



UNIVERSITY OF NEBRASKA MEDICAL CENTER unmc.edu

Grey Matters: Principles of Brain Tumor Management- Surgery

Michele Aizenberg, MD
Associate Professor, Neurosurgery
University of Nebraska Medical Center





- I have no disclosures





What does surgery do?

- Diagnosis
- Therapeutic benefit
- Possibly
 - Improve neurologic deficits
 - Decrease seizure frequency
- Obtain tissue for studies





Diagnosis

- Obtained via biopsy or resection (excision)
- Biopsy
 - Sampling of tissue only
 - May be obtained by minimally invasive or open means
 - Needle biopsy or craniotomy/direct vision





Diagnosis

- Biopsy cont'd
 - Can be done for initial diagnosis but also at time of recurrence to clarify treatment effect v recurrent tumor or upgrade
- Resection
 - Intent to remove tumor
 - Performed open





Diagnosis

- Resection cont'd
 - There are minimally invasive techniques for resection
 - Tissue sent to pathology but usually much more than biopsy alone
 - May eliminate sampling error with biopsy
 - Therapeutic benefits
 - Recurrence, survival times, malignant transformation



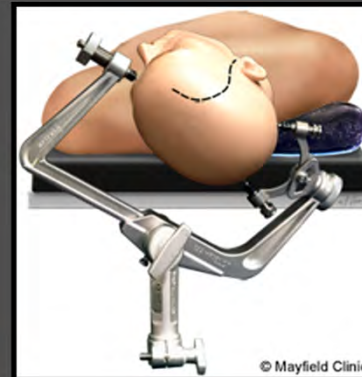
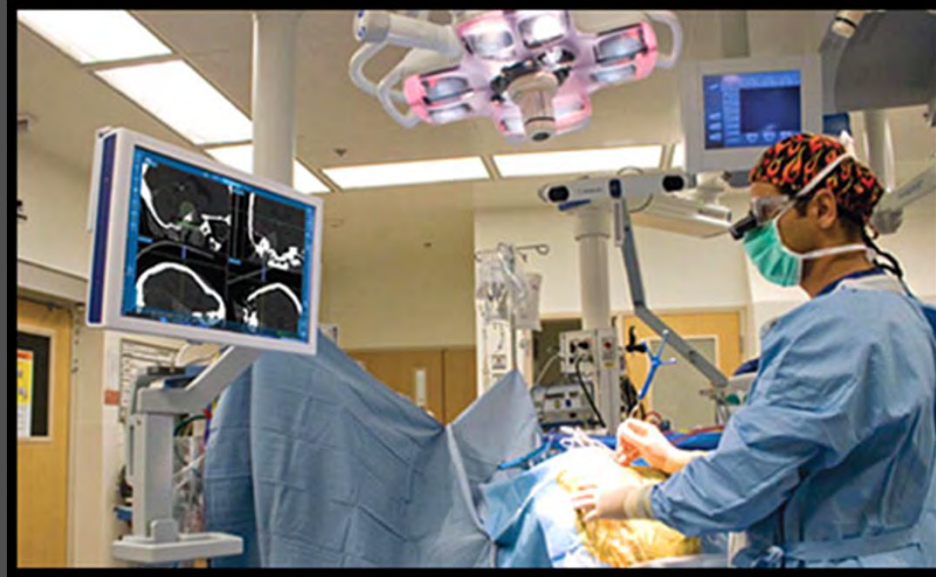


