

The Scope

Fall 2015

MUSC DEPARTMENT OF OTOLARYNGOLOGY

HEAD & NECK SURGERY

Vol. 16 N^o 1

ENT.musc.edu



CHAIRMAN'S CORNER



Paul R. Lambert, M.D.

2015 - A Year of Remarkable Growth

In 2015 our Department added six new physicians – a 35% increase in our fulltime M.D. faculty complement (17 to 23). Daunting, bullish, foolish, proactive – are just a few of the descriptors bantered about.

Our growth strategy is two pronged: to build depth in our Divisions and to develop new programs and initiatives. Included in the latter category are a dedicated Multidisciplinary Vestibular Program, (involving neurology, neuro-ophthalmology, psychiatry, physical therapy, and nutrition); a Facial Reanimation Center; and a Brainstem Cochlear Implant Program. In addition, we are expanding our Head and Neck reconstructive capacity (free flaps and maxillofacial prosthetics) and our Pediatric Division to meet increasing demands, especially with the opening of our new Pediatric Hospital in 2019.

Faculty expansion is being fueled in part by the sustained population growth in South Carolina, and especially in Charleston and coastal areas north and south of the city. In 2014, the state ranked #9 in the nation for absolute population growth, and Charleston plus two other South Carolinas coastal cities were the fastest growing metro areas along the entire Atlantic seaboard.

Our new faculty will each be featured in future communications, but I will briefly introduce them now:

- Clarice S. Clemmens, M.D.**, Pediatric Otolaryngology
Fellowship: Children's Hospital of Philadelphia
- Andrew T. Huang, M.D.**, Head and Neck Oncology
Fellowship: MD Anderson
- Teddy R. McRackan, M.D.**, Otolaryngology-Neurotology
Fellowship: House Ear Clinic
- Sam L. Oyer, M.D.**, FPRS
Fellowship: Johns Hopkins University
- Habib G. Rizk, M.D.**, Otolaryngology-Neurotology
Fellowship: Medical University of South Carolina
- J Rhet Tucker, DMD**, Maxillofacial Prosthodontics
Fellowship: MD Anderson

As our faculty has expanded, new residency training opportunities have correspondingly increased. We were pleased that the ACGME approved our request for a **resident complement increase** from 3 to 4. Similarly, we were awarded an **NIH T32 Training Grant**, which will enhance our ability to support clinician-scientists and post-doctoral students.

Paul R. Lambert, M.D.
Paul R. Lambert, M.D., Professor and Chair
Otolaryngology - Head & Neck Surgery

INSIDE

- Chairman's Corner
- Continuing Education
- Clinical Update
- Honors & Awards
- Research Realm
- Faculty
- CME Events



Continuing Education



The 29th Annual F. Johnson Putney Lectureship in Head & Neck Cancer

Terry A. Day, M.D. hosted the 29th Annual F. Johnson Putney Lectureship on November 7, 2014. The free half-day session of lectures on head and neck cancers featured guest professor **Neal Futran, M.D., D.M.D.** from the University of Washington, in Seattle. The afternoon brought together world class Head & Neck specialists to discuss the latest information and guidelines in oral cavity/head and neck cancer and reconstructive surgery.

The Charleston Sleep Surgery Symposium

Our 4th Annual Charleston Sleep Surgery Symposium was held at the Charleston Renaissance Hotel on January 30 - 31, 2015 under the direction of **M. Boyd Gillespie, M.D., MSc.** Over 40 otolaryngologists from 17 states and China attended the lectures, discussions, live patient demonstration, and hands-on labs focused on procedures for snoring and sleep disordered breathing. Guest professors included **Lon R. Doles, D.D.S.**, Oral Maxillofacial Associates, Charleston, SC; **Eric J. Kezirian, MD, MPH**, University of Southern California, Los Angeles, CA; **Ofer Jacobowitz, M.D., PhD, FAASM**, Mount Sinai Medical Center, New York, NY; **Tapan A. Padhya, M.D.**, University of South Florida College of Medicine, Tampa, FL; and **Ed Weaver, M.D., MPH**, University of Washington, Seattle, WA.

Seats for the hands-on lab filled up fast, reserve yours early for the February 2016 course!



The Charleston Pediatric ENT Update

The second annual Charleston Pediatric ENT Update was held March 7, 2015 on the MUSC campus under the direction of **David R. White, M.D.**, **Christopher M. Discolo, M.D., M.S.C.R.**, and **Carissa C. Howle, C.P.N.P.** This comprehensive full-day course for pediatricians, family practitioners, and otolaryngologists provided up-to-date guidelines to implement into daily practice, promote quality and efficient care, and tackle challenging ENT diagnoses with confidence. Our guest speaker was **Emily F. Boss, M.D., MPH**, of the Children's Hospital at Johns Hopkins. The more than 50 participants represented 11 states and Canada.

We hope you will join us for the the next presentation March 12, 2016.



Temporal Bone Dissection Course

Our intensive two-day otology course was held on the MUSC campus March 20 - 21, 2015 under the direction of **Ted A. Meyer, M.D., Ph.D.** This course, designed for practicing otolaryngologists, focused on procedures for chronic ear disease and included hands-on training in our temporal bone dissection lab. Distinguished guest speaker was **Alan G. Micco, M.D., F.A.C.S.** Northwestern University, Lemont, IL. We hosted a full house of practitioners from 9 states. The 2016 course will be May 6 - 7, save the date!



Annual Sinus Masters Course

This two-day rhinology course designed for Sinus and General Otolaryngology surgeons was held on April 17 - 18, 2015. The course included hands-on training in our state-of-the-art temporal bone lab and was attended by practitioners and residents from eight states, 25 institutions. Course Director: **Rodney J. Schlosser, M.D.**



An Impressive Showing – 44!

AAO-HNS, Dallas, 2015. I wish to applaud our faculty, residents, clinical fellows, and research faculty for an impressive educational footprint at the recent Academy *meeting:

- 26 oral presentations
- 18 instruction courses, mini-seminars, panels

This degree of participation would not have been possible without the dedication to mentorship

that characterizes our Department. I would like to especially note the efforts of **Shaun Nguyen, M.D.**, our Director of Clinical Research. He continually provides opportunities for our residents and fellows to be involved in clinical trials and other related research opportunities.

Congratulations to all for a job well done.

