

of THE JOURNAL UROLOGY®

Official Journal of the American Urological Association

Editor
D. Robert Siemens
Kingston, Ontario, Canada

Associate Editors

Toby C. Chai Boston, MA	Scott E. Eggener Chicago, IL
Peter E. Clark Charlotte, NC	Melissa R. Kaufman Nashville, TN

Section Editors

Anthony Atala Winston-Salem, NC	Julian Wan Ann Arbor, MI
------------------------------------	-----------------------------

Assistant Editors

D. Duane Baldwin Loma Linda, CA	Simon P. Kim Aurora, CO	Anne Suskind San Francisco, CA
Rodney H. Breau Ottawa, Ontario, Canada	Vernon M. Pais, Jr. Lebanon, NH	Stacy T. Tanaka Birmingham, AL
Ithaar H. Derweesh La Jolla, CA	Sanoj Punnen Miami, FL	Mark D. Tyson Scottsdale, AZ
Jason C. Hedges Portland, OR	Wade J. Sexton Tampa, FL	
Stephanie Kielb Chicago, IL	John T. Stoffel Ann Arbor, MI	

Feature Editor
**New Technology and
Techniques**
Inderbir S. Gill
Los Angeles, CA

**Online Content
Editor**
John W. Davis
Houston, TX

**Online Content
Assistant Editors**

Khurshid Ghani Ann Arbor, MI	Angela B. Smith Chapel Hill, NC
Phillip Pierorazio Baltimore, MD	Quoc-Dien Trinh Boston, MA

Board of Statisticians

Melissa Assel
Chief Statistician
New York, NY

Albert Botchway
Springfield, IL

Stephanie Daignault-Newton
Ann Arbor, MI

Kristin Delfino
Springfield, IL

Elizabeth B. Habermann
Rochester, MN

Katherine Herbst
Hartford, CT

Li-Ching Huang
Nashville, TN

Dezheng Huo
Chicago, IL

Michael Kattan
Cleveland, OH

Tatsuki Koyama
Nashville, TN

Gina P. McKernan
Pittsburgh, PA

Yingwei (Paul) Peng
Kingston, Ontario, Canada

Gregory R. Pond
Hamilton, Ontario, Canada

Charlotte E. Ward
Lebanon, NH

Wei Wei
Cleveland, OH

Emily Zabor
Chief Statistician
Cleveland, OH

Zhiguo Zhao
Nashville, TN

Huirong Zhu
Houston, TX

Editorial Board

Mid-Atlantic

Jay D. Raman
Hershey, PA

New England

Martin S. Gross
Lebanon, NH

New York

John L. Phillips
Valhalla, NY

Northeastern

Joel B. Nelson
Pittsburgh, PA

North Central

David C. Miller
Ann Arbor, MI

Scott E. Eggener
Chicago, IL

South Central

Ashish M. Kamat
Houston, TX

Vitaly Margulis
Dallas, TX

Southeastern

Wayne J. G. Hellstrom
New Orleans, LA

Andrew C. Peterson
Durham, NC

Angela B. Smith
Chapel Hill, NC

Western

Peter Black
Vancouver, British Columbia, Canada

Sia Daneshmand
Los Angeles, CA

Jaime Landman
Orange, CA

Pediatric Urology Editorial Committee

Luis H. Braga
Associate Section Editor
Hamilton, Ontario, Canada

Hillary L. Copp
San Francisco, CA

Luke Harper
Bordeaux Cedex, France

Kathleen Kieran
Seattle, WA

Chester J. Koh
Houston, TX

Armando J. Lorenzo
Toronto, Ontario, Canada

Siam Oottamasathien
Associate Section Editor
Boston, MA

Jonathan C. Routh
Durham, NC

Aseem Shukla
Philadelphia, PA

Stacy T. Tanaka
Assistant Editor
Nashville, TN

Julian Wan
Section Editor
Ann Arbor, MI

Elizabeth B. Yerkes
Chicago, IL

Urological Survey Editorial Committee

(cont'd on next page)

Dean G. Assimos
Birmingham, AL

Anthony Atala
Section Editor
Winston-Salem, NC

Jeffrey A. Cadeddu
Dallas, TX

Douglas Canning
Philadelphia, PA

Sam Chang
Nashville, TN

J. Quentin Clemens
Ann Arbor, MI

**Urological
Survey Editorial
Committee**
(cont'd from previous page)

Sean P. Elliott Minneapolis, MN	Craig Niederberger Chicago, IL	Cary Lynn Siegel St. Louis, MO
David A. Goldfarb Cleveland, OH	Matthew J. Resnick Nashville, TN	Samir S. Taneja New York, NY
Tomas Griebing Kansas City, KS	Jerome P. Richie Boston, MA	David S. Wang Boston, MA
Steven A. Kaplan New York, NY	Allen D. Seftel Camden, NJ	Alan J. Wein Philadelphia, PA
M. Pilar Laguna Amsterdam, Netherlands		

