

# ARCHIVES

OF

## OTOLARYNGOLOGY— HEAD & NECK SURGERY

The ARCHIVES OF OTOLARYNGOLOGY—HEAD & NECK SURGERY is a member of the consortium of AMA journals listed below. The complete text of all AMA journals is available online from Dialog Information Services and Information Access Company.

**The Journal of the American Medical Association (JAMA)**

**Archives of Dermatology**

**Archives of Facial Plastic Surgery**

**Archives of Family Medicine**

**Archives of General Psychiatry**

**Archives of Internal Medicine**

**Archives of Neurology**

**Archives of Ophthalmology**

**Archives of Otolaryngology—Head & Neck Surgery**

**Archives of Pathology & Laboratory Medicine**

**Archives of Pediatrics & Adolescent Medicine**

**Archives of Surgery**

The ARCHIVES OF OTOLARYNGOLOGY—HEAD & NECK SURGERY (ISSN 0886-4470) is published monthly by the American Medical Association, 515 N State St, Chicago, IL 60610-0946, and is an official publication of the Association. The ARCHIVES OF OTOLARYNGOLOGY—HEAD & NECK SURGERY reaches more than 11 000 readers in over 80 countries each month. Periodicals postage rates paid at Chicago, IL and at additional mailing offices. GST registration number: 12622 5556 RT. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 319066.

Printed in the USA.

Official publication for American Academy of Facial Plastic and Reconstructive Surgery, Inc, American Society for Head and Neck Surgery, and American Society of Pediatric Otolaryngology.

**SUBSCRIPTION RATES**—The personal subscription rates for the ARCHIVES OF OTOLARYNGOLOGY—HEAD & NECK SURGERY are \$195 for 1 year (12 issues) in the United States and US possessions; \$245 in the Americas; £145 outside the Americas. The institution rates for 1 year are \$295 in the United States; \$395 in the Americas; £245 outside the Americas. Special rates for residents and medical students are available. Address all subscription communications to: Subscriber Services Center, American Medical Association, PO Box 10946, Chicago, IL 60610-0946. Phone: (800) 262-2350. Fax: (312) 464-5831. E-mail: ama-sub@ama-assn.org. For mailing addresses outside the United States and US possessions, see International Subscription Information.

**CHANGE OF ADDRESS**—POSTMASTER, send all address changes to ARCHIVES OF OTOLARYNGOLOGY, c/o Subscriber Services, American Medical Association,

515 N State St, Chicago, IL 60610. Please notify us of address change at least 6 weeks in advance to ensure uninterrupted service. Include both old and new addresses, a recent mailing label, and new ZIP code. For mailing addresses outside the United States and US possessions, see International Subscription Information.

**SUBSCRIBER SERVICES**—For information about subscribing to any of the AMA publications, change of address, missing issues, or purchasing back issues, please contact Subscriber Services Center, American Medical Association, PO Box 10946, Chicago, IL 60610-0946, or call (800) 262-2350 or (312) 670-SUBS (670-7827) between 8:30 AM and 4:30 PM CST. Fax: (312) 464-5831. E-mail: ama-sub@ama-assn.org. For mailing addresses outside the United States and US possessions, see International Subscription Information.

**INTERNATIONAL SUBSCRIPTION INFORMATION**—Subscriptions outside the United States and US possessions are served according to geographic region. Please address correspondence to the following 2 offices based on delivery address: (1) For delivery in North America, Central America, and South America, contact Subscriber Services, AMA, PO Box 10946, Chicago, IL 60610-0946. Phone: (312) 670-7827. Fax: (312) 464-5831. E-mail: ama-sub@ama-assn.org. (2) For delivery outside the Americas, contact JAMA & Archives Journals, Reader Services Centre, PO Box 299, London WC1H 9TD, England. Phone: +44 (0)171-383-6270. Fax: +44 (0)171-383-6402. E-mail: jama-archives@dial.pipex.com.

**REPRINTS**—Authors place their reprint order at the time the edited typescript is reviewed and should allow 4 to 6 weeks for delivery following publication. Requests for individual reprints should be sent directly to the author at the address shown in the article.

For bulk reprint orders for distribution by commercial organizations, please contact Wanda Bartolotta, 500 Fifth Ave, #2210, New York, NY 10110. Phone: (212) 354-0050. Fax: (212) 354-1169. E-mail: wanda\_bartolotta@ama-assn.org. For reprint orders in limited quantities for distribution by educational organizations and for author reprints, please contact Joseph R. Rekish, 515 N State St, Chicago, IL 60610. Phone: (312) 464-4594. Fax: (312) 464-4849.

