

ADVANCES IN CLINICAL RADIOLOGY

CONTRIBUTORS

MICHAEL ACHILLEOS, MD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA

ABASS ALAVI, MD, MD (Hon), PhD, (Hon), DSc (Hon)

Department of Radiology, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania, USA

WILLIAM F. AUFFERMANN, MD, PhD

Associate Professor of Radiology, Department of Radiology and Imaging Sciences, University of Utah, Salt Lake City, Utah, USA

RICHARD I. AVIV, MBChB, MRCP, FRCR (UK), FRCPC, DABR

Department of Medical Imaging, The Ottawa Hospital, Ontario, Canada

KAREN BALLABAN-GIL, MD

Professor, Child Neurology Fellow, Isabelle Rapin Division of Child Neurology, The Saul R Korey Department of Neurology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

RICHARD G. BARR, MD, PhD

Professor of Radiology, Northeastern Ohio Medical University, Editor-in-Chief, *Journal of Ultrasound in Medicine*, Youngstown, Ohio, USA

CHRISTOPHER F. BEAULIEU, MD, PhD

Professor of Radiology (Diagnostic Radiology) and (by courtesy) Orthopaedic Surgery, Department of Radiology, Stanford Hospitals and Clinics, Stanford University School of Medicine, Stanford, California, USA

STEVEN BENITEZ, MD

Neuroradiology Fellow, Department of Radiology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

ANDREW BIVARD, PhD

Department of Neurology, The Royal Melbourne Hospital, University of Melbourne, Melbourne, Victoria, Australia

AUSTIN J. BORJA, BA

Department of Radiology, Hospital of the University of Pennsylvania, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, USA

MARTA BRASCHI-AMIRFARZAN, MD

Assistant Professor, Department of Radiology, Lahey Medical Center, Tufts University School of Medicine, Burlington, Massachusetts, USA

ALLAN BROOK, MD

Professor, Department of Radiology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

MICHAEL BURKE, MD

Department of Radiology, Amita St. Francis Hospital, Evanston, Illinois, USA

JESSICA CHAN, MD

Assistant Professor of Radiology, Department of Radiology and Imaging Sciences, University of Utah, Salt Lake City, Utah, USA

VICTORIA CHERNYAK, MD, MS

Professor of Radiology and Urology, Department of Radiology, Montefiore Medical Center, Bronx, New York, USA

JENNIFER H. CHOE, MD, PhD

Division of Hematology and Medical Oncology, Department of Medicine, Duke University Medical Center, Durham, North Carolina, USA

BORIS CHULPAYEV, MD

Attending Neurologist, Department of Neurology, White Plains Medical Center, Interventional

Neuroradiology Fellow, Department of Radiology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

MARY FRANCES A. CROAKE, DO

Department of Imaging Sciences, University of Rochester, Rochester, New York, USA

KRISTOPHER W. CUMMINGS, MD

Associate Professor, Department of Radiology, Mayo Clinic, Phoenix, Arizona, USA

ELIZABETH M. DAVENPORT, PhD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA

BAO H. DO, MD

Clinical Assistant Professor (Affiliated) (VAPAHCS), Department of Radiology, Stanford Hospitals and Clinics, Stanford University School of Medicine, Stanford, California, USA

SEAN DWIJENDRA, MD

Department of Radiology, Amita St. Francis Hospital, Evanston, Illinois, USA

SHEILA ENAMANDRAM, MD, MBA

Resident Physician, Department of Medicine, University of California San Diego, San Diego, California, USA

POUYA ENTEZARI, MD

Department of Radiology, Section of Interventional Radiology, Northwestern Memorial Hospital, Robert H. Lurie Comprehensive Cancer Center, Chicago, Illinois, USA

AMICHAJ J. ERDFARB, MD

Associate Professor of Radiology, Chief of Radiology, Montefiore Wakefield Division, Director of Quality and Safety, Department of Radiology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

