



**OTOLARYNGOLOGY —
HEAD AND NECK
SURGERY**

2014 YEAR IN REVIEW

CONTENTS

1 Message from the Chair

2 Facts & Figures

3 New & Noteworthy

7 Clinical Care

8 Cochlear Implants

12 Voice

14 Partnerships

16 Neurofibromatosis

18 Education & Training

20 Publications

22 Locations

23 Faculty

24 Leadership

MESSAGE FROM THE CHAIR

Dear Colleagues and Friends,

NYU Langone Medical Center's Department of Otolaryngology—Head and Neck Surgery continues to push the boundaries of research and care.

Our multidisciplinary teams work together to diagnose, treat, and rehabilitate patients, and many of our researchers' projects have attracted major funding in support of their investigations into new therapies and treatment strategies. In fact, we are now among the top 10 otolaryngology departments in the nation in terms of number of National Institutes of Health grants.

Our Cochlear Implant Center has served as one of the world's largest, leading centers since it implanted one of the first multichannel cochlear prostheses in 1984. Our physicians have implanted more than 3,500 cochlear and brainstem implants in children and adults, and today they perform an average of 180 surgeries annually. And our researchers conduct numerous clinical trials for new devices and therapies, such as the Nucleus® Hybrid™ L24 Cochlear Implant System, which received Food and Drug Administration approval last year on the basis of a national clinical trial of the device led by NYU Langone.

At the Voice Center at NYU Langone, a multidisciplinary team is pioneering new treatments for patients with voice, swallowing, and airway disorders. Our practitioners are known for their expertise in performing in-office vocal fold injection and laser treatments, which are safer and less costly compared to traditional operating room procedures. And our investigators are pursuing new treatments for vocal fold scarring and lesions, including targeted genetic therapies that may promote natural healing after injury.

NYU Langone is also one of the world's foremost centers for the treatment of neurofibromatosis (NF), a genetic disorder associated with potentially life-threatening tumors of the nervous system. Our neurosurgeons, otolaryngologists—head and neck surgeons, and reconstructive plastic surgeons work together to remove benign and malignant tumors and provide optimal postsurgical reconstruction and rehabilitation for these patients. As one of the 13 members of the national NF Clinical Trials Consortium, we are also enrolling patients in clinical trials to test new therapies for NF types 1 and 2.

Our expanded Head and Neck and Pediatric Otolaryngology teams are making many advances in education and clinical care. The new Head and Neck Center opened its doors in September 2014, and the newly established GUARD team is helping patients with very complex upper aerodigestive tract problems.

We look forward to building on our clinical and research accomplishments to further our groundbreaking otolaryngology care at NYU Langone. I invite you to read on to learn more about our work and achievements.



J. Thomas Roland Jr. MD

J. THOMAS ROLAND JR., MD

Mendik Foundation
Professor of Otolaryngology
Professor of Neurosurgery

Chair, Department of
Otolaryngology—
Head and Neck Surgery

NYU Langone Medical Center

FACTS & FIGURES*

Otolaryngology—Head and Neck Surgery

#10 
in the nation

for the number of active NIH grants and supplements

Ranked #21
in the U.S.

for otolaryngology in the 2014–15 U.S. News & World Report's Best Hospitals survey



3,500+ 
patients

have received cochlear implants at NYU Langone since 1984

180–200 
cochlear implant

procedures performed per year

2 → **14**

active NIH grants and supplements rose from 2009 to 2014 (awards with ENT faculty and their trainees as PIs)

1 of 13 
centers

participating in the NF Clinical Trials Consortium

< 1 
year old

In the last 13 years, almost 150 children under a year of age have received cochlear implants at NYU Langone

NF2

NYU Langone is the nation's second-largest center for auditory brainstem implantation for patients with neurofibromatosis type 2 (NF2)

500 
unique patients

seen each year for acoustic neuroma

1 of 4 
centers approved

by the Food and Drug Administration to perform auditory brainstem implantation in children born without cochleae or cochlear nerves

first 
pediatric auditory brainstem implantation

in the country was performed at NYU Langone in 2012

NYU Langone Medical Center

Ranked #1 for Two Years in a Row

in overall patient safety and quality, among leading academic medical centers across the nation that participated in the University HealthSystem Consortium Quality & Accountability Study



Ranked #15 on "Best Hospitals" Honor Roll

by U.S. News & World Report and nationally ranked in 13 specialties, including top 10 rankings in Orthopaedics (#4), Rheumatology (#6), Geriatrics (#8), Neurology & Neurosurgery (#8), and Rehabilitation (#9)



Ranked One of the Top 20 Medical Schools

by U.S. News & World Report

Magnet Designation for Third Consecutive Term

for Tisch Hospital and Rusk Rehabilitation, an honor achieved by only 2% of hospitals in the country. NYU Langone's Hospital for Joint Diseases received its first Magnet recognition in 2012.



NEW & NOTEWORTHY

Expanding Options and Possibilities for Patients with Ear, Nose, and Throat Disorders

Proving Cost Savings for Partial Tonsillectomy

Max M. April, MD, professor of otolaryngology and pediatrics at NYU Langone, was senior author of a study published in *The Laryngoscope*, suggesting that partial, or intracapsular, tonsillectomy—performed frequently at NYU Langone—is more cost- and resource-efficient than the more commonly performed total tonsillectomy.



Trial Paves Way for CMS Cochlear Implant Coverage

NYU Langone's cochlear implant team is recruiting patients for a multicenter clinical trial that may lead to full Centers for Medicare & Medicaid Services coverage of multichannel cochlear implant systems for patients aged 65 and older with less than profound bilateral sensorineural hearing loss. Researchers will assess participants before and after implantation to gauge the impact of cochlear implants compared to hearing aids on speech recognition and quality of life.

Investigating Auditory Brainstem Implants in Children

Investigators in the Department of Otolaryngology—Head and Neck Surgery at NYU Langone have secured Food and Drug Administration (FDA) approval to perform auditory brainstem implantation in children born without cochleae or cochlear nerves. The department is one of only four centers nationwide conducting the trials. Previously, the procedure was approved only for deaf patients over age 12 with neurofibromatosis type 2.

New Center Targets Pediatric Aerodigestive Disorders

The GUARD Center (Pediatric Gastroesophageal, Upper Airway, and Respiratory Diseases Center), established in 2014, is a multispecialty program of Hassenfeld Children's Hospital that treats a wide range of complex and rare disorders of the aerodigestive tract in children and adolescents.

Minimally-Invasive Access to Complex Lesions Using Endoscopic Techniques

Working closely with multidisciplinary teams, our surgeons offer comprehensive and compassionate care for patients with inflammatory diseases as well as benign and malignant tumors of the nose, paranasal sinuses and skull base. We perform approximately 150 endoscopic skull base cases per year.

NEW & NOTEWORTHY

Neurotologist
Sean McMenomey, MD, hosts
The Otolaryngology Show on

SiriusXM
Satellite Radio

Cochlear Implants for Partial and Single-Sided Deafness

NYU Langone researchers led a national multicenter study that collected data on 50 patients with partial deafness in the high frequencies who were implanted with a Nucleus® Hybrid™ L24 cochlear implant. Their findings of improved speech recognition formed the basis for FDA approval of the device in 2014.

The Cochlear Implant Center at NYU Langone is also leading a multisite pilot study evaluating the use of cochlear implants in patients with single-sided deafness.

Training the Next Generation

NYU Langone will be launching a pediatric otolaryngology fellowship in the summer of 2015 under the direction of Max M. April, MD, professor of Otolaryngology and Pediatrics. In addition, the facial plastic and reconstructive surgery fellowship program has been revamped under the direction of Philip J. Miller, MD, assistant professor of otolaryngology.

NIH-Funded Scientists Lead Vestibular and Auditory Research

David M. Landsberger, PhD, assistant professor of otolaryngology, and David E. Schoppik, PhD, assistant professor of otolaryngology and neuroscience and physiology, joined NYU Langone and are NIH-funded scientists in the vestibular and auditory sciences. Dr. Landsberger focuses on how cochlear implants interact with the auditory system, and Dr. Schoppik has developed a zebrafish model to elucidate the complex functioning of the vestibular system.

Head and Neck Center Expands Team

Mark S. Persky, MD, professor of otolaryngology, was recruited to NYU Langone in 2014 to lead the expansion of the Head and Neck Center at the Laura and Isaac Perlmutter Cancer Center. Dr. Persky, a specialist in head and neck, vascular, and skull base tumors, previously served as chair of the Department of Otolaryngology—Head and Neck Surgery at Beth Israel Medical Center. Also joining the Head and Neck Center team is Adam S. Jacobson, MD, associate professor of otolaryngology, who came to NYU Langone from New York's Mount Sinai Hospital System.

Gift Propels Growth of Cancer Center

Benjamin G. Neel, MD, PhD, assumed directorship of the NCI-designated Laura and Isaac Perlmutter Cancer Center (formerly NYU Cancer Institute) in January 2015. A world-renowned cancer biologist, Dr. Neel previously directed the Toronto-based Ontario Cancer Institute, Canada's largest cancer research center. The Perlmutter Cancer Center is poised for growth following a gift in excess of \$50 million from the Laura and Isaac Perlmutter Foundation to advance cancer research and treatment at NYU Langone.

Innovation in Facial Plastic Surgery

W. Matthew White, MD, assistant professor of otolaryngology, has developed an international reputation for spearheading the development of micro-focused ultrasound to treat the aging face and neck (Ultherapy®). He published the first three articles on the procedure in the medical literature and holds a U.S. patent for the technology.

Gene Therapy for Vocal Cord Scarring

The research lab, led by Ryan C. Branski, PhD, associate professor of otolaryngology and associate director of the Voice Center at NYU Langone, received a five-year, \$2.1 million National Institutes of Health (NIH) grant to investigate gene therapy for vocal cord scarring.