* AAO-HNS, AAFPRS, ARS

Annual Southern States Rhinology

This three day course held May 1 - 3, 2015 provided a comprehensive update on the medical and surgical practices of rhinology for practicing rhinologists and sinus surgeons. The course included a hands-on dissection laboratory, featuring state-of-the-art endoscopic instrumentation, video, and image guidance systems. Lab Director: **Rodney J. Schlosser, M.D.**

15th Annual Charleson Magnolia Conference

Our distinguished guest speakers for the 2015 Magnolia Conference held May 29 - 30, 2015 were **Richard R. Orlandi, M.D., F.A.C.S.**, University of Utah, Salt Lake City, UT; **Debara L. Tucci, M.D., MS, MBA**, Duke University, Durham, NC; **Kathy C. Y. Sie, M.D.**, Seattle Children's Hospital, Seattle, WA. Participants came from around the country for the presentations and round table lunch discussions covering the breadth of our specialty, directed by **Paul R. Lambert, M.D.** The weather was ideal, providing the perfect setting to enjoy historic Charleston, the beaches, golf, and the Spoleto Festival USA. Our 2016 course will be June 3 -4, a great time to come to Charleston!



The Charleston Course: Otolaryngology Literature Update

The department hosted its 5th Annual Literature Update Course on July 17 - 19, 2015 at the beautiful Kiawah Island Golf Resort. Over 40 Otolaryngologists representing 17 states enjoyed the two-and-a-half days of our faculty critically analyzing the year's most relevant, evidence-based medical literature. The course was directed by **Paul R. Lambert, M.D.** Afternoons were free to enjoy the beaches, golf, tennis, restaurants and many other activities on the island, or to take a short drive into historic downtown Charleston.

Next year's course will be held on August 5 - 7, 2016 again at Kiawah. We hope you will join us, and bring the family to experience all the area has to offer.



The Charleston Vestibular Conference, Evaluation and Management of Dizziness

Our inaugural Vestibular Conference was held on September 12, 2015 in historic downtown Charleston. Guest speakers were **Devin L. McCaslin, Ph.D.**, Vanderbilt University School of Medicine, Nashville, TN, and **Judith A. White, M.D., Ph.D.**, Cleveland Clinic, Cleveland, OH. The course, directed by **Courtney Hudak, Au.D., CCC-A**, hosted over 60 physicians and mid-level practitioners from a variety of specialties, as well as audiologists and physical therapists, representing 14 states. Up-to-date information was provided to enable participants to employ best practices when servicing patients with vestibular disorders.



Residency Program *Accolades*

As noted in my opening comments, we are excited about both our resident complement increase to four per year and the NIH T32 Training Grant Award. Our expanding faculty and several new clinical initiatives will provide fertile training ground. Ongoing clinical trials directed by the Department number between 15-20 annually. Support for these trials and our NIH, VA and Foundation support exceeds \$6.7 million in FY15. This research environment facilitates our goal of training clinician-scientists. A note of validation of the department's emphasis on resident education was received this year with **MUSC ranked #9** by Doximity/USNWR for residency programs in Otolaryngology.



In-Office Laryngology Procedures

Ashli O'Rourke, M.D.

Background

The practice of Laryngology has grown exponentially since Bozzini's 1807 invention of a "simple apparatus for the illumination of the internal cavities."¹ And in the last two decades there has been a shift of traditional operating room procedures into the office or clinic based practice. This transition has been made possible by improvements in technology such as distal chip flexible endoscopes, new types of vocal fold injectable materials, and fiber based visible wavelength lasers.

There are many advantages to office-based procedures. First, patients tend to prefer it. A study of 328 laser treatments found that 87% of patients favored unsedated in-office procedures over surgeries completed under general anesthesia.² Secondly, in-office procedures can cost as little as a tenth of operating room procedures. In-office procedures also obviate the risk of general anesthesia and for the most part avoid rigid instrumentation that can increase risk of complications. Because only topical anesthesia is used, most patients can drive themselves home after the procedure and NPO time is reduced (if needed at all).

There are, however, some disadvantages to office based procedures. Because patients may experience more discomfort without general anesthesia, the physician must balance the required time to complete the procedure with patient tolerance. Not all patients will withstand an unsedated procedure and some will have unfavorable anatomy so proper patient selection is paramount.

Anesthesia

Obtaining adequate local anesthesia of the airway is the most important step in successful completion of unsedated procedures. The first step is good nasal anesthesia with topical application of oxymetazoline (or similar decongestant) and 4% lidocaine. There are then several different methods to topicalize the laryngopharynx or trachea including: 4% lidocaine drip, transcutaneous tracheal or nebulized solution applications. All have been shown to be effective and only rarely will a superior laryngeal nerve block be needed.

Topical application of lidocaine has a rapid

onset. While hypoalgesia starts at 90 seconds, data from oral mucosal application of topical lidocaine suggest that maximum anesthesia is obtained after 4 – 5 minutes.³ Care should be taken not to over anesthetize the airway as this can lead to aspiration of secretions and therefore intolerance of the procedure. Also, the practitioner should be cognizant of lidocaine dosing safety guidelines and be aware of the percentage of lidocaine they are using (e.g. 4% lidocaine contains 40 mg of lidocaine per milliliter).

Laryngology In-Office Procedures	
Laryngeal	
Laser treatment	
Biopsy	
Vocal fold injection augmentation	
Therapeutic injection	
Electromyography	
Tracheal	
Diagnostic tracheoscopy	
Laser treatment	
Esophageal	
Diagnostic TNE	
Dilation	
Biopsy	
Therapeutic injection	
Secondary TEP	

Safety and Monitoring

Several investigators have recently examined hemodynamic changes in patients undergoing unsedated laryngopharyngeal procedures.^{4,5} These studies show significant increases in both blood pressure and heart rate but the clinical significance of these changes remains uncertain. It is recommended that older patients (>50 years of age) and those with cardiopulmonary comorbidities be monitored during procedures and discontinuation considered if extreme changes occur.

It is also somewhat controversial whether patients should be off of chronic anticoagulation but limited studies have revealed no complications due to anti-thrombin therapy.⁶ The decision regarding

anticoagulation should be made in conjunction with the patient's other treating physicians as well as considering patient factors, type of lesion to be biopsied, likelihood of prolonged bleeding, and risk of airway obstruction should hematoma develop.

Lastly, while rare, allergic reactions to sterilization cleansers and topical analgesics do exist. The most important point regarding safety is that practitioners should remain vigilant and be prepared with advanced life support equipment should any unexpected complications arise.

