



HEAD & NECK SURGERY

FIFTH EDITION
VOLUME TWO

PAUL W. FLINT
BRUCE H. HAUGHEY
VALERIE J. LUND
JOHN K. NIPARKO
MARK A. RICHARDSON
K. THOMAS ROBBINS
J. REGAN THOMAS

Cummings Otolaryngology Head & Neck Surgery

FIFTH EDITION

Paul W. Flint, M.D.

Professor and Chair Department of Otolaryngology–Head and Neck Surgery Oregon Health and Science University Portland, Oregon

Bruce H. Haughey, M.B.Ch.B., F.A.C.S., F.R.A.C.S.

Professor and Director Head and Neck Surgical Oncology Department of Otolaryngology–Head and Neck Surgery Washington University School of Medicine St. Louis, Missouri

Valerie J. Lund, C.B.E., M.S., F.R.C.S., F.R.C.S.Ed.

Professor of Rhinology University College London Honorary Consultant ENT Surgeon Royal National Throat, Nose, and Ear Hospital Royal Free Hospital Moorfields Eye Hospital London, United Kingdom

John K. Niparko, M.D.

George T. Nager Professor
Department of Otolaryngology–Head and Neck Surgery
Director
Divisions of Otology, Neurotology, Skull Base Surgery

Audiology
Johns Hopkins University School of Medicine

Johns Hopkins University School of Medicine Baltimore, Maryland

Mark A. Richardson, M.D.

Professor
Department of Otolaryngology–Head and Neck Surgery
Dean
School of Medicine
Oregon Health and Science University
Portland, Oregon

K. Thomas Robbins, M.D.

Director
SimmonsCooper Cancer Institute at Southern Illinois University
Professor
Division of Otolaryngology—Head and Neck Surgery
Southern Illinois University School of Medicine
Springfield, Illinois

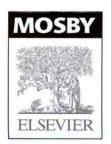
J. Regan Thomas, M.D.

Francis L. Lederer Professor and Chairman Department of Otolaryngology–Head and Neck Surgery University of Illinois at Chicago Chicago, Illinois

Illustrator:

Tim Phelps, M.S., F.A.M.I.

Associate Professor and Medical Illustrator
Art as Applied to Medicine
Johns Hopkins Virtuelsity School of Medicine
Baltimore, Maryland





1600 John F. Kennedy Blvd Suite 1800 Philadelphia, PA 19103-2899

CUMMINGS OTOLARYNGOLOGY—HEAD AND NECK SURGERY FIFTH EDITION

ISBN: 978-0-323-05283-2

Copyright © 2010, 2005, 1998, 1993, 1986 by Mosby, Inc. All Rights Reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the Publisher. Details on how to seek permission, further information about the Publisher's permissions policies and our arrangements with organizations such as the Copyright Clearance Center and the Copyright Licensing Agency can be found at our website: www.elsevier.com/permissions.

This book and the individual contributions contained in it are protected under copyright by the Publisher (other than as may be noted herein).

With the exception of any borrowed figures or tables, all material in Chapter 152 by Larry E. Davis is in the public domain.

Notices

Knowledge and best practice in this field are constantly changing. As new research and experience broaden our understanding, changes in research methods, professional practices, or medical treatment may become necessary. Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information, methods, compounds, or experiments described herein. In using such information or methods they should be mindful of their own safety and the safety of others, including parties for whom they have a professional responsibility. With respect to any drug or pharmaceutical products identified, readers are advised to check the most current information provided (i) on procedures featured or (ii) by the manufacturer of each product to be administered, to verify the recommended dose or formula, the method and duration of administration, and contraindications. It is the responsibility of practitioners, relying on their own experience and knowledge of their patients, to make diagnoses, to determine dosages and the best treatment for each individual patient, and to take all appropriate safety precautions. To the fullest extent of the law, neither the Publisher nor the authors, contributors, or editors assume any liability for any injury and/or damage to persons or property as a matter of product liability, negligence, or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein.

Library of Congress Cataloging-in-Publication Data

Cummings otolaryngology-head & neck surgery / [edited by] Paul W. Flint ... [et al.] ; illustrator, Tim Phelps.-5th ed.

p.; cm.

Rev. ed. of: Otolaryngology–head & neck surgery / edited by Charles W. Cummings ... [et al.]. 4th ed. c2005. Includes bibliographical references and index. ISBN 978-0-323-05283-2

Otolaryngology, Operative. I. Flint, Paul W. II Cummings, Charles W. (Charles William).
 III. Otolaryngology-head & neck surgery.
 IV. Title: Otolaryngology-head & neck surgery.
 [DNLM: 1. Otorhinolaryngologic Surgical Procedures. WV 168 C971 2010]
 RF51.086 2010
 617.5'1059—dc22

2009010493

Acquisitions Editor: Rebecca S. Gaertner
Developmental Editor: Roxanne Halpine
Publishing Services Manager: Frank Polizzano
Project Management: Rachel Miller, Robin E. Hayward
Design Direction: Lou Forgione
Marketing Manager: Radha Mawrie

Printed in China.

libraries in developing countries
www.elsevier.com | www.bookaid.org | www.sabre.org

Working together to grow

Contributors

Waleed M. Abuzeid, M.B.B.S.

Resident Department of Surgery University of Michigan Health System Ann Arbor, Michigan

Meredith E. Adams, M.D.

Fellow
Division of Otology and Neurotology
Department of Otolaryngology
University of Michigan Medical Center
Ann Arbor, Michigan

Peter A. Adamson, M.D., F.R.C.S.C., F.A.C.S.

Professor and Head
Division of Facial Plastic and Reconstructive Surgery
Department of Otolaryngology–Head and Neck Surgery
University of Toronto Faculty of Medicine
Staff Surgeon
University Health Network
Toronto General Hospital
Toronto, Ontario, Canada

Antoine Adenis, M.D., Ph.D.

Professor of Medical Oncology Catholic University Chief Department of Gastrointestinal Oncology Centre Oscar Lambret Lille, France

Seth Akst, M.D.

Assistant Professor Department of Anesthesiology and Critical Care Medicine George Washington University School of Medicine and Health Sciences

Washington, D.C.

Sheri L. Albers, D.O.

Fellow

Pain Management and Spinal Interventional Neuroradiology University of California, San Diego, School of Medicine UC San Diego Medical Center La Jolla, California VA San Diego Medical Center San Diego, California

David Albert, M.B.B.S., F.R.C.S.

Honorary Senior Lecturer
University College London Institute of Child Health
Lead Clinician
ENT Department
Great Ormond Street Hospital for Children
London, United Kingdom

Ronda E. Alexander, M.D.

Assistant Professor Department of Otolaryngology–Head and Neck Surgery University of Texas Health Science Center at Houston Houston, Texas

Sue Archbold, M.Phil.

CEO

The Ear Foundation Nottingham, United Kingdom

William B. Armstrong, M.D.

