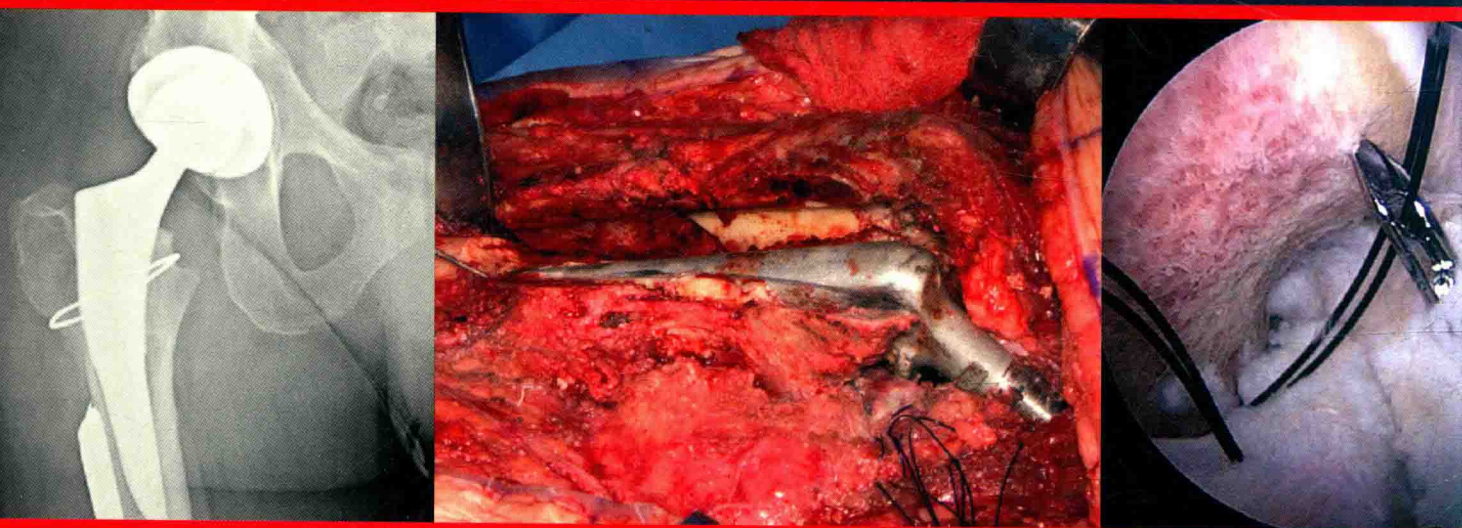


AAOS

髋关节重建前沿聚焦 Advanced Reconstruction

第2版

Hip 2



主编：(美)杰伊·雷博曼
(美)丹尼尔·贝里

主审：周一新 李记天

主译：孙永强 宋晓兰

AAOS

NM 北方联合出版传媒(集团)股份有限公司
辽宁科学技术出版社

AAOS

髋关节重建前沿聚焦

Advanced Reconstruction

第2版

Hip 2

主编：（美）杰伊·雷博曼

（美）丹尼尔·贝里

主审：周一新 李记天

主译：孙永强 宋晓兰

主 编

杰伊·雷博曼，医学博士

南加州大学凯克医学院矫形外科学系教授兼系主任

南加州大学维特比工程学院生物医学工程教授

南加州大学

洛杉矶，加利福尼亚州

丹尼尔·贝里，医学博士

矫形外科L.Z.Gund 教授

梅奥诊所矫形外科顾问

罗彻斯特，明尼苏达州

北方联合出版传媒（集团）股份有限公司

辽宁科学技术出版社

This is translation of
Advanced Reconstruction: Hip 2, English edition published by The American
Academy of Orthopaedic Surgeons
Copyright ©2017 The American Academy of Orthopaedic Surgeons
All Rights Reserved.