Awards and Recognitions

- **Milan R. Amin, MD**, associate professor of otolaryngology, chief of the Division of Laryngology, and director of the Voice Center at NYU Langone, was named secretary of the American Bronchoesophagological Association in 2014, and is the current president of the New York Laryngological Society.
- **Ryan C. Branski, PhD**, associate professor of otolaryngology and associate director of the Voice Center, was inducted into the American Laryngological Association, one of only 10 non-physicians to receive the honor in the organization's history.
- **Robert Froemke, PhD**, assistant professor, departments of otolaryngology, neuroscience & physiology, and molecular neurobiology, received The McKnight Endowment Fund for Neuroscience's Scholar Award from The McKnight Foundation and the Hirschl/Weill-Caulier Career Scientist award. He and his colleagues were also winners of the NYU Grand Challenge award (with **Michael A. Long, PhD**, **Bijan Pesaran, PhD**, **Dan H. Sanes, PhD**, and **Jonathan Viventi, PhD**).
- The laboratory of **Michael A. Long, PhD**, assistant professor of otolaryngology, and physiology and neuroscience, has received two prominent foundational fellowships. These awards were given by the New York Stem Cell Foundation and the Simons Foundation Global Brain Initiative. He also has been involved in orchestrating the annual Computational and Systems Neuroscience Meeting as program chair (2014) and general chair (2015).
- **Arlene C. Neuman, PhD**, research associate professor in the Department of Otolaryngology—Head and Neck Surgery and National Institutes of Health-funded scientist in the Laboratory for Translational Auditory Research, was recently named a fellow of the Acoustical Society of America. Dr. Neuman received the prestigious designation for her contributions to classroom acoustics and hearing aid development.
- **Mark S. Persky, MD**, professor of otolaryngology and director of the Head and Neck Center, is past president of the New York Head and Neck Society and is program chair for the Triological (Laryngological, Rhinological, and Otological) Society's 2015 Combined Sections Meeting in Coronado Island, California.
- **Scott M. Rickert, MD**, assistant professor of otolaryngology, pediatrics, and plastic surgery, is the only otolaryngologist in the tri-state area—and one of only six nationally—to complete two year-long fellowships in pediatric otolaryngology and laryngology. He is among a handful of physicians in the country who focus specifically on pediatric voice issues.
- **J. Thomas Roland Jr., MD**, the Mendik Foundation Professor of Otolaryngology, professor of neurosurgery, chair of the Department of Otolaryngology—Head and Neck Surgery, and co-director of the Cochlear Implant Center at NYU Langone, received the 2014 Distinguished Award for Humanitarian Service from the American Academy of Otolaryngology—Head and Neck Surgery Foundation. Dr. Roland and **Susan B. Waltzman, PhD**, the Marica F. Vilcek Professor of Otolaryngology and co-director of the Cochlear Implant Center, are founding members of the American Cochlear Implant Alliance. **William H. Shapiro, AuD**, the Lester S. Miller Jr. & Kathleen V. Miller Clinical Assistant Professor of Hearing Health, serves on the alliance's board of directors and executive committee.
- **Robert F. Ward, MD**, professor of otolaryngology and pediatrics, served as the 2013–14 president of the American Society of Pediatric Otolaryngology.

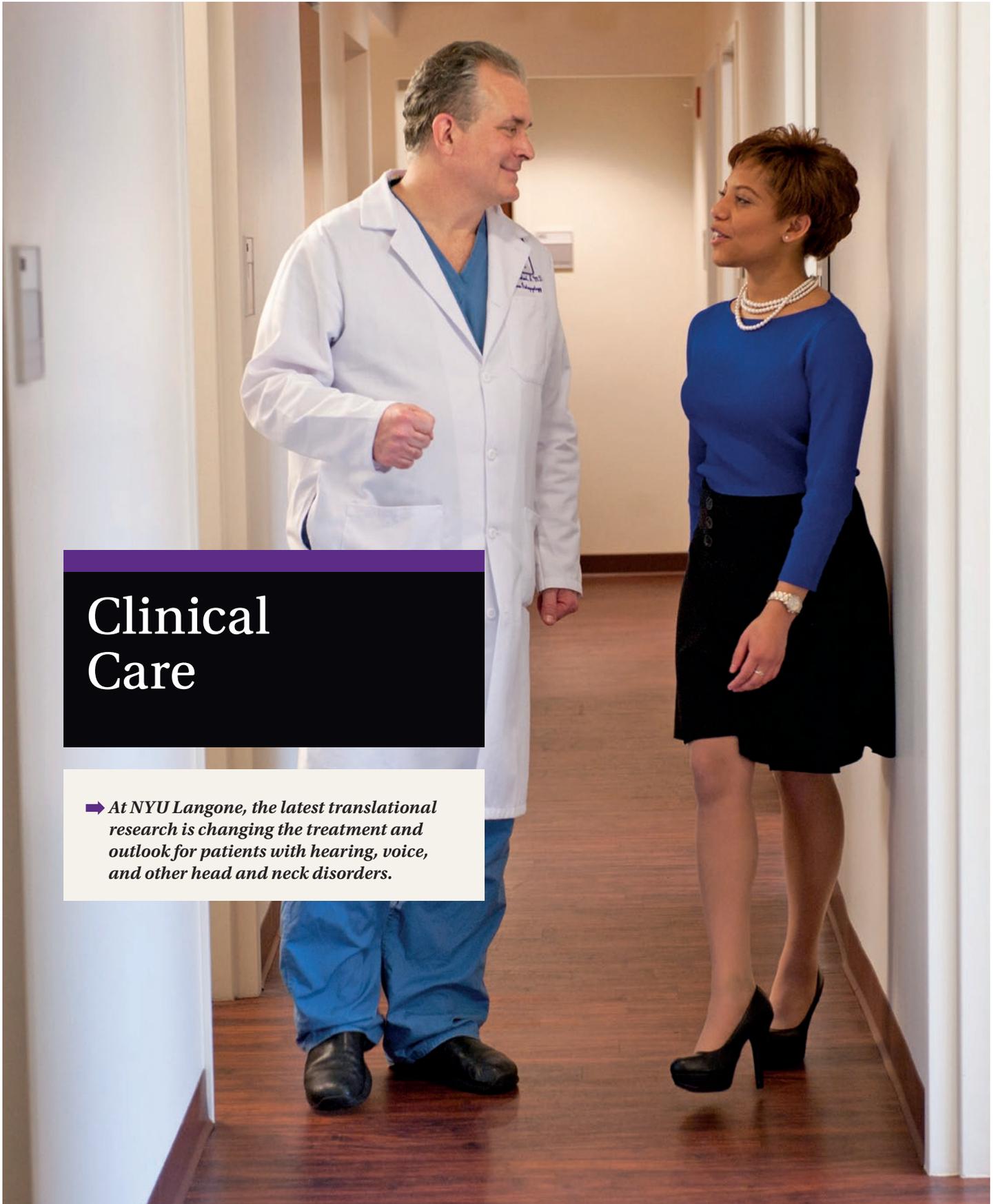
NEW & NOTEWORTHY

Conference Highlights

- J. Thomas Roland, Jr. MD and Susan B. Waltzman, PhD, are invited speakers at the 10th Asia Pacific Symposium on Cochlear Implants and Related Sciences in Beijing, China, April 30–May 3, 2015. Dr. Roland is also a keynote speaker at the upcoming Acoustic Neuroma Meeting in Shanghai, China, April 10–12, 2015
- The Division of Rhinology is co-directing the New York Advanced Rhinology and Sinus Surgery Update, May 15–16, 2015.
- Mario A. Svirsky, PhD, will be the keynote speaker at the 6th Iberoamerican Congress Conference on Cochlear Implants and Related Sciences in São Paulo, Brazil, May 21–23, 2015.
- Sean McMenomey, MD, is the course director for two of the largest resident temporal bone dissection training courses.
- J. Thomas Roland, Jr., MD, will be receiving a Presidential Citation award at the upcoming American Otolological Society Conference in Boston, MA, this April 2015.

Select Recent Conferences

- Eight members of the Department of Otolaryngology—Head and Neck Surgery presented as invited guest speakers or delivered study presentations at the 14th Symposium on Cochlear Implants in Children in Nashville, Tennessee, December 11–13, 2014.
- Alison Singleton, AuD, and Susan Waltzman, PhD, attended the 8th International Symposium on Objective Measures in Auditory Implants in Toronto, Canada, October 15–18, 2014, where Dr. Singleton won a Young Investigator Award for her poster “EABR Measures in the Pediatric Non-NF2 ABI Population.”
- Two members of the otolaryngology department delivered NYU Langone study presentations at the 13th International Conference on Cochlear Implants and Other Implantable Auditory Technologies in Munich, Germany, June 18–21, 2014.
- William H. Shapiro, AuD, delivered invited presentations on new trends in cochlear implant technology and auditory brainstem implants in children at the New York Eye and Ear Infirmary of Mount Sinai in New York, NY (February 2014), Option Schools in Buffalo, NY (May 2014), and St. John’s University in New York, NY (October 2014).
- Betsy Bromberg, MA, delivered a talk to local Veterans Affairs professionals on the hybrid cochlear implant, candidacy criteria for all types of cochlear implants, and new cochlear implant technology (July 2014).
- Max M. April, MD, hosted, in conjunction with Hofstra-North Shore LIJ School of Medicine in Hempstead, New York, the Seventh Annual New York City Pediatric Airway Symposium at NYU Langone Medical Center (October 30, 2014).
- Milan Amin, MD, delivered an invited keynote lecture, “Dynamic MRI for Swallowing,” at the European Laryngologic Society Meeting in Antalya, Turkey.
- Ryan C. Branski, PhD, and Milan Amin, MD, presented their research on “Concurrent oral human papilloma virus infection in patients with recurrent respiratory papillomatosis” at the ALA Annual Meeting in Las Vegas, NV. Their poster on “The Effect of Anticoagulation Therapy on Office-Based Procedures” won first place at the Fall Voice Meeting in San Antonio, TX.
- Ryan C. Branski, PhD, was an invited speaker on Voice Disorders at the Second International Voice Symposium held at NYU Steinhardt in New York, NY.



