

# Outcomes and Performance

# 2014



**Mount  
Sinai**

**Mount Sinai Health System  
Department of Otolaryngology–  
Head and Neck Surgery**



## **Mission**

The mission of the Mount Sinai Health System is to provide compassionate patient care with seamless coordination and to advance medicine through unrivaled education, research, and outreach in the many diverse communities we serve.

## **Vision**

The Mount Sinai Health System's vision is to continue to grow and challenge convention through our pioneering spirit, scientific advancements, forward-thinking leadership, and collaborative approach to providing exceptional patient care.

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This material and more information on The Department of Otolaryngology–Head and Neck Surgery can be found at [www.mountsinai.org/ent](http://www.mountsinai.org/ent)



## A Message from the Dean

Improving patient care is central to the mission of the Icahn School of Medicine at Mount Sinai and the Mount Sinai Health System. The Outcomes and Performance annual report, published by the Department of Otolaryngology-Head and Neck Surgery, highlights our dedication to improving clinical care and the innovative research programs. This year's report underscores the Department's continued improvement in surgical morbidity and reduction of complications rates. The report also showcases many of the innovative programs that distinguish Mount Sinai as a leader. Optical imaging, clinical trials, and advances in the molecular biology of tumor cell metastasis are some of the programs that distinguish this year's report, which I hope you find informative.

It is my pleasure to share with you the accomplishments of this outstanding Department, one that exemplifies Mount Sinai's mission to advance biomedical research, drive clinical improvements, and accelerate medical innovation.

A handwritten signature in black ink that reads "Dennis".

Dennis S. Charney, MD  
*Anne and Joel Ehrenkranz Dean  
Icahn School of Medicine at Mount Sinai  
President for Academic Affairs  
Mount Sinai Health System*

## A Message from the Chair

At the Department of Otolaryngology-Head and Neck Surgery at Mount Sinai, we are dedicated to continuously improving patient experiences and outcomes which is why we measure and report our performance data year after year. This approach identifies areas where we can improve and proactively implement clinical programs and research activities that target specific goals in each Division.

As total visits increase each year, the Department has seen a progressive increase in the volume of complex cases. Hence, It is critical to continue our efforts to reduce complication rates and improve our patient's quality of life following treatment. The *Patient First Program* is an example of our efforts demonstrating that pre-visit assessments increase treatment efficiencies among our high risk patient population and improve the patient experience.

This year there were several new and exciting developments, including our HPV vaccine clinical trial. As the only site worldwide, Mount Sinai is leading this trial, which is designed to measure the efficacy of a combined vaccine and robotic surgery treatment for HPV-related head and neck cancers. We are pleased to report our various accomplishments in this 2014 Outcomes and Performance report and hope you find it informative.



Eric M. Genden, MD, MHCA, FACS  
*Professor and Health System Chairman  
The Department of Otolaryngology -  
Head and Neck Surgery  
The Mount Sinai Health System*



# Outcomes and Performance

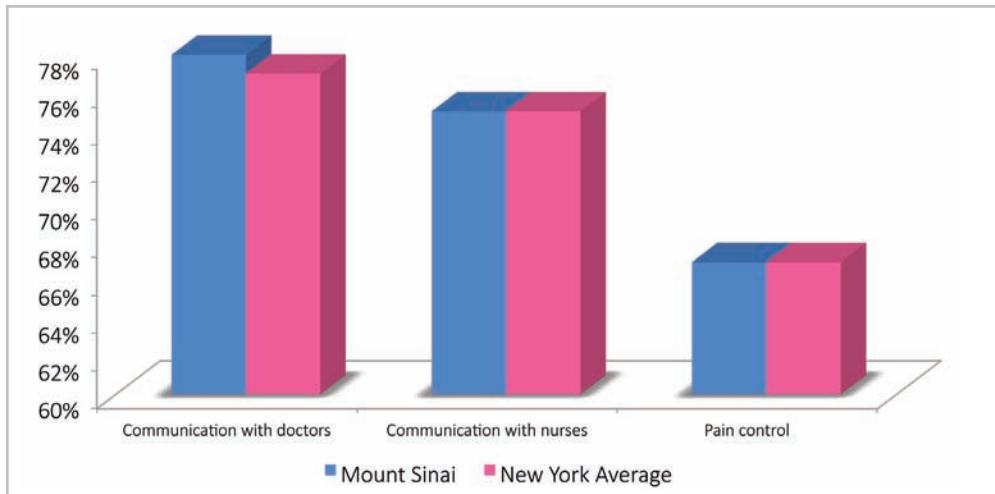
## What Have We Accomplished?

This year, we report our performance data and highlight several new programs, dedicated to improving patient care. The Stop Sepsis Program is an example of an initiative designed to reduce perioperative inpatient infections. It is estimated that more than 750,000 Americans suffer from sepsis each year. At Mount Sinai, our quality team implemented the Sepsis Reduction Program using a clinician decision support model that involves data-driven, multidisciplinary protocols to quickly identify and treat cases of sepsis. As part of the Program, nurses received additional training to recognize warning signs and to call the Stop Sepsis Team. A team member then promptly responds to evaluate the patient, order tests, and initiate the indicated treatment. The results of the pilot program were overwhelmingly positive. The sepsis mortality rate across all Departments at The Mount Sinai Hospital fell by 40 percent, significantly decreasing Mount Sinai's overall sepsis mortality rate, and we are proud to report, the Department of Otolaryngology-Head and Neck Surgery had 0 percent sepsis mortality rate in 2014. Programs like the Stop Sepsis Program make a difference for our patients and their families.

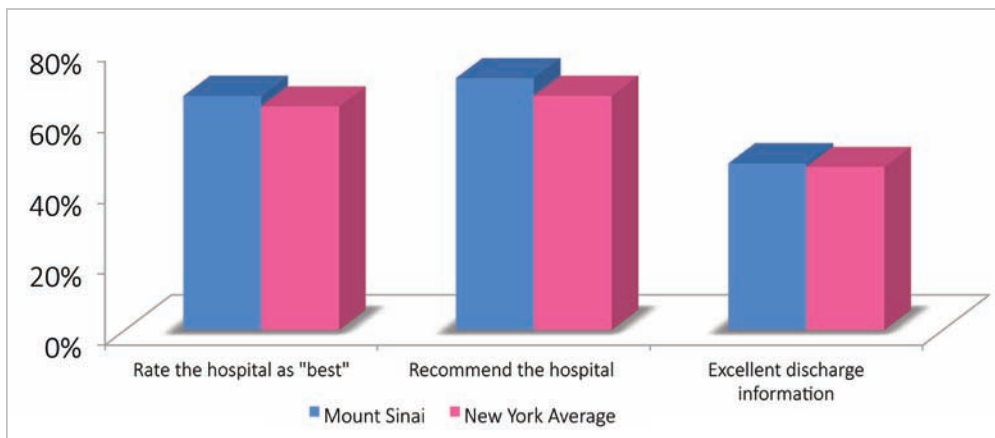


## ■ The Patient Hospital Experience

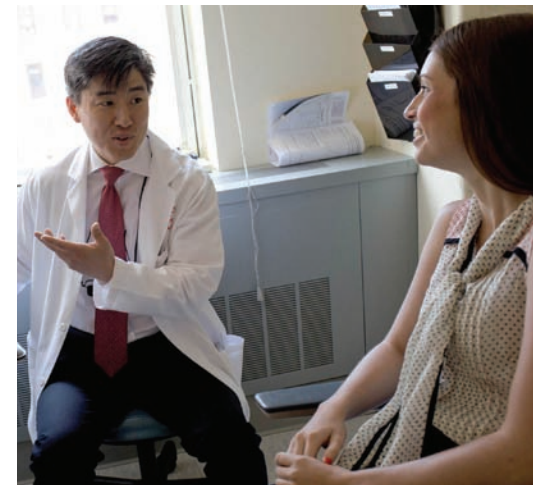
The patient hospital experience is a measure of critical aspects of patients' hospital experiences such as communication with nurses and doctors, the responsiveness of hospital staff, the cleanliness and quietness of the hospital environment, pain management, communication about medicines, discharge information, overall rating of hospital, and would they recommend the hospital. Working with nursing leadership, we have improved our patient's hospital experience by addressing our patients needs.



Source: The Centers for Medicare and Medicaid Services and Hospital Consumer Assessment of Healthcare Provider and Systems Survey. Medicare.gov Hospital Compare, <http://www.medicare.gov/HospitalCompare/profile>



Source: The Centers for Medicare and Medicaid Services and Hospital Consumer Assessment of Healthcare Provider and Systems Survey. Medicare.gov Hospital Compare, <http://www.hospitalcompare.hhs.gov>



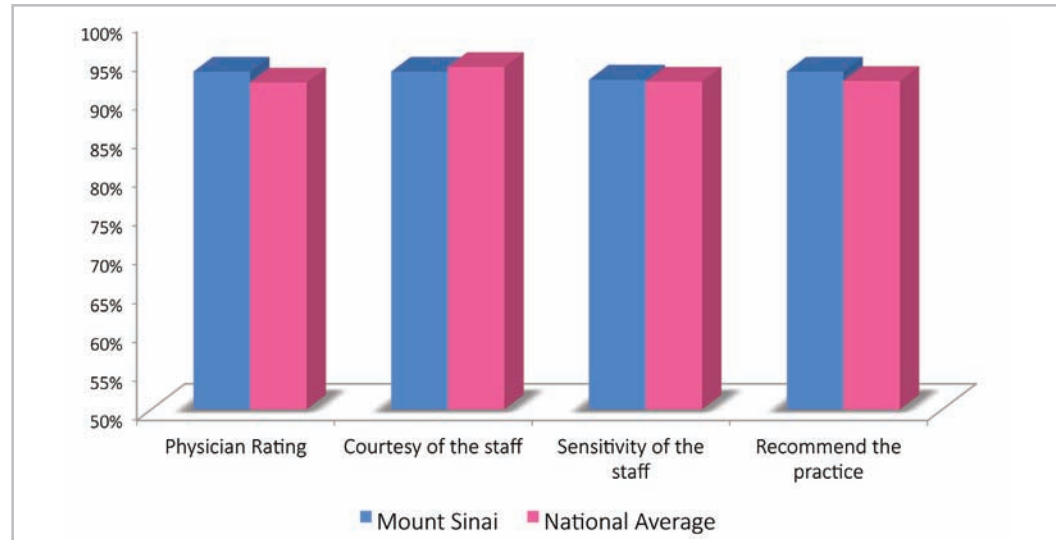
Dr. Edward Shin, Chair of Otolaryngology-Head and Neck Surgery at New York Eye and Ear Infirmary of Mount Sinai.

## ■ The Patient Practice Experience

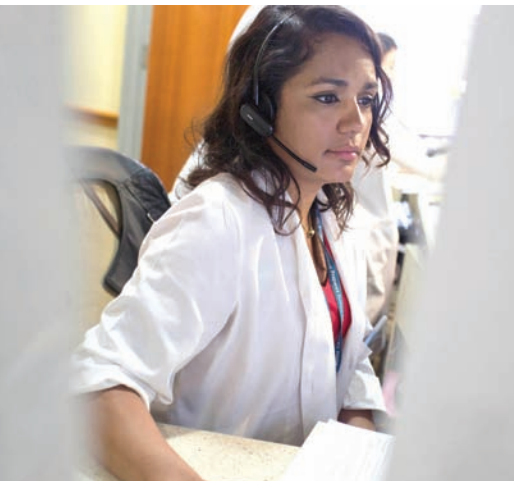


Head and Neck Surgeon Dr. Gennady Ukrainsky specializes in the treatment of the nasal airway disorders, obstructive sleep apnea and diseases of the paranasal sinuses at New York Eye and Ear Infirmary of Mount Sinai.

At Mount Sinai, the patient experience is a priority. The patient experience reflects occurrences and events that occur across the continuum of care. We believe that the patient experience extends beyond patient satisfaction surveys; it reflects the level of individualized care and managing the patient's expectations. As patient experience continues to emerge as an important focus in healthcare, we are finding ways to tailor our care to each patients needs.



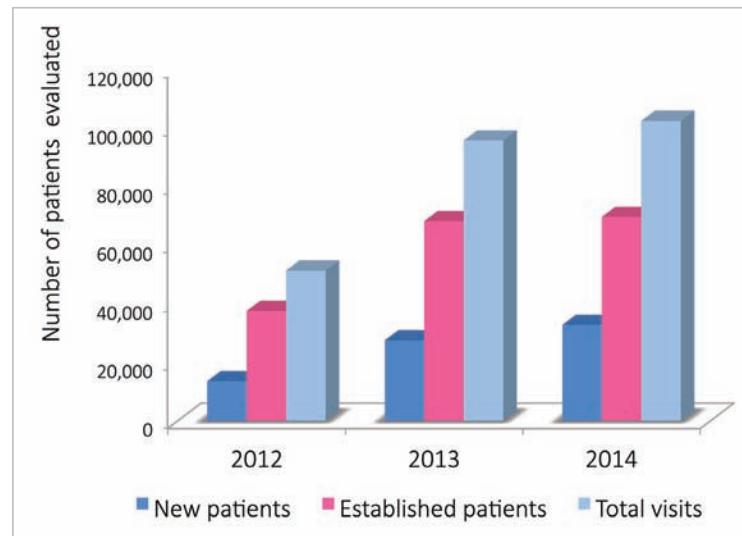
Source: Press Ganey Patient Experience Survey



## ■ Departmental Volume and Growth

### Patient Encounters

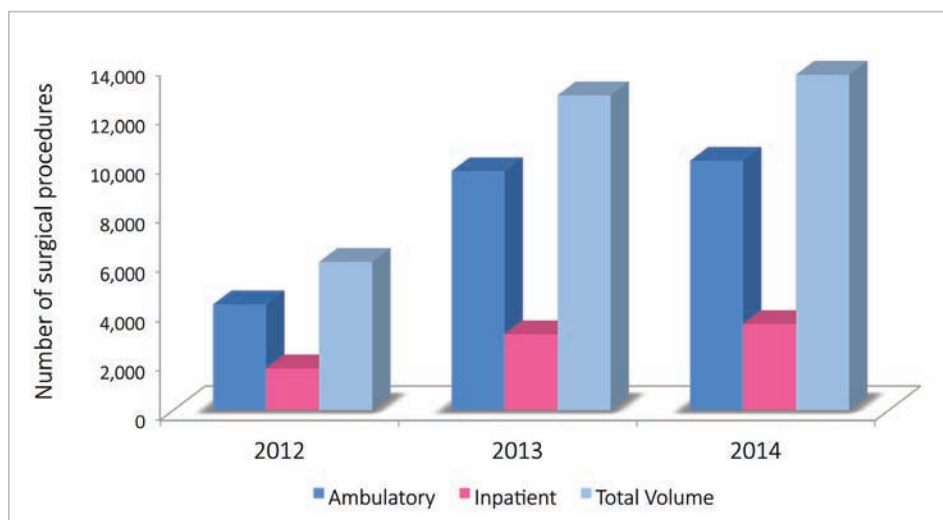
The Mount Sinai Health System's Department of Otolaryngology volume of patient encounters has consistently increased. Department physicians evaluate more than 100,000 patients a year. This volume provides an extraordinary data set to focus on the patient experience and surgical and medical outcomes.





