

Bayshore Medical Center Surgeon Invents Laser-Guided Spine Localizer

Neurosurgeon at Bayshore Medical Center in Pasadena Texas, creates a laser guided spine localizer that enables surgeons to correctly place incisions in minimally invasive spine surgery.

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Instrument ensures smallest incision possible in minimally invasive spine surgery

PASADENA, TEXAS, July 17, 2009—The Laser-Guided Spine Localizer is the latest innovation in minimally invasive spinal surgery. The localizer is the invention of Dr. Peyman Pakzaban, M.D., a neurosurgeon affiliated with Bayshore Medical Center in Pasadena, Texas.

The goal of minimally invasive spinal surgery is to make the smallest incision possible, avoiding major tissue dissection and trauma for the patient. The smaller the incision, the less likely there is to be infection and complications. The minimally invasive approach allows patients to recover from surgery within weeks instead of months, and with less pain.

The issue for neurosurgeons is determining where to make the incision to reach the affected area of the spine. In the past, surgeons palpated the bony protruberances on the patient's back in order to make an educated "guess" as to the proper location for the incision. Some surgeons place a metal instrument next to the patient's side or actually insert a needle into the surface of the back and take X-Rays of the area. But these methods are inexact and often result in an improperly placed incision, forcing the surgeon to lengthen the incision and due further dissection of tissues.

"What the Laser-Guided Spine Localizer does is create a virtual needle at the intersection of two planes using lasers and small, retractable cables draped on either side of the patient. It gives us a three dimensional view of the patient's body during x-ray and because it is non-invasive, we can move the localizer up and down the spine until we find the exact location of the affected area," says Dr. Peyman Pakzaban.

Dr. Pakzaban has an engineering degree from the Massachusetts Institute of Technology (M.I.T.) as well as his medical degree from Harvard University. His patent-pending idea came to him while hanging pictures in his home using a laser guided level.

Dr. Pakzaban determined he could use the same principles to help guide his incisions in spinal surgery. He purchased the necessary materials to make the prototype of the Localizer from a local hardware store. His resulting study on 76 patients proved successful and is published in the February, 2009 publication of the Journal of Neurosurgery: Spine.

"We are very excited to be able to offer this innovative technology at Bayshore Medical Center," says Jeff Holland, CEO. "This is an important step in minimally invasive surgical protocol, enabling us to offer life-changing surgical procedures with less risk to the patient. Patients, who may have avoided spinal

surgery before, may now consider the possibilities of an improved life-style through surgery.”

Since the study, the Localizer is standard protocol for every patient who undergoes spinal surgery at Bayshore Medical Center. Dr. Pakzaban indicates that the Localizer should be developed by the end of this year and available to other neurosurgeons and hospitals world-wide.

About Bayshore Medical Center

Bayshore Medical Center is the only hospital in Pasadena fully accredited by the Society of Chest Pain Centers and The Joint Commission. The Bayshore campus is a 369-bed acute-care facility that has been serving the needs of Southeast Harris County for 46 years. Bayshore’s wide range of services includes acute care of the medical and surgical patient and specialty services such as: Advanced Wound Care Center; Cardiovascular and Cardiology Services, including open heart; Level III Neonatal Intensive Care Unit; Inpatient Pediatric Unit; Inpatient Rehabilitation Unit and award-winning Maternity Services. www.bayshoremedical.com

About East Houston Regional Medical Center—a campus of Bayshore Medical Center

East Houston Regional Medical Center is an acute-care facility with the only Level IV Trauma Designated Emergency Center in East Harris County. East Houston Regional Medical Center, a hospital with accreditation by The Joint Commission and the Society of Chest Pain Centers, currently has 131 beds and over 550 employees. East Houston Regional Medical Center offers specialized services in fields such as: The Center for Pain Care; Industrial Medicine Program; Rehabilitation Services; and Diabetes Self-Management Program. With the resources and expertise of Bayshore Medical Center, the East Houston Regional Medical Center campus is able to provide a combination of clinical services and advanced technology for the residents and businesses in the Northeast and Southeast Harris County region. For more information about our services or community programs, visit www.easthoustonrhc.com

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