AARON M. FISCHMAN, MD, FSIR, FCIIRSE

Associate Professor, Department of Diagnostic, Molecular, and Interventional Radiology, Program Director, Interventional Radiology, Mount Sinai Health System, Associate Professor of Urology, Associate Professor of Surgery, Associate Professor of

Medical Education, Icahn School of Medicine at Mount Sinai, New York, New York, USA

JAN FRITZ, MD, PhD

Associate Professor, Department of Radiology, NYU Grossman School of Medicine, New York, New York, USA

AHMED GABR, MD

Department of Radiology, Section of Interventional Radiology, Northwestern Memorial Hospital, Robert H. Lurie Comprehensive Cancer Center, Chicago, Illinois, USA

WENDE N. GIBBS, MD, MA

Senior Associate Consultant, Department of Radiology, Mayo Clinic, Phoenix, Arizona, USA

KUSH K. GOYAL, MD

Staff Physician, Center for Spine Health, Cleveland Clinic, Cleveland, Ohio, USA

JORDAN S. GROSS, MD

Assistant Professor, Department of Radiology, Keck School of Medicine of USC, University of Southern California, Los Angeles, California, USA

LEWIS HAHN, MD

University of California San Diego, San Diego, California, USA

ALISON HART, MD

Assistant Professor of Radiology, Department of Diagnostic Imaging, Brown University, Rhode Island Hospital, Providence, Rhode Island, USA

STEPHEN B. HOBBS, MD, FSCCT

Associate Professor, Department of Radiology, University of Kentucky, Lexington, Kentucky, USA

CLINTON E. JOKERST, MD

Assistant Professor, Department of Radiology, Mayo Clinic, Phoenix, Arizona, USA

KATHERINE A. KAPROTH-JOSLIN, MD, PhD

Assistant Professor, Department of Imaging Sciences, University of Rochester, Rochester, New York, USA

HADIZA S. KAZAURE, MD

Division of Endocrine Surgery, Department of Surgery, Duke University Medical Center, Durham, North Carolina, USA

SETH KLIGERMAN, MD

University of California San Diego, San Diego, California, USA

WYATT KUPPERMAN, DO

Spine Medicine Fellow, Center for Spine Health, Cleveland Clinic, Cleveland, Ohio, USA

EDWARD Y. LEE, MD, MPH

Chief, Division of Thoracic Imaging, Associate Professor, Department of Radiology, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts, USA

SEON-KYU LEE, MD, PhD

Professor of Radiology, Neurology and Neurosurgery, Department of Radiology, Albert Einstein College of Medicine and Montefiore Medical Center, Isabelle Rapin Division of Child Neurology, The Saul R Korey Department of Neurology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

BENJAMIN LeMOINE, MD

Pediatric Radiologist, Javon Bea Mercy Health Hospital, Rockford, Illinois, USA

ROBERT J. LEWANDOWSKI, MD, FSIR

Professor of Radiology, Medicine, and Surgery; Director of Interventional Oncology, Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA

RACHNA MADAN, MD

Assistant Professor, Department of Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA

JOSEPH A. MALDJIAN, MD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA

GEORGE R. MATCUK Jr, MD

Associate Professor, Department of Radiology, S. Mark Taper Foundation Imaging Center, Cedars-Sinai Medical Center, Los Angeles, California, USA

MICHAEL A. MORRIS, MD, MS

Department of Radiology and Imaging Sciences, Clinical Center, National Institutes of Health, Bethesda, Maryland, USA

SOLOMON L. MOSHÉ, MD

Professor and Director, Child Neurology Fellow, Isabelle Rapin Division of Child Neurology, The Saul R Korey Department of Neurology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

AMANDA MURPHY, PhD

Department of Medical Imaging, University of Toronto, Toronto, Canada

MARK W. PARSONS, PhD

Department of Neurology, The Royal Melbourne Hospital, University of Melbourne, Melbourne, Victoria, Australia

RAHUL S. PATEL, MD, FSIR

Department of Diagnostic, Molecular, and Interventional Radiology, Icahn School of Medicine at Mount Sinai, New York, New York, USA

JENNIFER M. PERKINS, MD, MBA

Division of Endocrinology and Metabolism, Department of Medicine, Duke University Medical Center, Durham, North Carolina, USA

