hospital, St. Louis

CHAPTER 119

Bradford Cannon, M.D.

Associate Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts
Visiting Surgeon, Massachusetts General Hospital, Boston

CHAPTER 15

†J. Maxwell Chamberlain, M.D.

Late Associate Clinical Professor of Surgery, Columbia University College of Physicians
and Surgeons, New York, New York

CHAPTER 21

Charles G. Child, 3rd, M.D.

Professor of Surgery and Chairman of the Department, University of Michigan Medical
School, Ann Arbor, Michigan

Professor of Surgery and Chairman of the Department, University Hospital, Ann Arbor

CHAPTER 99

O. Theron Clagett, M.D.

Professor of Surgery, Mayo Graduate School of Medicine, University of Minnesota
(Rochester), Rochester, Minnesota

Consultant, Section of Thoracic, Cardiovascular and General Surgery, Mayo Clinic,
Rochester

CHAPTERS 30, 40

George H. A. Clowes, Jr., M.D.

Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts
Visiting Surgeon, Fifth (Harvard) Surgical Service, Boston City Hospital, Boston

CHAPTER 35

Edwin W. Cocke, Jr., M.D.

Associate Clinical Professor of Otolaryngology and Maxillofacial Surgery, University of
Tennessee College of Medicine, Memphis, Tennessee

Active Staff, Surgery, Baptist Memorial Hospital, Memphis

CHAPTER 7

Isidore Cohn, Jr., M.D.

Professor and Chairman, Department of Surgery, Louisiana State University School of
Medicine, New Orleans, Louisiana

Senior Visiting Surgeon, Surgeon-in-Chief, Charity Hospital of Louisiana at New Orleans

CHAPTER 86

† Deceased.

Contributing Authors

Bentley P. Colcock, M.D.

Staff Member, *Lahey Clinic Foundation*, Boston, Massachusetts
Associate Clinical Professor of Surgery, *Boston University School of Medicine*, Boston
Surgeon, *New England Baptist Hospital* and *New England Deaconess Hospital*, Boston

CHAPTER 9

John J. Collins, Jr., M.D.

Clinical Instructor in Surgery, *Harvard Medical School*, Boston, Massachusetts
Chief, *Thoracic and Cardiac Surgery*, *Peter Bent Brigham Hospital*, Boston

CHAPTER 49

John J. Conley, M.D.

Clinical Professor of Otolaryngology, *Columbia University College of Physicians and Surgeons*, New York, New York
Chief, *Head and Neck Surgery*, *St. Vincent's Hospital* and *Columbia-Presbyterian Medical Center*, New York

CHAPTER 5

†Herbert Conway, M.D.

Late Clinical Professor of Surgery, *Cornell University Medical College*, New York, New York

CHAPTER 13

Denton A. Cooley, M.D.

Surgeon-in-Chief, *Texas Heart Institute of St. Luke's Episcopal Hospital and Texas Children's Hospital*, Houston, Texas
Chief, *Cardiovascular Surgery*, *Texas Children's Hospital*, Houston
Consultant, *Cardiovascular Surgery*, *St. Luke's Episcopal Hospital*, Houston

CHAPTERS 45, 50

Philip Cooper, M.D.

Professor of Clinical Surgery, *Mount Sinai School of Medicine*, New York, New York
Clinical Professor of Surgery, *Albert Einstein College of Medicine*, Bronx
Chief of Surgical Services, *Veterans Administration Hospital*, Bronx
Consultant in Surgery, *Hospital for Special Surgery*, New York

CHAPTERS 1, 3, 67, 72, 82

Alvin M. Cotlar, M.D.

Assistant Clinical Professor of Surgery, *Louisiana State University School of Medicine*, New Orleans, Louisiana
Visiting Surgeon, *Louisiana State University Surgical Service*, *Charity Hospital of Louisiana at New Orleans*

CHAPTER 86

† Deceased.

Mark B. Coventry, M.D.

Professor of Orthopedic Surgery, Mayo Graduate School of Medicine, University of Minnesota (Rochester), Rochester, Minnesota

Consultant and Chairman of Department of Orthopedics, Mayo Clinic, Rochester

CHAPTER 147

George Crile, Jr., M.D.

