

Emily Plowman, PhD, CCC-SLP, treats a patient in the Aerodigestive Research Core laboratory.

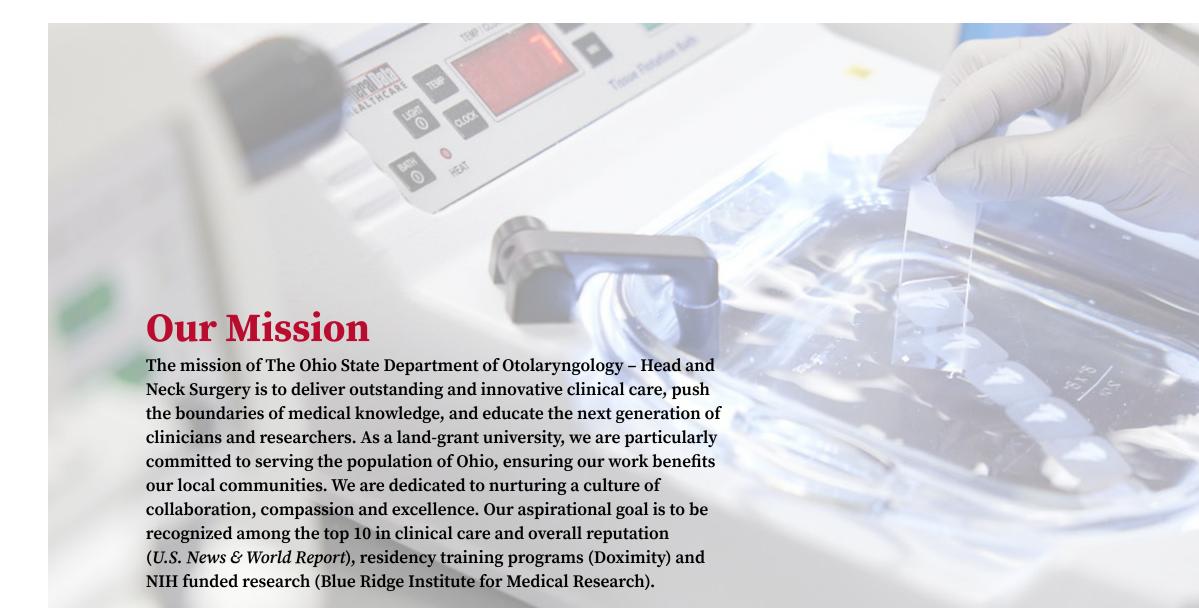


WEXNER MEDICAL CENTER

Department of Otolaryngology – Head and Neck Surgery

The Ohio State University College of Medicine

**Year in Review 2024** 



### The Department of Otolaryngology – Head and Neck Surgery comprises 10 specialty areas:

- Allergy and Immunology
- Audiology
- Facial Plastic and Reconstructive Surgery
- General Otolaryngology and Sleep Surgery
- · Head and Neck Oncology
- Laryngology
- Otology, Neurotology and Cranial Base Surgery
- Pediatric Otolaryngology
- Rhinology
- Skull Base Surgery





Arti Yadav, MS, analyzes cancer cells in the Rocco Lab.

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#### James Rocco, MD, PhD

Professor and Chair

Department of Otolaryngology –

Head and Neck Surgery

The Objectate University College of

The Ohio State University College of Medicine

The Mary E. and John W. Alford Research Chair in Head and Neck Cancer

The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute



#### **Letter From the Chair**

The Department of Otolaryngology – Head and Neck Surgery has achieved remarkable accomplishments in FY24, securing the No. 18 position in the Blue Ridge Institute for Medical Research rankings. Additionally, it has again been honored as the No. 5 otolaryngology residency program in the nation by Doximity Residency Navigator and has been recognized among the top ENT programs by U.S. News & World Report.

I am incredibly fortunate to lead a group of such talented individuals, and I am excited to share their progress and achievements with you.

#### Research and innovation

I am immensely proud of the research accomplishments of our department this past year. Notably, our NIH funding remained stable at \$5.4 million for FY24, securing our No. 18 ranking among all ear, nose and throat programs in the 2023 Blue Ridge Institute for Medical Research rankings. This year, I am excited to highlight groundbreaking work in our laboratories, including innovations in cancer research through AI and living tumor models, advancements in neurofibromatosis and hearing loss detection, and the continued development of a comprehensive swallowing center, among others.

#### Clinical practice

Clinical growth across our department continues to skyrocket. To meet additional access demands in 2024, we proudly welcomed five new faculty members to our team: pediatric otolaryngologists Ashley Miller, MD, and Rishabh Sethia, MD; surgical oncologist Lauren Miller, MD, MBA; rhinologist Vinay Rathi, MD, MBA; and facial plastic and reconstructive surgeon Kevin Quinn, MD. We are fortunate to have brought on such a talented and diverse group of physicians, and I am enthused by the contributions and expertise they will bring to the department.

#### Education

Education remains central to our mission, and this year we have made further advancements. Recognizing the need for a standardized core curriculum in otolaryngology, Meredith Lind, MD, FAAP, FACS, spearheaded the development of the Otolaryngology Core Curriculum. This initiative, launched in 2024, has garnered widespread adoption across many residency programs nationwide.

Additionally, we launched an innovative program to broaden access to otolaryngology research for medical students. Entering its second year and supported by Nolan Seim, MD, this program provides aspiring otolaryngologists with firsthand research and clinical experience, fostering a new generation of skilled professionals in our field.

#### Leadership and recognition

In addition to their clinical and academic responsibilities, our faculty members remain committed to embracing leadership opportunities. I'm proud that so many of my colleagues have been named leaders within professional organizations this year, and I'm delighted to see so many familiar names listed among Castle Connolly Top Doctors. Highlights of our team's individual achievements can be found on page 32 of this report.

#### Service and philanthropy

The department strives to educate and serve beyond its own institutions. Leading this cause, Matt Old, MD, and a team of senior surgeons, fellows, residents and medical students, anesthesiologists, nurses, and speech and language pathologists embarked on a two-week medical mission, operating out of a small hospital in Malindi on Kenya's southeast coast.

His team performed 60 advanced surgeries and more than 100 minor surgeries and conducted hands-on training sessions for local doctors, focusing on advanced surgical techniques. Beyond patient care and provider training, the team worked to establish a sustainable framework for ongoing care after their departure. Dr. Old's mission exemplifies the importance of collaboration, while making a lasting impact on global health care, fostering sustainability and strengthening medical care in Kenya for years to come.

The achievements of 2024 have been remarkable, and I am confident that 2025 will bring even more success. On behalf of the Department of Otolaryngology – Head and Neck Surgery, I invite you to delve into our annual report and share in our accomplishments.