**WORLD WIDE WEB ADDRESS**—<http://www.ama-assn.org>.

**OTOLARYNGOLOGY HOME PAGE**—<http://www.ama-assn.org/oto>.

**PERMISSIONS**—Contact Ada Jimenez-Walker, Permissions Assistant, 515 N State St, Chicago, IL 60610. Phone: (312) 464-2513.

**ADVERTISING PRINCIPLES**—Each advertisement in this issue has been reviewed and complies with the principles governing advertising in AMA scientific publications. A copy of these principles is available on request. The appearance of advertising in AMA publications is not an AMA guarantee or endorsement of the product or the claims made for the product by the manufacturer.

### Publication Staff

Offices: 515 N State St  
Chicago, IL 60610

Editorial Processing Department,  
Archives Journals

**Director:** Paula Glitman

**Manager:** Lise M. Stevens

**Freelance Manager:** Diane L. Cannon

**Freelance Coordinators:**

Mark Berthold  
Connie Manno

**Electronic Editing Specialist:**

Paul Frank

**Assistant Electronic Editing Specialist:**

Monica Mungle

**Senior Copy Editors:**

Dee E. Egger

Brandee Martin

**Copy Editors:**

Hemranee Bhojroo

John McFadden

**Editorial Assistant:** Wanda Hill

Scientific Information and  
Multimedia Group

**Staff Assistant:** Helga Fritz

New Media Editorial Office

**Editorial Director, New Media:**

William M. Silberg

**Associate Editor:** Marty Suter

**Assistant Editors:**

Deborah Flapan

Neil Shankman

**Staff Assistant:** Marla A. Hall

### Production & Distribution Division

**Manager, Budgets & Costs:**

Bonnie Van Cleven

**Publishing Manufacturing Analyst:**

Diane Darnell

**Office Manager:** Karen Branham

**Production Assistant:**

Shannon Epplert

Advertising & Production  
Department

**Director:** Karen Adams-Taylor

**Production Specialist:** Terri Hanley

**Manager, Advertising Services:**

Carole Piszker

**Manager, Production Services:**

Susan Price

**Supervisor, Production Services:**

Betty Frigerio

**Production Associates:**

Mari Guizzetti

Sarah Powell

Denise Steinhauser

Jo Anne Turner

**Production Assistants:**

Bryan Irzyk

Beth A. Rillema

Distribution

**Distribution Manager:** Paul Gasielki

**Traffic Control Specialist:**

Victoria Buckner

### Electronic Production Department

**Director:** Linda Knott

**Manager, Composition:** Phil Arko

**Electronic Production Specialists:**

Brenda Chandler-Grayer

Heather Crego

Amy Evers

Mary Ann Kuranda

Sandra Lopez

**Manager, Graphics:** Charl Richey

**Electronic Imaging Specialists:**

Joe Amft

Noel Chapparro

Maria Kowalkowski

JoAnne Weiskopf

**Manager, Proofreading:**

Teresa H. Omiotek

**Proofreaders:**

David Antos

Daniel James

Mary Kay Tinerella

Barbara Wojtowicz

**Production Assistant:** Ruth Sprague

**Manager, Database & New Media:**

Mary Ellen Johnston

**Indexer:** Kathy Gaydar

**New Media Specialists:**

Gail Barrett

Regina Brownlee

La'son J. Diggs

Melanie Parenti

Angela Smits

### Specialty Journal Division Office

**Assistant to the Publisher:**

Christine Hearne

**Circulation & Content**

**Marketing Division**

**Administrative Assistant:**

Millette Jackson-Bates

**Circulation Processing Department**

**Director:** Beverly Martin

**Circulation Development Department**

**Director:** Bina Oza

**Circulation Marketing Managers:**

Robert Herling

Audrey Mathies

**Licensing & Permissions Department**

**Director:** Norman Frankel

**Permissions:** Ada Jimenez-Walker

**International Coordinator:** Sharon Ali

**Reprints**

**Reprint Coordinator:** Joseph Rekish



# ARCHIVES

OF

## OTOLARYNGOLOGY- HEAD & NECK SURGERY

www.ama-assn.org/oto

VOL 125 NO. 2, FEBRUARY 1999

### EDITORIAL

- Introducing the New Journal** 141  
*Archives of Facial Plastic Surgery*  
Wayne F. Larrabee, Jr, MD;  
Michael E. Johns, MD

### ORIGINAL ARTICLES

- Aggressive Concurrent Chemoradiotherapy for Squamous Cell Head and Neck Cancer: An 8-Year Single-Institution Experience** 142  
Pierre Lavertu, MD; David J. Adelstein, MD;  
Jerrold P. Saxton, MD; Michelle Secic, MS;  
Isaac Eliachar, MD; Marshall Strome, MD;  
Marjorie A. Larto, RN;  
Benjamin G. Wood, MD

