Editor

Josef E. Fischer, MD
FRCS(E)HON, MD(HON)
William V. McDermott Professor of Surgery Harvard Medical School
Christian R. Holmes Professor of Surgery and Chair Department of Surgery
University of Cincinnati College of Medicine, Emeritus Chair, Department of Surgery
Beth Israel Deaconess Medical Center, Emeritus
Boston, Massachusetts

Assistant Editors

V. Suzanne Klimberg, MD
Professor of Surgery and Pathology
Department of Surgery
University of Arkansas for Medical Sciences
Muriel Balsam Kahn Chair in Breast Surgical Oncology
Director of Breast Cancer Program
Winthrop P. Rockefeller Cancer Institute
Little Rock, Arkansas

Steven D. Schwartzberg, MD
Associate Professor of Surgery
Harvard Medical School
Chief of Surgery
Cambridge Health Alliance
Cambridge, Massachusetts

Kirby I. Bland, MD
Fay Fletcher Kerner Professor and Chairman
Department of Surgery
University of Alabama at Birmingham School of Medicine
Surgeon-in-Chief
University Hospital
Senior Advisor to the Director UAB Comprehensive Cancer Center
Birmingham, Alabama

Associate Editors

Daniel B. Jones, MD, MS, FACS
Professor in Surgery
Harvard Medical School
Vice Chair of Surgery
Office of Technology and Innovation
Chief, Minimally Invasive Surgical Services
Beth Israel Deaconess Medical Center
Boston, Massachusetts

Frank B. Pomposelli, MD
Professor of Surgery
Harvard Medical School
Chief, Vascular and Endovascular Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts

Gilbert R. Upchurch Jr. MD
Chief of Vascular and Endovascular Surgery
William H. Muller, Jr. Professor of Surgery
University of Virginia
Charlottesville, Virginia
To Karen
Erich and Halle
Alexandra and Peter

and

The late Dr. Howard I. Down
Contributors

Naji N. Abumrad MD, FACS
Professor and Chair
Department of Surgery
Vanderbilt University School of Medicine
Nashville, Tennessee

J. Kyle Anderson, MD
Assistant Professor
Department of Urology
University of Minnesota and Veterans Affairs Medical Center
Minneapolis, Minnesota

Hans G. Beger, MD, FACS
Emeritus Professor of Surgery
Department of General Surgery
University of Ulm
Ulm, Federal Republic of Germany

David B. Adams, MD
Professor and Chief
Division of Gastrointestinal and Laparoscopic Surgery
Co-Director, Digestive Disease Center
Medical University of South Carolina
Charleston, South Carolina

Victoria Ardlies, MD
Department of General Surgery
Hospital Italiano de Buenos Aires
Buenos Aires, Argentina

Michael Belkin, MD
Professor
Department of Surgery
Harvard Medical School
Chief of Vascular and Endovascular Surgery
Brigham and Women's Hospital
Boston, Massachusetts

Muneeb Ahmed, MD
Interventional Radiologist
Beth Israel Deaconess Medical Center
Assistant Professor of Radiology
Harvard Medical School
Boston, Massachusetts

Frank R. Arko, MD
Chief
Department of Endovascular Surgery
Associate Professor
Division of Vascular & Endovascular Surgery
Department of Surgery
University of Texas Southwestern Medical Center
Dallas, Texas

Robert Bendavid, MD
Advisory Council Member
American Hernia Society
Haifa, Israel

Victoria Ardiles, MD
Department of General Surgery
Hospital Italiano de Buenos Aires
Buenos Aires, Argentina

Shalini Arora, MD
Surgeon
Department of Medicine
John H. Stroger, Jr Hospital of Cook County
Chicago, Illinois

Robert W. Bailey, MD
Department of Surgery
Mount Sinai Medical Center
Miami, Florida

Sanjay P. Bagaria, MD
Departments of General Surgery and Breast Clinic
Mayo Clinic Hospital
Jacksonville, Florida

Chad G. Ball, MD, MSC, FRCSC
Assistant Professor
Department of Surgery
University of Calgary
Calgary, Alberta, Canada

Parag Bhanot, MD
Assistant Professor of Surgery
Georgetown University School of Medicine
Attending Surgeon
Georgetown University Hospital
Washington, DC

J. Wesley Alexander, MD, ScD
Professor Emeritus
Department of Surgery
University of Cincinnati
Cincinnati, Ohio

Hans G. Beger, MD, FACS
Emeritus Professor of Surgery
Department of General Surgery
University of Ulm
Ulm, Federal Republic of Germany

Mohamad E. Allaf, MD
Associate Professor of Urology
Brady Urological Institute
Johns Hopkins Hospital
Baltimore, Maryland

Steve Beningfield, MD, MBChB, FFRad(D)SA
Chief Specialist and Head of Division Radiology Department
Groote Schuur Hospital and University of Cape Town
Western Cape, South Africa

Robert J. Allen, Sr., MD, FACS
New York University Langone Medical Center
New York, New York

Parag Bhanot, MD
Assistant Professor of Surgery
Georgetown University School of Medicine
Attending Surgeon
Georgetown University Hospital
Washington, DC

Waddah B. Al-Refaie, MD
Department of Surgery
The University of Minnesota and Minneapolis VA Medical Center
Minneapolis, Minnesota

Sanjay P. Bagaria, MD
Departments of General Surgery and Breast Clinic
Mayo Clinic Hospital
Jacksonville, Florida

Kirby L. Bland, MD
Fay Fletcher Kerner Professor and Chairman
Department of Surgery
University of Alabama at Birmingham School of Medicine
Syring-in-Chief
University Hospital
Senior Advisor to the Director UAB Comprehensive Cancer Center
Birmingham, Alabama