### **By the Numbers**



#### The Ohio State University College of Medicine

**Tier 1 (top 16)** in research by *U.S. News & World Report* 

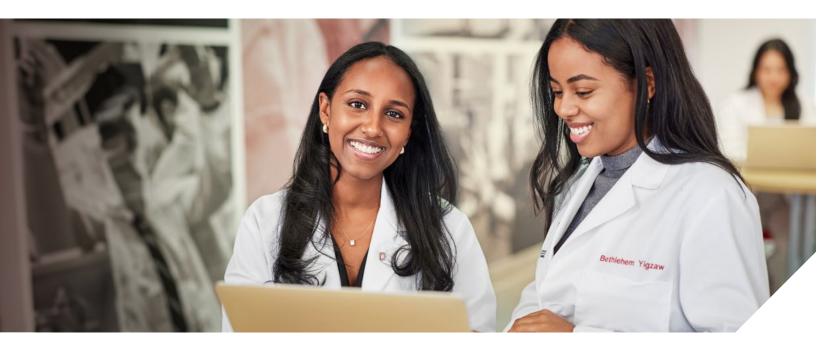
\$477M+ in total research funding

**20** clinical departments

**8** basic science departments

**2K+** active research studies and clinical trials

**5K+** total learners



#### The Ohio State University



**39K+** full-time equivalent employees

**580K+** living alumni around the world

**18** colleges and schools

**250+** majors

#### **The Ohio State University Wexner Medical Center**

22.8K+ employees

**2,013** attending physicians

**1,018** residents and fellows

**5,139** nursing staff

**\$5.9B** revenue





**Third-largest** cancer hospital in the country

**\$76M+** in total NCI grant funding in 2024

46 NCI grants awarded in 2024

**600+** clinical trials available

**5.8K+** faculty and staff and **270+** volunteers

**1.7K+** cancer researchers





In FY24, the Department of Otolaryngology – Head and Neck Surgery published 255 articles in industry-leading peer-reviewed journals; continued to be a national leader in the exploration of ear, nose and throat, head and neck cancer and human communication disorders through 42 active clinical trials; and produced groundbreaking research funded by 37 grants from national sources.



Scan the QR code to see our publications, clinical trials and research funding Advancing otolaryngology research for neurofibromatosis and

hearing loss detection

Yin Ren, MD, PhD, a distinguished physician-scientist at The Ohio State University Wexner Medical Center, is leading innovative research on neurofibromatosis and hearing loss. His work highlights the medical center's commitment to advancing otolaryngology and developing new diagnostic and therapeutic options.

"NF2 is a devastating condition that can severely impact a patient's quality of life," Dr. Ren says. "By developing more representative research models, we hope to gain new insights into the disease process and accelerate the development of more effective treatments."



Read more about Dr. Ren's NF2 modeling and hearing loss diagnostics

# ALT-VISION lab draws surgeons worldwide for advanced research

The Anatomy Laboratory Toward Visuospatial Surgical Innovation in Otolaryngology and Neurosurgery (ALT-VISION) at The Ohio State University Wexner Medical Center leads the world in training surgeons and advancing skull base surgery technology.

A research and education lab, ALT-VISION allows visiting researchers to work with cadaveric specimens and 3D neuronavigation techniques to learn, refine and develop surgical approaches or to conduct specific anatomical research.

"Skull base surgery is a very complex anatomical area," says Ricardo Carrau, MD, co-director of ALT-VISION and professor of Otolaryngology – Head and Neck Surgery at the Ohio State Wexner Medical Center. "It requires the surgeon to study anatomy in detail because it's very complex and full of things critical for life. That's why the laboratory has become so important."



Scan here to read more about the ALT-VISION lab



# Redefining cancer research with AI and living tumor models

Department of Otolaryngology researchers in the Rocco Lab along with pathology experts at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James) are collaborating on head and neck cancer research by integrating artificial intelligence (AI) with groundbreaking tumor modeling techniques. This work, led by Bhavna Kumar, MS, program director; Edmund Mroz, PhD, research scientist in the Department of Otolaryngology – Head and Neck Surgery; and Anil Parwani, MD, PhD, chair and clinical professor of Pathology, is poised to revolutionize cancer diagnosis and treatment while paving the way for breakthroughs in other cancer types.

#### Leveraging AI for biomarker detection

A key innovation of the research team involves using AI to analyze biomarkers, including estrogen receptor alpha ( $ER\alpha$ ), which has been linked to improved survival rates of head and neck cancers associated with the human papillomavirus (HPV).

"The observation that estrogen receptor alpha is expressed in head and neck tumors was very novel and interesting," Kumar, the project coordinator, says. "What's even more intriguing is that patients with estrogen receptor alpha–positive tumors seem to have better outcomes and survival rates."

The team analyzed more than 300 tumor samples using an AI algorithm initially designed for breast cancer. While the algorithm successfully identified  $ER\alpha$  expression, the researchers are refining it to enhance accuracy for head and neck tumors.

incorporation of digital AI in pathology is still in its infancy, but the potential is tremendous. By training AI algorithms on our growing database of digitally scanned tumor samples, we hope to accelerate analysis and uncover new insights to guide clinical decision-making.

The team employs a rigorous validation process, which combines AI-generated results with manual by head and neck pathologists Abberly Lott Limbach, MD, at The Ohio State University Wexner Medical Center and William Faquin, MD, PhD, at Mass General Brigham to ensure accuracy. They also are exploring AI's potential to detect other key biomarkers, such as p16, an HPV indicator, with the goals of understanding the spatial relationships among tumor cells and integrating AI-assisted diagnostics into clinical practice.

"AI could transform how we diagnose and treat head and neck cancers," Dr. Mroz says, emphasizing the technology's potential to streamline pathology workflows and enable more precise decision-making.

#### Advancing tumor research with living cell models

- Bhavna Kumar, MS

In parallel, researchers are exploring innovative methods to study tumors at the cellular level. Bhavna Kumar also leads a project cultivating living tumor cells from fresh patient samples.

Unlike fixed-tissue samples, which provide static snapshots, living cell models allow researchers to observe tumor behavior and evolution over time.

Tumor cells (typically from epithelial tumors found in the skin or the mouth lining) in tissue culture dishes are grown in a controlled environment with fibroblasts, which support epithelial cell proliferation, further enhanced by adding the drug Y-27362. When cells start to fill a dish following repeated division, some are "passaged" into a fresh dish for extended proliferation to produce large quantities for study.

Researchers found that adding a second drug targeting a separate pathway significantly improves cell culture growth, enabling tumor cell growth indefinitely with an 80% success rate.

However, Dr. Mroz points out that while the technique they use wasn't originally developed in their lab, we added an important step, a process that made a big difference.

Researchers also use xenograft models, implanting tumor cells into mice to examine growth patterns and test therapies. This approach has been especially valuable to study rare cancers like adenoid cystic carcinoma, a slow-growing yet fatal tumor.

"The goal is to understand how these cultured cells compare to the original tumor," Dr. Mroz says. "We're looking to determine why this happens and how the biology of the tumor cells might change over time."



Scan here to read more about how cancer treatment is being revolutionized

Photo above: Bhavna Kumar, MS, reviews pathology images.

Novel research enhances the understanding and performance of cochlear implants

Cochlear implants were first approved for hearing restoration in the 1980s, but researchers are still studying the detailed nerve interactions that underpin their function. Shuman He, MD, PhD, professor and vice chair of research in the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center, has made big strides in advancing that understanding.

"I work with adult and pediatric patients who get a cochlear implant due to hearing loss," says Dr. He. "The overall goal is to identify biomarkers based on the neural response generated by their system to predict cochlear implant benefit and to generate clinical tools based on scientific evidence to facilitate the programming process."

