



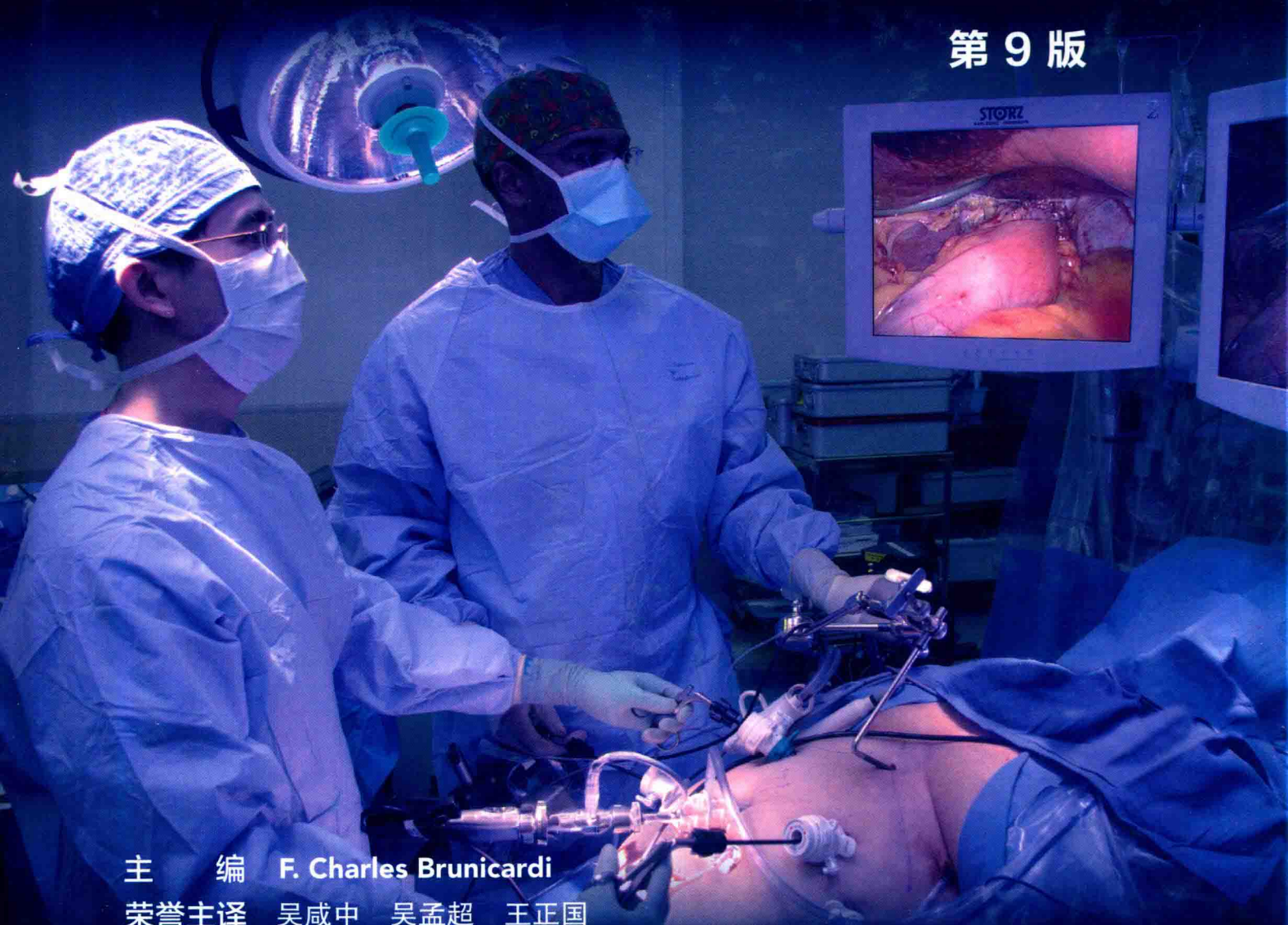
国家出版基金项目
NATIONAL PUBLICATION FOUNDATION

Mc
Graw
Hill
Education

施瓦兹外科学

Schwartz's
PRINCIPLES of SURGERY

第9版



主 编 F. Charles Brunicaardi
荣誉主译 吴咸中 吴孟超 王正国
主 译 陈孝平 崔乃强 邱贵兴 孙酉甦



人民卫生出版社
PEOPLE'S MEDICAL PUBLISHING HOUSE



国家出版基金项目
NATIONAL PUBLICATION FOUNDATION

施瓦兹外科学

Schwartz's Principles of Surgery

第9版

主编

F. Charles Brunickardi

荣誉主译

吴咸中 吴孟超 王正国

主译

陈孝平 崔乃强 邱贵兴 孙西甦

人民卫生出版社

敬告

本书的作者、译者及出版者已尽力使书中的知识符合出版当时普遍接受的标准。但医学在不断地发展,随着科学研究的不断探索,各种诊断分析程序和临床治疗方案以及药物使用方法都在不断更新。强烈建议读者在使用本书涉及的诊疗仪器或药物时,认真研读使用说明,尤其对于新的产品更应如此。出版者拒绝对因参照本书任何内容而直接或间接导致事故与损失负责。

需要特别声明的是,本书中提及的一些产品名称(包括注册的专利产品)仅仅是叙述的需要,并不代表作者推荐或倾向于使用这些产品;而对于那些未提及的产品,也仅仅是因为限于篇幅不能一一列举。

本着忠实于原著的精神,译者在翻译时尽量不对原著内容做删节。然而由于著者所在国与我国的国情不同,因此一些问题的处理原则与方法,尤其是涉及宗教信仰、民族政策、伦理道德或法律法规时,仅供读者了解,不能作为法律依据。读者在遇到实际问题时应根据国内相关法律法规和医疗标准进行适当处理。

图书在版编目(CIP)数据

施瓦兹外科学/(美)F·查尔斯·布朗尼卡迪主编;
陈孝平等主译.—北京:人民卫生出版社,2017

ISBN 978-7-117-24611-8

I. ①施… II. ①F…②陈… III. ①外科学
IV. ①R6

中国版本图书馆CIP数据核字(2017)第122758号

人卫智网 www.ipmph.com 医学教育、学术、考试、健康,
购书智慧智能综合服务平台
人卫官网 www.pmph.com 人卫官方资讯发布平台

版权所有,侵权必究!