Parvis K. Amid, MD
Clinical Professor of Surgery
Department of Surgery
University of California
Attending Staff
Department of Surgery
Ronald Reagan Hospital/UCLA Medical Center
Los Angeles, California

Maraya Altuwaijri, MD, RPVI
OC Vein Care
Newport Beach, California

Kirby L. Bland, MD
Fay Fletcher Kerner Professor and Chairman
Department of Surgery
University of Alabama at Birmingham School of Medicine
Syring-in-Chief
University Hospital
Senior Advisor to the Director UAB Comprehensive Cancer Center
Birmingham, Alabama
Contributors

Isaac A. Bohannon, MD  
Department of Surgery  
Division of Otolaryngology-Head and Neck Surgery  
University of Alabama at Birmingham  
Birmingham, Alabama

Richard D. Branson, MS, RRT  
Professor of Surgery  
Department of Surgery  
University of Cincinnati  
Cincinnati, Ohio

Igal Breitman, MD  
Instructor  
Department of Surgery  
Vanderbilt University School of Medicine  
Nashville, Tennessee

Murray F. Brennan, MD  
Professor  
Department of Surgery  
Weill Cornell Medical College  
Attending Surgeon  
Memorial Sloan-Kettering Cancer Center  
New York, New York

Stacy A. Brethauer, MD  
Associate Professor of Surgery  
Cleveland Clinic Lerner College of Medicine  
Staff Surgeon  
Bariatric and Metabolic Institute  
Cleveland Clinic  
Cleveland, Ohio

David Charles Brewster, MD  
Clinical Professor of Surgery  
Department of Surgery  
Harvard Medical School  
Senior Surgeon  
Division of Vascular and Endovascular Surgery  
Massachusetts General Hospital  
Boston, Massachusetts

L. D. Britt, MD, MPH, FACS  
Brickhouse Professor and Chairman  
Department of Surgery  
Eastern Virginia Medical School  
Norfolk, Virginia

I. Michael Brunt, MD  
Professor  
Department of Surgery  
Washington University School of Medicine  
Barnes-Jewish Hospital  
St. Louis, Missouri

Henry Buchwald, MD, PhD  
Professor  
Department of Surgery  
University of Minnesota  
Minneapolis, Minnesota

Rudolf Bumm, MD  
Professor of Surgery  
Chief, Department of Surgery  
Klinik Weilheim  
Germany

Ronald W. Busuttil, MD PhD  
Distinguished Professor and Executive Chairman of Surgery  
Chief  
Department of Surgery  
Division of Liver and Pancreas Transplantation  
Dumont-UCLA Transplant Center  
David Geffen School of Medicine at UCLA  
Los Angeles, CA

Jeffrey Anthony Cadeddu, MD  
Professor  
Department of Urology  
University of Texas Southwestern Medical Center  
Dallas, Texas

Casey M. Calkins, MD  
Associate Professor of Pediatric Surgery  
Department of Surgery  
The Medical College of Wisconsin  
Attending Surgeon  
General Pediatric and Thoracic Surgery  
The Children’s Hospital of Wisconsin  
Milwaukee, Wisconsin

Richard Paul Cambria, MD  
Professor of Surgery  
Department of Vascular and Endovascular Surgery  
Harvard Medical School  
Chief of Vascular and Endovascular Surgery  
Massachusetts General Hospital  
Boston, Massachusetts

Kenneth L. Campbell, MD  
Consultant Colorectal Surgeon  
University of Dundee  
Scotland

Jeremy W. Cannon, MD, SM  
Lt. Col, USAF, MC  
Assistant Professor of Surgery  
Uniformed Services University of the Health Sciences  
Bethesda, Maryland  
Staff Surgeon  
Division of Trauma and Acute Care Surgery  
Brooke Army Medical Center  
Ft. Sam Houston, Texas

Tobias Carling, MD, PhD  
Assistant Professor of Surgery  
Department of Surgery  
Yale University School of Medicine  
New Haven, Connecticut

Denise Carneiro-Pla, MD  
Associate Professor  
Department of Surgery  
Medical University of South Carolina  
Charleston, South Carolina

William R. Carroll, MD  
George W. Barber Jr. Professor of Surgery  
The University of Alabama at Birmingham  
Division of Otolaryngology  
University of Alabama Hospitals  
Birmingham, Alabama

Paul F. Castellanos, MD, FCCP  
Associate Professor of Surgery  
Division of Otolaryngology Head and Neck Surgery  
University of Alabama at Birmingham  
Birmingham, Alabama

Robert J. Cerfolio, MD  
Department of Cardiothoracic Surgery  
University of Alabama at Birmingham  
Birmingham, Alabama

Clark Chen, MD, PhD  
Instructor  
Department of Surgery  
Director, Clinical Neuro-Oncology  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Constance M. Chen, MD, MPH  
DIEP Flap Breast Reconstruction  
Assistant Clinical Professor  
Plastic and Reconstructive Surgery  
Tulane University  
New Orleans, Louisiana  
Attending Surgeon  
Plastic and Reconstructive Surgery  
Lenox Hill Hospital  
New York Eye and Ear Infirmary  
New York, New York

David C. Chen, MD  
Assistant Clinical Professor  
Department of Surgery  
University of California at Los Angeles  
Los Angeles, California

Herbert Chen, MD  
Professor and Vice-Chairman  
Department of Surgery  
University of Wisconsin  
Chairman, General Surgery  
University of Wisconsin Hospital and Clinics  
Madison, Wisconsin

Yijun Chen, MD  
Department of Medical Oncology  
Buffalo Medical Group, P.C.  
Williamsville, New York