The approach is to record the patient's neural response in their auditory system and use that data to predict how well the patient will perform with their cochlear implant. Dr. He says they can "measure the response from the patient's nerve, which is the first neural structure that receives the stimulation from a cochlear implant."

In the last two years, Dr. He's team developed new tools to quantify how well neurons are firing together in human cochlear implant patients. This process evaluates the nerve's response to the sounds delivered by the implant. A fundamental question is whether this is a cognitive issue, a device issue or a system issue.

Many cochlear implant users can understand speech just fine in a quiet environment. But Dr. He says, "Once you add some noise, it becomes mission impossible."

The study, "Peripheral Neural Synchrony in Post-Lingually Deafened Adult Cochlear Implant Users," was published in medRxiv.

Dr. He notes that although cochlear implants have been standard clinical medical treatment for 40 years for people with hearing loss, how the devices are programmed isn't evidence-based. Different manufacturers produce devices, and each manufacturer will suggest a set of parameters to program the device. But those can range, Dr. He says, from 900 up to 5,400 hertz. "That's a huge difference. If you ask the different manufacturers why they recommend those numbers, they can't tell you."

Due to her research and the resulting better understanding of the cochlear nerve, "we'll be able to better recommend the programming process for each individual patient," Dr. He says.

How well the nerves fire at the same time determines how well the patient can understand the speech when there is background noise, which is the most difficult task for cochlear implant users.

- Shuman He, MD, PhD

# Bringing aerodigestive research to Ohio State to create a comprehensive swallowing center

Emily Plowman, PhD, CCC-SLP, professor of Otolaryngology – Head and Neck Surgery at The Ohio State University College of Medicine, directs the Aerodigestive Research Core (ARC) laboratory she established in 2013. The mission of the ARC lab is to improve assessment of and clinical management approaches to upper aerodigestive tract disorders to optimize function, quality of life and ultimately survivorship in individuals suffering from breathing, swallowing and communication disorders.

The ARC lab's approach is to conduct pragmatic, meaningful clinical research "so that clinicians can immediately use outcomes from our research and incorporate them into their daily practice," says Dr. Plowman. Her research is currently funded by the National Institute of Nursing Research (NINR), the National Institute on Aging (NIA), the National Cancer Institute (NCI) and the U.S. Department of Defense (DOD).

"Our recent work in the Cardiac Intensive Care Unit identified that dysphagia, or swallowing impairment, in patients recovering from open-heart surgery represents a significant predictor for pneumonia, reintubation, length of hospital stay, and most importantly, 90-day mortality," says Dr. Plowman.

"Given the gravity of dysphagia in this setting, our NINR R01 is examining independent dysphagia risk factors following cardiac surgery to develop and validate an evidenced-based aspiration risk prediction algorithm," says Dr. Plowman. "Similar to our work in ALS, we will then translate our findings to create an open-access dysphagia risk calculator for real-time clinical use to guide triaged care pathways."

Dr. Plowman is also collaborating with Katherine Hutcheson, PhD, CCC-SLP, (MD Anderson Cancer Center) and Nicole Rogus-Pulia, PhD, CCC-SLP, (University of Wisconsin-Madison) on a dissemination and implementation (D&I) clinical trial that the NCI funds.

The NIA funds a third project, which is collecting the largest dataset to date of healthy videofluoroscopic swallowing across the lifespan in collaboration with Catriona Steele, PhD, CCC-SLP, (University Health Network, Toronto). This work will produce an open-access, comparative, healthy dataset for clinicians to facilitate evidence-based interpretation of the presence, nature and severity of swallowing impairment.

Finally, her fourth project, supported by the DOD, is evaluating the safety and potential efficacy of the drug metformin for treating bulbar dysfunction in individuals with C9orf72 amyotrophic lateral sclerosis (ALS) in collaboration with Laura Ranum, PhD, and James Wymer, MD, FAAN, at the University of Florida.

Moving into 2025, Dr. Plowman's next step is to establish a Comprehensive Swallowing Center at The Ohio State University Wexner Medical Center Eye and Ear Institute.



# Department of Otolaryngology pioneers innovation in patient documentation

The Ohio State University Department of Otolaryngology – Head and Neck Surgery has recently enhanced its approach to inpatient charting, focusing on better documenting patients and their comorbidities prior to and during hospitalization. "We've revamped how we do inpatient charting so that when coders go through charts now, they have more information to help better stratify outcomes," says Minka Schofield, MD.

#### ENT leaders launch new dashboard

In a comprehensive review of its performance metrics, the department identified opportunities to enhance coding accuracy, which is crucial for accurate patient documentation and outcomes.

Matthew Old, MD, and Minka Schofield, MD, MPH, spearheaded initiatives to review and improve medical coding practices. The initiative served two purposes: to improve cross-department coding in an environment where patients with comorbidities are sometimes seeing multiple specialists; and to review the department's *U.S. News & World Report* ranking, as the application of patient coding underpins the department's ranking framework. While the primary goal of the audit was to remove subjectivity in coding and create more opportunities for coding review, it also sought to lead to better patient outcomes for multi-case individuals and improved data output for the university.

Dr. Schofield, a clinical professor and director of the Division of General Otolaryngology, emphasized the need to study the methodology behind coding assignments. "We discovered that coding can be measured in various ways depending on the program or organization," Dr. Schofield explains. This insight prompted a review that identified potential improvements in the coding data.

The investigation paid off, highlighting opportunities for improvements in coding, documentation, and communication between clinical and coding teams. Drs. Old and Schofield collaborated with the university's coding department to implement a robust review system. This new process ensures immediate analysis of any mortality case attributed to ENT, which allows for timely corrections and adjustments to accurately reflect patient outcomes.

The department's efforts culminated in a coding accuracy dashboard, which enables real-time monitoring and review of coding cases. "Interestingly, because of this effort, the medical center decided to develop a more formal process for all departments to review their coding data and challenge any inaccurate assignments," Dr. Schofield says. "The dashboard provides monthly data updates, which is much more current than the annual reporting we previously relied on."



Scan here to learn more about the department's new coding accuracy dashboard

CLINICAL PRACTICE CLINICAL PRACTICE

# Vestibular center will serve often overlooked patients with multidisciplinary approach

Led by neurotologist Desi Schoo, MD, an interdisciplinary team of specialists across The Ohio State University Wexner Medical Center has been ramping up efforts to formalize a new vestibular center under the direction of the Department of Otolaryngology – Head and Neck Surgery that promises a streamlined pathway to targeted treatments for patients with chronic dizziness and balance issues.

A goal is to eliminate the frustration and lengthy timeline many of these patients have faced by pulling together highly skilled experts focused on care coordination, research and ongoing learning.

"One of the patient populations that is traditionally overlooked, underdiagnosed and mismanaged is patients with chronic dizziness," says Dr. Schoo, assistant professor in the Division of Otology, Neurotology and Cranial Base Surgery. "We're getting together all the stakeholders who might manage these patients instead of having patients bounced around before finally, maybe, finding the person who knows what's going on or how to treat them."

