### Course Objective

This elective builds upon the students’ exposure to neurology in the required third year neurology clerkship. Students will be given the opportunity to refine their neurological exam and techniques. The students will be exposed to the principles and practice involved in making the diagnosis and developing treatment plans of patients with cancer of the nervous system or neurologic complications of a non neurologic malignancy. Students will have the opportunity to evaluate patients in an inpatient setting in addition to an ambulatory setting. This elective allows the students to work closely with Neuro-Oncology faculty on a daily basis. The students will be exposed to neuroimaging and will receive detailed instruction regarding the appearance of CNS/PNS malignancies on routine magnetic resonance imaging.

### Material Covered:

- Standard multimodality treatment of patients with Primary Brain tumors: including external beam radiation therapy, chemotherapy, and surgery
- Role of clinical trials in the treatment of patients with glioblastoma
- Standard supportive care in malignant brain tumor patients: including use of anti-convulsants, steroids, and anti-emetics
- Review of pivotal clinical trial which changed the standard of care to include upfront chemotherapy with radiation therapy, and the role of prognostic molecular markers
- Multimodality treatment of patients with brain metastasis: including surgery and radiation therapy
- Lumbar Puncture

### Skills Acquired:

- Assessment and treatment of patients with primary and metastatic brain tumors: including neurological examination, history, and use of multimodality care
- Neurologic examination and assessment
- Knowledge and use of standard chemotherapy and radiation protocols use for brain tumors
- Knowledge of practice of interpretation of MRI to assess tumors

### Activities Of Elective

#### Number Of New Patients/Student/Week:

4-5/week

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Frequency of rounds on patients</td>
<td>Daily</td>
</tr>
<tr>
<td>Presents patients to preceptor or attending physician</td>
<td>Yes</td>
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<tr>
<td>Weekly schedule of required teaching sessions</td>
<td>Weekly brain tumor conference, Tuesday 12-1pm</td>
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#### Responsibilities Of Student For Assigned Patients:

- Does history/physical: Yes
- Who critiques: Faculty
- Follows patients, with appropriate notes as needed: Yes
- Who supervises: Faculty
- Does student see ambulatory patients: Yes
### Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Observe</th>
<th>Perform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbar puncture</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Intrathecal chemotherapy</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### Scheduled Duties of Student:

### Describe Optional Rounds And Activities, If Any:

Pediatric Neurology Grand Rounds (every Friday at 8am) and Adult Neurology Grand Rounds (every Friday at 12pm)

### Other Required Activities:

Participation at weekly brain tumor board at noon on Tuesdays

### How Is Student Evaluated:

Students will be evaluated based on their clinical performance, knowledge acquisition, and completion of the learning objectives. During the midpoint of the rotation, students will be provided constructive feedback to improve the student’s learning process and any deficiencies.

### Who Evaluates Students:

Supervising faculty

### Unique Features Of This Elective:

This rotation allows for in depth evaluation and management of the patient with malignancy involving the nervous system.