Clinical Care

➔ *At NYU Langone, the latest translational research is changing the treatment and outlook for patients with hearing, voice, and other head and neck disorders.*

CLINICAL CARE

Fitting and Optimizing Bimodal Cochlear Implants and Minimizing Frequency Mismatch

CREATING BETTER OPTIONS FOR THE HEARING IMPAIRED

Historically, the various areas of audiology have evolved on parallel tracks, with specialists focusing separately on hearing aids, diagnostics, or cochlear implants. But with the growing number of bimodal patients—those with a cochlear implant in one ear and a hearing aid in the other—that separation no longer makes sense. At NYU Langone, research, which includes a five-year, National Institutes of Health (NIH)–funded study, is being conducted on effective clinical management strategies for these bimodal patients.

“In 10 to 20 years, all audiologists will have to know how to fit both devices—and how to fit both in the same patient,” says Mario A. Svirsky, PhD, the Noel L. Cohen Professor of Hearing Science, vice chair of research in the Department of Otolaryngology—Head and Neck Surgery, and principal investigator of the NIH study. He continues, “A goal of our research is to provide guidance to clinicians on managing the fitting and follow-up care of these patients.”

Dr. Svirsky and Arlene C. Neuman, PhD, research associate professor in the Department of Otolaryngology—Head and Neck Surgery, a specialist in hearing aids, and co-principal investigator on the project, are developing data-based tools to help clinicians better coordinate the fitting of a hearing aid and a cochlear implant. Their goal is to create guidelines to aid clinicians in selecting the appropriate bandwidth and frequency allocation based on patients’ residual hearing, as well as guidelines for post-implant follow-up care.

“We still don’t know the mechanisms by which the brain integrates disparate acoustic and electrical information from each ear,” says Dr. Svirsky. “Some bimodal patients integrate it successfully, but others end up relying on whichever ear seems to work better.”

IMPLANTS MIX SIGNALS FOR ADULT PATIENTS

NYU Langone also pioneered the testing of new treatment options that integrate electrical and acoustical signaling, combining the functions of cochlear implants and hearing aids. The Medical Center’s Cochlear Implant Center, co-directed by Susan B. Waltzman, MD, the Marica F. Vilcek Professor of Otolaryngology, and J. Thomas Roland Jr., MD, the Mendik Foundation Professor of Otolaryngology, professor of neurosurgery, and chair of the Department of Otolaryngology—Head and Neck Surgery, was the lead investigational

center in a national clinical trial testing the effectiveness of the Nucleus® Hybrid™ L24 cochlear implant, which led to Food and Drug Administration (FDA) approval of the device in 2014. The device under trial was designed for adult patients with severe to profound sensorineural hearing loss in both ears who can still hear low-frequency sounds but do not benefit from conventional hearing aids.

MINIMIZING FREQUENCY MISMATCH

Another NIH-funded project led by Dr. Svirsky is aimed at minimizing frequency mismatches in postlingually hearing-impaired patients with cochlear implants. Postlingually hearing-impaired patients, or those who suffered hearing loss after age three, are capable of adapting to distorted input over time, but this process is often lengthy and sometimes incomplete, causing persistent problems with speech perception.

Dr. Svirsky’s team followed a group of recently impaired cochlear implant users and a group of experienced users for one year to measure their adaptation to frequency mismatch, complementing this measurement with a battery of speech perception, psychophysical, cognitive, and anatomical measurements. The results may help predict which patients are more likely to have trouble adapting to distortions and may help identify alternative frequency tables to minimize frequency mismatch.

“On the basic science level, we’re asking how adaptable the human brain is to understanding distorted input,” says Dr. Svirsky. “Then we want to apply that basic knowledge to practice and develop tools that might help clinicians select more appropriate fittings for their cochlear implant patients.”

Hearing experts at NYU Langone are developing data-based tools to help clinicians better coordinate the fitting of a hearing aid and a cochlear implant.

Cochlear Implant Studies Hint at the Brain's Plasticity

THE ABILITY TO LEARN AT ANY AGE

Cochlear implantation is most successful when performed on patients at a very young age, when the brain has a high degree of synaptic plasticity. But emerging research at NYU Langone's Cochlear Implant Center suggests that older children and teens with long-term deafness can also make significant progress with speech recognition.

"The research on neuroplasticity says you need to implant very early, but we're finding that prelingually deaf adolescents who were implanted after early childhood also do well," says Dr. Waltzman. "This suggests that the brain may be more plastic than we thought."

Dr. Waltzman's retrospective study on adolescents focused on patients with bilateral cochlear implants who experienced a gap—often of several years—between getting their first and second implants. These patients faced challenges associated with integrating a second implant later in life and synchronizing auditory signals from both ears.

"We tracked how these patients did on word and sentence recognition tests preoperatively and postoperatively," says Dr. Waltzman, who has submitted the data for publication. "The preliminary results are extremely promising."



IMPLANTS MAY PROMOTE REPAIR

The idea that cochlear implants and other prosthetic devices may themselves help restore plasticity to the brain is the subject of research by Robert C. Froemke, PhD, assistant professor of otolaryngology and physiology and neuroscience. Dr. Froemke has conducted research on animals that suggests that devices and training interventions have the potential to repair damaged brains and promote learning.

Dr. Froemke's findings have implications for deaf children with learning disabilities, which are much more common among individuals with significant hearing loss than they are in the general population. Currently, children with cochlear implants who are suspected of having additional challenges are seen at NYU Langone's Child Study Center, where they are evaluated and referred for appropriate educational placement and therapy. Dr. Waltzman plans to partner with the Child Study Center on research into whether diagnostic tests given to deaf children very early in life may be predictive of additional disabilities and thus facilitate earlier intervention.

"Learning disabilities often limit how much children can benefit from a cochlear implant," says Dr. Waltzman. "If we can identify these children at a very young age, we may be able to initiate therapy earlier."

COGNITIVE EFFECT OF COCHLEAR IMPLANTS IN THE ELDERLY

Looking at the other end of the age spectrum, Dr. Waltzman is also studying how cochlear implantation affects cognition in the elderly. Previous studies have shown that hearing loss is often accompanied by a decrease in cognition, raising the question of whether earlier intervention for hearing problems could delay the onset of dementia.

The project is following a group of elderly patients who received cochlear implants, comparing how they perform on cognitive tests given both at the time of implantation and one or two years later.

"Our findings will have implications for both cochlear implants and hearing aids," says Dr. Waltzman. "The hope is that by helping elderly patients in the early stages of hearing loss, we may help minimize or delay cognitive decline."

CLINICAL CARE



COCHLEAR IMPLANT CENTER HIGHLIGHTS

Trial Expands Auditory Brainstem Implant Target Patients

NYU Langone’s Cochlear Implant Center collaboratively pioneered auditory brainstem implantation (ABI) in adults and older children who are deaf as a result of a brain tumor associated with the genetic syndrome neurofibromatosis type 2 (NF2). It is one of four centers approved by the Food and Drug Administration (FDA) to perform and study ABI in children and young adults who do not have NF2. This new trial will enroll up to 20 patients ranging in age from 18 months to 22 years who were born without or with severely compromised auditory nerves, making them ineligible for cochlear implants. As of December 2014, six patients received implants.

NYU Langone’s Cochlear Implant Center is

1 of 4

centers with FDA approval to perform and study ABIs in deaf children

Does Human Growth Hormone Affect Cochlear Implant Performance?

A clinical capsule recently submitted for publication by researchers at the Cochlear Implant Center describes several cases involving children who were prescribed human growth hormone (HGH) for short stature and subsequently experienced a sharp decline in the performance of their cochlear implants. Conversely, performance was restored when HGH was discontinued. “We can’t draw conclusions from these data,” says Dr. Waltzman, “but they should alert parents and physicians to monitor children with cochlear implants who are taking this drug, because they might see this shift in performance.”

Patients prescribed human growth hormone may see a shift in performance of their cochlear implants.

Post-Market Study Follows Hybrid Cochlear Implant

Dr. Waltzman is leading a post-market approval study evaluating the safety and efficacy of the Nucleus® Hybrid™ L24 cochlear implant, a device that delivers acoustic and electric stimulation to adult patients with severe to profound sensorineural hearing loss in both ears. Dr. Roland was the principal investigator for the national clinical trial that led to FDA approval of this device in 2014. According to the results of studies involving 50 patients across 10 sites, use of the device led to improved speech recognition in both quiet and noisy environments.

A post-market approval study of the Nucleus® Hybrid™ L24 cochlear implant involves

50 patients

across 10 sites

Cochlear Implants Offer Best Start for Deaf Infants

Physicians in the Cochlear Implant Center have led the way in providing cochlear implants to deaf children under the age of one, giving them the best chance of successful speech and language development.

“The longer you wait to get a child implanted, the harder it is for them to catch up, if they ever do,” says Dr. Roland. “But if you implant at age six to nine months, these children don’t start out with a deficit and can reach the language results of normal-hearing peers.”

Over the past 13 years, almost 150 children under 1 year of age have received implants at NYU Langone. These patients have shown a low complication rate—similar to the rate seen in older patients—in data published by Drs. Roland and Waltzman.

