

Mazor Debuts 4th Generation Guidance System For Minimally Invasive Spine Surgery

Newly release SpineAssist V.4 cuts X-Ray exposure from minutes to seconds to be launched at SAS Montreal

(Caesarea, Israel & Atlanta, Georgia; May 8, 2006) Mazor Surgical Technologies, developer and manufacturer of the SpineAssist miniature robotic spinal surgery guidance system, introduces SpineAssist version 4 at the Spine Arthroplasty Society (SAS) meeting in Montreal, May 10 to 13. The upgrade significantly minimizes the amount of fluoroscopy radiation exposure required for minimally invasive lumbar surgeries and offers a host of new features that enhance the speed, precision and power of planning and executing implant placement for surgeries of the spine.

With SpineAssist v. 4, only two fluoroscopic images with one to two seconds of x-ray exposure are required to guide the surgery itself, contrasting with the 20 to 30 images and up to two minutes of x-ray exposure often required for a minimally invasive procedure without the guidance device. Continuing the trend towards radiation exposure reduction, this represents a 50 percent improvement over the limited x-ray exposure required by the previous version of SpineAssist. The new feature saves operating room (OR) time and reduces radiation exposure to the surgeon and the operating team by a corresponding amount.

Also new is the ability to scroll slice by slice through a CT image in both the planning stage and during surgery. This significantly enhances implant placement precision and minimizes the chance of breaching and injury.

During surgery, advanced algorithms enhance the registration of the CT-based surgical plan with real-time fluoroscopic images of the patient on the table to ensure robust, accurate guidance of the SpineAssist robotic device along the thoracic and lumbar spine. The process is cut from minutes to seconds, also saving valuable OR time.

A hardware redesign now supports access to a larger surgical area and allows surgeons to take advantage of a full range of surgical approaches. The design also improves screw placement accuracy.

SpineAssist has met with tremendous acceptance following its introduction into the U.S. market only a few months ago,” said Ori Hadomi, CEO of Mazor Surgical Technologies. “World-renowned spinal specialists believe the technology will become the new standard of care in spinal guidance systems. Our emphasis on both patient and physician safety through minimization of radiation exposure is significant. As a technology and market driven firm, Mazor also is committed to ongoing technological innovation and enhancement of the product to meet the needs of the surgeons.”

Hadomi points out that this upgrade is a demonstration of that commitment. Additionally, new technologies are under development to enable use of SpineAssist as a platform for a wide range of additional surgeries of the spine and other areas.

About SpineAssist

Elegant and user-friendly, SpineAssist is a unique robotic guidance system for a growing spectrum of spinal surgeries demanding great skill and precision. It consists of a workstation running advanced Mazor surgical planning software, the robotic device and a compact Hover-T Bridge. Initially, the patient is evaluated with a CT scan. SpineAssist's sophisticated software then uses the CT as the basis for a complex digital surgical plan providing a roadmap for the entire procedure.

Just prior to surgery, two fluoroscopic images of the patient on the table are taken, sent to the workstation, and the pre-operative plan is automatically registered with the real-time data to create a precise correlation. Next, the Hover-T Bridge is attached to the patient's back through three small incisions, allowing the robot access to the entire lumbar and mid thoracic region of the patient's spine, while also serving as a landmark to track the robot's position

As it is suspended above the patient on the operating table, the small, soda-can-sized robotic device glides along the Hover-T Bridge to pinpoint the specific site detailed in the physician's surgical plan. Once directed to the surgical site by the robot, the doctor threads a miniature operating tool through the SpineAssist guidance arm to implement the planned intervention.

About Mazor Technologies

Mazor Technologies was founded in 2001 by Technion Israel Institute of Technology Professor Prof. Moshe Shoham an internationally recognized expert in medical robotics. Selected for the prestigious Technion Incubator program, Mazor now has over 30 employees with headquarters in Israel and a successful U.S. subsidiary based in Atlanta, GA. Mazor received FDA approval for the SpineAssist platform in 2004, followed recently by approval for the related Hover-T Bridge in 2005. To date, Mazor has raised over 19.5 million dollars in two rounds of financing. International investors include Alice Ventures, Johnson & Johnson DC, Israel HealthCare Ventures, Shalom Equity, Dor Ventures, and Proseed.