Associate Professor Department of Otolaryngology–Head and Neck Surgery University of California, Irvine, School of Medicine Irvine, California

Moisés A. Arriaga, M.D., F.A.C.S. Clinical Professor and Director

Division of Otology and Neuro-otology

Department of Otolaryngology and Neurosurgery
Louisiana State University Health Sciences Center School of
Medicine at New Orleans
New Orleans, Louisiana
Director
Hearing and Balance Center
Our Lady of the Lake Regional Medical Center
Baton Rouge, Louisiana
Director
Department of Cochlear Implants and Neurotology
Children's Hospital New Orleans
New Orleans, Louisiana

H. Alexander Arts, M.D.

Professor Department of Otolaryngology and Neurosurgery University of Michigan Medical School Ann Arbor, Michigan

Yasmine A. Ashram, M.D., D.A.B.N.M.

Assistant Professor Department of Physiology University of Alexandria School of Medicine Surgical Neurophysiologist Alexandria University Hospital Alexandria, Egypt

Jonathan E. Aviv, M.D., F.A.C.S.

Clinical Professor Department of Otolaryngology Mount Sinai School of Medicine Clinical Director Voice and Swallowing Center ENT and Allergy Associates New York, New York

Nafi Aygun, M.D.

Assistant Professor

Department of Radiology

Neuroradiology Division

Johns Hopkins University School of Medicine

Baltimore, Maryland

Douglas D. Backous, M.D., F.A.C.S.

Director

Listen For Life Center

Virginia Mason Medical Center

Seattle, Washington

Department of Otolaryngology-Head and Neck Surgery

Madigan Army Medical Center

Fort Lewis, Washington

Shan R. Baker, M.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Michigan Medical School

Ann Arbor, Michigan

Facial Plastic and Reconstructive Surgery

University of Michigan Center for Facial Cosmetic Surgery

Livonia, Michigan

Thomas J. Balkany, M.D., F.A.C.S., F.A.A.P.

Hotchkiss Professor and Chair

Department of Otolaryngology

Professor of Neurological Surgery and Pediatrics

University of Miami Miller School of Medicine

Chief of Service

Division of Otology

Jackson Memorial Hospital

Miami, Florida

Robert W. Baloh, M.D.

Professor

Department of Neurology and Otolaryngology

David Geffen School of Medicine at UCLA

Director

Neuro-otology Program

Department of Neurology

Ronald Reagan UCLA Medical Center

Los Angeles, California

Julie Barkmeier-Kraemer, Ph.D.

Associate Professor

Department of Speech, Language, and Hearing Sciences

University of Arizona College of Medicine

Tucson, Arizona

Fuad M. Baroody, M.D., F.A.C.S.

Professor

Department of Otolaryngology-Head and Neck Surgery

Department of Pediatrics

University of Chicago Pritzker School of Medicine

Chicago, Illinois

Nancy L. Bartlett, M.D.

Professor

Department of Medicine

Division of Oncology

Washington University in St. Louis School of Medicine

Medical Oncologist

Siteman Cancer Center

St. Louis, Missouri

Jonathan Z. Baskin, M.D.

Assistant Professor

Department of Otolaryngology

Case Western Reserve University School of Medicine

Section Chief

Department of Otolaryngology-Head and Neck Surgery

Cleveland VA Medical Center

Attending Physician

Rainbow Babies and Children's Hospital

Cleveland, Ohio

Robert W. Bastian, M.D.

Clinical Professor

Department of Otolaryngology

Loyola University School of Medicine

Chicago, Illinois

Founder and Director

Bastian Voice Institute

Downers Grove, Illinois

Carol A. Bauer, M.D.

Professor of Surgery

Division of Otolaryngology-Head and Neck Surgery

Southern Illinois University School of Medicine

Springfield, Illinois

Michael S. Benninger, M.D.

Professor

Cleveland Clinic Lerner School of Medicine

Case Western Reserve University

Chairman

Head and Neck Institute

The Cleveland Clinic

Cleveland, Ohio

Prabhat K. Bhama, M.D.

Resident and Research Fellow

University of Washington Medical Center

Seattle, Washington

Nasir Islam Bhatti, M.D., F.A.C.S., F.R.C.S.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Baltimore, Maryland

Andrew Blitzer, M.D., D.D.S.

Professor

Department of Clinical Otolaryngology

Columbia University College of Physicians and Surgeons

Director

New York Center for Voice and Swallowing Disorders

Attending

Department of Otolaryngology

St. Luke's Roosevelt Hospital Center

New York, New York

Simone Boardman, M.B.B.S., F.R.A.C.S.(OHNS)

Great Ormond Street Hospital London, United Kingdom

Emily F. Boss, M.D.

Assistant Professor

Department of Otolaryngology

Division of Pediatric Otolaryngology

Johns Hopkins University School of Medicine

Baltimore, Maryland

Derald E. Brackmann, M.D.

Clinical Professor

Department of Otolaryngology-Head and Neck Surgery

David Geffen School of Medicine at UCLA

Clinical Professor

Department of Neurological Surgery

University of Southern California Keck School of Medicine

President

House Ear Clinic

Los Angeles, California

Carol R. Bradford, M.D., F.A.C.S.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

University of Michigan Medical School

Ann Arbor, Michigan

Barton F. Branstetter, IV, M.D.

Associate Professor

Departments of Radiology, Otolaryngology, and Biomedical

Informatics

University of Pittsburgh School of Medicine

Director

Head and Neck Imaging

University of Pittsburgh Medical Center

Pittsburgh, Pennsylvania

Edward B. Braun, M.D.

Assistant Professor

Department of Anesthesiology

University of Kansas School of Medicine

University of Kansas Hospital

Kansas City, Kansas

Robert J. S. Briggs, M.B.B.S., F.R.A.C.S.

Clinical Associate Professor

Department of Otolaryngology

The University of Melbourne Faculty of Medicine

Melbourne, Australia

Hilary A. Brodie, M.D., Ph.D.

Professor and Chair

Department of Otolaryngology

University of California, Davis, School of Medicine

UC Davis Medical Center

Sacramento, California

Carolyn J. Brown, Ph.D.

Professor

Department of Communication Sciences and Disorders

Department of Otolaryngology-Head and Neck Surgery

University of Iowa Carver College of Medicine

Iowa City, Iowa

David J. Brown, M.D.

Assistant Professor of Otolaryngology

Medical College of Wisconsin

Children's Hospital of Wisconsin

Milwaukee, Wisconsin

Kevin D. Brown, M.D., Ph.D.

Assistant Professor

Department of Otolaryngology

Weill Cornell Medical College

Assistant Attending Otorhinolaryngologist

NewYork-Presbyterian Hospital

New York, New York

J. Dale Browne, M.D, F.A.C.S.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

Wake Forest University School of Medicine

Winston-Salem, North Carolina

John M. Buatti, M.D.