图字:01-2012-1231

施瓦兹外科学

主 译:陈孝平 崔乃强 邱贵兴 孙西甦

出版发行:人民卫生出版社(中继线 010-59780011)

地 址:北京市朝阳区潘家园南里19号

邮 编:100021

E-mail: pmph@pmph.com

购书热线:010-59787592 010-59787584 010-65264830

印 刷:北京人卫印刷厂

经 销:新华书店

开 本:889×1194 1/16 印张:105

字 数:4543千字

版 次:2018年2月第1版 2018年2月第1版第1次印刷

标准书号:ISBN 978-7-117-24611-8/R·24612

定 价:900.00元

打击盗版举报电话:010-59787491 E-mail: WQ@pmph.com

(凡属印装质量问题请与本社市场营销中心联系退换)

施瓦兹外科学

Schwartz's Principles of Surgery

第9版

主编

F. Charles Brunickardi

副主编

Dana K. Andersen Timothy R. Billiar David L. Dunn
John G. Hunter Jeffrey B. Matthews Raphael E. Pollock

荣誉主译

吴咸中 吴孟超 王正国

主译

陈孝平 崔乃强 邱贵兴 孙酉甦

副主译

朱正纲 赵继宗 姜洪池 张必翔 王西墨

秘书

李丹 朱鹏 王洁

人民卫生出版社

F. Charles Brunicaardi
Schwartz's Principles of Surgery, 9th edition
978-0-07-1547703
Copyright © 2010 by McGraw-Hill Education.

All Rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including without limitation photocopying, recording, taping, or any database, information or retrieval system, without the prior written permission of the publisher.

This authorized Chinese translation edition is jointly published by McGraw-Hill Education and People's Medical Publishing House. This edition is authorized for sale in the People's Republic of China only, excluding Hong Kong, Macao SAR and Taiwan.

Copyright © 2018 by McGraw-Hill Education and People's Medical Publishing House.

版权所有。未经出版人事先书面许可,对本出版物的任何部分不得以任何方式或途径复制或传播,包括但不限于复印、录制、录音,或通过任何数据库、信息或可检索的系统。

本授权中文简体字翻译版由麦格劳-希尔(亚洲)教育出版公司和人民卫生出版社合作出版。此版本经授权仅限在中华人民共和国境内(不包括香港特别行政区、澳门特别行政区和台湾)销售。

版权© 2018 由麦格劳-希尔(亚洲)教育出版公司与人民卫生出版社所有。

本书封面贴有 McGraw-Hill Education 公司防伪标签,无标签者不得销售。

翻译委员会

- 荣誉主译** 吴咸中 天津市南开医院
吴孟超 第二军医大学第三附属医院
王正国 第三军医大学大坪医院
- 主译** 陈孝平 华中科技大学同济医学院附属同济医院
崔乃强 天津市南开医院
邱贵兴 北京协和医院
孙西甦 美国东卡罗莱纳大学医学院
- 副主译** 朱正纲 上海交通大学医学院附属瑞金医院
赵继宗 首都医科大学附属北京天坛医院
姜洪池 哈尔滨医科大学
张必翔 华中科技大学同济医学院附属同济医院
王西墨 天津市南开医院

委员 (按姓氏汉语拼音排序)

- 白祥军 华中科技大学同济医学院附属同济医院
蔡守旺 中国人民解放军总医院
蔡旺 天津市南开医院
曹谊林 上海交通大学医学院附属第九人民医院
陈鲟 天津市南开医院
陈刚 华中科技大学同济医学院附属同济医院
陈奇龙 四川大学华西医院
陈强华 美国纽约大学
陈孝平 华中科技大学同济医学院附属同济医院
陈义发 华中科技大学同济医学院附属同济医院
崔乃强 天津市南开医院
崔永 首都医科大学附属北京友谊医院
崔永华 华中科技大学同济医学院附属同济医院
崔云峰 天津市南开医院、美国约翰霍普金斯大学医学院
崔志刚 天津市南开医院
杜振宗 桂林医学院附属医院、美国约翰霍普金斯大学医学院
冯杰雄 华中科技大学同济医学院附属同济医院
付涛 第三军医大学大坪医院、美国约翰霍普金斯大学医学院
傅强 天津市第四中心医院
郭志刚 天津市胸科医院
哈良 天津市南开医院
韩小弟 首都医科大学附属北京天坛医院
胡盛寿 中国医学科学院阜外医院
郇京宁 上海交通大学医学院附属瑞金医院

- 姜洪池 哈尔滨医科大学
蒋俊豪 复旦大学附属中山医院
金炜东 广州军区武汉总医院
兰平 中山大学附属第六医院
李丹 天津市南开医院
李晶 天津医科大学总医院
李俊 第二军医大学第三附属医院
李兴睿 华中科技大学同济医学院附属同济医院
李宗芳 西安交通大学第二附属医院
林健 北京大学第一医院
刘继红 华中科技大学同济医学院附属同济医院
刘景丰 福建医科大学孟超肝胆医院
刘彤 天津医科大学总医院
刘争 华中科技大学同济医学院附属同济医院
陆芸 天津市泰达医院
罗顺丰 福建医科大学孟超肝胆医院
罗营 天津医科大学总医院
[秦鸣放] 天津市南开医院
邱贵兴 北京协和医院
任建安 南京军区南京总医院
沈锋 第二军医大学第三附属医院
[石应康] 四川大学华西医院
孙大强 四川大学华西医院
孙晓毅 华中科技大学同济医学院附属同济医院
孙颖 美国约翰霍普金斯大学医学院
孙西甦 美国东卡罗莱纳大学医学院
王保军 中国人民解放军总医院

