



Mission

To promote the best interests of patients by advancing the knowledge and professionalism of the physician community.

Editor-in-Chief

Karl A. Nath, MBChB
Mayo Clinic, Rochester, MN

Section Editors

James C. Andrews, MD
Radiology
Mayo Clinic, Rochester, MN

Samuel J. Asirvatham, MD
Cardiovascular Diseases, Innovations in Medicine and Surgery
Mayo Clinic, Rochester, MN

David J. Ballard, MD, MSPH, PhD
Health Care Policy
University of North Carolina at Chapel Hill

J. Michael Bostwick, MD
Psychiatry
Mayo Clinic, Rochester, MN

Timothy B. Curry, MD, PhD
Anesthesiology and Perioperative Medicine
Mayo Clinic, Rochester, MN

John M. Davis, III, MD
Rheumatology
Mayo Clinic, Rochester, MN

Mark Denis P. Davis, MD
Dermatology
Mayo Clinic, Rochester, MN

Jennifer E. DeVoe, MD, DPhI
Family Medicine
Oregon Health & Science University, Portland, OR

Matthew T. Drake, MD, PhD
Endocrinology
Mayo Clinic, Rochester, MN

Elizabeth B. Habermann, PhD
Health Care Policy and Research
Mayo Clinic, Rochester, MN

Daniel K. Hall-Flavin, MD, MS
Addiction Medicine, Humanities
Mayo Clinic, Rochester, MN

W. Michael Hooten, MD
Pain Medicine
Mayo Clinic, Rochester, MN

Paul B. Klaas, JD
Legal
North Coast Arbitration Chambers, Minneapolis, MN

Manish Kohli, MD
Medical Oncology
University of Utah, Salt Lake City

Alex Krist, MD
Family Medicine
Virginia Commonwealth University, Richmond, VA

Jay Mandrekar, PhD
Biomedical Statistics and Informatics
Mayo Clinic, Rochester, MN

Michelle L. Mauermann, MD
Neurology
Mayo Clinic, Rochester, MN

M. Hassan Murad, MD
Guidelines, Systematic Reviews, and Meta-analysis
Mayo Clinic, Rochester, MN

Joseph A. Murray, MD
Gastroenterology and Hepatology
Mayo Clinic, Rochester, MN

Robert J. Pignolo, MD, PhD
Aging and Geriatric Medicine
Mayo Clinic, Rochester, MN

Kannan Ramar, MBBS, MD
Pulmonary Medicine
Mayo Clinic, Rochester, MN

Andrew D. Rule, MD
Nephrology and Hypertension
Mayo Clinic, Rochester, MN

Tait D. Shanafelt, MD
Physician and Health Care Professional Engagement and Fulfillment
Stanford Medicine, Stanford, CA

Richard Sharp, PhD
Medical Ethics
Mayo Clinic, Rochester, MN

Robert J. Spinner, MD
Neurologic Surgery, Orthopedics
Mayo Clinic, Rochester, MN

Thomas D. Thacher, MD
Family Medicine
Mayo Clinic, Rochester, MN

Christopher M. Wittich, MD
General Internal Medicine, Medical Education
Mayo Clinic, Rochester, MN

Associate Editors

Thomas J. Beckman, MD
Residents' Clinics, Concise Reviews, General Internal Medicine
Mayo Clinic, Rochester, MN

Lori A. Erickson, MD
Laboratory Medicine and Pathology, Medical Images
Mayo Clinic, Rochester, MN

Vesna D. Garovic, MD
Women's Health and Medicine of Sex Differences
Mayo Clinic, Rochester, MN

Matthew Griffin, MB, ChB
Kidney Disease Pathophysiology, Transplantation, Transplant Immunology, Regenerative Medicine, Cell Therapies
National University of Ireland, Galway, Ireland

Vivekanand Jha, MD, DM, FRCP, FAMS
Global Kidney Health
The George Institute for Global Health, New Delhi, India
Imperial College, London, United Kingdom
University of New South Wales, Sydney, Australia