Tools



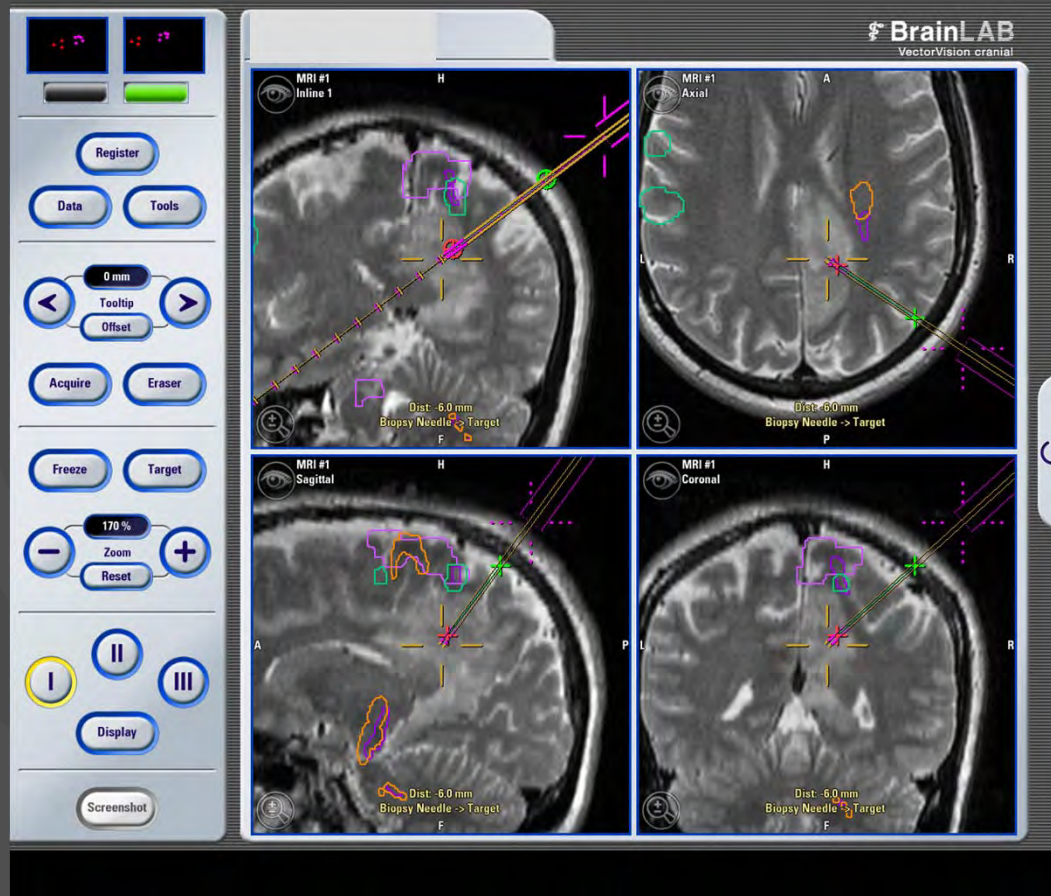


Tools



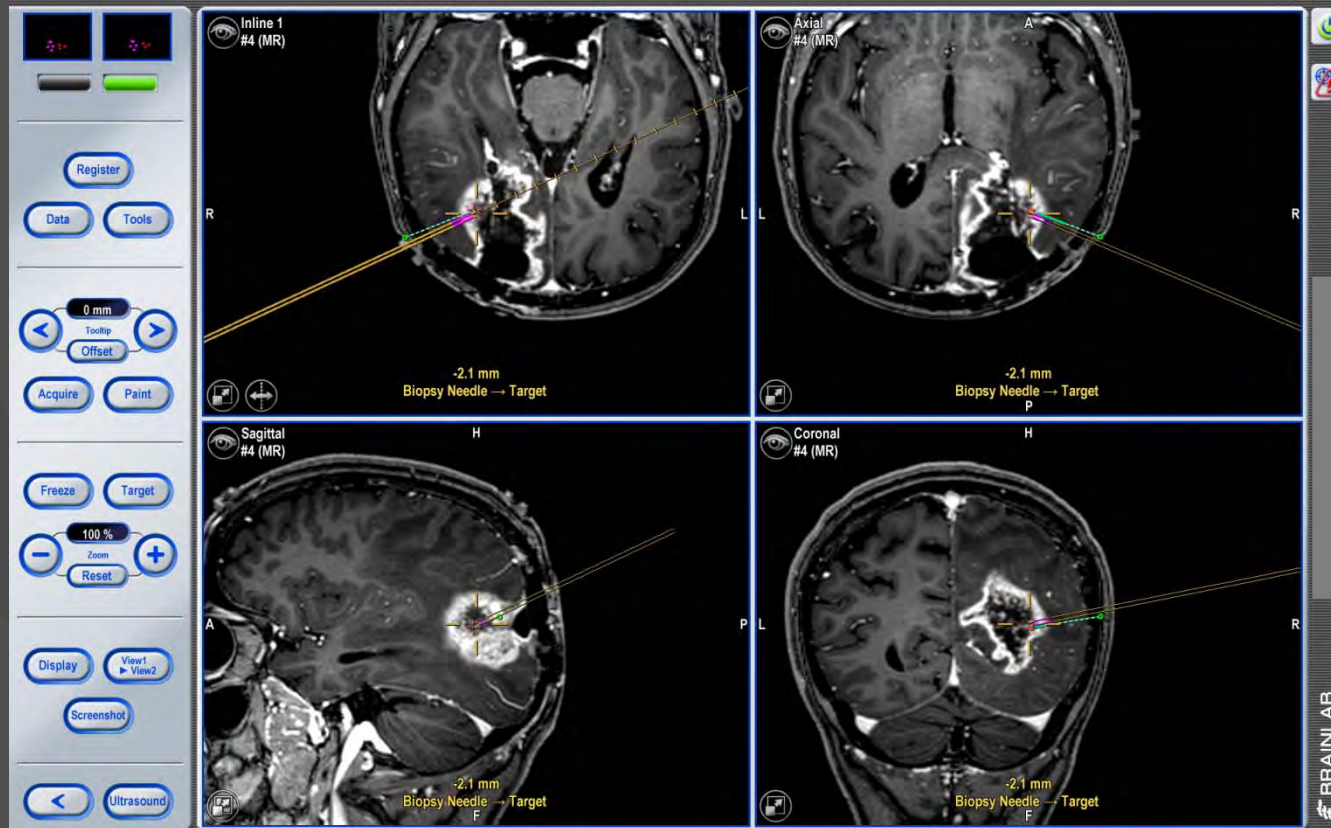