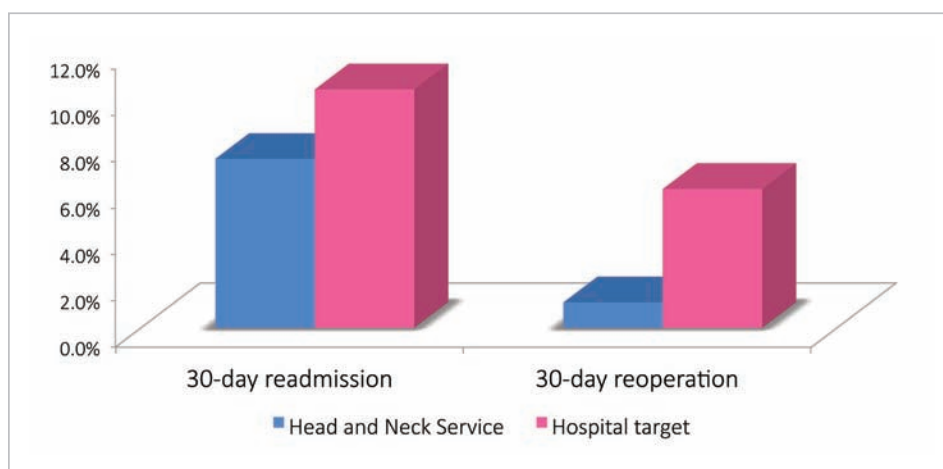
## Departmental Volume and Growth

### Surgical Volume



The Department attracts experts from all disciplines of otolaryngology to lecture at its various conferences. Here, Dr. Mike Yao, Head and Neck Surgeon, engages with one of the speakers.

### Rate of Readmission and Reoperation



Source: University Health System Consortium



## ■ Departmental Volume and Growth



Dr. Marita Teng, Head and Neck Surgeon at The Mount Sinai Hospital, performs a neck dissection alongside Resident Yue Ma.

Source: University Health System Consortium

### Post-Operative Sepsis Rate

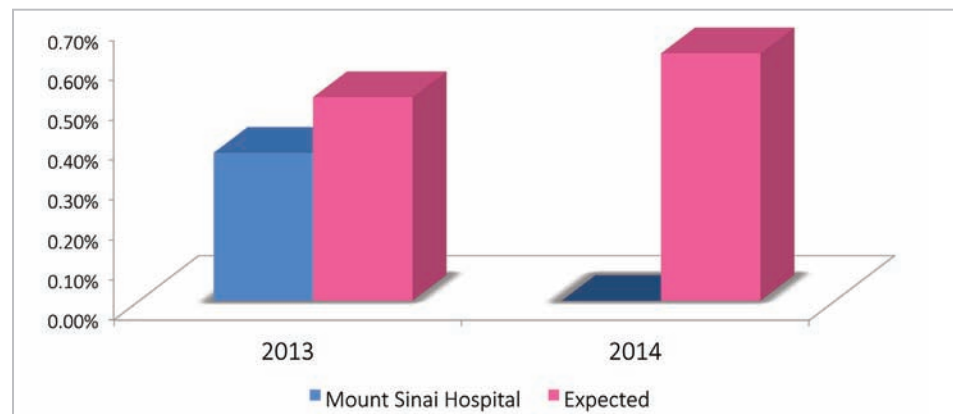
Although infection and sepsis are on the rise in the United States, striking an estimated 750,000 Americans annually, The Mount Sinai Hospital has begun implementing successful new procedures to combat this. This Sepsis Reduction Program uses a clinician decision support model that involves data-driven, multidisciplinary protocols to quickly identify and treat cases of sepsis. As part of the Program, nurses receive additional training to recognize warning signs and to call the Stop Sepsis Team (a group of specially trained nurse practitioners) if they determine a patient is at risk. A team member promptly responds to evaluate the patient, order tests, such as blood cultures and additional blood work, and initiate the indicated treatment.

The results of the pilot program were overwhelmingly positive. The sepsis mortality rate across all Departments at The Mount Sinai Hospital fell by 40 percent, significantly decreasing Mount Sinai's overall sepsis mortality rate, and we are proud to report, the Department of Otolaryngology-Head and Neck Surgery had 0 percent sepsis mortality rate in 2014.



### Mortality Rate

Mortality rate is the measure of patients that expire during hospitalization. The rates are calculated as a ratio of the number of deaths among hospital patients with the specific medical condition or procedure by the total number of patients admitted for that same medical condition or procedure. The risk adjustment method is used to account for the impact of individual risk factors such as age, severity of illness and other medical problems that can put some patients at greater risk of death than others.

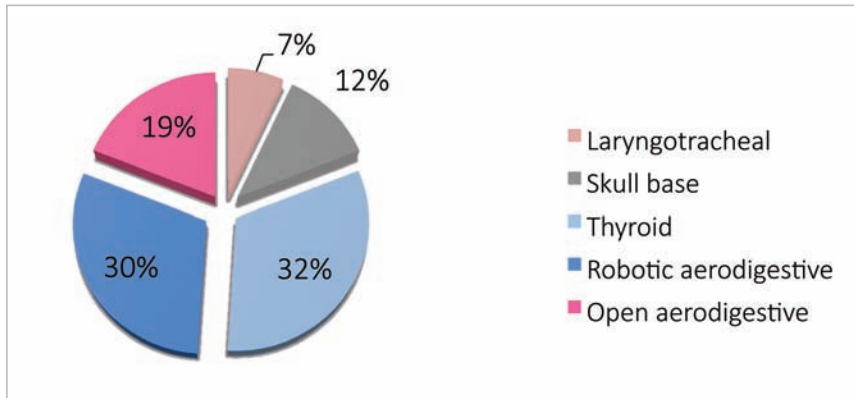


Source: University Health System Consortium

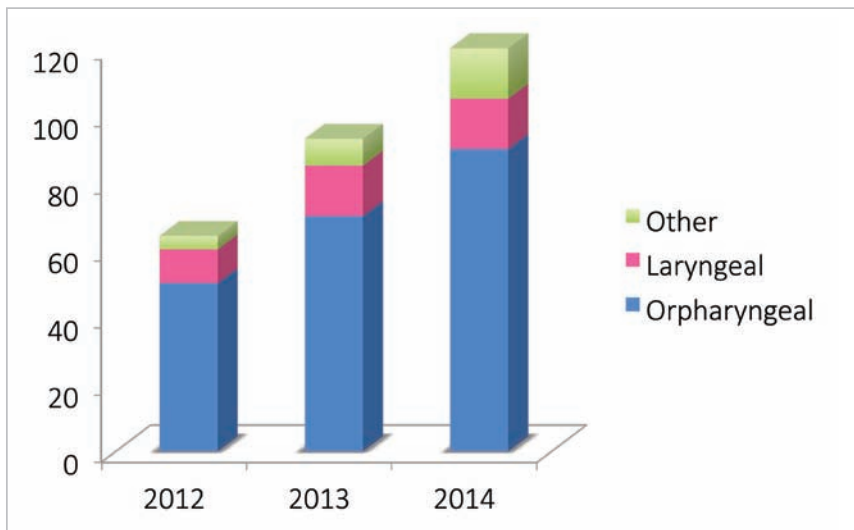
## ■ The Multidisciplinary Head, Neck, and Thyroid Center- A Center of Excellence

In 2014, The Mount Sinai Health System Division of Head and Neck Oncology was the highest volume surgical unit in the state of New York. Offering programs in minimally invasive skull base surgery, robotic transoral surgery, and minimally invasive thyroid and parathyroid surgery, the Division offers innovative trials for patients with human papilloma virus (HPV)-related oropharyngeal cancers and patients with advanced thyroid cancer. Mount Sinai offers the only therapeutic immune-mediated vaccine trial in the world, providing a unique opportunity for patients with HPV-related oropharyngeal cancer. New developments in optical imaging demonstrate promise for obtaining tumor free margins before making a surgical incision. The Division houses the nationally recognized Multidisciplinary Head, Neck and Thyroid Center that continues to strive toward clinical excellence through innovation and evidence-based clinical trials.

### Case Distribution



### Robotic Surgery Case Distribution



Dr. Eric Genden, Chair of the Department of Otolaryngology-Head and Neck Surgery at the Mount Sinai Health System, performs an open thyroidectomy.

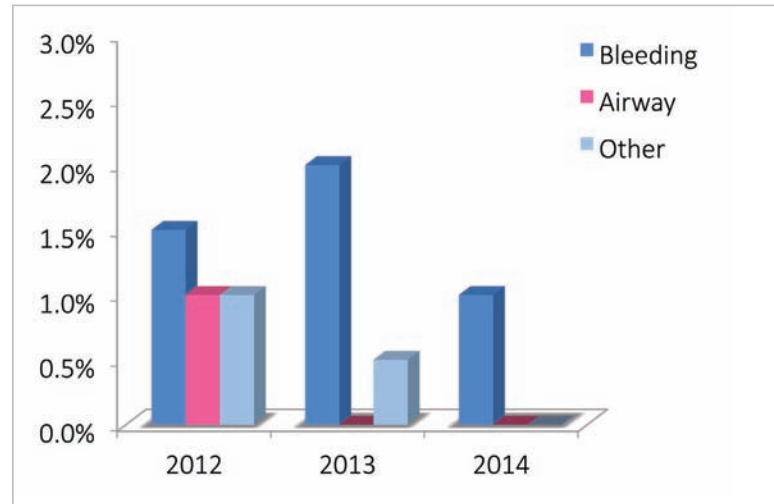


## ■ The Multidisciplinary Head, Neck, and Thyroid Center- A Center of Excellence



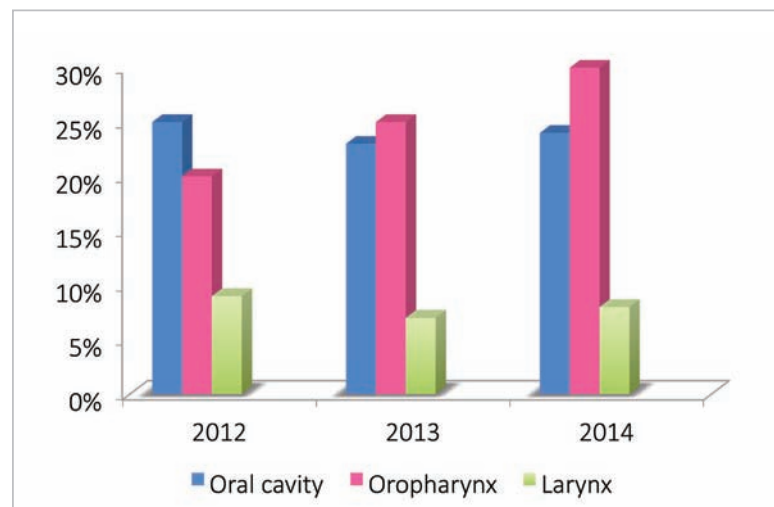
Dr. Stimson Schantz, Head and Neck Surgeon at New York Eye and Ear Infirmary of Mount Sinai.

### Complications Related to Robotic Surgery



Dr. Mark Urken, Chief of the Division of Head and Neck Oncology at Mount Sinai Beth Israel, examines a patient.

### Head and Neck Oncology- Trial Enrollment

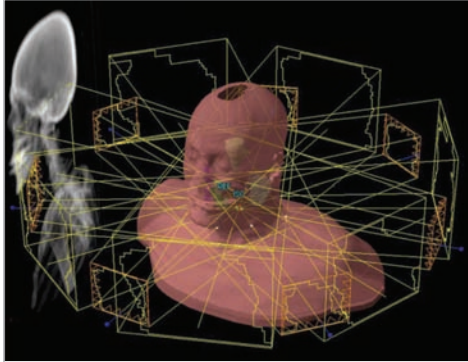


## ■ The Multidisciplinary Head, Neck, and Thyroid Center- A Center of Excellence

### New Research

Current guidelines recommend postoperative radiotherapy in locally advanced oropharyngeal cancers to include bilateral neck lymph nodes. Recently, some have argued that in select cases ipsilateral neck radiotherapy alone is sufficient in HPV positive patients.

Researchers at Mount Sinai evaluated the efficacy of sparing the contralateral in this patient population with base of tongue or locally advanced tonsillar cancers.

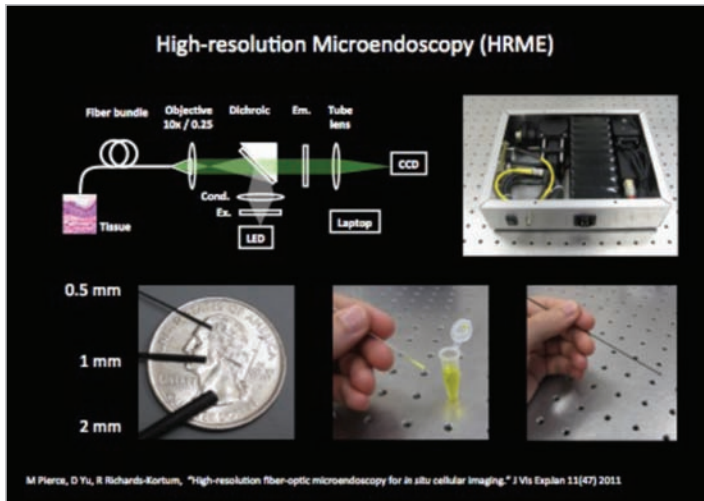


Researchers at the Mount Sinai Head and Neck Cancer Center found no locoregional and contralateral neck failures, or metastases. This work suggests that contralateral neck- sparing radiotherapy in select postoperative SCC patients with base of tongue and locally advanced tonsillar cancers who had bilateral neck dissection is appropriate treatment.

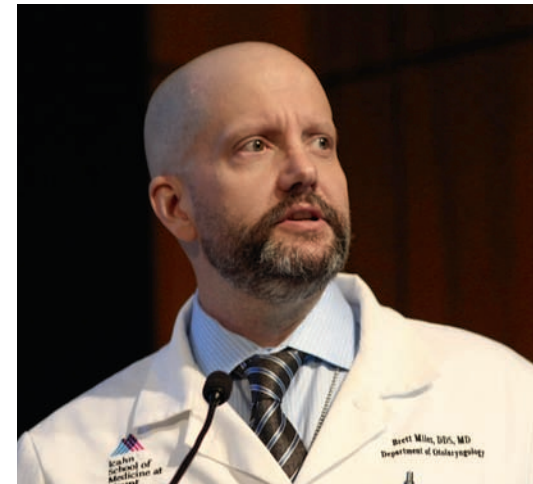


Guest speaker and Chair of Otolaryngology at Columbia University, Dr. Lawrence Lustig presented, "Cochlear Gene Therapy: Is It Time?" to the Health System faculty.