Carl J. Lavie, MD
Cardiovascular Diseases
John Ochsner Heart and Vascular Institute, New Orleans, LA

S. Vincent Rajkumar, MD
Review Articles, Hematology, Website, and Social Media
Mayo Clinic, Rochester, MN

Priya Sampathkumar, MD
Infection Control, Infectious Diseases
Mayo Clinic, Rochester, MN

Ayalew Tefferi, MD
Hematology
Mayo Clinic, Rochester, MN

R. Scott Wright, MD
Cardiovascular Diseases
Mayo Clinic, Rochester, MN

Editorial Board

Sarah L. Berga, MD
Reproductive Endocrinology and Infertility
Utah Center for Reproductive Medicine, Salt Lake City, UT

Mohamad Bydon, MD
Neurologic Surgery
Mayo Clinic, Rochester, MN

Daniel Claassen, MD, MS
Neurology
Vanderbilt University Medical Center, Nashville, TN

Steven P. Cohen, MD
Pain Medicine
The Johns Hopkins University, Baltimore, MD

Douglas B. Coursin, MD
Anesthesiology, Critical Care Medicine
University of Wisconsin-Madison

Chyke A. Doubeni, MBBS, MPH
Health Care Equity, Community Engagement, Family Medicine
Mayo Clinic, Rochester, MN

Martha Grogan, MD
Cardiovascular Diseases
Mayo Clinic, Rochester, MN

Aminah Jatoi, MD
Medical Oncology
Mayo Clinic, Rochester, MN

John G. Mastroradar, MD
Pulmonary and Critical Care Medicine
Providence Portland Medical Center, Portland, OR

Daniel P. Morin, MD, MPH
Cardiology/Electrophysiology
John Ochsner Heart and Vascular Institute, New Orleans, LA

Suzanne M. Norby, MD
Nephrology and Medical Education
Mayo Clinic, Rochester, MN

Naveen L. Pereira, MD
Cardiovascular Diseases
Mayo Clinic, Rochester, MN

Siddharth Singh, MD
Gastroenterology, Systematic Reviews, and Meta-analysis
University of California San Diego, La Jolla, CA

Joseph I. Sirven, MD
Neurologic Diseases (Epilepsy)
Mayo Clinic, Jacksonville, FL

Virend Somers, MD, PhD
Cardiovascular Diseases and Sleep Disorders
Mayo Clinic, Rochester, MN

Jeffrey A. Sparks, MD, MMSc
Rheumatology, Inflammation, and Immunity
Brigham and Women's Hospital, Boston, MA

Adrian Vella, MD
Endocrinology
Mayo Clinic, Rochester, MN

Amy W. Williams, MD
Clinical Practice and Policy, Nephrology
Mayo Clinic, Rochester, MN

Statistical Reviewers

Yu-Hui H. Chang, PhD, MS, Mayo Clinic, Scottsdale, AZ
William S. Harmsen, MS, Mayo Clinic, Rochester, MN
Byron C. Jaeger, PhD, University of Alabama at Birmingham, AL
Heidi E. Kosiorek, MS, Mayo Clinic, Scottsdale, AZ
Dirk R. Larson, MS, Mayo Clinic, Rochester, MN
Fazlur Rahman, PhD, University of Alabama at Birmingham, AL
Nan Zhang, MS, Mayo Clinic, Scottsdale, AZ

Proceedings Staff

Managing Editor: Terry Jopke, BA
Assistant Managing Editor: Kimberly D. Sankey
Assistant Managing Editor: Margaret R. Wentz, BA
Business Manager: David L. Dahlen, MS
Digital Editor: Lisa Muenkel

Editorial Offices

Mayo Clinic Proceedings, Room 770 Siebens Building, Rochester, MN 55905
Telephone: (507) 284-2094; **Fax:** (507) 284-0252; **E-mail:** proceedings@mayo.edu
Direct editorial information and inquiries to the above offices.