The number of bimodal patients—those with a cochlear implant in one ear and a hearing aid in the other—continues to increase.

CLINICAL CARE

Voice Center a Leader in Office-Based Procedures

OFFICE PROCEDURES GIVE NEW VOICE TO PATIENTS

The Voice Center at NYU Langone is known for pioneering in-office vocal fold injection and laser treatments, which are safer and less costly than traditional operating room procedures. Recent research at the Voice Center also suggests that these procedures yield long-term benefits for patients.

In a retrospective study, the mean Voice Handicap Index (VHI)-10 of patients who underwent potassium titanyl phosphate (KTP) laser treatment at the Voice Center decreased from 19.7 to 9.7 at first follow-up and remained stable over the next 2 years. Patients also showed improvements in noise-to-harmonic ratio and speaking fundamental frequency, according to results published in 2014 in *The Laryngoscope*.

“These data suggest that after treatment, patients with significant disability preoperatively (VHI above 11) were found to have VHI-10 scores within the normal range,” the authors conclude. “Moreover, VHI-10 scores remained below 11 on the second postprocedure visit.”

Improvements in equipment over the past decade have fueled the growth of office-based procedures, according to Milan R. Amin, MD, associate professor of otolaryngology, chief of the Division of Laryngology, and director of the Voice Center. Dr. Amin is the senior author of the outcomes study.

“We can now pass lasers through flexible scopes,” he says. “With the advanced equipment and expertise available at our center, we can evaluate and treat patients on the same day—and they walk out of here with a voice.”

KTP lasers treat benign vocal fold lesions by selectively cutting off the blood supply to the lesions without damaging underlying vocal fold tissue. The pulsed action of the laser also minimizes heat-induced scarring.



Voice Center Director Milan R. Amin, MD, first described the thyrohyoid approach to percutaneous vocal fold injection augmentation, which helps surgeons access and visualize the larynx.

An earlier multi-institutional study co-written by Dr. Amin and Ryan C. Branski, PhD, associate professor of otolaryngology and associate director of the Voice Center, reported that more than 100 patients who underwent in-office KTP procedures experienced significant reduction in lesion size. The study, published in 2012 in the *Journal of Voice*, also reported improved mucosal wave and glottic closure in 90 percent of patients.

“Our data confirm that the KTP may, in the right hands, be used as an efficacious tool for patients with a variety of vocal fold pathology,” the study’s authors conclude. “This effect appears to persist for extended durations.”

Dr. Amin is well known for pioneering or perfecting some of the most commonly used in-office procedures now used by specialists around the world. He was the first to describe the thyrohyoid approach to percutaneous vocal fold injection augmentation (VFIA), which improved on earlier percutaneous techniques by providing better access to and visualization of the vocal folds, ensuring more precise placement of injectable material.

VFIA is used to treat glottal incompetence resulting from a variety of causes. Use of the procedure became more widespread in the 2000s, with the availability of better materials that do not require harvesting of the patient’s own tissue and that are easily injected through smaller-gauge needles. Although the original technique has since been refined, it was Dr. Amin who first conceived of a way to allow surgeons to see the tip of the needle as it enters the vocal fold.

90%

of patients who underwent in-office potassium titanyl phosphate (KTP) procedures had improved mucosal wave and glottic closure

VOICE CENTER HIGHLIGHTS

Testing the Effect of Steroids on Vocal Fold Lesions

Researchers at the Voice Center have launched a randomized, double-blinded, placebo-controlled trial to test the effectiveness of oral steroids as adjuvant therapy for patients with benign vocal fold lesions. Although steroids are commonly used to temporarily alleviate symptoms, there is no evidence that they provide any substantial benefit to patients, says Dr. Ryan C. Branski, PhD, associate professor of otolaryngology and associate director of the Voice Center. Funded by a grant from the American Academy of Otolaryngology—Head and Neck Surgery Foundation, the trial will enroll 40 patients who will receive either steroids or a placebo in addition to voice therapy. By tracking their progress, Dr. Branski hopes to provide the first empirical data on how steroid treatment affects outcomes.

Gene Therapy Research May Lead to New Treatments for Vocal Cord Scarring

Dr. Branski recently received a five-year, \$2.1 million National Institutes of Health (NIH) grant to investigate the use of gene therapy for vocal cord scarring. Dr. Branski's team is attempting to develop a drug and a targeted delivery system to interfere with the expression of Smad3, which encodes for a protein along the transforming growth factor signaling pathway and is associated with scarring after injury. By inhibiting the expression of Smad3, researchers hope to alter the trajectory of healing. "We don't have many effective treatments for healing vocal fold tissue after injury," says Dr. Branski. "Our goal is to create a therapeutic that can be delivered in the office and that will encourage the tissue to heal regeneratively."

The Voice Center at NYU Langone received a five-year, \$2.1 million National Institutes of Health grant to investigate the use of gene therapy for vocal cord scarring.

Defining and Treating Chronic Cough

With the help of a grant from The Fridolin Charitable Trust, Dr. Amin, and Dr. Branski are investigating the epidemiology of chronic cough and the outcome of pharmacologic management. Patients with chronic cough do not fit neatly into one disease category, and their cough is often misdiagnosed as related to allergies or to gastrointestinal issues. Drs. Amin and Branski developed a multidisciplinary diagnostic algorithm for patients with chronic cough involving gastroenterologists, pulmonologists, and otolaryngologists. "No one has put together a good clinical body of literature to direct treatment," says Dr. Branski. "We need to be able to categorize these patients and define their illness in order to give them appropriate therapies."

Researchers Examine World Trade Center Respiratory Symptoms

Dr. Amin is co-investigator of an NIH-funded study examining why a subgroup of survivors of the World Trade Center (WTC) 9/11 attacks experience persistent, uncontrolled lower respiratory symptoms despite aggressive therapy. Joan Reibman, MD, professor of medicine and environmental medicine, and medical director of the WTC Environmental Health Center, is the project's principal investigator. The researchers hypothesize that this group of survivors has a higher rate of abnormal airway physiology, airway inflammation and comorbid conditions compared to those with controlled symptoms. Knowing the mechanisms for uncontrolled symptoms has the potential to guide therapy and reduce the risks associated with prolonged use of inhaled corticosteroids and long-acting beta-agonists.

Dr. Amin and team are examining the root cause of persistent, uncontrolled lower respiratory symptoms in 9/11 survivors.

CLINICAL CARE

Partnerships Bring Basic Research into Clinical Practice

COOLING PROBE MAPS BRAIN'S SPEECH REGIONS DURING SURGERY

Collaborations between otolaryngologists and neuroscientists at NYU Langone are yielding new insight into the underlying mechanisms of speech and hearing. In one such partnership, a novel device developed by a neuroscientist has the potential to make brain surgery safer while illuminating how the brain controls the timing and quality of human speech.

Before operating on the brain, neurosurgeons typically use tiny electrical probes to identify regions of the cortex responsible for speech and language production, but the process can trigger seizures in some patients. To minimize that risk, neurosurgeons at the University of Iowa Health Center are testing the use of a cooling probe developed by Michael A. Long, PhD, assistant professor of otolaryngology and physiology and neuroscience.

Originally tested in songbirds, the probe allows surgeons to alternately cool different tiny sections of the brain's cortex while patients recite simple speech patterns, such as the days of the week. The process results in a map showing how different regions of the brain affect different aspects of speech production.

In patients undergoing brain surgery for intractable epilepsy, researchers discovered that cooling one section of the brain caused patients to speak more slowly, elongating their words, whereas cooling another region caused the patients' speech to become distorted. A team led by Dr. Long, with expert assistance from Mario A. Svirsky, PhD, the Noel L. Cohen Professor of Hearing Science and vice chair of research in the Department of Otolaryngology—Head and Neck Surgery, presented the preliminary results of the study at a recent annual meeting of the Society for Neuroscience.

The project is a collaborative effort, with Dr. Svirsky analyzing the acoustic content of patients' speech

and Tara McAllister Byun, PhD, assistant professor of communicative sciences and disorders at NYU Steinhardt School of Culture, Education, and Human Development, helping to establish a novel method for determining the patients' speech quality.

Dr. Svirsky is also working with neuroscientist Robert C. Froemke, PhD, assistant professor in the departments of otolaryngology and neuroscience and physiology, who studies the synaptic plasticity of the auditory cortex and its effect on speech and language processing. They are conducting a series of experiments using rats implanted with tiny cochlear implants to gain insight into how humans adapt to auditory devices, in effect analyzing actual learning.

UNIQUE DEVICE OFFERS NONINVASIVE TREATMENT FOR VOCAL CORD PARALYSIS

Robert F. Ward, MD, professor of otolaryngology and pediatrics and vice chair of clinical affairs, and Howard A. Riina, MD, professor of neurosurgery and radiology and vice chair of the Department of Neurosurgery, are seeking U.S. Food and Drug Administration approval for a first-of-its-kind novel laryngeal stent that could revolutionize treatment for vocal cord paralysis and impaired breathing due to disease or injury. They have received \$1.8 million in funding thus far.

Currently, patients with vocal cord immobility and/or tracheal stenosis must undergo invasive and potentially harmful procedures in order to restore their breathing. For example, inserting a tracheostomy tube often impairs swallowing and breathing and other treatments involve cutting away a portion of the vocal folds or the supporting cartilage to increase the airway opening. Balloon dilation is a less invasive alternative, but it treats symptoms only temporarily.

The new stent, called the Y-Lock Vocal Fold Lateralization System, is a self-expanding device that is implanted in the larynx. The stent, which has already been tested successfully in animals, exerts enough outward force on the larynx to expand the airway, allowing the patient to breathe and swallow.

"There is no other device like this," says Dr. Ward. "We hope this will allow patients to avoid tracheotomies or other procedures that are more invasive and destructive to the larynx."