Professor and Head

Department of Radiation Oncology

University of Iowa Carver College of Medicine

University of Iowa Hospitals and Clinics

Iowa City, Iowa

Luke Buchmann, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of Utah School of Medicine

Salt Lake City, Utah

Patrick J. Byrne, M.D.

Associate Professor

Departments of Otolaryngology-Head and Neck Surgery and

Dermatology

Johns Hopkins University School of Medicine

Director

Division of Facial Plastic and Reconstructive Surgery

Johns Hopkins Hospital

Baltimore, Maryland

Gabriel G. Galzada, M.D.

Department of Head and Neck Surgical Oncology

Kaiser Permanente

Downey, California

John P. Carey, M.D.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Division of Otology, Neurotology, and Skull Base Surgery

Johns Hopkins University School of Medicine

Baltimore, Maryland

Margaretha L. Casselbrant, M.D., Ph.D.

Eberly Professor of Pediatric Otolaryngology

Department of Otolaryngology

University of Pittsburgh School of Medicine

Director

Department of Pediatric Otolaryngology

Children's Hospital of Pittsburgh of UPMC

Pittsburgh, Pennsylvania

Paolo Castelnuovo, M.D.

Professor

University of Insubria

Chairman

Ospedale di Circolo e Fondazione Macchi

Varese, Italy

Steven Chang, M.D.

Resident

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins Medical Institutions

Baltimore, Maryland

Burke E. Chegar, M.D.

Clinical Assistant Professor

Department of Dermatology

Indiana University School of Medicine

Indianapolis, Indiana

Director

Center for Facial Plastic Surgery-Head and Neck Surgery

Fayette Regional Health System

Connersville, Indiana

Amy Chen, M.D., M.P.H.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Emory School of Medicine

Atlanta, Georgia

Eunice Y. Chen, M.D., Ph.D.

Assistant Professor

Dartmouth Medical School

Hanover, New Hampshire

Pediatric Otolaryngologist

Dartmouth Hitchcock Medical Center

Lebanon, New Hampshire

Theodore Chen, M.D.

Department of Head and Neck Surgery

Kaiser Permanente Los Angeles Medical Center

Los Angeles, California

Douglas B. Chepeha, M.D., M.P.H.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

University of Michigan Medical School

Director

Microvascular Program

A. Alfred Taubman Health Care Center

Ann Arbor, Michigan

Alice Cheuk, M.D.

Resident Physician

Los Angeles County Hospital and USC Medical Center

Los Angeles, California

Neil N. Chheda, M.D.

Assistant Professor

Department of Otolaryngology

Division of Laryngology

University of Florida College of Medicine

Shands at the University of Florida

Gainesville, Florida

Wade Chien, M.D.

Clinical Fellow

Department of Otolaryngology

Johns Hopkins University School of Medicine

Johns Hopkins Hospital

Baltimore, Maryland

Sukgi S. Choi, M.D.

Professor

Departments of Otolaryngology and Pediatrics

George Washington University School of Medicine and Health

Sciences

Vice Chief

Department of Pediatric Otolaryngology

Children's National Medical Center

Washington, D.C.

Richard A. Chole, M.D., Ph.D.

Lindburg Professor and Head

Department of Otolaryngology-Head and Neck Surgery

Washington University in St. Louis School of Medicine

Chief of Staff

Department of Otolaryngology

Barnes-Jewish Hospital

St. Louis, Missouri

James M. Christian, D.D.S., M.B.A.

Visiting Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Director

Division of Dentistry and Oral Surgery

Johns Hopkins Hospital

Baltimore, Maryland

Eugene A. Chu, M.D.

Clinical Instructor in Rhinology and Sinus Surgery

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Baltimore, Maryland

Martin J. Citardi, M.D.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

University of Texas Medical School at Houston

Chief

Otorhinolaryngology

Memorial Hermann-Texas Medical Center

Houston, Texas

Marc A. Cohen, M.D.

Resident

Department of Otorhinolaryngology-Head and Neck Surgery

University of Pennsylvania Health System

Philadelphia, Pennsylvania

Savita Collins, M.D.

Physician

Departments of Otolaryngology-Head and Neck Surgery and

Audiology

South Bend Clinic

South Bend, Indiana

Nancy A. Collop, M.D.

Professor

Department of Medicine

Division of Pulmonary/Critical Care Medicine

Johns Hopkins University School of Medicine

Medical Director

Sleep Disorders Center

Johns Hopkins Hospital

Baltimore, Maryland

Philippe Contencin, M.D., Ph.D.

Senior Consultant

Department of Otorhinolaryngology

Hôpital Necker

Paris, France

Raymond Cook, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of North Carolina at Chapel Hill School of Medicine

Chapel Hill, North Carolina

WakeMed Health and Hospitals

Raleigh, North Carolina

Jacquelynne Corey, M.D.

Professor of Surgery

Department of Otolaryngology-Head and Neck Surgery

University of Chicago Pritzker School of Medicine

Director

ENT Allergy Program

University of Chicago Medical Center

Chicago, Illinois

Robin T. Cotton, M.D., F.A.C.S., F.R.C.S.C

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Cincinnati College of Medicine

Director

Pediatric Otolaryngology-Head and Neck Surgery

Cincinnati Children's Hospital

Cincinnati, Ohio

Marion Everett Couch, M.D., Ph.D.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

University of North Carolina at Chapel Hill School of Medicine

Chapel Hill, North Carolina

Mark S. Courey, M.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Director

Division of Laryngology

University of California, San Francisco, School of Medicine

Director

UCSF Voice and Swallowing Center

San Francisco, California

Benjamin T. Crane, M.D., Ph.D.

Assistant Professor

Departments of Otolaryngology and Neurobiology

University of Rochester School of Medicine and Dentistry

Department of Otolaryngology

Strong Memorial Hospital

Rochester, New York

Roger L. Crumley, M.D.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

University of California, Irvine, School of Medicine

Orange, California

Oswaldo Laércio M. Cruz, M.D.

Associate Professor and Chief

Division of Otology-Neurotology

Department of Otolaryngology

Federal University of São Paulo

São Paulo, Brazil

Frank Culicchia, M.D.

Professor and Chair

Department of Neurosurgery

Louisiana State University Health Sciences Center

New Orleans, Louisiana

Charles W. Cummings, M.D.

Distinguished Professor

Johns Hopkins University School of Medicine

Executive Medical Director

Johns Hopkins International

Baltimore, Maryland

Calhoun D. Cunningham, III, M.D.

Assistant Consulting Professor of Surgery

Division of Otorhinolaryngology-Head and Neck Surgery

Duke University School of Medicine

Durham, North Carolina

Associate Physician

Carolina Ear and Hearing Clinic

Raleigh, North Carolina

Greg E. Davis, M.D., M.P.H.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of Washington School of Medicine

Seattle, Washington

Larry E. Davis, M.D.

Distinguished Professor of Neurology

Research Professor

Departments of Neuroscience and Molecular Genetics and

Microbiology

University of New Mexico School of Medicine

Chief

Neurology Service

New Mexico VA Health Care System

Albuquerque, New Mexico

Terry A. Day, M.D.

