

OTOLARYNGOLOGY HEADLIGHTS

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FACULTY

Head and Neck Oncology

John Gleysteen, MD
Courtney Shires, MD
Chris Vanison, MD

Otology

C. Bruce MacDonald, MD

Rhinology and Allergy

Sanjeet Rangarajan, MD

Pediatric Otolaryngology

Tom Long, MD
Jennifer McLevy, MD
Tony Sheyn, MD
Rosemary Stocks, MD, PharmD
Jerome Thompson, MD, MBA
Josh Wood, MD

Facial Plastics and Reconstructive Surgery

Phillip Langsdon, MD

General Otolaryngology

Neal Beckford, MD
Chris Hall, MD
Mac Hodges, MD
Francisco Vieira, MD

Sleep and Airway Surgery

M. Boyd Gillespie, MD, MSc



M. Boyd Gillespie, MD, MSc

LETTER FROM DR. GILLESPIE

Dear Colleagues and Friends,

If there is one word that can capture life in the UTHSC Department of Otolaryngology-Head and Neck Surgery over the past year, it would be **growth**. Growth in provider numbers, growth in subspecialty care, growth in research, and growth in opportunity.

With regard to growth in providers, our team added three new physicians, including myself, over the past year. **Dr. Tom Long** joins our pediatric division at Le Bonheur Children's Hospital. Tom has been a pillar of the Memphis otolaryngology community for many years, faithfully serving children and adults, while supporting this department in an unofficial capacity. We are thrilled to have Tom as a full-time member of our team. **Dr. Chris Vanison** joins our head and neck division at West Cancer Center and Methodist University Hospital, following residency at Northwestern University and a head and neck and microvascular reconstructive fellowship at UC-Davis. Dr. Vanison will supervise head and neck surgery at the Memphis VA Medical Center, while building an ablative and microvascular head and neck program at Methodist University. Dr. Vanison's subspecialty interests include advanced cutaneous malignancy, and functional restoration following head and neck cancer surgery.

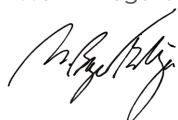
The second half of 2017 will see the addition of new arrivals and old friends. **Dr. John Gleysteen** will join the head and neck division at West Cancer Center and Methodist University Hospital, after otolaryngology training at Oregon Health & Science University and a head and neck/microvascular fellowship at Thomas Jefferson University. Dr. Gleysteen will bring added expertise in transoral robotic surgery (TORS), which will help address the growing number of HPV-related cancers of the tonsil and base of tongue. **Dr. Sanjeet Rangarajan** will arrive with expertise in sinus surgery and allergy, after completing an otolaryngology residency at The Ohio State University and a rhinology/skull base fellowship at Thomas Jefferson University. Dr. Rangarajan will be the only fellowship-trained rhinologist in the Memphis metro area, and will be able to address complex sinonasal disorders, as well as minimally-invasive management of tumors of the anterior skull base. **Dr. Josh Wood** was a standout resident in the department before pursuing pediatric otolaryngology training at the University of

Pittsburgh Medical Center. Dr. Wood started a practice focused on difficult pediatric airway, hearing loss, and otologic disorders at Le Bonheur in July 2017. Another long-time friend of the department, **Dr. Neal Beckford**, will join in 2017, bringing added expertise in thyroid surgery, head and neck surgery, and voice and swallowing care. Dr. Beckford's office in Germantown will provide easy access to UTHSC ENT physicians for the growing populations in the eastern metro area. Our residency program under the leadership of **Dr. Rosemary Stocks** was approved for an extra resident to a total of four per year. In March 2017, we successfully matched four outstanding candidates, who started their surgical internship in July 2017.

On the research front, UTHSC Otolaryngology faculty are forming lasting partnerships with basic science investigators in the UTHSC College of Medicine, College of Dentistry, and St. Jude Children's Research Hospital. These collaborations will bear fruit for the benefit of patients in the coming years. The department is also dedicated to bringing the latest in therapy to the people of the greater Memphis area. New clinical trials open for enrollment include hypoglossal nerve stimulation for moderate-to-severe obstructive sleep apnea (OSA); office-based palatal stiffening suture for troublesome snoring; and immunotherapy boosters for oral cancer patients. In the coming months, additional trials will include office-based radiofrequency therapy for mild-to-moderate OSA, and a Centers for Disease Control and Prevention (CDC) prospective study of children with human-papillomavirus of the upper airway. As chair of the department, I am committed to building the infrastructure needed to expand these efforts for the good of the wider community.

In conclusion, I am humbled by the awesome responsibility to lead this department forward to a bright future. Despite the challenges of modern medicine, there will be opportunity in the midst of difficulty. The talented team we are forming will survive and thrive with an uncompromising commitment to excellent patient care, teaching, and research. As always, thank you for your friendship and support.

Warm Regards,



M. Boyd Gillespie, MD, MSc
Professor and Chair
UTHSC Otolaryngology-Head & Neck Surgery

FACULTY PROFILE: **DR. CHRISTOPHER VANISON**

Dr. Christopher Vanison has joined the UTHSC Department of Otolaryngology - Head and Neck Surgery faculty as an assistant professor. He completed his fellowship in head and neck oncologic and microvascular reconstructive surgery at the University of California, Davis, in 2016, under the directorship of Dr. Greg Farwell. Prior to that, he received his MD degree from The George Washington University in Washington, DC, and completed a residency in otolaryngology at Northwestern University in Chicago, Illinois, where he won multiple resident teaching awards.



Dr. Vanison is originally from Long Island, New York, and holds a Bachelor of Science degree in Communication Sciences and Disorders from Northwestern University and a Master of Science degree in Physiology from Georgetown University. During his undergraduate training, Dr. Vanison had the unique opportunity to learn from some of the leaders in speech and hearing sciences, including the late Dr. Jeri Logemann. He credits these experiences with influencing his decision to become an otolaryngologist. Before deciding to pursue a career in medicine, Dr. Vanison studied cello performance and music composition, and he has had several of his original compositions performed by academic and semi-professional ensembles in the New York and Chicago metropolitan areas.

