Clinical Presentation
The patient is a 78 year-old female with a remote history of lobular breast cancer with no history of metastasis. She is a heavy smoker. She presented with a one week history of headache and left upper limb and lower limb weakness, which improved following commencement of Dexamethasone. MRI showed a 12mm enhancing lesion in the right posterior frontal lobe. Her case was discussed in a multi-disciplinary tumor meeting. Stereotactic radiosurgery was considered; however, it was felt that surgical resection would be the preferred treatment as a tissue diagnosis was required to plan further systemic treatment. It was also felt that resecting the lesion in a minimally invasive fashion would remove the mass effect and relieve some of her deficits quickly.

Surgical Management
Pre-operative DTI imaging was performed. Surgical approach was planned through the precentral sulcus running parallel to association fibers. Mannitol was not used. The first attempt at cannulating a tubular retractor resulted in bleeding from a sulcal vessel. Hemostasis was secured. Re-cannulation provided direct access to the tumor and complete tumor resection was achieved. Total operating time was 2 hours and 45 minutes; intra-dural operating time was 1 hour and 45 minutes.
Clinical Course & Outcomes

Immediately post-operative the patient had normal power in her left side. From an anesthetic perspective, the main difference was that Mannitol wasn’t used. She did experience a transient decrease in spontaneous movements in her left hand and difficulty performing voluntary movements with the left hand. This was consistent with a post-operative supplementary motor area syndrome. She was observed overnight in the ICU (standard practice in Australia) and was discharged to the ward the next day. Her symptoms resolved over the course of one week in hospital with physical therapy for her left hand. Further in-patient rehab was not required.

Post-operative MRI confirmed complete resection of the tumor. Histopathology revealed a metastatic adenocarcinoma which is consistent with lung primary.

Pre-Op MRI:

Post-Op MRI (48 hours):

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