David K.W. Chew, MD  
Division of Vascular and Endovascular Surgery  
Brigham and Women’s Hospital  
Harvard Medical School  
Boston, Massachusetts

Silas M. Chikunguwo, MD, PhD  
Department of Surgery  
Virginia Commonwealth University and School of Medicine  
Richmond, Virginia
Contributors

Georges Decker, MD
Visceral & Thoracic Surgery
Zitha Klinik
Department of Thoracic Surgery
University Hospital Gasthuisberg
Leuven, Belgium

G. Michael Deeb, MD
Section of Cardiac Surgery
University of Michigan Medical School
Ann Arbor, Michigan

Alberto De Hoyos, MD
Director
Center for Robotic and Minimally Invasive Thoracic Surgery
Co-Director
Center for Complex Airway Surgery
Department of Thoracic Surgery
Northwestern Memorial Hospital
Chicago, Illinois

John P. Delany, MD
Chair in Clinical Surgical Oncology
Masonic Cancer Center
University of Minnesota
Minneapolis, Minnesota

Jorge L. de la Torre, MD
Professor and Chief
Division of Plastic Surgery
University of Alabama at Birmingham School of Medicine
Director
Center for Advanced Surgical Aesthetics
Birmingham, Alabama

Paul De Leyn, MD, PhD
Professor of Surgery
Dean of Clinical Clerkship
Faculty of Medicine
Department of Thoracic Surgery
University Hospital Gasthuisberg
Leuven, Belgium

Eric Joel DeMaria, MD
Attending Surgeon
Department of Surgery
Durham Regional Hospital
Duke Health System
Durham, North Carolina

Tom R. DeMeester, MD
Emeritus Professor
Department of Surgery
University of Southern California
Los Angeles, California

Demetrios Demetriades, MD, PhD, FACS
Professor of Surgery
University of Southern California School of Medicine
Director of Trauma, Emergency Surgery, Surgical Intensive Care Unit
Department of Surgery
Los Angeles County and University of Southern California Medical Center
Los Angeles, California

Daniel T. Dempsey, MD
Chief, Department of Gastrointestinal Surgery
Assistant Director
Department of Peri-Operative Services
Hospital of the University of Pennsylvania
Philadelphia, Pennsylvania

Eduardo de Santibañes, DR, MD, PhD
Full Professor in Surgery
Department of Surgery
Universidad ad de Buenos Aires
Chairman General Surgical Service & Liver Transplant Unit
Hospital Italiano
Buenos Aires, Argentina

J. Michael Dixon, MBChB, MD
Professor of Surgery
Consultant Surgeon
University of Edinburgh
Clinical Director of the Edinburgh Breast Unit
Western General Hospital
Edinburgh, Scotland

Eric J. Dozois, MD
Program Director
Department of Colon and Rectal Surgery
Mayo Medical School
Rochester, Minnesota

Roger R. Dozois, MD
Department of Colon and Rectal Surgery
Mayo Clinic
Rochester, Minnesota

Richard L. Drake, PhD, FAA
Director of Anatomy
Professor of Surgery
Cleveland Clinic Lerner College of Medicine
Cleveland, Ohio

Kelli Bullard Dunn, MD
Associate Professor
Department of Surgical Oncology
Roswell Park Cancer Institute
Department of Surgery
University at Buffalo/State University of New York
Buffalo, New York

Philipp Dutkowski, MD
Swiss HPB and Transplantation Center
Department of Surgery
University Hospital Zurich
Switzerland

John Francis Eidt, MD
Professor of Radiology and Surgery
Department of Vascular and Endovascular Surgery
University of Arkansas for Medical Sciences
Little Rock, Arkansas

Jonathan L. Eliason, MD
Assistant Professor of Surgery
Section of Vascular Surgery
Department of Surgery
University of Michigan School of Medicine
Ann Arbor, Michigan

Sean P. Elliott, MD, MS
Associate Professor
Department of Urology
University of Minnesota
Minneapolis, Minnesota

E. Christopher Ellison, MD
Professor and Chair
Department of Surgery
The Ohio State University
Columbus, Ohio

Scott Alan Engum, MD
Professor
Department of Surgery
Indiana University School of Medicine
James Whitcomb Riley Hospital for Children
Indianapolis, Indiana

Mark K. Eskandari, MD
Professor and Chief
Division of Vascular Surgery
Northwestern University Feinberg School of Medicine
Northwestern Memorial Hospital
Chicago, Illinois

N. Joseph Espar, MD, MS, FACS
Harold Wanebo Professor of Surgery
Acting-Chair, Department of Surgery
Director, Adele R. Decof Cancer Center
Chief, Surgical Oncology
Roger Williams Medical Center
Boston University School of Medicine
Providence, Rhode Island

Steve Eubanks, MD, FACS
Director of Academic Surgery
Medical Director of the Institute for Surgical Advancement
Florida Hospital
Orlando, Florida

Douglas Evans, MD
Donald C. Ausman Family Foundation Professor of Surgery and Chairman
Department of Surgery
Medical College of Wisconsin
Milwaukee, Wisconsin

Stephen R. T. Evans, MD
Professor
Department of Surgery
Georgetown University Hospital
Chief Medical Officer
Georgetown University Hospital
Washington, DC

Amy R. Evenson, MD
Instructor
Department of Surgery
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston, Massachusetts

Boston, Massachusetts
Contributors

Salomao Faintuch, MD, MSc
Interventional Radiologist
Beth Israel Deaconess Medical Center
Instructor in Radiology
Harvard Medical School
Boston, Massachusetts

Sheung Tat Fan, MS, MD, PhD, DSc
Chair, Professor of Surgery
Department of Surgery
The University of Hong Kong
Honorary Consultant
Queen Mary Hospital
Hong Kong, China