AAOS 未参与此中文版翻译工作。中文译文中任何错误，或者可能出现的误差、错误与AAOS无关。

©2018，简体中文版权归辽宁科学技术出版社所有。
本书由The American Academy of Orthopaedic Surgeons授权辽宁科学技术出版社在
中国出版中文简体字版本。著作权合同登记号：第06-2017-256号。

版权所有·翻印必究

图书在版编目（CIP）数据

AAOS髋关节重建前沿聚焦：第2版 /（美）杰伊·雷博
曼，（美）丹尼尔·贝里主编；孙永强，宋晓兰主译. —沈
阳：辽宁科学技术出版社，2018.11

ISBN 978-7-5591-0964-4

I. ①A… II. ①杰… ②丹… ③孙… III. ①髋关节—
外科手术 IV. ①R687.4

中国版本图书馆CIP数据核字（2018）第222540号

出版发行：辽宁科学技术出版社
（地址：沈阳市和平区十一纬路25号 邮编：110003）

印刷者：辽宁新华印务有限公司

经销者：各地新华书店

幅面尺寸：210mm×285mm

印 张：46.25

插 页：4

字 数：900千字

出版时间：2018年11月第1版

印刷时间：2018年11月第1次印刷

责任编辑：陈 刚 凌 敏 吴兰兰

封面设计：颖 溢

版式设计：袁 舒

责任校对：尹 昭 王春茹

书 号：ISBN 978-7-5591-0964-4

定 价：498.00元

联系电话：024-23284363

E-mail:lingmin19@163.com

http://www.lnkj.com.cn

AAOS

髋关节重建前沿聚焦
Advanced Reconstruction

第2版

Hip 2

AAOS

译者名单

主审

周一新 李记天

主译

孙永强 宋晓兰

参译人员

刘国杰 阎 亮 李帅垒 冯丽娜 耿 端 孙 楠

陈晓波 赵子龙 刘福东 冯 方 苏 艺 陈洛宇

赵建磊 柴 昊 窦继元 李付礼 宋世鹏 张 伟

段亚威

寄语

相较于膝关节，髋关节的解剖结构更为特殊，病变更加复杂多变，关节置换术后感染、假体松动、假体周围骨折、严重骨缺损等并发症的治疗，对骨科医师来说是一项巨大挑战，再加上手术技术参差不齐，髋关节重建后的疗效令人堪忧。

目前，髋关节外科的发展若火之始然，泉之始达。《AAOS Advanced Reconstruction Hip》第1版在2005年出版，是美国骨科医师协会编著的关于髋关节重建技术的教程，代表着当时髋关节重建的前沿，我很荣幸当时能翻译此书。十余年间，我们对髋关节的认识逐渐加深，髋关节重建技术也不断革新，而重建材料的性能，假体的涂层工艺也有了突飞猛进的发展，相信其第2版的出版在促进髋关节诊疗更加规范化的同时，也会大大提高我们应对日益复杂的诊疗问题的能力。

我与孙永强教授经常在学术会议上进行交流，听闻他正带领团队编译此书的第2版，当时我便对此产生了极浓厚的兴趣，后来有幸参阅该书的英文原版和译稿，更颇有亲近之感，令我忍不住览之而后快。这本书继续由美国的杰伊·雷博曼和丹尼尔·贝里两位教授领衔编著，相较于第1版来说，增加了许多新的内容，这既有我们目前正在面对的、迫切需要掌握的技能，如直前微创化入路的选择，新后侧入路应用，标准及专用手术台DAA的不同操作技术要点，以及翻修中遇到的金属-金属假体失败后的应对策略、金属离子疾

病治疗、多型翻修假体应用等棘手问题。也对翻修手术中的多种临床常见问题均提出了标准化处理原则，同时更是为国内翻修潮的到来提供了更加符合目前情况的有效的技术指导。

博观约取，审辩而笃行，新技术、新理论的掌握和完善需要不断地实践，再形成理论上的升华。我与孙永强教授相识多年，他常年致力于关节外科疾病的研究工作，每年完成大量的人工髋、膝关节置换及翻修手术，在人工关节重建领域有其独到的技术素养，建树颇丰，令人艳羡。由孙永强、宋晓兰及其团队对此书进行编译，使译著更加贴近原著，保证了译著的专业性和准确性。纵览全书，本书内容全面、叙述清晰、图文并茂，配有大量临床数据、照片以及专业注解，为广大年轻医师开辟了一条良好的学习途径，同时为高年资医师、研究人员提供了了解专业领域前沿发展的平台。

负势竞上，互相轩邈，争高直指，千百成峰，相信此书能给我们带来开卷的充实，又能使我们的手术技术实现“苟日新、又日新、日日新”！我很荣幸成为这本译著的主审，同时，衷心向各位同道推荐此书！

