

英文影印版

**SABISTON & SPENCER**

胸外科学

**Surgery of  
the  
Chest**

SIXTH EDITION

(第6版)

上册

Volume

**I**

科学出版社  
Harcourt Asia  
W.B.SAUNDERS

英文影印版

# 胸外科学

## Surgery of the Chest

第16版 • 上册

Sixth Edition • Volume 1

David C. Sabiston, Jr., MD

Frank C. Spencer, MD



科学出版社

Harcourt Asia  
W. B. Saunders

2001



David C. Sabiston, Frank C. Spencer: Surgery of the Chest, 6<sup>th</sup> Edition

Copyright © 1999 **Harcourt Publishers Limited**.

Authorized Reprinting by **Science Press**, A division of *China Science Publishing Group*.

All rights reserved. For sale in the People's Republic of China only.

Reprint ISBN 0-8089-2216-5

本书英文影印版由科学出版社——中国科学出版集团核心企业和美国哈克出版集团国际公司合作出版。本版本是最新美国版,惟一获正式授权的完整和无节略的复制版,仅限在中国境内(不包括香港特别行政区和台湾省)出版和标价销售。

未经出版者书面许可,不得以任何方式复制或抄袭本书的任何部分。

版权所有,翻印必究。

北京市版权局版权登记号: 01-2000-2836

#### 图书在版编目(CIP)数据

胸外科学: 第6版: 英文影印版/(美)萨比斯通(Sabiston, D. C.) 主编. —北京: 科学出版社, 2001.1

书名原文: Surgery of the Chest

ISBN 7-03-008823-9

I. 胸… II. 萨… III. 胸腔外科学 IV. R655

中国版本图书馆CIP数据核字(2000)第69922号

#### 注 意

医学是一门不断发展的科学。由于新的研究及临床实践在不断丰富人们的知识,因此在药物使用及治疗方面也在谋求各种变化。本书编者及出版者核对了各种信息来源,并确信本书内容完全符合出版时的标准。然而,鉴于不可避免的人为错误和医学学科的发展,不管是编者、出版者还是其他参与本书出版的工作者均不能保证此书中的内容百分之百正确。因此,他们不能对由此类错误引起的后果负责。

我们提倡读者将本书内容与其他资料进行确证。例如,我们希望读者对他们将要使用的每一种药品的说明书仔细阅读,以确证本书的有关信息是正确的,且推荐的药品用量及禁忌证等没有变化。该建议对新药或非常用药尤为重要。

**科学出版社 出版**

北京东黄城根北街16号

邮政编码:100717

**中国科学院印刷厂 印刷**

科学出版社发行 各地新华书店经销

\*

2001年1月第一版 开本: 889×1194 1/16

2001年1月第一次印刷 印张: 151 1/2

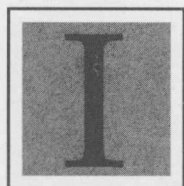
印数: 1—3 000 字数: 5 064 000

**定价: 398.00 元 (上、下册)**

(如有印装质量问题,我社负责调换(科印))

# *Surgery of the Chest*

Volume



SIXTH EDITION

David C. Sabiston, Jr., M.D.

James B. Duke Professor of Surgery  
Duke University School of Medicine  
Chief of Staff

Duke University Medical Center  
Durham, North Carolina

Frank C. Spencer, M.D.

George David Stewart Professor  
Chairman, Department of Surgery  
New York University School of Medicine  
New York, New York



SCIENCE PRESS  
HARCOURT ASIA  
W. B. SAUNDERS



SCIENCE PRESS

*A division of China Science Publishing Group  
16 Donghuangchenggen North Street,  
Beijing 100717  
China*

HARCOURT ASIA PTE.LTD

*A Harcourt Publishers International  
Company  
583 Orchard Road #09-01 Forum  
Singapore 238884*

Distribute in the Mainland China by Science Press,  
16 Donghuangchenggen North Street, Beijing 100717, China.

Copyright © 1999 by W. B. Saunders

All rights reserved. No part of this publication may be reproduced, or transmitted in any form of by any means, electronic, mechanical, including photocopy, recording or any information storage and retrieval system, without permission in writing from the publisher.

Printed in China by HARCOURT ASIA PTE, LTD and SCIENCE PRESS under special arrangement with W. B. Saunders, A Harcourt Health Science Company. This edition is the only authorized complete and unabridged reproduction of the latest American Edition, published and priced for sale in China only, not including Hong Kong SAR and Taiwan.

Unauthorized export of this edition is a violation of the Copyright Act Violation of this Law is subject to Civil and Criminal penalties.

**This Edition First Printed in China in 2001.**

ISBN 7-03-008823-9/R · 604

Reprint ISBN 0-8089-2216-5

Printed in China

# Contributors

---

Alon S. Aharon, M.D.