- | | | | |
|-----|-------------------|-----|-------------------|
| 王 丰 | 天津市南开医院 | 于向阳 | 天津市南开医院 |
| 王晗之 | 第三军医大学 | 于泳浩 | 天津医科大学总医院 |
| 王 洁 | 天津市南开医院 | 余剑波 | 天津市南开医院 |
| 王 其 | 华中科技大学同济医学院附属同济医院 | 岳天孚 | 天津医科大学总医院 |
| 王 强 | 中国医学科学院阜外医院 | 臧运金 | 武警总医院 |
| 王天佑 | 首都医科大学附属北京友谊医院 | 张必翔 | 华中科技大学同济医学院附属同济医院 |
| 王西墨 | 天津市南开医院 | 张大鹏 | 天津市南开医院 |
| 王玉琦 | 复旦大学附属中山医院 | 张 辰 | 天津市南开医院 |
| 王正国 | 第三军医大学大坪医院 | 张 东 | 首都医科大学附属北京天坛医院 |
| 王忠裕 | 大连医科大学附属第一医院 | 张 健 | 西安交通大学第二附属医院 |
| 魏 翔 | 华中科技大学同济医学院附属同济医院 | 张 瑾 | 天津医科大学附属肿瘤医院 |
| 吴 华 | 华中科技大学同济医学院附属同济医院 | 张连阳 | 第三军医大学大坪医院 |
| 吴文溪 | 南京医科大学 | 张 楠 | 天津市南开医院 |
| 吴毅平 | 华中科技大学同济医学院附属同济医院 | 张淑坤 | 天津市南开医院 |
| 吴肇汉 | 复旦大学附属中山医院 | 张 旭 | 中国人民解放军总医院 |
| 吴志勇 | 上海交通大学医学院附属仁济医院 | 张艳敏 | 天津市南开医院 |
| 解基良 | 天津市南开医院 | 张毓青 | 天津市南开医院 |
| 徐 涛 | 山东大学附属省立医院 | 张滋洋 | 华中科技大学同济医学院附属同济医院 |
| 许大辉 | 天津市南开医院 | 赵继宗 | 首都医科大学附属北京天坛医院 |
| 阳 军 | 华中科技大学同济医学院附属同济医院 | 朱 鹏 | 华中科技大学同济医学院附属同济医院 |
| 殷 茜 | 华中科技大学同济医学院附属同济医院 | 朱正纲 | 上海交通大学医学院附属瑞金医院 |
| 李 丹 | 天津市南开医院 | | |
| 朱 鹏 | 华中科技大学同济医学院附属同济医院 | | |
| 王 洁 | 天津市南开医院 | | |

编者名单

Louis H. Alarcon, MD

Assistant Professor of Surgery, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Chapter 13, Physiologic Monitoring of the Surgical Patient

Dana K. Andersen, MD, FACS

Professor and Vice-Chair, Department of Surgery, Johns Hopkins University School of Medicine, Surgeon-in-Chief, Johns Hopkins Bayview Medical Center, Baltimore, Maryland
Chapter 33, Pancreas

Peter Angelos, MD

Professor of Surgery and Chief of Endocrine Surgery, University of Chicago Medical Center, Chicago, Illinois
Chapter 48, Ethics, Palliative Care, and Care at the End of Life

Peter B. Angood, MD

Senior Advisor for Patient Safety, National Quality Forum, Washington, DC
Chapter 12, Patient Safety

Stanley W. Ashley, MD

Frank Sawyer Professor of Surgery, Department of Surgery, Harvard Medical School, Boston, Massachusetts
Chapter 28, Small Intestine

Samir S. Awad, MD

Associate Professor, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 1, Accreditation Council for Graduate Medical Education Core Competencies

Adrian Barbul, MD

Professor of Surgery, Department of Surgery, Johns Hopkins Medical Institutions, Baltimore, Maryland
Chapter 9, Wound Healing

Joel A. Bauman, MD

Resident Physician, Department of Neurosurgery, University of Pennsylvania, Philadelphia, Pennsylvania
Chapter 42, Neurosurgery

Carlos Bechara, MD

Assistant Professor of Surgery, Division of Vascular Surgery and Endovascular Therapy, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 23, Arterial Disease

Greg J. Beilman, MD

Professor of Surgery and Anesthesia, Chief of Surgical Critical Care/Trauma, University of Minnesota, Minneapolis, Minnesota
Chapter 6, Surgical Infections

Richard H. Bell Jr., MD

Assistant Executive Director, American Board of Surgery, Philadelphia, Pennsylvania
Chapter 33, Pancreas

Robert L. Bell, MD, MA, FACS

Director, Minimally Invasive Surgery, Director, Bariatric Surgery, Associate Professor of Surgery, Department of Surgery, Yale University School of Medicine, New Haven, Connecticut
Chapter 35, Abdominal Wall, Omentum, Mesentery, and Retroperitoneum

Arie Belldgrun, MD

Director, Institute of Urologic Oncology at UCLA, Professor and Chief, Division of Urologic Oncology, Roy and Carol Doumani Chair in Urologic Oncology, David Geffen School of Medicine at UCLA, Los Angeles, California
Chapter 40, Urology

Peleg Ben-Galim, MD

Assistant Professor, Department of Orthopedic Surgery, Baylor College of Medicine, Houston, Texas
Chapter 43, Orthopedic Surgery

David H. Berger, MD

Professor and Vice Chair, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 1, Accreditation Council for Graduate Medical Education Core Competencies
Chapter 30, The Appendix