Professor and Clinical Vice Chair

Department of Otolaryngology-Head and Neck Surgery

Medical University of South Carolina

Charleston, South Carolina

Antonio De la Cruz, M.D.

Clinical Professor

Department of Otolaryngology-Head and Neck Surgery

University of Southern California Keck School of Medicine

Director of Education

House Ear Clinic

Los Angeles, California

Charles C. Della Santina, M.D., Ph.D.

Associate Professor

Departments of Otolaryngology-Head Neck Surgery and

Biomedical Engineering

Director

Vestibular NeuroEngineering Laboratory

Division of Otology, Neurotology, and Skull Base Surgery

Johns Hopkins School of Medicine

Baltimore, Maryland

Chadrick Denlinger, M.D.

Assistant Professor

Department of Surgery

Medical University of South Carolina

Charleston, South Carolina

Craig S. Derkay, M.D., F.A.A.P., F.A.C.S.

Professor of Otolaryngology and Pediatrics

Vice Chair

Department of Otolaryngology

Eastern Virginia Medical School

Director of Pediatric Otolaryngology Children's Hospital of the King's Daughters

Norfolk, Virginia

Rodney C. Diaz, M.D.

Assistant Professor of Otology, Neurotology, and Skull Base Surgery

Department of Otolaryngology-Head and Neck Surgery University of California, Davis, School of Medicine

Sacramento, California

Robert A. Dobie, M.D.

Professor

Department of Otolaryngology–Head and Neck Surgery University of California, Davis, School of Medicine Sacramento, California

Suzanne K. Doud Galli, M.D., Ph.D.

Department of Otolaryngology Inova Fairfax Hospital Washington, D.C.

Newton O. Duncan, M.D.

Clinical Assistant Professor Departments of Otorhinolaryngology and Pediatrics Baylor College of Medicine Attending Surgeon Texas Children's Hospital Houston, Texas

Scott D. Z. Eggers, M.D.

Assistant Professor Department of Neurology Mayo Medical School Ann Arbor, Michigan Associate Department of Neurology Mayo Clinic Rochester, Minnesota

Avraham Eisbruch, M.D.

Professor Department of Radiation Oncology University of Michigan Medical School Associate Chair of Clinical Research University of Michigan Health System Ann Arbor, Michigan

David W. Eisele, M.D., F.A.C.S.

Professor and Chair Department of Otolaryngology–Head and Neck Surgery University of California, San Francisco, School of Medicine San Francisco, California

Hussam K. El-Kashlan, M.D.

Associate Professor Department of Otolaryngology University of Michigan Medical School Medical Director Vestibular Testing Center University of Michigan Health System Ann Arbor, Michigan

Ravindhra G. Elluru, M.D., Ph.D.

Associate Professor
Department of Otolaryngology–Head and Neck Surgery
University of Cincinnati College of Medicine
Division of Pediatric Otolaryngology
Cincinnati Children's Hospital
Cincinnati, Ohio

Kevin H. Ende, M.D.

Clinical Instructor Plastic Surgery and Facial Surgery University of California, San Francisco, School of Medicine San Francisco, California

Audrey B. Erman, M.D.

Resident

Department of Otolaryngology University of Michigan Health System Ann Arbor, Michigan

Samer Fakhri, M.D.

Associate Professor

Department of Otolaryngology–Head and Neck Surgery University of Texas Medical School at Houston Houston, Texas

Carole Fakhry, M.D., M.P.H.

Resident

Department of Otolaryngology–Head and Neck Surgery Johns Hopkins Hospital Baltimore, Maryland

Edward H. Farrior, M.D.

Visiting Clinical Associate Professor Department of Otolaryngology University of Virginia School of Medicine Charlottesville, Virginia Founder and Physician Farrior Facial Plastic and Cosmetic Surgery Center Tampa, Florida

Richard T. Farrior, M.D.

Boca Grande, Florida

Russell A. Faust, M.D., Ph.D.

Assistant Professor
Department of Otolaryngology, College of Medicine
Department of Oral Triology, College of Dentistry
The Ohio State University
Staff Attending Physician
Department of Otolaryngology
Nationwide Children's Hospital
Columbus, Ohio

Berrylin J. Ferguson, M.D.

Associate Professor Department of Otolaryngology University of Pittsburgh School of Medicine Director Division of Sino-Nasal Disorders and Allergy University of Pittsburgh Medical Center Pittsburgh, Pennsylvania

Paul W. Flint, M.D.

Professor and Chair Department of Otolaryngology–Head and Neck Surgery Oregon Health and Science University Portland, Oregon

Howard W. Francis, M.D.

Associate Professor Residency Program Director Department of Otolaryngology–Head and Neck Surgery Johns Hopkins University School of Medicine Baltimore, Maryland

Marvin P. Fried, M.D.

Professor and University Chairman
Albert Einstein College of Medicine
Department of Otorhinolaryngology–Head and Neck Surgery
Montefiore Medical Center
Bronx, New York

David R. Friedland, M.D., Ph.D.

Associate Professor

Department of Otolaryngology and Communication Sciences

Division of Otology and Neuro-otologic Skull Base Surgery

Medical College of Wisconsin

Milwaukee, Wisconsin

Oren Friedman, M.D.

Assistant Professor

Department of Otolaryngology

Mayo Medical School

Director

Facial Plastic and Reconstructive Surgery

Mayo Clinic

Rochester, Minnesota

John L. Frodel, Jr., M.D., F.A.C.S.

Clinical Professor

Department of Otolaryngology-Head and Neck Surgery

Temple University School of Medicine

Philadelphia, Pennsylvania

Associate

Geisinger Medical Center

Danville, Pennsylvania

Gerry F. Funk, M.D., F.A.C.S.

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Iowa Carver College of Medicine

Director

Division of Head and Neck Oncology

University of Iowa Hospitals and Clinics

Iowa City, Iowa

Bruce J. Gantz, M.D.

Department of Otolaryngology-Head and Neck Surgery

University of Iowa Carver College of Medicine

Head

Department of Otolaryngology-Head and Neck Surgery

University of Iowa Hospitals and Clinics

Iowa City, Iowa

C. Gaelyn Garrett, M.D.

Professor

Vanderbilt University School of Medicine

Medical Director

Vanderbilt Voice Center

Nashville, Tennessee

Jackie Gartner-Schmidt, Ph.D.

Assistant Professor

Department of Otolaryngology

University of Pittsburgh School of Medicine

Associate Director

University of Pittsburgh Voice Center

UPMC Mercy Hospital

Pittsburgh, Pennsylvania

William Donald Gay, D.D.S.

Hawes Professor of Maxillofacial Prosthetics (retired)

Department of Otolaryngology

Washington University in St. Louis School of Medicine

Attending Dentist

Barnes Hospital

St. Louis, Missouri

Norman N. Ge, M.D., M.S.E.E., F.A.C.S.

