Grey Matters: Principles of Brain Tumor Management - Surgery

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• 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 vs 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
Biopsy
CNS lymphoma
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