These stakeholders include:

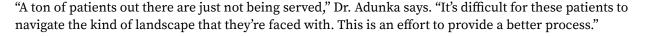
- Otolaryngologists
- Neurologists, including neurotologists and headache specialists
- Vestibular audiologists
- · Vestibular physical therapists
- Rehabilitation psychologists

Developing a center to address vestibular problems is a unique endeavor, and the hiring of Dr. Schoo in 2023 was a pivotal step toward making it a reality, says Oliver Adunka, MD, division director of Otology, Neurotology and Cranial Base Surgery.

The Ohio State Wexner Medical Center has expertise in all the disciplines necessary to move the needle, Dr. Adunka adds, and putting everyone under one umbrella is critical to the collaboration that best serves this growing patient population. In addition, the department has invested in state-of-the-art equipment including a Visual Eyes 525 Videonystagmography caloric system, an Interacoustics Eclipse EP25 ASSR/VEMP system, and a Virtualis MotionVR+ system to enhance diagnostics across many vestibular disorders.

He notes that dizziness is the most common reason patients give for calling the hospital appointment line, but as many as 30% of people with dizziness visit numerous providers without getting a diagnosis.

Photo above: Desi Schoo, MD, assesses a veritgo patient.



Saul Strieb, AuD, audiologist and vestibular laboratory coordinator, says the center also will allow partners to serve more patients, access the latest technology and ensure all members of a patient's care team are able to follow treatment developments.

He says the interdisciplinary approach already is successfully practiced by a panel that takes on the most challenging cases.

"It's about effective identification of what the patient has and then what's the best management," Strieb says. "It's all very holistic and should lead to good diagnosis and care."

Treatment can differ significantly depending on the cause of vestibular problems, and many conditions can be addressed fairly quickly if there's an understanding of that cause, says Matthew Bjelac, DPT, PT, NCS, a physical therapist who works with patients with vestibular disorders.

"Putting the patient at the center of their condition and having everyone on the medical team on the same page is going to achieve a faster, more ideal outcome," Bjelac says. "It's being able to really collaborate, bounce ideas off each other, learn in real time. That doesn't happen a lot in medicine."

Vestibular therapists are available to patients at at multiple ambulatory centers across central Ohio, an asset that will further help make the vestibular center successful.

Vestibular rehabilitation was initiated at the university in 1999 when Greg Wenger, PT, DPT, OCS (currently a physical therapist at The Ohio State University Wexner Medical Center Martha Morehouse Pavilion), received his first referral for dizziness and began pursuing further continuing education for this diagnosis. This development marked the beginning of a strong collaboration with neurotologists, according to Sara Rismiller, PT, MPT, rehab services manager for Neurologic Rehabilitation at Outpatient Care New Albany.

"The Ohio State tripartite mission of clinical care, education and research really lends itself to this type of care," Rismiller says. "And the structure of Ohio State that allows us opportunities to pursue interdepartmental relationships and to be involved with clinical research has been key for this program's growth."

Dr. Schoo says the Ohio State Wexner Medical Center also has the vast support and infrastructure needed to make such a venture possible.

"The departmental and faculty support for this type of research was just overwhelming," he says. "Clinically, it's very apparent to me that we have a lot of pieces to the puzzle that are missing or not as well organized elsewhere. And the size of our institution allows us to reach and treat and help people."



Treatment can differ significantly depending on the cause of vestibular problems, and many conditions can be addressed fairly quickly if there's an understanding of that cause.

- Matthew Bjelac, DPT, PT, NCS

**CLINICAL PRACTICE** 

# **Empowering head and neck cancer patients through education**

At The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James), an innovative initiative is reshaping postoperative care for head and neck cancer patients. Recognizing an opportunity to enhance care and reduce hospital stays, Taylor Freeman, MD and resident, Ohio State, and Nolan Seim, MD, MBA surgical oncologist and clinical professor in the Department of Otolaryngology – Head and Neck Surgery, developed an innovative educational video to empower patients to remove their surgical drains at home safely.

The project addresses a critical aspect of recovery following complex head and neck cancer surgeries. Effective surgical drain management reduces complications such as seroma formation, infection and delayed wound healing. However, patients and caregivers often feel overwhelmed despite receiving inclinic instructions.

Empowering patients with clear, high-quality educational tools that complement their in-person training is essential to improve outcomes, according to Dr. Seim. "Proper drain management is pivotal, not just for the immediate postoperative period, but also for instilling confidence in patients as they transition to at-home care."

The team secured funding to create a professionally produced video designed with input from both surgical teams and patients. The video provides a step-by-step visual guide that covers hand hygiene, drain removal techniques and early signs of complications.

"We know that patient understanding and adherence to postoperative care directly correlate with complication rates," Dr. Freeman says. "By creating a video that patients can access as often as they need to, we're reinforcing their training and helping mitigate preventable issues."

The initiative also expands access to care by reducing unnecessary hospital visits and saves patients the cost and hassle of additional postoperative visits. This is especially beneficial for patients traveling long distances for treatment. "It aligns with [the university's] overall mission of access to care," Dr. Seim says.



By creating a video that patients can access as often as they need to, we're reinforcing their training and helping mitigate preventable issues.

- Nolan Seim, MD, MBA



Patients really do like taking some ownership in their care, it's exciting when they come back, and they tell you about how they did it. They're very proud.

- Taylor Freeman, MD and current resident

The initial version, created during the COVID-19 pandemic, featured a mannequin to demonstrate drain removal. But after positive patient feedback, the physicians partnered with a marketing agency to produce a more realistic version with real patients.

Released earlier this year, the new video, available in English and Spanish, addresses common questions, such as where to cut the suture. It also features real patients undergoing actual drain removals, which makes the content both authentic and relatable. It's the centerpiece of a comprehensive educational toolkit that includes handouts and 3D-printed models.

Since its release, the program has achieved impressive results. More than 500 patients have successfully removed their surgical drains at home, with a success rate exceeding 95%. This has significantly decreased hospital stays and freed up clinic resources, which has enabled the ENT department to accommodate more follow-up and new patient appointments.

"We spend a lot of time with the patient beforehand so they're comfortable with the procedure," Dr. Freeman says, "but they always have a choice to come in to have us do it." Most patients choose the at-home program, though. "Patients really do like taking some ownership in their care," she says. "It's exciting when they come back, and they tell you about how they did it. They're very proud."

The team is exploring opportunities to expand this approach to other procedures, such as tracheotomies and laryngectomies. Fully funded for the next three years through a patient care innovation award, the initiative underscores how leadership at the Ohio State Wexner Medical Center integrates innovation with clinical expertise to enhance patient outcomes.

The project's success has garnered national attention. The team, along with Rishabh Sethia, MD, pediatric otolaryngologist at Nationwide Children's Hospital and assistant professor of Otolaryngology – Head and Neck Surgery at The Ohio State University College of Medicine, published their findings in *The Laryngoscope* and has presented this work at national conferences.

"Our goal is to share this effective protocol with other head and neck teams across the country," Dr. Seim says. By addressing an often-overlooked aspect of postoperative care, the Ohio State Wexner Medical Center sets a new standard for patient education and empowerment and reaffirms its commitment to innovation and excellence in otolaryngology care.

**CLINICAL PRACTICE** 

### Welcome, new recruits



Ashley Miller, MD, joins Nationwide Children's as a pediatric otolaryngologist

Ashley Miller, MD, joins Nationwide Children's as a pediatric otolaryngologist and maintains an academic appointment in the department.