Dr. Brett Miles and co-investigators recently completed a clinical trial to assess the feasibility of intraoperative margin control utilizing high resolution microendoscopy optical imaging for head and neck squamous cell carcinoma. This trial is a collaboration with Dr. Andrew Sikora at Baylor University and Dr. Rebecca Richards-Kortum and the optical division in the department of Bioengineering at Rice University. The trial examined the use of high-resolution fiberoptic microscope to evaluate intraoperative cancer margins.



The microendoscopy probe can be used to assess tissue without making an incision. Current margin analysis requires that tissue is biopsied and assessed histologically to determine if margins are free of tumor. This investigational technique uses high resolution endoscopy techniques to assess the tissue.

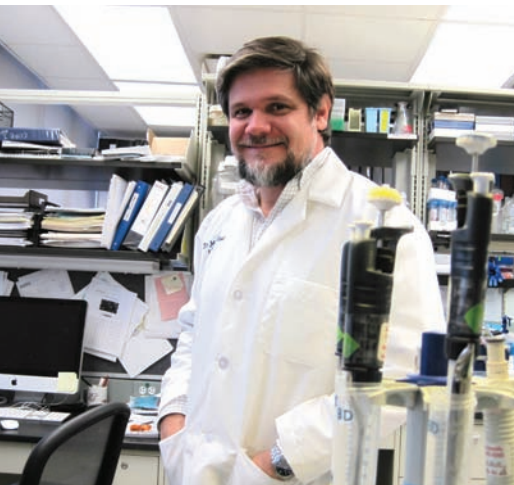


Dr. Brett Miles, Health System Co-chief of the Division of Head and Neck Oncology, spearheads the Advaxis HPV-related cancer vaccine and Sinai Robotic Surgery clinical trials.

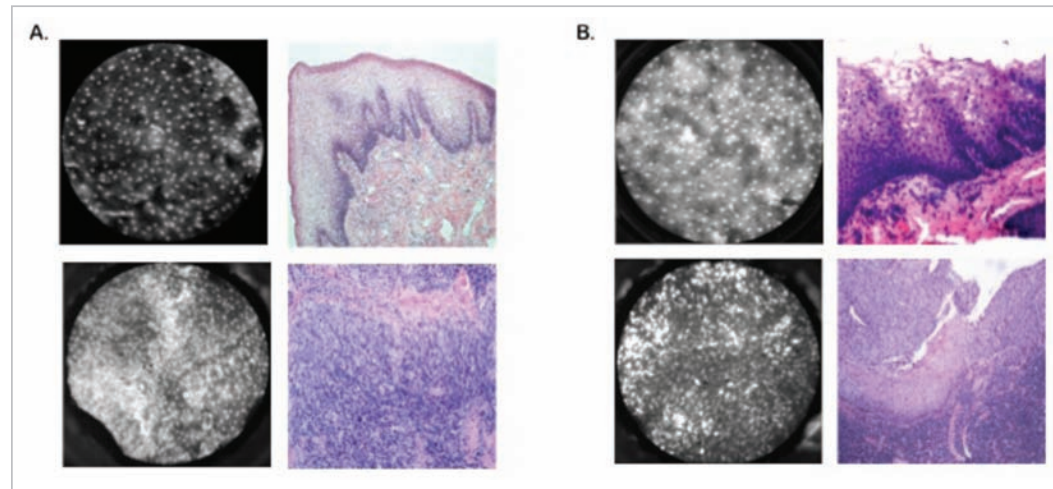
## ■ The Multidisciplinary Head, Neck, and Thyroid Center- A Center of Excellence

### New Research

Oropharynx: representative images with corresponding histopathology (H&E original magnification 100X) of benign (top) and malignant (bottom) mucosa. A. Base of tongue B. Tonsil.



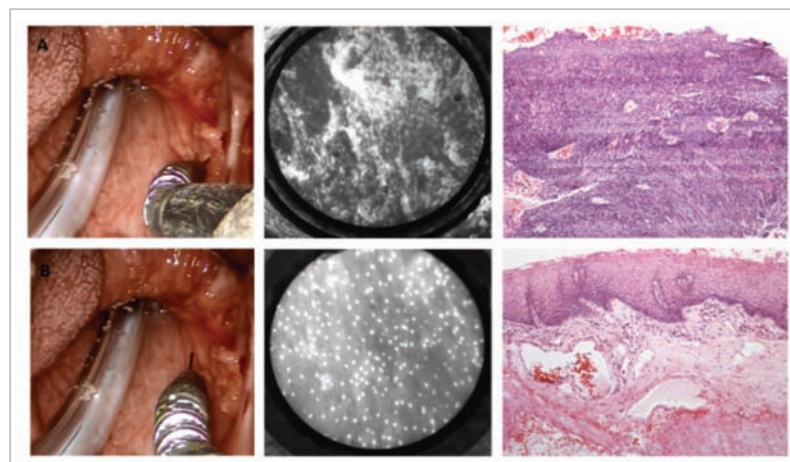
Dr. Julio Aguirre-Ghiso, Director of the Head and Neck Cancer Research Program, who is internationally recognized for his pioneering research on tumor cell dormancy, growth, and metastasis.



The endoscopy probe can be placed into the robotic arms to assess tissue before making an operative incision. The fiberoptic probe demonstrates malignant tissue (above) and benign tissue (below) during robotic pharyngectomy.



Dr. Alfred Illoreta (right), Skull Base Surgeon at The Mount Sinai Hospital, performs a transnasal resection of a meningioma, alongside Neurosurgeon Dr. Raj Shrivastava (left).



## ■ The Division of Facial Plastic and Reconstructive Surgery

The Division of Facial Plastic and Reconstructive Surgery encompasses cosmetic and reconstructive treatments of the face, head and neck. From facelift and rhinoplasty to major reconstruction of the face, the Division provides the gamut of facial plastic surgical care. Each aspect complements the other: function enhances appearance, while an aesthetic eye reconstruction yields better functional, as well as cosmetic, results. Our physicians provide these services in a caring, safe and comfortable environment. Several key initiatives are described in more detail below.

### Nasal Obstruction

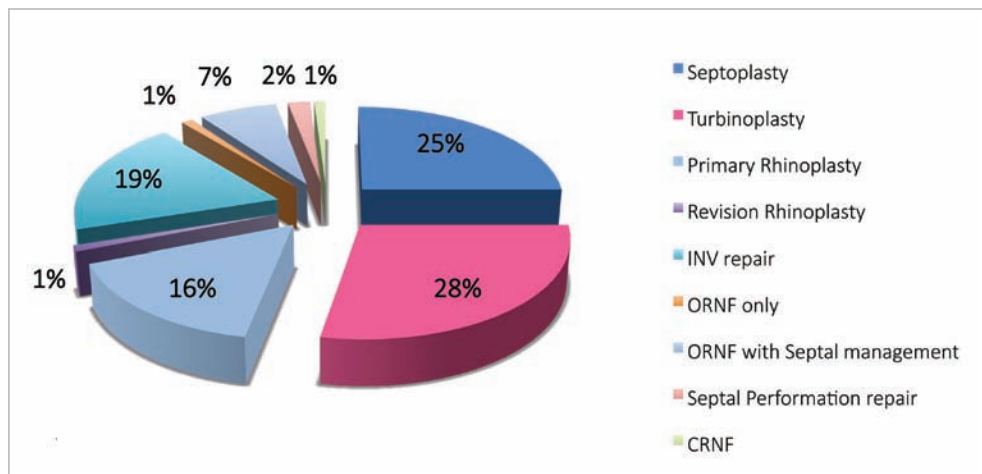


Figure 1b. Procedures performed in patients with nasal obstruction.

Nasal obstruction is a common problem and can be treated medically or surgically. While surgical success can be determined for the individual patient based on subjective complaints, objective data can be obtained to assess the success of patient management, surgical assessment and execution program-wide. Using the validated NOSE (Nasal Obstruction Symptom Evaluation) scale, we have assessed the results of surgery for nasal obstruction for patients who had surgery in 2014. Our patients' average NOSE score (0= no symptoms of obstruction, 100= complete obstruction) pre-operatively was 73.3, which decreased to 23.2 post-operatively ( $p < 0.0001$ ) (figure 1a). All patients showed improvement in NOSE scores, and the mean surgical improvement was 49.7, consistent with reported data.

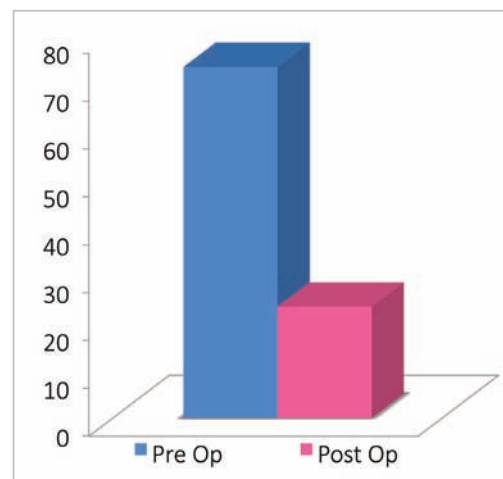


Figure 1a. Mean NOSE scores before and after surgery for nasal obstruction.



Dr. Anthony Sclafani, Chief of the Division of Facial Plastic and Reconstructive Surgery at the Mount Sinai Health System.

## ■ The Division of Facial Plastic and Reconstructive Surgery



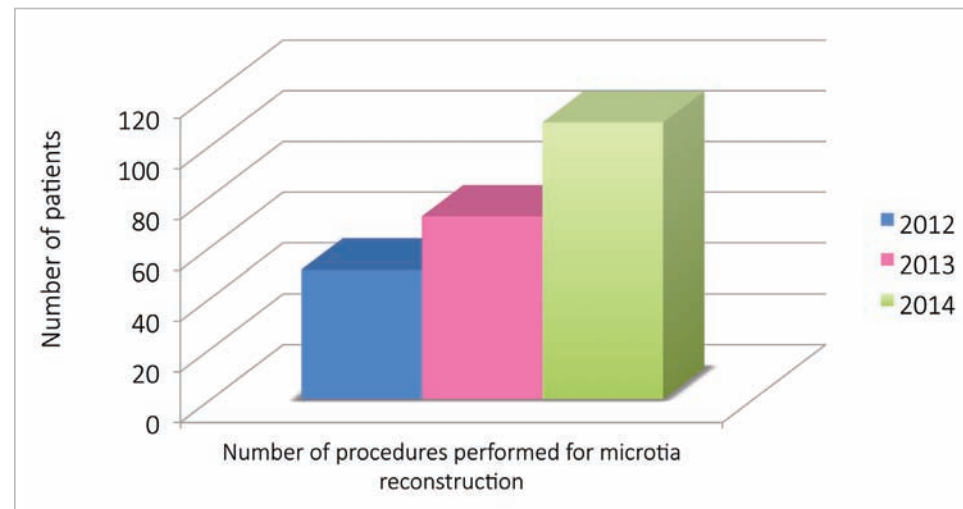
Dr. Joshua Rosenberg, Surgeon at the Division of Facial Plastic and Reconstructive Surgery at The Mount Sinai Hospital, discusses research findings with his colleagues.

### Rehabilitation of Facial Paralysis

Facial paralysis remains a difficult condition to treat with significant social, psychological and functional repercussions for the sufferer. In the past year, our Division performed more than 200 procedures to treat facial paralysis. These included botulinum toxin A (Botox) injections to treat synkinesis, static and dynamic slings to restore facial symmetry and microvascular reconstruction to reinnervate the paralyzed face and restore natural expressive facial movement.

### Correction of Congenital Deformities

Correction of congenital facial deformities, including cleft lip and palate, velopharyngeal insufficiency (VPI) and microtia is a focus for our division. Dr. Joseph Rousso specializes in the treatment of cleft lip, cleft palate and VPI, treating patients at New York Eye and Ear of Mount Sinai, as well as on overseas missions, and performed more than 100 of these procedures in 2014. The breadth of treatments we provide to patients with microtia has expanded significantly over the past three years, and is coordinated with the Otology service to provide comprehensive care for both the aesthetic and functional problems these patients face. Most microtia patients are reconstructed with autologous rib in two stages, with additional procedures to further refine the shape of the ear or remove unwanted hair from the created ear with lasers.





## ■ The Division of Laryngology

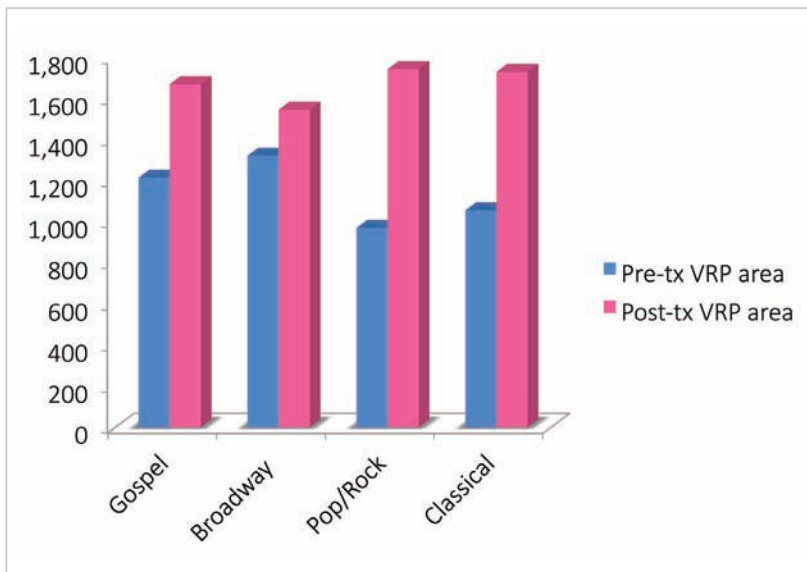
The Grabscheid Voice Center at The Mount Sinai Hospital specializes in the treatment of voice problems in professional and amateur singers and actors. The Voice Range Profile is the measurement of the pitch and loudness range of a performer. We have learned to make use of the information these measures can give us to guide our treatment of these performers. The increases in total voice range (in decibel/semitones) is shown below for four classes of professional singers. The average pre-treatment / post-treatment gains for all singing patients are 49.6 percent.

	Pre-tx VRP area	Post-tx VRP area	% gain
Gospel	13213	1669	37.59%
Broadway	1320	1544	16.57%
Pop/Rock	968	1742	79.96%
Classical	1054	1729	64.04%
Mean	1139	1671	49.6%
SD	158	90	27.9%



Dr. Michael Pitman, Chief of the Division of Laryngology at the Mount Sinai Health System, preparing to perform an endoscopic temporalis fascia transplant for the treatment of vocal fold scarring.