Victor W. Fazio, MD
Chairman, Colorectal Surgery
Vice-Chairman, Division of Surgery
Cleveland Clinic
Professor of Surgery
Health Science Center
The Ohio State University
Professor of Surgery
Lerner College of Medicine
Case Western Reserve University
Cleveland, Ohio

Robert Joseph Feezor, MD
Assistant Professor
Department of Vascular Surgery and Endovascular Therapy
University of Florida
Gainesville, Florida

David Vincent Feliciano, MD
Professor
Department of Surgery
Mercer University School of Medicine
Medical Center of Central Georgia
Macon, Georgia
Attending Surgeon
Atlanta Medical Center
Atlanta, Georgia

Alessandro Fichera, MD
Associate Professor of Surgery
Department of Surgery
The University of Chicago Medical Center
Chicago, Illinois

George Fielding, MD
Fellow
Royal Australasian College of Surgeons
Royal College of Surgeons
England
Associate Professor of Surgery
New York University School of Medicine
New York, New York

Josef F. Fischer, MD
Mallinckrodt Professor of Surgery
Harvard Medical School;
Chairman, Department of Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts

James W. Fleschman, MD
Chief of the Section of Colon and Rectal Surgery
Department of Surgery
Washington University School of Medicine
Chief of Surgery
Barnes Jewish West County
St. Louis, Missouri

Joe Fix, MD
Professor
Department of Surgery
University of Alabama at Birmingham
School of Medicine
Birmingham, Alabama

W. Dennis Foley, MD
Professor of Radiology
Director of Digital Imaging
Medical College of Wisconsin
Milwaukee, Wisconsin

Yuman Fong, MD
Professor of Surgery
Department of Surgery
Weill-Cornell Medical College
Murray F. Brennan Chair in Surgery
Memorial Sloan-Kettering Cancer Center
New York, New York

Dennis L. Fowler, MD, MPH
Professor of Clinical Surgery
Department of Surgery
Columbia University College of Physicians and Surgeons
Medical Director
Simulation Center
New York Presbyterian Hospital/Columbia
New York, New York

Charles James Fox, MD
Associate Professor
Department of Surgery
Uniformed Services University of the Health Sciences
Attending Surgeon
Walter Reed National Military Medical Center
Bethesda, Maryland

Spiros G. Frangos, MD, MPH, FACS
Associate Professor of Surgery
Trauma & Surgical Critical Care
NYU School of Medicine
New York, New York

Herbert R. Freund, MD
Emeritus Professor
Department of Surgery
Hebrew University Hadassah Medical School
Senior Surgeon
Hadassah University Medical Center
Jerusalem, Israel

Flavio Frigo, MD
Department of General Surgery
Alta Pudovana
Padova, Italy

Arlan F. Fuller, Jr., MD
Clinical Vice President for Oncology
Chief of Gynecologic Oncology
Winchester Hospital Center for Cancer Care
Winchester, Massachusetts

Susan Galianuk, MD
Professor of Surgery
Department of Surgery
University of Louisville
Louisville, Kentucky

Steven S. Gale, MD, FACS
Clinical Assistant Professor of Surgery
Medical College of Ohio at Toledo
Associate Director
Jobst Vascular Center for Vascular Laboratories
Vein Solutions
Toledo, Ohio

Sidhu P. Ganghadaran, MD
Division of Thoracic Surgery and Interventional Pulmonology
Beth Israel Deaconess Medical Center
Harvard Medical School
Boston, Massachusetts

Ian Ganly, MD, PhD, FRCS
Assistant Professor
Department of Otolaryngology
Weill Cornell Medical Center
Assistant Attending
Department of Head and Neck Surgery
Memorial Sloan Kettering Cancer Center
New York, New York

Antonio Garcia-Ruiz, MD
Section Head
Minimally Invasive Surgery
Hospital Central Militar
Mexico City, Mexico

Professor O. James Garden, MD, FRCS, FRCPED, FRACs(Hon), FRCSCan(Hon)
Regius Professor of Clinical Surgery
Clinical Surgery
University of Edinburgh
Royal Infirmary
Edinburgh, United Kingdom

Armando E. Giuliano, MD, FACS
Clinical Professor of Surgery
University of California, Los Angeles
Executive Vice Chair
Department of Surgery
Cedars Sinai Medical Center
Los Angeles, California

John Mario Giurini, DPM
Associate Professor
Department of Surgery
Harvard Medical School
Chief Division of Podiatric Medicine and Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts
Michaëla Ilves, MD  
Division of Vascular and Endovascular Surgery  
University of Texas Southwestern Medical Center at Dallas  
Dallas, Texas

Carlos Eduardo Jacob, MD, PhD  
Department of Gastroenterology  
Digestive Surgery Unit  
University of Sao Paulo Medical School  
Sao Paulo, Brazil

Glenn R. Jacobowitz, MD  
Associate Professor of Surgery  
Department of Surgery  
New York University School of Medicine  
New York, New York

Garth R. Jacobsen, MD  
Department of Surgery  
University of California San Diego Medical Center  
San Diego, California

Jay A. Johannigman, MD  
Professor of Surgery  
Chief, Trauma & Critical Care  
Department of Surgery  
University of Cincinnati  
Cincinnati, Ohio

Daniel B. Jones, MD, MS, FACS  
Professor in Surgery  
Harvard Medical School  
Vice Chair of Surgery  
Office of Technology and Innovation  
Chief, Minimally Invasive Surgical Services  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Stephanie B. Jones, MD  
Associate Professor of Anesthesia  
Harvard Medical School;  
Vice Chair for Education  
Residency Program Director  
Department of Anesthesia, Critical Care and Pain Management  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Ravi Kacker, MD  
Division of Urologic Surgery  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Venkat R. Kalapatapu, MD  
Assistant Professor of Clinical Surgery  
Clinical Practices of the University of Pennsylvania  
University of Pennsylvania College of Medicine  
Philadelphia, Pennsylvania