Department of Surgery Resident, Cardiothoracic Division, University of California at Los Angeles Medical Center, Los Angeles, California  
*Congenital Malformations of the Mitral Valve*

Robert W. Anderson, M.D.

The David C. Sabiston Professor and Chairman, Department of Surgery, Duke University Medical Center; Duke University Hospital, Durham, North Carolina  
*Shock and Circulatory Collapse*

Mark P. Anstadt, M.D.

Resident in Chief in General Surgery, Duke University Medical Center, Durham, North Carolina  
*Assisted Circulation*

Erle H. Austin III, M.D.

Professor of Surgery, University of Louisiana, Department of Surgery; Chief, Pediatric Cardiac Surgery, Kosair Children's Hospital, Louisville, Kentucky  
*Pulmonary Atresia with Intact Ventricular Septum; Univentricular Heart*

John A. Bartlett, M.D.

Assistant Professor of Medicine, Duke University Medical Center, Durham, North Carolina  
*Thoracic Disorders in the Immunocompromised Host*

Thomas M. Bashore, M.D.

Professor of Medicine; Director, Fellowship Training Program, Associate Director, Duke Heart Center, Duke University Medical Center, Durham, North Carolina  
*Cardiac Catheterization, Angiography, and Interventional Techniques in Valvular and Congenital Heart Disease; Coronary Arteriography*

Harvey W. Bender, Jr., M.D.

Professor of Surgery, Vanderbilt University, School of Medicine; Chairman, Department of Cardiac and Thoracic Surgery, Vanderbilt University Medical Center, Nashville, Tennessee  
*Major Anomalies of Pulmonary and Thoracic Systemic Veins*

Arthur D. Boyd, M.D.

Professor of Surgery, New York University School of Medicine; Attending Surgeon, Tisch Hospital of the New York University Medical Center; Attending Surgeon, Bellevue Hospital Center; Attending Surgeon, Manhattan Veterans Administration Center, New York, New York  
*Endoscopy: Bronchoscopy and Esophagoscopy; Tracheal Intubation and Mechanical Ventilation: The Surgeon's Viewpoint*



Robert M. Califf, M.D.

Associate Professor of Medicine, Duke University; Director, Coronary Care Unit; Director, Clinical Epidemiology and Biostatistics, Duke University Medical Center, Durham, North Carolina

*Fibrinolytic Therapy in the Management of Acute Myocardial Infarction*

David N. Campbell, M.D.

Associate Professor of Surgery, University of Colorado, Health Services Center, Denver, Colorado

*Thrombosis and Thromboembolism of Prosthetic Cardiac Valves and Extracardiac Prostheses*

Aldo R. Castañeda, M.D., Ph.D.

Director, The Aldo Castañeda Institute for Congenital Heart Disease, Clinique de Genolier, Genolier, Switzerland

*Anatomic Correction of Transposition of the Great Arteries at the Arterial Level*

Jessie Chai, M.D.

Brigham and Women's Hospital, Boston, Massachusetts

*Role of Computed Tomographic Scans in Cardiovascular Diagnosis*

Robbin G. Cohen, M.D.

Assistant Professor of Surgery, Division of Cardiothoracic Surgery, Department of Surgery, University of Southern California School of Medicine; University of Southern California University Hospital; University of Southern California—Kenneth Norris Jr. Cancer Hospital; LAC University of Southern California Hospital, Los Angeles, California

*The Pleura*

Lawrence H. Cohn, M.D.

Professor of Surgery, Harvard Medical School; Chief, Division of Cardiac Surgery, Brigham and Women's Hospital, Boston, Massachusetts

*Thoracic Aortic Aneurysms and Aortic Dissection*

Stephen B. Colvin, M.D.

Associate Professor of Surgery, New York University Medical School; Director, Cardiac Surgical Residency and Pediatric Cardiac Surgery, New York Medical Center, New York, New York

*Atrial Septal Defects, Atrioventricular Canal Defects, and Total Anomalous Pulmonary Venous Return; Acquired Disease of the Mitral Valve; Bypass Grafting for Coronary Artery Disease*

Joel D. Cooper, M.D.

Joseph C. Bancroft Professor of Surgery; Head, Section of General Thoracic Surgery, Division of Cardiothoracic Surgery, Washington University School of Medicine, Barnes Hospital, St. Louis, Missouri

*Lung Transplantation*

James L. Cox, M.D.

Evarts A. Graham Professor of Surgery, Washington University School of Medicine; Professor of Surgery, Chief, Division of Cardiothoracic Surgery, Barnes Hospital at Washington University School of Medicine, St. Louis, Missouri

*The Surgical Management of Cardiac Arrhythmias*

Fred A. Crawford, Jr., M.D.