Biopsy new diagnosis





Biopsy recurrent tumor

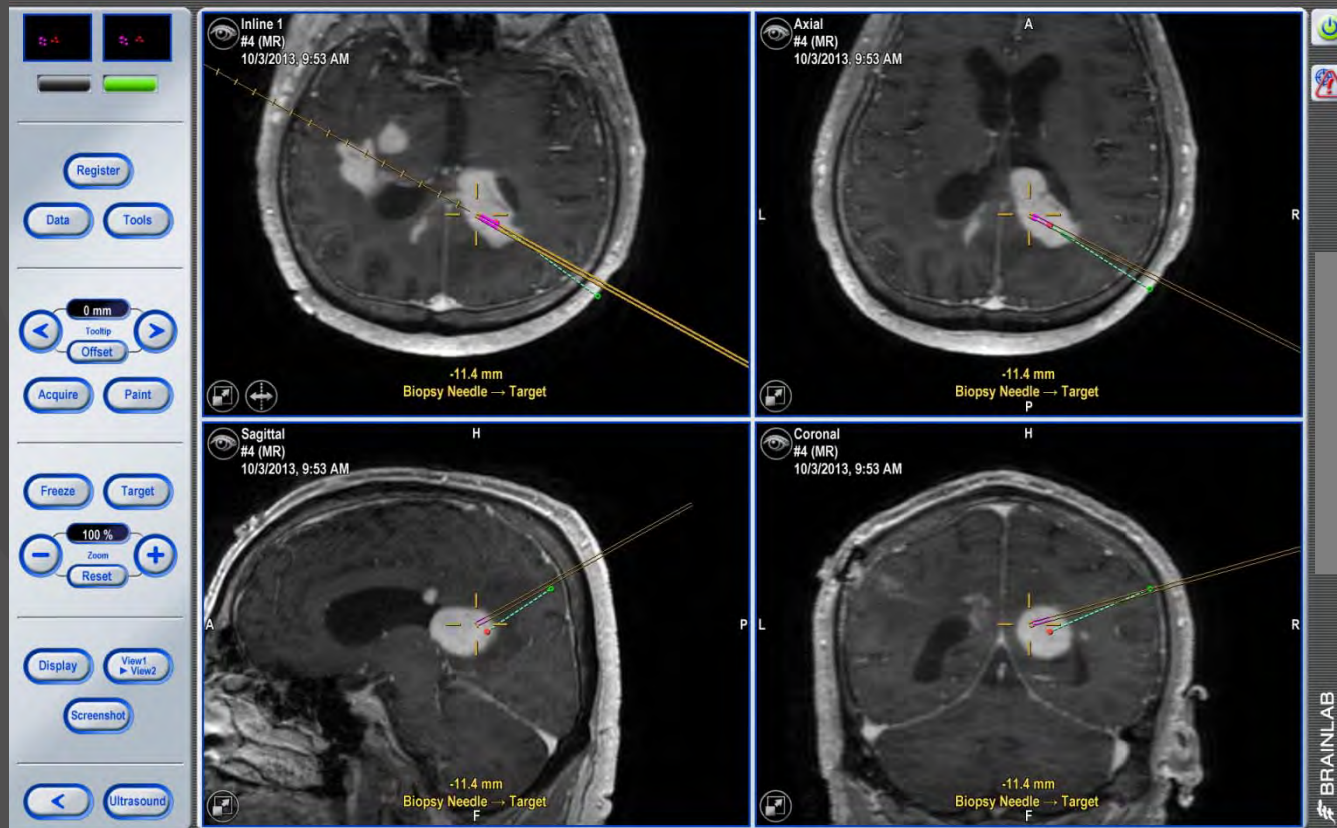


BRAINLAB
Cerebral



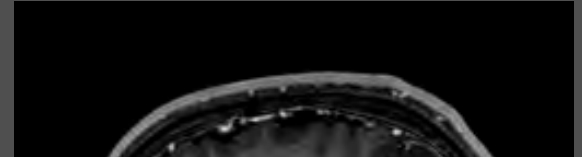