Jeffrey Kalish, MD  
László N. Tauber Assistant Professor of Surgery  
Department of Surgery  
Boston University School of Medicine  
Director of Endovascular Surgery  
Section of Vascular Surgery  
Boston Medical Center  
Boston, Massachusetts

Burkhard Kasper, MD  
Department of Neurology  
Epilepsy Centre  
University of Erlangen  
Erlangen, Germany

Ekkehard Kasper, MD, PhD  
Co-Director, Brain Tumor Center  
Chief, Section of Neurosurgical Oncology  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Mukta V. Kadare, MD  
Department of Surgery  
University of Chicago Medical Center  
Chicago, Illinois

Yoshifumi Kato, MD, PhD  
Associate Professor  
Pediatric General and Urogenital Surgery  
Juntendo University School of Medicine  
Tokyo, Japan

Louis R. Kavoussi, MD  
Wlautbaum Professor of Urologic Surgery  
Smith Institute for Urology  
North Shore-LIJ School of Medicine of Hofstra University  
Chairman and Senior Vice President  
North Shore-LIJ Health System  
New York, New York

Michael Christopher Kearney, MD  
Division of Urologic Surgery  
Department of Surgery  
Beth Israel Deaconess Medical Center  
Boston, Massachusetts

Michael RB. Keighley, MBBS, FRCS (Edin), FRCS (Eng), MS  
Consultant Surgeon  
Priory Hospital  
Birmingham, West Midlands, United Kingdom

Mark Keldahl, MD  
Department of Vascular Surgery  
Northwestern Memorial Hospital  
Chicago, Illinois

Mark C. Kelley, MD, FACS  
Associate Professor  
Chief  
Division of Surgical Oncology  
Vanderbilt University Medical Center  
Nashville, Tennessee

Edward Kelly, MD  
Assistant Professor  
Department of Surgery  
Harvard Medical School  
Associate Surgeon  
Brigham and Women’s Hospital  
Boston, Massachusetts

Keith A. Kelly, MD  
Scottsdale, Arizona

Eugene P. Kennedy, MD  
Associate Professor  
Department of Surgery  
Thomas Jefferson University  
Philadelphia, Pennsylvania

Jason K. Kim, MD  
Assistant Professor of Surgery  
Department of Surgery  
University of Rochester Medical Center  
Rochester, New York

Young Bae Kim, MD  
Division Director, Division of Gynecologic Oncology  
Department of Obstetrics and Gynecology  
Tufts Medical Center  
Boston, Massachusetts

Masaki Kitajima, MD, PhD, FACS(hon), FRCS(hon), ASA(hon)  
President  
International University of Health and Welfare (IUHW)  
IUHW Mita Hospital  
Minato-ku, Tokyo, Japan

V. Suzanne Klimberg, MD  
Professor of Surgery and Pathology  
Department of Surgery  
University of Arkansas for Medical Sciences  
Muriel Balaam Kahn Chair in Breast Surgical Oncology  
Director of Breast Cancer Program  
Winthrop P. Rockefeller Cancer Institute  
Little Rock, Arkansas

Badrinath R. Konety, MD, MBA  
Professor and Chair  
Department of Urologic Surgery  
University of Minnesota  
Minneapolis, Minnesota

David A. Kooby, MD  
Associate Professor of Surgery  
Division of Surgical Oncology  
Director of Robotic/Minimally Invasive Gastrointestinal Cancer Surgery Program  
Winship Cancer Institute  
Emory University School of Medicine  
Atlanta, Georgia

Jake E. Krige, MB, ChB, MSc, FACS, FRCS, FCS(SA)  
Professor of Surgery  
Department of Surgery  
University of Cape Town Health Sciences Faculty  
Head HPB Unit, Head Surgical Gastroenterology  
Department of Surgical Gastroenterology  
Groote Schuur Hospital  
Cape Town, South Africa

Venkataramu N. Krishnamurthy, MD  
Clinical Associate Professor  
Department of Radiology and Vascular Surgery  
University of Michigan  
Ann Arbor, Michigan
Contributors

James D. Luketich, MD
Professor of Surgery
Chair, Department of Cardiothoracic Surgery
Director, Heart Lung Esophageal Surgery Institute
Chief, Division of Thoracic and Foregut Surgery
Co-Director, Minimally Invasive Surgery Center
University of Pittsburgh Medical Center
Pittsburgh, Pennsylvania

Junji Machi, MD, PhD
Professor
Department of Surgery
University of Hawaii
Honolulu, Hawaii

Robyn A. Macksata, MD
Chief
Department of Vascular Surgery
Veterans Affairs Medical Center
Washington DC

Robert D. Madoff, MD
Professor
Department of Surgery
University of Minnesota
Minneapolis, Minnesota

J. Scott Magnuson, MD
Department of Surgery
Division of Otalaryngology-Head and Neck Surgery
University of Alabama at Birmingham
Birmingham, Alabama

James William Maher, MD
Paul J. Nutter Professor and Chair
Division of General Surgery
Virginia Commonwealth University
Professor of Surgery
Medical College of Virginia Hospitals
Richmond, Virginia

Massimo Malagó, MD, PhD
Professor of Surgery
Royal Free Hospital
Hampstead, London, England

John Christopher Marshall, MD
Professor
Department of Surgery
University of Toronto
Attending Surgeon
Departments of Surgery and Critical Care Medicine
St. Michael’s Hospital
Toronto, Canada

