Building a World-Class Head and Neck Cancer Program

International Commission on Hearing Loss Draws on Duke Expertise

Department Status Accompanied by Major Growth in HNS&CS Research Programs
Welcome to the fourth annual issue of Connections, and the inaugural issue from the newly formed Department of Head and Neck Surgery & Communication Sciences (HNS&CS).

As a division, otolaryngology has a long-standing history at Duke, tracing back to 1929 when Watt W. Eagle accompanied J. Deryl Hart, first Chair of the Department of Surgery, from Johns Hopkins to begin the surgical program at Duke. In the 90 years since, the division has gained national prominence through the delivery of high-quality patient care, the development of a robust education program with residency and fellowships, and the dedication of faculty members to research in global health, oncology, hearing, speech, and other specialties. With the elevation of the division to department status within Duke’s School of Medicine in July 2019, the missions and vision of HNS&CS have grown with us as we strive to offer even greater contributions to human health.

The department’s academic vision leverages the vast infrastructure of Duke’s research community and its partners to bridge the gap between basic science research and improved patient health outcomes. A continuum of discovery and innovation, this bridge is a transdisciplinary collaboration between basic and translational scientists and clinicians, with the development of our trainees, faculty, and staff forming its bedrock. In our approach, we are guided by several principles: maintaining a culture that supports creativity, developing faculty and trainees, amplifying Duke’s reputation and impact through collaborative engagement, and providing innovative healthcare that exceeds our patients’ expectations for compassion and value.

With this new perspective in mind, I present to you the 2020 issue of Connections. We’ve focused on four core...
areas: Patient Care, Research, Clinical Education, and Community, reflective of the key elements of our department’s overall vision of promoting healthier connections with the world.

In this year’s issue, we share our efforts to increase patient access to care through our community clinics, a growing network that expands availability to first-rate care by our otolaryngologists and subspecialists, audiologists, speech-language pathologists, and advanced practice providers. In research, we highlight a sampling of our current portfolio funded by the National Institutes of Health and the Patient-Centered Outcomes Research Institute. Research has also become an integral component in education through our otolaryngology residency program, with a new two-year research training track embedded between clinical training years. Finally, our community section offers a glimpse at our ongoing initiatives outside the walls of our operating rooms, clinics, and laboratories, through annual efforts by the Duke Hearing Center, Duke Voice Care Center, and Speech Pathology.

The synergism of the many teams across HNS&CS and greater Duke testify to our commitment to patients, their loved ones, and each other. Our editorial team and I are honored to provide you with this portrait of a new department that we are building upon a storied legacy into a model for the future.

Sincerely,

Howard W. Francis, MD, MBA
Richard Hall Chaney, Sr. Professor of Otolaryngology
Chair, Department of Head and Neck Surgery & Communication Sciences
Professor of Head and Neck Surgery & Communication Sciences

TABLE OF CONTENTS

HNS&CS Welcomes New Team Members 4
Duke Skull Base Center Prioritizes Patient Experience through Multidisciplinary Care 5
International Commission on Hearing Loss Draws on Duke Expertise 6
Co-founder of Duke Voice Care Center Retires, Mentors Faculty 7
Using Manual Therapy to Treat Globus, Voice, and Swallowing Problems 8
Advanced Botox® Delivery Methods Expand Treatment of Laryngeal Disorders 10
HNS&CS Honored by Vietnam Hospital 11
Providing the Highest Level of Patient Access Through Community Clinics 12
Building a World-Class Head and Neck Cancer Program 13
Clinical Practice Today 14
Duke Holds Temporal Bone Course for Residents 15
Department Status Accompanied by Major Growth in HNS&CS Research Programs 16
Otolaryngology Residency Program Expands, Offers Research Track 18
Alumni Symposium Will Celebrate New Department 19
Community Outreach 20
Encouraging Medical Students to Pursue Otolaryngology-Head and Neck Surgery 22
Generous Gifts Promote Hearing-Related Programs for Children, Resident Education 23
Faculty 25
Allied Health Clinicians and Advanced Practice Providers 30

OUR MISSION

To Be a Global Leader in Promoting Healthier Connections with the World through:

Compassionate care for our patients, their loved ones, and each other
Advancing and sharing knowledge in the field
Promoting virtuous professional development, collaboration, and leadership

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HNS&CS Welcomes New Team Members

Trinitia Cannon, MD, is an Associate Professor of Head and Neck Surgery & Communication Sciences and the Director of Head and Neck Surgical Oncology at Duke Raleigh Hospital. As a surgical oncologist and microvascular reconstructive surgeon, she cares for patients with benign and malignant tumors of the head and neck and performs complex reconstructive surgeries following trauma or cancer surgery. She is interested in clinical research on cancer. Cannon is a member of Alpha Omega Alpha national medical honor society. She has received a teaching award and has been honored in her hometown of Warren, Ohio, with inductions into Warren High School’s Distinguished Alumni Hall of Fame and the Trumbull County African-American Hall of Fame. She is a senior examiner for the oral certifying boards with the American Board of Otolaryngology and a member of the Advanced Training Council, which oversees the accreditation process for head and neck fellowship training. Cannon earned her medical degree at the University of Rochester School of Medicine. She completed a research residency in otolaryngology at the University of North Carolina Hospitals and a fellowship in head and neck oncology at the Medical College of Georgia and her fellowship in facial plastics in otolaryngology–head and neck surgery and training in advanced rhinology and sinus surgery at Johns Hopkins.

Xiaoyang Hua, MD, PhD, is an Assistant Professor and physician–scientist. Clinically, he sees patients with problems that affect the ears, nose, throat, head, and neck, with a special interest in rhinology and otology. His research focuses on airway mucosal immunology, principally on how the nose immunologically impacts the lungs, and new strategies for nasal vaccine development. Additionally, he is interested in nucleotide and nucleotide biology, particularly how these small molecules contribute to the development of chronic inflammatory diseases that affect the ear, nose, throat, head, and neck. He led a team that discovered that the nose can effectively prime immunity to protect lungs against direct viral infections. Hua earned his medical degree and doctoral degree at Tongji Medical University in China. He completed a residency in otolaryngology–head and neck surgery and a research fellowship in otolaryngology, both at University of Iowa Hospitals and Clinics.

Janet Lee, MD, is as Assistant Professor of Head and Neck Surgery & Communication Sciences in the Division of Pediatric Otolaryngology. She works with children of all ages—from babies in the NICU to teenagers—providing medical and surgical management of head and neck conditions, including congenital neck masses and problems related to hearing, breathing, and swallowing. Lee earned her medical degree at Duke. She completed a residency in otolaryngology–head and neck surgery at the University of California, Davis and a fellowship in pediatric otolaryngology at the University of Utah.

Chris Tobias, MPA, is Chief Administrator of the Department of Head and Neck Surgery & Communication Sciences. She handles operational and financial leadership for the clinical practice and academic programs of the department, and oversees and manages overall operations and finances of its three missions: education, research, and clinical services delivery. Tobias joins us from the Duke Global Health Institute, bringing extensive experience building complex shared services in one of Duke’s most impactful institutes. She has a masters in public administration (healthcare track).