Professor and Chairman, Department of Surgery, Medical University of South Carolina, Charleston, South Carolina

*Thoracic Incisions*

Ronald D. Curran, M.D.

Fellow, Cardiovascular and Thoracic Surgery, Northwestern University Medical School, Chicago, Illinois  
*Shock and Circulatory Collapse*

Thomas A. D'Amico, M.D.

Fellow in Cardiothoracic Surgery, Duke University Medical Center, Durham, North Carolina  
*Carcinoma of the Lung; Benign Tumors of the Lung and Bronchial Adenomas; Immunology and Immunotherapy of Carcinoma of the Lung; Surgical Management of Pulmonary Metastases; Kawasaki's Disease*

Gordon K. Danielson, M.D.

Roberts Professor of Surgery, Mayo Medical School and Graduate School of Medicine; Consultant, Cardiothoracic Surgery, Mayo Clinic/Foundation, Rochester, Minnesota  
*Atrioventricular Canal; Ebstein's Anomaly*

Charles J. Davidson, M.D.

Associate Professor of Medicine, Northwestern University Medical School; Chief, Cardiac Catheterization Laboratories, Northwestern Memorial Hospital, Chicago, Illinois  
*Cardiac Catheterization, Angiography, and Interventional Techniques in Valvular and Congenital Heart Disease; Coronary Arteriography*

R. Duane Davis, Jr., M.D.

Assistant Professor of Surgery, Duke University School of Medicine, Durham, North Carolina  
*The Mediastinum*

Tom R. DeMeester, M.D.

Professor and Chairman, Department of Surgery, University of Southern California School of Medicine, Los Angeles, California  
*The Pleura*

Roberto M. Di Donato, M.D.

Professor of Clinical Surgery, Professor of Clinical Pediatrics, University of Medicine and Dentistry of New Jersey; Director, Division of Pediatric Cardiothoracic Surgery, Children's Hospital of New Jersey, United Hospitals Medical Center, Newark, New Jersey  
*Anatomic Correction of Transposition of the Great Arteries at the Arterial Level*

J. Michael DiMaio, M.D.

Chief Resident in Surgery, Duke University Medical Center, Durham, North Carolina  
*Thoracic Disorders in the Immunocompromised Host*

James M. Douglas, Jr., M.D.

Director of Cardiovascular Surgery, St. Joseph Hospital, Bellingham, Washington  
*The Pericardium; Thoracoscopic Surgery*

John J. Downes, M.D.

Professor of Anesthesia and Pediatrics at the University of Pennsylvania; Department of Anesthesia and Critical Care Medicine, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania  
*Respiratory Support in Infants*

André Duranceau, M.D.

Professor of Surgery, Faculté de Médecine, Université de Montréal; Division of Thoracic Surgery, Hôtel-Dieu de Montréal, Montréal, Québec, Canada  
*Disorders of the Esophagus in the Adult*



L. Henry Edmunds, Jr., M.D.

Julian Johnson Professor of Cardiothoracic Surgery, University of Pennsylvania; Staff, Division of Cardiothoracic Surgery, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania  
*Respiratory Support in Infants*

T. Bruce Ferguson, Jr., M.D.

Associate Professor of Surgery, Division of Cardiothoracic Surgery, Washington University School of Medicine; Associate Surgeon, Barnes Hospital, St. Louis, Missouri  
*Congenital Lesions of the Lung and Emphysema*

Thomas B. Ferguson, M.D.

Emeritus Professor of Surgery, Washington University School of Medicine at Barnes Hospital, St. Louis, Missouri  
*Congenital Lesions of the Lung and Emphysema*

Gregory P. Fontana, M.D.

Assistant Clinical Professor, University of California at Los Angeles School of Medicine, Division of Cardiothoracic Surgery, Department of Surgery; Attending Cardiothoracic Surgeon, Cedars-Sinai Medical Center, Department of Cardiothoracic Surgery, Los Angeles, California  
*Acute Pulmonary Embolism*

Robert M. Freedom, M.D., F.R.C.P.(C.), F.A.C.C.

Professor of Paediatrics (Cardiology) and Pathology, University of Toronto, Faculty of Medicine; Head, Division of Cardiology, The Hospital for Sick Children, Toronto, Ontario, Canada  
*The Mustard Procedure*

David A. Fullerton, M.D.

Assistant Professor, Department of Surgery, University of Colorado; Chief, Cardiothoracic Surgery, Veterans Administration Medical Center; Surgeon, Denver Children's Hospital, Denver, Colorado  
*Prosthetic Valve Endocarditis*

Aubrey C. Galloway, M.D.