William Marston, MD
Professor and Chief
Division of Vascular Surgery
University of North Carolina School of Medicine
Chapel Hill, North Carolina

Jose M. Martinez, MD
Associate Professor of Surgery
Department of Surgery
University of Miami Health System
Miami, Florida

Viraj A. Master, MD, PhD, FACS
Associate Professor
Department of Urology
Emory University
Attending Surgeon
Grady Memorial Hospital
Emory University Hospital
Atlanta, Georgia

Laura Ellen Matarese, PhD, RD, LDN, FADA, CNCS
Associate Professor
Division of Gastroenterology, Hepatology, and Nutrition
Department of Internal Medicine
Brady School of Medicine
Department of Nutrition Science
East Carolina University
Greenville, North Carolina

Jack W. McAninch, MD
Professor
Department of Urological Surgery
University of California San Francisco
Chief of Urological Surgery
San Francisco General Hospital
San Francisco, California

Jennifer M. McBride, PhD
Assistant Professor of Surgery
Cleveland Clinic Lerner College of Medicine
Cleveland, Ohio

David A. McClusky III, MD
Assistant Professor of Surgery
Department of Surgery
Emory University School of Medicine
Atlanta, Georgia

John B. McCraw, MD
Department of Surgery
University of Mississippi Medical Center
Jackson, Mississippi

James Thomas McPhee, MD
Vascular Surgery Fellow
Department of Vascular and Endovascular Surgery
Harvard Medical School
Brigham and Women’s Hospital
Boston, Massachusetts

Genevieve B. Melton, MD, MA
Assistant Professor, Department of Surgery
Division of Colon and Rectal Surgery
Faculty Fellow, Institute for Health Informatics
University of Minnesota
Minneapolis, Minnesota

W. Scott Melvin, MD
Director, Division of Gastrointestinal Surgery
Department of Surgery
The Ohio State University
Professor of Surgery
Columbus, Ohio

Matthew T. Menard, MD
Instructor
Department of Surgery
Harvard Medical School
Associate Surgeon
Brigham and Women’s Hospital
Boston, Massachusetts

Miguel Angel Mercado, MD
Professor of Surgery
Post-Graduate School of Medicine
Universidad Nacional Autónoma de México
Professor and Chairman
Department of Surgery
Instituto Nacional de Ciencias Médicas y Nutrición “Salvador Zubrín”
Mexico

David W. Mercer, MD
Professor
Division of General Surgery
McLaughlin Professor and Chairman
Department of Surgery
University of Nebraska Medical Center
Omaha, Nebraska

J. Wayne Meredith, MD
Director
Division of Surgical Sciences
Wake Forest School of Medicine
Winston-Salem, North Carolina

Ingrid M. Meszoely, MD
Assistant Professor of Surgery
(Surgical Oncology)
Clinical Director
Vanderbilt Breast Center
VICC Member
Surgical Oncologist
Vanderbilt-Ingram Cancer Center
Nashville, Tennessee

Fabrizio Michelassi, MD
Lewis Afferhury Stimson Professor and Chairman
Department of Surgery
Weil Cornell Medical College
Surgeon-in-Chief
New York Presbyterian Hospital
New York, New York

Mira Milas, MD
Director
Thyroid Center
Cleveland Clinic
Cleveland, Ohio

Miroslav Nikola Milicevic, MD, PhD, FACS
Professor
Department of Surgery
Belgrade School of Medicine
Head, HPB Surgery and Liver Transplant
Clinical Center of Serbia
Belgrade, Serbia
Contributors
Contributors

Arthur Rawlings, MD
Department of Surgery
Ellis Fischel Cancer Center
University of Missouri Health Care
University of Missouri
Columbia, Missouri

John Edward Rectenwald, MD, MS
Associate Professor of Surgery
Department of Surgery
Section of Vascular Surgery
University of Michigan
Ann Arbor, Michigan

Amy B. Reed, MD
Chief, Vascular Surgery
Penn State Heart and Vascular Institute
Penn State College of Medicine
Penn State Hershey Medical Center
Hershey, Pennsylvania

Ari R. Reichstein, MD
Surgeon
University of Wisconsin and Clinics
Madison, Wisconsin

Feza H. Remzi, MD
Chairman
Department of Colorectal Surgery
Digestive Disease Institute
Cleveland Clinic
Cleveland, Ohio

Frederick Rescorla, MD
Lafayette L. Page Professor of Surgery
Director Section of Pediatric Surgery
Surgeon-in-Chief
Baylor Hospital for Children
Indiana University School of Medicine
Indianapolis, Indiana

William O. Richards, MD, FACS
Ingram Professor of Surgical Sciences
Vanderbilt School of Medicine
Director of Laparoendoscopic General Surgery
Medical Director
Center for Surgical Weight Loss
Vanderbilt University Medical Center
Nashville, Tennessee

Richard R. Ricketts, MD
Professor
Department of Surgery
Emory University
Department of Surgery
Children’s Healthcare of Atlanta
Atlanta, Georgia

Paul F. Ridgway, MD, MMEdSc, FRCSI
Associate Professor
Professorial Surgical Unit
University of Dublin, Trinity College
Consultant HPB, Upper GI and General Surgeon
Department of Surgery
Adelaide Meath Hospital Incorporating the National Children’s Hospital
Dublin, Ireland

Bryce R.H. Robinson, MD
Assistant Professor of Surgery
University of Cincinnati
Cincinnati, Ohio

Caron B. Rockman, MD
Associate Professor
Department of Surgery
New York University Medical Center
Attending Surgeon
Department of Vascular Surgery
New York, New York