Tammara Watts, MD, PhD, is a head and neck cancer surgeon and clinician–scientist who studies the biology of the tumor microenvironment and its role in tumorigenesis. Her work, in collaboration with other members of the Duke Cancer Institute and basic science community, promises to advance our understanding of head and neck cancer biology and targets for new treatment. Watts earned her medical degree and doctoral degree at the University of Maryland. She completed her residency in otolaryngology at the Medical College of Georgia and her fellowship in facial plastics and microvascular reconstruction at Oregon Health and Science University.
The Duke Skull Base Center is a comprehensive program dedicated to treating tumors of the skull base. Patients can choose to be treated in Durham at Duke University Medical Center or in Raleigh at Duke Raleigh Hospital. They have access to a multispecialty team that includes otolaryngologists, neurosurgeons, radiation oncologists, audiologists, and physical therapists.

As one of the few programs of its kind, the center handles a high volume of cases involving tumors of the anterior skull base and lateral skull base. Specialists frequently treat pituitary tumors and acoustic neuromas, common tumors of the anterior and lateral skull base, respectively. Precision is critical for the types of surgery performed, as the skull base is where many neural and vascular structures enter and exit the head and brain.

“Tumors in these areas can be very challenging to treat because of these structures being at risk,” says Calhoun D. Cunningham III, MD, a neurotologist and otologist. Removal or treatment of an acoustic neuroma, for example, can cause hearing loss, balance problems, or facial nerve issues. “Experience goes a long way in regard to improving outcomes,” he says.

Neuronavigators—nurses who assist and support patients as they receive care—are central to this patient-centered approach. The program staffs two neuronavigators, one at each location. When a patient is diagnosed with a skull base tumor, they typically work with a large care team, and the treatment process can be complex. When questions arise, a neuronavigator helps reduce a patient’s anxiety by being a central point of contact.

The navigator is one of the most important aspects of the program, Cunningham says. “This individual really gets to know the patient well and guides them through the whole process,” he explains. That typically begins at the patient’s initial consult and continues through treatment and follow-up visits.

MULTIPLE DISCIPLINES, ONE PROGRAM

Providers in the Skull Base Center offer a high level of expertise in a range of specialties, creating an optimal experience for the patient. “One of the benefits of our program is its multispecialty focus,” says Cunningham. “When a patient comes in, they’re not just seeing one individual—they’re getting multiple opinions from various providers.”

This advantage can be seen in the example of a patient with an acoustic neuroma. The patient will initially see an audiologist for hearing tests and balance testing. They will then work with an otolaryngologist-neurotologist to undergo imaging tests; neuroradiologists are involved in the evaluation of the imaging as well. Once the tumor’s location and size is determined, the otolaryngologist-neurotologist formulates the treatment plan.

From there, depending on the treatment plan, the patient may see a neurosurgeon, who is an integral part of the surgical management of acoustic neuromas. The patient may also work with a radiation oncologist, if radiation therapy is chosen as a potential treatment. Physical therapists who specialize in balance problems may also be involved in the patient’s care.

“The goal is to optimally manage patients’ care and to help them make a decision about treatment that’s going to work the best for them, given their current situation, allowing them to maintain their quality of life,” Cunningham says.

OPTIMIZING THE PATIENT EXPERIENCE WITH NEURONAVIGATORS

The center began two years ago, when Duke decided to create a dedicated skull base program with a detailed treatment process for patients. Instead of being referred to and treated by one provider, patients are now given multiple treatment options based on recommendations from various providers, with the goal of maximizing their treatment course. That may include minimally invasive microscopic or endoscopic skull base surgery, a customized radiation plan, or working with a physical therapist who specializes in balance problems.
TUCCI ACCEPTS NIH POSITION

Debara L. Tucci, MD, MBA, MS, has been appointed Director of the National Institute of Deafness and Communication Disorders, part of the NIH. Tucci has been a leading investigator, clinician, and educator in the field of otolaryngology–head and neck surgery, closely collaborating with colleagues in the neurosciences, audiology, and speech–language pathology. An integral member of our faculty for the past 26 years, she will be greatly missed as a colleague, mentor, and friend. We are extremely proud of this well-deserved honor and highly optimistic for the future of discovery and innovation in the communication sciences under her leadership.

The Lancet Commission on Hearing Loss held its first session at Duke University on October 22 and 23, 2019, bringing together leaders from healthcare, public health, and health economics and policy.

The commission came out of a 2017 review article that Blake S. Wilson, PhD, co-founder of the Duke Hearing Center, published in The Lancet with Duke colleagues Debara Tucci, MD, MBA, MS, and Michael Merson, MD, and the University of Nottingham’s Gerard O’Donoghue. The authors argued that hearing loss is a large and growing contributor to the global disability burden and addressing it would be among the least expensive and most effective ways to improve human health and quality of life.

The international commission aims to create an urgent roadmap to address this issue. Half of its experts are from the low- and middle-income countries where more than 80% of the people with hearing loss live. Two commission members have experienced hearing loss themselves.

The commission includes many Duke faculty, including Wilson; Mark McClellan, MD, PhD, Director of the Duke–Margolis Center for Health Policy; Eric Finkelstein, PhD, a Professor of Global Health at Duke and Duke–NUS; Susan Emmett, MD, MPH, Assistant Professor in the Department of Head and Neck Surgery & Communication Sciences, and faculty member in the Duke Global Health Institute (DGHI); and Tucci, a co-founder with Wilson of the Duke Hearing Center and who now heads the NIH’s National Institute on Deafness and Other Communication Disorders (NIDCD).

Howard Francis, MD, MBA, is a member of the Advisory Board to the Commission, which is chaired by DGHI’s Gavin Yamey, MD, MPH.

It also includes Robert Califf, MD, founder of the Duke Clinical Research Institute and Vice Chancellor for Health Data Science, who recently announced his departure from Duke to head Google’s healthcare division. Several other commissioners have Duke ties.

The panel’s second meeting will be held at the Duke–NUS Medical School in Singapore, February 21 and 22, 2020. The final two meetings will be held in Europe, and the commission’s findings and recommendations will be published in a special issue of The Lancet, ideally alongside the separate meeting in Geneva of the World Health Assembly in late May 2021.

Lancet Commission on Hearing Loss co-founders Debara Tucci, MD, MBA, MS, and Blake S. Wilson, PhD.
David L. Witsell, MD, MHS, who helped establish the Duke Voice Care Center (DVCC) and served as its Medical Director, retired September 30, 2019.

Witsell’s time at Duke saw the steady growth and success of the DVCC. He came to Duke in 1995 and initially formed a partnership with the Division of Speech Pathology and Audiology to treat patients with voice problems. “That was a relatively new field in otolaryngology and certainly a new field to Duke,” Witsell says. Patient evaluation was comprehensive, but the model wasn’t financially feasible—each appointment lasted an hour and a half to two hours.

The DVCC was established in 2006, arising from a brainstorming session between Witsell and speech-language pathologists about how to create comprehensive, streamlined evaluation process for patients who presented with voice problems. Gina R. Vess, MA, CCC-SLP, Leda Scearce, MM, MS, CCC-SLP, and, eventually, Caroline Banka, MS, CCC-SLP, were contracted to work specifically with the Division of Otolaryngology and Head-Neck Surgery in the Department of Surgery. This gave the center the ability to seamlessly coordinate voice evaluation for patients as well as create a new model of leadership. “It was a true team-based leadership model, where we would all come together and decide what was best for our patients and for the program to move forward,” Witsell says.

Shortly thereafter, Seth M. Cohen, MD, MPH, a fellowship-trained laryngologist, was recruited, and the DVCC faculty undertook an ambitious strategy to reach out to the community with educational initiatives that support voice health. Within the first year of its existence, the DVCC was established as an institutional center of excellence.

