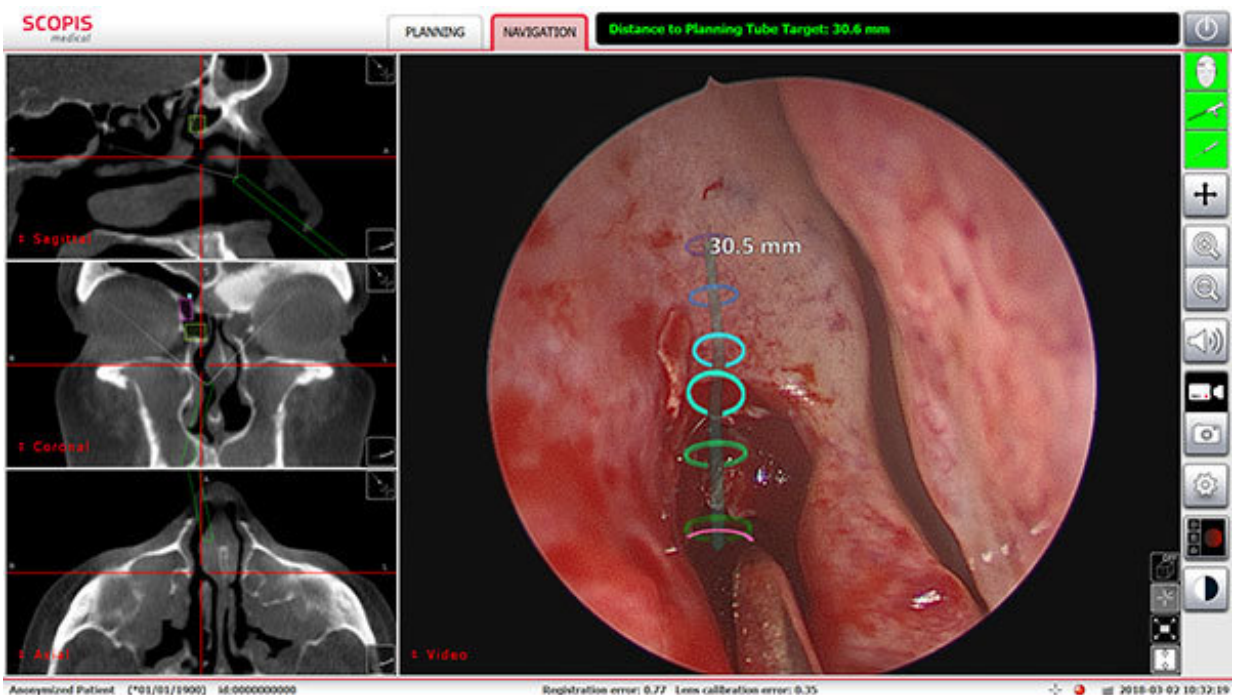


UTHealth/Memorial Hermann conduct first sinus surgery in US with augmented reality technology

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UTHealth-Houston sinus surgeons affiliated with Memorial Hermann-Texas Medical Center are the first in the U.S. to use augmented reality technology in minimally invasive sinus surgeries, allowing them to better navigate complex anatomy. Credit: Martin J. Citardi, M.D., UTHealth/Memorial Hermann-Texas Medical Center

Sinus surgeons with The University of Texas Health Science Center at

Houston (UTHealth) and Memorial Hermann-Texas Medical Center are the first in the United States to use augmented reality technology during minimally invasive sinus procedures.

"Augmented reality, which uses 3-D mapping and imagery, enhances our understanding of complex anatomy so surgical procedures are more precise," said Martin J. Citardi, M.D., chair of the Department of Otorhinolaryngology-Head and Neck Surgery in McGovern Medical School at UTHealth. "The addition of augmented reality to a surgical navigation serves as a GPS-like system and offers patients the benefits of [minimally invasive surgery](#) with lower risks and better outcomes."

The initial uses of the [technology](#) included a March 2 case at Memorial Hermann-TMC in which Citardi performed revision image-guided functional [endoscopic sinus surgery](#) for recurrent chronic rhinosinusitis. In addition, the patient also had a fibro-osseous lesion blocking drainage from the left frontal sinus.

"This was a complicated case. By using this technology, we were able to plan a pathway to drain that blocked frontal sinus and avoid the need for a more extensive [procedure](#)," Citardi said.

Citardi believes augmented reality technology has the potential to improve many types of sinus procedures, including those performed for [chronic rhinosinusitis](#), sinonasal polyps and even tumors.

The surgery was performed using Stryker's Scopis Target Guided Surgery (TGS) technology, a system designed to give surgeons the tools to plan pathways and critical structures in preoperative medical imaging scans. During surgery, this planning is overlaid onto the surgeon's endoscopic view of the surgical area. The system assists the surgeon in following the defined pathway and avoiding critical structures.

"This system also allows easy recording of both the surgery and surgical planning. Such digital content will be important for the training of surgeons in the difficult area of endoscopic sinus [surgery](#). This will ultimately benefit patients," said Citardi, who is affiliated with UT Physicians, the clinical practice of McGovern Medical School, and Memorial Hermann-TMC

Provided by University of Texas Health Science Center at Houston

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