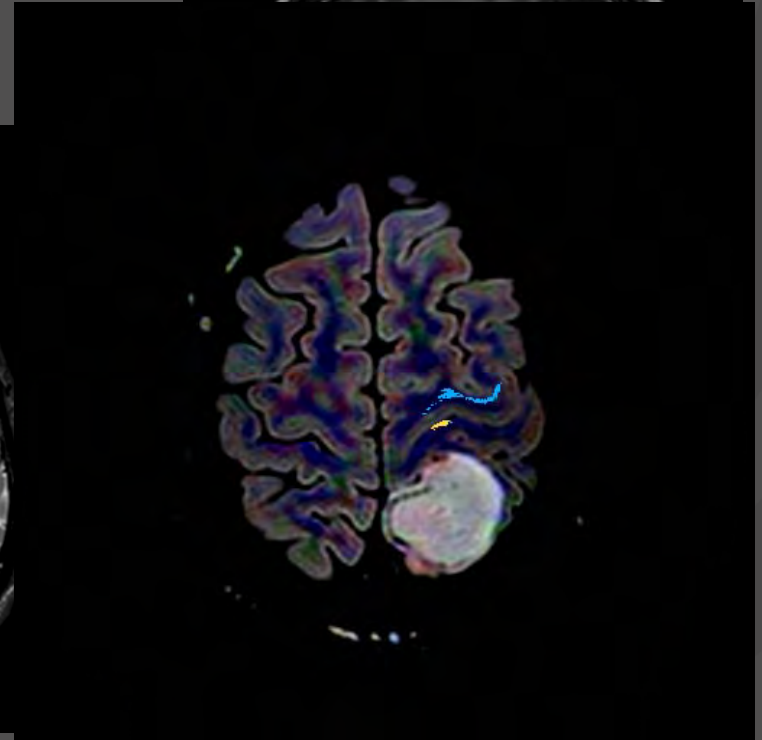
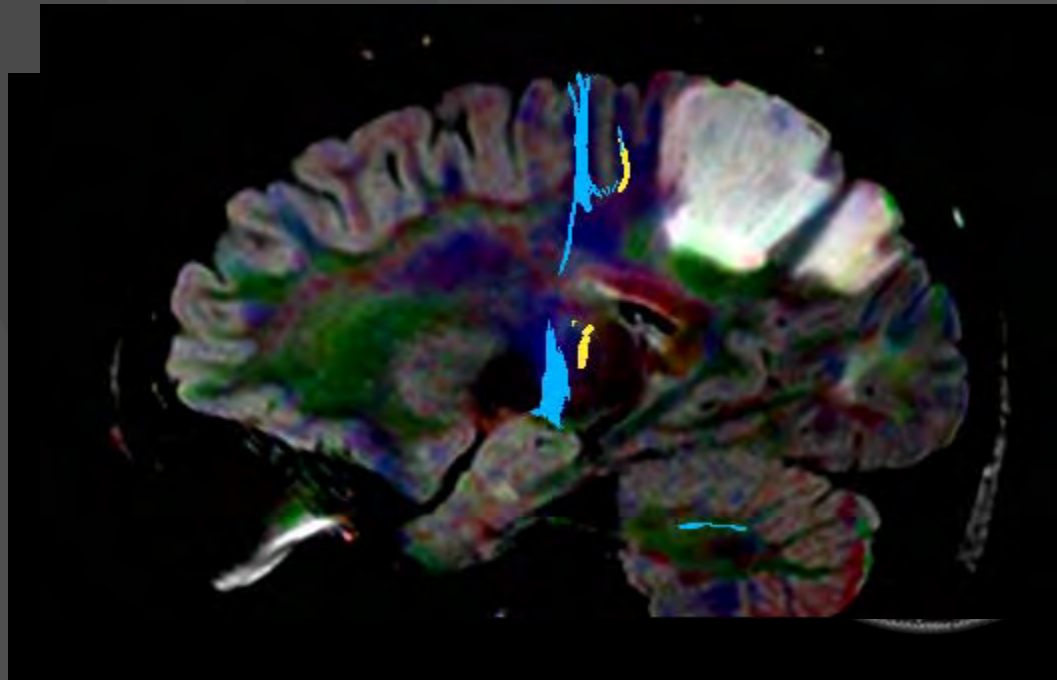