The growth has been remarkable, Witsell says, with new voice therapists recruited almost every year. The DVCC is one of the largest voice centers in the country, with thousands of patients—including elite performers from the contemporary, musical theatre, and classical singing worlds, as well as renowned actors and other celebrities—visiting from beyond North Carolina.

“We’ve really been blessed by a terrific team, coordination of care, and a passion for voice health that I think is unparalleled anywhere else,” he says.

Witsell owes the success of the center in part to its model of distributed leadership, which allows people who excel in certain areas to be leaders and make decisions within a particular section of the program. “It would be hard for me to describe all of the successes of the Duke Voice Care Center without including Gina, Leda, and Seth. It wouldn’t have happened without all of us.”

During his tenure at Duke, Witsell was a productive researcher who was continuously funded from either industry, foundations, or the NIH. He led the way in community-based research on health-related quality of life in patients with ear, nose, and throat diseases. As a Professor Emeritus, Witsell will stay engaged with the department. He’ll begin a formal role as a Senior Mentor at the beginning of the year, providing support to faculty who are interested in research as part of their academic careers. He’ll work alongside them to develop grants and research initiatives.

“I owe a huge thank you to all my colleagues, past and present, for being part of my career—for encouraging me and creating an environment that was not always very easy but always very worthwhile, such that I could excel and contribute to the extent I have,” Witsell says.
Manual therapy techniques, according to the American Physical Therapy Association, are "skilled hand movements and skilled passive movements of joints and soft tissue and are intended to improve tissue extensibility, increase range of motion, induce relaxation, [and] mobilize or manipulate soft tissue and joints."

Speech pathologists have been using manual therapy with patients for many years. For example, circumlaryngeal massage, a repetitive kneading-type massage around the larynx, has been a common therapeutic practice to treat muscle tension dysphonia since the early 1990s.

However, in recent years, some speech pathologists have adopted a different approach to manual therapy—one that employs slow, gentle sustained pressures and stretching. These stretches are applied in areas where patients are symptomatic for pain, tightness, globus, and other related issues. Physical therapists and massage therapists commonly perform this type of manual therapy, but it is becoming more recognized and utilized by speech pathologists—including those at Duke Head and Neck Surgery & Communication Sciences. All of Duke Voice Care Center’s speech-language pathologists have attended the Walt Fritz Foundations in Myofascial Release seminar for neck, voice, and swallowing and routinely use manual therapy in treating patients with voice and swallowing problems.

**RELIEVING MUSCLE TENSION THROUGH TOUCH**

Using this slow, sustained method, speech pathologists apply gentle pressure well below a patient’s threshold of pain or discomfort to an area that is relevant to the patient’s symptoms. Typically, symptoms associated with muscle tension gradually diminish over a period of time. For many patients, this style of engagement—slow, static, prolonged stretches—seems to release tension more effectively than repetitive massage to an area, explains Duke speech pathologist and voice specialist Gina R. Vess, MA, CCC-SLP, who has used this type of manual therapy as an adjunct treatment for the past four years. “It has been life-altering for many of the patient conditions that I treat,” she says.

“Because I treat patients with changes in voice, breathing, and swallowing, I typically do manual therapy anywhere from the abdomen up to the jaw,” Vess says. Patients are taught to do the stretches independently on a regular
basis, and when their condition begins to improve, the exercises can be tapered off.

CONTROLLING HEALTHCARE COSTS WHILE IMPROVING PATIENT SATISFACTION

The common finding in patients who benefit from this type of therapy is muscle tension, along with non-specific patient-reported symptoms such as pain, effort, fatigue, voice change, and globus, which often do not point to a definitive singular diagnosis. “If a doctor relays information that an exam is unremarkable but doesn’t provide an explanation or solution, that patient is likely to keep searching for answers, seeking second and third medical opinions,” Vess says. “This can not only impact the overall cost of healthcare, but it can be very frustrating and humiliating for the patient.”

Sometimes patients feel they aren’t being heard, or they may feel dismissed as not having a “real” medical problem, Vess says. Furthermore, patients are sometimes prescribed antibiotics or reflux medications they may not need, resulting in added healthcare costs. These patients often have greater benefit from manual therapy and other voice therapy techniques.

Vess sees patients with a variety of throat problems. She has used myofascial release during therapy to help people with conditions such as globus sensation, chronic pain, spasmodic dysphonia, radiation-related changes, and vocal fatigue. She also sees patients with throat symptoms after neck surgery.

Muscle tension dysphagia—difficulty swallowing related to muscle tension—is something that can be particularly helped by manual therapy. These patients may have normal swallowing evaluations, but they may feel increased effort swallowing saliva and food.

“We often think of swallowing as something that requires exercise or strengthening,” Vess says. “But these patients do not have too little strength—

they have too much tension.” Releasing tension can help improve the effort with swallowing and the sensation of food sticking for these patients.

FUTURE DIRECTIONS

While Vess has had much success applying these techniques, she emphasizes that thorough and accurate evaluation is critical. “I think we still have a long way to go in understanding which patient populations could benefit,” she says. Vess sees the potential for this approach to be applied beyond its current uses.

“It is commonplace for doctors and patients to understand the importance of reducing maladaptive muscle tension with orthopedic injuries, and hopefully one day, more physicians and speech pathologists will understand how to assess the role of muscle tension as a contributor to patients’ voice, swallowing, and other throat symptoms.”

All of Duke Voice Care Center’s voice therapists are trained in manual therapy techniques and have attended the Walt Fritz Foundations in Myofascial Release seminar for neck, voice, and swallowing. Photo: Ken Huth
Botulinum toxin (Botox®) is a neurotoxin that has long been used to treat a variety of muscular spasms and other conditions. When injected, it effectively acts as a blocker, stopping the release of acetylcholine, the neurotransmitter responsible for making the muscle contract. In laryngology, Botox® can be used to treat two conditions, spasmodic dysphonia and muscle tension dysphonia, that affect the muscles of the larynx.

A chronic neurological disorder, spasmodic dysphonia (SD) refers to involuntary spasms in the laryngeal muscles, either causing the vocal cords to come together (adductor SD) or open (abductor SD). Adductor SD produces a strangled or strained voice, while abductor SD causes a breathy sound. People with SD can experience a variety of symptoms, such as a change in voice quality, effortful speaking, vocal fatigue with speaking, and difficulty being understood.

Muscle tension dysphonia (MTD) is characterized by excessive use of the paralaryngeal and laryngeal muscles and is often referred to as strain. It can be initiated by a condition such as laryngitis, reflux, or allergies, or it may be a way to compensate for a polyp, vocal fold paresis, or other underlying condition. Severe MTD can cause symptoms similar to SD, creating speech that sounds strangled and tight.

Botox® is widely used as an effective treatment for both SD and MTD symptoms, as it weakens the laryngeal muscles and renders them less responsive to spasms and strain. Depending on the person and the severity of the condition, results last three months on average.

The traditional modality involves inserting a needle through the neck into the true vocal cords, guided by electromyography (EMG). The patient is asked to produce vocal sounds so the doctor can confirm correct placement of the needle.

“It’s a bit of a tough thing to do,” says Alissa Collins, MD, otolaryngologist and head and neck surgeon. “You’re trying to hit the vocal cord, and anatomy can make that incredibly challenging.”

INNOVATIVE METHODS OFFER BOTH PRECISION AND ALTERNATIVES

Collins, who joined the Duke team in 2018, brought with her two new methods of delivering Botox® for SD and MTD patients.