As a member of the division of head and neck surgery, Dr. Vanison will focus on reconstructive surgery and the entire gamut of head and neck ablative surgery, including endocrine surgery, skull base surgery and transoral robotic surgery. He has a particular interest in surgical treatment of advanced skin cancers of the head and neck. Dr. Vanison will serve as director of medical student education within the department, and looks forward to working with and mentoring resident physicians and medical students in this role. Under the leadership of Dr. Boyd Gillespie, he hopes to play an important role in the creation of a comprehensive head and neck cancer division, which will serve the Greater Memphis area and beyond. Dr. Vanison's clinical locations include Methodist University Hospital, West Cancer Center in Germantown, and the Memphis VA Medical Center.

TREATMENT OF ADVANCED CUTANEOUS MALIGNANCIES OF THE HEAD AND NECK

Christopher Vanison, MD

Non-melanoma skin cancers are among the most-common malignancies known to affect the population. While these tumors are typically slow-growing and are diagnosed and treated at early stages, a small subset behaves aggressively and poses an increased risk of metastasis, recurrence, and death. Treatment of these more advanced tumors often requires a multidisciplinary team, including dermatology, otolaryngology-head and neck surgery, radiation oncology, and medical oncology.

At the University of Tennessee Health Science Center and West Cancer Center, we are uniquely poised to collaborate with an excellent team of dermatologists and Mohs surgeons, oculoplastic surgeons, neurosurgeons, radiation oncologists and medical oncologists to treat patients with advanced cutaneous cancers of the head and neck. The Division of Head and Neck Surgery at UTHSC is comprised of fellowship-trained surgeons including **Drs. Courtney Shires, Christopher Vanison, and M. Boyd Gillespie**. Our specialized training allows us to treat complex cutaneous tumors, which may involve the salivary glands, facial nerve, orbit, bony facial skeleton, ear canal, temporal bone, and cervical lymph nodes. Dr. Vanison has expertise in reconstructing complex bony and soft-tissue defects, including the use of regional pedicled flaps (Figures 1-3) for smaller defects, microvascular free flaps for larger or more complex defects, and facial nerve reanimation when needed. **Dr. Bruce MacDonald**, our fellowship trained neurotologist, is often called upon to perform mastoidectomy and intricate facial nerve dissection in cases when tumors involve the main trunk of the facial nerve. Dr. Courtney Shires has extensive training and experience in both endoscopic and open skull base surgery, and she works with skull base neurosurgeons to resect cutaneous tumors, which invade the paranasal sinuses, orbit and anterior skull base. Dr. Gillespie brings significant experience in salivary gland surgery and is internationally renowned for his expertise in this discipline.



Figure 1. 70-year-old fair-skinned Caucasian male with significant sun exposure history with an invasive basosquamous carcinoma of the posterior external auditory canal involving the lobule, anti-tragus, conchal bowl and tympanic portion of the temporal bone.



Figure 2. Lateral temporal bone and partial auriclectomy with facial nerve preservation has been performed (large arrow). A supraclavicular island flap has been raised (smaller arrow), and the cutaneous portion will be used to reconstruct the surgical defect.



Figure 3. The temporal bone and partial auriclectomy defect has been reconstructed with the supraclavicular island flap. The shoulder can easily be closed primarily without functional deficit.

Our patient population includes many individuals from rural areas and agricultural settings with a history of significant sun exposure. The thriving organ transplant institute at Methodist University Hospital has a large population of patients with solid organ transplants who are prone to aggressive and rare cutaneous malignancies due to their immunosuppression. With this growing at-risk population, head and neck surgeons at UTHSC have developed a robust practice treating advanced cutaneous malignancies. Physicians are encouraged to refer patients with these cancers to an otolaryngologist when there is involvement of the salivary glands, facial nerve weakness or paralysis, facial pain, hearing loss, tumors extending deeply into the ear canal, involving the sinuses and skull base, or when there is the potential for cervical lymph node metastasis (see table below). The UTHSC Department of Otolaryngology – Head and Neck Surgery aims to provide comprehensive care to patients with these advanced tumors and are available for consultation regarding ablative and reconstructive treatment options.

For referral or consultation with a member of the UTHSC Head and Neck Division, please call 901.609.3570.

SIGNS OF ADVANCED CUTANEOUS MALIGNANCY OF THE HEAD AND NECK

WHEN TO CONSULT A HEAD AND NECK SURGEON

- Tumor invades bony ear canal or middle ear
- Cervical lymph node metastases are present
- Facial nerve is involved by tumor
- Paranasal sinuses, orbital or skull base tumor invasion
- Tumor invades mandible or maxilla
- Large tumors requiring regional flap or microvascular free flap reconstruction

THE EXIT PROCEDURE

UTHSC DIVISION OF PEDIATRIC OTOLARYNGOLOGY

The Pediatric Otolaryngology Division of the UTHSC Department of Otolaryngology-Head & Neck Surgery has the privilege to practice at two world-class hospitals: Le Bonheur Children's Hospital (our main facility) and St. Jude Children's Research Hospital. The division cares for an average of 600 inpatient consults per year at Le Bonheur's two sites and all the ENT consults at St. Jude. The division performed over 2,000 surgeries, and 6,000 outpatient consultations at Le Bonheur in the past year, and published over 300 peer-reviewed articles and posters and gave over 100 presentations in the past decade.

The Pediatric Otolaryngology Division has a growing experience and interest in the highly demanding EXIT Procedure. The EXIT Procedure, developed in the early 1990s, is an acronym for Ex Utero Intrepartum Treatment, used to deliver babies with airway compression due to cystic hygromas, cervical teratomas, or other congenital obstructions of the airway. These are frequently characterized as Chaos or congenital high airway obstruction syndrome.