Dr. Miller's research has been published in *The Laryngoscope, Dysphagia* and *JAMA Otolaryngology* — *Head & Neck Surgery*.

Dr. Miller trained as a fellow in Pediatric Otolaryngology at Cincinnati Children's Hospital Medical Center before completing an additional year-long fellowship

in laryngology at the Medical University of South Carolina in Charleston. Dr. Miller completed her residency training in otolaryngology – head and neck surgery in a combined program in Boston at Harvard Medical School, Mass Eye and Ear and Mass General Brigham. She earned her medical degree at the University of Michigan Medical School in Ann Arbor.



Lauren Miller, MD, MBA, joins the Department of Otolaryngology – Head and Neck Surgery as a head and neck surgical oncologist

Lauren Miller, MD, MBA, has joined the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University College of Medicine as a head and neck surgical oncologist. She specializes in treating patients with disorders of the head and neck region, with a focus on microvascular reconstruction for patients who received head and neck cancer ablation.

"I am thrilled to be joining the Ohio State faculty," Dr. Miller says. "I look forward to working with the head and neck team to provide excellent surgical care for our cancer patients."

Dr. Miller completed her fellowship training in head and neck surgical oncology with The Ohio State University Wexner Medical Center. She completed her residency in otolaryngology – head and neck surgery in a combined program in Boston at Harvard Medical School, Mass Eye and Ear and Mass General Brigham. Dr. Miller earned her medical degree from the University of Pennsylvania in Philadelphia and her MBA from The Wharton School in Philadelphia.



Vinay Rathi, MD, MBA, joins the Department of Otolaryngology – Head and Neck Surgery as a rhinologist and health policy researcher

Vinay Rathi, MD, MBA, has joined the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University College of Medicine as a rhinologist and health policy researcher.

"My experience has taught me the importance of understanding the strength of clinical evidence that supports new technology and forces that influence the cost of care," Dr. Rathi says. "I want to help people understand and navigate their health

care options and then support the right decision for them."

Dr. Rathi completed a fellowship in Rhinology and anterior skull base surgery at the Medical University of South Carolina in Charleston. He completed his residency training in otolaryngology – head and neck surgery in a combined program in Boston at Harvard Medical School, Mass Eye and Ear and Mass General Brigham. Dr. Rathi earned his medical degree from the Yale School of Medicine in New Haven, Connecticut, and an MBA from Harvard Business School in Boston.



Kevin Quinn, MD, brings facial nerve reanimation and reconstruction expertise to the Division of Facial Plastics

Kevin Quinn, MD, has joined the Division of Facial Plastics at the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center as a facial plastic and reconstructive surgeon and an assistant professor. Dr. Quinn brings expertise in facial nerve reanimation and reconstruction to the department.

"I'm excited to join the Ohio State team and look forward to improving access to specialized care for patients with facial nerve pathology and paralysis," Dr. Quinn says. "Advancing care and functionality for these patients will expand Ohio State's robust neurotology and head and neck oncology programs."

Dr. Quinn finished his fellowship training in facial plastic and reconstructive surgery with an emphasis on facial paralysis rehabilitation with Tessa Hadlock, MD, at Mass Eye and Ear and the staff at Harvard Medical School in Boston. He earned his medical degree from the University of Maryland Medical School in Baltimore. After three years of general surgery residency, he transitioned to otolaryngology residency at Virginia Commonwealth University in Richmond, Virginia.



Rishabh Sethia, MD, joins Nationwide Children's as a pediatric otolaryngologist

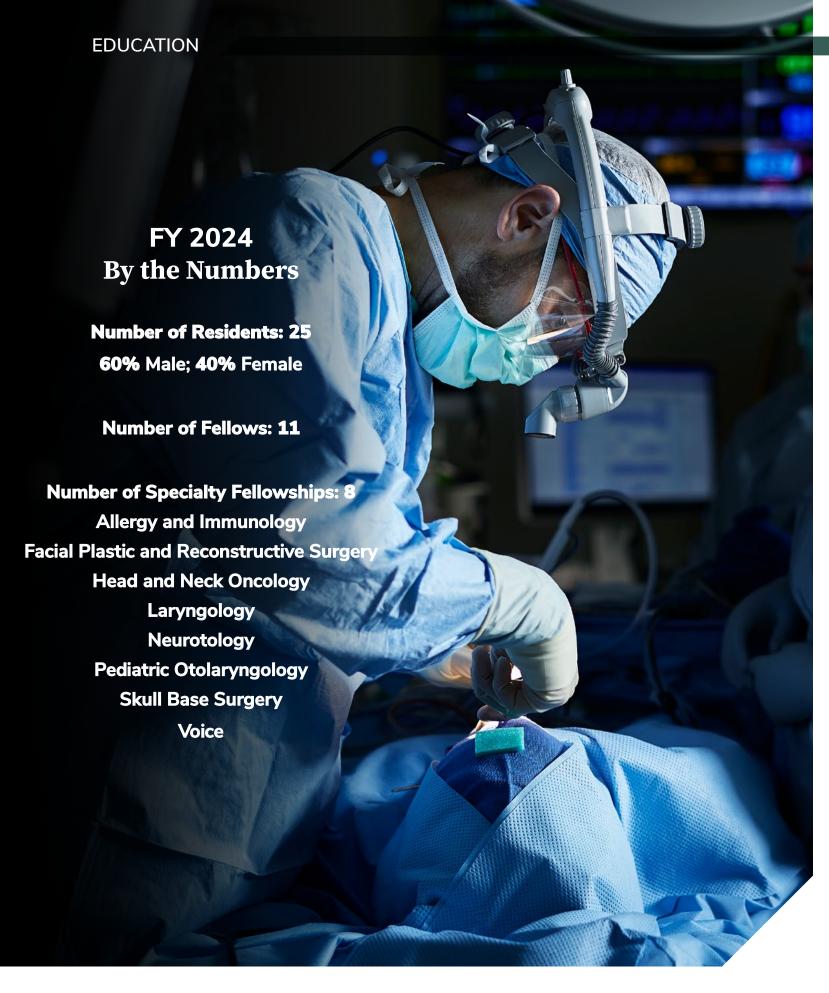
Rishabh Sethia, MD, has joined Nationwide Children's as a pediatric otolaryngologist. Dr. Sethia has a special interest in sinus, endoscopic and skull-based surgery.

Dr. Sethia is co-founder and director of the OSUCOM ENT Mentorship Program and the Altered Airway Anatomy Course. The course was developed to provide teaching simulation and expanded rapidly. Currently, all third-year medical students go

through the program as an established part of their curriculum.

"I'm thrilled to be back in Columbus and at Ohio State. I look forward to being active clinically, as well as in teaching and mentorship," Dr. Sethia says. "I believe that mentorship is critical to success, and I plan to continue and expand the ENT Mentorship Program as well as the Altered Airway Anatomy Course."

Dr. Sethia completed his otolaryngology residency at Ohio State before finishing a fellowship in pediatric otolaryngology – head and neck surgery at Northwestern Lurie Children's Hospital in Chicago. Dr. Sethia earned his medical degree from Ohio State.



