

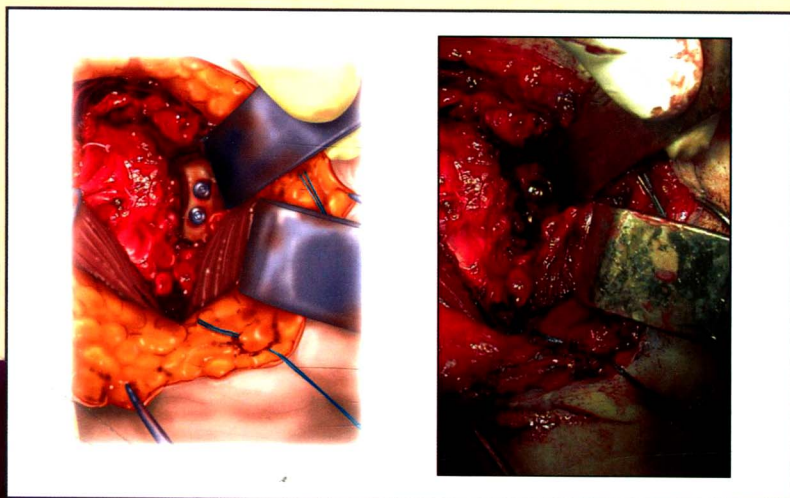
骨科手术操作技术丛书

肩和肘关节手术技术

Operative Techniques: Shoulder and Elbow Surgery

原 著 Donald H. Lee
Robert J. Neviaser

主 译 姜保国

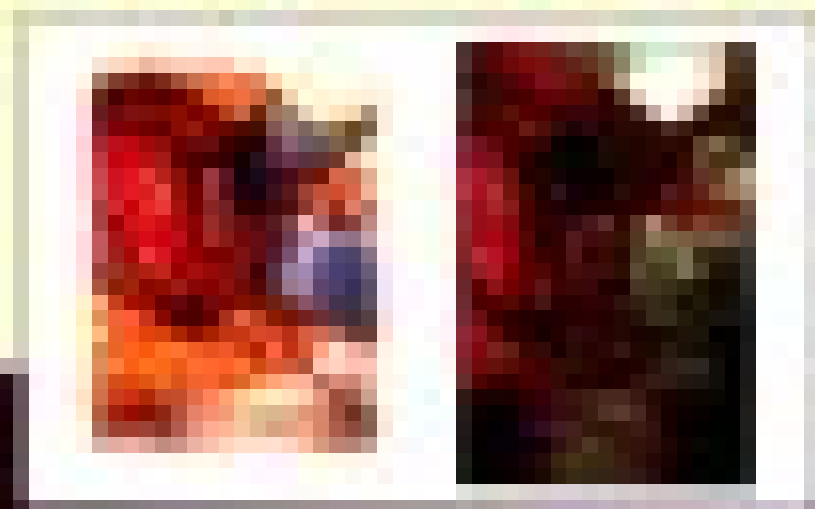


北京大学医学出版社

肩肘腕关节手术技术

Operative Techniques: Shoulder and Elbow Surgery

主 编 Robert M. Marder
副 编 Robert J. Marder
主 译 李树强



WILEY MEDICAL LIBRARY

骨科手术操作技术丛书

肩和肘关节手术技术

Operative Techniques: Shoulder and Elbow Surgery

原 著 Donald H. Lee
Robert J. Neviaser

主 译 姜保国

副主译 郝定均 付中国 张殿英 王 蕾 张培训

北京大学医学出版社

JIAN HE ZHOU GUANJIE SHOUSHU JISHU

图书在版编目 (CIP) 数据

肩和肘关节手术技术 / (美) 李 (Lee, D. H.),
(美) 尼维阿瑟 (Neviaser, R. J.) 原著; 姜保国等译.
—北京: 北京大学医学出版社, 2013. 1

(骨科手术操作技术丛书)

书名原文: Shoulder and Elbow Surgery

ISBN 978-7-5659-0425-7

I. ①肩… II. ①李… ②尼… ③姜… III. ①肩关节 - 关节疾病
- 外科手术 ②肘关节 - 关节疾病 - 外科手术 IV. ① R687.4

中国版本图书馆 CIP 数据核字 (2012) 第 156649 号

北京市版权局著作权合同登记号: 图字: 01-2012-4727

Shoulder and Elbow Surgery

Donald H. Lee, Robert J. Neviaser

ISBN-13: 978-1-4160-3278-6

ISBN-10: 1-4160-3278-9

Copyright © 2010 by Saunders, an imprint of Elsevier Inc.