The EXIT Procedure starts with a cesarean section under general with the child either partially delivered from the uterus or fully delivered and set on an adjacent table but still attached to the umbilical cord with approximately 15 minutes of working time. The airway is secured by either intubation, tracheotomy, or if all else fails, emergency ECMO. Our team, including Drs. Rosemary Stocks, Jennifer McLevy, Tony Sheyn, and Jerome Thompson have performed eight successful EXIT procedures in recent years. Treated etiologies of the airway obstruction have included a thyroid teratoma, two lingual cysts, four epignathic teratomas, and one vascular abnormality. The team must remain prepared to manage these difficult and stressful airways at all times, since this a unique service not otherwise available in the region.

WHAT IS A SLEEP SURGERY CLINIC?

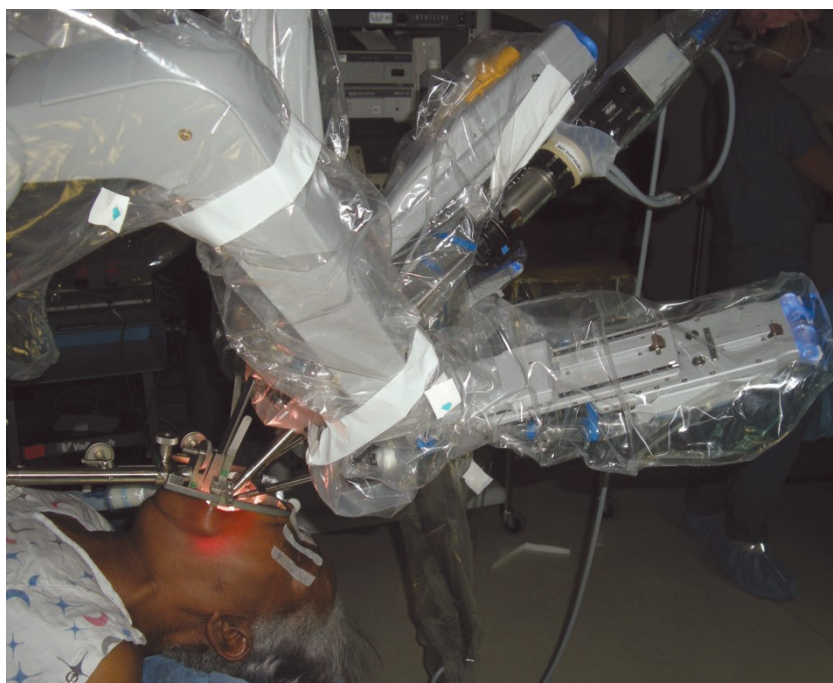
M. Boyd Gillespie, MD, MSc

The Department of Otolaryngology-Head and Neck Surgery in conjunction with Methodist Healthcare is pleased to announce the opening of the **University of Tennessee Methodist Physicians (UTMP) Sleep Surgery Clinic**. Obstructive sleep apnea (OSA) is a prevalent disorder affecting up to 25 percent of adult men and 10 percent of adult women. Untreated OSA leads to increased rates of heart disease, stroke, cardiac arrhythmias, hypertension, weight gain, increased automobile accidents, and reduced quality of life due to daytime sleepiness and snoring. Untreated patients with severe OSA (apnea-hypopnea index >30 per hour) have a 30 percent increased risk of death over the course of 15 years compared to patients without OSA.



Continuous positive airway pressure (CPAP) remains the gold standard for the treatment of moderate to severe OSA. CPAP is readily available, non-invasive, and proven to reduce mortality, snoring, and daytime sleepiness. Unfortunately, up to 50 percent of OSA patients have difficulty tolerating CPAP long-term due to discomfort, nasal blockage, or claustrophobia. There is, therefore, an urgent need to identify and manage patients who are struggling with or have stopped using CPAP.

The UTMP Sleep Surgery Clinic offers a comprehensive approach to patients struggling with CPAP.



Patient prepared for posterior glossectomy using TORS.

The UTMP Sleep Surgery Clinic is ready to intervene in the following scenarios:

1. Alternative to CPAP – Many patients with benign snoring, upper airway resistance syndrome (UARS; multiple arousals during sleep associated with snoring and daytime sleepiness), and mild OSA (apnea-hypopnea index <15) may be eligible for minor office-based or outpatient procedures to open and support the airway in a minimally-invasive fashion. Procedures that work well in this scenario depending on anatomic findings include palatal stiffening techniques (Pillar implant; radiofrequency ablation); nasal surgery (septoplasty, turbinate reduction, nasal valve repair); tongue base reduction (radiofrequency ablation); and/or oral appliance therapy. These techniques allow a patient to be CPAP free, especially if combined with efforts to improve sleep hygiene and physical fitness.

2. Adjunct to CPAP – Nasal blockage is a major source of CPAP dissatisfaction. Preemptive nasal surgery to address anatomic blockages can improve CPAP satisfaction and adherence.

3. Salvage Therapy for CPAP Failure – Patients with moderate-to-severe OSA, who are not able to tolerate CPAP long term, need a comprehensive evaluation to determine the best alternatives to CPAP therapy. The comprehensive evaluation includes review of diagnostic sleep studies, upper airway examination, and drug-induced sleep endoscopy (DISE), a fiber-optic examination of the airway during drug-induced sleep that can identify areas of airway collapse. Based on the findings of the evaluation, patients are offered a rational plan to improve their OSA.

Most patients (>85 percent) with moderate-to-severe OSA have collapse of the tongue in addition to collapse of the soft palate. As a result, the commonly used surgery, uvulopalatopharyngoplasty (UPPP), has a limited success rate of only 40 percent when used as a stand-alone procedure. **When evaluating collapse at the tongue, most patients with moderate-to-severe OSA will fall into one of the following categories:**

1. The Box is Too Small (10 percent of OSA patients) – In this circumstance, patients have collapse at the tongue due to the tongue being squeezed by a tight craniofacial structure. Signs include bite abnormalities (open bite; cross bite; overjet; underjet), retrognathia (receding chin), and high-arched hard palate. These patients are best managed with oral appliance therapy and/or orthognathic (jaw) surgery.