Associate Professor

Department of Otolaryngology

University of California, Irvine, School of Medicine

Orange, California

Chief

Department of Head and Neck Surgery

VA Long Beach Healthcare System

Long Beach, California

M. Boyd Gillespie, M.D., M.S.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Medical University of South Carolina

Charleston, South Carolina

Douglas A. Girod, M.D., F.A.C.S.

Professor and Russell E. Bridwell Chair

Department of Otolaryngology-Head and Neck Surgery

Senior Associate Dean for Clinical Affairs

University of Kansas School of Medicine

University of Kansas of Medical Center

Kansas City, Kansas

George S. Goding, Jr., M.D.

Associate Professor

Department of Otolaryngology

University of Minnesota Medical School

Faculty

Department of Otolaryngology

Hennepin County Medical Center

Minneapolis, Minnesota

Andrew N. Goldberg, M.D., F.A.C.S.

Professor

Departments of Otolaryngology-Head and Neck Surgery and

Neurological Surgery

University of California, San Francisco, School of Medicine

Director

Rhinology and Sinus Surgery

UCSF Medical Center

San Francisco, California

David Goldenberg, M.D.

Associate Professor

Department of Surgery

Division of Otolaryngology-Head and Neck Surgery

Penn State University College of Medicine

Director

Head and Neck Surgery

Penn State Milton S. Hershey Medical Center

Head and Neck Cancer Program

Penn State Cancer Institute

Hershey, Pennsylvania

Daniel O. Graney, Ph.D.

Professor

Department of Biological Structure

University of Washington School of Medicine

Seattle, Washington

Nazaneen N. Grant, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

Georgetown University School of Medicine and Health Sciences

Georgetown University Hospital

Washington, D.C.

Vincent Grégoire, M.D., Ph.D., Hon.F.R.C.R.

Professor of Radiation Oncology Catholic University of Louvain Louvain-la-Neuve, Belgium Head of Clinics St. Luc University Hospital Brussels, Belgium

Heike Gries, M.D., Ph.D.

Assistant Professor of Anesthesiology and Pediatrics Division of Pediatric Anesthesiology Department of Anesthesiology and Peri-Operative Medicine Oregon Health and Science University School of Medicine Portland, Oregon

Samuel P. Gubbels, M.D.

Assistant Professor
Department of Surgery
University of Wisconsin–Mad

University of Wisconsin–Madison School of Medicine and Public Health

Madison, Wisconsin

Joel Guss, M.D.

Attending Physician
Department of Head and Neck Surgery
Kaiser Permanente Medical Center
Walnut Creek, California

Patrick Ha, M.D., F.A.C.S.

Assistant Professor

Department of Otolaryngology–Head and Neck Surgery Johns Hopkins University School of Medicine Physician

Johns Hopkins Head and Neck Surgery at the Greater Baltimore Medical Center

Milton J. Dance, Jr., Head and Neck Center Baltimore, Maryland

Grant S. Hamilton, III, M.D.

Assistant Professor University of Iowa Carver College of Medicine University of Iowa Hospitals and Clinics Iowa City, Iowa

Ehab Y. Hanna, M.D., F.A.C.S.

Lecturer

University of Arkansas for Medical Sciences

Little Rock, Arkansas

Professor and Vice Chairman

Department of Head and Neck Surgery

Director of Skull Base Surgery

Medical Director of Head and Neck Center

University of Texas M.D. Anderson Cancer Center

Houston, Texas

Lee A. Harker, M.D.

Formerly Deputy Director

Boys Town National Research Hospital

Vice Chair

Department of Otolaryngology and Human Communication Omaha, Nebraska

Uli Harréus, Dr.Med.

Assistant Professor Department of Otolaryngology–Head and Neck Surgery Ludwig-Maximilians University Grosshadern Clinic Munich, Germany

Robert V. Harrison, Ph.D.

Professor and Director of Research

Department of Otolaryngology-Head and Neck Surgery

University of Toronto Faculty of Medicine

Senior Scientist

Neuroscience and Mental Health

Hospital for Sick Children

Toronto, Ontario, Canada

Bruce H. Haughey, M.B.Ch.B., F.A.C.S., F.R.A.C.S.

Professor and Director

Head and Neck Surgical Oncology

Department of Otolaryngology-Head and Neck Surgery Washington University in St. Louis School of Medicine

St. Louis, Missouri

John W. Hellstein, D.D.S.

Clinical Professor of Oral and Maxillofacial Pathology University of Iowa Carver College of Medicine Iowa City, Iowa

Kurt Herzer

Marshall Scholar

Department of Social Policy and Social Work

University of Oxford

Oxford, United Kingdom

Woodrow Wilson Fellow

Departments of Public Health Studies and Anesthesiology and

Critical Care Medicine

Johns Hopkins University School of Medicine

Baltimore, Maryland

Michael S. Hildebrand, Ph.D.

Postdoctoral Fellow

Department of Otolaryngology

University of Iowa Carver College of Medicine

University of Iowa Hospitals and Clinics

Iowa City, Iowa

Frans J. M. Hilgers, M.D., Ph.D.

Professor

Amsterdam Center for Language and Communication (Institute of Phonetic Sciences)

Academic Medical Center

University of Amsterdam

Emeritus Chairman

Department of Head and Neck Oncology and Surgery

The Netherlands Cancer Institute–Antoni van Leeuwenhoek Hospital

Amsterdam, The Netherlands

Justin D. Hill, M.D.

Physician

Central Oregon Ear, Nose & Throat

Bend, Oregon

Michael L. Hinni, M.D.

Associate Professor and Residency Program Director

Mayo Clinic College of Medicine

Consultant

Department of Otolaryngology-Head and Neck Surgery

Mayo Clinic

Phoenix, Arizona

Henry T. Hoffman, M.D., F.A.C.S.

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Iowa Carver College of Medicine

Director

Voice Clinic

University of Iowa Hospitals and Clinics

lowa City, Iowa

Eric H. Holbrook, M.D., M.S.(Anat.)

Assistant Professor

Department of Otology and Laryngology

Harvard Medical School

Associate Surgeon

Department of Otolaryngology

Massachusetts Eye and Ear Infirmary

Boston, Massachusetts

Lauren D. Holinger, M.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Northwestern University Feinberg School of Medicine

Head

Division of Pediatric Otolaryngology

Children's Memorial Hospital

Chicago, Illinois

Allison MacGregor Holzapfel, M.D.

Volunteer Clinical Professor

Department of Otolaryngology-Head and Neck Surgery

University of Cincinnati College of Medicine

Cincinnati, Ohio

David B. Hom, M.D., F.A.C.S.

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Cincinnati College of Medicine

Director

Facial Plastic and Reconstructive Surgery

University of Cincinnati Medical Center

Cincinnati Children's Hospital Medical Center

Cincinnati, Ohio

John W. House, M.D.