Authorized Simplified Chinese translation from English language edition published by the Proprietor.

Elsevier (Singapore) Pte Ltd.

3 Killiney Road, #08-01 Winsland House I, Singapore 239519

Tel: (65) 6349-0200, Fax: (65) 6733-1817

First Published 2013

2013年初版

Simplified Chinese translation Copyright © 2013 by Elsevier (Singapore) Pte Ltd and Peking University Medical Press. All rights reserved.

Published in China by Peking University Medical Press under special agreement with Elsevier (Singapore) Pte Ltd. This edition is authorized for sale in China only, excluding 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.

本书简体中文版由北京大学医学出版社与Elsevier (Singapore) Pte Ltd.在中国境内 (不包括香港特别行政区及台湾) 协议出版。本版仅限在中国境内 (不包括香港特别行政区及台湾) 出版及标价销售。未经许可之出口, 是为违反著作权法, 将受法律之制裁。

肩和肘关节手术技术

主 译: 姜保国

出版发行: 北京大学医学出版社 (电话: 010-82802230)

地 址: (100191) 北京市海淀区学院路 38 号 北京大学医学部院内

网 址: <http://www.pumpress.com.cn>

E-mail: booksale@bjmu.edu.cn

印 刷: 北京圣彩虹制版印刷技术有限公司

经 销: 新华书店

责任编辑: 刘 燕 责任校对: 金彤文 责任印制: 苗 旺

开 本: 889mm × 1194mm 1/16 印张: 64 字数: 1622 千字

版 次: 2013 年 1 月第 1 版 2013 年 1 月第 1 次印刷

书 号: ISBN 978-7-5659-0425-7

定 价: 788.00 元

版权所有, 违者必究

(凡属质量问题请与本社发行部联系退换)

骨科手术操作技术丛书

肩和肘关节手术技术

Operative Techniques: Shoulder and Elbow Surgery

注 意

医学在不断进步。虽然标准安全措施必须遵守，但是由于新的研究和临床实践在不断拓展我们的知识，在治疗和用药方面作出某些改变也许是必需或适宜的。建议读者核对本书所提供的每种药品的生产厂商的最新产品信息，确认药物的推荐剂量，服用方法、时间及相关禁忌证。确定诊断、决定患者的最佳服药剂量和最佳治疗方法以及采取适当的安全措施是经治医师的责任，这有赖于他（她）们的个人经验和对每一位患者的了解。在法律允许的范围内，出版商和编著者对于因与本书所包含的资料相关而引起的任何个人损伤或财产损失，均不承担任何责任。

出版者

译者名单

编译专家（以姓氏笔画排序）

马先贵（潍坊市中医院）	张 堃（西安市红十字会医院）
王天兵（北京大学人民医院）	张殿英（北京大学人民医院）
王文良（天津武警医学院附属医院）	陈世益（复旦大学附属华山医院运动医学中心）
王 欣（宁波市第六医院）	陈 宏（宁波市第六医院）
王宝军（首都医科大学附属北京友谊医院）	陈建海（北京大学人民医院）
王 蕾（上海交通大学医学院瑞金医院）	陈疾忤（复旦大学附属华山医院运动医学中心）
邓少杰（深圳市宝安区人民医院）	陈 宾（承德医学院附属医院）
付中国（北京大学人民医院）	郁 凯（天津市第五中心医院）
白 露（北京大学深圳医院）	周君琳（首都医科大学附属北京朝阳医院）
华英汇（复旦大学附属华山医院运动医学中心）	赵立连（卫生部北京医院）
伊力哈木·托合提（新疆医科大学第二附属医院）	郝定均（西安市红十字会医院）
刘海春（山东大学齐鲁医院）	姜保国（北京大学人民医院）
李 鑫（山东潍坊医学院）	党 育（北京大学人民医院）
杨 明（北京大学人民医院）	徐迎军（青岛市妇女儿童医院）
杨 波（北京协和医院）	徐海林（北京大学人民医院）
肖鸿鹄（复旦大学附属华山医院运动医学中心）	唐康来（第三军医大学西南医院）
宋有鑫（承德医学院附属医院）	崔国庆（北京大学第三医院运动医学研究所）
张亚军（武警北京市总队第二医院）	寇玉辉（北京协和医院）
张忠礼（潍坊市人民医院）	彭建平（上海交通大学医学院附属新华医院）
张振军（山东大学附属济南市中心医院）	熊 建（北京大学人民医院）
张培训（北京大学人民医院）	薛 峰（北京大学人民医院）