2. Tongue Too Big (60 percent of OSA patients) – This is the most-common reason for tongue obstruction in patients with moderate-to-severe OSA. The tongue, like much of the body, will accumulate fat with weight gain, eventually producing an overly large tongue that worsens OSA. Signs include obesity (body mass index > 32 kg/m²) and large tongue on physical exam (Mallampati score 3 or 4; tongue spilling over mandibular arch with teeth impressions along the side). On drug-induced sleep endoscopy, a massive tongue base with or without lingual tonsil hypertrophy is observed occluding the airway. These patient respond well (60-70 percent success rate) to tongue reductive procedures, including transoral robotic surgery (TORS) partial glossectomy. TORS reduces the size of the tongue in a precise manner that leads to rapid recovery without long-term effects on speech or swallowing.

3. Tongue Too Lax (30 percent of OSA patients) – This is a common reason for tongue obstruction that may be difficult to identify. Signs include BMI < 30; normal tongue on examination (Mallampati 1 or 2); and a sleep study that demonstrates clustering of apnea events during supine and rapid-eye movement (REM) sleep. This finding is confirmed by observing laxity in the tongue that occludes the airway on drug-induced sleep endoscopy. Patients with mild-to-moderate OSA may do well with a tongue and/or hyoid suspension procedure, whereas those with more severe OSA are best served with **upper airway stimulation (UAS)** therapy involving the placement of a pacemaker device on the hypoglossal nerve.

M. Boyd Gillespie, MD, MSc, Chairman of the Department of Otolaryngology-Head and Neck Surgery, and Director of the UTMP Sleep Surgery Clinic, is double-boarded in otolaryngology and sleep medicine. In addition, Dr. Gillespie holds a master’s degree in clinical research. He will be offering patients a variety of new, investigative therapies, which often cover the costs of care. Currently available studies include:

1. ImThera Upper Airway Stimulation Therapy (TN3 Study) – This is a study of a novel hypoglossal nerve stimulator in patients with moderate-to-severe OSA (AHI>20) with a BMI<35, who have tried and failed CPAP therapy.

2. Elevoplasty (SILENCE Study) – This study involves an office-based procedure under local to improve snoring in patients with benign snoring and mild OSA.

3. Upper Airway Radiofrequency Treatment (Blue Sleep Study) – This is a study for patients with mild-to-moderate OSA (apnea-hypopnea index <30), BMI <32, who have tried and failed CPAP therapy. The study involves a series of office-based treatments to the soft palate and tongue with radiofrequency ablation (RFA) under local anesthesia.

For sleep surgery or clinical trials consultations, contact Dr. Gillespie at 901.609.3570 or mgilles8@uthsc.edu.

DONOR IN FOCUS

John “Mac” Hodges, MD, is an otolaryngologist-head and neck surgeon, who has served UT Otolaryngology-Head and Neck Surgery in numerous capacities, from resident to professor, over the past 50 years. For the past five years, Dr. Hodges has served as director of the Methodist University Hospital Otolaryngology Resident Clinic. This clinic is the only otolaryngology practice in the Memphis region that will accept patients without regard to payment. It supports the working poor and many of our fellow citizens who have fallen through the cracks and have unreliable safety nets.



A few years ago, the clinic was in need of more up-to-date equipment. Dr. Hodges was able to find a clinic in Virginia that was closing and willing to donate to this clinic. Dr. Hodges paid out of pocket for a moving company to transport the equipment to Memphis for the benefit of his patients. The clinic provides a wonderful opportunity for residents to be instructed by an enthusiastic, caring, and

skilled mentor who always puts the interests of his patients first. For example, Dr. Hodges recently saw a young mother in need of a thyroidectomy. The mother cares for a special needs child around the clock, and could only find coverage for her child on the weekend. In order to help this patient, Dr. Hodges agreed to schedule the surgery on Saturday morning. I feel fortunate that my residents are witnessing such a caring attitude in practice, and hope that they will try to emulate it throughout their own careers.

In the past 50 years, Dr. Hodges has given tirelessly and selflessly to this community. He has personally taught multiple other surgeons techniques of facial plastics to improve the care of children with cleft lip and palate. Dr. Hodges is a regular at the Department of Otolaryngology-Head and Neck Surgery teaching conferences, and can often add needed insight and perspective on quality of care. He has served on humanitarian missions to Africa, Central American, and Asia, helping the lives of an untold number of people who would have never have received care otherwise.

In 2016, he established the **John “Mac” Hodges Humanitarian Fund** in the UTHSC Department of Otolaryngology-Head and Neck Surgery, which will provide each otolaryngology resident a grant to serve on an overseas mission during residency. Therefore, we recognize Dr. Hodges as a friend to patient and colleague alike. His character and service are worthy of imitation.

FAREWELL, CHIEF RESIDENTS

Jonathan Giurintano, MD, is a native of Jackson, Mississippi. He completed his undergraduate education at Millsaps College in Jackson, achieving membership in Phi Beta Kappa while earning a BA degree in mathematics and BS in chemistry. He then obtained his medical degree at the University of Mississippi School of Medicine. As a resident, he has given more than a dozen oral and poster presentations at national conferences, authored several published book chapters, twice received the Departmental Resident Research Award, and was chosen for membership in the Alpha Omega Alpha Honor Medical Society. After graduation, he and his fiancé, Taylor, are moving to San Francisco, California, where he will be the Bryan Hemming Endowed Fellow in Head and Neck Oncologic Surgery and Microvascular Reconstruction at UCSF Medical Center. His future goal is to stay in academic otolaryngology as a head and neck ablative and reconstructive surgeon.



Chief residents Drs. Caleb Wilson, Adam Singleton, and Jonathan Giurintano will be missed.