Associate Professor of Surgery, New York University Medical School; Director of Surgical Research, New York University Medical Center, New York, New York  
*Atrial Septal Defects, Atrioventricular Canal Defects, and Total Anomalous Pulmonary Venous Return; Acquired Disease of the Mitral Valve; Bypass Grafting for Coronary Artery Disease*

William A. Gay, Jr., M.D.

Professor, Department of Surgery, Washington University School of Medicine; Attending Surgeon, Cardiothoracic Surgery, Barnes Hospital, St. Louis, Missouri  
*Cardiac Transplantation*

J. William Gaynor, M.D.

Assistant Professor of Surgery, Pediatric Cardiothoracic Surgery, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania  
*Patent Ductus Arteriosus, Coarctation of the Aorta, Aortopulmonary Window, and Anomalies of the Aortic Arch; Pulmonary Atresia or Stenosis with Intact Ventricular Septum*

Brian Ginsberg, M.D., B.Ch.

Assistant Professor of Anesthesiology, Duke University Medical Center, Durham, North Carolina  
*Acute Pain Management After Surgical Procedures*

Donald D. Glower, Jr., M.D.

Associate Professor of Surgery, Duke University, Durham, North Carolina  
*Acquired Aortic Valve Disease*

William J. Greeley, M.D.

Division Chief, Division of Pediatric Anesthesia and Critical Care Medicine; Associate Professor of Anesthesiology; Associate Professor of Pediatrics, Duke University Medical Center, Durham, North Carolina  
*Anesthesia and Supportive Care for Cardiothoracic Surgery*

Katherine Grichnik, M.D.

Assistant Professor of Anesthesiology, Duke University Medical School; Assistant Professor of Anesthesiology, Duke University Medical Center, Durham, North Carolina  
*Anesthesia and Supportive Care for Cardiothoracic Surgery; Acute Pain Management After Surgical Procedures*

Hermes C. Grillo, A.B., M.D.

Professor of Surgery, Harvard Medical School; Visiting Surgeon, Thoracic Surgery, Massachusetts General Hospital, Boston, Massachusetts  
*Congenital Lesions, Neoplasms, Inflammation, Infections, Injuries, and Other Lesions of the Trachea*

Michael A. Grosso, M.D.

Assistant Professor of Cardiothoracic Surgery, University of Medicine and Dentistry of New Jersey, Cooper Hospital/University Medical Center, Camden, New Jersey  
*Left Ventricular Aneurysm*

Frederick L. Grover, M.D.

Professor of Surgery; Head, Division of Cardiothoracic Surgery, University of Colorado Health Sciences Center; Chief, Surgical Service, Veterans Administration Medical Center, Denver, Colorado  
*Prosthetic Valve Endocarditis; Thrombosis and Thromboembolism of Prosthetic Cardiac Valves and Extracardiac Prostheses*

John R. Guyton, M.D.

Associate Professor of Medicine; Assistant Professor of Pathology, Duke University Medical Center, Durham, North Carolina  
*Dietary and Pharmacologic Management of Atherosclerosis*

John W. Hammon, Jr., M.D.

Professor of Cardiothoracic Surgery, Bowman Gray School of Medicine of Wake Forest University; Attending Cardiothoracic Surgeon, Medical Center of Bowman Gray School of Medicine and North Carolina Baptist Hospital, Winston-Salem, North Carolina  
*Major Anomalies of Pulmonary and Thoracic Systemic Veins*

John R. Handy, Jr., M.D.

Assistant Professor of Surgery, Medical University of South Carolina College of Medicine, Charleston, North Carolina  
*Tricuspid Atresia*

Alden H. Harken, M.D.

Staff Surgeon, Veterans Administration Hospital; Professor and Chairman, Department of Surgery; Staff Surgeon, Cardiovascular Surgery, University of Colorado; Staff Surgeon, Rose Medical Center, Denver, Colorado  
*Left Ventricular Aneurysm*



J. Kevin Harrison, M.D.

Assistant Professor of Medicine; Assistant Director, Diagnostic and Interventional Catheterization Laboratories, Duke University Medical Center, Durham, North Carolina

*Cardiac Catheterization, Angiography, and Interventional Techniques in Valvular and Congenital Heart Disease; Coronary Arteriography*

Lucius D. Hill, M.D.

Clinical Professor of Surgery, University of Washington, Seattle, Washington

*The Nissen Fundoplication; The Hill Repair; Paraesophageal Hernia*

William L. Holman, M.D.

Associate Professor in Surgery, University of Alabama at Birmingham; Associate Professor in Surgery, Veterans Administration Medical Center, Birmingham, Alabama

*Aneurysms of the Sinuses of Valsalva*

O. Wayne Isom, M.D.

Professor of Cardiothoracic Surgery, Cornell University Medical College; Cardiothoracic Surgeon-in-Chief, The New Hospital, New York, New York

*Aortic Grafts and Prostheses; Occlusive Disease of Branches of the Aorta*

Robert H. Jones, M.D.