Walter L. Biffli, MD

Associate Professor, Department of Surgery, Denver Health Medical Center/University of Colorado-Denver, Denver, Colorado
Chapter 7, Trauma

Timothy R. Billiar, MD, FACS

George Vance Foster Professor and Chairman of Surgery, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Chapter 5, Shock

Kirby I. Bland, MD

Fay Fletcher Kerner Professor and Chairman, Department of Surgery, University of Alabama at Birmingham, Birmingham, Alabama
Chapter 17, The Breast

Mary L. Brandt, MD

Professor and Vice Chair, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 1, Accreditation Council for Graduate Medical Education Core Competencies

F. Charles Brunickardi, MD, FACS

DeBakey/Bard Professor and Chairman, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 1, Accreditation Council for Graduate Medical Education Core Competencies
Chapter 15, Molecular and Genomic Surgery
Chapter 33, Pancreas
Chapter 37, Inguinal Hernias

Jamal Bullocks, MD

Assistant Professor, Division of Plastic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 16, The Skin and Subcutaneous Tissue

Catherine Cagiannos, MD

Assistant Professor of Surgery, Division of Vascular Surgery and Endovascular Therapy, Baylor College of Medicine, Houston, Texas
Chapter 23, Arterial Disease

Joanna M. Cain, MD

Chace/Joukowsky Chair of Obstetrics and Gynecology, Department of Obstetrics and Gynecology, Brown University, Portland, Oregon
Chapter 41, Gynecology

Rakesh K. Chandra, MD

Assistant Professor, Department of Otolaryngology, Head and Neck Surgery, Northwestern University, Chicago, Illinois
Chapter 18, Disorders of the Head and Neck

Catherine L. Chen, MPH

Fellow, Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland
Chapter 12, Patient Safety

Changyi J. Chen, PhD

Molecular Surgery Endowed Chair, Professor of Surgery and Molecular and Cellular Biology, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 23, Arterial Disease

Orlo H. Clark, MD

Professor of Surgery, Department of Surgery, UCSF/Mt. Zion Medical Center, San Francisco, California
Chapter 38, Thyroid, Parathyroid, and Adrenal

Patrick Cole, MD

Resident, Division of Plastic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 16, The Skin and Subcutaneous Tissue

Edward M. Copeland III, MD

Emeritus Distinguished Professor of Surgery, Department of Surgery, University of Florida, College of Medicine, Gainesville, Florida
Chapter 17, The Breast

Janice N. Cormier, MD

Associate Professor of Surgery, Department of Surgical Oncology, University of Texas M.D. Anderson Cancer Center, Houston, Texas
Chapter 36, Soft Tissue Sarcomas

Joseph S. Coselli, MD

Professor and Cullen Foundation Endowed Chair, Division of Cardiothoracic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 22, Thoracic Aneurysms and Aortic Dissection

C. Clay Cothren, MD

Associate Professor of Surgery, Department of Surgery, University of Colorado, Denver, Denver, Colorado
Chapter 7, Trauma

Gregory A. Crooke, MD

Assistant Professor of Cardiothoracic Surgery, New York University School of Medicine, New York, New York
Chapter 21, Acquired Heart Disease

Daniel T. Dempsey, MD

Professor and Chair, Department of Surgery, Temple University School of Medicine, Philadelphia, Pennsylvania
Chapter 26, Stomach

Robert S. Dorian, MD

Chairman and Program Director, Department of Anesthesia, Saint Barnabas Medical Center, Livingston, New Jersey
Chapter 47, Anesthesia of the Surgical Patient

David L. Dunn, MD, PhD, FACS

Vice President for Health Sciences, State University of New York, Buffalo, Buffalo, New York
Chapter 6, Surgical Infections
Chapter 11, Transplantation

Geoffrey P. Dunn, MD

Medical Director, Department of Surgery, Hamot Medical Center, Erie, Pennsylvania
Chapter 48, Ethics, Palliative Care, and Care at the End of Life

Kelli M. Bullard Dunn, MD

Associate Professor of Surgery, Department of Surgical Oncology, State University of New York, Buffalo, Buffalo, New York
Chapter 29, Colon, Rectum, and Anus

David T. Efron, MD

Associate Professor of Surgery, Chief, Division of Trauma, Critical Care, and Emergency Surgery, Johns Hopkins Hospital, Baltimore, Maryland
Chapter 9, Wound Healing

Wafic M. ElMasri, MD

Cancer Research Training Award Postdoctoral Fellow, Medical Oncology Branch, Molecular Signaling Section, National Institutes of Health, National Cancer Institute, Bethesda, Maryland
Chapter 41, Gynecology

Fred W. Endorf, MD

Clinical Associate Professor, Department of Surgery, University of Minnesota, St. Paul, Minnesota
Chapter 8, Burns

Xin-Hua Feng, PhD

Professor, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 15, Molecular and Genomic Surgery

William E. Fisher, MD

Professor, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 33, Pancreas

Henri R. Ford, MD

Vice President and Surgeon-in-Chief, Children's Hospital Los Angeles, Professor of Surgery and Vice Dean for Medical Education, Keck School of Medicine, University of Southern California, Los Angeles, California
Chapter 39, Pediatric Surgery

Aubrey C. Galloway, MD

Seymour Cohn Professor, Chairman Department of Cardiothoracic Surgery, Department of Cardiothoracic Surgery, New York University School of Medicine, New York, New York
Chapter 21, Acquired Heart Disease

Francis H. Gannon, MD

Associate Professor of Pathology and Orthopedic Surgery, Staff Pathologist, DeBakey VA Medical Center, Baylor College of Medicine, Houston, Texas

Chapter 43, Orthopedic Surgery

David A. Geller, MD

Richard L. Simmons Professor of Surgery, Thomas E. Starzl Transplantation Institute, University of Pittsburgh, Pittsburgh, Pennsylvania