Adam Edgar Singleton, MD, is a native of Bethesda, Maryland. He attended The University of Colorado at Boulder for his undergraduate education, obtaining a BA in biology. He then obtained a master's degree in biophysiology from Georgetown University, before matriculating to The George Washington University School of Medicine for his medical degree. While in residency, under the esteemed tutelage of Phillip R. Langsdon, MD, and John “Mac” Hodges, MD, Adam developed a love and passion for facial plastic surgery. To further his career in FPRS, he, his wife, and two sons will be moving to San Francisco, California, where he was selected to be an American Academy of Facial Plastic and Reconstructive Surgery Fellow under Dr. Corey Maas at the Maas Clinic San Francisco. His future plans include opening his own Facial Plastic Surgery and Aesthetics practice in the Washington D.C. area.

Caleb Wilson, MD, has accepted a general otolaryngology position with Wyoming Otolaryngology in Casper, Wyoming. Originally from Kaysville, Utah, he is looking forward to moving back to the West with his wife and six children. As an undergraduate, he attended Weber State University and earned his BA in psychology with minors in business administration, chemistry and French. He then completed his medical degree at the University of Pittsburgh School of Medicine. He has a total of six peer-reviewed publications. He has enjoyed his time as a resident, and will miss the close camaraderie he has enjoyed with fellow residents throughout his training.

WELCOME NEW RESIDENTS!

Anas Eid, MD, grew up in Amman, Jordan, before attending Al-Quds Medical School in East Jerusalem, where he earned his medical degree. After his residency overseas, he joined the University of Iowa, where he did a postdoctoral fellowship in burn surgery, followed by a plastic surgery fellowship. He has been interested in head and neck reconstruction, and that inspired him to do a head and neck focused microsurgery fellowship in Memphis. His strong interest in head and neck surgery is what drove him to apply and join the UT ENT residency. He authored several manuscripts in reconstructive surgery and burn surgery, and he was one of the participating writers of the published free flap salvage protocol. Anas and his wife, who works as a pediatric endocrinologist at Le Bonheur Children's Hospital, enjoy life in Memphis. Anas participates in the local soccer league, and enjoys the outdoor activities in West Tennessee. A world traveler, he has visited 33 countries.

Andrea L. Gentile, MD, is from Chicago, Illinois. She earned her BS degree in biology from the University of Kentucky. She then went on to complete her degree in medicine at the University of Louisville, graduating Summa Cum Laude. During medical school, she spent time in Africa for a medical mission trip, providing health care to the people of underserved rural villages. She was inducted into the Alpha Omega Alpha honor society, and spent several years working on research investigating quality of life in head and neck cancer patients. She lives in Memphis with her husband, Jake, and their Great Pyrenees, Wolfgang. In her spare time, she enjoys hiking with her dog, running, and exploring all the exciting new restaurants and breweries Memphis has to offer.

Samuel Smith, MD, MPH, grew up in Las Cruces, New Mexico. He attended the University of New Mexico, where he earned a BA degree in biochemistry, before going on to complete his MD/MPH. During medical school, he raced cross-country mountain bikes and cyclocross. His research interests include clinical outcomes and epidemiology. Sam and his wife, who is a resident in pediatrics, live in East Memphis with their dogs, Banjo and Bovie. In his spare time, he enjoys being outside on his bike or fly-fishing.

Drs. Sam Smith, Andrea Gentile, and Anas Eid have already become valuable members of our team.



RESEARCH HIGHLIGHTS - PEDIATRIC OTOLARYNGOLOGY

Tony Sheyn, MD

Over the past year, there has been an increase in resident and faculty research projects presented including, 24 poster presentation and six oral presentations at national meetings. Several of these projects are highlighted below. The first project, conducted by Drs. Cecil Rhodes, Tony Sheyn, and Amanda KTony Sheyn, and Amanda Kull, MS IV, is titled **Post-operative Monitoring Following Adenotonsillectomy for Severe Obstructive Sleep Apnea**.

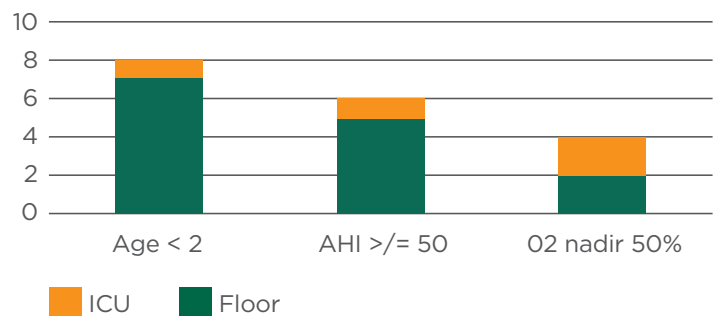


This project looked at pediatric ICU monitoring of patients with severe obstructive sleep apnea (OSA) after tonsillectomy and adenoidectomy, which is routine practice at most major pediatric medical centers. Given the limited number of beds in the ICU, the frequency with which adenotonsillectomy is performed, and the infrequent nature of post-operative complications; the project sought to determine which patients need to be monitored post-operatively in the ICU and which can be monitored on the regular inpatient service. During the time frame of the study, 46 patients met inclusion criteria. Pre-operative sleep studies were reviewed on all patients confirming the presence of an apnea-hypopnea index (AHI) of at least 10. Of 46 patients, 17 were monitored in the ICU and 29 were