Mary and Deryl Hart Professor of Surgery; Associate Professor of Radiology, Duke University School of Medicine; Duke University Medical Center, Durham, North Carolina

*Radionuclide Imaging in Cardiac Surgery*

Allen B. Kaiser, M.D.

Professor of Medicine, Vanderbilt University School of Medicine; Vice-Chairman, Department of Medicine, Vanderbilt University Medical Center, Nashville, Tennessee

*Use of Antibiotics in Cardiac and Thoracic Surgery*

Robert B. Karp, M.D.

Professor of Surgery, University of Chicago, Chicago, Illinois

*Acquired Disease of the Tricuspid Valve*

James K. Kirklin, M.D.

Professor of Surgery, University of Alabama at Birmingham, School of Medicine; Professor and Surgeon, University of Alabama at Birmingham, Hospitals and Clinics, Birmingham, Alabama

*Cardiopulmonary Bypass for Cardiac Surgery; Surgical Treatment of Ventricular Septal Defect*

Joseph A. Kisslo, M.D.

Professor, Division of Cardiology, Department of Medicine; Director, Echocardiography, Duke University Medical Center, Durham, North Carolina

*Ultrasound Applications in Cardiac Surgery: Echocardiography*

John M. Kratz, M.D.

Professor of Surgery, Medical University of South Carolina, Charleston, South Carolina

*Thoracic Incisions*

Marino Labinaz, M.D., F.R.C.P.(C.)

Assistant Professor of Medicine (Cardiology), University of Ottawa, Heart Institute, Ottawa, Ontario, Canada

*Percutaneous Transluminal Coronary Angioplasty*

Edwin Lafontaine, M.D., F.R.C.S.(C.)

Assistant Professor of Surgery, Department of Surgery, University of Montreal; Attending Surgeon, Department of Surgery, Hospital Hôtel-Dieu, Montreal, Quebec, Canada

*The Pleura*

Hillel Laks, M.D.

Professor and Chief, Cardiothoracic Surgery Department, University of California at Los Angeles Medical Center, Los Angeles, California

*Congenital Malformations of the Mitral Valve*

Kevin P. Landolfo, M.D.

Assistant Professor of Surgery, Duke University Medical Center, Durham, North Carolina

*Postoperative Care in Cardiac Surgery; Congenital Deformities of the Chest Wall; Postinfarction Rupture of the Papillary Muscles and Ischemic Mitral Insufficiency*

Bruce Leone, M.D.

Associate Professor of Anesthesiology; Assistant Professor of Medicine; Chairman, Duke University Animal Care and Use Committee; Director, Anesthesiology Cardio-pulmonary Research Laboratory, Duke University Medical Center, Durham, North Carolina

*Anesthesia and Supportive Care for Cardiothoracic Surgery*

John Leslie, M.D.

Clinical Professor of Anesthesiology, Duke University Medical School; Staff Attending, Duke University Medical Center; Staff Anesthesiologist, The Duke Heart Center, Durham, North Carolina

*Anesthesia and Supportive Care for Cardiothoracic Surgery*

Gary K. Lofland, M.D.

Clinical Professor of Surgery, Georgetown University, Washington, District of Columbia; Director, Columbia/HCA Congenital Heart Center; HCA Henrico Doctors' Hospital, Richmond, Virginia

*Truncus Arteriosus*

Floyd D. Loop, M.D.

Chairman, Board of Governors and Executive Vice President, The Cleveland Clinic Foundation, Cleveland, Ohio

*Repeat Coronary Artery Bypass Grafting for Myocardial Ischemia*

James E. Lowe, M.D.

Professor of Surgery; Associate Professor of Pathology, Attending Surgeon, Cardiothoracic Surgery, Duke University Medical Center, Durham, North Carolina

*Bronchoplastic Techniques in the Surgical Management of Benign and Malignant Pulmonary Lesions; Cardiac Pacemakers and Implantable Cardioverter-Defibrillators; Congenital Malformations of the Coronary Circulation; Prinzmetal's Variant Angina and Other Syndromes Associated with Coronary Artery Spasm; Assisted Circulation*

Philip D. Lumb, M.B.B.S., F.C.C.M.

Professor of Anesthesiology; Professor of Surgery; Chairman, Department of Anesthesiology, Albany Medical College; Anesthesiologist-in-Chief, Co-Director, Surgical Intensive Care Unit, Albany Medical Center Hospital, Albany, New York

*Perioperative Pulmonary Physiology*

H. Kim Lyster, M.D.

Associate Professor of Surgery; Assistant Professor of Pathology, Duke University Medical Center, Durham, North Carolina

*Thoracic Disorders in the Immunocompromised Host; Pulmonary Arteriovenous Fistulas*



Neil R. MacIntyre, M.D.