周-新

于北京积水潭医院矫形外科

2018年10月20日

译者序

中国髋关节外科的发展已有40多年了，随着人均寿命的提高和国内初次人工髋关节置换术的推广，行关节置换患者的基数与日俱增，使得手术规范化操作、掌握复杂的髋关节置换技术、围术期管理等，日臻成为一线关节外科医师必然面临并亟须解决的关键问题。加之重建技术的不断开展，其所带来的假体长期磨损和严重并发症等问题，使关节翻修已然成为广大关节外科医师不可回避的挑战。

现在，由于国内外关节外科技术的完善以及假体材料的不断改进，每年有大量的研究成果问世。为了使临床医师更加全面地掌握髋关节重建的前沿技术，更好地服务于患者，我们从众多外文书籍中，甄选了由美国骨科医师协会（AAOS）联合美国髋关节协会出版的《AAOS Advanced Reconstruction Hip》第2版一书，以期广大临床一线医师能够获得更加专业、前沿、实用性的骨科学术专著的指导。

本书由美国知名专家杰伊·雷博曼博士和丹尼尔·贝里博士带领专家团队共同编著，是目前国际上公认的权威性骨科教程。全书分为5部70项议题，分别对初次全髋关节置换术、复杂性全髋关节置换术、全髋关节置换术后并发症、全髋关节置换翻修术和其他重建方法进行系统而详细的论述，并重点介绍了面对某一髋关节问题时所使用的手术策略和关键技术，特别是在微创前入

路选择、复杂髋置换、内置物适应证和翻修操作难点等方面增加了许多新内容，不仅可以使读者能够了解髋关节重建的前沿动态，对临床复杂棘手问题的处理也具有一定的指导作用。同时，本书每一章节都拥有详细的临床数据，并配以大量高清图片，对解剖、器械和技术操作标注清晰，方便广大读者的阅读和对技术的掌握。

本书的翻译团队临床经验丰富，完成过多部国外英文专著的翻译工作，在尊重原文的基础上尽力做到“信、达、雅”，又因本书涉及的理论和技术都较为领先，翻译过程中为了能够准确，在主审的指导下，我们也请教了很多著名的关节外科专家和知名骨科译者，完成之后，每一章节我们都邀请了该领域的知名专家来进行校阅，他们的积极热情和无私的帮助使得翻译过程顺利进行。在此书即将出版之际，我们对此表示衷心的感谢，对你们的帮助与支持，我们永远铭记于心。即便如此，此书还可能有相关错漏和不尽完善之处，希望读者予以批评指正。

孙永强 宋晓兰

河南省洛阳正骨医院（郑州院区）

河南省骨科医院

2018年10月16日

美国骨科医师协会董事会，2016—2017

Gerald R. Williams, Jr, MD

主席

William J. Maloney, MD

第一副主席

David A. Halsey, MD

第二副主席

M. Bradford Henley, MD, MBA

财务主管

David D. Teuscher, MD

前主席

Basil R. Besh, MD

Robert H. Brophy, MD

Lisa K. Cannada, MD

Howard R. Epps, MD

Daniel C. Farber, MD

Brian J. Galinat, MD, MBA

Daniel K. Guy, MD

Lawrence S. Halperin, MD

Amy L. Ladd, MD

Brian G. Smith, MD

Ken Sowards

Karen L. Hackett, FACHE, CAE (ex officio)

员工

Ellen C. Moore, Chief Education Officer

Hans Koelsch, PhD, Director, Department of Publications

Lisa Claxton Moore, Senior Manager, Book Program

Laura Goetz, Managing Editor

Kathleen Anderson, Senior Editor

Steven Kellert, Senior Editor

Michelle Wild, Associate Senior Editor

Courtney Dunker, Editorial Production Manager

Abram Fassler, Publishing Systems Manager

Suzanne O' Reilly, Graphic Designer

Susan Morritz Baim, Production Coordinator

Karen Danca, Permissions Coordinator

Charlie Baldwin, Digital and Print Production Specialist

Hollie Muir, Digital and Print Production Specialist

Emily Douglas, Page Production Assistant

Genevieve Charet, Editorial Coordinator

Rachel Winokur, Editorial Coordinator/Copy Editor

Brian Moore, Manager, Electronic Media Programs

Katie Hovany, Digital Media Specialist

Explore the full portfolio of AAOS educational programs and publications across the orthopaedic spectrum for every stage of an orthopaedic surgeon's career, at www.aaos.org. The AAOS, in partnership with Jones & Bartlett Learning, also offers a comprehensive collection of educational and training resources for emergency medical providers, from first responders to critical care transport paramedics. Learn more at www.aaos.org/ems.