校译秘书（以姓氏笔画排序）

张培训（北京大学人民医院）

韩 娜（北京大学人民医院）

译者团队（以姓氏笔画排序）

王 刚（北京大学人民医院）

王志永（北京大学人民医院）

王艳华（北京大学人民医院）

王振威（北京大学人民医院）

邓玖旭（北京大学人民医院）

邓 磊（湖北省十堰市太和医院）

安 帅（北京大学人民医院）

芦 浩（北京大学人民医院）

李 轩（中国医学科学院阜外心血管病医院）

李建鑫（天津武警医学院附属医院）

李恒超（北京大学人民医院）

杨贵博（中国医学科学院阜外心血管病医院）

杨 亮（天津武警医学院附属医院）

冷坤鹏（北京大学人民医院）

陈旭红（北京大学人民医院）

陈 博（北京大学人民医院）

金开基（北京大学人民医院）

周 靖（北京大学人民医院）

顾航宇（北京积水潭医院）

徐小东（北京大学人民医院）

徐春归（北京大学人民医院）

徐 雷（北京大学人民医院）

殷晓峰（北京大学人民医院）

黄 伟（北京大学人民医院）

鹿子燕（青岛妇女儿童医院）

韩大成（北京通州区潞河医院）

韩 娜（北京大学人民医院）

韩端阳（北京大学人民医院）

缪炜程（天津武警医学院附属医院）

黎庆佃（北京大学人民医院）

颜勇卿（宁波市第二医院）

原著序言

《肩和肘关节手术技术》一书旨在向读者展示由本领域最权威的外科医生所描述的步骤清晰、解释明确的肩和肘关节外科手术操作。与传统的论著不同，本书注重于向创伤骨科医生展示更为精细的手术要点、手术技巧和失误。这些将有助于医务工作者更加深入地了解相关手术步骤的操作情况。作为爱思唯尔出版公司出版的“骨科手术操作技术”丛书中的一本，本专著重点阐述了肩和肘关节外科手术的操作。本书每一章的结构类似，对手术适应证、体格检查、适当的影像学研究、外科解剖和治疗方案逐一作了描述。每一章的手术操作部分包括了对于手术定位、手术入路和手术显露的介绍，以及手术操作步骤的详解。书中的插图、手术照片均配以详细的解释说明。书中也提供了对于术后康复、预后情况的讨论和注解参考列表。纵观每一章，书中对手术过程中的经验教训和一些手术争议进行了探讨。我们希望当外科医生们在进行手术操作时，这些详细的手术说明和讨论将给术者提供便捷和全面的参考，从而使他们增强对于手术的理解力，并提高手术效果，最大限度地减少手术并发症。我们很幸运拥有一支出色的撰稿人团队。在分享他们的工作经验的同时，我们也为他们对本书所作的贡献深表感激。我们也向 Daniel Pepper、Berta Steiner 和 Julie Daniels 为本书的出版所提供的巨大帮助表示感谢。

希望读者喜欢这本书并从中获益。

Donald H. Lee, MD

Robert J. Neviaser, MD

原著前言

医学教育包括诸多方面，如专业知识的培养、对于人类需求感的了解、多领域知识的融合、基础科学的应用、对某些问题和对策的深入研究、基于患者的症状的整合分析、对于结构性缺陷的了解、并要知道需要提供给患者什么药物和手术，吸收消化所有这些信息，然后再决定采取何种措施来帮助患者。这些所有的知识是如此复杂。这就是为什么没有书本可以明确地告诉你应该如何去做！但这些知识，对于那些初级阶段的医生来说，却是如此有用。即便是在事业成熟期，这些知识也有助于人们去了解其他经验丰富的医生是如何进行手术操作的，从而学到他人解决问题和提高技术的方法。本书的资深编者已经在加紧编撰一本论著，旨在着重讨论何时、如何做到这一切。

经验丰富的编者选用了最常见的手术操作步骤，其所提供的知识信息对处于任一职业阶段的几乎所有医生都将是有益的。肩关节部分重点讨论了肩袖及其肌腱相关问题、骨折、关节炎和骨不稳定性。同样，肘关节部分包含了肌肉肌腱附着的问题、骨折、关节炎和骨不稳定性等内容，其后还补充了关于如何处理神经损伤和肌肉强直等知识。肘关节部分的附加章节是关于软组织覆盖方法的。在完成本书手术操作的外科医生里，有的是精通各种手术的多面手，有的是创伤、运动、成人重建方面的专科医生。但是，不论从哪个角度了解肩和肘关节外科手术，人们都可以从同一学科、但不同亚专业的医生那里学到经验和知识，以及来自不同学术背景和研究方向专家们的经验。