Associate Professor of Medicine; Medical Director, Respiratory Care Services, Duke University Medical Center, Durham, North Carolina

*Tracheal Intubation and Assisted Ventilation: The Anesthesiologist's Viewpoint*

David C. McGiffin, M.D.

Associate Professor of Surgery, University of Alabama at Birmingham, Birmingham, Alabama

*Cardiopulmonary Bypass for Cardiac Surgery*

Eli Milgalter, M.D.

Division of Cardiothoracic Surgery, Hadassah Hospital, Jerusalem, Israel

*Congenital Malformations of the Mitral Valve*

Jon F. Moran, M.D.

Division of Cardiac Surgery, Department of Surgery, School of Medicine, East Carolina University, Greenville, North Carolina

*Surgical Treatment of Pulmonary Tuberculosis*

James J. Morris, M.D.

Associate Professor of Surgery, Mayo Medical School; Consultant, Cardiovascular Surgery, Mayo Clinic; Associate, Department of Physiology, Mayo Graduate School of Medicine, Mayo Clinic, Rochester, Minnesota

*Utilization of Autologous Arterial Grafts for Coronary Artery Bypass*

Kurt D. Newman, M.D.

Associate Professor of Surgery and Pediatrics, George Washington University School of Medicine; Senior Attending Surgeon, Children's National Medical Center, Washington, District of Columbia

*Surgery of the Esophagus in Infants and Children*

William I. Norwood, M.D., Ph.D.

The Aldo Castañeda Institute, Chief of Surgery, Clinique de Genolier, Genolier, Switzerland

*Hypoplastic Left Heart Syndrome*

H. Newland Oldham, Jr., M.D.

Professor of Surgery, Duke University Medical School; Professor of Surgery, Duke University Medical Center, Durham, North Carolina

*The Mediastinum*

Mark B. Orringer, M.D.

Professor and Head, Section of Thoracic Surgery, University of Michigan Medical School, Ann Arbor, Michigan

*Short Esophagus and Reflux Stricture*

A. D. Pacifico, M.D.

John W. Kirklin Professor of Surgery, University of Alabama at Birmingham, School of Medicine; Director, Division of Cardiothoracic Surgery, Vice Chairman, Department of Surgery, University of Alabama at Birmingham, Hospitals and Clinics, Birmingham, Alabama

*Surgical Treatment of Ventricular Septal Defect; The Senning Procedure for Transposition of the Great Vessels*

Peter C. Pairolero, M.D.

Chair, Department of Surgery; Professor, Mayo Medical School, Mayo Graduate School of Medicine, Rochester, Minnesota

*Surgical Management of Neoplasms of the Chest Wall*

## G. Alexander Patterson, M.D.

Professor of Cardiothoracic Surgery, Department of Surgery, Washington University  
School of Medicine, St. Louis, Missouri  
*Lung Transplantation*

## Robert B. Peyton, M.D.

Carolina Cardiovascular Surgical Associates, P.A., Wake Heart Center, Rex Hospital,  
Raleigh, North Carolina  
*Aortic Grafts and Prostheses; Occlusive Disease of Branches of the Aorta*

## Harry R. Phillips III, M.D.

Associate Professor, Division of Cardiology, Department of Medicine; Co-Director,  
Interventional Cardiovascular Program, Duke University Medical Center, Durham,  
North Carolina  
*Percutaneous Transluminal Coronary Angioplasty*

## William S. Pierce, M.D.

College of Medicine, The Pennsylvania State University; Professor of Surgery, Univer-  
sity Hospital, The Milton S. Hershey Medical Center, Hershey, Pennsylvania  
*The Artificial Heart*

## Francisco J. Puga, M.D., F.A.C.S., F.A.C.C.

Professor of Surgery, Mayo Medical School and Graduate School of Medicine; Consul-  
tant, Cardiothoracic Surgery, Mayo Clinic/Mayo Foundation, Rochester, Minnesota  
*Atrioventricular Canal*

## Judson Randolph, M.D.

Professor of Surgery, Meharry Medical College; Attending Surgeon, Metropolitan  
Nashville General Hospital, Nashville, Tennessee  
*Surgery of the Esophagus in Infants and Children*

## J. Scott Rankin, M.D.

Clinical Associate Professor, Department of Cardiac and Thoracic Surgery, Vanderbilt  
University Medical Center; Attending Surgeon, St. Thomas Hospital, Nashville, Ten-  
nessee  
*Cardiopulmonary Resuscitation; Physiology of Coronary Blood Flow, Myocardial Function,  
and Intraoperative Myocardial Protection; Utilization of Autologous Arterial Grafts for Coro-  
nary Artery Bypass; Postinfarction Ventricular Septal Defect*