原书参编者 Contributors

Matthew P. Abdel, MD

*Associate Professor of Orthopedic Surgery, Mayo Clinic
College of Medicine
Senior Associate Consultant, Department of
Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota*

Derek F. Amanatullah, MD, PhD

*Assistant Professor
Department of Orthopaedic Surgery
Stanford University
Redwood City, California*

David Backstein, MD, MEd, FRCSC

*Associate Professor, Surgery
Head, Granovsky Gluskin Division of Orthopaedics
Mount Sinai Health System
University of Toronto
Toronto, Ontario, Canada*

Rishi Balkissoon, MD, MPH

*Assistant Professor
Adult Reconstructive Orthopaedic Surgery
University of Rochester Medical Center
Rochester, New York*

William P. Barrett, MD

*Director, Center for Joint Replacement
Proliance Orthopedic Associates
Renton, Washington*

Paul E. Beaulé, MD, FRCSC

*Professor of Surgery
Head, Division of Orthopedics
The Ottawa Hospital/University of Ottawa
Ottawa, Ontario, Canada*

Asheesh Bedi, MD

*Harold and Helen W. Gehring Professor
Division Chief, Sports Medicine and Shoulder Surgery
Department of Orthopaedic Surgery
University of Michigan
Ann Arbor, Michigan*

Michael E. Berend, MD

Midwest Center for Joint Replacement - Midwest Specialty

Surgery Center

*Joint Replacement Surgeons of Indiana Research Foundation
Indianapolis, Indiana*

Jonathan L. Berliner, MD

*Department of Orthopaedic Surgery
University of California, San Francisco
San Francisco, California*

Daniel J. Berry, MD

*L.Z. Gund Professor of Orthopedic Surgery
Consultant
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota*

Michael Bolognesi, MD

*Chief, Division of Adult Reconstruction
Department of Orthopaedic Surgery
Duke University Medical Center
Durham, North Carolina*

Barrett Steven Boody, MD

*Department of Orthopaedic Surgery
Northwestern Memorial Hospital
Chicago, Illinois*

Mathias P. G. Bostrom, MD

*Attending Orthopaedic Surgeon
Adult Reconstruction & Joint Replacement Division
Hospital for Special Surgery
New York, New York*

Kevin J. Bozic, MD, MBA

*Chair of Surgery and Perioperative Care
Dell Medical School, University of Texas at Austin
Austin, Texas*

Adam C. Brekke, MD

*Department of Orthopaedic Surgery
Vanderbilt Orthopaedics and Rehabilitation
Nashville, Tennessee*

Timothy S. Brown, MD

*Department of Orthopaedic Surgery
University of Texas Southwestern Medical Center
Dallas, Texas*

James A. Browne, MD

*Associate Professor of Orthopaedic Surgery
Division Head of Adult Reconstruction
University of Virginia
Charlottesville, Virginia*

Miguel E. Cabanela, MD

*Professor of Orthopedics
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota*

John J. Callaghan, MD

*Professor
Department of Orthopaedics
University of Iowa
Iowa City, Iowa*

Hugh U. Cameron, MBChB, FRCSC

*Orthopaedic Surgeon
Sunnybrook Hospital
Toronto, Ontario, Canada*

Joshua L. Carter, MD

*Midwest Center for Joint Replacement
Indianapolis, Indiana*

John C. Clohisey, MD

*Daniel C. and Betty B. Viehmann Distinguished Professor
Department of Orthopaedic Surgery
Washington University School of Medicine
St. Louis, Missouri*

David F. Dalury, MD

*Clinical Professor of Orthopedics
University of Maryland
Chief of Orthopedic Surgery
University of Maryland St. Joseph Medical Center
Towson, Maryland*

Craig J. Della Valle, MD

*Chief, Division of Adult Reconstruction
Professor of Orthopaedic Surgery
Department of Orthopaedic Surgery
Rush University Medical Center
Chicago, Illinois*

Douglas A. Dennis, MD

*Surgeon
Colorado Joint Replacement
Denver, Colorado*

Ajit Deshmukh, MD

*Assistant Professor
Adult Reconstructive Orthopaedic Surgery
NYU Langone Medical Center/VA New York Harbor
Healthcare System
New York, New York*

