Revolutionizing Neurosurgical Procedures

ROSA® Brain's inherent flexibility empowers the surgeon in a broad range of indications, including:

- ROSA® Brain is a robotic assistant working alongside neurosurgeons to provide guaranteed accuracy relative to a frame-based stereotactic system.
- Procedural safety is increased; the instruments are guided into position based on the planned trajectory inputs.
- Worklist is simplified.
- Patient pre-op preparation is no longer required.
- Application accuracy: combines robotic accuracy with proton beam technology.
- Patient’s comfort is increased because a stereotactic frame is no longer needed.
- Time is reduced during the procedure.
- There are no limitations with planned trajectories and they can be easily and rapidly modified through the planning station or directly on the robot.

ROSA® Brain provides a unique and seamless integration between the surgical planning and the actual execution thus providing the surgeon with increased confidence in his surgery.

ROSA® Brain promises to deliver an entirely new level of surgical assistance for a variety of neurosurgical procedures. It offers a seamless combination of the latest generation in computer science and robotic technology to bridge the gap between surgical planning and accurate execution.

ROSA® Brain integrates cutting-edge tools for pre-operative planning, instrument guidance, intraoperative navigation and instrument manipulation. This exclusive combination of features provides increased accuracy, reliability and control over procedures.

Contact us at contact.rosa@zimmerbiomet.com

www.medtechsurgical.com

Studies referenced:

- Robot Assisted Stereotactic Laser Ablation in Medically Intractable Epilepsy: Operative Technique
- Stereoelectroencephalography in children with cortical dysplasia: technique and results
- The stereotactic approach for mapping epileptic networks: a prospective study of 200 patients
- Frameless robotic stereotactic biopsies: a consecutive series of 100 cases
- Robotic Stereo-Electroencephalography in Medically Refractory Focal Epilepsy
- First experience with ROSA and O-Arm guided stereotactic neurosurgery in Merheim
- Stereo-EEG in children with therapy-refractory epilepsy: Robot-assistance plus stereotaxy combines speed with maximal precision for the implantation of multiple depth electrodes
- The Impact of the Reference Imaging Modality, Registration Method and Intraoperative Flat-Panel Computed Tomography on the Accuracy of the ROSA® Stereotactic Robot
- Robotic Placement of Intracranial Depth Electrodes for Long-Term Monitoring: Utility and Efficacy
- High-resolution 3-dimensional T2*-weighted angiography (HR 3-D SWAN): an optimized 3-T magnetic resonance imaging sequence for targeting the subthalamic nucleus
Introducing ROSA® Brain, your unique robotic assistant for neurosurgery

quick and smart

It goes without saying that neurosurgeons are facing growing challenges to improve patient outcomes while increasing productivity with superior results during surgical and clinical procedures.

ROSA® Brain, an innovative robotic assistant working alongside neurosurgeons to provide precise targeting and dexterous handling by means of a minimally invasive approach to reduce clinical complications and increase patient safety.

ROSA® Brain includes state-of-the-art surgical robotics technology as well as comprehensive and innovative proprietary software designed for advanced surgical planning.

Proprietary surgical planning solution: ROSA® Brain includes its own, purpose-built surgical planning solution. This proprietary navigation software was engineered in close cooperation with leading neurosurgeons. The result is a full-featured, yet intuitive solution allowing you to make full advantage of our powerful robotic platform.

Automatic instrument guidance: ROSA® Brain’s precise robotic technology enables automatic guidance of surgical instruments according to pre-operative planning. In a matter of seconds, the robotic arm moves from one trajectory to another resulting in significant OR time savings.

Furthermore, the safety of the procedure is increased by minimizing the potential human error associated with a manual mode.

Advanced instrument manipulation: ROSA® Brain’s advanced robotic manipulation mode provides the surgeon with enhanced control over the procedure. At any given time during surgery, the robot may be transitioned to manual mode while allowing continuous instrument tracking in the pre-operative images. Tridimensional instrument support coupled with enhanced precision movements, make ROSA® Brain an ideal assistant for minimally invasive procedures. The advanced manipulation mode increases the surgeon’s density with conventional movement. Instruments can be easily manipulated along complex trajectories such as isocentric rotation or axial translation.

The safety of the intervention is further enhanced by enabling ROSA® Brain’s security zones to restrict instrument manipulation inside a given subspace, as determined during pre-operative planning.

The surgeon can now move instrumentation with greater confidence knowing that ROSA® Brain provides a unique and seamless integration between planning and execution.

www.medtechsurgical.com