Chapter 31, Liver

Nicole S. Gibran, MD

Professor, Department of Surgery, Harborview Medical Center, Seattle, Washington

Chapter 8, Burns

Michael Gimbel, MD

Assistant Professor of Surgery, Division of Plastic and Reconstructive Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania

Chapter 45, Plastic and Reconstructive Surgery

Carlos D. Godinez Jr., MD

Fellow and Clinical Instructor, Minimally Invasive Surgery, Department of Surgery, University of Maryland School of Medicine, Baltimore, Maryland

Chapter 34, Spleen

Ernest A. Gonzalez, MD

Assistant Professor of Surgery, Department of Surgery, University of Texas Health Science Center, Houston, Texas

Chapter 4, Hemostasis, Surgical Bleeding, and Transfusion

John A. Goss, MD

Professor of Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas

Chapter 31, Liver

M. Sean Grady, MD

Charles Harrison Frazier Professor, Department of Neurosurgery, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania

Chapter 42, Neurosurgery

Tom Gregory, MD

Associate Professor, Department of Obstetrics and Gynecology, Division of Urogynecology, Oregon Health and Science University, Portland, Oregon

Chapter 41, Gynecology

Tracy C. Grikscheit, MD

Assistant Professor of Surgery, Department of Pediatric Surgery, Keck School of Medicine, University of Southern California, Los Angeles, California

Chapter 39, Pediatric Surgery

Eugene A. Grossi, MD

Professor of Cardiothoracic Surgery, New York University School of Medicine, New York, New York

Chapter 21, Acquired Heart Disease

David J. Hackam, MD, PhD

Roberta Simmons Associate Professor of Pediatric Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

Chapter 39, Pediatric Surgery

Daniel E. Hall, MD

Division of Trauma and General Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania

Chapter 48, Ethics, Palliative Care, and Care at the End of Life

Rosemarie E. Hardin, MD

Resident Cardiothoracic Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania

Chapter 46, Surgical Considerations in the Elderly

Michael H. Heggeness, MD, PhD

Chairman, Division of Orthopedic Surgery, Baylor College of Medicine, Houston, Texas

Chapter 43, Orthopedic Surgery

Lior Heller, MD

Associate Professor, Division of Plastic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas

Chapter 16, The Skin and Subcutaneous Tissue

Daniel B. Hinshaw, MD

Veterans Administration Medical Center

Chapter 48, Ethics, Palliative Care, and Care at the End of Life

John B. Holcomb, MD

Professor, Department of Surgery and Director, Center for Translational Injury Research, University of Texas Health Science Center, Houston, Texas

Chapter 4, Hemostasis, Surgical Bleeding, and Transfusion

Larry H. Hollier, MD

Professor, Division of Plastic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas

Chapter 16, The Skin and Subcutaneous Tissue

Abhinav Humar, MD

Professor of Surgery, Department of Surgery, University of Minnesota, Minneapolis, Minnesota

Chapter 11, Transplantation

Kelly K. Hunt, MD

Professor of Surgery, Department of Surgical Oncology, University of Texas M.D. Anderson Cancer Center, Houston, Texas

Chapter 17, The Breast

John G. Hunter, MD, FACS

Mackenzie Professor and Chair, Department of Surgery, Oregon Health and Science University, Portland, Oregon

Chapter 14, Minimally Invasive Surgery, Robotics, and Natural Orifice Transluminal Endoscopic Surgery

Chapter 25, Esophagus and Diaphragmatic Hernia

Chapter 32, Gallbladder and the Extrahepatic Biliary System

Tam T. Huynh, MD

Associate Professor of Surgery, Division of Vascular Surgery and Endovascular Therapy, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas

Chapter 23, Arterial Disease

Bernard M. Jaffe, MD

Professor Emeritus, Department of Surgery, Tulane University School of Medicine, New Orleans, Louisiana

Chapter 30, The Appendix

Badar V. Jan, MD

PGY-4 Surgical Resident, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, New Jersey

Chapter 2, Systemic Response to Injury and Metabolic Support

Kenneth M. Jastrow, MD

Surgery Resident, Department of Surgery, University of Texas Health Science Center, Houston, Texas
Chapter 4, Hemostasis, Surgical Bleeding, and Transfusion

Blair A. Jobe, MD

Associate Professor of Surgery, The Heart, Lung and Esophageal Surgery Institute, University of Pittsburgh, Pittsburgh, Pennsylvania
Chapter 14, Minimally Invasive Surgery, Robotics, and Natural Orifice Transluminal Endoscopic Surgery
Chapter 25, Esophagus and Diaphragmatic Hernia

Tara B. Karamlou, MD, MSc

Cardiothoracic Surgery Fellow, University of Michigan, Ann Arbor, Michigan
Chapter 20, Congenital Heart Disease

Elise C. Kohn, MD

Senior Investigator and Section Head, Department of Molecular Signaling Section, Medical Oncology Branch, National Cancer Institute, Bethesda, Maryland
Chapter 41, Gynecology

Panagiotis Kougiaris, MD

Assistant Professor, Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 23, Arterial Disease

Rosemary A. Kozar, MD

Associate Professor of Surgery, Department of Surgery, Memorial Hermann Hospital, Houston, Texas
Chapter 4, Hemostasis, Surgical Bleeding, and Transfusion

Jeffrey La Rochelle, MD

Fellow and Clinical Instructor, David Geffen School of Medicine at UCLA, Los Angeles, California
Chapter 40, Urology

Geeta Lal, MD

Assistant Professor of Surgery, University of Iowa Health Care, Carver College of Medicine, Department of Surgery, Division of Surgical Oncology and Endocrine Surgery, Iowa City, Iowa
Chapter 38, Thyroid, Parathyroid, and Adrenal

