GOALS AND OBJECTIVES
NEUROPATHOLOGY

• **PGY-4:** The aim of the rotation in Neuropathology is to provide the resident with the knowledge, skills, and attitudes that will allow him or her to deal effectively with the nervous system component of an autopsy, and with neurosurgical specimens. The resident is expected to identify the limits of his or her diagnostic ability, and to consult appropriately.

• **PGY-5** year is one of senior leadership and the resident should be able to assume responsibility for organizing the service and supervising junior residents and students. The resident should have mastery of the information contained in standard texts and be prompt in using the literature to solve specific problems. The resident will be responsible for presentations at conferences and for teaching junior residents and students on a routine basis. The PGY 5 should begin to have an understanding of the role of the practitioner in an integrated health care delivery system and to be aware of the issues in health care management facing patients and physicians.

MEDICAL KNOWLEDGE

SPECIFIC GOALS AND OBJECTIVES

AUTOPSY PATHOLOGY

• Residents should be able to summarize the clinical history from a chart, and identify the specific questions to be answered by the autopsy.

• Residents should be able to remove the brain, spinal cord, eyes, peripheral nerves, and muscles by themselves; promptly and without causing damage.

• Residents should be able to name every grossly visible structure of the brain and spinal cord and their major vessels. They should be able to indicate the general function of the different parts of the brain.
Residents must be aware of circumstances (such as a subarachnoid hemorrhage) in which special procedures are called for before fixation of the brain, and be prepared to act accordingly. They should be familiar with the risks associated with conventional infectious agents and prions, and with the procedures used to reduce this risk.

Residents should be able to select and take appropriate samples for histological examination.

Residents must be able to recognize the histological appearance of all parts of the brain or spinal cord.

Residents must be able to obtain a diagnosis in all common lesions and to classify less common lesions in the appropriate group.

Residents must be able to correlate pathological findings with clinical signs and symptoms, and to write a brief summary explaining how the autopsy results relate to the clinical history.

SURGICAL PATHOLOGY

Residents must be able to handle neurosurgical specimens appropriately, including obtaining smears, frozen sections, preparing tissue for culture or flow cytometry, and fixing samples for electron microscopy.

Residents must be able to provide an appropriate gross and microscopic description of surgical specimens.

Residents must be familiar with the technical principles involved in special stains in neuropathology, as well as their diagnostic significance.

Residents should be able to identify the use and pitfalls of the different antigenic markers utilized in immunoperoxidase and immunofluorescence procedures.

Residents should be able to interpret the microscopic findings in light of clinical and radiological information, and to incorporate this process into a written comment.

Residents must be able to achieve an appropriate diagnosis in all common conditions, and to recognize uncommon conditions.

Residents should be familiar with normal and abnormal CSF cytology.
GENERAL GOALS AND OBJECTIVES

- Residents should be able to obtain high quality photographs of gross and microscopic specimens.

- Residents should be able to present their findings in a manner appropriate for pathologists and clinicians.

- Residents should be able to describe major mechanisms of disease affecting the nervous system and muscle.

- Residents must be able to interact with other pathologists, technologists, and staff in a professional and courteous manner.

COMMUNICATOR

- Be able to report gross and microscopic description of the brain in autopsy cases.

- Participate in departmental rounds and presentations.

COLLABORATOR

- Be aware of potential interactions with other agencies and other physicians.

MANAGER

- Become aware of tissue handling, transport and storage issues in neuropathology.

HEALTH ADVOCATE

- Be aware of infectious disease control in neuropathology.

SCHOLAR

- Understand basic neurobiology as it pertains to neuropathologic specimens.

- Be aware of special investigative techniques pertinent to neuropathology.
PROFESSIONAL

- Maintain collegial relationship with peers and staff.

RECOMMENDED READING

1. A minimal reading list would include a neuroanatomy textbook, such as:


3. A neuropathology textbook, such as:


7. A surgical neuropathology textbook, such as:

8. WHO, Classification of Tumours of the Central Nervous System, 2007

Revised April 2016