A cooling probe developed by NYU Langone neuroscientist Michael A. Long, PhD, allows surgeons to alternately cool different tiny sections of the brain's cortex during surgery.



REVERSING POSTSURGICAL FACIAL PARALYSIS

An eight-hour operation, performed by J. Thomas Roland Jr., MD, the Mendik Foundation Professor of Otolaryngology, professor of neurosurgery, and chair of the Department of Otolaryngology—Head and Neck Surgery, and John G. Golfinos, MD, associate professor of neurosurgery and otolaryngology and chair of the Department of Neurosurgery, was by most measures a success. The surgeons had successfully dislodged a tumor compressing his brainstem behind the 64-year-old patient's right ear that was dangerously close to his brain stem, while leaving the facial nerve intact. However, the patient emerged with facial paralysis resulting from stretching of the nerve during surgery. When the patient's paralysis persisted after 12 months, Dr. Roland decided to perform a nerve graft using a technique he had pioneered at NYU Langone more than a decade earlier.

The procedure involves grafting the damaged facial nerve onto the nearby tongue or hypoglossal nerve, which acts as a power source. To prevent weakening or sacrificing the tongue nerve, the facial nerve is loosened from around a salivary gland near the jaw, extending the facial nerve by three to five centimeters using only one anastomosis so that the two nerves can be grafted together without tension.

Dr. Roland collaborated on the case with facial plastic surgeon W. Matthew White, MD, assistant professor of otolaryngology. To keep both sides of the patient's face in balance, Dr. White implanted a gold weight on the patient's right eyelid to keep it closed, lifted the eyebrow, and pulled a tendon from the upper jaw to the edge of the mouth. Dr. Roland then moved the intra-temporal facial nerve down to the hypoglossal nerve. Using tiny sutures viewed through a microscope, he grafted the facial nerve onto half of the tongue nerve. To be most effective, the graft must be located below the ansa hypoglossi, a junction of nerves near the jugular vein, which connects nerves in the tongue and the neck.

The operation successfully restored muscle innervation and movement to the patient's face. He is expected to regain mimetic movement from his eye to his chin over the next year as the nerve fully heals.

CLINICAL CARE

Neurofibromatosis Center at NYU Langone Provides Leading-Edge Care

A TEAM APPROACH TO RARE HEAD AND NECK TUMORS

Patients with neurofibromatosis (NF) often develop benign and malignant tumors in the head and neck area that may increasingly interfere with their ability to function—and that may eventually become life-threatening. NYU Langone otolaryngologists, head and neck surgeons, neurosurgeons, and reconstructive plastic surgeons often combine forces to work together to remove these tumors and to provide optimal postsurgical reconstruction and rehabilitation.

“Many patients with NF form tumors that become compressive around the trachea and esophagus and at the junction of the neck and chest, where there is a bony ring formed by the spine, the first ribs, the clavicles, and the sternum,” says Mark D. DeLacure, MD, the George E. Hall Associate Professor of Head and Neck Cancer Research, with joint appointments in the departments of Otolaryngology—head and neck surgery, neurosurgery, and plastic surgery. “These tumors can reach the size of a football, pushing against, and compressing, the windpipe and esophagus.”

Because these tumors grow slowly over years, most patients acclimate to the limitations they gradually place on breathing and swallowing, according to Dr. DeLacure, a world leader in treating NF’s head and neck manifestations. Often, patients do not realize just how symptomatic they were until after the tumor is removed.

Dr. DeLacure recently removed two large tumors from a 17-year-old with NF: one in the cervicothoracic inlet that was compressing the esophagus and the trachea and another that was threatening his right arm. The thoracic tumor, about the size of an eggplant, was expanding against the rigid bony circle formed by the clavicle, sternum, and spinal bones at the base of the patient’s neck, making it increasingly difficult for him to breathe and swallow.

“Removing the tumors was exceptionally challenging,” says Dr. DeLacure. Risks included damaging nerves affecting the vocal cords and diaphragm and residual paralysis, numbness, and loss of function of the right (dominant) arm. However, both tumor operations went smoothly, allowing the patient to eventually resume normal activities, including attending college.

“For patients who suffer facial nerve dysfunction after tumor removal, we use microsurgery to transplant muscle from the leg or neck to the face—ultimately restoring the patient’s ability to smile.”

In addition to this type of surgery for NF patients, NYU Langone also specializes in reconstructive neurosurgery and facial nerve rehabilitation for patients with rare or advanced-stage tumors. Procedures may involve transferring muscle from another part of a patient’s body to the site of the tumor defect, or using microsurgical free tissue transfer techniques to transplant muscle fiber or nerve tissue into a defect, missing the functional end organ.

“For patients who suffer facial nerve dysfunction after tumor removal, we use microsurgery to transplant muscle from the leg or neck to the face—ultimately restoring the patient’s ability to smile,” says Dr. DeLacure.

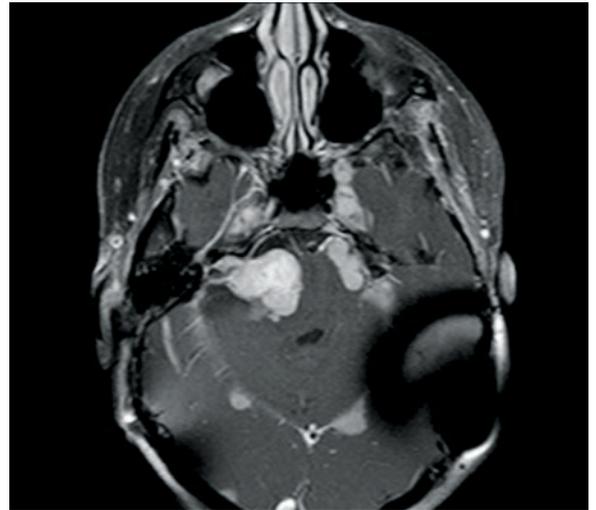
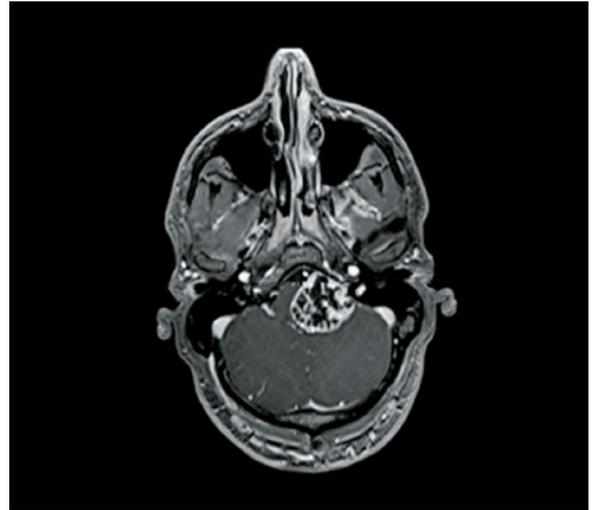
CLINICAL TRIALS TEST NEW THERAPIES FOR NF1 AND NF2 TUMORS

As one of 13 members of the national NF Clinical Trials Consortium, the Comprehensive Neurofibromatosis Center at NYU Langone is enrolling patients in six clinical trials testing new therapies for NF types 1 and 2.

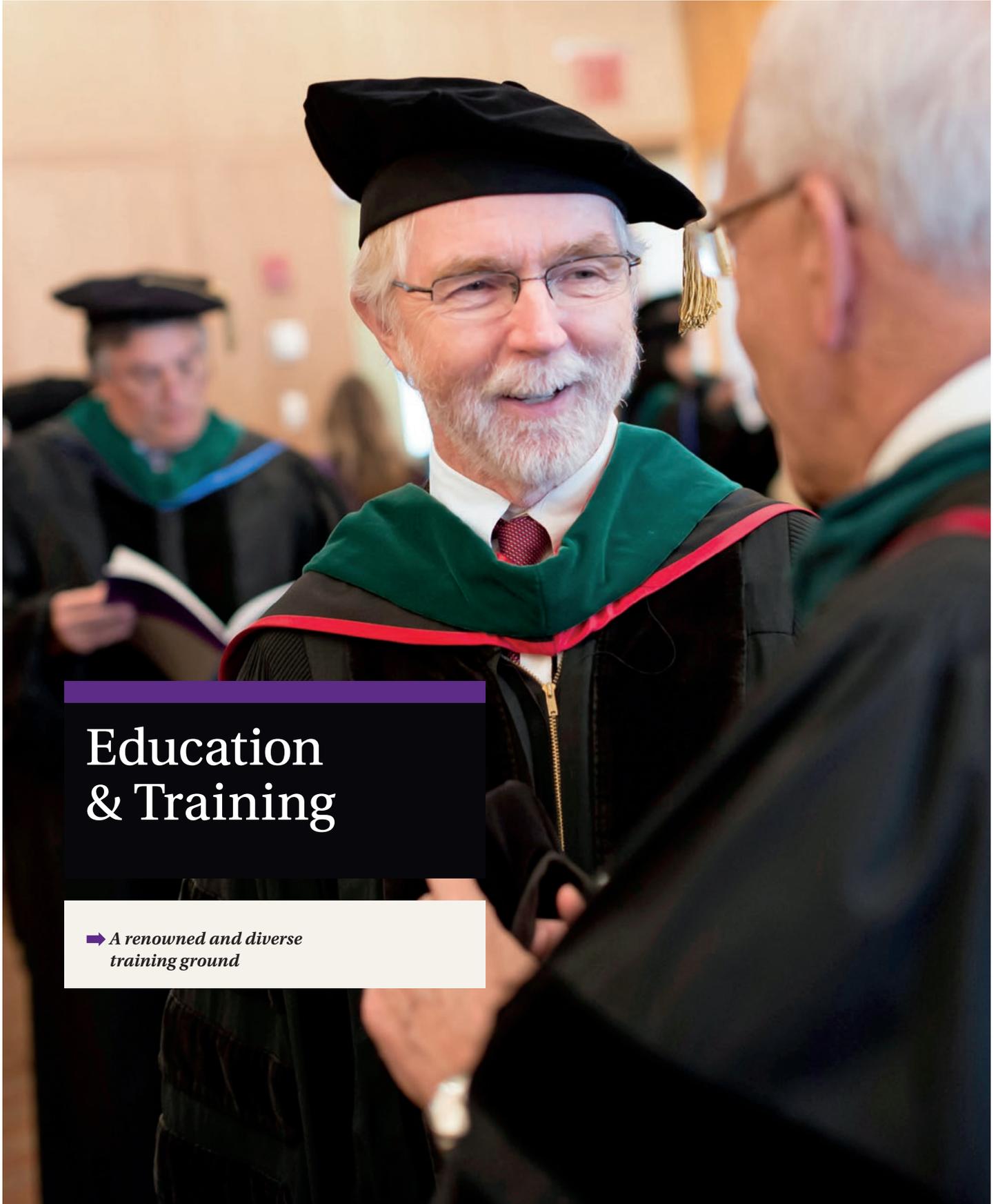
One phase 0 (pharmacokinetic and pharmacodynamic) study is testing the effectiveness of the small-molecule inhibitor lapatinib in patients with NF2-related vestibular schwannomas (VS), benign tumors that grow on the auditory nerves and that can cause hearing loss. Lapatinib has the potential to shrink or stop the growth of these tumors, presenting a safer alternative to surgery and radiation.