Senior Consultant, Department of General Surgery, Cleveland Clinic Hospital, Cleveland, Ohio

CHAPTER 10

Clyde E. Culp, M.D.

Instructor in Proctology, Mayo Graduate School of Medicine, University of Minnesota (Rochester), Rochester, Minnesota

Consultant, Section of Proctologic Surgery, Mayo Clinic, Rochester

CHAPTER 98

Leo M. Davidoff, M.D.

Professor Emeritus, Neurosurgery, Albert Einstein College of Medicine, Bronx, New York

Consultant Neurosurgeon, Affiliated Hospitals, Albert Einstein College of Medicine, Bronx

CHAPTER 140

Michael E. De Bakey, M.D.

President, and Professor and Chairman, Department of Surgery, Baylor University College of Medicine, Houston, Texas

Director, Cardiovascular Research and Training Center, Methodist Hospital, Houston

CHAPTER 56

Ralph A. Deterling, Jr., M.D.

Professor and Chairman, Department of Surgery, Tufts University School of Medicine, Boston, Massachusetts

Director of the First (Tufts) Surgical Service, Boston City Hospital, Boston

Surgeon-in-Chief, New England Center Hospital, Boston

CHAPTER 60

Gordon A. Donaldson, M.D.

Associate Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts

Visiting Surgeon, Massachusetts General Hospital, Boston

CHAPTER 91

Lester R. Dragstedt, M.D.

Research Professor of Surgery and Professor of Physiology, University of Florida College of Medicine, Gainesville, Florida

CHAPTER 76

Contributing Authors

Charles G. Drake, M.D.

Professor and Chairman, Department of Clinical Neurological Sciences, University of Western Ontario Faculty of Medicine, London, Ontario, Canada

Professor and Chairman, Department of Clinical Neurological Sciences, Victoria Hospital, London, Ontario

CHAPTERS 136, 139

James C. Drye, M.D.

Professor of Surgery, University of Louisville School of Medicine, Louisville, Kentucky

Chief of Surgery (West Division), Louisville General Hospital, Louisville

CHAPTER 68

Donald B. Effler, M.D.

Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation, Cleveland, Ohio

CHAPTERS 48, 51

Rene G. Favaloro, M.D.

Department of Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation, Cleveland, Ohio

CHAPTER 51

John H. Fisher, M.D.

Associate Professor of Surgery (Pediatric), Tufts University School of Medicine, Boston, Massachusetts

Chief of Pediatric Surgery, New England Medical Center Hospitals, Boston

CHAPTER 132

Lloyd D. Flint, M.D.

Staff Member, Lahey Clinic Foundation, Boston, Massachusetts

Urologic Surgeon, New England Baptist Hospital and New England Deaconess Hospital, Boston

CHAPTER 123

Thomas J. Fogarty, M.D.

Assistant Professor, Department of Surgery, Stanford University School of Medicine, Stanford, California

Assistant Professor, Department of Surgery, Stanford University Hospital, Stanford

CHAPTER 61

Kenneth C. Francis, M.D.

Professor of Clinical Orthopedic Surgery, New York University School of Medicine, New York, New York

Attending Orthopedic Surgeon, University Hospital, New York University Medical Center, New York

CHAPTER 150

Albert Frankel, M.D.

Assistant Professor of Surgery, Mount Sinai School of Medicine, New York, New York
Assistant Attending Surgeon, Mount Sinai Hospital, New York

CHAPTER 41

Jaime L. Fridman, M.D.

Assistant Clinical Professor in Pediatrics, Chicago Medical School, Chicago, Illinois
Attending Surgeon (Pediatrics), Mount Sinai Hospital and Lutheran General Hospital,
Park Ridge

CHAPTER 53

† John H. Garlock, M.D.

Late Clinical Professor of Surgery, Emeritus, Columbia University College of Physicians
and Surgeons, New York, New York

CHAPTERS 31, 85, 93

Dan Gavrilu, M.D.

Chirurg primar, Asistent universitar, Spitalul "Carol Davilla," Bucharest, Rumania

CHAPTER 36

Leslie W. Gleadell, M.D., F.R.A.C.S.

Consultant Gynecological Surgeon, Royal Melbourne Hospital, University of Melbourne,
Melbourne, Australia

CHAPTER 96

Frank Glenn, M.D.