Clinic Professor

Department of Otorhinolaryngology-Head and Neck Surgery

University of Southern California Keck School of Medicine

Associate Physician

House Clinic President

House Ear Institute

nouse Ear Institute

Los Angeles, California

Joyce Colton House, M.D.

Chief Resident

Boston Medical Center

Boston, Massachusetts

Timothy E. Hullar, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery Washington University in St. Louis School of Medicine

St. Louis, Missouri

Murad Husein, M.D.

Assistant Professor

London Health Sciences Centre

Victoria Hospital

Children's Hospital of Western Ontario

London, Ontario, Canada

Steven Ing, M.D.

Assistant Professor of Medicine

The Ohio State University College of Medicine

Columbus, Ohio

Tim A. Iseli, M.B.B.S., F.R.A.C.S.

Staff Surgeon

Royal Melbourne Hospital

Melbourne, Victoria, Australia

Stacey Ishman, M.D.

Assistant Professor

Department of Pediatrics

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Director

Center for Snoring and Sleep Surgery

Johns Hopkins Hospital

Baltimore, Maryland

Robert K. Jackler, M.D.

Edward C. and Amy H. Sewall Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

Associate Dean

Stanford University School of Medicine

Attending Physician

Lucile Packard Children's Hospital at Stanford

Stanford, California

Brian Jameson, D.O.

Clinical Assistant Professor

Temple University School of Medicine

Philadelphia, Pennsylvania

Attending Endocrinologist

Geisinger Wyoming Valley Medical Center

Wilkes-Barre, Pennsylvania

Herman A. Jenkins, M.D.

Professor and Chair

Department of Otolaryngology

University of Colorado, Denver, School of Medicine

University of Colorado Hospital

Aurora, Colorado

Hong-Ryol Jin, M.D., Ph.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Seoul National University College of Medicine

Seoul, Korea

John K. Joe, M.D.*

Assistant Professor

Department of Surgery

Division of Otolaryngology-Head and Neck Surgery

Yale University School of Medicine

New Haven, Connecticut

Stephanie A. Joe, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of Illinois at Chicago College of Medicine

Director

Sinus and Nasal Allergy Center

Codirector

Skull Base Surgery

University of Illinois Hospital

Chicago, Illinois

^{*}Deceased

Gary Johnson, M.D.

Professor

Department of Obstetrics and Gynecology

Director of Gynecologic Oncology

Clerkship Director

Southern Illinois University School of Medicine

Springfield, Illinois

Rhonda Johnson, M.Ed., Ph.D.

Assistant Professor

Department of Psychiatry

Southern Illinois University School of Medicine

Psychologist

SimmonsCooper Cancer Institute

St. John's Hospital

Memorial Medical Center

Springfield, Illinois

Tiffany A. Johnson, Ph.D.

Assistant Professor

Department of Speech-Language-Hearing: Sciences and

Disorders

University of Kansas

Lawrence, Kansas

Timothy M. Johnson, M.D.

Professor

Department of Dermatology and Otorhinolaryngology-Head and

Neck Surgery

University of Michigan Medical School

Ann Arbor, Michigan

Nick S. Jones, M.D., F.R.C.S., F.R.C.S.(ORC)

Professor

Department of Otorhinolaryngology-Head and Neck Surgery

University of Nottingham

Queens Medical Centre

University Hospital

Nottingham, United Kingdom

Sheldon S. Kabaker, M.D.

Professor

Department of Otolaryngology

University of California, San Francisco, School of Medicine

San Francisco, California

Lucy H. Karnell, Ph.D.

Research Scientist

University of Iowa Hospitals and Clinics

Iowa City, Iowa

Matthew L. Kashima, M.D., M.P.H.

Assistant Professor

Johns Hopkins University School of Medicine

Chair

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins Bayview Medical Center

Baltimore, Maryland

Robert M. Kellman, M.D.

Professor and Chair

Department of Otolaryngology and Communication Sciences

SUNY Upstate Medical University

Syracuse, New York

Paul E. Kelly, M.D.

Staff Surgeon

Eastern Long Island Hospital

Greenport, New York

Peconic Bay Medical Center

Riverhead, New York

David W. Kennedy, M.D.

Professor of Rhinology

Department of Otolaryngology-Head and Neck Surgery

Vice Dean for Professional Services

University of Pennsylvania School of Medicine

Philadelphia, Pennsylvania

Ayesha N. Khalid, M.D.

Clinical Instructor

Oregon Health and Science University School of Medicine

Portland, Oregon

Merrill S. Kies, M.D.

Professor of Medicine

University of Texas M.D. Anderson Cancer Center

Houston, Texas

Paul R. Kileny, Ph.D.

Professor

Departments of Otolaryngology and Pediatrics

University of Michigan Medical School

Academic Program Director

Audiology and Hearing Rehabilitation

University of Michigan Health System

Ann Arbor, Michigan

David W. Kim, M.D.

Clinical Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Division of Facial Plastic Surgery

University of California, San Francisco, School of Medicine

San Francisco, California

Jason H. Kim, M.D., F.A.C.S.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of California, Irvine, School of Medicine

Orange, California

Theresa B. Kim, M.D.

Resident

Department of Otolaryngology-Head and Neck Surgery

UCSF Medical Center

San Francisco, California

William J. Kimberling, Ph.D.

Professor of Ophthalmology

Departments Ophthalmology and Visual Sciences and

Otolaryngology

University of Iowa Carver College of Medicine

Iowa City, Iowa

Senior Scientist

Boys Town National Research Hospital

Omaha, Nebraska

Jeffrey Koh, M.D., M.B.A.

Professor of Anesthesiology and Pediatrics

Oregon Health and Science University School of Medicine Chief

Division of Pediatric Anesthesiology and Pain Management

Doernbecher Children's Hospital

Portland, Oregon

Niels Kokot, M.D.

Assistant Professor

Department of Otolaryngology—Head and Neck Surgery University of Southern California Keck School of Medicine Los Angeles, California

Peter J. Koltai, M.D., F.A.C.S., F.A.A.P.

Professor of Otolaryngology

Department of Otolaryngology-Head and Neck Surgery

Stanford University School of Medicine

Chief

Division of Pediatric Otolaryngology

Lucile Packard Children's Hospital at Stanford

Stanford, California

Frederick K. Kozak, M.D.

Clinical Professor

University of British Columbia Faculty of Medicine

Head

Division of Pediatric Otolaryngology

Medical/Surgical Director

Cochlea Implant Program

B.C. Children's Hospital

Vancouver, British Columbia, Canada

Paul R. Krakovitz, M.D.

Assistant Professor

Department of Surgery

Cleveland Clinic Lerner College of Medicine of Case Western

Reserve University

Section Head, Pediatric Otolaryngology

Head and Neck Institute

Cleveland Clinic

Cleveland, Ohio

Russell W. H. Kridel, M.D., F.A.C.S.

Clinical Professor

Department of Otolaryngology-Head and Neck Surgery

Division of Facial Plastic and Reconstructive Surgery

University of Texas Medical School at Houston

Houston, Texas

Parvesh Kumar, M.D.