## Russell C. Raphaely, M.D.

Professor of Anesthesia and Pediatrics, University of Pennsylvania School of Medicine;  
Associate Director, Department of Anesthesiology and Critical Care Medicine; Direc-  
tor, Division of Critical Care Medicine, Children's Hospital of Philadelphia, Philadel-  
phia, Pennsylvania  
*Respiratory Support in Infants*

## Maruf A. Razzuk, B.Sc., M.D.

Professor in Thoracic and Cardiovascular Surgery, University of Texas Southwestern  
Medical School; Baylor University Medical Center, Dallas, Texas  
*Thoracic Outlet Syndrome*

## Bruce A. Reitz, M.D.

Professor and Chairman, Department of Cardiothoracic Surgery, Stanford University  
School of Medicine, Stanford; Chief of the Pediatric Cardiac Surgical Services, Lucile  
Salter Packard Children's Hospital at Stanford; Chief of the Cardiac Surgical Service,  
Stanford Health Services, Palo Alto, California  
*Clinical Heart-Lung Transplantation*

J. G. Reves, M.D.

Professor and Chairman, Department of Anesthesiology; Director, The Duke Heart Center, Duke University Medical Center, Durham, North Carolina  
*Anesthesia and Supportive Care for Cardiothoracic Surgery*

Greg H. Ribakove, M.D.

Assistant Professor of Surgery; Attending Cardiac Surgeon, New York University Medical Center, New York, New York  
*Tracheal Intubation and Mechanical Ventilation: The Surgeon's Viewpoint*

William C. Roberts, M.D.

Executive Director, Baylor Cardiovascular Institute; Dean, A. Webb Roberts Center for Continuing Education, Baylor University Medical Center, Dallas, Texas  
*Pathology of Coronary Atherosclerosis*

Bradley M. Rodgers, M.D.

Professor of Surgery and Pediatrics; Chief, Pediatric Surgery, University of Virginia Health Sciences Center, Charlottesville, Virginia  
*Management of Infants and Children Undergoing Thoracic Surgery*

David C. Sabiston, Jr., M.D.

James B. Duke Professor of Surgery, Duke University School of Medicine; Chief of Staff, Duke University Medical Center, Durham, North Carolina  
*Congenital Deformities of the Chest Wall; The Mediastinum; Carcinoma of the Lung; Bronchoplastic Techniques in the Surgical Management of Benign and Malignant Pulmonary Lesions; Benign Tumors of the Lung and Bronchial Adenomas; Immunology and Immunotherapy of Carcinoma of the Lung; Surgical Management of Pulmonary Metastases; Acute Pulmonary Embolism; Chronic Pulmonary Embolism; Pulmonary Arteriovenous Fistulas; Patent Ductus Arteriosus, Coarctation of the Aorta, Aortopulmonary Window, and Anomalies of the Aortic Arch; Physiology of Coronary Blood Flow, Myocardial Function, and Intraoperative Myocardial Protection; Congenital Malformations of the Coronary Circulation; Tumors of the Heart*

Robert M. Sade, M.D.

Professor of Surgery, Medical University of South Carolina, Charleston, South Carolina  
*Tricuspid Atresia*

Mark W. Sebastian, M.D.

Department of Surgery, Duke University Medical Center, Durham, North Carolina  
*Chronic Pulmonary Embolism; Benign and Malignant Tumors of the Esophagus*

David B. Skinner, M.D.

Professor of Surgery, Cornell University Medical College; Attending Surgeon, President/Chief Executive Officer, The Society of the New York Hospital, New York, New York  
*The Condition: Clinical Manifestations and Diagnosis; The Belsey Mark IV Antireflux Repair*

Robert N. Sladen, M.B., Ch.B., M.R.C.P.(U.K.), F.R.C.P.(C.)

Associate Professor of Anesthesiology, Associate Professor of Surgery, Assistant Professor of Cell Biology, Duke University School of Medicine; Vice-Chair, Department of Anesthesiology, Co-Director, Surgical Intensive Care Unit, Duke University Medical Center, Durham, North Carolina  
*Tracheal Intubation and Mechanical Ventilation: The Anesthesiologist's Viewpoint*

Peter K. Smith, A.B., B.M.E., M.D.

Professor of Surgery; Associate Professor of Biomedical Engineering, Duke University Medical Center; Division Chief, Thoracic and Cardiovascular Surgery; Medical Direc-



tor, Cardiac Acute Care Unit; Director, Core Cardiac Physiology Laboratory, Duke University Medical Center, Durham, North Carolina

*Preoperative Assessment of Pulmonary Function: Quantitative Evaluation of Ventilation and Blood Gas Exchange; Postoperative Care in Cardiac Surgery; Computer Applications in Cardiothoracic Surgery; Ultrasound Applications in Cardiac Surgery; Echocardiography*

Peter Snopkowski, M.D.