Both begin by inserting a laryngoscope through the nose for guidance. One method involves numbing the back of the throat and going through the mouth, using an oro-tracheal injector to get around the back of the tongue. The other involves numbing the front of the patient’s neck and passing a needle through the neck soft tissues to access the larynx. Both methods inject the Botox® into the false vocal cords—an area...
of soft tissue right above the true vocal cords—using a larger amount than is used for EMG-guided Botox® injections.

The delivery site is the same, but the method used depends on the patient. “Some people don’t like needles in their neck, so we do it through the mouth,” Collins says. “Others don’t tolerate anything in their mouth—or they don’t have the anatomy that is conducive to that—so we go through the neck.”

One of the advantages to laryngoscope-guided Botox® injections is precision. “I’m actually looking where the tip of the needle goes, so I have visual confirmation that it’s going in the right place,” Collins says. “That’s important because if you inject the Botox® in the wrong place, the patient doesn’t get any benefit.”

Collins completed her otolaryngology residency at Duke before entering a fellowship in laryngology at the University of Texas Health Science Center at San Antonio, where she focused on voice, airway, and swallowing disorders. During her fellowship, she trained with world-renowned laryngologist Blake Simpson, MD, who introduced her to laryngoscope-guided Botox® injections. Collins explains that this modality helps patients avoid two potential side effects of EMG-guided Botox®: breathiness and dysphagia. These are caused when the patient receives a heavy load of Botox® directly into the muscle. The laryngoscope-guided method, by contrast, is an injection into the false vocal cords, offering slow diffusion of Botox® into the true vocal cords. This helps patients avoid a weak voice and a risk of choking on liquids for the first week or two after the procedure.

“I think that if you can offer something that has a much lower likelihood of that happening, people like having that option,” Collins says.

A delegation from the Department of Head and Neck Surgery & Communication Sciences was invited to be honored guests and keynote speakers at the 50th anniversary of the National ENT Hospital in Hanoi, Vietnam, on October 10–11, 2019.

During the visit, faculty signed a memorandum of understanding between the department and hospital to establish improved research collaborations. The partnership is built on the work that Walter Lee, MD, MHS, has conducted in Vietnam for the past decade.

This research collaboration exemplifies the department’s vision to be a global leader in promoting healthier connections with the world, Lee says. “Our department doesn’t just have a local or regional viewpoint. It’s national and international, because everything is connected. This is a concrete example of the explicit steps for achieving that vision.”

The interdisciplinary delegation included specialists in pediatric otolaryngology, head and neck cancer surgery, otology/neurotology, and facial plastics and reconstructive surgery. The faculty members were Howard Francis, MD, MBA, Eileen Raynor, MD, Liana Puscas, MD, Charles R. Woodard, MD, and Lee. Two spouses, Sarah Francis and Dewey Raynor, were also in attendance.

A delegation from the Department of HNS&CS met with Vietnamese leaders from the National ENT Hospital and Resource Exchange International–Vietnam, a non-profit partner.

HNS&CS HONORED BY VIETNAM HOSPITAL
Duke Otolaryngology continues to increase patient access to healthcare and expand its service delivery capacity. Through its multiple community clinics, patients can quickly and efficiently receive an appropriate level of ENT care.

The Private Diagnostic Clinic—the physician practice of Duke Health and one of the largest academic multi-specialty group practices in the country—gives patients access to several community clinics that offer general otolaryngology care. This number increased in April 2019, when North Carolina Eye, Ears, Nose and Throat (NCEENT) was added to the network. NCEENT has five locations in the region, including one in Chapel Hill and one in Roxboro, North Carolina. Other clinics include Duke Health Center South Durham, Duke Otolaryngology of Raleigh, and Duke Otolaryngology of Person County.

At these clinics, patients can see general otolaryngologists who provide a level of care that is appropriate for many diagnoses, including sinus conditions, hearing problems, tonsillitis, and other general ENT concerns for adult and pediatric patients. For more complex conditions—problems related to sinus tumors, head and neck cancer, or cochlear implants, for example—patients are referred to one of three specialty clinics located in Raleigh and Durham.

Otolaryngologists are trained to treat general ENT problems, which is what the majority of patients need. “These are typical things that could be seen by any board-certified otolaryngologist—and it’s a large volume,” says David M. Kaylie, MD, MS, an otologist/neurotologist and Vice Chair of Clinical Operations. While general ENT problems can also be treated at the specialty locations, there are advantages to the community clinics. “General otolaryngology clinics are easy to get into, the parking is good, and there are really convenient locations,” he says.

RIGHT PATIENT, RIGHT PROVIDER, RIGHT TIME

These offerings—varying levels of specialization, and multiple community and hospital locations—are part of Duke’s strategy to provide the highest level of access to innovative, first-rate care.

Their mantra, Kaylie says, is getting the “right patients to the right provider at the right time.” All of their decisions—from strategic planning, to new hires, to bringing on a private practice such as NCEENT—aim to make access for patients as convenient as possible.

“It doesn’t make sense to get someone the next day if they’re seeing the wrong provider,” Kaylie says. “So we really take a lot of care to make sure that patients with specific diagnoses are getting to exactly the right person as quickly as possible.” That may mean a general otolaryngologist at community practice, or it may mean a skull base surgeon at a specialty clinic.

FULL SPECTRUM OF PROVIDERS

Along with general otolaryngologists, advanced practice providers (APPs) open up availability for doctors at the specialty clinics to treat complex problems. Often, diagnoses can be handled expertly—and more quickly—by a physician assistant.

“Our APPs have many years of experience in ENT and work side-by-side with the MDs, so it provides seamless care,” Kaylie says. “They really help offload a lot of diagnoses that don’t need to be seen by a specialist.”

This provides another benefit to patients: cost savings. APPs bill at a lower rate than physicians for the same diagnoses, so not only do patients receive quick and efficient care, they do so at a reduced rate. “We’re really trying to maximize utility for the patients while minimizing costs,” Kaylie says.
The HNS&CS Head and Neck Cancer Program continues to experience growth as it expands its clinical footprint, invests in translational research, and strengthens its multidisciplinary focus. These advancements represent the department’s goal of leveraging Duke’s expertise and resources to become a recognized global leader in head and neck cancer care, education, and research.

One of the goals is to provide high-quality care for patients in Wake County, North Carolina. To that end, the department has built a team of multidisciplinary experts at Duke Raleigh Hospital. New faculty member Trinitia Cannon, MD, a surgical oncologist and microvascular reconstructive surgeon, has joined radiation oncologist David S. Yoo, MD, and medical oncologist Marvaretta M. Stevenson, MD, along with speech pathologists and other ENT providers. “This is something that’s very good for patients, to be treated closer to home,” says Walter T. Lee, MD, MHS. “And we’re establishing the same level quality of care, regardless of whether you go to Raleigh or to Durham.”

Limiting patients’ travel burden is a priority, as patients experience better outcomes when they’re close to their support systems. Duke specialists often work collaboratively with referring physicians outside of Duke’s region. “Once a procedure is completed at Duke, patients can receive follow-up care closer to home,” Lee says. HNS&CS physicians remain closely involved in subsequent surveillance and are committed to continued participation in their care as needed.

As a complement to clinical care, research advances the field by helping other head and neck cancer specialists improve the care they provide. The recent recruitment of Tammara Watts, MD, PhD, demonstrates the department’s commitment to translational research. Watts conducts research on the tumor microenvironment and its role in tumorigenesis, working in collaboration with the Duke Cancer Institute and basic science community.