**International
Editorial
Committee**

Ahmed R. El-Nahas Mansoura, Egypt	Ali R. Kural Istanbul, Turkey	Eduardo Mazzucchi São Paulo, Brazil
Paolo Gontero Torino, Italy	Nathan Lawrentschuk Melbourne, Australia	André van der Merwe Tygerberg, South Africa
Rajeev Kumar New Delhi, India	Evangelos Liatsikos Patras, Greece	Liqun Zhou Beijing, China

Former Editors

Hugh H. Young 1917–1945	Herbert Brendler 1983–1985	Martin I. Resnick 2004–2007
J. A. Campbell Colston 1946–1965	John T. Grayhack 1985–1994	William D. Steers 2007–2015
Hugh J. Jewett 1966–1977	Jay Y. Gillenwater 1994–2004	Joseph A. Smith, Jr. 2015–2021
William W. Scott 1977–1983		

**AUA Publications
Staff**

Patricia Banks Executive Vice President and Chief Marketing and Development Officer	Martha Keyes Publications Content Manager	Julia Thompson Publications Administration Associate
Jennifer Regala Executive Editor Director of Publications	Scott D. Morrow Publications Production and Editorial Coordinator	Betty VanDaniker Publications Administration Manager
Matt Ferguson Publications Specialist	Jon Munn Publications Production Manager	Kathe Warshawsky Copy Editor Specialist

DISCLOSURES: The American Urological Association (AUA) is committed to maintaining transparency in its relationships. The AUA requires that individuals make full disclosures for themselves, their family and/or business partner of relationships, business transactions, leadership positions, presentations or publications prior to participating in AUA activities. All relevant relationships for the last 12 months should be disclosed. Records must be updated after April 1 to be considered current for the Association Year. Further information regarding the disclosures of any of the editors or editorial committee members can be obtained by emailing the Publications Department (publications@auanet.org).

DISCLAIMER: The statements and opinions contained in the articles of *The Journal of Urology*[®] are solely those of the individual authors and contributors and not of the American Urological Association Education and Research, Inc. or Wolters Kluwer Health Inc. The appearance of the advertisements in *The Journal* is not a warranty, endorsement or approval of the products or services advertised or of their effectiveness, quality or safety. The content of this publication may contain discussion of off-label uses of some of the agents mentioned. Please consult the prescribing information for full disclosure of approved uses. To the extent permissible under applicable laws, no responsibility is assumed by the publisher and by the AUA for any injury and/or damage to persons or property as a result of any actual or alleged libelous statements, infringement of intellectual property or privacy rights, or products liability, whether resulting from negligence or otherwise, or from any use of operation, ideas, instructions, procedures, products or methods contained in the material therein.

CUSTOMER SERVICE: Change of address (except Japan): 1800 Dual Highway, Suite 201, Hagerstown, MD 21740-6636; phone 800-638-3030; fax 301-223-2400. In Japan, contact Wolters Kluwer Health Japan Co., Ltd., Forecastr Mita Building 5th floor, 1-3-31 Mita Minato-ku, Tokyo, Japan 108-0073. Telephone: +81 3 5427 1969. E-mail: journal@wkjapan.co.jp

SUBSCRIPTION INFORMATION: For customers in the US: individual rate: US \$1,492; institutional rate: US \$2,433. For customers outside the US: individual rate: US \$1,997; institutional rate: US \$3,177. Individual rates include access to *The Journal of Urology*[®] Online (www.auajournals.org/jurology). For institutional online access visit www.ovid.com. Prices include postage and are subject to change without notice.

COPYRIGHT AND PERMISSIONS: *The Journal of Urology*[®] is the Official Journal of the American Urological Association Education and Research, Inc. and is published monthly by Wolters Kluwer Health Inc. The American Urological Association grants the Publisher full and exclusive publishing and distribution rights, worldwide, for both print and electronic media. Therefore no portions of the work(s) can be reproduced without written consent from the Publisher. Permissions and photocopying: For permission and/or rights to use content for which the copyright holder is Wolters Kluwer or the society we have partnered with the Copyright Clearance Center to provide permissions for our products through their RightsLink service, please go to the journal's website and after clicking on the relevant article, click on the Get Content & Permissions link under the Article Tools box that appears on the right side of the page. For questions about the Rightslink service, e-mail customercare@copyright.com or call 877-622-5543 (U.S. Only) or 978-777-9929. Permissions FAQs and information on authors permission requests are available at <https://shop.lww.com/journal-permission>. For additional permission inquiries, please contact Permissions@LWW.com.

For translation rights requests, contact TranslationRights@wolterskluwer.com. For license to republish and distribute requests, contact HealthLicensing@wolterskluwer.com. For special projects and reprints (U.S./Canada), contact Alan Moore at Alan.Moore@wolterskluwer.com or reprintsolutions@wolterskluwer.com. For special projects and reprints (non-U.S./Canada), contact Avia Potashnik at Avia.Potashnik@wolterskluwer.com or InternationalReprints@wolterskluwer.com.

Copyright © 2022 by the American Urological Association Education and Research, Inc..

INDEXED IN: MEDLINE, CURRENT CONTENTS, SCIENCE CITATION INDEX, EMBASE, BIOBASE, BIOSIS, CANCERLIT, PASDCAL, and others.