Types of Procedures

The most common lasers used for unsedated treatments are fiber based lasers in the visible light spectrum, such as the pulsed dye (585 nm) or the potassium-titanyl-phosphate (KTP) (532 nm) lasers (**Figure 1**). Since their introduction for laryngeal applications in 2001 and 2006, respectively, these non-ablative lasers have been shown to be both efficacious and safe in treating benign laryngeal pathology.⁷ KTP laser treatment, often combined with bevacizumab (Avastin) injections, can be especially beneficial for patients with recurrent respiratory papillomatosis. This chronic disease often requires recurrent treatment and an unsedated alternative decreases recurrent general anesthetics but also importantly decreases loss of work and productivity for patients and their family members.

True vocal fold augmentation in the office via transoral, trans-thyrohyoid membrane, or trans-cricothyroid membrane are commonplace in a Laryngology practice. Substances appropriate for injection in the office include hyaluronic acid, micronized alloderm, carboxymethylcellulose, and calcium hydroxylapatite. Care must be taken in selecting appropriate patients and substances for injection to be sure that an optimal result is obtained.

In-office biopsy procedures are slightly more controversial. It may offer earlier detection and avoid general anesthesia. However, as compared to the gold standard of operative biopsy, a recent study reported a sensitivity of only 60% and specificity of 87% when laryngopharyngeal biopsies were performed.⁸ Therefore, while appropriate for benign lesions,



Figure 1. Fiber based laser in the visible light spectrum.

in cases of suspected malignancy, in-office biopsy should generally be reserved for patients at unacceptable risk for general anesthesia or impossible exposure in the OR. Patients with negative in-office biopsies but high suspicion of malignancy should be taken to the OR for operative biopsy.⁹

References

1. Jahn A, Blitzer A. A short history of laryngoscopy. *Log Phon Vocol* 1996; 21: 181-185.
2. Rees CJ et al. Patient tolerance of in-office pulse dye laser treatments to the upper aerodigestive tract. *Otolaryngol Head Neck Surg.* 2006; 134(6): 1023-1027.
3. Bjerring P. Onset and duration of hypoalgesia of lidocaine spray applied to oral mucosa—a dose response study. *Acta Anaesthesiol Scand.* 1992; 36(7): 733-5.
4. Morrison MP et al. Hemodynamic changes during otolaryngological office-based flexible endoscopic procedures. *Ann Otol Rhinol Laryngol.* 2012; 121(11): 714-8.
5. Ongkasuwan J1, Yung KC, Courey MS. The physiologic impact of transnasal flexible endoscopy. *Laryngoscope.* 2012; 122(6): 1331-4.
6. Fritz MA et al. The Safety of Antithrombotic Therapy during In-office Laryngeal Procedures-A Preliminary Study. *J Voice.* 2015. Epub ahead of print.
7. Sheu M. et al. Multi-Institutional experience with the in-office potassium titanyl phosphate laser for laryngeal Lesions. *J Voice.* 2012; 26(6). 806-810.
8. Richards et al. The utility of office-based biopsy for laryngopharyngeal lesions: Comparison with surgical evaluation. *Laryngoscope.* 2015; 125(4): 909-12.
9. Naidu H. et al. Comparison of efficacy, safety, and cost-effectiveness of in-office cup forcep biopsies versus operating room biopsies for laryngopharyngeal tumors. *J Voice.* 2012; 26(5): 604-6.
10. Verma SP, Smith ME, Dailey SH. Transnasal tracheoscopy. *Laryngoscope.* 2012; 122(6): 1326-30.
11. Jobe BA et al. Office-based unsedated small-caliber endoscopy is equivalent to conventional sedated endoscopy in screening and surveillance for Barrett's esophagus: a randomized and blinded comparison. *Am J Gastroenterol.* 2006 Dec;101(12):2693-703.

Ashli O'Rourke, M.D., attended medical school at the Medical College of Georgia, graduating in 2005. She completed both her general surgery internship and Oto-HNS residency at the University of Virginia in Charlottesville. She completed a fellowship in Laryngology – Voice and Swallowing Disorders at the Medical College of Georgia. Dr. O'Rourke has been board certified through the American Board of Otolaryngology since 2012. Her interests include

Awake tracheoscopy is a safe and quick procedure that is a viable alternative to sedated tracheobronchoscopy. It has a low complication rate and good patient tolerance.¹⁰ Not only is unsedated tracheoscopy helpful in the diagnosis of airway pathology, it is a dynamic evaluation more sensitive for tracheomalacia. In addition, it can eliminate the need for CT imaging for evaluation of the upper aerodigestive tract before planned airway intervention.

Transnasal esophagoscopy (TNE) is widely accepted in-office procedure performed by otolaryngologists, gastroenterologists, and some primary care providers. TNE has been shown to be comparable to conventional flexible sedated endoscopy in Barrett's esophagus detection and biopsies can be taken through the 2 mm working port.¹¹ TNE can also be a therapeutic tool for stricture dilation, secondary tracheoesophageal puncture or injection (e.g. cricopharyngeal botulinum toxin injections).

Conclusion

In-office laryngologic procedures are effective and well tolerated by many patients. They can offer patients a safe and cost effective alternative to traditional sedated procedures and are a growing part of otolaryngology practices worldwide.



swallowing disorders (dysphagia), voice disturbances, and airway concerns. She specializes in many in-office procedures including KTP laser treatment of laryngeal lesions, vocal fold injection medialization, Botox injections, laryngeal biopsy, and transnasal esophagoscopy.

Honors Awards

Terry A. Day, M.D.

Presidential Citation - American Head & Neck Society

Betsy K. Davis, D.M.D., M.S.

Presidential Citation – American Head & Neck Society

Judy R. Dubno, Ph.D.

Plenary Speaker, Israel Society of Auditory Research, Sackler School of Medicine, Tel Aviv University, October, 2014.

Invited Speaker, Sheba Medical Center Hearing, Speech, and Language Center, and the Department of Communication Disorders, Tel Aviv University, October, 2014.

Member, National Academy of Sciences/ Institute of Medicine, Committee on Accessible and Affordable Hearing Health Care for Adults, 2015-2016

Mark A. Eckert, Ph.D.

Visiting Scholar Award, Aston University, Birmingham, England, 2014

M. Boyd Gillespie, M.D., MSc

Presidential Citation – American Head & Neck Society

Visiting Professor- University of Missouri

Kelly C. Harris, Ph.D.