Biopsy CNS lymphoma



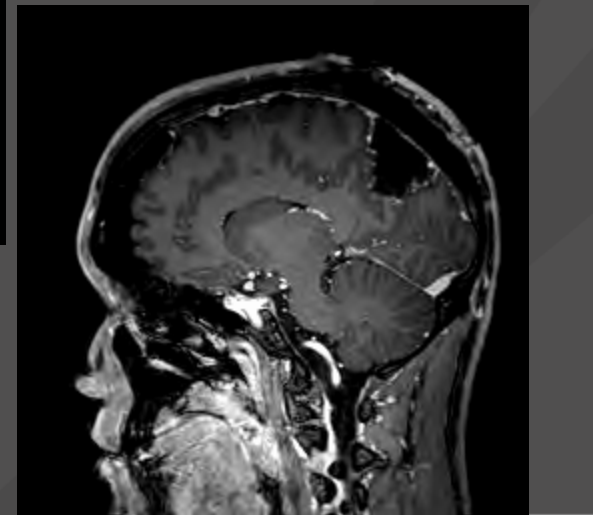
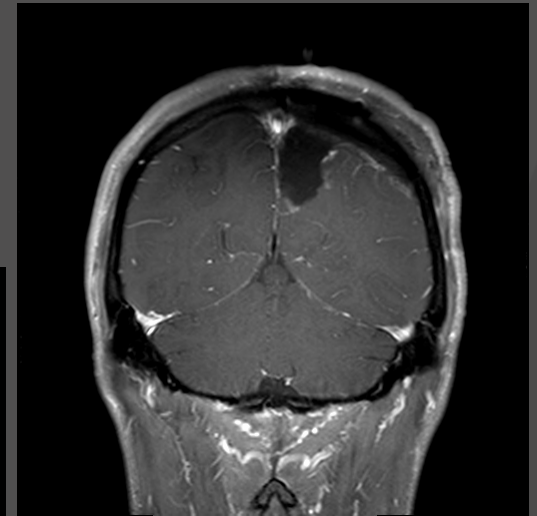
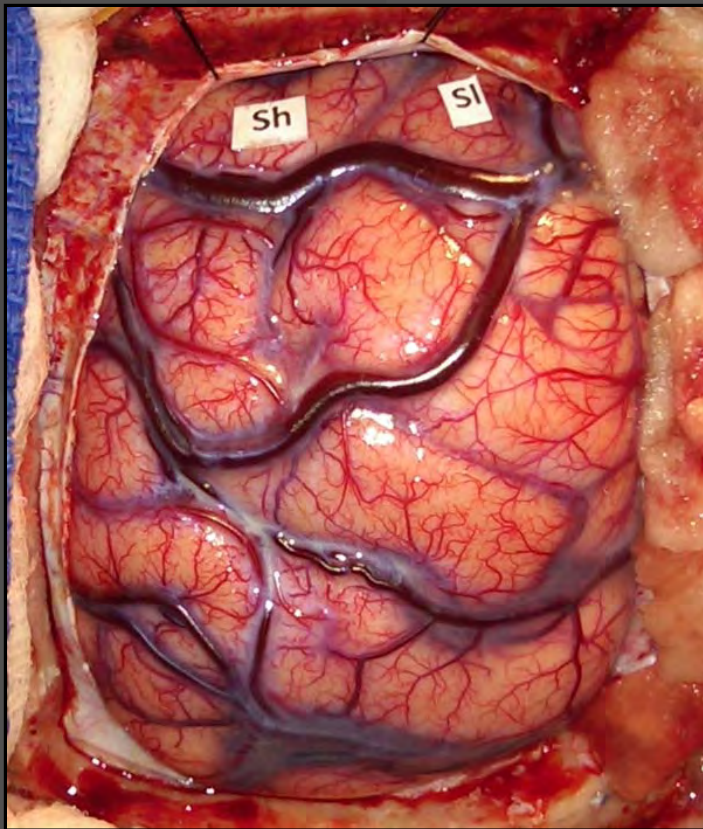