Michael J. Dunbar, MD, FRCSC, PhD

*Professor of Surgery
Dalhousie University
Halifax, Nova Scotia, Canada*

Clive P. Duncan, MD, MSc, FRCSC

*Professor and Emeritus Chair
Department of Orthopaedics
University of British Columbia
Vancouver, British Columbia, Canada*

Randa Elmallah, MD

*Orthopaedic Surgery
University of Mississippi Medical Center
Jackson, Mississippi*

Mohammad Ali Enayatollahi, MD

*Postdoctoral Research Fellow
Rothman Institute at Thomas Jefferson University
Philadelphia, Pennsylvania*

C. Anderson Engh, Jr, MD

*Orthopaedic Surgeon
Anderson Orthopaedic Research Institute
Alexandria, Virginia*

Keith A. Fehring, MD

*Hip and Knee Reconstruction Fellow
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota*

Thomas K. Fehring, MD

*Co-Director, OrthoCarolina
Hip and Knee Center
OrthoCarolina
Charlotte, North Carolina*

Bryan Flynn, MD, FRCSC

*Arthroplasty Fellow
Division of Orthopaedics
Dalhousie University
Halifax, Nova Scotia, Canada*

Donald S. Garbuz, MD, FRCSC

*Professor and Head
Division of Lower Limb Reconstruction & Oncology
Department of Orthopaedics
University of British Columbia
Vancouver, British Columbia, Canada*

Jean W. M. Gardeniers, MD, PhD, DTHM

*Consultant Orthopaedic Surgeon
Department of Orthopaedics
Radboud University Medical Center
Nijmegen, Netherlands*

Kevin L. Garvin, MD

*Professor and Chair
Department of Orthopaedic Surgery and Rehabilitation
University of Nebraska Medical Center
Omaha, Nebraska*

Jeremy M. Gililland, MD

*Orthopaedic Surgeon
Department of Orthopaedics
University of Utah
Salt Lake City, Utah*

Francis B. Gonzales, MD

*Assistant Clinical Professor
Fellowship Program Director
Department of Orthopaedic Surgery
University of California, San Diego
San Diego, California*

Stuart B. Goodman, MD, PhD, FRCSC, FACS

*Robert L. and Mary Ellenburg Professor of Surgery
Professor, Department of Orthopaedic Surgery and
(by courtesy) Bioengineering
Department of Orthopaedic Surgery
Stanford University
Stanford, California*

Christopher Grayson, MD

*Adult Reconstruction and Arthritis Surgery
Florida Orthopaedic Institute
Tampa, Florida*

Allan E. Gross, MD, FRCSC, O.Ont

*Professor of Surgery
Division of Orthopaedic Surgery
Mount Sinai Hospital, University of Toronto
Toronto, Ontario, Canada*

George J. Haidukewych, MD

*Academic Chairman of Orthopedic Surgery
Level One Orthopedics
Orlando Health
Orlando, Florida*

Rhett K. Hallows, MD

*Orthopedic Surgeon
Duke Orthopedics
Duke University Medical Center
Durham, North Carolina*

William G. Hamilton, MD

*Orthopaedic Surgeon
Anderson Orthopaedic Research Institute
Alexandria, Virginia*

Arlen D. Hanssen, MD

*Professor
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota*

Curtis W. Hartman, MD

*Associate Professor
Department of Orthopaedic Surgery and Rehabilitation
University of Nebraska Medical Center
Omaha, Nebraska*

Nathanael Heckmann, MD

*Orthopaedic Surgery
Keck School of Medicine
University of Southern California
Los Angeles, California*

Patrick K. Horst, MD

*Department of Orthopaedic Surgery
University of California, San Francisco
San Francisco, California*

James L. Howard, MD, MSc, FRCSC

*Program Director and Assistant Professor
Division of Orthopaedic Surgery
Western University, London Health Sciences Centre
London, Ontario, Canada*

Jonathan R. Howell, MBBS, MSc, FRCS (Tr & Orth)

*Consultant Orthopaedic Surgeon
Princess Elizabeth Orthopaedic Centre
Royal Devon and Exeter NHS Foundation Trust
Exeter, England, United Kingdom*

William Hozack, MD

*Walter Annenberg Professor of Joint Replacement
Sidney Kimmel Medical School
Thomas Jefferson University
Rothman Institute Orthopedics
Philadelphia, Pennsylvania*

Der-Chen Timothy Huang, MD

*Orthopedic Fellow
Joint Replacement Institute
St. Vincent Medical Center
Los Angeles, California*

