

# Contributors

## CONSULTING EDITOR

---

### **FRANK H. MILLER, MD, FACR**

Lee F. Rogers MD Professor of Medical Education, Chief, Body Imaging Section and Fellowship Program, Medical Director, MRI, Department of Radiology, Northwestern Memorial Hospital, Northwestern University, Feinberg School of Medicine, Chicago, Illinois

## EDITOR

---

### **SANGAM KANEKAR, MD**

Professor of Radiology and Neurology, Vice Chair, Radiology Research, Chief, Division of

Neuroradiology, Penn State Milton Hershey Medical Center, Penn State College of Medicine, Hershey, Pennsylvania

## AUTHORS

---

### **AMIT AGARWAL, MD**

Associate Professor, Department of Radiology, UT Southwestern Medical School and Parkland Hospital, Dallas, Texas

Medical Imaging, University of Virginia Health System, Charlottesville, Virginia

### **SHRUTI AGARWAL, PhD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

### **ELHAM BEHESHTIAN, MD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

### **CHAITRA BADVE, MBBS, MD**

Assistant Professor, Department of Radiology, Division of Neuroradiology, University Hospitals Cleveland Medical Center, Cleveland, Ohio

### **JOSEPH H. DONAHUE, MD**

Assistant Professor of Neuroradiology, Department of Radiology and Medical Imaging, University of Virginia Health System, Charlottesville, Virginia

### **JAYAPALLI RAJIV BAPURAJ, MD**

Division of Neuroradiology, Department of Radiology, University of Michigan Medical School, Michigan Medicine, Ann Arbor, Michigan

### **THOMAS J. ELUVATHINGAL MUTTIKKAL, MD**

Assistant Professor of Neuroradiology, Department of Radiology and Medical Imaging, University of Virginia Health System, Charlottesville, Virginia

### **PREM P. BATCHALA, MD**

Assistant Professor of Nuclear Medicine and Neuroradiology, Department of Radiology and

### **CAMILO E. FADUL, MD**

Professor of Neurology, Medicine, and Neurological Surgery, Department of Neurology, University of Virginia Health System, Charlottesville, Virginia

**DIANA GOMEZ-HASSAN, MD**

Division of Neuroradiology, Department of Radiology, University of Michigan Medical School, Michigan Medicine, Ann Arbor, Michigan

**SACHIN K. GUJAR, MBBS**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**MICHAEL J. HOCH, MD**

Assistant Professor, Department of Radiology, University of Pennsylvania, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania

**RANLIANG HU, MD**

Assistant Professor, Department of Radiology and Imaging Sciences, Emory University, Emory University Hospital, Atlanta, Georgia

**MICHAEL IV, MD**

Clinical Associate Professor, Division of Neuroimaging and Neurointervention, Department of Radiology, Stanford University, Stanford, California

**ROZITA JALILIANHASANPOUR, MD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**SANGAM KANEKAR, MD**

Professor of Radiology and Neurology, Vice Chair, Radiology Research, Chief, Division of Neuroradiology, Penn State Milton Hershey Medical Center, Penn State College of Medicine, Hershey, Pennsylvania

**MANOHAR KURUVA, MD**

Assistant Professor, Radiology and Imaging Sciences, Emory University, Atlanta, Georgia

**LICIA P. LUNA, MD, PhD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**SUGOTO MUKHERJEE, MD**

Associate Professor of Neuroradiology, Department of Radiology and Medical Imaging,

University of Virginia Health System, Charlottesville, Virginia

**MARK E. MULLINS, MD, PhD**

Professor, Radiology and Imaging Sciences, Emory University, Atlanta, Georgia

**TAO OUYANG, MD**

Assistant Professor, Department of Radiology, Penn State Health Milton Hershey Medical Center, Penn State College of Medicine, Hershey, Pennsylvania

**SOHIL H. PATEL, MD**

Associate Professor of Neuroradiology, Department of Radiology and Medical Imaging, University of Virginia Health System, Charlottesville, Virginia

**KRISHNA PERNI, MD**

Division of Neuroradiology, Department of Radiology, University of Michigan Medical School, Michigan Medicine, Ann Arbor, Michigan

**JAY J. PILLAI, MD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Department of Neurosurgery, Johns Hopkins School of Medicine, Baltimore, Maryland

**MARTIN G. POMPER, MD, PhD**

Professor of Radiology and Radiological Science, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**STEVEN P. ROWE, MD, PhD**

Associate Professor, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**DANIEL RYAN, MD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**MOHAMMAD S. SADAGHIANI, MD, MPH**

Resident Physician, The Russell H. Morgan Department of Radiology and Radiological

Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**HARIS I. SAIR, MD**

Division of Neuroradiology, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, The Malone Center for Engineering in Healthcare, The Whiting School of Engineering, Johns Hopkins University, Baltimore, Maryland

**SARA SHEIKHBAHAEI, MD, MPH**

Resident Physician, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**HYUNSUK SHIM, PhD**

Professor, Radiation Oncology, Emory University, Atlanta, Georgia

**LILJA B. SOLNES, MD, MBA**

Associate Professor, The Russell H. Morgan Department of Radiology and Radiological Science, Johns Hopkins School of Medicine, Baltimore, Maryland

**ASHOK SRINIVASAN, MD**

Division of Neuroradiology, Department of Radiology, University of Michigan Medical School, Michigan Medicine, Ann Arbor, Michigan

**AUSTIN TRINH, MD**

Clinical Instructor, Division of Neuroimaging and Neurointervention, Department of Radiology, Stanford University, Stanford, California

**BRENT D. WEINBERG, MD, PhD**

Assistant Professor, Radiology and Imaging Sciences, Emory University, Atlanta, Georgia

**MAX WINTERMARK, MD**

Professor, Division of Neuroimaging and Neurointervention, Department of Radiology, Stanford University, Stanford, California

**BRAD E. ZACHARIA, MD, MS**

Associate Professor, Department of Neurosurgery and Otolaryngology, Penn State Health, Hershey, Pennsylvania

**THOMAS ZACHARIA, MD**

Professor, Department of Radiology, Penn State Health, Hershey, Pennsylvania