- Adenoid Cystic Carcinoma of the Head and Neck: Predictors of Morbidity and Mortality** 149  
Jim Fordice, MD; Corey Kershaw, MS;  
Adel El-Naggar, MD;  
Helmuth Goepfert, MD

- Outcome of Observing the N0 Neck Using Ultrasonographic-Guided Cytology for Follow-up** 153  
Michiel W. M. van den Brekel, MD, PhD;  
Jonas A. Castelijns, MD, PhD;  
Laurens C. Reitsma, MD;  
Charles R. Leemans, MD, PhD;  
Isaac van der Waal, DD, PhD;  
Gordon B. Snow, MD, PhD

- Acoustic and Perceptual Evaluation of Voice and Speech Quality: A Study of Patients With Laryngeal Cancer Treated With Laryngectomy vs Irradiation** 157  
Caterina Finizia, MD, PhD; Hans Dotevall, MD;  
Elisabet Lundström; Jörgen Lindström, MD, PhD

- Multi-institutional Assessment of the Provox 2 Voice Prosthesis** 167  
Annemieke H. Ackerstaff, PhD;  
Frans J. M. Hilgers, MD, PhD;  
Cees A. Meeuwis, MD, PhD;  
Lilly-Ann van der Velden, MD;  
Frank J. A. van den Hoogen, MD, PhD;  
Henri A. M. Marres, MD, PhD;  
Gerard C. M. Vreeburg, MD;  
Johannes J. Manni, MD, PhD

- Detection of the Proto-oncogene *eIF4E* in Larynx and Hypopharynx Cancers** 177  
Scott Franklin, MD; Thuy Pho;  
Fleurette W. Abreo, MD;  
Raja Nassar, PhD;  
Arrigo De Benedetti, PhD;  
Fred J. Stucker, MD;  
Cherie-Ann O. Nathan, MD

- DNA Repair in Lymphoblastoid Cell Lines From Patients With Head and Neck Cancer** 185  
Erich M. Sturgis, MD;  
Gary L. Clayman, DDS, MD;  
Yongli Guan, BA; Zhaozheng Guo, MD;  
Qingyi Wei, MD, PhD

## American Medical Association

Physicians dedicated to the health of America



Copyright 1999 by the American Medical Association. All rights reserved.  
Reproduction without permission is prohibited.

All articles published, including editorials, letters, and book reviews, represent the opinions of the authors and do not reflect the policy of the American Medical Association, the Editorial Board, or the institution with which the author is affiliated, unless this is clearly specified.

**E. Ratcliffe Anderson, Jr, MD**  
Executive Vice President,  
Chief Executive Officer

**Lynn Jensen, PhD**  
Chief Operating Officer

**Robert L. Kennett**  
Interim Senior Vice President,  
Publishing & Business Services

**Peter L. Payerli**  
Publisher

**Peter G. Messina**  
National Sales Manager

**Geoffrey A. Flick**  
Manager, Marketing Services

**Cheryl Iverson**  
Director, Editorial Processing Division

**Vanessa Hayden**  
Director, Production &  
Distribution Division

**James A. Skowrenski**  
Director, Circulation &  
Content Marketing Division

**Advertising Offices: East:** Philip G. Soufleris,  
119 Cherry Hill Rd, 3rd Flr, Parsippany,  
NJ 07054 (973)263-9191.

**Midwest/West:** J. P. Cahill & Associates,  
341 S Waiola Ave, La Grange, IL 60525  
(708) 352-0322.

**AMA Classified Advertising Department:**  
Thalia Moss, 800-262-2260.

**Birth Trauma in the Head and Neck** 193  
*C. Anthony Hughes, MD; Earl H. Harley, MD;  
Gregory Milmo, MD; Rupa Bala, MD;  
Andrew Martorella, MD*

**The Use of Balloon-Expandable Metallic Stents in the Treatment of Pediatric Tracheomalacia and Bronchomalacia** 203  
*Robert H. Furman, MD; Carl L. Backer, MD;  
Michael E. Dunham, MD; James Donaldson, MD;  
Constantine Mavroudis, MD; Lauren D. Holinger, MD*

**Auditory and Facial Nerve Dysfunction in Patients With Hemifacial Microsomia** 209  
*Gerard J. Carvalho, MD; Caroline S. Song, MD, MPH;  
Karin Vargervik, DDS; Anil K. Lalwani, MD*

**High-Frequency Hearing Influences Lower-Frequency Distortion-Product Otoacoustic Emissions** 215  
*David J. Arnold, MD;  
Brenda L. Lonsbury-Martin, PhD;  
Glen K. Martin, PhD*