Michael H. Huo, MD

*Professor
Department of Orthopaedic Surgery
University of Texas Southwestern Medical Center
Dallas, Texas*

Cathy Huynh, BS

*Project Director
Anderson Orthopaedic Research Institute
Alexandria, Virginia*

Richard Iorio, MD

*Chief of Adult Reconstruction
William and Susan Jaffe Professor of Orthopaedic Surgery
Department of Orthopaedic Surgery
NYU Langone Medical Center
Hospital for Joint Diseases
New York, New York*

Joshua J. Jacobs, MD

*Professor and Chairman
Department of Orthopaedic Surgery
Rush University Medical Center
Associate Provost for Research
Rush University
Vice Dean for Research
Rush Medical College
Chicago, Illinois*

Jason M. Jennings, MD, DPT

*Orthopaedic Surgeon
Colorado Joint Replacement, Porter Adventist Hospital
Denver, Colorado*

William A. Jiranek, MD

*Professor and Chief of Adult Reconstruction
Alison and Abbott Byrd Chair in Orthopaedic Surgery
Department of Orthopedic Surgery
Virginia Commonwealth University School of Medicine*

Richmond, Virginia

Robert B. Jones, MD

*Adult Reconstruction Fellow
Department of Orthopaedic Surgery
University of Utah
Salt Lake City, Utah*

Y. Julia Kao, MD

*Adult Reconstruction and Joint Replacement
Resurgens Orthopaedics
Atlanta, Georgia*

Erdan Kayupov, MSE

*Research Fellow
Department of Orthopaedic Surgery
Rush University Medical Center
Chicago, Illinois*

James A. Keeney, MD

*Chief, Adult Hip & Knee Reconstruction Service
Associate Professor
Department of Orthopaedic Surgery
University of Missouri
Columbia, Missouri*

Scott S. Kelley, MD

*Professor
Department of Orthopedic Surgery
Duke University
Durham, North Carolina*

Bryan T. Kelly, MD

*Chief, Sports Medicine and Shoulder Service
Hospital for Special Surgery
New York, New York*

Raymond H. Kim, MD

*Surgeon
Colorado Joint Replacement
Denver, Colorado*

Kevin Koo, MD, FRCSC

*Clinical Associate
Division of Orthopaedics
University of Toronto
Toronto, Ontario, Canada*

Paul Kuzyk, MD, MASc, FRCSC

*Assistant Professor, Orthopaedic Surgeon
Department of Orthopaedic Surgery
Mount Sinai Hospital, University of Toronto*

Toronto, Ontario, Canada

Paul F. Lachiewicz, MD

Consulting Professor
Department of Orthopaedics
Duke University Medical Center
Durham, North Carolina

Matthew Landrum, MD

Department of Orthopaedic Surgery
University of Texas Southwestern Medical Center
Dallas, Texas

Christopher M. Larson, MD

Twin Cities Orthopedics
Edina, Minnesota

Nicholas J. Lash, MBChB, FRACS

Clinical Fellow
Department of Orthopaedics, Lower Limb
Reconstruction & Oncology
University of British Columbia
Vancouver, British Columbia, Canada

Cameron K. Ledford, MD

Assistant Professor
Department of Orthopedic Surgery
University of Kansas Medical Center
Kansas City, Kansas

Brett R. Levine, MD, MS

Associate Professor
Department of Orthopedic Surgery
Rush University Medical Center
Chicago, Illinois

David G. Lewallen, MD

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

Jay R. Lieberman, MD

Professor and Chairman
Department of Orthopaedic Surgery
Keck School of Medicine of USC
Professor of Biomedical Engineering
Viterbi School of Engineering of USC
University of Southern California
Los Angeles, California

Steve S. Liu, MD

Associate Research Scientist
Department of Orthopaedics
University of Iowa
Iowa City, Iowa

Adolph V. Lombardi, Jr, MD, FACS

President
Joint Implant Surgeons, Inc
New Albany, Ohio

Tad M. Mabry, MD

Assistant Professor of Orthopedics
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota

Steven J. MacDonald, MD, FRCSC

Professor of Orthopedic Surgery and Department Chair
Department of Orthopedic Surgery
London Health Sciences Centre
London, Ontario, Canada

Rami Madanat, MD, PhD, FEBOT

Attending Orthopaedic Surgeon
Department of Orthopaedics and Traumatology
Helsinki University Hospital
Helsinki, Finland

