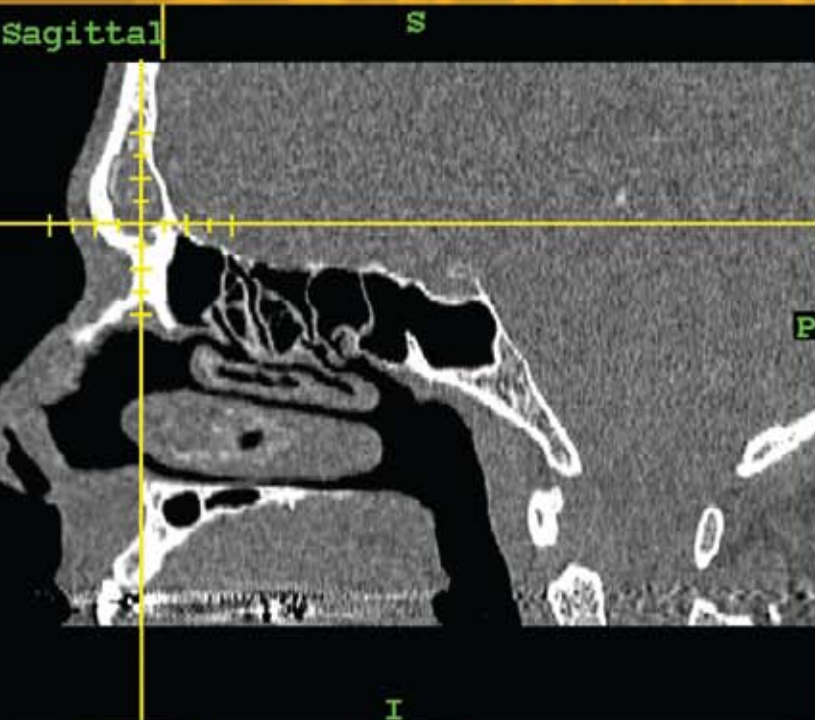


MEMORIAL HERMANN

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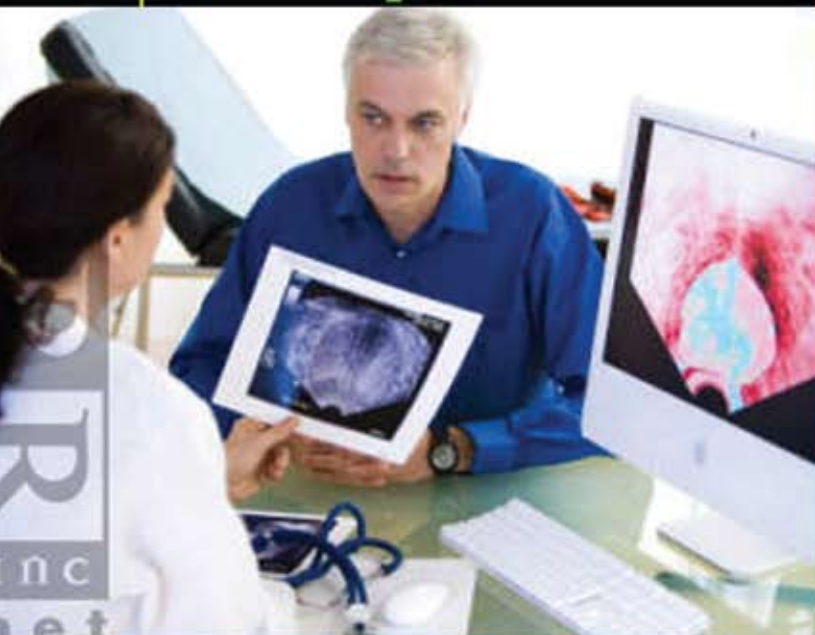


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## A2

### **Otorhinolaryngology Update: Revision Image-Guided Functional Endoscopic Sinus Surgery Offers Patients New Postoperative Hope**

At the new Texas Sinus Institute, at The University of Texas Medical School at Houston, fellowship trained rhinologists offer unique services and expertise unavailable in many communities, including computer-aided revision sinus surgery and transnasal endoscopic skull base surgery.