Thu Ha Liz Lee, MD

Assistant Professor of Surgery, Department of Surgery, University of Cincinnati, Cincinnati, Ohio
Chapter 1, Accreditation Council for Graduate Medical Education Core Competencies

Scott A. LeMaire, MD

Associate Professor and Director of Research, Division of Cardiothoracic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 22, Thoracic Aneurysms and Aortic Dissection

Timothy K. Liem, MD

Associate Professor of Surgery, Adjunct Associate Professor of Radiology, Division of Vascular Surgery, Oregon Health and Science University, Portland, Oregon
Chapter 24, Venous and Lymphatic Disease

Scott D. Lifchez, MD

Assistant Professor, Department of Surgery, Division of Plastic Surgery, Johns Hopkins Medical Institutions, Baltimore, Maryland
Chapter 44, Surgery of the Hand and Wrist

Peter H. Lin, MD

Associate Professor of Surgery, Division of Vascular Surgery and Endovascular Therapy, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 23, Arterial Disease

Xia Lin, MD

Associate Professor, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 15, Molecular and Genomic Surgery

Joseph E. Losee, MD

Associate Professor of Surgery and Pediatrics, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania
Chapter 45, Plastic and Reconstructive Surgery

Stephen F. Lowry, MD

Professor and Chair, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, New Jersey
Chapter 2, Systemic Response to Injury and Metabolic Support

James D. Luketich, MD

Henry T. Bahnson Professor of Cardiothoracic Surgery, Chief, The Heart, Lung and Esophageal Surgery Institute, Department of Surgery, Division of Thoracic and Foregut Surgery, University of Pittsburgh, Pittsburgh, Pennsylvania
Chapter 19, Chest Wall, Lung, Mediastinum, and Pleura

James R. Macho, MD

Emeritus Professor of Surgery, Department of Surgery, University of California, San Francisco, San Francisco, California
Chapter 37, Inguinal Hernias

Michael A. Maddaus, MD

Professor of Surgery, Department of Surgery, Division of General Thoracic and Foregut Surgery, University of Minnesota, Minneapolis, Minnesota
Chapter 19, Chest Wall, Lung, Mediastinum, and Pleura

Martin A. Makary, MD

Mark Ravitch Chair in General Surgery, Associate Professor of Health Policy, Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland
Chapter 12, Patient Safety

Jeffrey B. Matthews, MD, FACS

Dallas B. Phemister Professor and Chairman, Department of Surgery, University of Chicago, Chicago, Illinois

Funda Meric-Bernstam, MD

Associate Professor, Department of Surgical Oncology, University of Texas M.D. Anderson Cancer Center, Houston, Texas
Chapter 10, Oncology

Gregory L. Moneta, MD

Professor of Surgery, Division of Vascular Surgery, Department of Surgery, Oregon Health and Science University, Portland, Oregon
Chapter 24, Venous and Lymphatic Disease

Ernest E. Moore, MD

Vice Chairman and Professor, Department of Surgery, University of Colorado, Denver, Denver, Colorado
Chapter 7, Trauma

Katie S. Nason, MD

Assistant Professor, Division of Thoracic Surgery, Department of General Surgery, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania
Chapter 19, Chest Wall, Lung, Mediastinum, and Pleura

Kurt D. Newman, MD

Professor of Surgery and Pediatrics, Division of Surgery, George Washington University School of Medicine, Washington, DC
Chapter 39, Pediatric Surgery

Lisa A. Newman, MD

Professor, Department of Surgery, University of Michigan Comprehensive Cancer Center, Ann Arbor, Michigan
Chapter 17, The Breast

Margrét Oddsdóttir, MD*

Professor of Surgery, Chief of General Surgery, Landspítali-University Hospital, Reykjavík, Iceland
Chapter 32, Gallbladder and the Extrahepatic Biliary System

Adrian E. Park, MD

Campbell and Jeanette Plugge Professor and Vice Chair, Division of General Surgery, University of Maryland Medical Center, Baltimore, Maryland
Chapter 34, Spleen

Timothy M. Pawlik, MD

Johns Hopkins University, Baltimore, Maryland
Chapter 48, Ethics, Palliative Care, and Care at the End of Life

Andrew B. Peitzman, MD

Mark M. Ravitch Professor and Vice Chairman, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Chapter 5, Shock

Jeffrey H. Peters, MD

Chairman, Department of Surgery, University of Rochester Medical Center, Rochester, New York
Chapter 25, Esophagus and Diaphragmatic Hernia

Thai H. Pham, MD

Fellow, Department of General Surgery, Oregon Health and Science University, Portland, Oregon
Chapter 32, Gallbladder and the Extrahepatic Biliary System

Raphael E. Pollock, MD, PhD, FACS

Head, Division of Surgery, Professor and Chairman, Department of Surgical Oncology, Senator A.M. Aiken, Jr., Distinguished Chair, University of Texas M.D. Anderson Cancer Center, Houston, Texas
Chapter 10, Oncology
Chapter 36, Soft Tissue Sarcomas

Charles A. Reitman, MD

Associate Professor, Department of Orthopedic Surgery, Baylor College of Medicine, Houston, Texas
Chapter 43, Orthopedic Surgery

David A. Rothenberger, MD

Professor and Deputy, Department of Surgery, University of Minnesota, Minneapolis, Minnesota
Chapter 29, Colon, Rectum, and Anus

J. Peter Rubin, MD

Director of the Life After Weight Loss Program, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania
Chapter 45, Plastic and Reconstructive Surgery

Ashok K. Saluja, PhD

Professor and Vice Chair, Department of Surgery, University of Minnesota, Minneapolis, Minnesota
Chapter 33, Pancreas

Philip R. Schauer, MD

Chief of Minimally Invasive General Surgery, Cleveland Clinic, Cleveland, Ohio
Chapter 27, The Surgical Management of Obesity