The department also recently hired a Director of Clinical Research Training, Nosayaba Osazuwa-Peters, PhD, MPH, who will begin in the spring. Osazuwa-Peters conducts clinical outcomes research in head and neck cancer—for example, reporting on head and neck cancer and increased rates of depression and suicide. Understanding the outcomes of certain interventions is critical in providing the highest level of care, says Lee. “Then we can ask, ‘How can we provide better holistic care knowing the immense impact that cancer has on patients and their loved ones?’”

Multidisciplinary and interprofessional collaboration forms the foundation of this growth. Faculty from surgery, radiation oncology, medical oncology, speech pathology, palliative care, endocrinology, and other disciplines work together in partnership, each respecting the others’ expertise. The nurses also have extensive experience in caring for patients with cancer.

“We truly are a team,” Lee says. “Not all places have the breadth and depth of the resources we can provide.”
Balloon sinus dilation (BSD) may be overused for the treatment of chronic rhinosinusitis, according to a multi-year retrospective analysis published in *Otolaryngology–Head and Neck Surgery*. Duke researchers, led by David Jang, MD, found significant differences in demographics in patients undergoing BSD than those undergoing functional endoscopic sinus surgery. They also found differences in comorbidities between the two patient populations. The results highlighted the need for better-defined indications for use of BSD.

“We found that the use of BSD is significantly increasing and that there’s a lot of variation based on demographics and geography,” Jang reports. “Many physicians are recommending BSD partly because it’s safe, simple, and effective, and can be performed in the office. But if patients aren’t going to benefit from the procedure or are at greater risk for complications, we should recommend conventional surgery,” he says.

Cheng performed open laryngotracheal reconstruction, opening the neck to expose the airway then expanding the narrowed portion of the subglottic airway by using the child’s rib cartilage as grafts to expand the anterior and posterior area of the cricoid cartilage. He used a temporary breathing tube to hold the grafts in place and help heal and strengthen the area. Now a healthy 2-year-old toddler, the patient has healed completely and is breathing comfortably without the tracheostomy.

Cheng is one of only a few surgeons in North Carolina with experience performing this type of complex airway reconstruction surgery on very young children and is a leading researcher in pediatric airway conditions, treatments, and risk factors.

Jeffrey Cheng, MD, a Duke pediatric otolaryngologist who specializes in treating airway stenosis, removed a tracheostomy in an 18-month-old infant using a complex surgical approach. “He needed a permanent surgical solution that would give him an adequate airway and hopefully allow for decannulation,” says Cheng.

Clinical Practice Today

Review some of the groundbreaking research Duke HNS&CS faculty have led recently.
Biomedical engineers in Duke’s Department of Biomedical Engineering are teaming up with otolaryngologists and speech pathologists in the Department of Head and Neck Surgery & Communication Sciences to apply augmentative and alternative communication technologies for patients with cognitive impairments and neuromuscular disabilities that make speech difficult or impossible.

Professor Kevin Caves, BSME, Clinical Associate in the Department of Head and Neck Surgery & Communication Sciences, outlines three ways the collaboration is making an impact.

- **Clinical services:** For nonspeaking people, Duke works to match commercially available speech-generating devices to their individual needs. Caves and his team evaluate patients individually, look at the likely progression of their impairment, and match them with the best device for their needs.

- **Research:** Caves and his colleagues have initiated a number of proof-of-concept projects, including a device that helps people modulate their speaking volume, and an application that enables people to communicate using their smart phone or tablet.

- **Training:** A large part of Caves’ work involves teaching the next generation of biomedical engineers to integrate technology with biology.

Learn more about these advances:

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**Research News**

David W. Jang, MD, and David L. Witsell, MD, MHS, have been awarded a grant from Amgen for a clinical study, “Facial Pain, Rhinosinusitis and Migraine Disease: Is the Facial Pain Presumed to Be Associated with Rhinosinusitis Responsive to Migraine Treatment?”

An HNS&CS faculty team led by Walter Lee, MD, was recently awarded a competitive yearlong grant from the Society of University Otolaryngologists for the project, “A Nationwide Resource for Virtue-Based Leadership and Professional Development.”

Blake S. Wilson, PhD, has been elected a Fellow of the National Academy of Inventors. Wilson developed many of the sound-processing strategies used in modern cochlear implants.

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**DUKE HOLDS TEMPORAL BONE COURSE FOR RESIDENTS**

The sixth annual Duke Resident Temporal Bone Dissection course was held November 15–16, 2019. Directed by Calhoun D. Cunningham III, MD, the two-day course focused on temporal bone anatomy, hearing loss, and chronic otitis media. New this year, hands-on training was provided using the Stryker Corporation’s mobile dissection lab, as well as the Duke temporal bone dissection lab. Invited residents were welcomed from Duke, Medical University of South Carolina, Virginia Commonwealth University, and Wake Forest University. Daniel H. Coelho, MD, from Virginia Commonwealth University, attended as guest faculty.
Along with patient care and education, research is a core component of the new Department of Head and Neck Surgery & Communication Sciences. As part of its mission, the department aims to deepen its expertise in clinical research, accelerating the translation of leading-edge basic science discoveries into clinical practice. Its efforts have been focused on recruiting new faculty, particularly clinician–scientists, in conjunction with existing faculty development.

While many faculty incorporate research programs into their clinical activities, seven faculty members currently receive federal funding, including from the National Institutes of Health (NIH), the Patient-Centered Outcomes Research Institute (PCORI), and the Veterans Administration (VA). The following projects are examples of the research initiatives that are breaking new ground while helping place our department among top-tier otolaryngology programs in the country.

**BASIC AND TRANSLATIONAL HEAD AND NECK CANCER RESEARCH**

**Targeting Mesenchymal Stem Cells in Head and Neck Cancer**
*PI: Tammara Watts, MD, PhD*

Watts, a new recruit, is an experienced head and neck cancer surgeon and clinician–scientist. Her research focuses on understanding basic science aspects of head and neck tumor growth. With this grant, she’s investigating the biology of mesenchymal stem cells in the head and neck tumor micro-environment. Watts is also partnering with oncology researchers to develop a robust head and neck cancer basic science research program within the department.

**Partnership to Establish a Practice-Based Network to Assess for Head and Neck Cancers Using a Low-Cost Portable Flexible Nasopharyngoscope**
*PI: Walter Lee, MD, MHS*

Lee was recently awarded an NIH Research Project Grant (R01) to build on his global health interests. The five-year award aims to improve local detection of head and neck cancer by using a portable flexible endoscopic instrument (a nasolaryngoscope) in low-resource environments. Using Vietnam as a model, this study enables local doctors with a new, low-cost way to detect cancers within a newly formed practice-based research network. The ultimate goal is to integrate the nasolaryngoscope into head and neck cancer care in other low-resource settings.

**AIRWAY RESEARCH**

**Computational Modeling of the Mature Unilateral Cleft Lip Nasal Deformity for Objective Assessment of Patient Nasal Function and Treatment Outcomes**
*PI: Dennis Frank-Ito, PhD*

Frank-Ito was awarded a new R01 grant to use computational fluid dynamics (CFD) methods to examine nasal obstruction, dysfunction, and treatment in patients with unilateral cleft lip nasal deformity. This study will be the first of its kind to specifically focus on cleft-induced nasal dysfunction to develop treatments that will improve surgical outcomes using virtual surgery and CFD modeling. This work builds bridges with several plastic surgeon colleagues who perform cleft deformity repair.
NEUROBIOLOGY AND OLFACTORY DISORDER RESEARCH

Therapeutic Potential for Modulation of Olfactory Basal Stem Cells

*PI: Bradley Goldstein, MD, PhD*

Goldstein, a clinician-scientist and recent recruit who serves as Vice Chair of Research for the department, has a new R01-funded research program studying aspects of olfactory disorders, which are currently challenging to treat. His basic science lab focuses on understanding how certain stem and progenitor cells produce new olfactory neurons. He and his team are studying tissue damage and repair in the olfactory system, with the goal of developing new treatment strategies for olfactory disorders. This work involves collaborations with the Duke neurobiology community.

