

## **MAZOR SPINEASSIST DELIVERS 98 PERCENT REDUCTION IN SURGEON RADIATION EXPOSURE**

### **Spinal Guidance System More than Doubles Implant Placement Precision**

**March 12, 2007, Atlanta, GA and Caesarea, Israel** - According to a new study, surgeons using the Mazor SpineAssist miniature robotic surgical guidance system experience up to a 98 percent decrease in x-ray exposure compared to those using conventional minimally invasive techniques. The study also demonstrated that the SpineAssist's surgical guidance enhanced implant placement precision 2.5 times over freehand placement.

The research on cadavers was conducted at the Cleveland Clinic, Texas Back Institute, Johns Hopkins University and UCLA Medical Center with 15 spine surgeons from throughout the US. It utilized minimally invasive and conventional techniques to place a total of 217 screws for spinal pedicular fixation in lumbar and thoracic fusion procedures. One group of surgeons worked with the guidance of the SpineAssist system, while another group performed the same procedures freehand.

Radiation exposure dosimeters indicated that surgeons operating conventionally were exposed to radiation levels an average of 51 times greater than the surgeons using SpineAssist.

At the same time, with SpineAssist's guidance, placements deviated by an average of only 1.1 mm from surgical plan site. Placements made using freehand techniques deviated an average of 2.8 mm, which is 2.5 times higher than with SpineAssist's guidance. Further, the SpineAssist surgeon group, consisting of experienced and inexperienced users, differed from one another in screw placement by only 0.5 mm, suggesting that the device enhances implant placement across all levels of surgical experience.

The SpineAssist system enables surgeons to plan precise locations for spinal fusion screw placement and related surgical interventions. It consists of a miniature robot, a patented Hover-T Bridge, which allows the robot to glide freely above the patient's spine, and a workstation running advanced surgical planning software.

"The study represents a strong validation of our system's benefits," said Ori Hadomi, CEO of Mazor Surgical Technologies. "With this, we are taking the next big step towards fulfilling Mazor Surgical Technologies' vision of providing accurate, and precise spinal surgery products based on miniature robotic technology."

The research was led by a team of internationally recognized spine surgeons, including Isador Lieberman, MD, Jeffrey C. Wang, MD, Richard Guyer, MD, Jay Khanna, MD and Mitchell Hardenbrook, MD. SpineAssist will be presented at the upcoming events of AANS meeting in Washington DC and the DGNC meeting in Leipzig, Germany.

#### **About Mazor Surgical Technologies:**

Mazor Surgical Technologies was founded in 2001 by Technion Israel Institute of Technology Professor Moshe Shoham, an internationally recognized expert in medical robotics. The SpineAssist platform received FDA clearance in 2004, followed by Hover-T Bridge approval in 2005. International investors include Alice Ventures, Johnson & Johnson DC, Israel HealthCare Ventures, Shalom Equity Fund, Dor Ventures, and Proseed.

Mazor Surgical Technologies is headquartered in Caesarea Israel, with U.S. offices in Atlanta. Visit [www.mazorst.com](http://www.mazorst.com) or contact the company at [usa@mazorst.com](mailto:usa@mazorst.com).