Selected for the NIH Early Career Reviewer Program, NIH Auditory Systems Study Section, 2014

Paul R. Lambert, M.D.

Presidential Citation - Triological Society

Presidential Citation - American Otological Society

Shaun A. Nguyen, M.D.

Member, Medical Devices and Drugs Committee

Member, Outcomes Research and EBM Committee

Ashli K. O'Rourke, M.D.

Mentored Teaching Fellow, Academy of Medical Educators

Judith Skoner, M.D.

Presidential Citation – American Head & Neck Society

Cancer Progression and Metastasis Research

David M. Neskey, M.D.

Head and neck squamous cell carcinoma (HNSCC) affects over 60,000 patients annually in the US¹. Over 300,000 patients develop squamous cell carcinoma of the oral cavity worldwide and nearly half of these patients die from the disease each year². Treatment of advanced head and neck cancer often requires complex, multimodality therapy, employing surgical resection and post-operative radiation, with

the addition of cisplatin-based chemotherapy for patients with high-risk of failure³. Currently, there are no molecular biomarkers to guide these management decisions but several genes have been identified including mutant TP53 (mutp53). Our previous research developed a classification that could stratify TP53 mutations and subsequently isolate a subset of oncogenic or high-risk TP53 mutations that are associated with poor

overall survival, reduced progression-free survival, and the development of distant metastasis (Figure 1). Additionally, high-risk mutations were found to be associated with increased cellular invasion, tumorigenicity, and propensity for distant metastases in both in vitro and in vivo models⁴. Furthermore this classification identified low-risk p53 mutations associated with improved survival outcomes and appeared to retain some residual p53 function⁴. Despite these findings it is currently not understood how these high-risk mutations alter the function of the TP53 gene and lead to more aggressive head and neck tumor cells. Our ongoing research is aimed to determine a cause for the behavior of these high-risk mutations, which has uncovered the important role of cellular structural protein, non-muscle Myosin IIA. This protein is important for the normal movement of the cell but has also been found to suppress tumor cell growth and high expression has been associated with improved survival for patients with head and neck cancer⁵. Based on our current work non-muscle Myosin IIA expression appears to correlate with survival in patients with head and neck cancer that harbor functional or low-risk mutations in p53, which is lost in patients with high-risk mutations (Figure 2). In an effort to explain the different impact of Myosin IIA expression between low and high-risk mutations we are currently studying these genes in head and neck cell lines. Our recent findings using this model reveal Myosin IIA function is dependent upon a functional p53. Cells with a functional p53 co-localize with Myosin IIA which is not observed in cells with a high-risk p53 mutation. Furthermore when Myosin IIA is inhibited the co-localization of the functional p53 and Myosin is also inhibited (Figure 3). Additionally, when we overexpress Myosin IIA in cells with a functional p53 the cells appear to undergo apoptosis, which is not seen in head and neck cancer cells with a high-risk mutant p53. Taken together, these results imply the tumor suppressor activity of non-muscle Myosin IIA is dependent upon a functional p53,

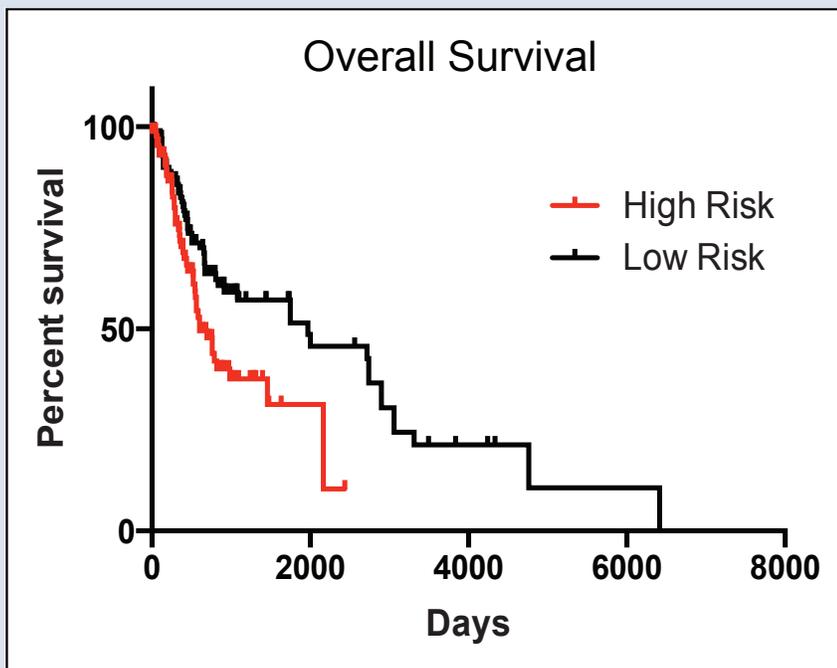


Figure 1: Impact of TP53 mutational status. Patients with tumors harboring high-risk ($n=83$) mutations have a decreased overall survival relative to low-risk ($n=85$) mutations

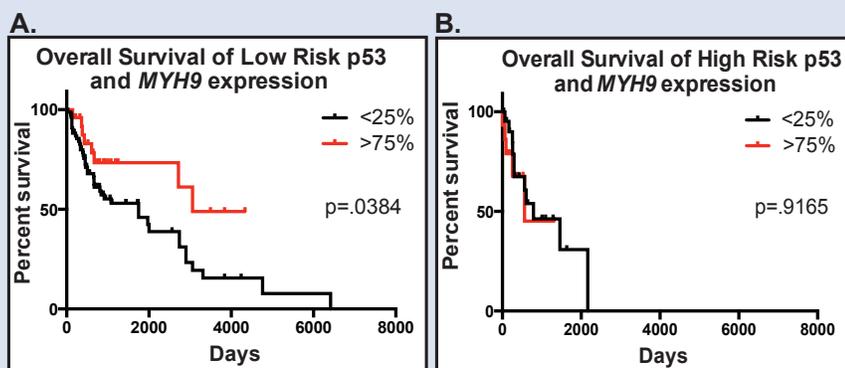


Figure 2: Impact of Myh9 expression and p53 mutational status. A. Patients with low risk (functional) p53 mutations and Myh9 expression in the lower quartile (<25%) have decreased survival relative to patients with high Myh9 expression (>75%). B. The expression level of Myh9 did not impact the survival of patients with high-risk (oncogenic) p53 mutations.