### Ohio State Wexner Medical Center and Nationwide Children's Hospital Allergy/Immunology Fellowship continues through its 16th year

Launched in 2008, The Ohio State University Wexner Medical Center and Nationwide Children's Hospital Allergy and Immunology Fellowship Program is completing its 16th year. In that time, the fellowship has trained two fellows per year, with a 100% board pass rate.

One of the unique aspects of the program, "is that it's housed in Ohio State, but is a combination of adult and pediatric allergy and immunology. Allergy is one of the unique subspecialties. Whether you have a primary background in internal medicine or pediatrics, the board covers a specialization with both." says Monica Kraft, MD, clinical assistant professor in the Department of Otolaryngology at the Ohio State Wexner Medical Center and associate program director of the fellowship.

The two-year program is administered through The Ohio State University College of Medicine and is designed to meet guidelines created by the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Allergy and Immunology (ABAI). The fellowship program provides 12 months of clinical experience, split between the Ohio State Wexner Medical Center and Nationwide Children's Hospital, including six months of research and additional educational and academic time.

Dr. Kraft says that with Rebecca Scherzer, MD, the fellowship program's director, they "coordinate the fellow clinical experiences to rotate in continuity clinics at both NCH Allergy and Ohio State Allergy weekly, and alternate month-to-month consult coverage and electives."

On Fridays, the didactic session offers opportunities for faculty from both institutions to meet and present important topics in allergy and immunology to the fellows. Dr. Kraft says, "I think having the fellowship program keeps our divisions feeling like one 'team' of faculty rather than two separate institutions."

Because the Division of Allergy and Immunology resides within the Department of Otolaryngology, there is typically more of a partnership with ear, nose and throat (ENT) compared to other programs that are usually associated with internal medicine, pulmonology or rheumatology. This allows fellows, says Dr. Kraft, "to get close-up experience" with ENT-specific conditions that significantly overlap with allergies, such as chronic sinusitis with nasal polyps, vocal cord dysfunction or immune deficiency. This gives fellows real-world experience with differential diagnoses for these types of indications.

The fellows also rotate through other areas depending on their future career paths. For example, fellows may spend more time in Allergy and Immunology at Nationwide Children's Hospital, or if they have an interest in oncology, they may rotate with Hematology, Oncology and Marrow Transplant.

"We're not surgeons," says Kraft. "We are medical doctors, but we specialize in allergic diseases and immune deficiencies. So, we train fellows to become competent clinicians, either in academics, private practice or industry. It's created a nice partnership and potential for collaboration."

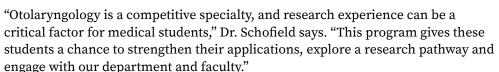


# New program expands access to otolaryngology research

The Ohio State University Wexner Medical Center Department of Otolaryngology – Head and Neck Surgery launched an innovative program designed to broaden access to otolaryngology research for medical students who might not otherwise have exposure to the field. Now entering its second year, the program allows aspiring otolaryngologists from underserved or geographically disadvantaged areas to gain hands-on research and clinical experience.

"We're aiming to identify medical students who don't have access to otolaryngology research in their area," says Nolan Seim, MD, MBA, a clinical associate professor and one of the program's key supporters. "This program offers them a scholarship or award to spend up to three months working with our faculty on meaningful research projects."

Led by Minka Schofield, MD, MPH, professor and director of the Division of General Adult and Pediatric Otolaryngology at Ohio State, the program focuses on recruiting students who come from regions without significant otolaryngology resources. Participants collaborate with faculty members on research projects, gain clinical experience and culminate their time at the university by presenting their findings to the department.



Last year, the program welcomed its first participant, a medical student from Buffalo, New York. During her summer session, she worked alongside multiple faculty members, gained valuable clinical insights, and presented her research findings to the department. Her feedback helped refine the program for its second year. Enhancements included earlier applicant selection to address logistical challenges and greater integration into departmental activities, such as journal clubs and case discussions.

"One of the things we learned from last year is the importance of involving students in a wide range of departmental activities, not just research," Dr. Schofield says. "We've worked to integrate more opportunities for mentorship and collaboration, which provide students with a fuller picture of what a career in otolaryngology looks like."

A department committee oversees the selection process, based on academic performance, leadership potential and a demonstrated commitment to research. Once selected, participants choose from a list of research mentors, aligning their interests and career goals. This ensures that each participant has an experience that maximizes research exposure and personal growth.

The program runs for eight to 12 weeks, depending on the student's schedule, and includes a \$5,000 stipend funded by the department to cover travel and lodging expenses.

"The stipend ensures that all students, regardless of their financial background, have an opportunity to participate without added financial strain," Dr. Schofield says. "It's about removing barriers and creating opportunities."

The program's second year is already successful, with more applications and faculty mentors. The department also is considering other changes, which include virtual research opportunities and increasing the number of participants and the geographic regions they represent. According to Dr. Schofield, "Our goal is to create a meaningful, immersive experience that not only enhances the students' skills but also inspires them to pursue a future in otolaryngology."

The goal is to provide these students with exposure to the field, mentorship and opportunities that they might not have in their home institutions. It's a way to advance their knowledge and skills and diversify and enrich the future of our specialty.

- Nolan Seim, MD, MBA



## Otolaryngology Core Curriculum rolled out nationwide

With approximately 130 medical residency programs in the United States, there has been a need for a standardized core curriculum for otolaryngology trainees. After a decade of effort by many leaders in education, the Otolaryngology Core Curriculum has been launched, headed by Meredith Nicole Lind, MD, FAAP, FACS, clinical professor of Otolaryngology at The Ohio State University and a member of the Department of Otolaryngology – Head and Neck Surgery at Nationwide Children's Hospital.

Dr. Lind is coordinator for education for the American Academy of Otolaryngology – Head and Neck Surgery (AAO-HNS), and in this role has led the efforts to create the Otolaryngology Core Curriculum. The AAO-HNS, as well as the Otolaryngology Program Directors Organization (OPDO) and the Society of University Otolaryngologists (SUO) is actively involved in defining and creating standards and resources for resident and medical student education for otolaryngology in the United States.

The idea is to provide a universal learning curriculum for residents for their general and comprehensive otolaryngology knowledge and to help faculty improve the efficiency and quality of teaching.

- Meredith Nicole Lind, MD, FAAP, FACS

The curriculum officially launched in July 2024, and Dr. Lind says about 109 of the 130 U.S. programs have enrolled. "The idea is to provide a universal learning curriculum for residents for their general and comprehensive otolaryngology knowledge and to help faculty improve the efficiency and quality of teaching."

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Overall, there will be 100 modules for a two-year curriculum. Twenty-five modules were launched in July 2024, with the next 25 available Jan. 1, 2025. The remaining 50 are under development.

In November 2024, Brad deSilva, MD, clinical professor of Otolaryngology at The Ohio State University Wexner Medical Center and vice chair of education in the Department of Otolaryngology – Head and Neck Surgery, presented on the value of the curriculum at the annual meeting for the SUO, OPDO and the Association of Academic Departments of Otolaryngology (AADO). Dr. deSilva says, "There is a weekly module on different topics within our field, and those modules have been developed with resources and hyperlinks that the resident physicians can access and read more on."