### Changes in Vocal Range After Treatment

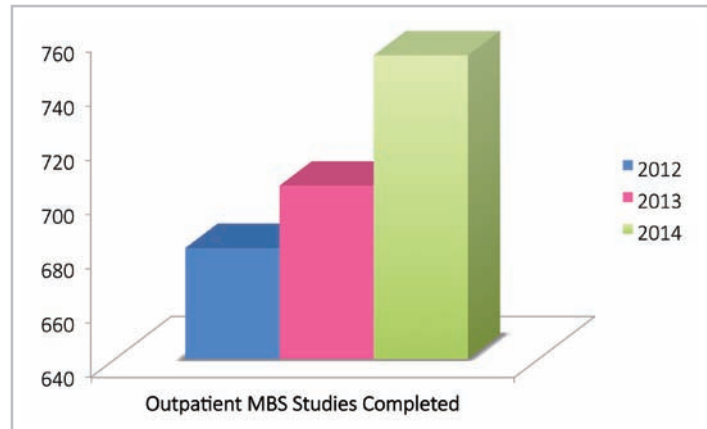


## ■ The Division of Laryngology

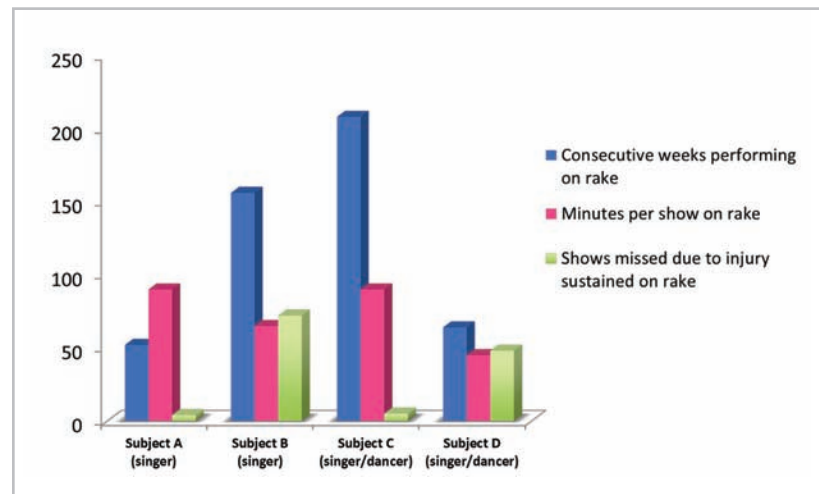


Vocologist Dan McCabe and patient Helena-Joyce Wright celebrate her increased vocal range with voice therapy. "The gift of this second chance to own my voice leaves me with unspeakable joy," she said.

Mount Sinai's Division of Laryngology is one of the busiest in the nation when it comes to the evaluation of patients with swallowing disorders. With 752 modified bariums swallow evaluations per year, our experts have the experience and expertise to evaluate and treat a wide range of swallowing disorders. With a newly developed research initiative led by Cathy Lazarus CCC-SLP, they are harnessing the strength of this volume of visits to improve the treatment of patients with swallowing disorders and to optimize their care and outcomes.



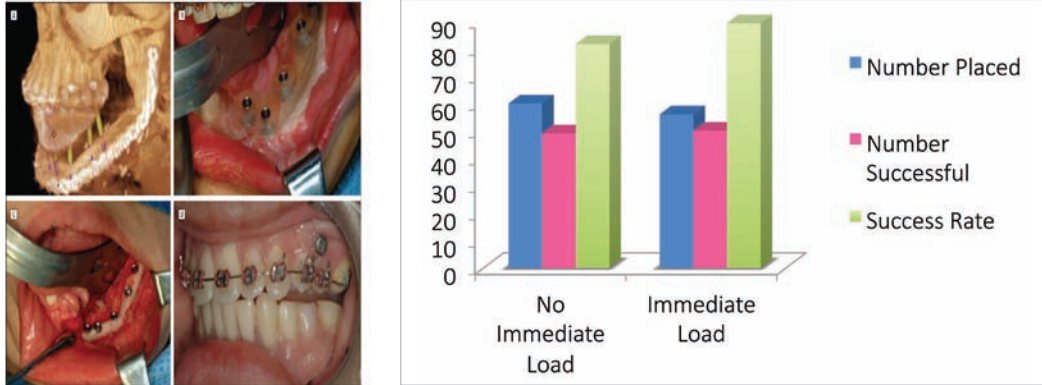
Therapists at the VSI of New York Eye and Ear Infirmary of Mount Sinai are dedicated to treatment of voice complaints in performers. A particular area of clinical and research interest for Amy Cooper CCC-SLP, Director of Speech Language Pathology and a Singing Voice Specialist, is the ergonomics of Broadway musicals. Although highly desired and extremely competitive, professional productions have traditionally given minimal consideration to the overall welfare of casts beyond the immediate performance contract. The interests of production aesthetics and producer needs are generally considered ahead of performer fatigue. At NYEE of Mt. Sinai, we recently surveyed Broadway performers regarding vocal injury sustained while performing on a raked stage. Complaints included disturbed breath management, increased laryngeal tension, changes in voice quality and vocal fatigue. This informs the way we treat professional performers and sets the stage for future considerations include on-stage acoustics/monitor feedback, as well as rehearsal conditions.



## ■ The Division of Oral and Maxillofacial Surgery

Physicians' experience at Mount Sinai with mandibular and maxillary reconstruction has revealed that osseointegrated implant-borne dentures improve functional outcomes. This type of rehabilitation is potentially more attainable with computer-assisted implant planning.

### Implant Success for Fixed Dental Protheses (FDP's in Patients with Restorations – With and Without Immediate Load)

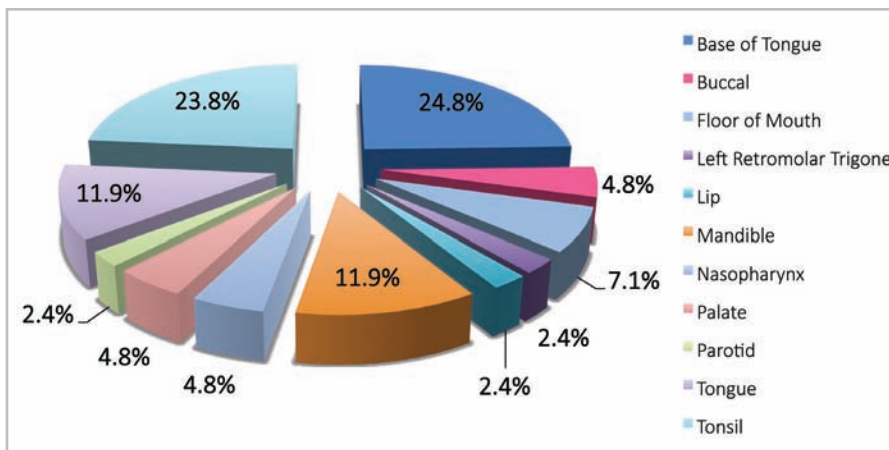


Conclusions: Computer-assisted implant rehabilitation of reconstructed defects can achieve superior results to traditional prosthesis. This prosthodontic-driven approach also uses unique framework design to account for mandible height discrepancy after fibula free flap reconstruction.



Health System Chief of the Division of Oral and Maxillofacial Surgery Dr. Daniel Buchbinder.

### Primary Treated Tumor Percentage for Patients Who Underwent Osteoradionecrosis (ORN) Surgery



Surgery for advanced ORN can result in an improved QOL. Functional outcomes of oral intake, speech intelligibility, and eating in public correlated with patient rated QOL measures.

## ■ The Division of Oral and Maxillofacial Surgery



Dr. Vincent Carrao, Chief of the Division of Oral and Maxillofacial Surgery at The Mount Sinai Hospital, performed a mandibular distraction and a bone graft on little Anthony, who was born with Goldenhar syndrome.

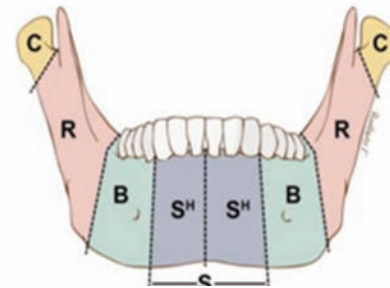
### Quality of Life After Surgical Management of Advanced Osteoradionecrosis (ORN) of the Mandible

A telephone survey was conducted and quality of life (QOL) questionnaires were completed in a subset of 30 patients assessing QOL for speech, swallowing and overall functioning correlated with oral nutrition and performance status.

**Table 2.**

ORN site utilizing the mandible defect classification system by frequency and percentage for the 47 patients who underwent ORN surgery.

	Frequency	Valid percent
Valid		
B	26	56.5
RB	6	13.0
BSB	10	21.7
CRB	2	4.3
S	1	2.2
CRBSBRC	1	2.2
Total	36	100.0
Missing	1	
Total	47	



B: body; RB: ramus-body; BSB: body-symphysis-body; CRB: condyle-ramus-body;  
S: symphysis; CC: condyle-condyle;  
BRBSBRC: condyle-ramus-body-symphysis-body-ramus-condyle

**Table 6.**

Kruskal-Wallis test of difference in means of PSS scale across flap type.

	Fibular flap	Scapular flap	Iliac crest	p value
Normalcy of diet	61 (SC = 36) <sup>a</sup>	50 (SD = 35)	13 (SD = 25) <sup>1</sup>	0.074
Eating in public	69 (SD = 37)	45 (SD = 37)	25 (SD = 35)	0.080
Understandability of Speech	96 (SD = 9) <sup>b</sup>	90 (SD = 14)	75 (SD = 20) <sup>2</sup>	0.024

a p = 0.050

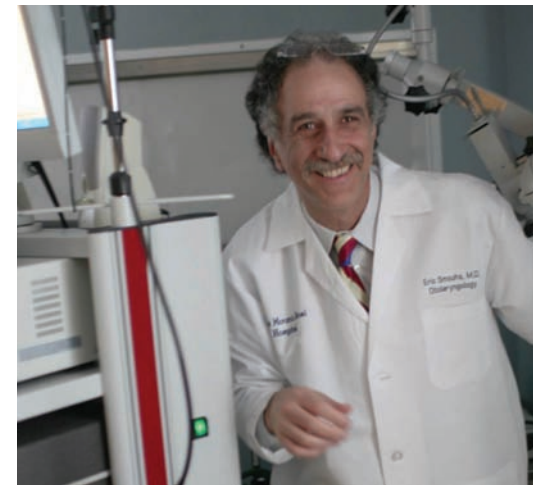
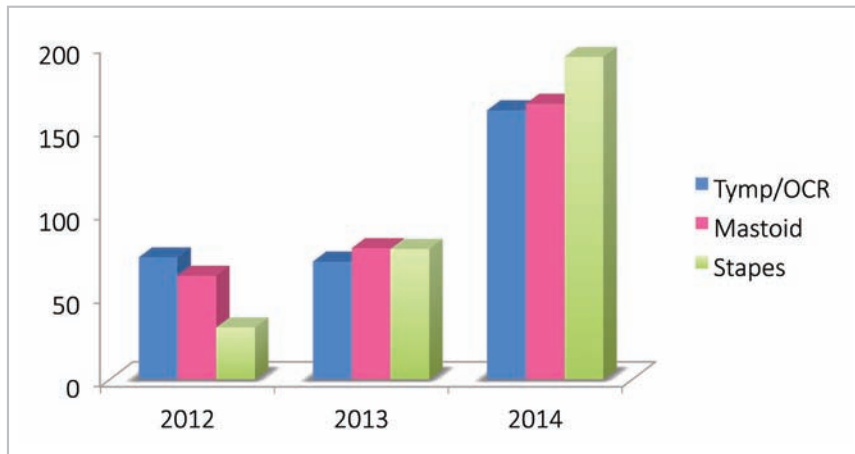
b p = 0.006

Surgery for advanced ORN can result in an improved QOL. Functional outcomes of oral intake, speech intelligibility, and eating in public correlated with patient rated QOL measures.

## ■ The Division of Otolaryngology and Neurotology

The Division of Otolaryngology-Neurotology specializes in diseases of the ears, hearing and balance, and surgery of the skull base. Among the most common otologic procedures are tympanoplasty and mastoidectomy for the treatment of chronic ear infections, and stapedectomy for the restoration of hearing. Our recent merger with the Ear Institute of the New York Eye and Ear has led to an increase in the volume of surgical cases.

### Surgical Case Volume for Tympanoplasty, Mastoidectomy, and Stapedectomy



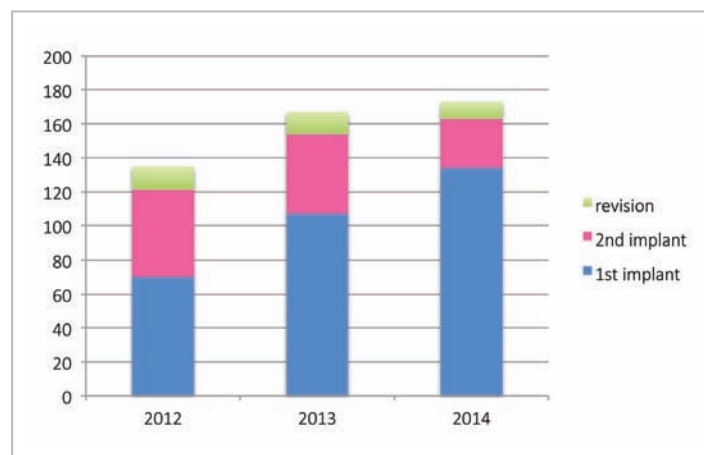
Dr. Eric Smouha, Director of Neuro-Otology and the Center for Hearing and Balance at The Mount Sinai Hospital.

### Complications

Cholesteatoma is a destructive process of the middle ear and is the most common reason for mastoid surgery. Despite years of surgical experience, recurrence remains a vexing problem in the treatment of this disease. At Mount Sinai we have adopted novel surgical techniques and the use of endoscopes, which have led to a recurrence rate much less than published data. This has led to the need for fewer surgical operations, and a substantial reduction in the cost of treatment.

### Surgical Case Volume for Cochlear Implant

The Cochlear Implant Center of the New York Eye and Ear Infirmary has one of the region's largest volume for cochlear implantation. Displayed here are the combined totals for the Ear Institute and Mount Sinai Hospital for the last 3 years.