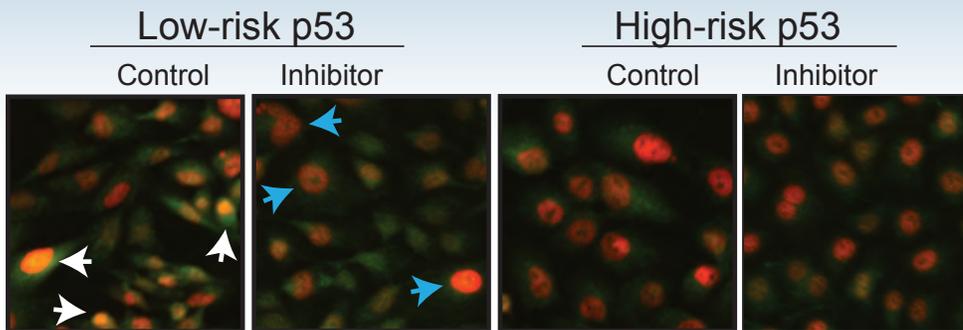


Figure 3: NMIIA co-localizes with low-risk mutant p53 but not high-risk mutant p53 in nucleus. Cells with low-risk mutant p53 reveal co-localization of Myosin IIA/p53 in nucleus as shown by the yellow staining (white arrows). Inhibition of NMIIA resulted in a loss of this co-localization as shown by the red nuclei (blue arrow). There was not co-localization or an effect of Myosin IIA inhibition observed in high-risk mutant p53 cells.

which is lost in high-risk p53 mutations and may contribute to their aggressive characteristics. Therefore our current goal is to confirm the role of non-muscle Myosin IIA in the increased aggressiveness of head and neck cancers harboring high-risk TP53 mutations. The long-term goal of this research is to develop therapies that target these aggressive cancers and will improve the survival of patients afflicted with this disease. On a broader scale, since TP53 is the most frequently altered gene in human cancer this study could provide the foundation for future work that identifies non-muscle Myosin IIA as a factor associated with these high-risk p53 gene mutations contained in aggressive malignancies in other organs in the body.

References

1. Society, A.C., Cancer Facts and Figures. 2015, American Cancer Society: Atlanta.
2. Ferlay, J., et al., GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. 2013.
3. Bernier, J., et al., Defining risk levels in locally advanced head and neck cancers: a comparative analysis of concurrent postoperative radiation plus chemotherapy trials of the EORTC (#22931) and RTOG (# 9501). *Head Neck*, 2005. 27(10): p. 843-50.
4. Neskey, D.M., et al., Evolutionary Action score of TP53 (EAp53) identifies high risk mutations associated with decreased survival and increased distant metastases in head and neck cancer. *Cancer Res*, 2015.
5. Schramek, D., et al., Direct in vivo RNAi screen unveils myosin IIA as a tumor suppressor of squamous cell carcinomas. *Science*, 2014. 343(6168): p. 309-13.



David M. Neskey, M.D. joined the Department of Otolaryngology in the Division of Head and Neck Surgical Oncology in 2014. Originally from Massachusetts, he received his

medical degree from Albany Medical College with a distinction in research in 2006 followed by a residency in Otolaryngology Head and Neck Surgery at the University of Miami. He then completed a fellowship in head and neck surgical oncology at MD Anderson Cancer Center in Houston. This training experience was comprised of two years dedicated to basic science research followed by a year committed to the management of head and neck cancer patients.

Dr. Neskey's clinical focus is on the care of patients with benign and malignant neoplasias of the head and neck including oral cavity, oropharyngeal, and laryngeal lesions, advanced melanoma and nonmelanoma skin cancers, and lesions of the salivary glands, thyroid and parathyroids. His specific interests are squamous cell carcinoma of the oral cavity and salivary gland neoplasms. He currently sees patients at Hollings Cancer Center.

Dr. Neskey has published over 20 peer reviewed articles and book chapters largely focused on the molecular pathways and genomic alterations associated with head and neck squamous cell carcinoma. He received the K12 John Calabresi Clinical & Translational Oncology Training Program grant to study the mechanisms of invasion and metastases in head and neck cancer. He is board certified by the American Board of Otolaryngology, and is a member of the American Head and Neck Society, the American Academy of Otolaryngology - Head and Neck Surgery, and the American Society of Cancer Research.



Drs. Will Carroll and Rod Schlosser

Congratulations to PGY-4 resident, **William Carroll, M.D.!** Dr. Carroll's abstract, *The Presence of Increased Sinonasal Fibroblasts is Associated with More Severe Crswnp,*

was selected to receive an **AAOA-Merck Clinical Scholar Award**, which is intended to encourage and facilitate resident research and authorship. After the conclusion of the 2015 AAOA Annual Scientific Meeting, Dr. Carroll received a \$1500 award.

Grants Grants

Research Awards 2015

	Number	Awarded in FY2015	Total Active
NIH	10	\$5,012,780	11,170,851
VA	6	\$8,243	\$126,735
Foundation	6	\$445,497	\$1,008,530
Industry Clinical Studies	29	\$1,035,415	\$3,273,986
Other	5	\$199,266	\$199,266
Total Funding	56	\$6,701,201	\$15,779,368

Farewell Residents & Fellows 2015



The 2015 Graduating Otolaryngology Residents - Drs. Shawn Stevens, Brendan O'Connell, and Jay Cline

The MUSC Department of Otolaryngology-Head & Neck Surgery ushered another fine class of graduating chief residents into the world at the yearly graduation dinner at the Charleston Yacht Club on June 22, 2015. Since Dr. Lambert's arrival at MUSC in 1999, the Department has expanded from 6 to 23 clinical faculty covering all aspects of subspecialty care in otolaryngology. The increased exposure of advanced clinical care is reflected in the career choices of our graduating residents with 20 of 38 graduating chiefs pursuing advanced fellowships since 2000.

The increased subspecialty exposure benefits residents who pursue general practice as well. In this year's graduating class, **Dr. Jay Cline** entered a general otolaryngology position with Blue Ridge ENT in Lynchburg, VA. Dr. Cline was known for his warm and affable manner which complimented his former college football stature. He was a constant source of support and encouragement to his fellow residents, and a model family man. His research included 3 publications with a focus of facial reconstruction of pediatric facial deformities. Dr. Cline has a heart for missions, and will use his skills to better the lives of his local patients, as well as others on the fringe around the world.