The curriculum covers a range of topics, such as adult and pediatric airway emergencies, hearing loss, middle ear disease, and vocal fold paralysis and paresis. It also includes general concepts like professionalism, evidence-based medicine, quality improvements and the business of medicine.

Otolaryngology residency programs can use the curriculum for their full educational program or use it as a supplement. Dr. deSilva says, "There are no other full versions of the curriculum. There are many educational resources that the academy produces that residency programs and departments around the country may purchase, and there are other educational tools produced by other companies, such as question banks. But this is something promoted and organized by our educational leaders within our field."

As the modules are rolled out and utilized, Dr. Lind says, "There will be a continuous review and improvement cycle for each module."

Although the Otolaryngology Core Curriculum is targeting U.S.-based training programs, Dr. Lind says, "We feel there is a role for the curriculum to be used internationally. We are working with our partners across international societies to help create pricing structures that will be fair to different countries who can also benefit from using it for their trainees who are learning about otolaryngology."



#### Awards and distinguished achievements

- Amit Agrawal, MD, was appointed to the first John & Christine Olsen Professorship in Head and Neck Surgical Oncology.
- Charles Elmaraghy, MD, FACS, FAAP, was appointed the John F. Wolfe Endowed Chair in Pediatric Surgery.
- Leslie Kim, MD, MPH, was nominated as the facial plastics course chair for Combined Otolaryngology Spring Meetings.
- Monica Kraft, MD, was elected secretary of the NAIA.
- Emily Plowman, PhD, was named president elect for the Dysphagia Research Society.
- Apoorva Ramaswamy, MD, was named course director for the Advanced Practices in Dysphagia and Voice Laryngology Conference.
- Yen Ren, MD, PhD, was named director of the NF2 Clinic through the Children's Tumor Foundation. He was also named a member of the Academy of Otolaryngology's Committee on Otolaryngology Core Curriculum (Cochlear Implants).
- Nolan Seim, MD, MBA, graduated as valedictorian of the Executive MBA Program at The Ohio State University Fisher College of Business in Spring 2024.
- These faculty members of the Department of Otolaryngology Head and Neck Surgery received promotions in 2024: Stephen Kang, MD, was promoted to clinical professor; Meredith Lind, MD, was promoted to clinical professor; Kai Zhao, PhD, was promoted to professor.
- These physicians from the Department of Otolaryngology Head and Neck Surgery were named Castle Connolly "Top Doctors for 2024": Oliver Adunka, MD; Amit Agrawal, MD; Carol R. Bradford; MD; Ricardo Carrau, MD; Tendy Chiang, MD; Brad deSilva, MD; Edward Dodson, MD; Charles Elmaraghy, MD; L. Arick Forrest, MD; Mitchell Grayson, MD; Jonathan Grischkan, MD; Kris Jatana, MD; Stephen Kang, MD; Leslie Kim, MD; Monica Kraft, MD; Meredith Lind, MD; Prashant Malhotra, MD; Laura Matrka, MD; Matthew Old, MD; Bradley Otto, MD; Enver Ozer, MD; James Rocco, MD, PhD; James Ruda, MD; Minka Schofield, MD; Nolan Seim, MD, Kara Wada, MD; Patrick Walz; and Gregory Wiet, MD.

Amit Agrawal, MD, named to the first John and Christine Olsen Professorship in Head and Neck Surgical Oncology

In 2024, John Olsen, MD, and Christine Olsen created a \$1 million endowed professorship within the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James). Dr. Olsen is a retired chair of the Ohio State Department of Radiology and a former patient of Ohio State's head and neck oncology group.

Amit Agrawal, MD, is the first recipient of the professorship. Dr. Olsen, a cancer survivor and grateful patient of Agrawal's, preferred that consideration be given to a faculty physician specializing in head and neck cancers, which is Dr. Agrawal's special interest, as well as facial plastic and reconstructive surgery.

"The concept behind it is to promote the educational, research and clinical mission of excellence that we hold, not only within the Department of Otolaryngology and the Ohio State Comprehensive Cancer Center – James Cancer Hospital and Solove Research Institute, but medical center-wide," says Dr. Agrawal.

"I've known John and Christine Olsen for a very long time," Dr. Agrawal says. "They are wonderful people. Part of this is their gratefulness toward our institution and our departments. This position supports these institutions' mission by providing support so faculty can continue to engage in all three areas — academic, clinical and research."

Dr. Agrawal's research interests are broad but fall into two main categories. The first is to improve the effectiveness of cancer treatment outcomes while minimizing the major side effects and toxicity.

Many of the cancers he treats tend to metastasize and require a time-honored procedure called neck dissection to remove lymph nodes. "It's very effective, but it carries potential side effects and risks," says Dr. Agrawal. "One of the ways we can mitigate those risks is to perform a less invasive procedure, potentially remove fewer lymph nodes or more important lymph nodes that we think are important in determining how a cancer is behaving, instead of a more radical, extensive procedure."

The procedure is sentinel lymph node biopsy, and Dr. Agrawal says, "that's an area that I've devoted a lot of my time, focus and research expertise toward developing."

A second area of interest is transoral robotic surgery. "I've been specifically interested in this over a long period," Dr. Agrawal says. He is also involved in numerous ongoing, collaborative, multidisciplinary efforts between surgical oncologists, radiation oncologists and medical oncologists.

"John and Christine Olsen's story, in terms of John's battle with cancer, underlines how we were able to help him using many of the elements that we have investigated or are currently investigating," says Dr. Agrawal. "This is very rewarding, and I'm honored to be part of it and a recipient of it."



# Charles Elmaraghy, MD, FACS, FAAP, appointed John F. Wolfe Endowed Chair in Pediatric Surgery

The appointment of Charles Elmaraghy, MD, FACS, FAAP, as the John F. Wolfe Endowed Chair in Pediatric Surgery is a significant milestone for the Department of Pediatric Otolaryngology at Nationwide Children's Hospital. This prestigious position recognizes Dr. Elmaraghy's exceptional contributions to medical education and patient care.

Dr. Elmaraghy, MD, FACS, FAAP, current faculty member in the Department of Otolaryngology – Head and Neck Surgery and clinical professor at The Ohio State University College of Medicine, currently serves as the Director of Pediatric Otolaryngology at Nationwide Children's Hospital. His extensive experience and dedication to the field have earned him this well-deserved honor.

Congratulations to Dr. Elmaraghy on achieving this prestigious milestone! Dr. Elmaraghy's work will continue to have a positive impact on the field of otolaryngology, improving both education and patient care and outcomes.

The John F. Wolfe Endowed Chair is named for John F. Wolfe, a prominent figure known for his role as the publisher of *The Columbus Dispatch* and as chair and CEO of the Dispatch Printing Company.

Mr. Wolfe's legacy of altruism and civic leadership has significantly contributed to numerous projects in central Ohio and beyond, and the Wolfe family has generously supported many initiatives at Ohio State, including cancer research, veterinary medicine, athletic facilities, scholarships, and the establishment of eight endowed chairs and professorships.

Dr. Elmaraghy's career is marked by distinguished professional highlights. He graduated summa cum laude from The Ohio State University and achieved the highest USMLE Step 1 score in the nation in 1998. He was valedictorian at The Ohio State University College of Medicine in 2000 and scored highest in the nation in 2004 on the annual otolaryngology in-service examination.