应用解剖学是外科手术的基础。但令人费解却又真实的情况是，常用的解剖学课本往往不包含适用于手术操作的解剖知识。本书对应用解剖学知识进行了详细的阐述。本书的精彩之处是不仅对手术方法进行了步骤清晰的描述，对细微环节也进行了注释。许多问题可以通过开放手术或关节镜手术来解决。书中很多内容是原始病例，但也有一些是修正手术。

这是一本值得每一位外科医生在手术操作实践中反复研读的教科书。我本人认为，这是一本值得经常放在手边而不是图书馆里的工具书。本书将适合从事本领域手术工作的外科医生反复使用。另一个优点是，书中对于每一步操作都进行了恰如其分的注解，这使读者在处理特殊情况的时候，也能扩展自己的知识面。

再一次向那些富有创见、无私的编者们的和才华出众的作者们致敬！正是他们付出精力和时间，才使这本通俗易懂的论著得以面世。

Robert H. Cofield, MD
Professor of Orthopedics
Mayo Clinic College of Medicine
Emeritus Chairman, Department of
Orthopedic Surgery, Mayo Clinic
Past-President
American Shoulder and Elbow Surgeons
Past-Chairman, International Board of
Shoulder and Elbow Surgery
Emeritus Editor-in-Chief, *Journal of
Shoulder and Elbow Surgery*

致 谢

将本书献给我的妻子 Dawn, 和我们的孩子 David, Dana, Diane, Daniel 和 Dustin, 他们给了我无尽的支持和快乐。也将此书献给我的父母——Kwan 和 Kay, 感谢他们的指导。

感谢共同编者 Robert Neviaser, 一直以来他给了我很多建议和鼓励。最后, 感谢在此书编写中付出了时间和知识的所有作者。

Donald H. Lee MD

将本书献给我的妻子 Anne, “你是让我展翅高飞的风”, 献给我的孩子 (Niki, Rob, Lan 和 Andy) 以及孙子和孙女 (Isabel, Mac, Bozie, Kenzie, J.B., Maddie, Geordie, A.J 和 Katie), 你们是我在这个世界上存在的理由。最后, 将本书献给我的父亲——Julius S.Neviaser, MD, 他是肩关节外科领域的先驱和巨匠。

Robert J. Neviaser MD

编著者名单

Julie E. Adams, MD, MS

Assistant Professor of Orthopaedic Surgery,
University of Minnesota, Minneapolis, Minnesota
**Arthroscopy of the Elbow: Setup and Portals; Elbow
Arthritis and Stiffness: Open Treatment; Elbow
Arthritis and Stiffness: Arthroscopic Treatment;
Surgical Reconstruction of Longitudinal
Radioulnar Dissociation (Essex-Lopresti Injury)**

Christopher S. Ahmad, MD

Associate Professor, Orthopaedic Surgery, Columbia
University College of Physicians and Surgeons;
Assistant Attending, Orthopaedic Surgery, New
York Presbyterian Hospital, New York, New York
**Arthroscopic Treatment of Posterior-Inferior
Multidirectional Instability of the Shoulder**

James R. Andrews, MD

Program Director, Orthopedic Sports Medicine
Fellowship, American Sports Medicine Institute,
Birmingham, Alabama
**Ulnar Collateral Ligament Reconstruction Using the
Modified Jobe Technique; Lateral Ulnar Collateral
Ligament Reconstruction**

Robert M. Baltera, MD

Assistant Clinical Professor, Orthopaedic Surgery
Department, Indiana University Medical Center,
Indianapolis, Indiana
Repair and Reconstruction of the Ruptured Triceps

Eric D. Bava, MD

Shoulder Service, The Carrell Clinic, Dallas, Texas
**Humeral Hemiarthroplasty with Biologic Glenoid
Resurfacing**

Louis U. Bigliani, MD

Frank E. Stinchfield Professor and Chairman,
Columbia University Medical Center; Director of
Orthopaedics, New York-Presbyterian Hospital/
Columbia University, New York, New York
**Open Treatment of Anterior-Inferior Multidirectional
Instability of the Shoulder**

Julie Y. Bishop, MD

Assistant Professor, Department of Orthopaedic
Surgery, Chief, Division of Shoulder Surgery, The
Ohio State University, Columbus, Ohio
**Open Reduction and Internal Fixation of Three- and
Four-Part Proximal Humerus Fractures**