Our otology-neurotology division continues to be a strong influence on the career choices of our residents. **Dr. Brendan P. O'Connell** leaves to become a fellow in otology-neurotology at Vanderbilt. Dr. O'Connell is a living example that a left-handed surgeon can become a skilled otologist. He mentored many medical students on research projects, and could often be found in the departmental offices working on academic projects after hours. Brendan received 3 grants during residency to study sinonasal inflammation, and had a total of 20 publications and 7 book chapters which sets the stage for a promising academic career.

Dr. Shawn Stevens likewise continues his education as a otology-neurotology fellow at the University of Cincinnati. Dr. Stevens was known for his teaching skills, and always kept medical students on their toes with his Socratic approach. Dr. Stevens' efforts were recognized with the Resident Excellence in Teaching Award, in addition to his 6 academic publications and 5 textbook chapters.

The Department has likewise become a sought after center for advanced training in otolaryngology subspecialties, currently offering fellowships in sinus and skull base surgery; pediatric otolaryngology; otology and neurotology; and head and neck oncologic and reconstructive surgery.

When not performing as a professional beat boxer, **David Gudis, M.D.**, completed a hybrid year as a rhinology fellow and pediatric otolaryngology attending. Our patients and staff already miss his easy going bedside manner, as he is now an Assistant Professor at Columbia University and one of the only dual fellowship trained otolaryngologists in the New York City area.

Karen Hawley, M.D., completed her fellowship in Pediatric Otolaryngology. She moved west to Albuquerque where she joined the faculty of the University of New Mexico as an Assistant Professor. She is enjoying her time there operating, climbing rocks, and mountain biking.

Tom Karnezis, M.D., refined his technique as an endoscopic sinus and skull base

surgeon while publishing articles examining perioperative complications in endoscopic skull base surgery. Dr. Karnezis returned home to southern California where he will use his outstanding surgical skills as a rhinologist in the Kaiser system.

Rusha Patel, M.D. joined us from the University of Utah and quickly became a favorite of the head and neck cancer patients in her weekly clinic. She became skilled at all aspects of head and neck surgery including robotic surgery, skull base surgery and microvascular reconstruction despite her part time duties running the streets and micro-brewing. She will be summitting many mountains next year as she joins the faculty at West Virginia University.

Habib G. Rizk, M.D., MSc completed a 2-year fellowship in June 2015, during which he refined his skills in otologic and lateral skull base surgery, published five manuscripts and three book chapters, presented at several scientific meetings, and participated in a mission to the Dominican Republic. Upon graduation, Dr. Rizk joined the department as an Assistant Professor of Neurotology, and Director of the Vestibular Program. He is developing the only multidisciplinary dizziness clinic in the state of SC solely dedicated to the medical, surgical and pluridisciplinary management of patients with vertigo and balance disorders. Dr. Rizk's research interests include functional neuroimaging in vestibular disorders, vestibular migraine and psychiatric comorbidities in chronic dizziness.

Shaum Sridharan, M.D. joined MUSC after completing residency at NYU and fellowship in Laryngology at Pittsburgh. He expanded this experience into broad head and neck training covering trans oral laser and robotic techniques, microvascular reconstruction and complex head and neck cancer surgery. As a musician, he will extend his AP musical skills and stand as one of the only head & neck/laryngology experts in the country while joining the faculty at Georgetown University.

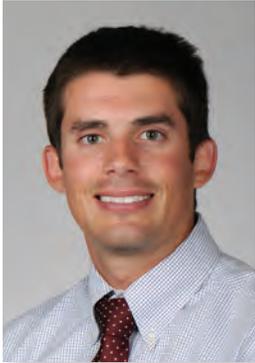


Otolaryngology Fellows, left to right: David Gudis, M.D., Karen Hawley, M.D., Tom Karnezis, M.D., Rusha Patel, M.D., Habib G. Rizk, M.D., MSc, Shaum Sridharan, M.D.

Welcome to MUSC!

PGY2 Residents

The MUSC Department of Otolaryngology-Head & Neck Surgery welcomed three new PGY2's into service in July 2015.



Ryan M. Boerner, M.D. is from Austin, Texas. He attended the McCombs School of Business at The University of Texas at Austin and earned a B.B.A. in Finance. Ryan then moved to Houston, Texas and obtained his medical degree from The University of Texas Medical School at Houston. He was inducted into the Alpha Omega Alpha honor society and accepted into the M.D. Anderson Research Program for medical students. Ryan co-authored research on mucous producing genes in the upper airway and allergic fungal rhino-sinusitis. Ryan and his wife live in West Ashley with their yellow lab, Bluebell. In his

spare time, he enjoys fishing from his kayak, playing golf, and sampling the local restaurants in Charleston.



Phong T. Le, M.D., from Wichita, KS, earned his B.S. in Biology from Newman University. He attended the University of Kansas School of Medicine in Kansas City and Wichita. During college, he volunteered in Guadalajara, Mexico for an outreach mission trip. He then spent time during medical school in Antigua and Guatemala for an Otolaryngology mission trip and has co-authored research on the safety of tonsillectomies during short-term medical mission trips. He was inducted into the Alpha Omega Alpha honor society and was a board member of the student-run JayDoc clinic.

Phong resides on Johns Island with his wife Teresa. In his spare time, he enjoys Jayhawk basketball, movies, tennis, working on his car, and aiming to hit all of Charleston's restaurants.



Robert J. Taylor, M.D. grew up in Buffalo, NY before attending SUNY Genesee where he earned a BS in Biology and was a member of the Division III Cross-Country and Track teams. He then attended medical school at SUNY Buffalo where he completed a one-year Doris Duke Clinical Research Fellowship at UNC Chapel Hill between his third and fourth years. He has authored several manuscripts on rhinology and endoscopic skull base surgery and graduated with a SUNY Buffalo with a distinction in research. Robert now lives in West Ashley with his wife Valerie and their

beagle, Barney. He enjoys running, playing ultimate frisbee, and eating at Charleston's many amazing restaurants.

2015-16 Fellows

MUSC offers otolaryngology fellowships in Head & Neck Oncologic and Reconstructive Surgery, Rhinology and Endoscopic Sinus/Skull Base Surgery, Pediatric Otolaryngology, and Neurotology. In addition to an extensive surgical experience, fellows benefit from a multidisciplinary approach by participating in outpatient clinics, rounds, and didactic conferences.