For the phase 0 trial, patients scheduled for removal of either a single sporadic VS or an NF2-related VS take lapatinib for 15 consecutive days prior to surgery. After the tumor is removed, the tissue is assessed to measure both concentration and activity of the study medication. The drug has already shown promise in a phase II trial with 21 patients. More than 25 percent of evaluable patients in that trial experienced significant tumor shrinkage, and other patients' tumors stopped growing. Other ongoing trials at the center include:

- Phase 0 study of the use of RAD001 (everolimus) in VS and meningiomas. Patients receive the drug for 10 days prior to surgery. After tumor removal, the effectiveness of the drug in slowing tumor growth is assessed.
- Phase II study of bevacizumab (an anticancer drug) for children and adolescents with NF2 and progressive VS. Patients are treated for 24 weeks to assess the drug's effect on their hearing response.
- Phase II study of axitinib in patients with NF2 and progressive VS. Axitinib, which is approved for other types of cancer, is in the same class of drugs as bevacizumab, which has been shown to shrink tumors in some NF2 patients.
- Phase II open-label trial of the MEK inhibitor PD-0325901 for adolescents and adults with NF1. This drug may have potential for shrinking tumors in patients with NF1 and plexiform neurofibromas.
- Phase II study of cabozantinib for plexiform neurofibromas in adolescent and adult patients with NF1. These slow-growing tumors, which are located near nerves, blood vessels, and the airway, typically do not respond well to chemotherapy, radiation, and surgery. Cabozantinib is thought to block pathways involved in tumor growth and the blood vessels that supply tumors.



EDUCATION & TRAINING



Education & Training

➔ *A renowned and diverse
training ground*

Residency

Otolaryngology residents undergo a rigorous five-year program that begins with one year of general surgery, neurosurgery, anesthesiology, plastic surgery and emergency medicine rotations and is followed by four years of training in otolaryngology. During this time the residents are exposed to all elements of the specialty and participate in minor to very complex procedures.

Graduates of our residency program have been selected to pursue fellowships at leading institutions across the country:

2013 GRADS

- Laryngology—University of Pittsburgh Medical Center (UPMC)
- Neurotology—UT Southwestern Medical Center
- Facial Plastics—UCSF Medical Center

2014 GRADS

- Neurotology—NYU Langone Medical Center
- Facial Plastics—NYU Langone Medical Center
- Laryngology—UCLA Health
- Head and Neck—Oregon Health and Science University (OHSU)

2015 GRADS

- Head and Neck—University of Pittsburgh Medical Center (UPMC)
- Rhinology—University of Pittsburgh Medical Center (UPMC)
- Facial Plastics—The University of Illinois at Chicago Medical Center
- Facial Plastics—University of Miami Health System

Fellowships

NYU Langone offers four one- and two-year fellowships to graduates of accredited otolaryngology residency programs. Areas of focus are:

- Laryngology
- Otology/Neurotology
- Facial Plastic and Reconstructive Surgery
- Pediatric Otolaryngology

Surgical Skills

Renovations were recently completed on a new state-of-the-art surgical skills training lab with 13 stations.

Clinical Training Sites

Residents rotate through four hospital systems, all located in close geographic proximity but spanning the municipal, private, and federal sectors. Residents and fellows partake in a broad and varied clinical experience treating the diverse and unique patient populations within:

- NYU Langone Medical Center’s Tisch Hospital
- Bellevue Hospital Center
- Manhattan VA Hospital (VA NY Harbor Healthcare System)
- Lenox Hill Hospital

The weekly didactic Head and Neck Tumor Conference is the major teaching vehicle of the head and neck service. This multidisciplinary conference includes clinicians from Otolaryngology, Surgical Pathology, Speech and Language Pathology, Oral and maxillofacial surgery, radiation oncology, medical oncology, plastic surgery, general surgery, and rehabilitation medicine. Additionally, the two year lecture education cycle provides an exceptional learning process often with world renowned invited speakers.

new
fellowship

pediatric otolaryngology
fellowship will launch in 2015



SELECT PUBLICATIONS

- Amin MR, Achlatis S, Lazarus CL, Branski RC, Storey P, Praminik B, Fang Y, Sodickson DK. Dynamic magnetic resonance imaging of the pharynx during deglutition. *Ann Otol Rhinol Laryngol*. 2013;122(3):145-150.
- Aronoff JM, Landsberger DM. The development of a modified spectral ripple test. *J Acoust Soc Am*. 2013;134(2):EL217-EL222.
- Carcea I, Froemke RC. Cortical plasticity, excitatory-inhibitory balance, and sensory perception. *Prog Brain Res*. 2013;207:65-90.
- Carey B, Sulica L, Wu A, Branski R. A novel electrodiagnostic assessment of the laryngeal closure reflex. *Muscle Nerve*. 2013;47(3):432-436.
- Cosetti MK, Friedmann DR, Zhu BZ, Heman-Ackah SE, Fang Y, Keller RG, Shapiro WH, Roland JT Jr, Waltzman SB. The effects of residual hearing in traditional cochlear implant candidates after implantation with a conventional electrode. *Otol Neurotol*. 2013;34(3):516-521.
- Cosetti MK, Waltzman SB. Outcomes in cochlear implantation: variables affecting performance in adults and children. *Otolaryngol Clin North Am*. 2012;45(1):155-171.
- Fitzgerald MB, Green JE, Fang Y, Waltzman SB. Factors influencing consistent device use in pediatric recipients of bilateral cochlear implants. *Cochlear Implants Int*. 2013;14(5):257-265.
- Fitzgerald MB, Sagi E, Morbiwala TA, Tan CT, Svirsky MA. Feasibility of real-time selection of frequency tables in an acoustic simulation of a cochlear implant. *Ear Hear*. 2013;34(6):763-772.
- Froemke RC, Carcea I, Barker AJ, Yuan K, Seybold BA, Martins AR, Zaika N, Bernstein H, Wachs M, Levis PA, Polley DB, Merzenich MM, Schreiner CE. Long-term modification of cortical synapses improves sensory perception. *Nat Neurosci*. 2013;16(1):79-88.
- Gehling D, Sridharan S, Fritz M, Friedmann DR, Fang Y, Amin MR, Branski RC. Backstage at Broadway: a demographic study. *J Voice*. 2014;28(3):311-315.
- Heman-Ackah SE, Roland JT Jr, Waltzman SB. Cochlear implantation in late childhood and adolescence: is there such a thing as 'too late'? *Expert Rev Med Devices*. 2012;9(3):201-204.
- Karajannis M, Legault G, Hagiwara M, Giancotti FG, Filatov A, Derman A, Hochman T, Goldberg JD, Vega E, Wisoff JH, Golfinos JG, Merkelson A, Roland JT Jr, Allen JC. Phase II study of everolimus in children and adults with neurofibromatosis type 2 and progressive vestibular schwannomas. *Neuro Oncol*. 2014;16:292-297.
- Landsberger DM, Mertens G, Punte AK, Van De Heyning P. Perceptual changes in place of stimulation with long cochlear implant electrode arrays. *J Acoust Soc Am*. 2014;135(2):EL75-EL81.
- Lazarus CL, Husaini H, Falciglia D, DeLacure M, Branski RC, Kraus D, Lee N, Ho M, Ganz C, Smith B, Sanfilippo N. Effects of exercise on swallowing and tongue strength in patients with oral and oropharyngeal cancer treated with primary radiotherapy with or without chemotherapy. *Int J Oral Maxillofac Surg*. 2014;43(5):523-530.
- Lieberman SM. Anatomical landmarks in revision sinus surgery and advanced nasal polyposis. *Operat Tech Otolaryngol Head Neck Surg*. 2014 June 2014;25(2):149-155.
- Lieberman SM, Chen S, Jethanamest D, Casiano RR. Spontaneous CSF rhinorrhea: Prevalence of multiple simultaneous skull base defects. *Am J Rhinol Allergy*. 2015 Jan;29(1):77-81.
- Neuman AC, Svirsky MA. Effect of hearing aid bandwidth on speech recognition performance of listeners using a cochlear implant and contralateral hearing aid (bimodal hearing). *Ear Hear*. 2013;34(5):553-561.
- O TM, Rickert SM, Diallo AM, Scheuermann-Poley C, Otokiti A, Hong M, Chung HY, Waner M. Lymphatic malformations of the airway. *Otolaryngol Head Neck Surg*. 2013;149(1):156-160.
- Padilla M, Landsberger DM. Loudness summation using focused and unfocused electrical stimulation. *J Acoust Soc Am*. 2014;135(2):EL102-EL108.