Pascal Boileau, MD

Professor and Chairman, Department of Orthopaedic
Surgery, Medical University of Nice, Nice, France
Arthroscopic Biceps Tenodesis

Wayne Z. Burkhead, MD

Clinical Professor, Department of Orthopaedic
Surgery, University of Texas Southwestern Medical
School; Shoulder Service, The Carrell Clinic, Dallas,
Texas
**Humeral Hemiarthroplasty with Biologic Glenoid
Resurfacing**

Jonathan E. Buzzell, MD

Nebraska Orthopaedic Hospital; OrthoWest, Omaha,
Nebraska
**Open and Arthroscopic Suprascapular Nerve
Decompression**

Kyle A. Caswell, DO

Chief Resident, Tulane University School of Medicine;
PGY 5 Resident, Tulane University Medical Center,
New Orleans, Louisiana
**Arthroscopic Treatment of Calcific Tendinitis in the
Shoulder**

Neal C. Chen, MD

Lecturer, University of Michigan, Ann Arbor,
Michigan
Operative Fixation of Symptomatic Os Acromiale

Tyson Cobb, MD

Director of Hand Center of Excellence, Orthopaedic
Specialists, Davenport, Iowa
Endoscopic Cubital Tunnel Release

Robert H. Cofield, MD

Professor Emeritus, Mayo Clinic College of Medicine,
and Mayo Clinic, Rochester, Minnesota

Total Shoulder Arthroplasty

Mark S. Cohen, MD

Professor, Director, Orthopedic Education, and Head,
Section of Hand and Elbow Surgery, Department
of Orthopedic Surgery, Rush University Medical
Center, Chicago, Illinois

**Lateral Epicondylitis: Arthroscopic and Open
Treatment**

Edward V. Craig, MD, MPH

Professor of Clinical Orthopaedic Surgery, Weill
Cornell Medical School; Attending Surgeon,
Hospital for Special Surgery, New York, New York

Open Distal Clavicle Excision

Lynn A. Crosby, MD

Professor and Director of Shoulder Surgery,
Department of Orthopaedic Surgery, Medical
College of Georgia, Augusta, Georgia

Humeral Head Resurfacing Arthroplasty

Leah T. Cyran, MD

Shoulder Service, The Carrell Clinic, Dallas, Texas

**Humeral Hemiarthroplasty with Biologic Glenoid
Resurfacing**

Matthew Denkers, MD, FRCSC

Assistant Professor, Division of Orthopaedic Surgery,
McMaster University; Associate Staff, Service of
Orthopaedic Surgery, Department of Surgery,
Hamilton Health Sciences, Hamilton, Ontario,
Canada

**Arthroscopic Treatment of Traumatic Anterior
Instability of the Shoulder**

Allen Deutsch, MD

Clinical Assistant Professor, Baylor College of
Medicine; Faculty Staff, St. Luke's Episcopal
Hospital, Houston, Texas

**Rotator Cuff Repair: Arthroscopic Technique for
Partial-Thickness or Small or Medium Full-
Thickness Tears**

Christopher C. Dodson, MD

Assistant Professor of Orthopaedic Surgery, Thomas
Jefferson University; Attending Orthopaedic
Surgeon, Division of Sports Medicine, Rothman
Institute, Philadelphia, Pennsylvania

**Anterior Glenohumeral Instability Associated with
Glenoid or Humeral Bone Deficiency: The Latarjet
Procedure**

Jason D. Doppelt, MD

Resident, Department of Orthopaedic Surgery,
George Washington University, Washington, DC

Intramedullary Fixation of Clavicle Fractures

Mark C. Drakos, MD

Attending Orthopaedic Surgeon, Sports Medicine
and Foot and Ankle Surgery, North Shore-Long
Island Jewish Health System, New Hyde Park,
New York

**SLAP Lesion: Arthroscopic Reconstruction of the
Labrum and Biceps Anchor**

George S. M. Dyer, MD

Clinical Instructor in Orthopaedic Surgery, Harvard
Medical School; Hand and Upper Extremity
Service, Department of Orthopaedic Surgery,
Brigham and Women's Hospital, Boston,
Massachusetts