HEARING LOSS AND OTOLOGY RESEARCH

Addressing Barriers to Adult Hearing Healthcare

*PI: Howard W. Francis, MD, MBA, and Sherri L. Smith, PhD*

Continuing the work of Debara Tucci, MD, MS, MBA, who became Director of the NIH’s National Institute on Deafness and Other Communication Disorders in September, this research examines hearing healthcare for adults ages 65–75. The study aims to establish what degree of involvement by the primary care practitioner is needed for older adults to follow through with routine hearing screening. The ultimate goal is to influence healthcare policy to promote accessible and affordable hearing health care.

Identifying and Treating Childhood Hearing Loss in Rural Alaska

*PI: Susan D. Emmett, MD, MPH*

Emmett leads a PCORI-funded randomized trial that seeks to improve the identification of unrecognized childhood hearing loss in rural areas through mHealth screening and telemedicine referral. Her research is conducted in partnership with the Norton Sound Health Corporation, a tribally owned and operated healthcare organization in Nome, Alaska. Emmett is also the Founder and Director of the Global HEAR Collaborative, an international research consortium spanning 28 countries dedicated to addressing disparities in global hearing loss.
As the department’s clinical and research footprints grow, so does the number of trainees. The Otolaryngology Residency Program began with one resident in 1959 and grew to three in 2010. Now, the department is getting ready to welcome the third class of four residents per year.

“The context for our growth has been the tremendous growth in our faculty,” says Program Director Charles “Chip” Woodard, MD. “Ten years ago, we had a faculty of less than 10. Now we have a faculty of over 25 that represent all of the subspecialties, including a robust research portfolio that is the foundation for a very strong program that allows for these educational opportunities to develop.”

Keeping pace with these advancements, the department is offering a new two-year research track embedded within the residency program. Residents in this track will complete their PGY1 and PGY2 clinical years, followed by two years of dedicated research. Residents return to complete their clinical PGY4, PGY5, and half of PGY6 years, for a total of six and a half years of training, including the research block. The department will support the option for residents to pursue additional academic or clinical interests in the six months following their half year of PGY6.

This track is for residents who aim to pursue a career that integrates research and medicine, working at an academic medical center, a research institute such as the National Institutes of Health, or a private entity such as a biotech company. Some may decide to pursue an advanced degree, such as a Master of Public Health.

The department has been granted a temporary complement increase by the Accreditation Council for Graduate Medical Education (ACGME) to accommodate the resident in the research track. “They realized the added value that this research opportunity has in our program,” Woodard says. This year, they’ll match four clinical residents and one research resident; in subsequent years, they’ll return to matching three clinical residents and one research resident.

**RARE OPPORTUNITY FOR OTOLARYNGOLOGY RESIDENTS**

The two-year research track is a unique offering among ENT programs across the country, with very few residencies offering this degree of research exposure. Duke has both the research and clinical infrastructure to support the additional resident, and the

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**GRADUATING OTOLARYNGOLOGY RESIDENTS**

**Feras Ackall, MD**
Dr. Ackall will be completing a fellowship in rhinology/endoscopic skull base surgery in the Department of Head and Neck Surgery & Communication Sciences at Duke.

**Matthew Cooper, MD**
Dr. Cooper will be completing a fellowship in clinical otology in the Department of Head and Neck Surgery & Communication Sciences at Duke.

**Nicholas Mildenhall, MD**
After graduation, Dr. Mildenhall will join a private practice in comprehensive otolaryngology in north Atlanta.
The HNS&CS Alumni Symposium will be held May 15–16, 2020, at the Washington Duke Inn. The celebration this year is bigger than ever, as it commemorates the newly formed Department of Head and Neck Surgery & Communication Sciences. “As a new department, this event gives us the opportunity to showcase where we started, where we are, and where we’re going in the years to come,” says Russel R. Kahmke, MD, Co-president of the Duke Otolaryngology Alumni Society.

The Samuel R. Fisher, MD, Memorial Golf Tournament will be held Friday, May 15 at noon, and the academic session will be held Saturday, May 16. Residents will present research talks, and a state of the department address will be given. Distinguished alumni and previous faculty members will attend, including:

- Lloyd B. Minor, MD, Dean of the Stanford University School of Medicine, who will serve as the 2020 William R. Hudson, MD, lecturer
- Anil K. Lalwani, MD, Vice Chair for Research, Otolaryngology–Head and Neck Surgery and Director of the Division of Otology, Neurotology and Skull Base Surgery at Columbia University
- Ramon M. Esclamado, MD, former Chief of the Division of Head and Neck Surgery & Communication Sciences
- William J. Richtsmeier, MD, PhD, former Chief of the Division of Head and Neck Surgery & Communication Sciences
- Debara L. Tucci, MD, MBA, MS, former faculty member and current Director of the National Institute of Deafness and Communication Disorders

Chairs from other Duke departments, such as surgery and neurology, will join us. We look forward to celebrating with current and former colleagues, residents, fellows, and other members of the Duke community.

ability to tailor the resident’s research and clinical experience.

“There’s a fairly high bar set by the ACGME to offer something like this,” Woodard says. “We were able to get this approved in our first application based on the merits of the program.”

More than 120 applications were submitted for the research spot alone, demonstrating the significant interest that medical students have in research as a part of their career goals. The department received more than 450 applications in total for all of the residency spots.

During the interview process, research resident applicants will meet with both research and clinical faculty, but part of the afternoon will be spent with potential collaborators—those who do the type of research they’re interested in. “It really gives them a taste of what Duke has to offer at a very personalized level,” Woodard says.

This experience reflects a changing competitive landscape, where the goal is to go beyond merely matching “good residents” and instead show what is unique about the residency experience at Duke. “If you create a personalized experience on the front end and make that investment, it really shows that you have a focus on the success of that individual,” he says.

The two-year research track is an example of the department’s mission to become a world-class center for otolaryngology, and a leader in education. “We’re leveraging the many offerings at Duke to provide a research experience that allows us to recruit some of the future leaders in our field,” Woodard says.
Duke HEARS 2019 was held on April 27, 2019. Twenty-one families, 75 attendees total, spent the day at the Museum of Life and Science. Parents attended a three-hour session focused on the important transition from early intervention to elementary education, including Individualized Education Plans (IEPs), 504 Plans, and how to best empower their child(ren) to advocate for their needs and become self-sufficient adults with hearing loss. At the end, the parents had an opportunity to ask a panel of experts questions. The children explored the museum in supervised small groups and participated in an animal program (met a snake, bearded dragon, and chinchilla) and enjoyed a train ride.

The Duke Hearing Center for Children and Families also sponsored and participated in the 2019 annual Walk 4 Hearing in Cary, North Carolina. This event supports the Hearing Loss Association of America and raises money for national and local programs that provide services to people with hearing loss.