Eduardo De Jesus Rodriguez, MD, DDS
Associate Professor
Department of Surgery
University of Maryland School of Medicine
Chief, Plastic, Reconstructive and Maxillofacial Surgery
R Adams Cowley Shock Trauma Center
University of Maryland Medical Center
Baltimore, Maryland

Alexander S. Rosemurgy, MD
Surgical Director
Center for Digestive Disorders
Tampa General Hospital
Tampa, Florida

Raul J. Rosenthal, MD, FACS, FASMBS
Professor of Surgery
Chairman
Department of Minimally Invasive Surgery
The Bariatric and Metabolic Institute
Director, General Surgery Residency Program
Director, Fellowship in Minimally Invasive and Bariatric Surgery
Cleveland Clinic Florida
Weston, Florida

David A. Rothenberger, MD
Associate Director for Clinical Affairs
Deputy Chairman and Professor
Department of Surgery

Ornitho P. Roy, MD
Clinical Instructor
Department of Urology
Arthur Smith Institute for Urology:
Clinical Instructor
Department of Urology
Long Island Jewish Medical Center
New Hyde Park, New York

Aaron Ruhalter, MD, FACS
Professor of Anatomy
University of Cincinnati College of Medicine
Executive Director of Medical Education
Johnson & Johnson Endo-Surgery Institute
Cincinnati, Ohio

Karla Russek, MD
Research Professor
Department of Minimally Invasive Surgery
Johnson & Johnson Endo-Surgery Institute
San Antonio, Texas

Robby H. Rutledge, MD, FRCPC
Associate Professor
Faculty of Medicine
Dalhousie University
Radiation Oncologist
Halifax, Nova Scotia, Canada

Frederick C. Ryczewski, MD
Professor of Surgery
Department of Pediatric Surgery
University of Cincinnati
St. Vice President Medical Operations
Cincinnati Childrens Hospital
Cincinnati, Ohio

Jacqueline M. Saito, MD
Assistant Professor of Surgery
Division of Pediatric Surgery
Washington University School of Medicine
Attending Surgeon
Department of Pediatric Surgery
St. Louis Children’s Hospital
St. Louis, Missouri

Atef A. Salam, MD
Professor of Surgery
Department of Surgery
Division of Vascular Surgery
Emory University School of Medicine
Chief, Vascular Service
Atlanta VA Medical Center
Atlanta, Georgia

Rodrigo Sanchez-Claria, MD
Attending
Department of General Surgery
Hospital Italiano de Buenos Aires
Buenos Aires, Argentina

Martin G. Sanda, MD
Associate Professor of Surgery
Department of Surgery
Division of Urology
Harvard Medical School
Beth Israel Deaconess Medical Center
Boston, Massachusetts

Luigi De Santis, MD
Department of Internal Medicine
Stonybrook Medical Center
Levittown, Pennsylvania

Philip R. Schauer, MD
Professor of Surgery
Cleveland Clinic Lerner College of Medicine
Director
Bariatric and Metabolic Institute
Cleveland Clinic
Cleveland, Ohio

Marc Schermerhorn, MD
Associate Professor
Department of Surgery
Harvard Medical School
Chief, Division of Vascular and Endovascular Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts
Contributors

René E. Stoppa, MD
Centre Hospitalier
University of Amiens
Amiens, France

Julianne Stoughton, MD, FACS
Instructor
Department of Surgery
Harvard Medical School
Surgeon
Department of Vascular and Endovascular Surgery
Massachusetts General Hospital
Boston, Massachusetts

Steven Martin Strasberg, MD
Pruett Professor of Surgery
Department of Surgery
Washington University in St. Louis
Barnes-Jewish Hospital
St. Louis, Missouri

Stacey Su, MD
Assistant Professor
Department of Surgery
Division of Thoracic Surgery
University of Pennsylvania
Philadelphia, Pennsylvania

David J. Sugarbaker, MD
Chief
Division of Thoracic Surgery
Brigham and Women's Hospital
Boston, Massachusetts

Timothy M. Sullivan, MD, FACS, FACC
Department of Vascular Surgery
Minneapolis Heart Institute
Abbott Northwestern Hospital
Minneapolis, Minnesota

John David Symbas, MD
Plastic Surgeon
Department of Surgery
Wellstar Kennestone Hospital
Marietta, Georgia

Michael Eric Tarnoff, MD, FACS
Adjunct Associate Professor of Surgery
Department of Surgery
Tufts University School of Medicine
Staff Surgeon
Tufts Medical Center
Boston, Massachusetts

Sumeet S. Teotia, MD
Assistant Professor
Department of Plastic Surgery
University of Texas Southwestern Medical Center
Dallas, Texas

Oreste Terranova, MD
Department of Surgical and Gastroenterological Sciences
Geriatric Surgery Clinic
University of Padua School of Medicine
Padua, Italy

Robert W. Thompson, MD
Departments of Surgery (Section of Vascular Surgery), Radiology, and Cell Biology and Physiology
Washington University School of Medicine and Barnes-Jewish Hospital
St. Louis, Missouri

Gregory M. Tiao, MD
Assistant Professor
Division of Pediatric Surgery
Associate Director
Pediatric Surgery Training Program
Surgical Director
Liver Transplantation
Pediatric Surgeon
Cincinnati Children's Hospital Medical Center
Cincinnati, Ohio

Carlos H. Timaran, MD
Associate Professor of Surgery
Department of Surgery
University of Texas Southwestern Medical Center
Dallas, Texas

Nam T. Tran, MD
Assistant Professor
Division of Vascular and Endovascular Surgery
University of Washington
Attending Vascular Surgeon
Division of Vascular and Endovascular Surgery
Harborview Medical Center
Seattle, Washington