Tatu J. Mäkinen, MD, PhD, FEBOT

Arthroplasty Clinical Fellow
Division of Orthopaedic Surgery
Mount Sinai Hospital, University of Toronto
Toronto, Ontario, Canada

Henrik Malchau, MD, PhD

Professor
Department of Orthopedics
Massachusetts General Hospital, Harvard Medical School
Boston, Massachusetts

William J. Maloney, MD

Chairman
Department of Orthopaedic Surgery
Stanford University
Redwood City, California

Thomas Marceau-Cote, MD, FRCSC

Arthroplasty Fellow
Division of Orthopaedics
Dalhousie University
Halifax, Nova Scotia, Canada

Cody L. Martin, MD

Department of Orthopaedic Surgery
University of Florida College of Medicine Jacksonville
Jacksonville, Florida

Bassam A. Masri, MD, FRCSC

Professor and Head
Department of Orthopaedics
University of British Columbia
Vancouver, British Columbia, Canada

R. Michael Meneghini, MD

Associate Professor
Department of Orthopedics
Indiana University School of Medicine
Indianapolis, Indiana

Ryan A. Mlynarek, MD

Department of Orthopaedic Surgery
University of Michigan
Ann Arbor, Michigan

Michael Mont, MD

Chairman
Department of Orthopedics
Cleveland Clinic
Cleveland, Ohio

Charles L. Nelson, MD

Chief of Adult Reconstruction and Associate Professor of
Orthopaedic Surgery
University of Pennsylvania
Philadelphia, Pennsylvania

Matthew C. Niesen, MD

Adult Reconstruction Fellow
Department of Orthopedic Surgery
Mayo Clinic
Phoenix, Arizona

Daniel A. Oakes, MD

Associate Professor of Clinical Orthopaedic Surgery
Director, USC Joint Replacement Program
Department of Orthopaedic Surgery
Keck School of Medicine of USC
University of Southern California
Los Angeles, California

Mary I. O'Connor, MD

Director and Professor
Center for Musculoskeletal Care at Yale Medicine and
Yale New Haven Health

Professor

Department of Orthopaedics and Rehabilitation
Yale School of Medicine
New Haven, Connecticut

Liza Osagie-Clouard, MBBS

Royal National Orthopaedic Hospital
London, England, United Kingdom

Alex Pagé, MD, FRCSC

Adult Reconstruction Fellow
The Ottawa Hospital
Ottawa, Ontario, Canada

Wayne G. Paprosky, MD

Professor
Department of Orthopaedic Surgery
Rush University Medical Center
Winfield, Illinois

Javad Parvizi, MD, FRCS

James Edwards Professor of Orthopaedic Surgery
Rothman Institute at Thomas Jefferson University
Philadelphia, Pennsylvania

Christopher E. Pelt, MD

Assistant Professor
Department of Orthopaedics
University of Utah
Salt Lake City, Utah

Kevin I. Perry, MD

Assistant Professor
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota

Christopher L. Peters, MD

Professor and Chief, Adult Reconstruction and
Hip Preservation
Department of Orthopaedics
University of Utah
Salt Lake City, Utah

Gregory G. Polkowski, MD, MSc

Assistant Professor
Department of Orthopaedic Surgery
Vanderbilt Orthopaedic Institute
Nashville, Tennessee

Christopher Pomeroy, MD

OrthoIndy

Indianapolis, Indiana

Peter Pyrko, MD, PhD

Assistant Professor of Orthopedic Surgery
Adult Reconstruction
Department of Orthopedics
Loma Linda University
Loma Linda, California

Amar S. Ranawat, MD

Associate Professor of Orthopaedic Surgery
Hospital for Special Surgery
New York, New York

Chitranjan S. Ranawat, MD

Professor of Orthopaedic Surgery
Weill Cornell Medical College
Attending Orthopaedic Surgeon
Hospital for Special Surgery
New York, New York

Michael D. Ries, MD

Arthroplasty Fellowship Co-Director
Reno Orthopaedic Clinic
Reno, Nevada

Wim H. C. Rijnen, MD, PhD

Orthopaedic Surgeon
Department of Orthopaedics
Radboud University Medical Center
Nijmegen, Netherlands

Ola Rolfson, MD, PhD

Attending Orthopaedic Surgeon
Department of Orthopaedics
Sahlgrenska University Hospital
Mölndal, Sweden