## A5

### **Breakthroughs in Rehabilitation Botulinum Toxin Type A: Finding New Urologic Uses for a Common Chemical**

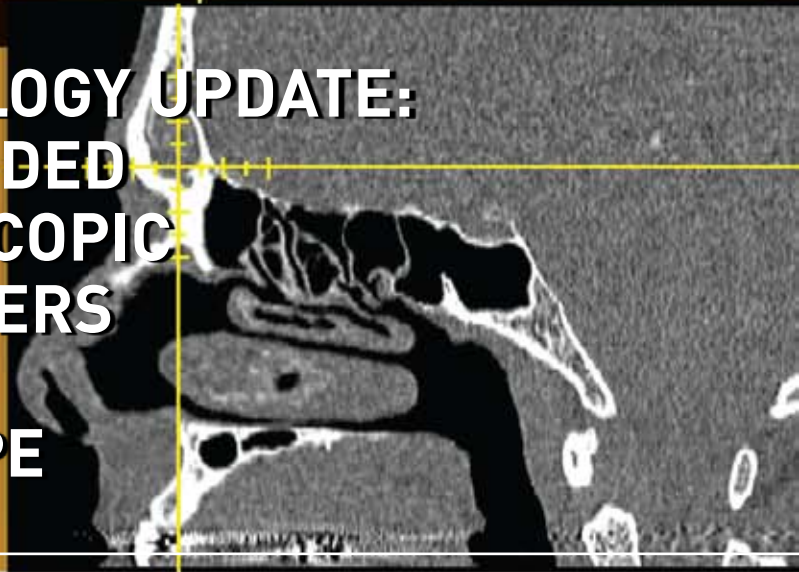
A urologist at TIRR Memorial Hermann is using Botox® to provide relief for overactive bladder in spinal cord injury patients – and investigating new urologic uses of the toxin in clinical trials.

### **The Robot That Helps People Walk Again**

Patients with neurological movement disorders are benefiting from intensive robotic rehabilitation therapy delivered at TIRR Memorial Hermann using the Lokomat®, the world's first driven gait orthosis.

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# OTORHINOLARYNGOLOGY UPDATE: REVISION IMAGE-GUIDED FUNCTIONAL ENDOSCOPIC SINUS SURGERY OFFERS PATIENTS NEW POSTOPERATIVE HOPE



**At the new Texas Sinus Institute, at The University of Texas Medical School at Houston, fellowship-trained rhinologists offer unique services and expertise unavailable in many communities, including computer-aided revision sinus surgery and transnasal endoscopic skull base surgery.**

While the majority of patients who undergo endoscopic sinus surgery are satisfied with their results, some patients have symptoms that persist beyond the OR and convalescence. For those suffering from persistent chronic rhinosinusitis (CRS) or sinonasal polyposis even after surgery and multiple rounds of antibiotics and steroids, revision image-guided functional endoscopic sinus surgery is now being performed at the Texas Sinus Institute (TSI), with excellent long-term results.

“The patients who benefit most from our services are described by a fairly typical clinical scenario,” says Martin J. Citardi, M.D., formerly of the Cleveland Clinic, and a nationally known educator, clinician and researcher who joined the medical staff at Memorial Hermann-Texas Medical Center in March as chief of otorhinolaryngology. “Most of our patients have had recent sinus surgery and did well for a while before their symptoms returned, or their symptoms worsened following the procedure. They typically have congestion and purulent nasal drainage. Often, they have co-morbidities such as asthma. They’ve received multiple rounds of antibiotics and other treatments, and have finally been told they’ll have to learn to live with the condition. These are the patients we need to see.”

Dr. Citardi focuses his clinical practice on disorders of the nose and sinuses, with special interests that include medical and surgical management of refractory sinusitis, revision sinus surgery, endoscopic management of sinonasal neoplasia, computer-aided surgery and minimally invasive anterior skull base surgery. His partner in practice Samer Fakhri, M.D., assistant professor of otorhinolaryngology at The University of Texas Medical School at Houston, focuses on medical and surgical management of refractory chronic rhinosinusitis and sinonasal polyposis, image-guided surgery, endoscopic lacrimal and orbital surgery, cerebrospinal fluid (CSF) leak repair and minimally invasive skull base surgery.