## ■ The Division of Otolaryngology and Neurotology



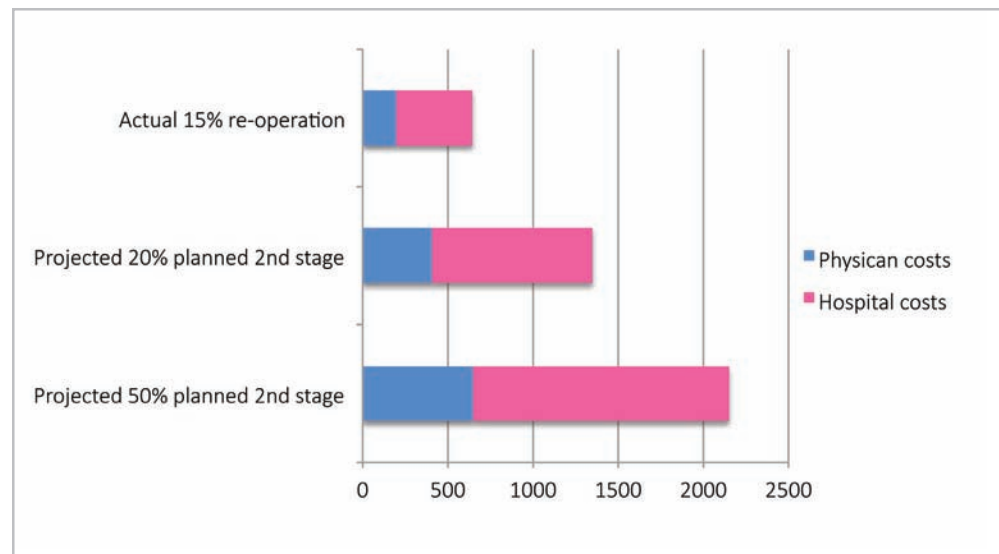
Dr. Ana Kim, Otolaryngologist and Director of Otolaryngologic Research at The Ear Institute of New York Eye and Ear Infirmary of Mount Sinai.

### The Cost-Effective Treatment of Cholesteatoma

We studied 120 patients with cholesteatoma treated at Mount Sinai from 2007-2010 who had adequate follow-up (avg 43 mo). Our preference is to perform a single stage operation for the treatment of this disease. Costs of surgery and outpatient care were calculated based on standard Medicare rates. Our actual costs were compared to the hypothetical costs of planned second stage surgery, the traditional approach, in which an initial operation is done to remove the disease, and a second operation is done 9-18 months later to search for recurrence and rebuild the hearing.

Results: Using our single stage treatment strategy, 18 patients (14.8%) required second operations.

*Our recurrence rate is substantially lower than what is reported in the literature. Our re-operation rate and calculated costs were significantly lower than they would have been with traditional planned second stage surgery.*



### Clinical Research

Comparison of cochlear implant (CI) performance after round window (RW) electrode insertion compared with traditional cochleostomy:

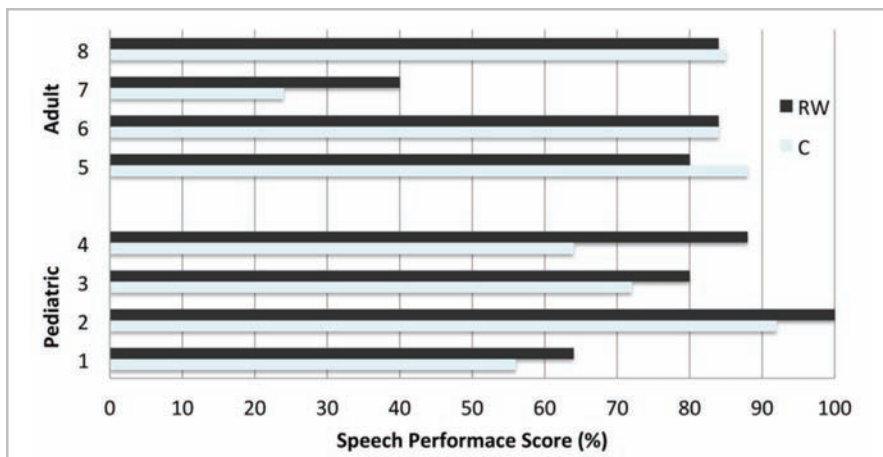
Eighty-four patients underwent RW cochlear implants at NYEE, and their postoperative hearing results were compared to matched controls who had traditional cochleostomies. Standard CI test batteries were used.

## ■ The Division of Otolaryngology and Neurotology

### Clinical Research *(continued)*

Our study found that patients with favorable RW anatomy who underwent RW electrode insertion demonstrated comparable speech perception compared with the traditional cochleostomy insertion group.

### Interaural Comparison of Speech Performance



Dr. Christopher Linstrom, Otologist at The Ear Institute of New York Eye and Ear Infirmary of Mount Sinai.

### Basic Science Research

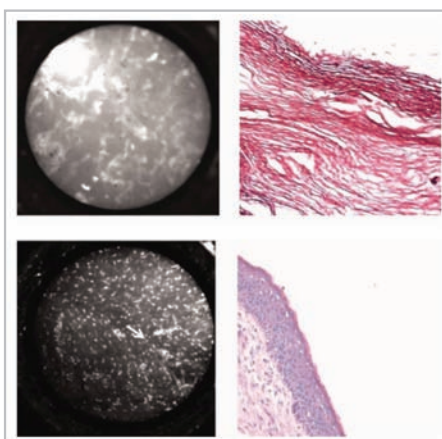
High-resolution optical imaging allows visualization of tissue structures in real time. The contrast agent, proflavine, has high affinity for keratin, which is found in cholesteatoma. Thus, high-resolution microendoscopy (HRME) with proflavine provides a potential mechanism to identify cholesteatoma, and distinguish between uninvolved mucosa and residual keratin at the time of surgery.

Results: Cholesteatoma and surrounding middle ear epithelium were found to have distinct imaging characteristics.

Use of real-time imaging may facilitate the complete extirpation of cholesteatoma and prevent residual disease

### Optical imaging with a high resolution microendoscope to identify cholesteatoma of the middle ear

HRME images (left) of cholesteatoma (top) and normal middle ear (bottom) specimens with corresponding H&E appearance at 20× magnification. Notice that keratin appears as disorganized hyperfluorescence without visible nuclei.



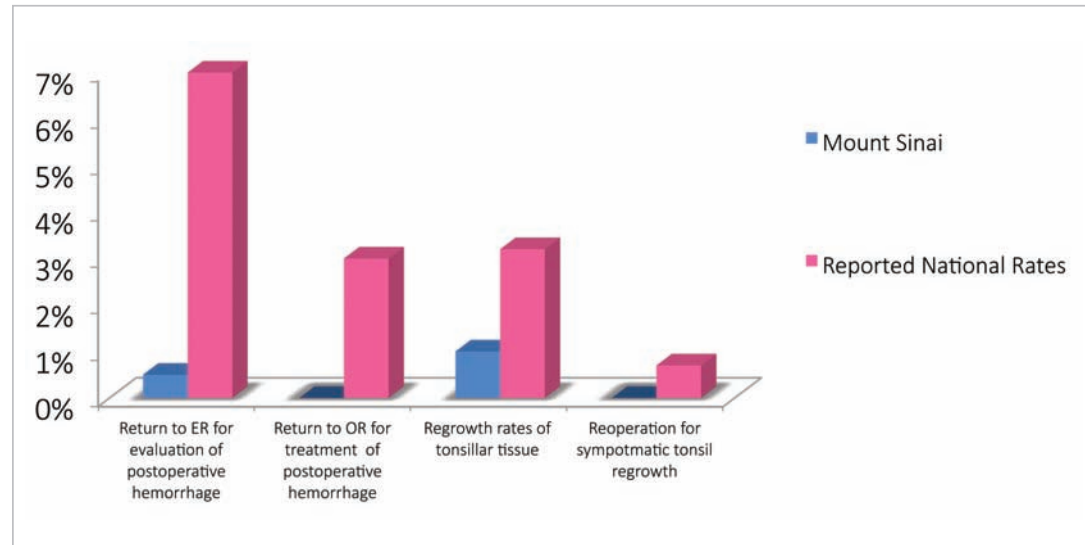
## ■ The Division of Pediatric Otolaryngology



Dr. Joseph Bernstein, Director of Pediatric Otolaryngology at the Mount Sinai Health System.

More than 500,000 pediatric tonsillectomies are performed in the U.S. annually. The frequency with which these procedures are performed makes it critical for surgeons to use the safest and most efficient techniques, while reducing financial burdens to families and the healthcare systems. The outcomes results of the intracapsular tonsillectomy procedure offered by our surgeons support its use as an effective and safe treatment option for obstructive and infectious tonsillar disorders, while reducing postoperative morbidity, complications and utilization of healthcare resources.

### Complications from Pediatric Intracapsular Tonsillectomies and Adenotonsillectomies



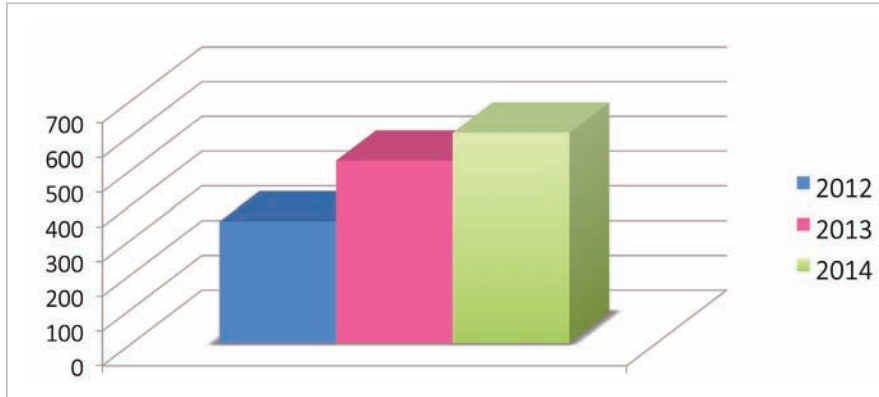
Dr. Alyssa Hackett, Pediatric Otolaryngologist at New York Eye and Ear Infirmary of Mount Sinai, examines patient Johan.



## ■ The Division of Rhinology and Skull Base Surgery

The Division of Rhinology specializes in the comprehensive management of neoplastic and inflammatory conditions that affect the nose and sinuses. One of the most commonly performed procedures is functional endoscopic sinus surgery. Our team specializes in primary and revision endoscopic sinus surgery.

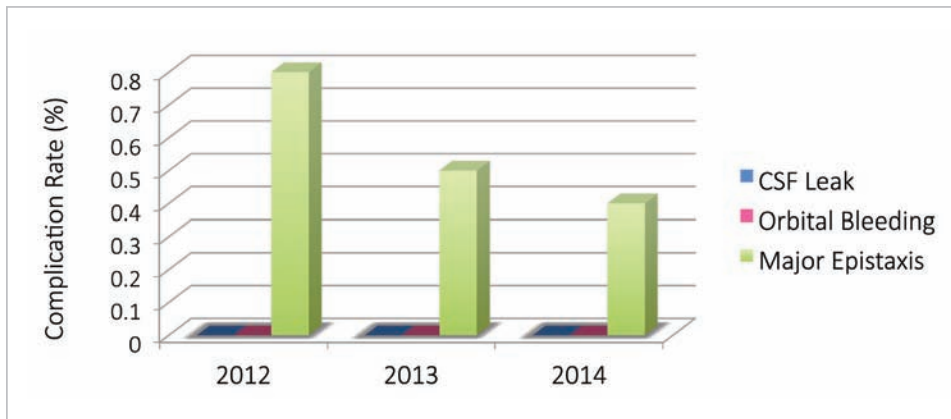
### Endoscopic Sinus Surgery Case Volume



Chief of the Division of Rhinology and Skull Base Surgery, Dr. Satish Govindaraj removes sinus polyps on a patient.

### Primary and Revision Endoscopic Sinus Surgery – Complications

The Division of Rhinology at the Mount Sinai Health System is comprised of fellowship trained rhinologists, who specialize in both primary and revision endoscopic sinus surgery. Each year our surgical volume has experienced steady growth and our complication rate remains low with an absence of major complications and lower post operative major epistaxis rate (defined as requiring post-operative packing placement or surgical control of bleeding).



As an academic medical center our institution specializes in performing surgery on patients with complex medical conditions backed by research. In 2014, our rhinologists maintained a low complication rate despite ASA status. The Division had no iatrogenic CSF leaks or orbital bleeding and a less than 1% major epistaxis rate as defined as a need for packing placement or operating room control of bleeding. Additionally, our ASA 3 group did not have any major complications.

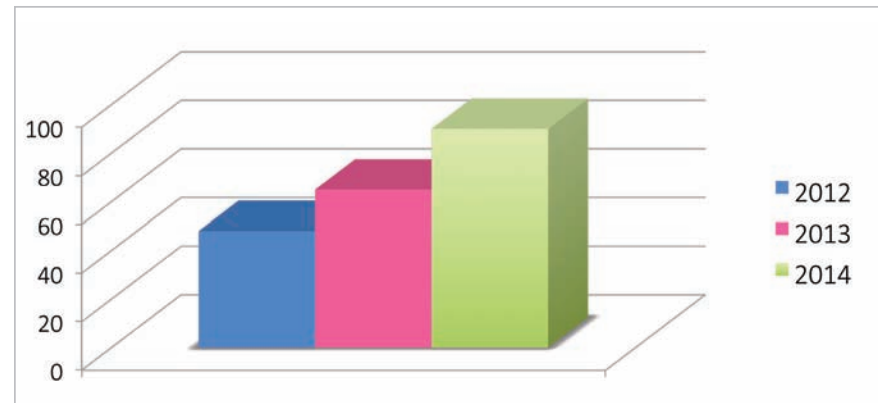
## ■ The Division of Rhinology and Skull Base Surgery



Dr. Madeleine Schaberg of New York Eye and Ear Infirmary of Mount Sinai specializes in endoscopic sinus surgery, rhinology and skull base surgery.

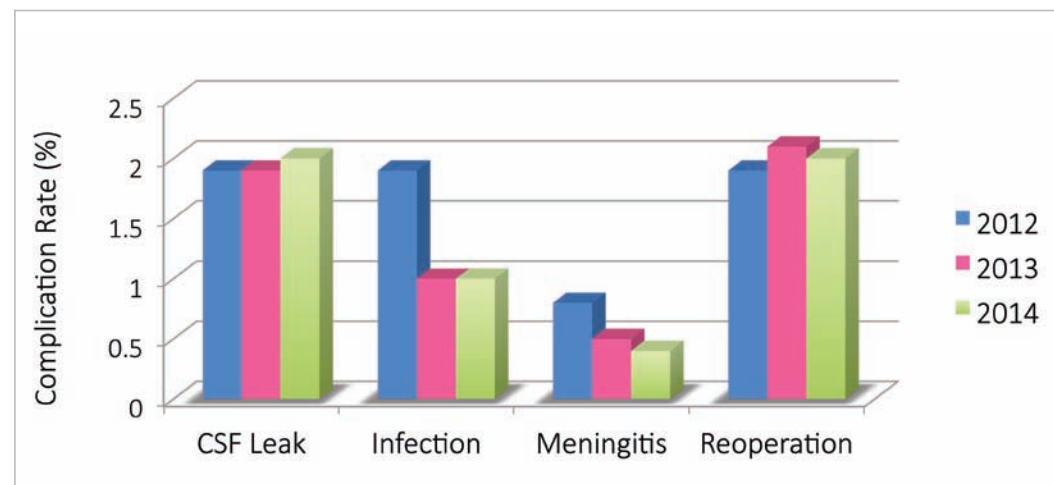
The Division of Rhinology works closely with the Department of Neurosurgery in the management of skull base pathology. Over the last three years, the Division has experienced steady growth in endoscopic skull base case volume. The endoscopic approach results in less morbidity and a shorter hospital stay for our patients. In collaboration with Neurosurgery, the Division will report our experience with one day discharge in our pituitary patients in a paper that will be published in *The Journal of Skull Base Surgery* in 2015.