Professor and Chair

Department of Radiation Oncology

University of Southern California Keck School of Medicine

Chair

Department of Radiation Oncology

Los Angeles County Hospital-USC Medical Center

Director

Division of Radiation Oncology

USC Norris Cancer Center Hospital

Los Angeles, California

Melda Kunduk, Ph.D.

Assistant Professor

Department of Communication Sciences and Disorders

Louisiana State University School of Medicine at New Orleans

Health Sciences Center

Speech Pathologist

Department of Otolaryngology-Head Neck Surgery

Louisiana State University Health Sciences Center New

Orleans, Lourisiana

Our Lady of the Lake Voice Center

Baton Rouge, Louisiana

Ollivier Laccourreye, M.D.

Professor

Department of Otorhinolaryngology-Head and Neck Surgery

Paris Descartes University

Hôpital Européen Georges Pompidou

Paris, France

JoAnne Lacey, M.D.

Assistant Professor

Department of Radiology

Division of Neuroradiology

Washington University in St. Louis School of Medicine

Neuroradiologist

Barnes-Jewish Hospital

St. Louis, Missouri

Stephen Y. Lai, M.D., Ph.D.

Assistant Professor

Department of Head and Neck Surgery

University of Texas M.D. Anderson Cancer Center

Houston, Texas

Devyani Lal, M.D.

Chief Resident

Department of Otolaryngology-Head and Neck Surgery

Loyola University Medical Center

Maywood, Illinois

Anil K. Lalwani, M.D.

Mendik Foundation Professor and Chair

Department of Otolaryngology

New York University School of Medicine

New York, New York

Paul R. Lambert, M.D.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

Medical University of South Carolina

Charleston, South Carolina

Amy Anne Lassig, M.D.

Assistant Professor

Department of Otolaryngology-Head and Neck Surgery

University of Minnesota Medical School

Minneapolis, Minnesota

Richard E. Latchaw, M.D.

Professor

Department of Radiology

University of California, Davis, School of Medicine

Directo

Neuroradiology Division

Department of Radiology

UC Davis Medical Center

Sacramento, California

Kevin P. Leahy, M.D., Ph.D.

Assistant Professor

Department of Otorhinolaryngology-Head and Neck Surgery University of Pennsylvania School of Medicine

Philadelphia, Pennsylvania

Daniel J. Lee, M.D.

Assistant Professor

Department of Otology and Laryngology

Harvard Medical School

Department of Otolaryngology

Massachusetts Eye and Ear Infirmary

Boston, Massachusetts

Ken K. Lee, M.D.

Associate Professor

Departments of Dermatology, Surgery, and Otolaryngology

Director

Department of Dermatologic and Laser Surgery

Oregon Health and Science University School of Medicine Portland, Oregon

Nancy Lee, M.D.

Associate Attending

Department of Radiation Oncology

Memorial Sloan-Kettering Cancer Center

New York, New York

Jean-Louis Lefebvre, M.D.

Professor and Chief

Head and Neck Cancer

Center Oscar Lambret

Lille, France

Maureen A. Lefton-Greif, Ph.D.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Department of Pediatrics

Johns Hopkins University School of Medicine

Speech-Language Pathologist

Johns Hopkins Hospital

Baltimore, Maryland

Donald A. Leopold, M.D., M.S.(Bus.)

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

University of Nebraska School of Medicine

Omaha, Nebraska

James S. Lewis, Jr., M.D.

Assistant Professor of Pathology and Immunology

Department of Anatomic and Molecular Pathology

Director, Research Histology and Tissue Microarray Laboratory

Washington University in St. Louis School of Medicine

St. Louis, Missouri

Daging Li, M.D.

Associate Professor

Department of Otorhinolaryngology-Head and Neck Surgery

University of Pennsylvania School of Medicine

Director

Gene and Molecular Therapy Laboratory

Director

Temporal Bone Laboratory

Hospital of the University of Pennsylvania

Philadelphia, Pennsylvania

Timothy S. Lian, M.D.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Residency Program Director

Louisiana State University Health Sciences Center School of

Medicine Shreveport

Shreveport, Louisiana

Greg R. Licameli, M.D., M.H.C.M., F.A.C.S.

Assistant Professor

Department of Otology and Laryngology

Harvard Medical School

Interim Chief

Department of Otolaryngology

Children's Hospital

Boston, Massachusetts

Charles J. Limb, M.D.

Associate Professor

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Johns Hopkins Hospital

Baltimore, Maryland

Jeri A. Logemann, Ph.D.

Ralph and Jean Sundin Professor

Department of Communication Sciences and Disorders

Northwestern University

Evanston, Illinois

Professor

Departments of Neurology and Otolaryngology-Head and Neck

Northwestern University Feinberg School of Medicine

Director

Voice, Speech, and Language Service and Swallowing Center

Northwestern Memorial Hospital

Chicago, Illinois

Thomas Loh, M.B.B.S., F.R.C.S.

Associate Professor

Department of Otolaryngology

National University of Singapore

Senior Consultant

Department of Otolaryngology-Head and Neck Surgery

National University Hospital

Singapore

Brenda L. Lonsbury-Martin, Ph.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Loma Linda University School of Medicine

Senior Research Scientist

VA Loma Linda Healthcare System

Loma Linda, California

Manuel A. Lopez, M.D.

Chief

Facial Plastic Surgery

Wilford Hall Medical Center

San Antonio, Texas

Rodney P. Lusk, M.D.

Director

Ear, Nose, and Throat Institute

Boys Town National Research Hospital

Omaha, Nebraska

Lawrence R. Lustig, M.D.

Francis A. Sooy, M.D., Chair in Otolaryngology

Chief

Division of Otology and Neurotology

Department of Otolaryngology-Head and Neck Surgery University of California, San Francisco, School of Medicine

San Francisco, California

Anna Lysakowski, Ph.D.

Professor

Department of Anatomy and Cell Biology

University of Illinois at Chicago College of Medicine

Chicago, Illinois

Carol J. MacArthur, M.D.

Associate Professor

Department of Otolaryngology–Head and Neck Surgery Oregon Health and Science University School of Medicine

Portland, Oregon

Robert H. Maisel, M.D.

Professor

Department of Otolaryngology

University of Minnesota Medical School

Chief of Otolaryngology

Hennepin County Medical Center

Minneapolis, Minnesota

James P. Malone, M.D.

Associate Professor

Division of Otolaryngology

Southern Illinois University School of Medicine

Springfield, Illinois

Ellen M. Mandel, M.D.

Associate Professor

Department of Otolaryngology

University of Pittsburgh School of Medicine

Children's Hospital of Pittsburgh

Pittsburgh, Pennsylvania

Susan J. Mandel, M.D., M.P.H.

Professor and Associate Chief

Division of Endocrinology, Diabetes and Metabolism

Department of Medicine

University of Pennsylvania Health System

Philadelphia, Pennsylvania

Scott C. Manning, M.D.