As chair of the department of Otorhinolaryngology-Head and Neck Surgery at the UT Medical School, Dr. Citardi is working to expand the collaborative Memorial Hermann-UT program beyond rhinology to include the full spectrum of otorhinolaryngology diagnosis and treatment. “Since we’re active faculty within the UT Medical School,” he says, “we can offer our patients immediate access to multidisciplinary management expertise, including allergy and immunology, neurosurgery, neuroradiology, infectious disease, plastic and reconstructive surgery, pulmonology,

rheumatology and medical and radiation oncology.” Patients also have access to new medical therapies and innovative devices and technology very quickly after their introduction, and those who qualify have the opportunity to participate in clinical trials of treatments not otherwise available.

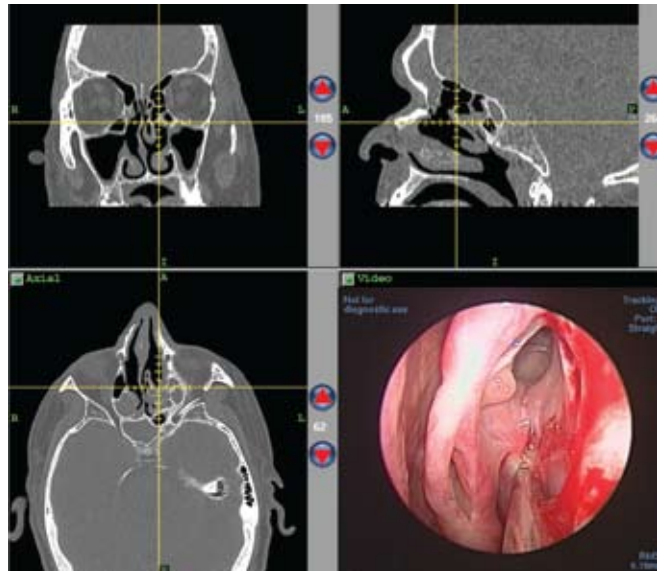
For most patients seen at the Texas Sinus Institute for active CRS, the initial treatment is culture-directed antibiotics. “Recent reports in the media have focused on the failure of antibiotics to provide relief for sinusitis,” Dr. Citardi says. “Our success with antibiotic treatment is based on the precise identification of the predominant organism in a culture of nasal secretions gathered endoscopically. Most of the negative press about antibiotics for sinusitis treatment describes studies that may have included patients whose sinusitis was not bacterial. Nasal endoscopy with cultures enhances our diagnostic accuracy and improves outcomes.”

Most patients at TSI require other medical interventions, including relatively long courses of systemic steroids. All patients receive counseling about the implications of steroid usage and are offered ophthalmology consultation to monitor for signs of glaucoma and cataracts. “In addition, steroid-related bone loss is moderated through comprehensive screening and judicious use of bisphosphonates,” he says. “These measures permit the administration of long-term steroids with a better adverse effect profile.”

For patients who do not respond to aggressive medical management, particularly for the frontal sinus, the next step is revision sinus surgery, according to Dr. Citardi. “Frontal sinus surgery has been a challenge for more than a century, and revision sinus surgery can put the patient at high risk for a surgical complication due to the distortion in the anatomy caused by previous surgery and extensive inflammatory disease. We’re now performing revision image-guided functional sinus surgery routinely. That consistent caseload enhances our long-term outcomes for our patients.”

Drs. Citardi and Fakhri use advanced techniques that include computer-aided surgery. Dr. Citardi has tried an intraoperative CT scanner for select cases and is looking forward to easy access to this technology for more difficult cases. During the postoperative period, they adjust medical management based on patient symptoms and endoscopic examination.