Bruce Schirmer, MD

Stephen H. Watts Professor of Surgery, University of Virginia Health System, Charlottesville, Virginia
Chapter 27, The Surgical Management of Obesity

Charles F. Schwartz, MD

Assistant Professor of Cardiothoracic Surgery, New York University School of Medicine, New York, New York
Chapter 21, Acquired Heart Disease

Subhro K. Sen, MD

Clinical Assistant Professor, Division of Plastic & Reconstructive Surgery, Department of Surgery, Stanford University Medical Center, Palo Alto, California
Chapter 44, Surgery of the Hand and Wrist

Neal E. Seymour, MD

Professor, Department of Surgery, Tufts University School of Medicine, Chief of General Surgery, Baystate Medical Center, Springfield, Massachusetts
Chapter 35, Abdominal Wall, Omentum, Mesentery, and Retroperitoneum

Mark L. Shapiro, MD

Associate Professor of Surgery, Associate Director Trauma Services, Department of Surgery, Duke University Medical Center, Durham, North Carolina
Chapter 12, Patient Safety

Kapil Sharma, MD

Assistant Professor, Division of Cardiothoracic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 22, Thoracic Aneurysms and Aortic Dissection

Vadim Sherman, MD, FRCSC

Assistant Professor of Surgery, Director, Comprehensive Bariatric Surgery Center, Program Director, Minimally Invasive Fellowship, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 37, Inguinal Hernias

G. Tom Shires III, MD

Chair, Surgical Services, Presbyterian Hospital of Dallas, Dallas, Texas
Chapter 3, Fluid and Electrolyte Management of the Surgical Patient

Brian Shuch, MD

Chief Resident, Department of Urology, David Geffen School of Medicine, Los Angeles, California
Chapter 40, Urology

Michael L. Smith, MD

Assistant Professor, Department of Neurosurgery, Albert Einstein College of Medicine, Bronx, New York
Chapter 42, Neurosurgery

Samuel Stal, MD

Professor, Division of Plastic Surgery, Michael E. DeBakey Department of Surgery, Baylor College of Medicine, Houston, Texas
Chapter 16, The Skin and Subcutaneous Tissue

Ali Tavakkolizadeh, MB BS

Assistant Professor of Surgery, Department of Surgery, Harvard Medical School, Boston, Massachusetts
Chapter 28, Small Intestine

*Deceased.

Allan Tsung, MD

Assistant Professor, Department of Surgery, University of Pittsburgh, Pittsburgh, Pennsylvania
Chapter 31, Liver

Ross M. Ungerleider, MD

Professor of Surgery, Department of Surgery, Oregon Health and Science University, Portland, Oregon
Chapter 20, Congenital Heart Disease

Christopher G. Wallace, MD

Clinical and Research Microsurgery Fellow, Department of Plastic and Reconstructive Surgery, Chang Gung Memorial Hospital, Chang Gung University and Medical College, Taipei, Taiwan
Chapter 45, Plastic and Reconstructive Surgery

Kasper S. Wang, MD

Assistant Professor of Surgery, Department of Pediatric Surgery, Keck School of Medicine, University of Southern California, Los Angeles, California
Chapter 39, Pediatric Surgery

Randal S. Weber, MD

Professor and Hubert L. and Olive Stringer Distinguished Professor for Cancer Research and Chairman, Department of Head and Neck Surgery, University of Texas M.D. Anderson Cancer Center, Houston, Texas
Chapter 18, Disorders of the Head and Neck

Fu-Chan Wei, MD, FACS

Professor and Chancellor, Department of Plastic Surgery, College of Medicine, Chang Gung University, Chang Gung Memorial Hospital, Taipei, Taiwan
Chapter 45, Plastic and Reconstructive Surgery

Richard O. Wein, MD

Assistant Professor, Department of Otolaryngology-Head and Neck Surgery, Tufts New England Medical Center, Boston, Massachusetts
Chapter 18, Disorders of the Head and Neck

Jacob Weinberg, MD

Assistant Professor, Department of Orthopedic Surgery, Baylor College of Medicine, Houston, Texas
Chapter 43, Orthopedic Surgery

Karl F. Welke, MD

Assistant Professor, Division of Cardiothoracic Surgery, Oregon Health and Science University, Portland, Oregon
Chapter 20, Congenital Heart Disease

Edward E. Whang, MD

Associate Professor of Surgery, Department of Surgery, Harvard Medical School, Boston, Massachusetts
Chapter 28, Small Intestine

Michael E. Zenilman, MD

Clarence and Mary Dennis Professor and Chairman, Department of Surgery, SUNY Downstate Medical Center, Brooklyn, New York
Chapter 46, Surgical Considerations in the Elderly

Michael J. Zinner, MD

Moseley Professor of Surgery, Department of Surgery, Harvard Medical School, Boston, Massachusetts
Chapter 28, Small Intestine

Brian S. Zuckerbraun, MD

Assistant Professor of Surgery, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Chapter 5, Shock

译者序一

《施瓦兹外科学》是一部优秀的国际性外科学教科书,在世界各地广泛应用。

该书的问世已有 40 余年,见证了一个外科学飞速发展的时代。外科疾病的诊断能力从定性到定量,从宏观到微观,从单一疾病诊断到蛋白组学和基因检测对疾病发生发展的深度了解。微创外科手术已广泛应用于许多腹腔和胸腔内的手术,有逐步取代开放性手术之势。达·芬奇系统不仅使很多不可开展的手术技巧得以实现,其视觉增强效果显著增加了外科手术的精度。经自然腔道手术(NOTES)的开展使外科手术有了新的路径,手术后在体表不留瘢痕。血管内的手术方法已经完全改变了周围性血管疾病的治疗。心脏手术扩大心室辅助装置和人工心脏最终成为现实。而在器官移植中肾、肝、小肠、心脏、肺原位移植已成为常规手术。液体、电解质和肠内肠外营养治疗不仅解决了临床营养问题,也作为治