AMY L. PROSKOVEC, PhD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA

JONATHAN J. RASOULI, MD

Associate Staff, Neurosurgery, Department of Neurological Surgery Center for Spine Health, Cleveland Clinic, Cleveland, Ohio, USA

JOSHUA J. REICHER, MD

Clinical Assistant Professor (Affiliated) (VAPAHCS), Department of Radiology, Stanford Hospitals and Clinics, Stanford University School of Medicine, Stanford, California, USA

AHSUN RIAZ, MD

Department of Radiology, Section of Interventional Radiology, Northwestern Memorial Hospital, Robert H. Lurie Comprehensive Cancer Center, Chicago, Illinois, USA

DANIEL J. ROCKE, MD, JD

Division of Head and Neck Surgery and Communication Sciences, Department of Surgery,

Duke University Medical Center, Durham, North Carolina, USA

BABAK SABOURY, MD, MPH

Department of Radiology and Imaging Sciences, Clinical Center, National Institutes of Health, Bethesda, Maryland, USA; Department of Radiology, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania, USA

ALAN ALPER SAG, MD

Division of Vascular and Interventional Radiology, Department of Radiology, Duke University Medical Center, Durham, North Carolina, USA

RIAD SALEM, MD, MBA

Department of Radiology, Section of Interventional Radiology, Northwestern Memorial Hospital, Robert H. Lurie Comprehensive Cancer Center, Department of Surgery, Division of Transplantation, Comprehensive Transplant Center, Northwestern University, Chicago, Illinois, USA

JONATHAN D. SAMET, MD

Section Head, Musculoskeletal Radiology, Department of Medical Imaging, Ann & Robert H. Lurie Children's Hospital of Chicago, Northwestern University, Feinberg School of Medicine, Chicago, Illinois, USA

EMIR SANDHU, MD, MBA

Adjunct Clinical Instructor, Department of Radiology, Stanford Hospitals and Clinics, Stanford University School of Medicine, Stanford, California, USA

RANDALL P. SCHERI, MD

Division of Endocrine Surgery, Department of Surgery, Duke University Medical Center, Durham, North Carolina, USA

OMID SHAFAT, MD

Postdoctoral Research Fellow, Division of Vascular and Interventional Radiology, Department of Radiology, Interventional Radiology Center, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland, USA

BHAVYA R. SHAH, MD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA

CLAUDE B. SIRLIN, MD

Professor, Department of Radiology, University of California San Diego, San Diego, California, USA

TONY P. SMITH, MD, FSIR

Division of Vascular and Interventional Radiology, Department of Radiology, Duke University Medical Center, Durham, North Carolina, USA

RICHARD THOMAS, MD

Clinical Fellow, Department of Radiology, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA

JOSEPH J. TITANO, MD

Department of Diagnostic, Molecular, and Interventional Radiology, Icahn School of Medicine at Mount Sinai, New York, New York, USA

JENANAN P. VAIRAVAMURTHY, MD

Assistant Professor, Division of Vascular and Interventional Radiology, Department of Radiology, Keck School of Medicine of USC, Los Angeles, California, USA

SARAH VAN DINE, MD

Child Neurology Fellow, Isabelle Rapin Division of Child Neurology, The Saul R Korey Department of Neurology, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York, USA

ELIZABETH WEIHE, MD

University of California San Diego, San Diego, California, USA

CLIFFORD R. WEISS, MD, FSIR, FCIRSE

Associate Professor, Division of Vascular and Interventional Radiology, Department of Radiology, Interventional Radiology Center, Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland, USA

STEPHANIE R. WILSON, MD

Clinical Professor of Radiology, Clinical Professor of Medicine, Division of Gastroenterology, Department of Radiology and Department of Medicine, University of Calgary, Foothills Medical Centre, Calgary, Alberta, Canada

FRANK F. YU, MD

Department of Radiology, Magnetoencephalography Center of Excellence, The University of Texas Southwestern Medical Center, Dallas, Texas, USA