**Open Treatment of Complex Traumatic Elbow
Instability**

Benton A. Emblom, MD

Sports Medicine Fellow, American Sports Medicine
Institute, Birmingham, Alabama

**Ulnar Collateral Ligament Reconstruction Using the
Modified Jobe Technique**

John M. Erickson, MD

Upper Extremity Surgeon, Raleigh Hand Center,
Raleigh, North Carolina

**Radial Head Fractures: Radial Head Replacement;
Radial Head Fractures: Open Reduction and
Internal Fixation; Operative Treatment of
Olecranon Bursitis**

Evan L. Flatow, MD

Lasker Professor and Chairman of Orthopaedic
Surgery, The Leni and Peter May Department of
Orthopaedic Surgery, Mount Sinai Medical Center,
New York, New York

Open Unconstrained Revision Shoulder Arthroplasty

Mark A. Frankle, MD

Chief of Shoulder and Elbow Surgery, Florida
Orthopaedic Institute, Tampa, Florida

Hemiarthroplasty for Proximal Humerus Fracture

Leesa M. Galatz, MD

Associate Professor, Department of Orthopaedic
Surgery, Washington University School of
Medicine; Associate Professor, and Shoulder and
Elbow Fellowship Director, Washington University
Orthopedics; Barnes-Jewish Hospital, St. Louis,
Missouri

Arthroscopic Repair of Massive Rotator Cuff Tears

Andrew Green, MD

Associate Professor, and Chief of Division of Shoulder and Elbow Surgery, Warren Alpert Medical School, Brown University, Providence, Rhode Island

Open Treatment of Acute and Chronic Acromioclavicular Dislocations

Jeffrey A. Greenberg, MD, MS

Clinical Assistant Professor, Department of Orthopedics, Indiana University; Partner and Fellowship Director, Indiana Hand to Shoulder Center, Indianapolis, Indiana

Repair of Distal Biceps Tendon Ruptures

Robert U. Hartzler, MD

Resident, Department of Orthopedic Surgery, Mayo Clinic, Rochester, Minnesota

Total Shoulder Arthroplasty

Hill Hastings II, MD

Clinical Professor, Orthopaedic Surgery, Indiana University Medical Center, and Indiana Hand to Shoulder Center, Indianapolis, Indiana

Total Elbow Arthroplasty: Discovery Minimally Constrained Linked System; Total Elbow Arthroplasty for the Treatment of Complex Distal Humerus Fractures

Robert Hollinshead, MD, FRCSC

Clinical Professor, Division of Orthopaedic Surgery, and Adjunct Professor, Faculty of Kinesiology, University of Calgary; Associate Staff, Service of Orthopaedic Surgery, Department of Surgery, Peter Lougheed Centre, Alberta Health Services, Calgary, Alberta, Canada

Arthroscopic Treatment of Traumatic Anterior Instability of the Shoulder

Joseph P. Iannotti, MD, PhD

Department Chair and Professor of Orthopaedic Surgery, Cleveland Clinic, Cleveland, Ohio

Arthrodesis of the Shoulder

Frank W. Jobe, MD

Co-Founder, Kerlan-Jobe Orthopaedic Clinic, Los Angeles, California

Medial Epicondylitis: Open Treatment

Kristofer J. Jones, MD

Resident, Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, New York

Anterior Glenohumeral Instability Associated with Glenoid or Humeral Bone Deficiency: The Latarjet Procedure

Jesse B. Jupiter, MD

Hansjorg Wyss AO Professor of Orthopedic Surgery, Harvard Medical School; Division of Hand and Upper Extremity Service, Massachusetts General Hospital, Boston, Massachusetts

Open Reduction and Internal Fixation of Acute Midshaft Clavicular Fractures

Anne M. Kelly, MD

Assistant Professor of Clinical Orthopaedics, Department of Orthopaedics, Weill Cornell Medical Center; Assistant Attending Orthopaedic Surgeon, Hospital for Special Surgery, New York, New York

Open Distal Clavicle Excision

W. Ben Kibler, MD

Medical Director, Shoulder Center of Kentucky, Lexington Clinic, Lexington, Kentucky

Scapular Surgery I: Eden-Lange Transfer for Trapezius Muscle Palsy; Scapular Surgery II: Pectoralis Major Transfer for Serratus Anterior Palsy; Scapular Surgery III: Rhomboid/Latissimus Dorsi Transfer for Serratus Anterior Palsy

Steven M. Klein, MD

Hospital Staff Physician, Gundersen Lutheran Hospital, La Crosse, Wisconsin

Hemiarthroplasty for Proximal Humerus Fracture

Zinon T. Kokkalis, MD

Fellow, Hand and Upper Extremity Surgery, Allegheny General Hospital, Pittsburgh, Pennsylvania