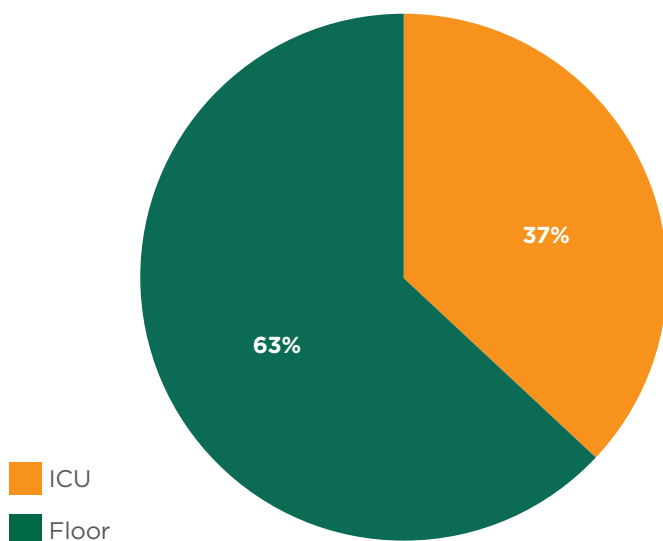
monitored on the regular floor. See the chart below. Seven of the patients monitored in the ICU were under the age of 2, and six of those required supplemental oxygen overnight, including four patients, who were unable to be weaned off the ventilator and remained intubated overnight. Of the 10 patients in the ICU who were over the age of 10, no post-operative complications, including need for supplemental oxygen, were noted. None of the 29 patients monitored on the surgical floor were observed to have post-operative complications.

Based on this study, it is proposed that ICU monitoring may not be necessary for the majority of pediatric patients with severe sleep apnea after adenotonsillectomy. Exceptions to this include children under age 2 with severe sleep apnea. This age group seems to have a higher rate of post-operative airway complications and a higher requirement for supplemental oxygen. The characteristics of patients who were more likely to spend time in the ICU is shown in the chart below.

Characteristics of Patients Admitted to the ICU



ICU Admission Location for Patients with Severe OSA



A second project investigated the use of mometasone eluting stents in pediatric nasal disorders, such as choanal atresia, pyriform aperture stenosis, and complex rhinosinusitis. Mometasone stents have also been used with great success in pediatric patients with complex sinus disease, such as chronic sinusitis due to cystic fibrosis and allergic fungal rhinosinusitis. To date, eight patients have undergone placement of steroid-eluting stents following endoscopic sinus surgery. When compared at > 6 months to control patients with the similar pathology who did not have a stent placed, the stented patients noted prolonged periods of improved nasal breathing, improved sense of smell, and decreased rates of facial pain and frontal headaches.

One final area of research involves application of the national KID database to evaluate outcomes in pediatric patients with rare conditions. An example of this is a recently published article titled **Pediatric pituitary resection: characterizing surgical approaches and complications**. By utilizing this database, the project

identified over 1,000 cases of pediatric pituitary surgery between 2009 and 2012. The study observed that while many pediatric patients undergo a trans-sphenoidal approach for these conditions, more pediatric patients than adults still undergo a trans-frontal approach. The transfrontal approach is associated with higher rates of significant complications including diabetes insipidus

and pan-hypopituitarism when compared to the trans-sphenoidal approach, as shown in the table below. This data present an opportunity to influence future sellar resections in children toward a trans-sphenoidal approach when surgically feasible. The table below summarizes the complication rates, length of stay, and associated hospital costs when comparing transsphenoidal and transfrontal approaches.

Surgical Complications, Length of Stay and Hospital Costs in Pediatric Pituitary Resection

	TS	TF	LOS	Cost
N	831	227		
Diabetes I	254 (30.4%)	151 (66.5%)*	1.98 (10.76 - 13.20)**	138,269 (119,833 - 153,569)**
Pan	84 (10.2%)	88 (38.8%)*	10.83 (8.89 - 12.77)**	158,534 (124,574 - 192,494)**
Visual Changes	53 (6.4%)	132 (58.1%)*	9.82 (8.15 - 11.46)**	46,205 (120,447 - 171,964)**
Hydro	25 (2.7%)	55 (24.2%)*	9.58 (8.48 - 10.67)**	136,701 (119,833 - 153,569)**
Hem	20 (2.1%)	18 (7.9%)*	17.55 (2.26 - 32.83)**	316,380 (43,953 - 589,168)**
CSF Leak	18 (2.3%)	5 (2.2%)	9.27 (5.70 - 12.83)	134,928 (79,092 - 190,763)

* = complication statistically more common to transfrontal procedure

** = statistical increase in LOS or Cost compared to group without complication

TS = transsphenoidal; TF = transfrontal; LOS = length of stay; I = Insipidus; Pan = panhypopituitarism; Hydro = obstructive hydrocephalus; CSF = cerebrospinal fluid; Hem - brain bleed/ischemic stroke

References

Post-Operative Monitoring Following Adenotonsillectomy for Severe Obstructive Sleep Apnea

Cecil Rhodes, Amanda Kull, Timothy Head, Anthony Sheyn
 Oral Presentation, SENTAC, Orlando, FL 2016

Use of Mometasone Eluting Stents in the Treatment of Complex Pediatric Sinus Disease

Anthony Sheyn, Caleb Wilson, Gopi Shah
 Submitted to SENTAC, Toronto, ON 2017

Pediatric Pituitary Resection: Characterizing Surgical Approaches and Complications

Curtis Hanba, Peter Svider, Mahdi Shkoukani, Anthony Sheyn, Jean Anderson Eloy, Adam Folbe
 Int Forum of Allergy and Rhinol 2017 Jan;7(1):72-79

2016-2017 ACADEMIC YEAR IN REVIEW

HONORS

Jonathan Guirintano, MD. Received the NRG Head and Neck Surgical Subcommittee travel award to attend the 2017 NRG Oncology Meeting, Philadelphia, PA, July 13-16, 2017.

M. Boyd Gillespie, MD. Co-recipient, The Thomas A. and Shirley W. Roe Award, Best Article in the 2017 Journal of the South Carolina Medical Association.

Phillip R. Langsdon, MD. 150th President, Memphis Medical Society, January 31, 2017.