疗措施改变了病人的预后。生命垂危病人的临终关怀、护理以及强调人文特色和医学伦理,极大程度上维护了病人的尊严,同时也拉近了医护人员与病人及其家属的关系。这些都是本书与时俱进之处。

在本书出版之际,感谢本书的译者同行在繁重的临床工作中利用休息时间出色完成承担的任务,感谢天津市南开医院对该书出版的支持,感谢人民卫生出版社保证了本书高水平、高质量的出版。

陈孝平

华中科技大学同济医学院附属同济医院外科学系教授

中国科学院院士

2017 年冬于武汉

译者序二

《施瓦兹外科学》是一部优秀的外科学教科书,在世界各地广泛应用于教学、临床及科研。从第1版发行至今40余年,我国尚未有中文翻译本,我一直希望把这部书介绍给我国广大医学生、医生及相关科学研究人员。

在一次美国ASA会议上巧遇在East Carolina大学的老同学孙西甦教授和著名胰腺外科专家John Hopkins大学的Dana Andersen教授,Andersen教授正是该书的副主编。大家谈起此书一拍即合,决定由我和孙西甦教授回国组织专家翻译该书。陈孝平院士是我国著名腹部外科学家和教育学家,他已主编全国高等学校八年制及七年制临床医学等专业用规划教材《外科学》10部,配套教材、专著及参考书8部,是本书翻译出版的最佳主译。恰巧,陈孝平教授的博士研究生李丹医生毕业后加盟我的团队,她工作认真、不辞劳苦、英语基础扎实,是该书翻译工作不二的编写秘书。在陈院士的组织下,建立

了一个阵容强大的翻译团队,由吴咸中院士、吴孟超院士、王正国院士作为该书的荣誉主译,陈孝平院士、崔乃强教授、邱贵兴院士、孙西甦教授作为主译。各位译者分别来自全国30家高等医学院校和三级甲等医院,均为国内各自领域的精英,共90余名,其中包括在美国霍普金斯大学的访问学者4名。

非常感谢华中科技大学同济医学院同济医院和天津市南开医院对该书编译投入的人力、物力和财力支持。特别感谢本书编写秘书李丹医师协调诸多单位和译者以及文字修改等工作付出的巨大艰辛。感谢人民卫生出版社对该书的出版给予了极大的支持。

崔乃强

天津市南开医院

2017年5月

《施瓦兹外科学》第1版和第9版之间经历了40年,见证了外科学在对疾病的认知和诊断以及在外科技术和补充治疗(complementary therapeutic approaches)等领域取得的非凡进步。

人类基因组的发现使我们对更多疾病的遗传学因素有了新的认识。幽门螺杆菌的发现及其在溃疡中的作用彻底颠覆了溃疡病的治疗原则,如部分胃切除的抗酸手术、迷走神经切断加引流手术等是我在当住院医师时高年资住院医师们最常做的术式,而今已是鲜有实施。

超声、CT和磁共振技术的不断进展使疾病的诊断更加精准,内镜检查技术的发展对诊断能力的提高也大有裨益,微创手术已经成为许多腹内和胸腔手术的标准术式,视觉增强的机器人手术的使用将这些手术变得更加精准,经自然腔道的内镜手术也已在临床使用。

血管内介入治疗已彻底改变了包括动脉和静脉在内的周围血管疾病的外科处理原则。心脏外科学也以倍增的速度发

展——左心室辅助装置和人工心脏已成为现实。最富戏剧性技术的成功则来自于器官移植,肾、肝、小肠、心脏、肺的原位移植都在这一阶段得以实现。

基于对液体与电解质平衡和营养需求与静脉营养治疗的进一步理解,已使这些技术更广泛的应用于临床。对肿瘤患者在放化疗方面的进步,不但将肿瘤的切除率提高到一个此前不曾预想的高度,同时也延长了病人的生存期。为完成这一全景蓝图,同时还要考虑到具有人文特征、伦理、人口老龄化、临终关怀等相关问题。

本书第1版的6位主编当时很难想到上述的巨大变化,作为其中的两位,弗朗克·斯宾塞(Frank C. Spencer)和我幸运地见证了本书的出版,享受为人父母般的骄傲。

西摩·施瓦兹,医学博士,美国外科学会会员
Seymour I. Schwartz, MD, FACS

原著前言

当我应邀主编这本有着历史价值的外科教科书时,我的目标是维护其盛名,尊重西摩·施瓦兹(Seymour I. Schwartz)和其他主编及作者前辈以往的努力,正是他们才赋予了本书前8版的超高水准。我感谢所有实现这一宏伟目标的各个章节的作者们,他们带着对病人、对外科教学和临床的无比热爱,完美地完成了他们的工作,并奉献了他们一丝不苟的工作。

正是大家共同的努力才造就了本书第9版的诞生,它更新了《施瓦兹外科学》,并在国际上使之继续保持着外科教科书的权威地位。本书中的每一个章节都由该领域的权威专家进行了严苛的充实或更新,以期达到外科教学的最高水平。此外,每个章节还配有快速检索关键论点、突出的循证参考文

献、彩色插图、影像图片和附表。本版还加入了两个新章节,即“美国毕业后医学教育鉴定委员会指定的核心能力”(第2章)和“医学伦理、姑息治疗和临终关怀”(最后1章)。

本书所有的作者真诚希望本书的内容可以为读者的外科技能打下一个坚实的基础,也为继续教育的读者以及更高级的读者提供一个前进中的驿站。

感谢所有参与本版新书出版的人。还要感谢我的家人,是他们的爱与一贯支持使本书的出版成为现实。

查尔斯·布朗尼卡迪,医学博士,美国外科学会会员
F. Charles Brunicaudi, MD, FACS