Surgical Decompression for Radial Tunnel Syndrome

Marc S. Kowalsky, MD

Assistant Attending Orthopaedic Surgeon, Department of Orthopaedic Surgery, Lenox Hill Hospital, New York, New York

Arthroscopic Repair of Massive Rotator Cuff Tears

Sumant G. Krishnan, MD

Clinical Assistant Professor, University of Texas Southwestern Medical Center, Dallas, Texas; Clinical Assistant Professor, and Director, Shoulder Fellowship, Baylor University Medical Center; Visiting Professor, Shoulder Surgery, International Orthopaedic and Traumatological Institute, Arezzo, Italy; Shoulder Service, The Carrell Clinic, Dallas, Texas; North Central Surgical Center, Baylor University Medical Center, Dallas, Texas

Humeral Hemiarthroplasty with Biologic Glenoid Resurfacing; Open and Arthroscopic Suprascapular Nerve Decompression

John E. Kuhn, MD, MS

Associate Professor, Vanderbilt University Medical School; Chief of Shoulder Surgery, Vanderbilt University Medical Center, Nashville, Tennessee
Sternoclavicular Joint Reconstruction Using Semitendinosus Graft

Donald H. Lee, MD

Professor of Orthopaedic Surgery, Vanderbilt Orthopaedic Institute, Vanderbilt University School of Medicine, Nashville, Tennessee
Surgical Treatment of Scapular Fractures; Radial Head Fractures: Radial Head Replacement; Total Elbow Arthroplasty for the Treatment of Complex Distal Humerus Fractures; Revision Total Elbow Arthroplasty; Radial Head Fractures: Open Reduction and Internal Fixation; Operative Treatment of Olecranon Bursitis

William N. Levine, MD

Professor of Clinical Orthopaedic Surgery, Columbia University; Vice Chairman, Columbia University Medical Center, New York, New York
Acromioplasty

David M. Lutton, MD

Clinical Instructor of Orthopaedic Surgery, The George Washington University School of Medicine; Attending Orthopaedic Surgeon, The George Washington University Hospital, Washington, DC
Open Unconstrained Revision Shoulder Arthroplasty

Leonard C. Macrina, MSPT, SCS, CSCS

Champion Sports Medicine, Birmingham, Alabama
Ulnar Collateral Ligament Reconstruction Using the Modified Jobe Technique

Kevin J. Malone, MD

Assistant Professor, Department of Orthopaedic Surgery, Case Western Reserve University, MetroHealth Medical Center, Cleveland, Ohio
Submuscular Ulnar Nerve Transposition

Alfred A. Mansour III, MD

Pediatric Orthopaedic Fellow, The Children's Hospital; Sports Medicine Fellow, Steadman Hawkins Clinic, Denver, Colorado
Sternoclavicular Joint Reconstruction Using Semitendinosus Graft

Milford H. Marchant, Jr., MD

Sports Medicine—Orthopaedic Surgery, Bay Area Orthopaedics & Sports Medicine, Annapolis, Maryland
Medial Epicondylitis: Open Treatment

Chad J. Marion, MD

Orthopaedic Surgeon, Pacific Medical Centers, Seattle, Washington
Open Treatment of Anterior-Inferior Multidirectional Instability of the Shoulder; Arthroscopic Treatment of Posterior-Inferior Multidirectional Instability of the Shoulder

George M. McCluskey III, MD

Clinical Professor, Department of Orthopaedic Surgery, Medical College of Georgia, Augusta, Georgia; Clinical Assistant Professor, Department of Orthopaedic Surgery, Tulane University School of Medicine, New Orleans, Louisiana; Director, St. Francis Shoulder Center, and Director, St. Francis Shoulder Fellowship Program, Columbus, Georgia
Open Treatment of Posterior-Inferior Multidirectional Shoulder Instability

Patrick J. McMahon, MD

Adjunct Associate Professor, Department of Bioengineering, University of Pittsburgh; McMahon Orthopedics & Rehabilitation, Pittsburgh, Pennsylvania
Adhesive Capsulitis

Steven W. Meisterling, MD

Sports Medicine Fellow, American Sports Medicine Institute, Birmingham, Alabama
Lateral Ulnar Collateral Ligament Reconstruction

Mark A. Mighell, MD

Shoulder and Elbow Surgery, Florida Orthopaedic Institute, Tampa, Florida
Hemiarthroplasty for Proximal Humerus Fracture