### Endoscopic Skull Base Case Volume



### Endoscopic Skull Base Surgery – Complications

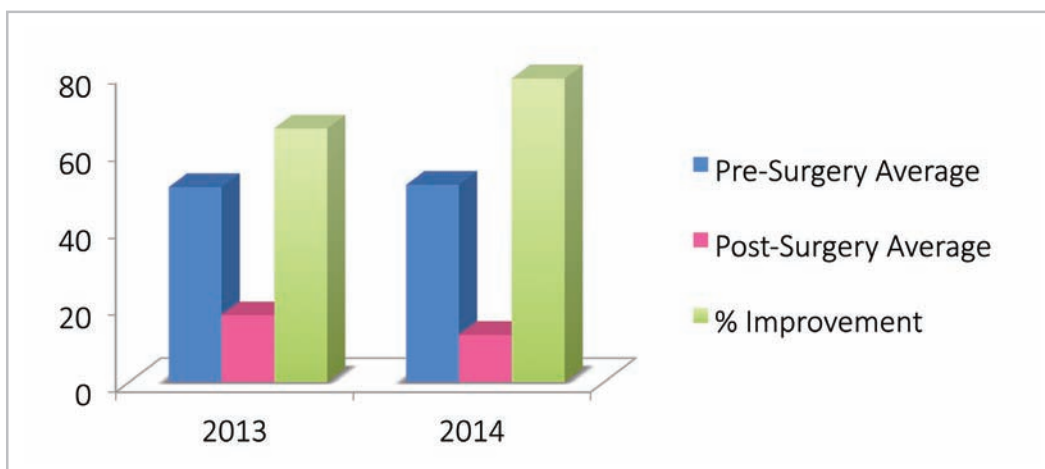
Our Division has seen a steady growth in the number of endoscopic skull base cases with a complication rate that remains below 2%. Our length of stay for endoscopic cases remains low and we have noted the number one reason for extended length of stay in these cases has been CSF leaks.



## ■ The Division of Sleep Surgery

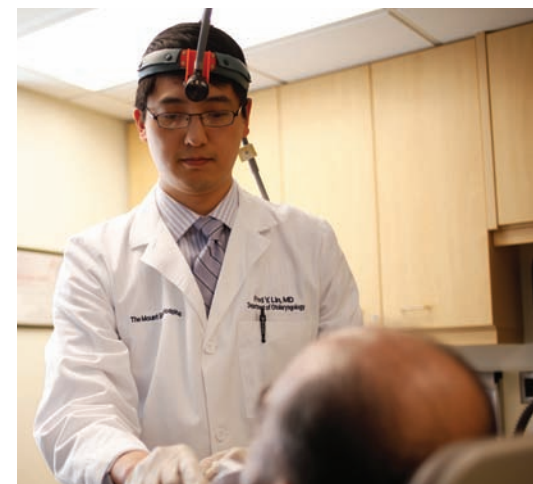
The Division of Sleep Surgery specializes in the comprehensive management of obstructive sleep apnea and sleep disordered breathing. We work closely with the departments of pulmonology, endocrinology, bariatric surgery, dentistry, and oral maxillofacial surgery, to offer a multi-disciplinary approach to the treatment of sleep apnea and snoring. Our team specializes in upper airway surgery, including nasal surgery, palate surgery, maxillofacial surgery, and surgery of the tongue to improve airway obstruction. As a team, we continue to grow, with 3 full-time otolaryngologists that are either fellowship trained in sleep surgery or boarded in sleep medicine.

Our goal is to improve not only the health, but also the quality of life, of sleep apnea patients. We measure all patients pre- and post-treatment with the SNORE-25 quality of life measure, which is a validated quality of life survey. Our results have shown significant gain in improvement of sleep quality and daytime symptoms of night time sleep disturbances post-surgery.

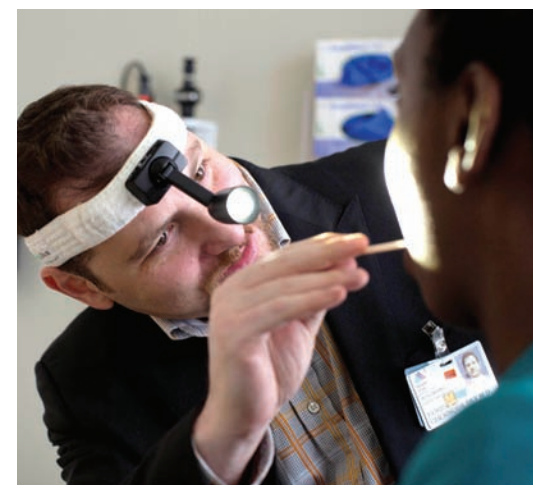


### Perioperative Complications

As an academic medical center, our institution specializes in the surgery of tertiary cases with severe sleep apnea and complex medical conditions. Regardless of ASA status or severity, we have maintained an extremely low complication rate among all our sleep surgery cases. In 2013, we reported a post-operative bleed rate of 1.4 percent (139 cases) with no readmissions or mortalities. In 2014, our sleep surgeons increased our surgical volume, but decreased the complication rate to less than 0.5 percent (184 cases) while maintaining 0 post-operative readmissions and 0 mortalities in those cases.

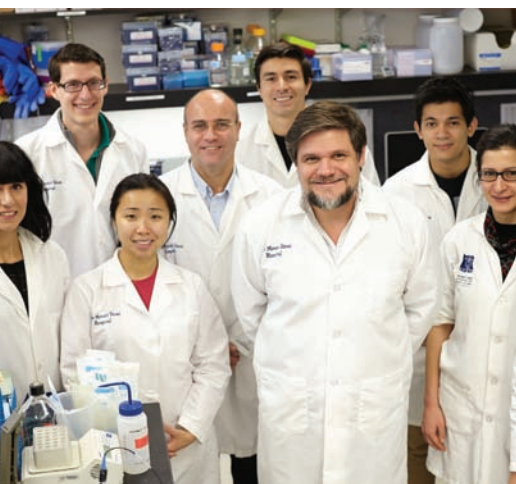


Dr. Fred Lin, Chief of the Division of Sleep Surgery at the Mount Sinai Health System.

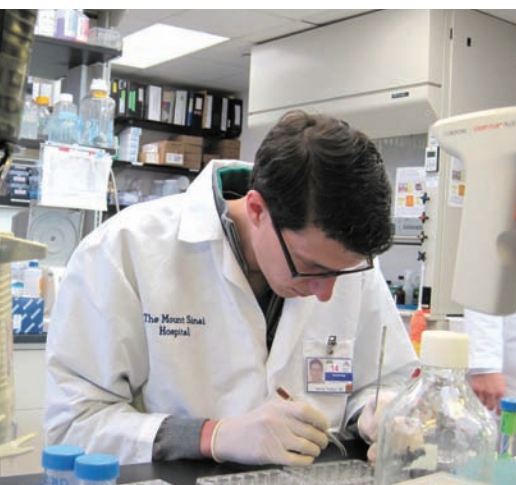


Dr. Boris Chernobilsky is the Director of Airway and Sleep Surgery at Mount Sinai Beth Israel.

# Research and Clinical Trials



Dr. Julio Aguirre-Ghiso and his research team at the Head and Neck Cancer Research Program at the Icahn School of Medicine.



Postdoctoral Fellow Georg Fluegen, MD, is studying the impact of primary tumor stress microenvironments on the tendency of disseminated tumor cells to enter a dormant state in secondary sites.

At the Mount Sinai Head and Neck Cancer Research Program, our research activities encompass clinical, translational, and basic science investigations that are carefully designed using a multidisciplinary approach to determine the safest and most effective treatments in curing head and neck cancers and other illnesses. Below are our current clinical and research trials and studies.

## Auditory Treatments

### Treatment of Outcomes in Chronic Otitis

Principal Investigator: Eric Smouha, MD

The purpose of this retrospective chart review is to show that patients undergoing canal wall reconstruction mastoidectomy have equivalent recurrence rates and less postoperative otorrhea than patients undergoing canal wall down mastoidectomy. Approximately 500 records from 5/1/05 and onward have been reviewed. Results show that this technique is favorable for patients with large mastoid cavities who are at increased risk of recurrence using standard canal wall up mastoidectomy.

### Combined Auditory and Transcranial Direct Current Stimulation for Treatment of Tinnitus

Principal Investigator: Eric Smouha, MD

Tinnitus is the persistent ringing in the ears for which there is no reliable treatment options. Two exploratory treatment options involve compensatory auditory stimulation (CAS) and transcranial direct current stimulation (tDCS). The purpose of this pilot study is to explore the benefits of combining tailored CAS with tDCS. This study involves auditory stimulation (compensatory or non-compensatory) and tDCS stimulation (active or sham) as well as questionnaires, audiograms, and Tinnitus Likeness Spectrum activity. Preliminary results show positive benefit for the use of tDCS.

## Head and Neck Bio-Data Bank

### Head and Neck Bio-Data Bank

Principal Investigator: Brett Miles, DDS MD FACS

Co-PI: Eric Genden, MD

This study collects comprehensive clinical data by going through patient records and clinical questionnaires. The collected data will be maintained in the clinical database application eRAP (electronic research application portal). This clinical data will be then linked to the specimen banked by the Mount Sinai CIB (Cancer institute biorepository) in an effort to identify disease specific biomarkers predictive of cancer behavior and response to therapy. The specimen collection takes place under the Mount Sinai CIB (GCO # 06-0996). The CIB will bank excess fluid (blood, saliva) and solid (Head and Neck tumor biopsy, normal mucosal biopsy) patient specimens collected at baseline, during cancer therapy, and at progression which is partly as per standard of care.

## ■ Research and Clinical Trials

### Head and Neck Bio-Data Bank *(continued)*

#### Dormancy Markers in Neck Specimens and Surgical Margins

Principal Investigator: Brett Miles, DDS MD FACS

Co-PI: Julio Aguirre-Ghiso, PhD

This investigation aims to identify dormant tumor cells nodes in neck dissection specimens obtained from patients who underwent primary surgical resection through the use of a cytokeratin antibody. We are characterizing the surrounding microenvironment through staining with a TGF $\beta$ -2 antibody). We are also seeking to examine ipsilateral and contralateral neck dissection specimens in patients who recurred after undergoing primary radiation therapy to identify metastatic or disseminated tumor cell (solitary)-bearing nodes using the same methods. Our final objective is to examine primary tumor margins for markers associated with dormancy-inducing signaling pathways using NR2F1 & TGF $\beta$ 2 antibody staining.

### Robotic Surgery for Oral Cancer

#### (ADVAXIS) Window of Opportunity Trial of Neoadjuvant ADXS 11-001 Vaccination Prior to Robot -Assisted Resection of HPV-Positive Oropharyngeal Squamous Cell Carcinoma

Principal Investigator: Brett Miles, DDS MD FACS

Co- Investigators: Eric Genden, MD, Marshall Posner, MD, Marita Teng, MD, Vishal Gupta, MD, Krzysztof Misiukiewicz, MD, Richard Bakst Elizabeth Demicco, MD

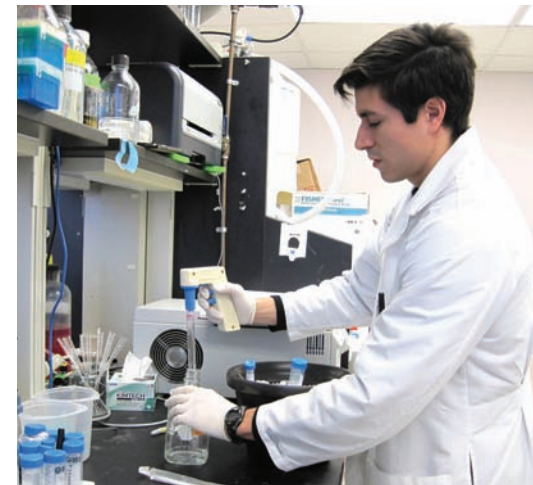
This is an investigator-initiated prospective clinical study of patients with stage II-IV squamous cell carcinoma of the oropharynx (OPSCC) who are to undergo ablative transoral robotic surgery (TORS). We propose to test the hypothesis that the listeria-based HPV vaccine ADX11-001 induces circulating and tumor-infiltrating antigen-specific T cells in HPV16+ oropharyngeal cancer patients undergoing TORS resection. The results of this trial will assess the ability of ADX11-001 vaccination to induce a robust HPV-specific cytotoxic lymphocyte (CTL) response in the blood and tumor. This trial represents the only opportunity for patients with known HV-associated carcinoma to be included in a therapeutic trial using immunotherapy.

#### Sinai Robotic Surgery Trial in HPV Positive Oropharyngeal SCCA (SIRS)

Principal Investigator: Brett Miles, DDS MD FACS

Co-Investigators: Eric Genden, MD, Marshall Posner, MD, Marita Teng, MD, Vishal Gupta, MD, Krzysztof Misiukiewicz, MD, Richard Bakst Elizabeth Demicco, MD

This is a non-randomized Phase II de-escalation clinical trial to establish recurrence rates, site of recurrence, survival and quality of life outcomes for early T-stage HPV positive oropharyngeal SCCA treated with upfront surgery. Eligible, consented and registered patients undergo transoral robotic surgery and selective neck dissection. After pathologic evaluation, patients with early stage disease as defined below are placed into surveillance protocol as outlined or assigned to adjuvant therapy, depending on risk factors. Patients with intermediate risk factors receive postoperative radiotherapy alone (5000 cGy). Patients with poor prognostic features receive concurrent chemoradiotherapy (5600 cGy) with weekly cisplatin. Patients taken off study (based on Section 9.2 "Criteria from Removal of Study") are followed for survival until the study ends.



Sachs Clinical Research Fellow Christopher Pool is investigating tumor dormancy as it relates to head and neck cancer.



Advaxis Window of Opportunity clinical trial participant Maxine and Research Nurse Rita Babu. "I am clear of cancer," Maxine remarked after surgery. "And I feel better than I've felt in years!"

## ■ Research and Clinical Trials



Dr. Marshal Posner, Director of Head and Neck Medical Oncology, spearheads various clinical trials at the Mount Sinai Health System.

### Sinus/Rhinology and Obstructive Sleep Apnea

#### Characterizing Dendritic Cells in Sinonasal Tissue

Principal Investigator: Satish Govindaraj, MD

The purpose of this study is to study the dendritic cells in patients with or without chronic rhinosinusitis. In this study we aim to collect sinonasal and lymphoid tissues from human subjects that are undergoing endoscopic/open sinus or skull base surgeries. Objectives: 1. To characterize the types of dendritic cells that are intrinsic to sinonasal tissues of normal human subjects as well as those with chronic rhinosinusitis with and without polyps. 2. To perform functional analysis of human dendritic cell subsets. 3. To compare the characteristics and distribution of human sinonasal dendritic cells with murine models in order to establish a mouse model for future studies on CRS.