GUEST PROFESSOR/PRESENTER

M. Boyd Gillespie:

- Department of Otolaryngology – Head and Neck Surgery, University of Utah, David Dolowitz Memorial Lecturer, June 23-24, 2017, Salt Lake City, Utah.
- Course Director, St. Louis Sleep Surgery Course, St. Louis, MO, April 2017.
- UCSF Head and Neck Cancer and Endocrine Surgery Update, San Francisco, CA, November 17-19, 2016.
- 46th Brazilian Congress of Otorhinolaryngology and Cervical Facial Surgery, Goias, Brazil, November 2-5, 2016.
- Department of Otolaryngology – Head and Neck Surgery, Augusta University, September 6-7, 2016.

Phillip Langsdon:

- Course Director, AAFPRS Fall Meeting, Nashville, TN, October 2016.

Jennifer McLevy:

- ENT Bootcamp, University of Mississippi, Jackson, MS, August 2016.

Rosemary Stocks:

- ENT Bootcamp, University of Mississippi, Jackson, MS, August 2016.

PEER-REVIEWED PUBLICATIONS

Ong AA, **Gillespie MB.** Smartphone applications for sleep analysis. *World J Otorhinolaryngol.* 2016.

Kandl JA, Ong AA, **Gillespie MB.** Pull-through sialodochoplasty for Stensen's megaduct. *Laryngoscope* 2016; 126: 2003-5.

Miller SC, Ong AA, Nguyen SA, **Gillespie MB.** Transoral robotic base of tongue reduction for obstructive sleep apnea: a systematic review and meta-analysis. *Laryngoscope* 2016; 127: 258-265.

Zhan K, **Gillespie MB,** White-Gilbertson S, et al. The HPV throat cancer epidemic: a brief update for primary care physicians. *J SC Med Assoc.* 2016; 112: 151-155.

Ong AA, **Gillespie MB.** Overview of smartphone applications for sleep analysis. *World J Otorhinolaryngol.* 2016; 2:45-49.

Farhood Z, Ong AA, Nguyen SA, **Gillespie MB,** Discolo CM, White DR. Objective outcomes of supraglottoplasty for children with laryngomalacia and obstructive sleep apnea: a meta-analysis. *JAMA Otolaryngol Head Neck Surg.* 2016; 142: 665-71.

Baker AB, Xiao CC, O'Connell BP, Cline JM, **Gillespie MB.** Uvulopalatopharyngoplasty: Does multilevel surgery increase risk? *Otolaryngol Head Neck Surg.* 2016; 155: 1053-1058.

Soose RJ, **Gillespie MB.** Upper airway stimulation therapy: A novel approach to managing obstructive sleep apnea. *Laryngoscope* 2016; 126: Suppl 7: S5-8.

Ong AA, Carroll WW, Nguyen SA, **Gillespie MB.** Cost-effectiveness of transfacial gland-preserving removal of parotid sialoliths. *Laryngoscope* 2016; Epub ahead of print. PMID 27873327.

Erkul E, **Gillespie MB.** Sialendoscopy for non-stone disorders: the current evidence. *Laryngoscope Invest Otolaryngol.* 2016; 1: 140-45.

Clinckscases W, Ong A, Nguyen S, Harruff EE, **Gillespie MB.** Diagnostic value of RAS mutations in indeterminate thyroid nodules. *Otolaryngol Head Neck Surg.* 2017; 156: 472-479.

Gillespie MB, Soose RJ, Woodson BT, et al. Upper airway stimulation for obstructive sleep apnea: patient-reported outcomes after 48 months. *Otolaryngol Head Neck Surg.* 2017; Epub ahead of print. PMID 28194999.

Smith A, Kull A, Thottam P, **Sheyn A.** Pyriform Aperture Stenosis: A Novel Approach to Stenting. *Ann Otol Rhinol Laryngol.* 2017 Jun;126(6):451-454.

Shires C, Smith A, Lee J, Boughter J, **Sebelik M.** Classification system for lateral pharyngotomy: systematic study of anatomic exposure in a human cadaver model. *Surg Radiol Anat.* Epub. Feb 2017.

Smith, A, Braden L, Wan J, **Sebelik M.** Effect of Resident Duty Hour Restrictions on Surgical Specific Complications for Head and Neck Endocrine Procedures. *JAMA Otolaryngol Head Neck Surg.* 2017 Feb 9. doi: 10.1001/jamaoto.2016.4182. [Epub ahead of print]

Smith A, Jain N, Wan J, Wei L, **Sebelik, M.** Duty hour restrictions and surgical complications for head and neck key indicator procedures. *Laryngoscope.* 2016 Dec 21. doi: 10.1002/lary.26464. [Epub ahead of print]

Smith A, Ray M, Zhang H, **Sebelik M.** The Burden of Angioedema Presenting to United States EDs: 2006-2010. *Laryngoscope.* 2016 Nov 15. doi: 10.1002/lary.26336. [Epub ahead of print]

Smith A, Thimmappa V, Shepherd B, Ray M, **Sheyn A, Thompson J**. Invasive fungal sinusitis in the pediatric population: Systematic review with quantitative synthesis of the literature. *Int Journ Ped Oto*. 2016. Nov; 90:231-235.

Wilson CD, Thompson JW, et al. Retrospective Review of Management of Outcomes of Pediatric Descending Mediastinitis. *Otolaryngol Head Neck Surg*. 2016. 115(1):155-9

RESEARCH PRESENTATIONS

Kato M, Isaac M, **Gillespie MB**, O'Rourke AK. The incidence and duration of swallow-related symptoms following surgery for obstructive sleep apnea. American Bronchoesophagological Association, San Diego, CA, April 26, 2017.

Law RH, Muus JS, **Gillespie MB**. Preliminary study comparing the efficacy of Facebook to other modes of recruitment for clinical trials in otolaryngology. Triological Society Sectional Meeting, New Orleans, LA, January 20, 2017.

Naik AN, Clinkscales WB, Nguyen SA, **Gillespie MB**. Nonsurgical management of HIV-associated parotid cysts: a systematic review and meta-analysis. Triological Society Sectional Meeting, New Orleans, LA, January 20, 2017.