The rhinologists attribute their success in part to their willingness to aggressively continue medical treatment weeks and months following surgery to optimize surgical results, working in conjunction with referring physicians. “Sinus and nasal surgery has come a long way, but ongoing medical management continues to be important,” Dr. Citardi says. “With continued treatment following surgery, CRS patients can expect an improvement in almost all cases. The key is continued management, guided by endoscopic examination over long periods of time.”



For more information about revision image-guided functional endoscopic sinus surgery, contact Dr. Martin Citardi and Dr. Samer Fakhri at 713.500.5410 or visit [www.ut-ent.org](http://www.ut-ent.org). To refer a patient for evaluation and treatment, call 832.325.7171.

*A fellow of the American College of Surgeons and the American Rhinologic Society, Martin J. Citardi, M.D., has been honored numerous times for his contributions to medicine. He was the 2003 recipient of the American Rhinologic Society's Presidential Award. That same year, he received the American Academy of Otolaryngology Honor Award, and in 2007, he received the Academy's Distinguished Service Award. The Singapore Ministry of Health named Citardi an Honorary Visiting Expert in 2004, and he has been listed among the Best Doctors in America since 2005. He received a Cleveland Clinic Innovator Award in 2007. He has more than 70 publications to his credit, including the editorship of*

*a textbook on computer-aided otorhinolaryngology. He presents regularly at meetings in the United States and abroad.*

## ENDOSCOPIC SKULL BASE SURGERY

Surgeons at the Texas Sinus Institute are skilled in the endoscopic repair of cerebrospinal fluid (CSF) leaks, an approach widely regarded as the optimal surgical technique. They've also gained worldwide recognition for the development of innovative strategies for the minimally invasive endoscopic management of both benign and malignant neoplasms of the paranasal sinuses and skull base.

“Over the past few years we've seen rapid advances in minimally invasive approaches to the skull base,” says Martin J. Citardi, M.D., chief of otorhinolaryngology at Memorial Hermann-Texas Medical Center and chair of the department of Otorhinolaryngology-Head and Neck Surgery at The University of Texas Medical School at Houston. “In most patients who would have required open approaches, we can now perform skull base procedures through the nose without incisions.”

Dr. Citardi and his colleagues are currently reviewing data on approximately 100 patients who have undergone endoscopic resection of malignant sinus neoplasm. For more information, contact him at 713.500.5410 or visit [www.ut-ent.org](http://www.ut-ent.org).

## THE TEXAS SINUS INSTITUTE AT A GLANCE

The fellowship-trained rhinologists at the Texas Sinus Institute provide comprehensive medical and surgical treatment of patients with diseases of the nose and paranasal sinuses. Their expertise includes a broad range of disorders from rhinosinusitis and sinonasal polyposis to complicated tumors of the nose, sinuses and anterior skull base. As clinicians within the department of Otorhinolaryngology-Head and Neck Surgery at Memorial Hermann-Texas Medical Center and The University of Texas Medical School at Houston, they also have an academic mission that includes education, research and the publication and presentation of scholarly articles worldwide.

## SCOPE OF EXPERTISE

### Rhinology

- Revision image-guided functional endoscopic sinus surgery (revision IG-FESS)
- Frontal sinus surgery
- Endoscopic orbital decompression
- Endoscopic optic nerve decompression
- Endoscopic dacryocystorhinostomy
- Nasal and sinus polyposis
- Allergic fungal rhinosinusitis
- Inflammatory disease of the nose and sinuses
- Drug-resistant bacterial rhinosinusitis
- Nasal blockage or obstruction

### Skull Base

- Anterior skull base tumors
- CSF rhinorrhea (spinal fluid leak)
- Fibro-osseous lesions
- Pituitary tumors
- Sinonasal neoplasia
- Computer-aided surgery

### Current Issues in Otorhinolaryngology

If you are a physician and would like to receive the Texas Sinus Institute's Internet-based newsletter on current issues in otorhinolaryngology, please visit [www.ut-ent.org](http://www.ut-ent.org) and submit your contact information for the UT ORL Update, or call 713.500.5410.

### Referrals

To refer a patient, call 832.325.7171.