#### Oncologic Therapy and the Development of Obstructive Sleep Apnea in the Head and Neck Patient

Principal Investigator: Fred Lin, MD

Co-PI: Eric Genden, MD

The primary purpose of the study is to determine the effect of radiation therapy on the development of clinically significant obstructive sleep apnea in the head and neck cancer patient.

#### The Comparison of Tissue Coblation Versus Transoral Robotic (TORS) Tongue Base Resection in Obstructive Sleep Apnea Patients

Principal Investigator: Fred Lin, MD

Co-PI: Eric Genden, MD, Brett Miles, DDS, MD, FACS

The objective of the study is to compare the outcomes of utilizing transoral robotic surgery versus tissue coblation in performing tongue base reductions utilizing pre- and post-operative Epworth Sleepiness Scale and Apnea Hypopnea Index Scores. 20 Patients with sleep apnea from MSSM will be approached and consented; survey and CT scan will be performed. Subject will choose either Tongue base reduction surgery with tissue coblation or the surgery with Trans oral Robot. 4 months later a final survey will be administered.

#### The Role of Doxycycline in Management of Severe Chronic Rhinosinusitis with Nasal Polyps

Principal Investigator: Benjamin Malkin, MD

Co-PI: Eric Genden, MD, Brett Miles, DDS, MD, FACS

The purpose of this study is to test the safety and efficacy of Doxycycline in patients with Severe Chronic Rhinosinusitis with nasal polyps. Subjects will be randomized to either doxycycline or placebo in conjunction with standard of care medications--including oral steroids--for a treatment period of 20 days. The study team hopes to recruit recruitment goal is 90 subjects between Mount Sinai and Elmhurst Hospital. Study procedures involve routine otolaryngologic history and physical examination, blood draws allergy testing, CT scan, nasal cavity culture, and endoscopic nasal exam. The primary endpoint is the subjects' SNOT-22 score at 3 months. The PI has obtained an IND exemption from the FDA to do for this study.

## ■ Research and Clinical Trials

### Laryngopharyngeal Reflux Diagnosis

#### Evaluation of Laryngopharyngeal Reflux Diagnosis

Principal Investigator: Uchechukwu Megwalu, MD

The goal of this study is to evaluate if laryngopharyngeal reflux (LPR) diagnosis using Reflux Symptoms Index and Reflux Funding Score improves LPR treatment outcomes. This retrospective chart review takes place at Queens Hospital Center Department of Otolaryngology. Outpatient electronic medical records were reviewed from August 2011-August 2013. Diagnosis codes for gastroesophageal reflux and reflux esophagitis will be reviewed (approximately 200 records).

### Honey for Local Wound Care

#### Role of Honey for Local Wound Care of Donor Sites after Split Thickness Skin Grafting

Principal Investigator: Joshua Rosenberg, MD

Co-PI: Eric Genden, MD

The purpose of this study is to examine the role of honey as a surgical dressing for head and neck reconstruction. Subjects enrolled in this study undergo surgery to remove cancer within the head and neck region. Approximately 50-60 subjects will be enrolled in this study and will be randomized to either receive the honey dressing or standard of care.

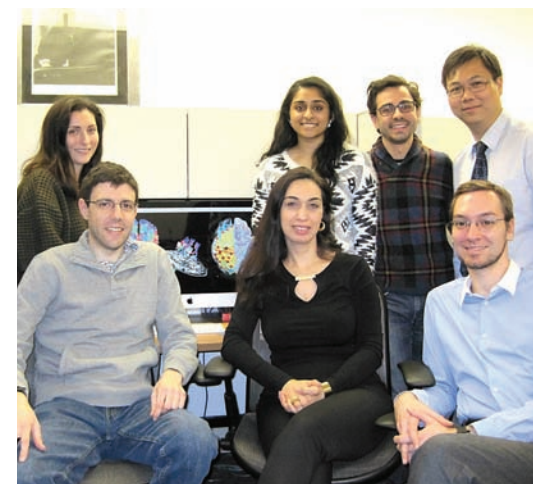
### Facial Nerve Disorders

#### Facial Nerve Disorders Database

Principal Investigator: Joshua Rosenberg, MD

Co-PI: Eric Genden, MD

The purpose of this study is to accrue data regarding treatment plans and outcomes in the treatment of facial nerve disorders. The research team plans to recruit 20 participants and study activities include collection of data about the participants' surgery outcomes.



Dr. Kristina Simonyan and her research team at the Dystonia and Motor Control Laboratory are studying the control of speech production as it relates to focal dystonias.

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## ■ Grants



The state-of-the-art Leon and Norma Hess Center for Science and Medicine unites exceptional clinical and research talent, along with advanced technology designed to advance Mount Sinai's fight against head and neck cancers.

**Principal Investigator:** Hoda Badr, PhD

Project Title: Improving Self-management in Head and Neck Cancer

Sponsor: NIH/NCI

**Principal Investigator:** Ana Kim, MD 2015-present

Project Title: Borderline Cochlear Implant Candidacy

Sponsor: Children's Hearing Institute

**Principal Investigator:** Ana Kim, MD 2014-present

Project Title: AM-101 in the Post-Acute Treatment of Peripheral Tinnitus 1 (AMPACT1) – an open-label extension to the TACTT2 study

Sponsor: Auris Medical Protocol Number AM-101-CL-12-01

**Principal Investigator:** Ana Kim, MD 2013-present

Project Title: A Phase 3, Randomized, Placebo-Controlled, Multi-Center Study to Evaluate the Efficacy and Safety of AM-101 in the Treatment of Acute Peripheral Tinnitus 2 (TACTT2)

Following Traumatic Cochlear Injury or Otitis Media

Sponsor: Auris Medical Protocol Number AM-101-CL-12-01

**Principal Investigator:** Ana Kim, MD Amendment Feb, 2014

Project Title: Novel Target of Dexamethasone Action in Sudden Sensorineural Hearing Loss.

Sponsor: NIH R03 (Original submission Feb, 2013)

**Principal Investigator:** Ana Kim, MD 2011-present

Project Title: A Prospective, Randomized, Double-Blind, Placebo-Controlled, Multicenter, Phase IIb Study of OTO-104 Given as a Single Intratympanic Injection in Subjects with

Unilateral Meniere's Disease

Sponsor: Otonomy, Inc.



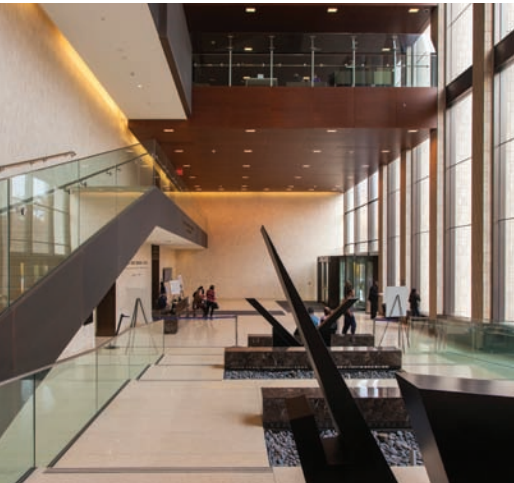
# Publications – 2014

## Head and Neck Oncology

- Dewey EH, Castro JR, Mojica J, Lazarus C, Alpert EH, Su HK, Dos Reis LL, Urken ML. (2014) Reconstruction of expanding tracheoesophageal fistulae in the post radiated patient following total laryngectomy using a bipaddled radial forearm flap: report of 8 cases. *Head & Neck*.
- Lazarus CL, Husaini H, Hu K, Culliney B, Li Z, Urken M, Jacobson A, Persky M, Tran T, Concert C, Palacios D, Metcalfe-Klaw R, Kumar M, Bennett B, Harrison L. (2014) Functional outcomes and quality of life after chemoradiotherapy – baseline, 3, and 6 months post-treatment. *Dysphagia* 29:365-75.
- Lazarus CL, Husaini H, Falciglia D, DeLacure M, Branski RC Kraus D, Lee N, Ho M, Ganz C, Smith B, Sanfilippo N. (2014) Exercise Effects on Swallowing and Tongue Strength in Patients with Oral and Oropharyngeal Cancer Treated with Primary Radiotherapy +/- Chemotherapy. *Int J Oral Maxillo Surg*. 43:523-530.
- Lazarus CL, Husaini H, Jacobson AS, Mojica JK, Buchbinder D, Okay D, Urken ML. (2014). Development of a New Lingual Range of Motion Assessment Scale: Normative Data in Surgically Treated Oral Cancer Patients. *Dysphagia*. 29:489-99.
- Illoreta AM, Anderson K, Miles BA. Mandibular osteotomy for expanded transoral robotic surgery (MOTORS): A novel technique. *Laryngoscope*. 2014, Jan 3.
- Amit M, Binenbaum Y, Trejo-Leider L, Sharma K, Naomi R, Ilana R, Abib A, Miles B, Yang X, Lei D, Kristine B, Christian G, Thomas M, Klaus-Dietrich W, Eckardt AM, Chiara C, Sesenna E, Frank P, Ian G, Patel S, Gil Z. International collaborative validation of intraneural invasion as a prognostic marker in adenoid cystic carcinoma of the head and neck. *Head Neck*. 2014 Apr 7.
- de Almeida JR, Byrd JK, Wu R, Stucken CL, Duvvuri U, Goldstein DP, Miles BA, Teng MS, Gupta V, Genden EM. A systematic review of transoral robotic surgery and radiotherapy for early oropharynx cancer. *Laryngoscope*. 2014 Apr 12.
- Misiukiewicz K, Camille N, Gupta V, Bakst R, Teng M, Miles BA, Genden E, Sikora A, Posner M. The Role of HPV Status in Recurrent/ Metastatic Squamous Cell Carcinoma of the Head and Neck. *Clinical Advances in Hematology and Oncology*. 2014.
- Patsias A, Giraldez-Rodriguez L, Polydorides A, Richards-Kortum R, Anandasabapathy S, Quang T, Sikora A, Miles B. Feasibility of Transoral Robotic-Assisted High Resolution Microendoscopic Imaging of Oropharyngeal Squamous Cell Carcinoma. *Head Neck*. 2014 Oct 17
- de Almeida JR, Moskowitz AJ, Miles BA, Goldstein DP, Teng MS, Sikora A, Gupta V, Posner M, Genden EM. Transoral robotic surgery is cost-effective compared to (Chemo)radiotherapy for early t-classification oropharyngeal carcinoma: A cost-utility analysis. *Head Neck*. 2014 Dec 9
- Misiukiewicz K, Camille N, Posner M, Gupta V, Bakst R, Teng M, Miles B, Genden E, Sikora A. The role of HPV status in recurrent/metastatic squamous cell carcinoma of the head and neck. *Clin Adv Hematol Oncol*. 2014
- Gibber MJ Clain JB, Jacobson AS, Buchbinder D, Scherl S, Zevallos JP, Mehra S, Urken ML. (2014). The Subscapular System of Flaps: An 8-year experience with 105 patients. *Head Neck* DOI:10.1002/hed.23738
- Dewey EH, Castro JR, Mojica J, Lazarus C, Alpert EH, Su HK, Dos Reis LL, Urken ML. (2014) Reconstruction of expanding tracheoesophageal fistulae in the post radiated patient following total laryngectomy using a bipaddled radial forearm flap: report of 8 cases. *Head & Neck*.



## ■ Publications – 2014



The Leon and Norma Hess Center for Science and Medicine stands 187 feet tall and boasts 500,000 square feet, including 180,000 square feet for laboratories.

### Facial Plastic and Reconstructive Surgery

- Cabin JA, Bassiri-Tehrani M, Sclafani, AP, Romo T. Microtia reconstruction: autologous rib and alloplast techniques. *Facial Plast Clin North Am* 2014; 22: 623- 38.
- Del Signore T, Iloreta, A, Rosenberg JD. Head and Neck Trauma. Ed. Lin, F. Springer, Berlin. ENT Board Prep: High Yield Review for the Otolaryngology Inservice and Board Exams. 2014;361-372
- Glick, J, Rosenberg JD. Head and Neck Reconstruction: Local, Pedicled, and Free Flaps; Facial Nerve Reanimation. Eds. Lin, F, Patel, ZM. Springer, Berlin. ENT Board Prep: High Yield Review for the Otolaryngology Inservice and Board Exams. 2014; 351-358
- Mashkevich G. Myocutaneous and Microvascular Flaps. In Sataloff RT, Sclafani AP, Spalla TC (eds). *Surgical Techniques in Otolaryngology – Head & Neck Surgery, Facial Plastic & Reconstructive Surgery*. Jaypee Brothers Medical Publishers, 2014.
- Sclafani AP, Spalla TC, eds. *Surgical Atlas of Facial Plastic Surgery* textbook, Philadelphia, PA: J.P. Brothers, Inc. 2014.
- Sclafani AP. Platelet-rich fibrin matrix (PRFM) for androgenetic alopecia. *Facial Plast Surg* 2014; 30:219–224.
- Stucken C, Rosenberg JD. Facial Plastics. Ed. Lin, F. Springer, Berlin. ENT Board Prep: High Yield Review for the Otolaryngology Inservice and Board Exams. 2014;331-350

### Laryngology

- Adams V, Mathisen B, Baines S, Lazarus C, Callister R. (2014) Reliability of Measurements of Tongue and Hand Strength and Endurance Using the Iowa Oral Performance Instrument with Healthy Adults. *Dysphagia*.29:83-95.
- Adams V, Mathissen B, Lazarus C., Baines S, Callister R. (2014). Reliability of measurements of strength and endurance using the Iowa Oral Performance Instrument with elderly adults. *Disability and Rehabilitation*. pp 1-7.
- Born H, Ruiz R, Verma A, Taliercio S, Achlatis S, Pitman M, Gandonu S, Bing R, Amin MR, & Branski RC. Concurrent Oral Human Papilloma Virus Infection in Patients with Recurrent Respiratory Papillomatosis. *Laryngoscope*. 2014 Dec;124(12):2785-90
- Fritz M, Cerrati E, Fang Y, Verma A, Achlatis S, Lazarus C, Branski RC, & Amin MR (2014). Magnetic Resonance Imaging of the Effortful Swallow. *Annals of Otolaryngology, Rhinology, and Laryngology* 123(11); 786-790.
- Hernandez-Morato I, Isseroff TF, Sharma S, Pitman MJ. Differential expression of glial-derived neurotrophic factor in rat laryngeal muscles during reinnervation. *Laryngoscope*. 2014 Dec; 124(12) :2750-6
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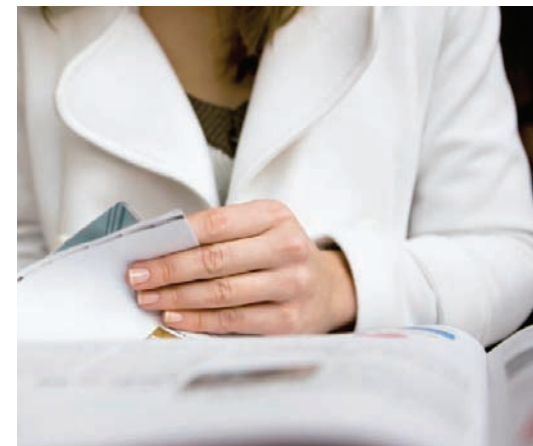
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### Otology and Neurotology

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## ■ Publications – 2014



Drs. Iloreta and Govindaraj attend a Surgical Theater simulation session at the Department of Neurosurgery. This technology enables physicians to map patients' tumors and is FDA-approved for use in the operating room.