Jason D. Chesney, D.O.

D.O.: Michigan State University
Residency: McLaren Oakland Regional Medical Center, Pontiac, Michigan
Special Interests: Pediatric airway reconstruction and chronic ear surgery



Jonathan L. Hatch, M.D.

M.D.: Creighton University School of Medicine
Residency: University of Nebraska Medical Center
Special Interests: Adult and pediatric hearing loss, cochlear implants, skull base surgery



Sobia Khaja, M.D.

M.D.: University of Iowa Carver College of Medicine
Residency: University of Iowa
Special interests: H&N cancer and reconstruction, and quality and safety improvement



Elizabeth A. Nicolli, M.D.

MD: University of Virginia
Residency: University of Pennsylvania
Special Interests: Transoral robotic surgery, micro vascular reconstruction



Arash Shahangian, M.D.

MD: UCLA David Geffen School of Medicine
Residency: Stanford University
Special Interests: Sinusitis, CSF leak and Skullbase tumors

To learn more about our residency and fellowship programs please visit our website at ENT.musc.edu

OTOLOGY & NEUROTOLOGY



Paul R. Lambert, M.D.
Professor and Chairman
Director, Otolaryngology
M.D.: Duke University
Residency: UCLA
Fellowship: House Ear Institute,
Los Angeles



Theodore R. McRackan, M.D.
Assistant Professor
M.D.: MUSC
Residency: Vanderbilt University
Medical Center
Fellowship: House Ear Clinic



Ted A. Meyer, M.D., Ph.D.
Associate Professor
Director, Cochlear Implant
Program
M.D. & Ph.D.: University of Illinois
Residency: Indiana University
Fellowship: University of Iowa



Habib G. Rizk, M.D., MSc
Assistant Professor
Director, Vestibular Program
M.D.: Saint Joseph University,
Beirut, Lebanon
Residency: Saint Joseph University
and Hotel-Dieu de France
Hospital, Beirut, Lebanon
Fellowship: MUSC

PEDIATRIC OTOLARYNGOLOGY



David R. White, M.D.
Associate Professor
Director, Pediatric Otolaryngology
Director, MUSC Airway and
Aspiration Center for Children
M.D.: MUSC
Residency: UNC Chapel Hill
Fellowship: Cincinnati Children's Hospital



Clarice S. Clemmens, M.D.
Assistant Professor
M.D.: MUSC
Residency: Hospital of the
University of Pennsylvania
Fellowship: Children's Hospital of
Philadelphia



**Christopher M. Discolo, M.D.,
M.S.C.R.**
Assistant Professor
M.D.: State University of New
York, Brooklyn
Residency: Cleveland Clinic
Fellowship: University of
Minnesota / Pediatric ENT
Associates

Faculty

*Otolaryngology -
Head & Neck Surgery*

HEAD & NECK ONCOLOGY



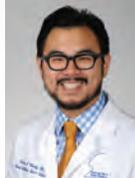
Terry A. Day, M.D.
Professor and Director
MUSC HN Tumor Program
Wendy and Keith Wellin Chair in
Head & Neck Surgery
M.D.: University of Oklahoma
Residency: LSU-Shreveport
Fellowship: UC Davis



M. Boyd Gillespie, M.D., M.Sc.
Professor
Director, MUSC Snoring Clinic
M.D., Residency & Fellowship:
Johns Hopkins Hospital



**Joshua D. Hornig, M.D.,
FRCS(C)**
Associate Professor
Director, Microvascular Surgery and
Functional Outcomes
M.D. & Residency: Univ. of Alberta
Fellowship: MUSC



Andrew T. Huang, M.D.
Assistant Professor
M.D.: University of Miami
Residency: Virginia Commonwealth
University Health System
Fellowship: M.D. Anderson



Eric J. Lentsch, M.D.
Associate Professor
M.D. & Residency: University of
Louisville
Fellowship: M.D. Anderson



David M. Neskey, M.D.
Assistant Professor
MD: Albany Medical College
Residency: University of Miami
Fellowship: M.D. Anderson



Roy B. Sessions, M.D.
Professor
M.D.: Louisiana State University,
New Orleans
Residency: Washington University
School of Medicine, St. Louis

MAXILLOFACIAL PROSTHODONTICS



Betsy K. Davis, D.M.D., M.S.
Associate Professor
Director, Division of Maxillofacial
Prosthodontics
D.M.D.: MUSC
Residency: University of Iowa
Fellowship: M.D. Anderson; UCLA



J Rhett Tucker, D.M.D.
Assistant Professor
D.M.D.: University of Pennsylvania
Residency: U.S. Army
Fellowship: M.D. Anderson

FACIAL PLASTIC & RECONSTRUCTIVE SURGERY



Krishna G. Patel, M.D., Ph.D.
Associate Professor
Director, FPRS
M.D. & Ph.D.: Medical College of
Georgia
Residency: UNC Chapel Hill
Fellowship: UC Davis



Samuel L. Oyer, M.D.
Assistant Professor
M.D.: Indiana University
Residency: MUSC
Fellowship: Johns Hopkins Hospital



Judith M. Skoner, M.D.
Assistant Professor
M.D.: University of South Carolina
Residency: MUSC
Fellowship: Oregon Health and
Science University

RHINOLOGY & SINUS SURGERY



Rodney J. Schlosser, M.D.
Professor
Director, Nasal and Sinus Center
M.D.: Mayo Clinic
Residency: University of Virginia
Fellowship: University of Pennsylvania



Zachary M. Soler, M.D., M.Sc.
Assistant Professor
M.D.: Wake Forest University
Residency: Oregon Health and Science University
Fellowship: Harvard Medical School

EVELYN TRAMMELL INSTITUTE FOR VOICE AND SWALLOWING



Lucinda A. Halstead, M.D.
Associate Professor
Medical Director, ETIVS
M.D.: George Washington University
Residency: New England Medical Center, Boston



Bonnie Martin-Harris, Ph.D., CCC-SLP, BRS-S
Mark and Evelyn Trammell Endowed Professor, Otolaryngology Head & Neck Surgery
Director, ETIVS
M.S.: Purdue University
Ph.D.: Northwestern University



Ashli O'Rourke, M.D.
Assistant Professor
M.D.: Medical College of Georgia
Residency: University of Virginia
Fellowship: Medical College of Georgia