Professor

Department of Otolaryngology

University of Washington in St. Louis School of Medicine

Chief

Division of Pediatric Otolaryngology

Seattle Children's Hospital

Seattle, Washington

Lynette Mark, M.D.

Associate Professor

Departments of Anesthesiology and Critical Care Medicine and

Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Johns Hopkins Hospital

Baltimore, Maryland

Jeffery C. Markt, D.D.S.

Associate Professor and Director

Department of Otolaryngology-Head and Neck Surgery

Division of Oral Facial Prosthetics/Dental Oncology

University of Nebraska School of Medicine

Omaha, Nebraska

Michael Marsh, M.D.

Physician

Arkansas Center for Ear, Nose, Throat and Allergy

Fort Smith, Arkansas

Glen K. Martin, Ph.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Loma Linda School of Medicine

Loma Linda, California

Douglas E. Mattox, M.D.

Professor and William Chester Warren, Jr., M.D., Chair Department of Otolaryngology-Head and Neck Surgery

Emory School of Medicine

Atlanta, Georgia

Thomas V. McCaffrey, M.D., Ph.D.

Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

University of South Florida College of Medicine

Program Leader and Senior Member

Head and Neck Oncology

H. Lee Moffitt Cancer Center

Tampa, Florida

Timothy M. McCulloch, M.D., F.A.C.S.

Professor

Department of Surgery

University of Wisconsin School of Medicine and Public Health

Chair

Division of Otolaryngology-Head and Neck Surgery

University of Wisconsin Hospitals and Clinics

Madison, Wisconsin

JoAnn McGee, Ph.D.

Scientist

Developmental Auditory Physiology Laboratory

Boys Town National Research Hospital

Omaha, Nebraska

John F. McGuire, M.D.

Attending Physician

Department of Otolaryngology

Fallbrook Hospital

Fallbrook, California

Jonathan McJunkin, M.D.

Resident

Department of Otolaryngology-Head and Neck Surgery

Washington University Medical Center

St. Louis, Missouri

J. Scott McMurray, M.D.

Associate Professor

Departments of Surgery and Pediatrics

University of Wisconsin School of Medicine and Public Health

American Family Children's Hospital

Madison, Wisconsin

Albert L. Merati, M.D.

Associate Professor and Chief

Division of Laryngology

Department of Otolaryngology-Head and Neck Surgery

Department of Speech and Hearing Sciences

University of Washington School of Medicine

Adjunct Associate Professor

Seattle, Washington

Saumil N. Merchant, M.D.

Gudrun Larsen Eliasen and Nels Kristian Eliasen Professor of

Otology and Laryngology

Harvard Medical School

Surgeon in Otolaryngology

Massachusetts Eye and Ear Infirmary

Boston, Massachusetts

Anna H. Messner, M.D.

Professor

Departments of Otolaryngology-Head and Neck Surgery and

Pediatrics

Stanford University School of Medicine

Stanford, California

Vice Chair

Department of Otolaryngology-Head and Neck Surgery

Lucile Packard Children's Hospital at Stanford

Palo Alto, California

James Michelson, M.D.

Professor

Department of Orthopedics and Rehabilitation

University of Vermont College of Medicine

Medical Informaticist

Fletcher Allen Health Care

Burlington, Vermont

Henry A. Milczuk, M.D.

Associate Professor of Pediatric Otolaryngology Oregon Health and Science University School of Medicine Portland, Oregon

Lloyd B. Minor, M.D.

Andelot Professor and Director

Department of Otolaryngology-Head and Neck Surgery

Johns Hopkins University School of Medicine

Johns Hopkins Hospital

Baltimore, Maryland

Steven Ross Mobley, M.D.

Associate Professor

Facial Plastic and Reconstructive Surgery

Department of Otolaryngology

University of Utah School of Medicine

Salt Lake City, Utah

Harlan Muntz, M.D., F.A.C.S., F.A.A.P.

Professor

Department of Otolaryngology-Head and Neck Surgery

University of Utah School of Medicine

Director

Department of Pediatric Otolaryngology

Primary Children's Medical Center

Salt Lake City, Utah

Craig S. Murakami, M.D.

Clinical Associate Professor

Department of Otolaryngology-Head and Neck Surgery

University of Washington School of Medicine

Directo

Department of Facial Plastic Surgery

Virginia Mason Medical Center

Seattle, Washington

Charles M. Myer, III, M.D.

Professor and Vice Chair

Department of Otolaryngology

University of Cincinnati College of Medicine

Director

Hearing Impaired Clinic

Cincinnati Children's Hospital Medical Center

Cincinnati, Ohio

Robert M. Naclerio, M.D.

Professor and Chief

Department of Otolaryngology-Head and Neck Surgery

University of Chicago Pritzker School of Medicine

Chicago, Illinois

Joseph B. Nadol, Jr., M.D.

Walter Augustus Lecompte Professor and Chair

Department of Otology and Laryngology

Harvard Medical School

Chief

Department of Otolaryngology

Massachusetts Eye and Ear Infirmary

Boston, Massachusetts

Paul S. Nassif, M.D., F.A.C.S.

Assistant Clinical Professor

Department of Otolaryngology

University of Southern California Keck School of Medicine

Los Angeles, California

Partner

Spalding Drive Cosmetic Surgery and Dermatology

Beverly Hills, California

Julian Nedzelski, M.D.

Professor

Department of Otolaryngology

University of Toronto Faculty of Medicine

Otolaryngologist-in-Chief

Sunnybrook Health Sciences Centre

Toronto, Ontario, Canada

Piero Nicolai, M.D.

Professor

University of Brescia School of Medicine

Chairman

Spedali Civili

Brescia, Italy

David R. Nielsen, M.D.

Executive Vice President and CEO

American Academy of Otolaryngology–Head and Neck Surgery Alexandria, Virginia

John K. Niparko, M.D.

George T. Nager Professor

Department of Otolaryngology-Head and Neck Surgery

Director

Divisions of Otology, Neurotology, Skull Base Surgery, and

Audiology

Johns Hopkins University School of Medicine

Baltimore, Maryland

Susan J. Norton, Ph.D.

Professor

Department of Otolaryngology-Head and Neck Surgery

Adjunct Professor

Department of Speech and Hearing Sciences

University of Washington School of Medicine

Chief

Department of Pediatric Audiology

Seattle Children's Hospital

Seattle, Washington

S. A. Reza Nouraei, M.A.(Cantab.), M.B.B.Chir., M.R.C.S.

Researcher

The Laryngology Research Group

University College London

Academic Specialist Registrar

Charing Cross Hospital

London, United Kingdom

Daniel W. Nuss, M.D., F.A.C.S.

G. D. Lyons Professor and Chair

Department of Otolaryngology-Head and Neck Surgery

Louisiana State University Health Sciences Center School of Medicine at New Orleans

New Orleans, Louisiana