- Paul BC, Chen S, Sridharan S, Fang Y, Amin MR, Branski RC. Diagnostic accuracy of history, laryngoscopy, and stroboscopy. *Laryngoscope*. 2013;123(1):215-219.
- Paul BC, Rafii BY, Gandonu S, Bing R, Born H, Amin MR, Branski RC. Smad3: an emerging target for vocal fold fibrosis. *Laryngoscope*. 2014;124(10):2327-2331.
- Persky M, Fang Y, Myssiorek D. Relationship of the recurrent laryngeal nerve to the superior parathyroid gland during thyroidectomy. *J Laryngol Otol*. 2014;128(4):368-371.
- Pollack AZ, Ward RF, DeRowe A, April MM. Iatrogenic velopharyngeal insufficiency caused by neonatal nasogastric feeding tube. *Int J Pediatr Otorhinolaryngol*. 2014 Aug;78(8):1410-1412.
- Ruiz R, Jeswani S, Andrews K, Rafii B, Paul BC, Branski RC, Amin MR. Hoarseness and laryngopharyngeal reflux: A survey of primary care physician practice patterns. *JAMA Otolaryngol Head Neck Surg*. 2014;140(3):192-196.
- Saoji AA, Landsberger DM, Padilla M, Litvak LM. Masking patterns for monopolar and phantom electrode stimulation in cochlear implants. *Hear Res*. 2013;298:109-116.
- Schmidt BL. The neurobiology of cancer pain. *Neuroscientist*. 2014;20(5):546-562.
- Schmidt BL, Kuczynski J, Bhattacharya A, Huey B, Corby PM, Queiroz EL, Nightingale K, Kerr AR, DeLacure MD, Veeramachaneni R, Olshen AB, Albertson DG. Changes in abundance of oral microbiota associated with oral cancer. *PLoS ONE*. 2014;9(6):e98741.
- Sheu M, Sridharan S, Paul B, Mallur P, Gandonu S, Bing R, Zhou H, Branski RC, Amin MR. The utility of the potassium titanyl phosphate laser in modulating vocal fold scar in a rat model. *Laryngoscope*. 2013;123(9):2189-2194.
- Siegel B, Bent JP, Ward RF. Endotracheal nitinol stents: lessons from the learning curve. *Otolaryngol Head Neck Surg*. 2013;148(4):671-677.
- Smalt CJ, Gonzalez-Castillo J, Talavage TM, Pisoni DB, Svirsky MA. Neural correlates of adaptation in freely-moving normal hearing subjects under cochlear implant acoustic simulations. *Neuroimage*. 2013;82:500-509.
- Sridharan S, Achlatis S, Ruiz R, Jeswani S, Fang Y, Branski RC, Amin MR. Patient-based outcomes of in-office KTP ablation of vocal fold polyps. *Laryngoscope*. 2014;124(5):1176-1179.
- Srinivasan AG, Padilla M, Shannon RV, Landsberger DM. Improving speech perception in noise with current focusing in cochlear implant users. *Hear Res*. 2013;299:29-36.
- Stucken EZ, Grunstein E, Haddad J Jr, Modi VK, Waldman EH, Ward RF, Stewart MG, April MM. Factors contributing to cost in partial versus total tonsillectomy. *Laryngoscope*. 2013;123(11):2868-2872.
- Sulica L, Carey B, Branski RC. A novel technique for clinical assessment of laryngeal nerve conduction: normal and abnormal results. *Laryngoscope*. 2013;123(9):2202-2208.
- Svrakic M, Rafii B, Roland JT Jr. Cochlear implantation in the setting of cochlear ossification as sequela of malarial meningitis. [Published online December 4, 2014] *Otol Neurotol*.
- Tan CT, Svirsky M, Anwar A, Kumar S, Caessens B, Carter P, Treaba C, Roland JT Jr. Real-time measurement of electrode impedance during intracochlear electrode insertion. *Laryngoscope*. 2013;123(4):1028-1032.
- Watanabe H, Velmurugan J, Mirkin MV, Svirsky MA, Lalwani AK, Llinas RR. Scanning electrochemical microscopy as a novel proximity sensor for atraumatic cochlear implant insertion. *IEEE Trans Biomed Eng*. 2014;61(6):1822-1832.
- Wei C, Sirikanjanapong S, Lieberman S, Delacure M, Martiniuk F, Levis W, Wang BY. Primary mucosal melanoma arising from the eustachian tube with CTLA-4, IL-17A, IL-17C, and IL-17E upregulation. *Ear Nose Throat J*. 2013 Jan;92(1):36-40.
- Zhou L, Friedmann DR, Treaba C, Peng R, Roland JT Jr. Does cochleostomy location influence electrode trajectory and intracochlear trauma? *Cochlear Implants Int*. 2014;15 (suppl 1):S8-S10.

LOCATIONS

(as of December 2014)

1
Voice Center at NYU Langone
345 East 37th Street
Suite 306
New York, NY

Rhinology at NYU Langone
345 East 37th Street
Suite 306
New York, NY

2
Head and Neck Center
at Perlmutter Cancer Center
160 East 34th Street
Seventh Floor
New York, NY

3
Ambulatory Care Center
240 East 38th Street
14th Floor
New York, NY

NYU Langone Facial Plastic
and Reconstructive Surgery
240 East 38th Street
14th Floor
New York, NY

4
NYU Langone Otolaryngology
and Audiology at Long Island
173 Old Froehlich Farm
Boulevard
Woodbury, NY

5
NYU Langone Otolaryngology,
Neurotology, and Skull
Base Surgery
550 First Avenue
Suite 7Q
New York, NY

6
Cochlear Implant Center
at NYU Langone
660 First Avenue
Seventh Floor
New York, NY

Select services are available
on-site at the New York School
for the Deaf in White Plains, NY,
and at 173 Old Froehlich Farm
Boulevard in Woodbury, NY.

7
Neurofibromatosis Center
at NYU Langone
160 East 32nd Street
New York, NY

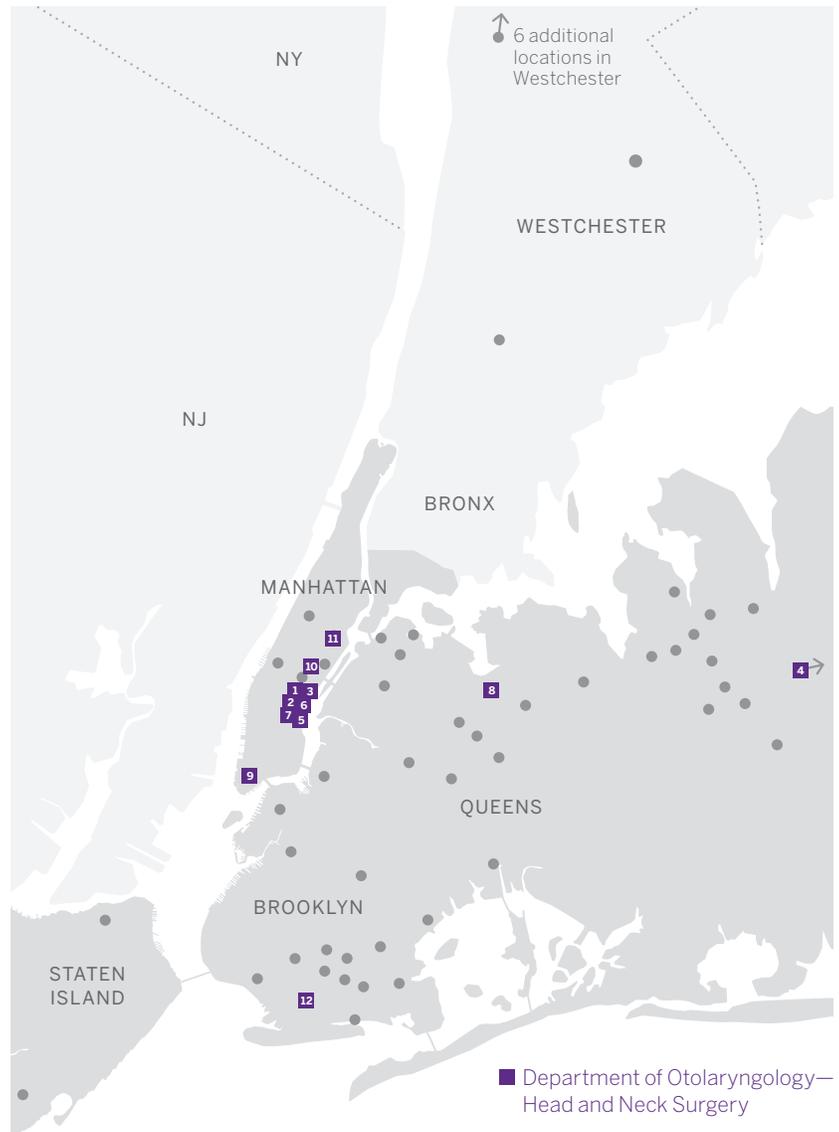
8
NYU Langone
at Columbus Medical
97-85 Queens Boulevard
Rego Park, NY