Aaron G. Rosenberg, MD

Director of Adult Reconstruction
Department of Orthopedic Surgery
Rush University Medical Center
Chicago, Illinois

Brett D. Rosenthal, MD

Department of Orthopaedic Surgery
Northwestern University
Chicago, Illinois

James R. Ross, MD

Orthopedic Surgeon
Boca Care Orthopedics

Boca Raton, Florida

Oleg A. Safir, MD, MEd, FRCSC

Associate Professor of Surgery
Gluskin Granovsky Division of Orthopaedics
D.H. Gales Director U of T Surgical Skills Centre
Sinai Health System
University of Toronto
Toronto, Ontario, Canada

Nemandra A. Sandiford, MSc, FRCS (Tr & Orth)

Adult Reconstruction and Oncology Fellow
Department of Orthopaedics
University of British Columbia
Vancouver, British Columbia, Canada

Richard F. Santore, MD

Director, Sharp Hip Preservation Center
Department of Orthopaedic Surgery
Sharp Memorial Hospital
San Diego, California

Adam A. Sassoon, MD, MS

Assistant Professor
Department of Orthopaedics and Sports Medicine
University of Washington
Seattle, Washington

Thomas P. Schmalzried, MD

Fellowship Director
Joint Replacement Institute
St. Vincent Medical Center
Los Angeles, California

B. Willem Schreurs, MD, PhD

Orthopaedic Surgeon
Department of Orthopaedics
Radboud University Medical Center
Nijmegen, Netherlands

Joseph M. Schwab, MD

Assistant Professor
Department of Orthopaedic Surgery
Medical College of Wisconsin
Milwaukee, Wisconsin

Peter K. Sculco, MD

Orthopedic Hip and Knee Reconstruction Fellow
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota

Thorsten M. Seyler, MD, PhD

Assistant Professor
Division of Adult Reconstruction
Department of Orthopaedic Surgery
Duke University
Durham, North Carolina

Courtney E. Sherman, MD

Orthopedic Oncologist and Assistant Professor
Department of Orthopedic Surgery
Mayo Clinic
Jacksonville, Florida

Neil Sheth, MD

Assistant Professor
Department of Orthopaedic Surgery
University of Pennsylvania
Philadelphia, Pennsylvania

Rafael J. Sierra, MD

Professor
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota

Tom J. J. H. Slooff, MD, PhD

Orthopaedic Surgeon
Department of Orthopaedics
Radboud University Medical Center
Nijmegen, Netherlands

David H. So, MD

Assistant Clinical Professor
Department of Orthopedic Surgery
University of California, Irvine
Orange, California

Mark J. Spangehl, MD

Associate Professor of Orthopaedics
Department of Orthopaedics
Mayo Clinic Arizona
Phoenix, Arizona

Andrew I. Spitzer, MD

Chief, Implant Service
Cedars-Sinai Orthopaedic Center
Cedars-Sinai Medical Center
Los Angeles, California

Scott M. Sporer, MD

Associate Professor
Department of Orthopedic Surgery

Rush University Medical Center
Medical Director Joint Replacement Institute, Central
DuPage Hospital
Winfield, Illinois

Bryan D. Springer, MD

Fellowship Director
Adult Reconstruction of the Hip and Knee
OrthoCarolina Hip & Knee Center
Charlotte, North Carolina

Michael D. Steffl, MD

Physician
Department of Orthopaedic Surgery
Los Angeles County and University of Southern California
Los Angeles, California
Rebecca M. Stone, MS, ATC
Twin Cities Orthopedics
Edina, Minnesota

Bernard N. Stulberg, MD

Staff Surgeon
Spine & Orthopaedic Institute
St. Vincent Charity Medical Center
Cleveland, Ohio
Dylan Tanzer, BSc
Faculty of Medicine
Sackler University
Tel Aviv, Israel

Michael Tanzer, MD, FRCSC

Professor and Jo Miller Chair
Division of Orthopaedic Surgery
McGill University
Montreal, Quebec, Canada

Michael J. Taunton, MD

Assistant Professor
Department of Orthopedic Surgery
Mayo Clinic
Rochester, Minnesota

A. J. Timperley, MBChB, FRCS, DPhil (Oxon)

Orthopaedic Surgeon
Princess Elizabeth Orthopaedic Centre
Royal Devon Exeter NHS Foundation Trust
Exeter, England, United Kingdom

Robert T. Trousdale, MD

Professor
Department of Orthopedic Surgery
Mayo Clinic