Professor of Surgery, Emeritus, Cornell University Medical College, New York, New York
Consultant in Surgery, New York Hospital, New York

CHAPTER 74

John C. Goligher, Ch.M., F.R.C.S.

Professor and Head, Department of Surgery, University of Leeds, Leeds, England
Surgeon, General Infirmary, Leeds

CHAPTER 94

Edmund N. Goodman, M.D.

Associate Clinical Professor of Surgery, Columbia University College of Physicians and
Surgeons, New York, New York
Associate Attending Surgeon, Babies Hospital and Presbyterian Hospital, New York

CHAPTER 80

† Deceased.

Contributing Authors

Willard E. Goodwin, M.D.

Professor of Surgery (Urology), University of California at Los Angeles School of Medicine, Los Angeles, California

Chief, Urology, University of California Medical Center and Wadsworth Veterans Administration Hospital, Los Angeles

CHAPTERS 114, 115, 116

Thomas H. Green, Jr., M.D.

Associate Clinical Professor of Gynecology, Harvard Medical School, Boston, Massachusetts

Associate Visiting Surgeon, Massachusetts General Hospital, Boston

CHAPTER 118

Henry B. Gregorie, M.D.

Clinical Assistant Professor of Surgery, Medical College of South Carolina, Charleston, South Carolina

Staff, General and Thoracic Surgery, Roper Hospital and St. Francis Hospital, Charleston

CHAPTER 35

Charles A. Griffith, M.D.

Clinical Associate Professor of Surgery, University of Washington School of Medicine, Seattle, Washington

CHAPTER 77

Elisha S. Gurdjian, M.D.

Professor and Chairman, Department of Neurosurgery, Wayne State University School of Medicine, Detroit, Michigan

Consultant in Neurosurgery, Grace Hospital, Detroit

CHAPTER 133

David V. Habig, M.D.

Professor of Surgery, Columbia University College of Physicians and Surgeons, New York, New York

Attending Surgeon, Presbyterian Hospital, New York

CHAPTER 19

Grady L. Hallman, M.D.

Clinical Associate Professor, Department of Surgery, Baylor University College of Medicine, Houston, Texas

Attending Surgeon, Cardiovascular Surgery, Texas Heart Institute of St. Luke's Episcopal Hospital and Texas Children's Hospital, Houston

CHAPTERS 45, 50

C. Rollins Hanlon, M.D.

Professor of Surgery, Northwestern University Medical School, Chicago, Illinois
Director, American College of Surgeons
Consultant in Surgery, Veterans Administration Research Hospital, Chicago

CHAPTER 54

Dwight E. Harken, M.D.

Clinical Professor of Surgery, Harvard Medical School, Boston, Massachusetts

CHAPTER 49

Charles C. Harrold, M.D.

Instructor of Surgery, Cornell University Medical College, New York, New York
Attending Surgeon, Chief of Head and Neck Service, Roosevelt Hospital, New York

CHAPTER 6

J. Paul Harvey, Jr., M.D.

Professor of Surgery (Orthopedics), University of Southern California School of Medicine, Los Angeles, California
Director of Department of Orthopedics, Los Angeles County—University of Southern California Medical Center, Los Angeles

CHAPTER 148

Edward S. R. Hughes, M.D., F.R.A.C.S.

Surgeon, Royal Melbourne Hospital, University of Melbourne, Melbourne, Australia

CHAPTER 96¹

Richard K. Hughes, M.D.

Associate Professor of Surgery and Chairman, Division of Thoracic and Cardiovascular Surgery, University of Utah College of Medicine, Salt Lake City, Utah
Chairman, Division of Thoracic and Cardiovascular Surgery, University of Utah Medical Center, Salt Lake City

CHAPTER 18

Alan H. Hunt, D.M., M.Ch., F.R.C.S.

Professor, Royal College of Surgeons of England, London, England
Senior Surgeon, St. Bartholomew's Hospital and Royal Marsden Hospital, London

CHAPTER 121

Allan E. Inglis, M.D.

Clinical Associate Professor of Surgery (Orthopedics), Cornell University Medical College, New York, New York
Associate Attending Surgeon (Orthopedics), New York Hospital and Hospital for Special Surgery

CHAPTER 149