9
NYU Langone
at Trinity Center
111 Broadway, 2nd Floor
New York, NY

10
NYU Langone Preston Robert
Tisch Center for Men's Health
555 Madison Avenue
Second Floor
New York, NY

11
Joan H. Tisch Center
for Women's Health
207 East 84th Street
New York, NY

12
NYU Langone Levit
Medical Arts Pavilion
1220 Avenue P
Brooklyn, NY



CONTACT INFORMATION

J. Thomas Roland Jr., MD

Chair, Department of Otolaryngology—Head and Neck Surgery

Mendik Foundation Professor of Otolaryngology

550 First Avenue – NBV 5E5
New York, NY 10016
212.263.7338

J.Thomas.RolandJr@nyumc.org

For more information about our expert physicians, visit nyulmc.org

FACULTY

J. THOMAS ROLAND JR, MD

Mendik Foundation Professor of Otolaryngology; Co-Director, Cochlear Implant Center at NYU Langone; Professor of Neurosurgery; Chair of the Department of Otolaryngology—Head and Neck Surgery

ALLERGY

RONIT HERZONG, MD

Clinical Associate Professor of Otolaryngology and Pediatrics; Director, Allergy and Immunology

FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY

JUDY WASHINGTON LEE, MD

Assistant Professor of Otolaryngology

PHILIP MILLER, MD

Assistant Professor of Otolaryngology; Program Director, Facial Plastic Reconstructive Surgery Fellowship

W. MATTHEW WHITE, MD

Assistant Professor of Otolaryngology; Division Chief, Facial Plastic and Reconstructive Surgery

GENERAL OTOLARYNGOLOGY AND SLEEP SURGERY

DAVID KAUFMAN, MD

Associate Professor of Otolaryngology

STEPHEN G. ROTHSTEIN, MD

Associate Professor of Otolaryngology

KENNETH L. SCHNEIDER, MD

Associate Professor of Otolaryngology; Division Chief, General/Sleep Otolaryngology

ERICH P. VOIGT, MD

Associate Professor of Otolaryngology

GERALD WEST, DO

Clinical Assistant Professor of Otolaryngology

HEAD AND NECK SURGERY AND ONCOLOGY

MARK D. DELACURE, MD

George E. Hall Associate Professor of Head and Neck Cancer Research; Professor of Otolaryngology, Neurosurgery, and Plastic Surgery; Division Chief, Head and Neck Surgery

BABAK GIVI, MD, FACS

Clinical Assistant Professor of Otolaryngology

ADAM S. JACOBSON, MD

Associate Professor of Otolaryngology

DAVID MYSSIOREK, MD

Professor of Otolaryngology

MARK S. PERSKY, MD

Professor of Otolaryngology; Director, Head and Neck Center

TUYET-PHUONG TRAN, MD

Clinical Assistant Professor of Otolaryngology; Program Director, Bellevue Hospital Center

COCHLEAR IMPLANT CENTER, OTOLOGY, NEUROTOLOGY, AND SKULL BASE SURGERY

PAUL E. HAMMERSCHLAG, MD

Clinical Associate Professor of Otolaryngology

DANIEL JETHANAMEST, MD

Assistant Professor of Otolaryngology

SEAN O. MCMENOMEY, MD

Professor of Otolaryngology and Neurosurgery; Vice Chair of Practice Operations; Division Chief, Neurotology/Otology; Program Director, Neurotology Fellowship

J. THOMAS ROLAND JR, MD

Mendik Foundation Professor of Otolaryngology; Professor of Neurosurgery; Chair of Department of Otolaryngology—Head and Neck Surgery; Co-Director, Cochlear Implant Center at NYU Langone

WILLIAM H. SHAPIRO, AuD

Lester S. Miller Jr. & Kathleen V. Miller Clinical Assistant Professor of Hearing Health

SUSAN B. WALTZMAN, PhD

Marica F. Vilcek Professor of Otolaryngology; Co-Director, Cochlear Implant Center at NYU Langone

PEDIATRIC OTOLARYNGOLOGY

MAX M. APRIL, MD

Professor of Otolaryngology and Pediatrics; Director, Pediatric Otolaryngology Fellowship Program

SCOTT M. RICKERT, MD

Assistant Professor of Otolaryngology, Pediatrics, and Plastic Surgery

ROBERT F. WARD, MD

Professor of Otolaryngology and Pediatrics; Vice Chair of Clinical Affairs; Division Chief, Pediatric Otolaryngology

RESEARCH

MARIO A. SVIRSKY, PhD

Noel L. Cohen Professor of Hearing Science; Vice Chair of Research

MAHAN AZADPOUR, PhD

Adjunct Professor of Otolaryngology

ROBERT FROEMKE, PhD

Assistant Professor of Otolaryngology and Neuroscience & Physiology

DAVID M. LANDSBERGER, PhD

Assistant Professor of Otolaryngology

MICHAEL A. LONG, PhD

Assistant Professor of Otolaryngology and Neuroscience & Physiology

ARLENE C. NEUMAN, PhD

Research Associate Professor of Otolaryngology

DAVID SCHOPPIK, PhD

Assistant Professor of Otolaryngology and Neuroscience & Physiology

ELAD SAGI, PhD

Research Assistant Professor of Otolaryngology

CHIN-TUAN TAN, PhD

Assistant Professor of Otolaryngology

RHINOLOGY

JOSEPH B. JACOBS, MD

Professor of Otolaryngology

RICHARD A. LEBOWITZ, MD

Associate Professor of Otolaryngology; Division Chief, Rhinology; Vice Chair of Academic Affairs; Program Director, Otolaryngology Residency Program

SETH M. LIEBERMAN, MD

Assistant Professor of Otolaryngology; Associate Director, Otolaryngology Residency Program

VOICE CENTER

MILAN R. AMIN, MD

Associate Professor of Otolaryngology; Director, Voice Center at NYU Langone; Division Chief, Laryngology; Program Director, Laryngology Fellowship

RYAN C. BRANSKI, PhD

Associate Professor of Otolaryngology; Associate Director, Voice Center at NYU Langone

AUDIOLOGY/SPEECH LANGUAGE PATHOLOGY

MATINA BALOU, PhD, CCC-SLP, BCS-S

ERIN BEAN, AuD

GAIL BISCOW, MA

BETSY BROMBERG, MA

KAITLYN COSCIONE, AuD

ROSEMARIE DROUS, MeD

CATHERINE FLYNN, AuD

NANCY J. GELLER, MA, CCC-SLP

SHIRLEY GHERSON, MA, CCC-SLP

JANET GREEN, AuD

LAUREL MAHONEY, AuD

JACQUELINE MOJICA, MS, CCC-SLP

MICHELLE NEIDLEMAN, AuD

IRINA OZERSKY, AuD

CARIE PAGE, AuD

WILLIAM H. SHAPIRO, AuD

THERESA SHAW, AuD

ALISON SINGLETON, AuD

LEADERSHIP

NEW YORK UNIVERSITY

MARTIN LIPTON, Esq.
Chair, Board of Trustees

JOHN SEXTON
President

ROBERT BERNE, MBA, PhD
Executive Vice President for Health

NYU LANGONE MEDICAL CENTER

KENNETH G. LANGONE
Chair, Board of Trustees

ROBERT I. GROSSMAN, MD
Saul J. Farber Dean and
Chief Executive Officer

STEVEN B. ABRAMSON, MD
Senior Vice President and Vice Dean
for Education, Faculty and Academic Affairs

DAFNA BAR-SAGI, PhD
Senior Vice President and Vice Dean
for Science, Chief Scientific Officer

BERNARD A. BIRNBAUM, MD
Senior Vice President and Vice Dean,
Chief of Hospital Operations

ANDREW W. BROTMAN, MD
Senior Vice President and Vice Dean
for Clinical Affairs and Strategy,
Chief Clinical Officer

MICHAEL T. BURKE
Senior Vice President and Vice Dean,
Corporate Chief Financial Officer

RICHARD DONOGHUE
Senior Vice President for Strategy,
Planning and Business Development

ANNETTE JOHNSON, JD, PhD
Senior Vice President and Vice Dean,
General Counsel

GRACE Y. KO
Senior Vice President for
Development and Alumni Affairs

KATHY LEWIS
Senior Vice President for
Communications and Marketing

JOSEPH LHOTA
Senior Vice President and
Vice Dean, Chief of Staff

VICKI MATCH SUNA, AIA
Senior Vice President and Vice Dean
for Real Estate Development and Facilities

NADER MHERABI
Senior Vice President and Vice Dean,
Chief Information Officer

NANCY SANCHEZ
Senior Vice President and Vice Dean
for Human Resources and Organizational
Development and Learning

NYU LANGONE MEDICAL CENTER

*by the numbers**

1,069
Total Number of Beds

1,408
Full-Time Faculty

4,000+
Publications

650
MD Candidates

77
Operating Rooms

1,047
Part-Time Faculty

550,000
Square Feet of Research Space

70
MD/PhD Candidates

35,666
Patient Admissions

2,500+
Voluntary Faculty

\$245M
NIH Funding (in millions)

252
PhD Candidates

1,061,552
Hospital-Based Outpatient Visits

120
Endowed Professorships

\$285M
Total Grant Funding (in millions)

415
Postdoctoral Fellows

5,422
Births

2,515
Physicians

2,053
Inventions

1,155
Residents and Fellows

2,000,000
Faculty Group Practice
Office Visits

2,953
Registered and Advanced
Practice Nurses

936
US Patents Issued

550+
Allied Health Professionals

475
US Patents Licensed

*Numbers represent FY14 (Sept 2013–Aug 2014); inventions/patents are cumulative through Aug 31, 2014

Design: Ideas On Purpose, www.ideasonpurpose.com

Produced by: Office of Communications and Marketing, NYU Langone Medical Center



NYU Langone Medical Center
550 First Avenue, New York, NY 10016

nyulmc.org