Resection 1



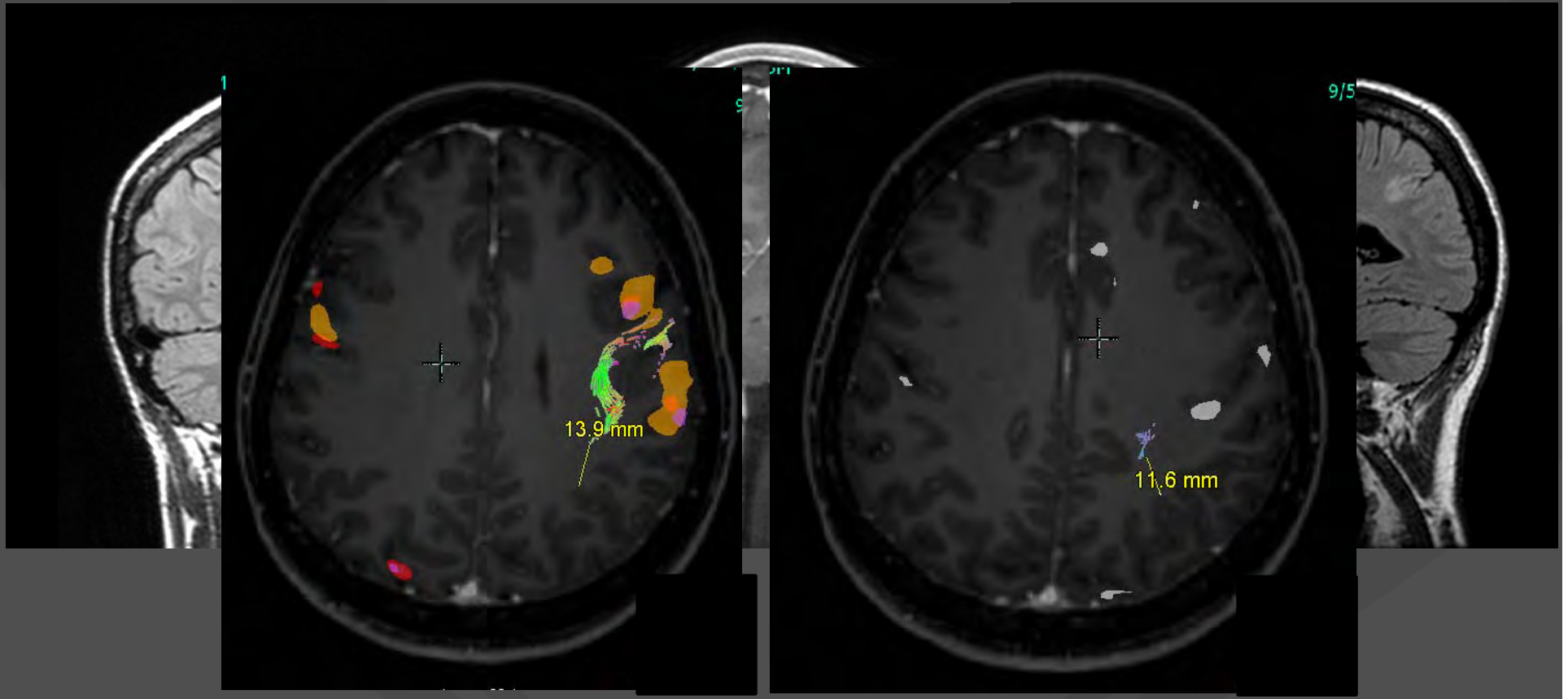


Resection 1



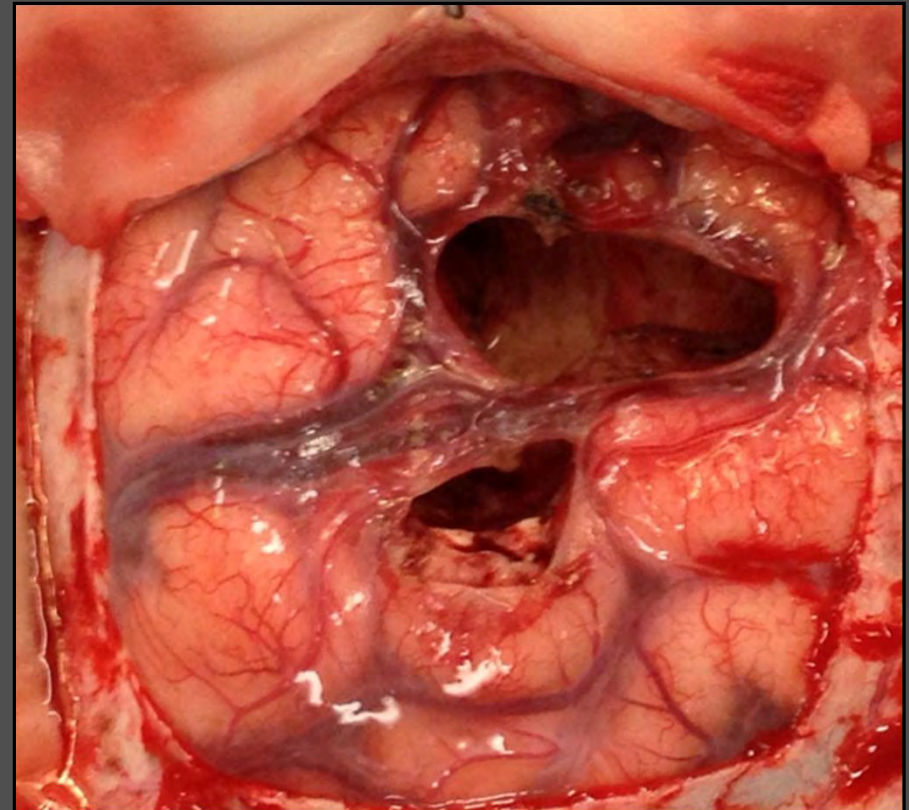


Resection 2



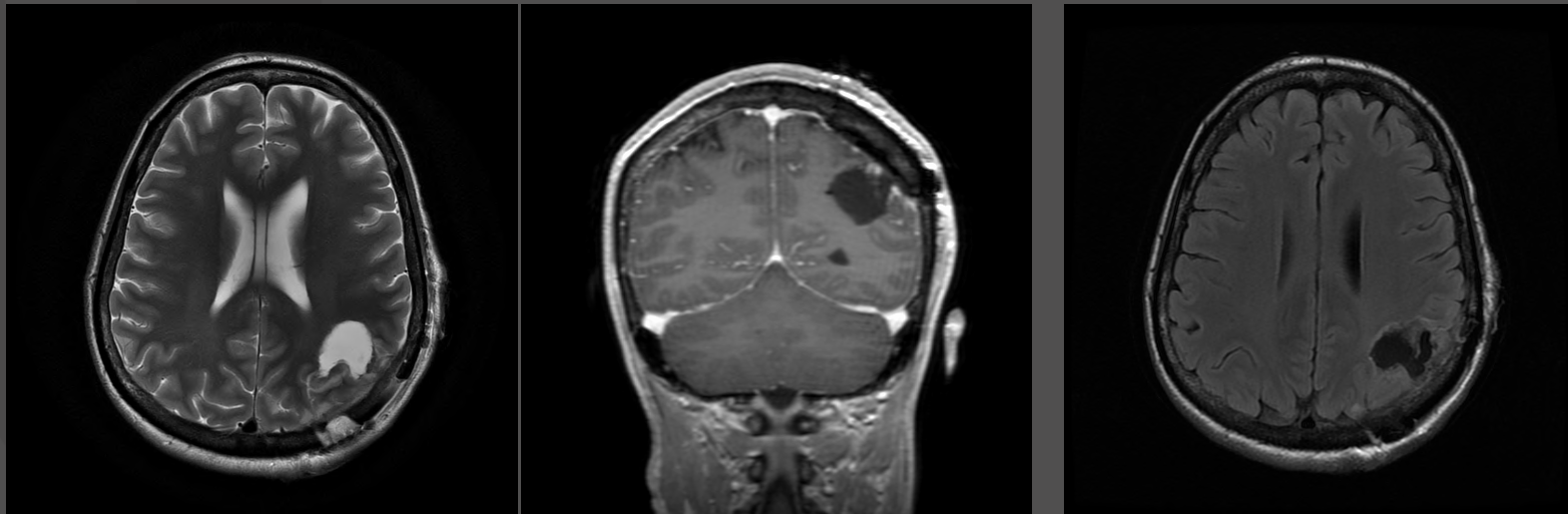


Resection 2





Resection 2





Summary

- Surgery for diagnostic and therapeutic purposes
- Decision for surgery depends upon suspected tumor type, EOR possible, location of tumor, surgeon experience, patient condition, patient wishes
- Various tools and techniques to maximize resection and make surgery safer





UNIVERSITY OF NEBRASKA MEDICAL CENTER unmc.edu



Michele R. Aizenberg, M.D.

Associate Professor, Neurological Surgery and Oncology

Director, Brain and Spine Cancer Center

University of Nebraska Medical Center

maizenberg@unmc.edu

UNIVERSITY OF
Nebraska
Medical Center