In addition to his academic achievements, Dr. Elmaraghy is board certified and received his fellowship training at Children's National Medical Center in Washington, D.C., specializing in pediatric otolaryngology. His career interests include sinus surgery, airway problems, head and neck masses, and general pediatric otolaryngology. He is actively involved in training residents, medical students, and other health professionals, and plays a crucial role in the ENT Mentorship Program and in medical school admissions to The COM for the clerkship. His accomplishments reflect his dedication to excellence and his commitment to advancing the field of pediatric otolaryngology.

In recent work, Dr. Elmaraghy and his team at Nationwide Children's Hospital have advanced a large-scale in-office ear tube program that eliminates the need for general anesthesia. This innovation not only alleviates the burden on pediatric patients and their families but also facilitates a higher volume of these routine procedures.

The induction ceremony for Dr. Elmaraghy's appointment to the John. F. Wolfe Endowed Chair took place at Nationwide Children's Hospital on Nov. 20, 2024. His appointment is a testament to his dedication, expertise and commitment to improving patient care and advancing medical education.

Congratulations to Dr. Elmaraghy on achieving this prestigious milestone! Dr. Elmaraghy's work will continue to have a positive impact on the field of otolaryngology, improving both education and patient care and outcomes.





### **Bringing advanced ENT care to Kenya**

In October, a team of more than 30 medical professionals from all over the country embarked on a two-week medical mission to Malindi, Kenya. Their goal: to empower local health care providers through education and training.

Veteran volunteer Matthew Old, MD, professor and director of the Division of Head and Neck Oncologic Surgery within the Department of Otolaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center, joined the mission, which works to create sustainable health care solutions in an underserved region.

"It's basically a boot camp for medical professionals," Dr. Old says. "The focus is educating the local medical care teams instead of just going to do surgeries. It's about creating a lasting impact."

Led by James Netterville, MD, a professor of otolaryngology at Vanderbilt University, the clinical team worked toward two key objectives: to deliver high-quality head and neck surgical care and to train local physicians and staff, which includes medical students, residents and fellows.



It's the perfect combination of service and education, We're trying to develop something sustainable — to train the teachers, build capacity and leave behind a system that thrives without us.

- Matthew Old, MD

Operating out of a small hospital in Malindi on Kenya's southeast coast, the team performed 60 advanced surgeries, treating conditions such as mandibular tumors, oral cancers, thyroid diseases and skin disorders. They also conducted more than 100 minor surgeries and hands-on training sessions for local doctors, focusing on advanced surgical techniques.

"They do so much with so little," says Dr. Old of the Kenyan medical professionals. "They are very adaptable and flexible, and they learn very quickly when given the opportunity and hands-on training."

Malindi, a region historically lacking in otolaryngology services, has been the focus of this annual mission for over seven years. This year's efforts were bolstered by additional funding, which secured five ultrasound machines to enhance diagnostic capabilities.

The mission trip is part of an ongoing partnership between the Caris Foundation, a nonprofit focused on global aid initiatives, and medical institutions across the United States. Institutions such as The Ohio State University, Vanderbilt, Indiana University and others, as well as companies like Synovis MCA and KLS Martin, donate supplies and equipment to support the team's efforts.

"It's the perfect combination of service and education," Dr. Old says. We're trying to develop something sustainable — to train the teachers, build capacity and leave behind a system that thrives without us."

According to Dr. Old, the volunteer team includes senior surgeons, fellows, residents and medical students, anesthesiologists, nurses, and speech and language pathologists.

Next year, Dr. Old plans to help expand the team with additional nurses, surgical techs, residents and fellows to continue to build training and capacity in Kenya. Through this collaborative mission, The Ohio State University Department of Otolaryngology is making a lasting impact on global health care, fostering sustainability and strengthening medical care in Kenya for years to come.



### Long-time donor Linda Dever supports Ohio State ALT-VISION lab

The Ohio State University's Anatomy Laboratory Toward Visuospatial Surgical Innovation in Otolaryngology and Neurosurgery (ALT-VISION) receives funding from a variety of sources, with one of its most consistent and long-term being an annual philanthropic donation by Linda Dever.

"Ms. Dever has been very generous all these years," says Ricardo Carrau, MD, co-director of ALT-VISION and professor of Otolaryngology – Head and Neck Surgery at The Ohio State University Wexner Medical Center. "I treated her husband many years ago. She was very grateful for the care that we gave him for his cancer."

Phillip and Linda Dever owned and operated Devco Oil, Inc., in Cambridge, Ohio. Although Phillip Dever passed away in 2014, Linda Dever has continued her generous support of the mission of the ALT-VISION laboratory. Since her first gift in 2012, Ms. Dever has contributed over \$86,000 to the program, most recently in August 2024.

Ms. Dever has been very generous all these years. I treated her husband many years ago. She was very grateful for the care that we gave him for his cancer.

- Ricardo Carrau, MD

ALT-VISION is a research and education lab that offers visiting researchers the opportunity to work with cadaveric specimens and 3D neuronavigation techniques. With these facilities and expertise, they work to learn about, refine and develop surgical approaches or perform their research projects.

The field of skull base surgery has benefited significantly from the expertise provided by ALT-VISION, producing 35 published studies in 2024 alone, a record number. Over the years, the laboratory has hosted more than 200 scholars from around the world, with 15 in 2024. In addition to training surgeons, the ALT-VISION laboratory has initiated a Medical Student Dissection Program (Introduction to Otolaryngology – Head and Neck Surgery and Neurosurgery Anatomy and Surgical Dissection Techniques) for the fourth-year medical student program. The program provides anatomical and surgical lectures with a hands-on, structured dissection curriculum that leverages the intersection of Otolaryngology and Neurosurgery within skull base surgery.

ALT-VISION's 3D photogrammetry project creates interactive 3D educational anatomical models for cranial and skull base dissections of surgical approaches as a surgical atlas for surgeons. Expanding on that concept, the ALT-VISION lab is creating an application that allows for complex image downloads of different surgical techniques. Initially a printed course manual, the new 3D model incorporates 1,000 to 2,000 cadaveric images linked by artificial intelligence (AI). The application is sponsored by Medtronic and owned by The Ohio State University.

ALT-VISION is not supported by NIH grants but by tuition for the annual course and donations from people such as Ms. Dever.

"We are incredibly grateful for her generosity," Dr. Carrau says. "It allows us to continue performing our valuable work in the lab."

Photo at left: Ms. Dever's contributions support the ALT-VISION lab, which offers hands-on training for medical students by combining Otolaryngology and Neurosurgery techniques within skull base surgery. Inset image: A 3D photogrammetry model based on endoscopic endonasal dissection of the skull base.



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### Give to the future of ENT

The Department of Otolaryngology – Head and Neck Surgery is dedicated to improving lives through research and education. Our efforts have led to many advancements, including an improved understanding of language development in children with hearing loss and groundbreaking findings in the underlying factors contributing to head and neck cancer.

If you're interested in supporting our ongoing efforts, consider giving to the Schuller Endowment Fund.

Honoring our former department chair, David E. Schuller, MD, the fund provides resources for research initiatives, helps us recruit the best scientists and enables important patient care improvements. For more details, go to give.osu.edu/supportENT.



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