GENERAL OTOLARYNGOLOGY & ALLERGY



Mark J. Hoy, M.D.
Assistant Professor
Director, General Otolaryngology & Allergy
M.D.: Temple University
Residency: University of Louisville



Robert C. Waters, M.D.
Clinical Assistant Professor
M.D.: MUSC
Residency: Barnes Hospital
Washington University School of Medicine



AUDIOLOGY
Kimberly A. Orr, Au.D., CCC-A
Director, Audiology
M.A.: Ohio State University
Au.D.: A.T. Still University



Elizabeth Camposo, Au.D., CCC-A
Instructor
Au.D.: Northwestern University



Laura A. Droege, Au.D., CCC-A
Instructor
M.A.: Northern Illinois University
Au.D.: A.T. Still University



Meredith A. Holcomb, Au.D., CCC-A
Instructor
Clinical Director, Cochlear Implant Program
Au.D.: UNC Chapel Hill



Cortney J. Hudak, Au.D., CCC-A
Instructor
Au.D.: University of Akron/Kent State University



Elizabeth A. Poth, Au.D., CCC-A
Instructor
M.S.: UNC Chapel Hill



Michelle L. Reiter, Au.D., CCC-A
Instructor
Au.D.: UNC Chapel Hill



Christine C. Strange, Au.D., CCC-A
Instructor
M.A.: SUNY Plattsburgh
Au.D.: A.T. Still University

Research



Judy R. Dubno, Ph.D.
Professor, Director, MUSC Hearing Research Program
Ph.D.: City University of New York



Jayne B. Ahlstrom, M.S.
Instructor
MUSC Hearing Research Program
M.S.: Vanderbilt University



Mark A. Eckert, Ph.D.
Associate Professor
MUSC Hearing Research Program
Ph.D.: University of Florida



Shaun A. Nguyen, M.D., M.A., CPI
Associate Professor
Director, Clinical Research MD & Residency: University College London
Fellowship: MUSC



Kelly C. Harris, Ph.D.
Assistant Professor
MUSC Hearing Research Program
Ph.D.: University at Buffalo



Lois J. Matthews, M.S.
Instructor
MUSC Hearing Research Program
M.S.: Purdue University



Jennifer K. Mulligan, Ph.D.
Assistant Professor
Rhinology & Sinus Surgery
Ph.D.: MUSC



M. Rita I. Young, Ph.D.
Professor
Head and Neck Research
Associate Director for Research, Ralph H. Johnson VA Medical Center

Upcoming CME Events

30th Annual F. Johnson Putney Lectureship in Head & Neck Cancer

November 6, 2015 Hollings Cancer Center, MUSC Campus

This free 1/2 day lecture will bring together world class Head & Neck Specialists to discuss the latest quality measures in oral cavity/head & neck cancer.

F. Johnson Putney Lecturer in Head & Neck Cancer:

Brian B. Burkey, M.D., Cleveland Clinic, Cleveland, OH

Cleft & Velopharyngeal Dysfunction Interactive Conference

December 4 - 5, 2015 Courtyard Marriott Charleston Historic District Hotel

This MULTIDISCIPLINARY interactive course will provide current updates on the latest treatments of cleft lip and palate and velopharyngeal dysfunction. It is designed for speech pathologists, surgeons (facial plastics, craniofacial, plastics, pediatric otolaryngologist, oral maxillofacial), maxillofacial prosthodontist, orthodontists, and dentists as well as residents from any of these backgrounds.

Course Directors:

Krishna G. Patel, M.D., Ph.D., Medical University of South Carolina

Steven Goudy, M.D., Children's Healthcare of Atlanta, Emory University

Travis T. Tollefson M.D., MPH, FACS, University of California, Davis Medical Center

5th Annual Charleston Sleep Surgery Symposium

February 4 - 5, 2016 Renaissance Charleston Historic District Hotel

Lectures and hands-on labs focused on procedures for snoring and sleep disordered breathing. This course will provide evidence-based guidelines and algorithms for proper patient selection, proper surgical site selection, and proper surgery selection. For practicing otolaryngologists.

Guest speakers:

Lon R. Doles, D.D.S., Oral Maxillofacial Associates, Charleston, SC

Tod C. Huntley, M.D., FACS, St Vincent Health, Indianapolis, IN

Brian W. Rotenberg, M.D., MPH, FRCSC, Western University, London, ON

Roldolfo Lugo Saldana, M.D., Constitution Hospital, Monterrey NL Mexico

Mas Takashima, M.D., Baylor College of Medicine, Houston, TX

The Charleston Pediatric ENT Update

March 12, 2016 MUSC Campus

A comprehensive full day course designed to provide pediatricians, family practitioners, and otolaryngologists with up-to-date guidelines to implement in their daily practice, promote quality and efficient care, and tackle challenging ENT diagnosis with confidence.

Southern States Rhinology Course

April 20 - 23, 2016 Kiawah Island and MUSC Campus

This course is intended for practicing Otolaryngologists and will feature presentations on topics for the practicing rhinologists and sinus surgeons. A hands-on laboratory dissection is available, featuring state-of-the-art endoscopic instrumentation, video, and image guidance systems.

Pediatric Audiology Conference

April 29, 2016 Courtyard Marriott, Mount Pleasant, SC

Temporal Bone Dissection Course

May 6 - 7, 2016 MUSC Campus

Lectures & hands on labs focused on procedures for chronic ear disease. For practicing otolaryngologists.

16th Annual Charleston Magnolia Conference

June 3 - 4, 2016 Mills House Hotel

The Charleston Course, 6th Annual Otolaryngology Literature Update

August 5 - 7, 2016 Kiawah Island Golf Resort

For course registration or more information:

Julie Taylor (843) 876-0943, taylojul@musc.edu

More information coming soon, please check our website often: ENT.musc.edu



Department of Otolaryngology - Head & Neck Surgery

135 Rutledge Avenue, MSC 550

Charleston, SC 29425-5500

Phone 843-792-8299

Website: ENT.musc.edu

Paul R. Lambert, M.D.

DEPARTMENT CHAIR, EDITOR-IN-CHIEF

M. Boyd Gillespie, M.D.

EXECUTIVE EDITOR

Zachary M. Soler, M.D., M.Sc.

ASSOCIATE EDITOR

Alison Padlan-Gillette

CREATIVE & PRODUCTION MANAGER

©2015 MUSC OTOLARYNGOLOGY - HNS
ALL RIGHTS RESERVED