Resident in Surgery, Ryan Hill Research Foundation, Seattle, Washington  
*The Hill Repair*

Robert J. Sparaco, B.S., J.D., R.R.T.

Associate Professor, Department of Allied Health Sciences, Nassau Community College, Garden City; Educational Coordinator, Respiratory Care Department, Tisch Hospital of New York University Medical Center, New York, New York  
*Tracheal Intubation and Mechanical Ventilation: The Surgeon's Viewpoint*

Frank C. Spencer, M.D.

George David Stewart Professor and Chairman, Department of Surgery, New York University Medical Center, New York, New York  
*Atrial Septal Defects, Atrioventricular Canal Defects, and Total Anomalous Pulmonary Venous Return; Acquired Disease of the Mitral Valve; Bypass Grafting for Coronary Artery Disease*

Charles E. Spritzer, M.D.

Associate Professor; Director, Body Magnetic Resonance Section; Co-Director, Magnetic Resonance Imaging, Duke University Medical Center, Durham, North Carolina  
*Role of Computed Tomographic Scans in Cardiovascular Diagnosis; Role of Magnetic Resonance Imaging in Cardiovascular Diagnosis*

Richard S. Stack, M.D., F.A.C.C.

Associate Professor of Medicine; Director, Interventional Cardiovascular Program, Duke University Medical Center, Durham, North Carolina  
*Percutaneous Transluminal Coronary Angioplasty*

James M. Steven, M.D.

Assistant Professor of Anesthesia and Pediatrics, University of Pennsylvania School of Medicine; Associate Anesthesiologist, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania  
*Respiratory Support in Infants*

John H. Stevens, M.D.

Chief Resident, Department of Cardiothoracic Surgery, Stanford University School of Medicine, Stanford, California  
*Clinical Heart-Lung Transplantation*

Bret W. Stolp, M.D., Ph.D.

Assistant Professor, Department of Anesthesiology; Associate, Department of Cell Biology, Duke University Medical Center, Durham, North Carolina  
*Tracheal Intubation and Assisted Ventilation: The Anesthesiologist's Viewpoint*

Mark Tedder, M.D.

Cardiothoracic Surgery Fellow, Duke University Medical Center, Durham, North Carolina  
*Bronchoplastic Techniques in the Surgical Management of Benign and Malignant Pulmonary Lesions*

George A. Trusler, M.D., F.R.C.S.(C.)

Professor Emeritus, Department of Surgery, University of Toronto; Senior Surgeon, Cardiovascular Surgery Division, Hospital for Sick Children, Toronto, Ontario, Canada  
*The Mustard Procedure*

Ross M. Ungerleider, M.D.

Professor of General and Thoracic Surgery; Associate Professor of Pediatrics; Chief, Pediatric Cardiac Surgery, Duke University Medical Center, Durham, North Carolina  
*Tetralogy of Fallot; Pulmonary Atresia or Stenosis with Intact Ventricular Septum; Congenital Aortic Stenosis*

Harold C. Urschel, Jr., A.B., M.D.

Professor of Thoracic and Cardiovascular Surgery, University of Texas Health Science Center at Dallas (Southwestern Medical School); Baylor University Medical Center, Dallas, Texas  
*Thoracic Outlet Syndrome*

Peter Van Trigt III, M.D.

Professor of Surgery, Surgical Director, Cardiopulmonary Transplantation, Duke University Medical Center, Durham, North Carolina  
*Lung Infections and Diffuse Interstitial Lung Disease; Diaphragm and Diaphragmatic Pacing; Tumors of the Heart*

Andrew S. Wechsler, M.D.

Stuart McGuire Professor and Chairman, Department of Surgery; Professor of Physiology, Virginia Commonwealth University Medical College of Virginia; Chairman of Surgery, Medical College of Virginia Hospitals, Richmond, Virginia  
*Surgical Management of Myasthenia Gravis*

J. Marcus Wharton, M.D.

Associate Professor of Medicine; Director, Clinical Cardiac Electrophysiology, Duke University Medical Center, Durham, North Carolina  
*Cardiac Pacemakers and Implantable Cardioverter-Defibrillators*

David H. Wisner, M.D.

Associate Professor, Department of Surgery, University of California at Davis, Sacramento, California  
*Trauma to the Chest*

Walter G. Wolfe, M.D.

Attending Cardiothoracic Surgeon; Professor of Surgery, Duke University Medical Center, Durham, North Carolina  
*Preoperative Assessment of Pulmonary Function: Quantitative Evaluation of Ventilation and Blood Gas Exchange; Benign and Malignant Tumors of the Esophagus*