Photo: Museum of Life and Science
The Duke Voice Care Center

Voice and hearing health are core components for maintaining social connection, a leading predictor of longevity. The Duke Voice Care Center (DVCC) and Duke Hearing Center partnered with the Cary Arts Center to present a day-long workshop, “Let Your Voice Be Heard: Healthy Singing and Speaking Voice for Older Adults” on September 7, 2019. Attendees learned about how “advanced youth” can affect communication health, and participated in hearing screenings, quality of life measures, and training sessions on vocal exercises for speaking and singing.

The DVCC presented their 13th annual World Voice Day (WVD) celebration April 6, 2019, featuring Mark Moliterno, recipient of the DVCC’s Patrick D. Kenan Award for Vocal Health and Wellness. Mark presented his YOGAVOICE® workshop, a unique pedagogical program which combines yoga traditions with bel canto singing techniques.

The DVCC will host their 14th annual WVD celebration, “Every Voice Has a Story,” April 25, 2020, honoring The Monti, a Durham-based organization devoted to live storytelling. The event will feature information on how the voice works, vocal wellness, and optimizing vocal performance, as well as workshops in the art of storytelling with a focus on stories about voice.

Other community engagement activities by the DVCC in 2019 include “Empowering Your Voice: Strong Voices for Young Women,” a vocal health workshop for Duke Alpha Kappa Alpha sorority; “Vocal Health for Singers” at High Point University; an appearance on “In Praise of Age” talk show; and “Vocal Health for Interpreter Services” for Duke International Patient Services.

Speech Pathology

A Duke Cleft and Craniofacial Center patient, Austin Wrede, was born on World Smile Day, annually the first Friday in October. For the past two years, Austin’s family has hosted a local Smile Stand on World Smile Day to celebrate Austin and raise awareness about cleft lip and palate. On October 4, 2019, the Wrede family partnered with the Department of HNS&CS for the first annual Duke Smile Stand, with the goals of expanding awareness about cleft lip and palate and raising money to support Smile Together. There were five Smile Stands located across Duke’s medical campus, with a Duke patient’s journey through cleft and craniofacial care highlighted at each station. Duke speech pathologists, audiologists, and other care team members volunteered at the event by handing out smile stickers and snacks, talking about cleft lip and palate, and collecting donations for Smile Together.
Through a variety of programs, the department encourages medical students to pursue residencies in otolaryngology–head and neck surgery. These initiatives are led by Russel R. Kahmke, MD, the Medical Student Clerkship Director who, along with Janet Lee, MD, works to improve exposure to OHNS and related fields.

During medical students’ first year, otolaryngology residents and faculty lecture during the anatomy course as well as assist in lab dissections. Second-year students have the opportunity to rotate in otolaryngology to get exposure to the field. Third-year students at Duke can perform their year of research within the department as well as complete their 6–12 month continuity clinics, which provides them longitudinal care to ENT patients.

During students’ fourth year, otolaryngology residents and faculty mentor them through sub-internship rotations to prepare them for residency. Additionally, the Otolaryngology Interest Group offers a variety of activities throughout the year, including mentorship, head and neck exam skills, ultrasound training, fiberoptic scope training, and suturing skills.

Kahmke’s next venture is creating pathways with local universities that don’t have otolaryngology departments. Duke will provide mentoring opportunities for those medical students and help them pursue a career in otolaryngology. “We can make that process a little easier, increasing the breadth of students that apply into our specialty,” he says.

In a two-year period, the department has gone from hosting one to two sub-interns per year to hosting 14 visiting students from schools across the country. “This increase speaks to the quality of our residents and faculty and the interest of people wanting to enter our specialty,” Kahmke says.

2019 Duke Medical School Graduates Entering OHNS Residencies

Duke Head and Neck Surgery & Communication Sciences extends our congratulations to 2019 Duke Medical School graduates entering residencies in otolaryngology–head and neck surgery:

James Campbell  
*Duke University*

Tracy Cheng  
*University of Pittsburgh*

Neelima Panth  
*Yale University*

Joanne Soo  
*Stanford University*

We wish them well and look forward to following their careers and contributions to the field.
Generous Gifts Promote Hearing-Related Programs for Children, Resident Education

Duke HNS&CS is committed to using our expertise and resources to promote healthier connections with the world. The support of alumni, friends, and community members makes this possible. Here are ways donors are supporting our clinical, research, and educational endeavors.

THE OWENS SUPPORT DUKE HEARS

Cecilia T’90 (BA, English) and Stephen Owen T’85 (BA, economics) have supported hearing-related programs for children and their families for many years through the endowed Powers/Owen Family Fund. In 2019, they pledged an additional $250,000 to grow this endowment.

“Our family is committed to helping Duke provide solutions to the problems of childhood disability,” Cecilia Owen says. “It is a heartfelt pride to share in such a meaningful endeavor.”

Duke HEARS (honor, educate, advocate, relate, support) is a resource for children with hearing loss and their families. The initiative has gained momentum over the years, particularly in Durham’s Hispanic community, and will enjoy continued growth with this generous gift. Through events like Duke HEARS: Transitions, which focuses on the important shift from early intervention and preschool to elementary school, and Foundations of Language/Literacy, the program is working to enrich the entire lives of children with hearing loss.

Cecilia Owen notes that Duke HEARS begins family interaction in the most critical place: the maternity ward.

continued on page 24
“Children born with hearing disabilities are immediately brought into the program. They benefit from assistance at an early stage, when hearing loss is not labeled as a disability, but simply as a condition to be addressed,” she says. This helps ensure that learning and development are not negatively affected.

Their gift will support additional outreach programs, such as:

- An integrated music and speech/language treatment program
- Family support through clinical social work, a child and adolescent life program, and parent-liaison programs
- Support for transportation, meals, and navigation through medical appointments that would otherwise not take place without assistance
- Hearing loss prevention programs in Durham public schools, such as the Durham School of the Arts Hearing Loss Prevention Program for Musicians

“This is a good example of a philanthropic gift providing resources to enable outreach programs for families,” says Marcy W. Romary, Executive Director of Development for Duke Health Development and Alumni Affairs. “It’s not just centered at Duke; it’s for the community. We are all so grateful to the Owen family for their support.”

**FUND SUPPORTS HNS&CS RESIDENT RESEARCH**

Through the Samuel R. Fisher, MD, Memorial Endowment for Resident Education, the department supports the educational and professional development of HNS&CS residents, enabling the purchase of equipment and special educational experiences. The fund honors the legacy of Fisher, who oversaw the residency program.

As a division, we designated $50,000 to establish the fund, a permanent endowment. Now, as a department, our goal is to raise $500,000. This will help us train, challenge, and prepare our residents to provide quality care to patients at Duke and around the world.

“Building this resident education fund means Dr. Howard Francis and the Director of the Residency Program can support these residents outside of the work they’re doing in the clinic,” Romary says.

The fund supports trainees such as Nick Mildenhall, MD, a senior resident who spent time at AIC Kijabe Mission Hospital in Kenya. He worked with alumnus David Nolen, MD, ’13, as well as a Kenyan otolaryngology resident and a Liberian general surgery resident. The opportunity to learn and serve alongside students and residents of other specialties in a global setting was valuable, Mildenhall says. “We were able to better appreciate our cultural differences through our joint desire to help patients, which was an enriching experience.”

Supporters can make a one-time or recurring gift to the fund. No matter the amount, every contribution helps our program flourish. Learn more at headnecksurgery.duke.edu/giving.