Joseph Mileti, MD

Assistant Clinical Professor of Orthopaedics, The Ohio State University; Shoulder Service, Riverside Methodist Hospital, Ohio Orthopaedic Center, Columbus, Ohio
Open Reduction and Internal Fixation of Three- and Four-Part Proximal Humerus Fractures

Anthony Miniaci, MD, FRCSC

Professor of Surgery, Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, and Cleveland Clinic, Cleveland, Ohio
Treatment of the Unstable Shoulder with Humeral Head Bone Loss

Anand M. Murthi, MD

Attending Orthopaedic Surgeon, and Chief, Shoulder and Elbow Surgery, Department of Orthopaedics and Sports Medicine, Union Memorial Hospital, Baltimore, Maryland
Arthroscopic Distal Clavicle Resection

Robert G. Najarian, MD

Assistant Professor in Clinical Orthopaedics, The Ohio State University, Columbus, Ohio
Treatment of the Unstable Shoulder with Humeral Head Bone Loss

Andrew S. Neviaser, MD

Assistant Professor, Department of Orthopaedic Surgery, George Washington University Medical Center, Washington, DC
Open Repair of Rotator Cuff Tears; Mini-Open Biceps Tenodesis

Robert J. Neviaser, MD

Professor and Chairman, Department of Orthopaedic Surgery, George Washington University Medical Center, Washington, DC
Open Repair of Rotator Cuff Tears; Mini-Open Biceps Tenodesis; Intramedullary Fixation of Clavicle Fractures

Michael J. O'Brien, MD

Assistant Professor of Orthopedic Surgery, Tulane University School of Medicine; Tulane University Medical Center, New Orleans, Louisiana
Arthroscopic Treatment of Calcific Tendinitis in the Shoulder; Elbow Arthroscopic Débridement for Osteochondritis Dissecans

Stephen J. O'Brien, MD, MBA

Associate Professor of Clinical Orthopaedic Surgery, Weill Cornell Medical College; Vice Chairman, Department of Sports Medicine, Associate Attending of Orthopaedic Surgery, and Assistant Scientist, Hospital for Special Surgery, New York, New York
SLAP Lesion: Arthroscopic Reconstruction of the Labrum and Biceps Anchor

Jason Old, MD, FRCSC

Assistant Professor, University of Manitoba; Pan Am Clinic, Winnipeg, Manitoba, Canada
Arthroscopic Biceps Tenodesis

A. Lee Osterman, MD

Professor and Chairman, Division of Hand Surgery, Department of Orthopaedic Surgery, Thomas Jefferson University; President, The Philadelphia Hand Center, Philadelphia, Pennsylvania
Surgical Reconstruction of Longitudinal Radioulnar Dissociation (Essex-Lopresti Injury)

Rick F. Papandrea, MD

Assistant Clinical Professor in Orthopaedics, Medical College of Wisconsin, Milwaukee; Partner, Orthopaedic Associates of Wisconsin, Waukesha, Wisconsin
Hemiarthroplasty of the Distal Humerus; Radiocapitellar Replacement

Maxwell C. Park, MD

Clinical Faculty, Orthopaedic Biomechanics Laboratory, VA Long Beach Healthcare System, Long Beach, California Department of Orthopaedic Surgery, Southern California Permanente Medical Group, Woodland Hills, California
Arthroscopic Treatment of Anterior-Inferior Multidirectional Instability of the Shoulder

Nata Parnes, MD

Director of Orthopedics, Carthage Area Hospital, Carthage, New York
Open Reduction and Internal Fixation of Acute Midshaft Clavicular Fractures

William Thomas Payne, MD

Department of Orthopaedic Surgery, University of Colorado, Denver, Colorado
Repair of Distal Biceps Tendon Ruptures

Matthew L. Ramsey, MD

Associate Professor of Orthopedic Surgery, Thomas Jefferson University, Philadelphia, Pennsylvania
Elbow Arthroscopic Débridement for Osteochondritis Dissecans

Bradley S. Raphael, MD

Resident, Hospital for Special Surgery, New York, New York
Open Distal Clavicle Excision

Herbert Resch, MD

Professor, and Head of Department of Trauma Surgery and Sports Injuries, Paracelsus Medical University, Salzburg, Austria
Percutaneous Fixation of Proximal Humerus Fractures

David Ring, MD, PhD

Associate Professor of Orthopaedic Surgery, Harvard Medical School; Orthopaedic Hand and Upper Extremity Service, Massachusetts General Hospital, Boston, Massachusetts
Open Treatment of Complex Traumatic Elbow Instability