### Otology and Neurotology (continued)

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### Rhinology and Skull Base Surgery (continued)

- Khan MN, Kanumuri VV, Raikundalia MD, Vazquez A, Govindaraj S, Baredes S, Eloy JA. Sinonasal melanoma: survival and prognostic implications based on site of involvement. *Int Forum Allergy Rhinol.* 2014 Feb;4(2):151-5.
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# Faculty



Mount Sinai Health System Department of Otolaryngology-Head and Neck Surgery Chairman Dr. Eric Genden has forged the integration of member hospitals into one cohesive Department and fostered collaboration across the Health System.

## Allergy

Sujan Patel, MD  
Anne Maitland, MD

## Facial Plastics

William Lawson, MD, DDS  
Grigoriy Mashkevich, MD  
Alexander Ovchinsky, MD  
Joshua Rosenberg, MD  
Joseph Rousso, MD  
Anthony Sclafani, MD  
Marc Zimble, MD

## General ENT

Bart Castellano, MD  
David Culang, MD  
Claude Douge, MD  
Benjamin Malkin, MD  
Uchechukwu Megwalu, MD  
Anthony Reino, MD

## Head and Neck

Raymond Chai, MD  
Eric Genden, MD  
Neil Gildener-Leapman, MD  
Brett Miles, MD, DDS  
Stimson Schantz, MD  
Edward Shin, MD  
Marita Teng, MD  
Mark Urken, MD  
Mike Yao, MD  
Helen Yoo-Bowne, MD

## Laryngology

Michael Pitman, MD  
Peak Woo, MD

## Oral and Maxillofacial Surgery/Dentistry

Brian Bovino, DDS  
Daniel Buchbinder, DMD, MD  
Vincent Carrao, DDS, MD  
Devin Okay, DDS  
Alan Schwimmer, DDS  
Michael Turner, MD, DDS  
David Valauri, DDS  
Joshua Verona, DDS

## Otology

George Alexiades, MD  
Ronald Hoffman, MD  
Ana Kim, MD  
Christopher Linstrom, MD  
Eric Smouha, MD

## Pediatrics

Joseph Bernstein, MD  
Alyssa Hackett, MD  
Michael Rothschild, MD

## Research

Julio Aguirre-Ghiso, PhD  
Cathy Lazarus, PhD  
Kristina Simonyan, MD, PhD  
Marshall Posner, MD

## Rhinology

Satish Govindaraj, MD  
Alfred Iloreta, MD  
William Lawson, MD, DDS  
Madeleine Schaberg, MD

## Sleep Disorders

Boris Chernobilsky, MD  
Fred Lin, MD  
Gennady Ukrainsky, MD

## ■ Clinical Specialists

### Audiologists

Meghan Brady, AuD, CCC-A  
Sandra Delapena, MA, CCC-A  
Michele DiStefano, MS, CCC-A  
Brittany Fishbane, AuD, CCC-A  
Karla Fernandez, AuD, CCC-A  
Jessica Gallatioto, AuD, CCC-A  
Lisa Goldin, MPhil, CCC-A  
Melissa Harawitz, AuD, CCC-A  
Jennifer Jones, AuD, CCC-A  
Randy Judson, AuD, CCC-A, F-AAA  
Elena Kagan, AuD, CCC-A  
Lauren Kaplan, AuD, CCC-A  
Sharon Kupfer, AuD, CCC-A  
Tat'yana Kennedy, AuD, CCC-A  
Megan Kuhlmeier, MS, CCC-A  
Jillian Levine, AuD, CCC-A  
Melissa Magnolia, AuD, CCC-A  
Patricia Mazzullo, AuD, CCC-A  
Tracey Moskatel, AuD, CCC-A  
Sabrina Mussawar, AuD, CCC-A  
Bess Nagler, AuD, CCC-A  
Kerri O'Connor, AuD, CCC-A  
Shelly Ozdamar, MS, CCC-A  
Derek Petti, AuD, CCC-A  
Katherine Scigliano, AuD, CCC-A  
Karen Siegel, AuD, CCC-A  
Nicole Sisljan, PhD, CCC-A  
Randi Tepper, AuD, CCC-A  
Sabrina Vitulano, AuD, CCC-A  
Nora Yeung-Molina, AuD, CCC-A

### Speech Language Pathologists

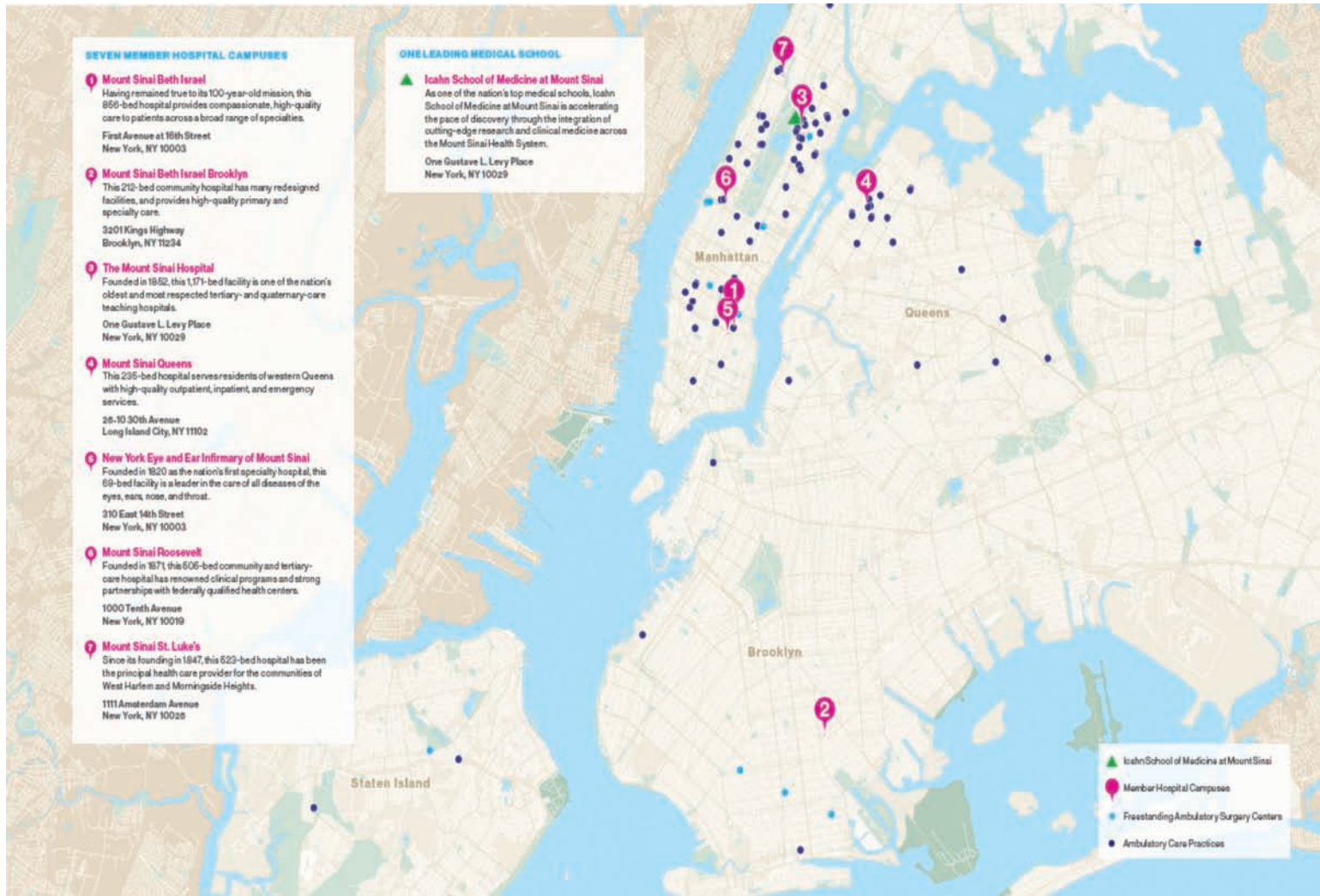
Erin Bestrich, MA, CCC-SLP  
Amy Cooper, MS, CCC-SLP  
Denise Cruz, MS, CCC-SLP  
Lisa Erlichster, CCC-SLP  
Cindy Ganz, MS, CCC-SLP  
Leanne Goldberg, MS, CCC-SLP  
Karen Keung, MS, CCC-SLP  
Tamar Kotz, MS, CCC-SLP  
Cathy Lazarus, PhD, CCC-SLP  
Vera Leyko, MS, CCC-SLP  
Jessica Lisogorsky, MS, CCC-SLP  
Daniel McCabe, DMA, CCC-SLP  
Elizabeth Roarke, MS, CCC-SLP  
Sarah Sietsema, MS, CCC-SLP  
Karen Slotnick, CCC-SLP  
Devon Zuller, MS, CCC-SLP

### Nurse Practitioners/ Physician Assistants

Sabra Baum, RPA-C  
Jacqueline Chiang, NP/RPA-C  
Katrina De Los Reyes, RPA-C  
Katie Dobrowski, RPA-C  
Sheryleen Elisca, RPA-C  
Stephanie Mendez, RPA-C  
Lyudmila Milman, RPA-C  
Alizza Retter, RPA-C  
Tanya Sharrieff, RPA-C  
Mei Xei, RPA-C



# Mount Sinai Health System at a Glance





# Practice Locations

## THE MOUNT SINAI HOSPITAL

**Mount Sinai Otolaryngology—  
Manhattan Campus**  
Faculty Practice Associates  
5 East 98th Street, 8th floor  
New York, NY 10029  
Telephone: 212-241-9410

**Center for Science and Medicine—  
Cancer Center**  
10 East 102nd Street, 3rd floor  
New York, NY 10029  
Telephone: 212-241-9410

**Mount Sinai Otolaryngology—  
Staten Island**  
2052 Richmond Road, Suite 1C  
Staten Island, NY 10306  
Telephone: 718-420-1279

**Mount Sinai North Shore  
Medical Group**  
325 Park Avenue  
Huntington, NY 11743  
Telephone: 212-241-9410

**Elmhurst Hospital Center  
Otolaryngology**  
79-01 Broadway – H2-69  
Elmhurst, NY 11373  
Telephone: 718-334-3392

**James J. Peters Veterans  
Medical Center  
Otolaryngology**  
130 West Kingsbridge Road  
Bronx, NY 10468  
Telephone: 718-584-9000 x5992

**The Queens Hospital Center  
Otolaryngology**  
82-68 164th Street  
Jamaica, NY 11432  
Telephone: 718-334-3392

**Mount Sinai Otolaryngology-Multispecialty Site**  
236 East 85th Street  
New York, NY 10028  
*Opening in Fall 2015*

## MOUNT SINAI BETH ISRAEL

**Mount Sinai Beth Israel  
Phillips Ambulatory Care Center (PACC)**  
10 Union Square East  
New York, NY 10003  
Telephone: 212-844-8450

**Mount Sinai Beth Israel–Westchester  
Head, Neck and Thyroid Institute**  
244 Westchester Avenue  
Suite 405  
White Plains, NY  
Telephone: 212-844-8775



## Practice Locations



### NEW YORK EYE AND EAR OF MOUNT SINAI

#### **New York Eye and Ear Infirmary of Mount Sinai**

310 E 14th Street  
New York, NY 10003  
Main Number: 212-979-4000  
Physician Referral Line:  
212-979-4472

#### **Columbus Circle**

200 W 57th Street, Suite 1410  
New York, NY 10019  
212-957-6933

#### **Ear Institute**

380 2nd Avenue, 9th Floor  
New York, NY 10010  
212-614-8379

#### **Financial District**

65 Broadway, #901  
New York, NY 10006  
212-514-6933

#### **Madison Avenue**

161 Madison Avenue  
New York, NY 10016  
212-213-3339

#### **Tribeca**

77 Worth Street  
New York, NY 10013  
212-966-3901

#### **Upper East Side**

1430 2nd Avenue  
New York, NY 10021  
212-535-2298

#### **Bay Ridge**

9020 5th Avenue, 3rd Floor  
Bay Ridge NY 11209  
718-333-5120

#### **Midwood**

1630 E 15th Street, #203  
Brooklyn, NY 11229  
718-375-6933

#### **Sheepshead Bay**

2560 Ocean Avenue, 2nd Floor  
Brooklyn, NY 11229  
718-646-1234

#### **Williamsburg**

101 Broadway, #201  
Brooklyn, NY 11249  
718-384-6933

#### **Bayside**

45-64 Francis Lewis Blvd., 2nd Fl.  
Bayside, NY 11364

#### **Forest Hills**

108-12 72nd Avenue  
Forest Hills, NY 11375  
718-544-9300

#### **Bronx ASC**

3170 Webster Avenue  
Bronx, NY 10467

#### **Chappaqua**

59 S Greeley Ave  
Chappaqua, NY 10514  
914-238-5500

#### **White Plains**

244 Westchester Avenue, #215  
White Plains, NY 10604  
914-997-9100

### WEBSITE SHORTCUTS

#### **The Department of Otolaryngology–Head and Neck Surgery**

[www.mountsinai.org/ent](http://www.mountsinai.org/ent)  
[www.nyee.edu/ent](http://www.nyee.edu/ent)  
[www.wehealny.org](http://www.wehealny.org)

#### **Center for Head and Neck Cancer**

[www.mountsinai.org/oralcancer](http://www.mountsinai.org/oralcancer)  
[www.headneckandthyroid.com](http://www.headneckandthyroid.com)

#### **Center for Hearing and Balance**

[www.mountsinai.org/hearing](http://www.mountsinai.org/hearing)

#### **Center for Minimally Invasive Robotic Surgery**

[www.headandneckrobotics.com](http://www.headandneckrobotics.com)

#### **Center for Thyroid and Parathyroid Diseases**

[www.mountsinai.org/thyroid](http://www.mountsinai.org/thyroid)

#### **Eugen Grabscheid MD Voice Center**

[www.mountsinai.org/voicecenter](http://www.mountsinai.org/voicecenter)

#### **Facial Plastics and Reconstructive Surgery**

[www.mountsinai.org/facialplastics](http://www.mountsinai.org/facialplastics)

#### **Skull Base Surgery Center**

[www.mountsinai.org/skullbase](http://www.mountsinai.org/skullbase)





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