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

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. DeVo, MD, DPhil
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
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 Mandreker, PhD
Biomedical Statistics and Informatics
Mayo Clinic, Rochester, MN

Michelle L. Masermann, 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, Orthopaedics
Mayo Clinic, Rochester, MN

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

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

Associate Editors

Thomas J. Bedeman, MD
Residence Clinics, Concise Reviews, General Internal Medicine
Mayo Clinic, Rochester, MN

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

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

Matthew Griffin, MB, BCh
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

Tait D. Shanafelt, MD
Reproductive Endocrinology and Infertility
University for Reproductive Medicine, Salt Lake City, UT

Mohamed Bydon, MD
Neurosurgery
Mayo Clinic, Rochester, MN

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

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

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

Editorial Board

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

Mohamed Bydon, MD
Neurosurgery
Mayo Clinic, Rochester, MN

Daniel C. Claassen, MD, MS
Neurologic Surgery
Mayo Clinic, Rochester, MN

Douglas B. Coursin, MD
Cardiovascular Diseases
Johns Hopkins University, Baltimore, MD

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

Carl J. Lavie, MD
Cardiovascular Disease
John Crawford Heart and Vascular Institute, New Orleans, LA

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

Fazlur Rahman, PhD, University of Alabama at Birmingham, AL

Manish Kohli, MD
Medical Oncology
Mayo Clinic, Rochester, MN

Martha Grogan, MD
Family Medicine
Mayo Clinic, Rochester, MN

An expandable list of statistical reviewers is available online at www.mayoclinicproceedings.org

Proceedings Staff

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

www.mayoclinicproceedings.org