



Navigation Sciences™ Awarded \$400,000 NCI SBIR/STTR Program Grant to Support Development of NaviSci™ Intelligent Surgical System Use in Removal of Early-Stage Lung Tumors

Brookline, MA, September 9, 2021 – Navigation Sciences announced today that the company has been awarded a \$400,000 Phase 1 Small Business Technology Transfer Program (SBIR/STTR) grant from the National Cancer Institute (NCI) to advance the development of a bronchoscope-based tissue marker (NaviSci EndoMarker™) for use in its NaviSci™ Intelligent Surgical System for tissue conserving removal of early-stage lung tumors. The NaviSci System, currently undergoing a clinical feasibility study, is designed to accurately determine surgical margins in real-time and enable tumor removal through a targeted, minimally invasive surgery.

“The EndoMarker we are developing provides a second-generation tumor localization approach to simplify clinical workflow and expand adoption of the system,” said Jayender Jagadeesan, Ph.D. Principal Investigator on the grant, Associate Professor at Harvard Medical School, and a Navigation Sciences co-founder. “The initial system in clinical development relies on visual localization or C-arm CT imaging to guide placement of the marker. Bronchoscopy-based placement of the EndoMarker prior to surgery will facilitate use of the NaviSci technology in hospitals that do not have interoperative imaging capabilities.”

“Surgery, the standard of care for lung tumors, is evolving as more cancers are being detected early, allowing surgeons to remove less tissue with wedge resections and segmentectomies to conserve lung function,” said Raphael Bueno, M.D., a co-investigator on the grant, Chief, Division of Thoracic and Cardiac Surgery, Brigham and Women’s Hospital and a Navigation Sciences co-founder. “The NaviSci System aims to address the critical need in this environment to assess margins in real-time and remove tumors completely, reducing the risk of recurrence.”

The NaviSci System localizes a tumor by marking the nodule with a sensor-enabled fiducial marker called a J-Bar™ that tracks its position. The marker couples with a second sensor on a surgical stapler used to cut the lung during surgery. Use of proprietary software, along with the sensors, provides the surgeon with ‘GPS’ guidance so the distance from the marker (i.e., tumor) to the resection margin can be measured in real time. With support from the grant, the EndoMarker will be developed for bronchoscopy-based placement of the J-Bar.

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“The NCI grant programs are highly competitive, and this award provides validation of our innovative approach and the clinical need for tissue-conserving lung surgery and potentially other soft tissue cancers,” said Alan D. Lucas, Navigation Science’s CEO. “The number of patients is expected to grow substantially in the coming years with increased adoption of CT screening, driven in part by recommendations that a larger population be tested, along with more favorable reimbursement.” Currently, there are more than 225,000 new cases of lung cancer diagnosed in the U.S. annually, of which more than 76,000 are early-stage tumors.

The grant is titled, “Bronchoscopic lung navigation system for accurately excising lung nodules.” Hisashi Tsukada, M.D., Ph.D., Assistant Professor of Surgery at Brigham and Women’s Hospital is a co-investigator on the grant, along with Dr. Bueno and Dr. Jagadeesan, the Principal Investigator.

About Navigation Sciences™

Navigation Sciences™ is a clinical-stage company developing the NaviSci™ System for the tissue conserving removal of lung cancer and other soft tissue tumors. The System integrates Augmented Reality and advanced software with surgical instruments to guide precise surgical resection by enabling for the first time, real-time *in vivo* margin measurement. The System aims to improve surgical outcomes with cutting-edge technologies that reduce recurrence risk and conserve lung function, shorten hospital length of stay and enhance surgical workflow. The NaviSci™ System is based on technology exclusively licensed from the Brigham and Women’s Hospital. Learn more at www.navigationsci.com.

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