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**Two ways to make a gift to Duke HNS&CS**

1. Contact Marcy Romary
   Executive Director of Development
   300 West Morgan Street
   Suite 1200
   Durham, NC 27701
   919-385-0051 (o)
   919-748-0745 (m)
   marcia.romary@duke.edu

2. Visit headnecksurgery.duke.edu/giving or scan the QR code to the right to directly make a pledge.
Faculty

DUKE HEARING CENTER

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Susan Emmett, MD, MPH
Assistant Professor of Head and Neck Surgery & Communication Sciences
Assistant Research Professor of Global Health

Howard Francis, MD, MBA
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Walter T. Lee, MD, MHS
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Liana Puscas, MD, MHS, MA
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Yvonne M. Mowery, MD, PhD
Butler Harris Assistant Professor of Radiation Oncology

David S. Yoo, MD, PhD
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Medical Oncology

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Neal E. Ready, MD, PhD
Professor of Medicine
RHINOLOGY AND ENDOSCOPIC SKULL BASE SURGERY

Ralph Abi Hachem, MD, MSc
Assistant Professor of Head and Neck Surgery & Communication Sciences
Assistant Professor in Neurosurgery

David W. Jang, MD
Associate Professor of Head and Neck Surgery & Communication Sciences
Assistant Professor in Neurosurgery

RECONSTRUCTIVE SURGERY

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Clinical Associate in the Department of Head and Neck Surgery & Communication Sciences

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Liana Puscas, MD, MHS
Associate Professor of Head and Neck Surgery & Communication Sciences

Charles Woodard, MD
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PEDIATRIC OTOLARYNGOLOGY

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Assistant Professor in Pediatrics

Janet W. Lee, MD
Assistant Professor of Head and Neck Surgery & Communication Sciences

Eileen Raynor, MD
Associate Professor of Head and Neck Surgery & Communication Sciences
Associate Professor in Pediatrics
Faculty

SPEECH PATHOLOGY

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Clinical Associate in the Department of Medicine

Kimberly Irby, MS
Clinical Director, Interim Co-Chief, Department of Speech Pathology & Audiology, Duke University Hospital

Harrison Jones, PhD
Associate Professor of Head and Neck Surgery & Communication Sciences

COMPREHENSIVE OTOLARYNGOLOGY

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Matthew Ellison, MD, FACS
Assistant Professor of Head and Neck Surgery & Communication Sciences

Sarah Holste Hodges, MD
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Kevin Geoffrey Hueman, MD
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Gregory Fabian Hulka, MD
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Benjamin Scott Oberman, MD
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James G. Ross, MD
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Sheila Ryan, MD
Clinical Associate in the Department of Head and Neck Surgery & Communication Sciences

Kathy Ka Kee Yu, MD
Clinical Associate in the Department of Head and Neck Surgery & Communication Sciences
RESEARCH

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Assistant Professor of Head and Neck Surgery & Communication Sciences
Assistant Professor in the Department of Mechanical Engineering and Materials Science

Bradley John Goldstein, MD, PhD
Instructor (Temporary) in the Department of Head and Neck Surgery & Communication Sciences

Xiaoyang Hua, MD, MMed, PhD
Assistant Professor of Head and Neck Surgery & Communication Sciences

Blake S. Wilson, PhD
Adjunct Professor in the Department of Head and Neck Surgery & Communication Sciences
Scholar in Residence in the Pratt School of Engineering
Adjunct Professor in the Department of Electrical and Computer Engineering

DURHAM VA MEDICAL CENTER FACULTY

Irenee Duncan
Consulting Associate in the Department of Surgery, Department of Head and Neck Surgery & Communication Sciences
Allied Health Clinicians and Advanced Practice Providers

SPEECH-LANGUAGE PATHOLOGISTS

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Clinical Speech Pathologist

Nicole Badgley, MS, CCC-SLP  
Senior Clinician

Judy Batista, MS, CCC-SLP  
Clinical Speech Pathologist

Milisa Batten, MS, CCC-SLP  
Clinical Speech Pathologist

Olivia Beasley, MS, CCC-SLP  
Clinical Speech Pathologist

Jen Blum, MA, CCC-SLP  
Senior Clinician

Katie Broadwell, MS, CCC-SLP  
Senior Clinician

Dianamari Castillo-Ruiz, MS, CCC-SLP  
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Jeanette Dickson, MA, CCC-SLP  
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Karen Everitt, MS, CCC-SLP  
Senior Clinician

Katie Flynt, MS, CCC-SLP  
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Julie Garris, MS, CCC-SLP  
Clinical Speech Pathologist

Kelly Gordon, MS, CCC-SLP  
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Samantha Hanes, MS, CCC-SLP  
Clinical Speech Pathologist

Carlee Jones, MS, CCC-SLP  
Clinical Speech Pathologist

Jennifer Jurgenson, MS, CCC-SLP  
Clinical Speech Pathologist

Megan Katz, MA, CCC-SLP, LSLS Cert AVT  
Clinical Specialist

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Joy Kerner, MA, CCC-SLP  
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Senior Clinician

Katherine Loebner, MS, CCC-SLP  
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Megan Lynch, MA, CCC-SLP  
Senior Clinician

Jessica Mancini, MA, CCC-SLP  
Clinical Speech Pathologist

Jill Marcus, MA, CCC-SLP  
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Sarah Plascyk, MS, CCC-SLP  
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Jamie Thomson, MS, CCC-SLP  
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Megan Urban, MA, CCC-SLP, BCS-S  
Clinical Coordinator

Dina Vallabh, M. Ed, CCC-SLP, CBIS  
Senior Clinician

Jacqueline Vanderbilt, MS, CCC-SLP  
Clinical Speech Pathologist

Sara Villaverde, MS, CCC-SLP  
Clinical Speech Pathologist

Jacquelyn Vorndran, MA, CCC-SLP  
Clinical Speech Pathologist

Christine Wilkie, MA, CCC-SLP  
Clinical Speech Pathologist

Komal Williams, MS, CCC-SLP  
Clinical Speech Pathologist

NCEENT SPEECH-LANGUAGE PATHOLOGISTS

Anne Harbour-Tonn, MS, CCC-SLP

Julie Rockefeller, MS, CCC-SLP

Melissa Rightor, MA, CCC-SLP, PC
DUKE VOICE CARE CENTER SPEECH-LANGUAGE PATHOLOGISTS

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Hilary Bartholomew, MS, CCC-SLP
Senior Clinician

Meghan Esper, MA, CCC-SLP
Clinical Speech-Language Pathologist

Lauren Fay, MS, CCC-SLP
Senior Clinician

Tara Nixon, MM, MS, CCC-SLP
Senior Clinician, Clinical Singing Voice Specialist

Cristen Paige, MS, CCC-SLP
Senior Clinician

ADVANCED PRACTICE PROVIDERS

Laura Geraghty, BS, MPA, PA-C
Physician Assistant

Benjamin D. Pierce, MHS, PA-C
Physician Assistant

Tami C. Runyan, PA-C
Physician Assistant

Ariel Hagedorn, MHS, PA-C
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Joshua F. Smith, MMS, PA-C
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Lynne B. Gasperson, PA-C
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NCEENT AUDIOLOGISTS

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Jennifer Rollinson, AuD, CCC-A
Clinical Audiologist

Sara Brooks Weems, AuD, CCC-A
Clinical Audiologist

Patricia Wild, MA
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Sara Young, AuD, CCC-A
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AUDIOLOGISTS

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Erin L. Blackburn, AuD, CCC-A
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Willam Dillon, AuD, CCC-A
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Rebecca Doll, MA, CCC-A
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Two missions guided by one purpose:
OUR PATIENTS.