

ROSA the surgical robot

ROSA is a surgical assistant robot used for stereotactic EEG electrode insertion. It works with the neurosurgeon to ensure accurate and precise placement of depth electrodes used for epilepsy monitoring (invasive stereotactic EEG). ROSA guides the neurosurgeon to the surgical site—the surgeon still creates the opening (drill) and feeds the electrodes in, along the laser-guided pathway created by ROSA.

In 2015, with the opening of the Mater Centre of Neurosciences, the Advanced Epilepsy Unit (under the direction of Epileptologist, Dr Sasha Dionisio, and Neurosurgeon, Dr Jason Papacostas) undertook the first SEEG case in Queensland (September 2015)—becoming one of three centres country-wide credentialed in this procedure. By December 2015, three cases had been successfully implanted and monitored.

The purchase of the robot was to improve surgical times (the time in the operating theatre under general anaesthetic) to reduce clinical risk and to improve on the accuracy of electrode placement.

Now, by April 2016, a further 3 cases have been undertaken and successfully implanted, using the ROSA.

Rosa Robotic Surgical Assistant

The Rosa Robotic Surgical Assistant is the latest generation in robotics to work alongside neurosurgeons to provide guaranteed accuracy that is ergonomically superior to a standard navigation system.



● Team photo with the epilepsy service, neurosurgeon, engineers and ROSA staff from France

Benefits

- Procedural safety is increased as the instruments are guided into position based on the planned trajectory inputs
- Application accuracy is the best available on the market today. It combines robotic accuracy with patented laser technology.
- Patient comfort is increased
- Operating time is reduced
- There are no limitations with planned trajectories and they can be easily modified.
- There is a seamless integration between surgical planning and actual execution, thus providing the surgeon with increased confidence in their surgery.

Clinical advantages

- access to a larger area of the brain (including posterior electrodes), allowing for a more detailed and accurate implantation and subsequent diagnosis and treatment (Medtech, 2015)
- the ability to quickly and accurately modify the trajectories intraoperatively to within a fraction of a millimetre, promoting patient safety (Medtech, 2015)
- decreased anaesthesia for the patient with a more rapid recovery
- an increase in clinical confidence in electrode placement.

The Mater Centre for Neurosciences is the only centre in the southern hemisphere with a Rosa Robotic Surgical Assistant.

Story provided by Mater Centre for Neurosciences

2016 Memorial Service

16 July 2016, 2.00 pm

Mercy Place, 371 Simpsons Road, Bardon Q 4065

*This is a nondenominational service where all are welcome...
to all those bereaved... whether a family member or friend of someone who has died from epilepsy-related causes...
whether an Epilepsy Queensland supporter, or your work brings you in contact with people with epilepsy.
Please join as we remember and celebrate those lives.*

**Contact Jenny Ritchie at Epilepsy Queensland for more information
or to RSVP on 07 3435 5000 or rsvp@epilepsyqueensland.com.au**