L. William Traverso, MD
Clinical Professor of Surgery
Department of Surgery
University of Washington
Seattle, Washington
Director
Center for Pancreatic Disease
St. Luke's Health System
Boise, Idaho

Donald Dean Trunkey, MD
Professor Emeritus
Department of Surgery
Oregon Health and Sciences University
Portland, Oregon

Shawn Tsuda, MD
Assistant Professor of Surgery
Department of Surgery
University of Nevada School of Medicine
Las Vegas, Nevada

Robert Udelsman, MD, MBA
Professor and Chairman
Department of Surgery
Yale University School of Medicine
Surgeon-in-Chief
Yale-New Haven Hospital
New Haven, Connecticut

Heidi Umphrey, MD
Department of Radiology
University of Alabama at Birmingham
Birmingham, Alabama

Gilbert R. Upchurch Jr., MD
Chief of Vascular and Endovascular Surgery
William H. Muller, Jr. Professor
University of Virginia
Charlottesville, Virginia

Dirk Van Baemdonck, MD, PhD
Department of Thoracic Surgery
University Hospital Gasthuisberg
Leuven, Belgium

Frank C. Vandy, MD
Department of Surgery
Division of Vascular Surgery
University of Michigan Medical School
Ann Arbor, Michigan

Luis O. Vasconez, MD
Professor of Surgery
Plastic Surgery
Vice Chair, Department of Surgery
University of Alabama Medical Center
Birmingham, Alabama

Dionysios K. Veronikis, MD
Chief
Division of Gynecology
Director
Urogynecology and Reconstructive Pelvic Surgery
St. John's Mercy Medical Center
St. Louis, Missouri

Selwyn M. Vickers, MD
Department of Surgery
The University of Minnesota and Minneapolis VAMC
Minneapolis, Minnesota

Gary C. Vitale, MD
Professor of Surgery
Department of Surgery
University of Louisville
Louisville, Kentucky

Guy Russell Voeller, MD
Professor of Surgery
Department of Surgery
University of Tennessee Health Science Center
Memphis, Tennessee

Daniel von Allmen, MD
Professor
Department of Surgery
University of Cincinnati
Director, Division of General Surgery
Cincinnati Children's Hospital
Cincinnati, Ohio

Andrew A. Wagner, MD
Assistant Professor of Surgery/Urology
Department of Surgery
Harvard University
Director of Minimally Invasive Urologic Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts

John C. Wain, MD, FACS
Department of Surgery
Harvard Medical School
Division of Thoracic Surgery
Massachusetts General Hospital
Boston, Massachusetts
Contributors

Brad W. Warner, MD
Jessie L. Ternberg Distinguished Professor of Pediatric Surgery
Department of Surgery
Washington University School of Medicine
Surgeon-in-Chief
Director of Division of Pediatric Surgery
St. Louis Children’s Hospital
St. Louis, Missouri

Jennifer Y. Wang, MD
Department of Surgery
Division of Colon and Rectal Surgery
San Jose Medical Center
San Jose, California

David Ian Watson, MBBS, MD, FRACS
Head of Department
Department of Surgery
Flinders University of South Australia
Head of Oesophagogastric Surgery Unit
Flinders Medical Centre
Bedford Park, South Australia

Julia Wattacheril, MD
Assistant Professor of Medicine
Columbia University School of Medicine
New York, New York

Kaare J. Weber, MD
Department of Surgery
Mount Sinai Medical Center
Mount Sinai School of Medicine
New York, New York

Alejandro Weber-Sanchez, MD
Chief
Department of Surgery
Hospital Angeles Lomas
Huixquilucan, State of Mexico

Jon O. Wee, MD
Co-Director of Minimally InvasiveThoracic Surgery
Division of Thoracic Surgery
Brigham & Women's Hospital
Harvard Medical School
Boston, Massachusetts

Martin Ross Weiser, MD
Associate Professor
Department of Surgery
Weill Cornell Medical School
Associate Member
Memorial Sloan-Kettering Cancer Center
New York, New York

Steven Wexner, MD
Voluntary Professor of Colon, Rectal and General Surgery
Associate Dean for Academic Affairs
Department of Surgery
Florida Atlantic University
Boca Raton, Florida
Chief Academic Officer and Chair
Department of Colorectal Surgery
Cleveland Clinic Florida
Weston, Florida

Bruce G. Wolff, MD
Department of Colon and Rectal Surgery
Mayo Clinic
Rochester, Minnesota

Mark C. Wyers, MD, FACS
Division of Vascular Surgery
Beth Israel Deaconess Medical Center
Boston, Massachusetts

Atsuyuki Yamataka, MD, PhD
Professor and Head
Department of Pediatric General & Urogenital Surgery
Juntendo University School of Medicine
Tokyo, Japan

Richard A. Yeager, MD
Department of Surgery
Portland VA Medical Center
Portland, Oregon

Charles J. Yeo, MD
Samuel D. Gross Professor and Chairman
Department of Surgery
Jefferson Medical College
Philadelphia, Pennsylvania

Jerrold Young, MD, FACS
Voluntary Associate Professor of Surgery
The Daughtry Family Department of Surgery
University of Miami Miller School of Medicine
Miami, Florida

Tonia M. Young-Fadok, MD, MS, FACS, FASCRS
Chair
Division of Colon and Rectal Surgery
Mayo Clinic
Phoenix, Arizona

Herbert J. Zeh III, MD
Division of Surgical Oncology
University of Pittsburgh School of Medicine
Pittsburgh, Pennsylvania

Steven M. Zeitels, MD, FACS
Eugene B. Casey Professor of Laryngeal Surgery
Department of Surgery
Harvard Medical School
Director
Center for Laryngeal Surgery and Voice Rehabilitation
Massachusetts General Hospital
Boston, Massachusetts