Kato MG, Erkul BE, Nguyen SA, **Gillespie MB**. Extracapsular dissection versus superficial parotidectomy of benign parotid lesions: surgical outcomes and cost effective analysis. Triological Society Sectional Meeting, New Orleans, LA, January 20, 2017.

Schaitkin B, **Gillespie MB**. The parotid megaduct: operative management and short-term outcomes. AAO-HNSF Annual Meeting, San Diego, CA, September 19, 2016.

Ong AA, Abidin M, **Gillespie MB**. Outcomes of hyoid myotomy and suspension for obstructive sleep apnea. AAO-HNSF Annual Meeting, San Diego, CA, September 19, 2016.

Clinkscales W, Ong AA, Harruff E, Nguyen SA, **Gillespie MB**. Diagnostic value of RAS mutations in indeterminate thyroid nodules. AAO-HNSF Annual Meeting, San Diego, CA, September 18, 2016.

Gillespie MB, Soose RJ, Woodson BT. Upper airway stimulation for obstructive sleep apnea: patient reported outcomes after 48-months of follow-up. AAO-HNSF Annual Meeting, San Diego, CA, September 18, 2016.

Giurintano J, Kortebein SM, **Sebelik ME, Thompson JW, McLevy J**. Intraoral Abscess: A Not so Rare Clinical Entity. American Academy of Otolaryngology Annual Meeting, San Diego, CA, September 18-21, 2016.

Giurintano J, Shires C. Duplicated pituitary, Poster presentation, New Orleans, LA, North American Skull Base Society, March 2017.

Giurintano J, Thornton B, **McLevy JD, Thompson JW**. Airway Foreign to Get "Charged Up About". Poster Presentation; ABEA at COSM, May 2016.

Giurintano J, Moak JS, **McLevy JD, Thompson JW**. Rigid Bronchoscopy Through Trachea for Foreign Body. Poster Presentation; ABEA at COSM, May 2016

Petty B, Thompson JW, et al. Combination Keel and Stent placement in Communitated Cricoid Fracture. ASPO, San Antonio, Texas 5/20/2017

Smith A, Kortebein S, **Eid A**, Gregory N, Brooks J, Boughter J, **Sebelik M**. The manubrium for cancellous bone grafting: comparison of cancellous bone volume of manubrium to iliac crest in fresh cadavers. Presented at American Academy of Facial Plastic and Reconstructive Surgery Fall Meeting, Oct 6-8, 2016, Nashville, TN.

Rhodes C, Smith A, Sheyn A. Emergent Pediatric Tracheostomy. Presented at American Academy of Otolaryngology Head and Neck Surgery Meeting (poster), Sept 18-21 2016, San Diego, CA.

Smith A, Allen S, **Hall C**, Boughter J, **Sebelik M**. New Versus Reprocessed Coblator Wands: Wire degradation and Tissue Efficacy in a Porcine Tongue Model. Presented at American Academy of Otolaryngology Head and Neck Surgery Meeting (poster), Sept 18-21 2016, San Diego, CA.

Smith A, Thottam P, **Sheyn A**. Pyriform Aperture Stenosis: A Novel Approach to Stenting. Presented at American Academy of Otolaryngology Head and Neck Surgery Meeting (poster), Sept 18-21 2016, San Diego, CA.

Smith A, Braden L, Wan J, **Sebelik M**. Effect of Resident Duty Hour Restrictions on Surgical Specific Complications for Head and Neck Endocrine Procedures. Presented at 9th International AHNS Meeting (oral), July 16-20, 2016, Seattle, WA.

Smith A, Thimmappa V, Shires C, Sebelik M. Ultrasound use for tracheoesophageal puncture and prosthesis placement. Presented at 9th International AHNS Meeting (poster), July 16-20, 2016, Seattle, WA.

BOOK CHAPTERS/NON-PEER REVIEWED

Gillespie MB, Iro H. Surgery for benign salivary neoplasms. *Adv Otorhinolaryngol*. 2016; 78: 53-62.

McLevy JL. Chapter 8: Pediatric Airway Management. In Thompson JW, Vieira F, Rutter M. *Managing the Difficult Airway, A Surgeon's Manual*. London: JP Medical Publishers, 2016.

Smith A, Chalet S. Big Data in Facial Plastic Surgery: From databases to registries. *Curr Opin Otolaryngol Head Neck Surg*. 2017 May 17.

Thompson JW, Vieira F, Rutter M. Managing the Difficult Airway: A Handbook for Surgeons. JP Medical. Pages 1-19; 63-104.2016

Patel U, Lin A, **Vanison C**. Section 1: Head and Neck. In *Otolaryngology: A Color Handbook*. Rosenthal L, Patadia M, Stankiewicz J, Eds. 2017. CRC Press. Boca Raton, FL.

Vanison C, Lam K, Kern R. *Fungus in Paranasal Sinus Disease*. In Sataloff's Comprehensive Textbook of Otolaryngology: Head and Neck Surgery. Fried M and Tabae A, Eds. 2016. Jaypee Medical Inc. Philadelphia, PA.



Department of Otolaryngology
910 Madison Avenue, Suite 408
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OTOLARYNGOLOGY HEADLIGHTS

UPCOMING EVENTS AND CME

UTHSC DEPARTMENT OF OTOLARYNGOLOGY - HNS RESIDENT AND ALUMNI GATHERING

September 12, 2017 | 5:30 pm - 7:30 pm

Kroll's South Loop
1736 S. Michigan Ave., Chicago, IL

4TH ANNUAL JOHN SHEA, JR. MEMORIAL TEMPORAL BONE COURSE

November 10-11, 2017

UTHSC Department of Otolaryngology-HNS
Temporal Bone Lab, Coleman Building
Memphis, TN
drjohnsheamemorial.org

Guest Professor

Barry E. Hirsch, MD
Professor and Director
Division of Otology/Neurotology
University of Pittsburgh Medical Center

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T 901.448.5886 | F 901.448.5120

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