SpineMap 3D Spine Navigation Software

SpineMask Tracker – the first non-invasive patient tracker enabling minimally invasive (MIS) approaches for spine surgery without an additional incision for navigation tracking. This technology is partnered with the innovative SpineMap 3D software to provide an enhanced OR experience.

In the past, spine navigation required an additional incision to affix a clamp to the patient's boney anatomy for registration and navigation tracking. Surgeons had to choose between non-navigated surgery with small or fewer incisions, or navigated surgery which required a larger or extra incision to accommodate the spine clamp. The SpineMask tracker technology allows surgeons the benefit of navigation without having to create a dedicated incision for navigation tracking.

Stryker Navigation's new SpineMask tracker leverages the proprietary tracking technology the company has developed and honed for neurosurgical procedures, allowing for other surgical specialties to benefit from this technology. The SpineMask non-invasive tracker is an adhesive surgical tracker which is placed on the patient's back and enables automatic registration with a wide-variety of imaging devices used in the operating room. Stryker's proprietary tracking technology allows for Automatic Intraoperative Mask Registration, which utilizes a software algorithm to match the patient's anatomy to the intra-operative image set in seconds. The SpineMask tracker uses Stryker's active tracking technology to sense tracker movement during surgery and automatically compensates for any deformation to help maintain accuracy throughout the procedure.

"This innovative system provides an intuitive solution designed to optimize the navigation experience for minimally invasive spine surgeries," said Derek Babin, Director of Marketing for Stryker Navigation. "Though we just fully launched SpineMask tracker early this year, we already have multiple facilities taking advantage of its accuracy and easy-to-use capabilities."

"The launch of the SpineMask tracker demonstrates Stryker's continued commitment to provide innovative procedural solutions for our surgeons and patients" added John Mayor, Vice President of Marketing for Stryker Spine.

The SpineMask tracker is used in conjunction with the SpineMap 3D 3.0 software and Stryker's NAV3i® navigation platform to provide a total solution for spine navigation procedures. This solution leverages Stryker's proprietary navigation camera which provides industry-leading accuracy1 for navigated procedures. The navigation platform also has a flexible camera arm with a large range of motion, making it easy to accommodate different procedures and approaches. A 32" HD monitor delivers sharp visualization for the surgeon while the platform's design makes it easy to position the monitor and camera for optimal space usage in the OR.

The SpineMask non-invasive tracker and SpineMap 3D 3.0 Software are compatible with a range of intra-operative imaging devices for automatic registration offering flexibility in incorporating the technology into the surgical workflow. Stryker's Spine Navigation system optimizes the surgical experience through a comprehensive and personalized spine navigation solution tailored to the clinical needs.

Stryker SpineMap 3D 3.0 Navigation Software is designed to optimize the surgical experience through an intuitive solution which includes a personalized surgical workflow to help support OR efficiency. Stryker's Spine Navigation software is compatible with a wide variety of imaging devices from pre-op CTs to the latest intra-operative imaging platforms. Features & Benefits Key advantages include:

SpineMask Tracker - a propriety non-invasive tracking technology

Integrated instrumentation to enhance navigated spinal surgery

Pre-planned screw sizing and placement

<html><iframe width="560" height="315" src="https://www.youtube.com/embed/guj-NsBHUaU" frameborder="0" allowfullscreen></iframe></html>

References

Elfring R, de la Fuente M, Radermacher K. Assessment of optical localizer accuracy for computer-aided surgery systems. Comput Aided Surg. 2010;15(1-3):1-12.

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