#### CLINICAL NOTE

**Carbamazepine-Induced Sensorineural Hearing Loss** 225  
*Mel de la Cruz, MD; Manohar Bance, MB, MSc, FRCSC*

#### RESIDENT'S PAGE: PATHOLOGY

**Pathologic Quiz Case 1** 228  
*Douglas L. Schulte, MD; Lester E. Wold, MD;  
Eugene B. Kern, MD; Kerry D. Olsen, MD*

**Pathologic Quiz Case 2** 229  
*David R. Donaldson, MD; Larry L. Myers, MD;  
Emesto Diaz-Ordaz, MD; Walter Grand, MD;  
Joyce Paterson, MD; Mark K. Wax, MD*

#### CLINICAL CHALLENGES IN OTOLARYNGOLOGY

**Is There Still a Role for Auditory Brainstem Response Audiometry in the Diagnosis of Acoustic Neuroma?** 232  
*Karen Jo Doyle, MD, PhD*

**There Is a Role for ABR Audiometry in the Diagnosis of Acoustic Neuroma** 234  
*Horst R. Konrad, MD*

**Current Status of ABR Audiometry in Acoustic Neuroma Diagnosis** 235  
*Derald E. Brackmann, MD*

#### LETTERS TO THE EDITOR

**Topical Ciprofloxacin in Long-Lasting Otorrhea** 236  
*Darko Manestar, MD, DSc;  
Tamara Braut, MD;  
Mitja Velepč, MD, DSc*

**Adherence of Benign Cervical Teratomas to Surrounding Soft Tissue** 236  
*William I. Kuhel, MD*

#### REGULAR DEPARTMENTS

**Calendar** 238  
**Classified Advertising** 239  
**Index to Advertisers** 248

**Instructions for Authors—**  
See January 1999 issue, page 5, or visit the Web site at [www.ama-assn.org/oto](http://www.ama-assn.org/oto).

## ARCHIVES

OF  
OTOLARYNGOLOGY—  
HEAD & NECK SURGERY

*Editor:*  
**Michael E. Johns, MD**  
Emory University  
Woodruff Health Sciences  
Administration Building  
Suite 408  
1440 Clifton Rd NE  
Atlanta, GA 30322  
*Assistant Editors:*  
**John K. Niparko, MD**  
Baltimore, Md  
**William J. Richtsmeier, MD, PhD**  
Durham, NC  
*Editorial Assistant:*  
**Trina L. Johns**  
*Production Manager:*  
**Catherine A. Alden**  
(404) 778-2322  
(404) 778-3100 FAX  
e-mail: [aohns@emory.edu](mailto:aohns@emory.edu)

*Editorial Board:*  
**Elliot Abemayor, MD, PhD**  
Los Angeles, Calif  
**John G. Batsakis, MD**  
Houston, Tex  
**Margaret S. Brandwein, MD**  
New York, NY  
**Robin T. Cotton, MD**  
Cincinnati, Ohio  
**Marvin P. Fried, MD**  
Boston, Mass  
**Patrick J. Gullane, MD**  
Toronto, Ontario  
**Lauren D. Holinger, MD**  
Chicago, Ill  
**Paul R. Lambert, MD**  
Charlottesville, Va  
**Wayne F. Larrabee, Jr, MD**  
Seattle, Wash  
**Robert H. Miller, MD**  
New Orleans, La

**H. Bryan Neel III, MD, PhD**  
Rochester, Minn  
**Jay F. Piccirillo, MD**  
St Louis, Mo  
**Clarence T. Sasaki, MD**  
New Haven, Conn  
**Richard J. H. Smith, MD**  
Iowa City, Iowa  
**Fred J. Stucker, MD**  
Shreveport, La  
*Section Editors:*  
*Challenges in Clinical Otolaryngology*  
**Karen H. Calhoun, MD**  
Galveston, Tex  
**Ronald B. Kupper-Smith, MD (Assistant)**  
Houston, Tex  
*Online Editor*  
**Michael A. Rothschild, MD**  
New York, NY

*Resident's Page: Imaging*  
**R. Nick Bryan, MD**  
**S. James Zinreich, MD**  
Baltimore, Md  
*Resident's Page: Pathology*  
**Frederic B. Askin, MD**  
**William H. Westra, MD**  
Baltimore, Md  
*American Academy of Facial Plastic and Reconstructive Surgery News*  
**Dale H. Rice, MD**  
**Maisie Shindo, MD**  
Los Angeles, Calif  
*American Society for Head and Neck Surgery News*  
**David W. Eisele, MD**  
Baltimore, Md  
*American Society of Pediatric Otolaryngology News*  
**Sally R. Shott, MD**  
Cincinnati, Ohio