NERVE BIOPSY PROTOCOL

At surgery the nerve is to be exposed gently, with care taken not to directly manipulate the segment to be submitted. The nerve segment to be biopsied is placed on a muscle biopsy clamp in situ under slight tension, clamped, and then resected, leaving an approximately 5-10 mm tail on both ends outside the clamp. The clamped specimen is placed immediately in buffered 4% glutaraldehyde. The specimen in glutaraldehyde must remain on the muscle clamp for at least 4 hours. At the end of 4 hours, the tissue may be unclamped. Specimens in glutaraldehyde may be stored and shipped at 4°C.

An additional unclamped, unfixed nerve segment placed should be obtained if immunofluorescence studies are required or if metabolic disease is suspected. For in-house patients, unfixed nerve segments should be delivered promptly, on saline-dampened gauze, to Room 3W10 in Duke Medicine Pavilion. For shipping purposes, fresh specimens may be sent on wet ice, in Zeus/Michel's medium (available through Wampol Labs, Division of Carter-Wallace, PO Box 1001, Cranbury, NJ 08512, tel. 1-800-257-9525, ext. 3; catalog #0102).

Usual nerve studies include H&E sections, Congo Red staining for amyloid, immunostaining for inflammatory cells, and Epon-embedding and staining with Toluidine Blue for light microscopic examination. Selected sections may be processed for full electron microscopy if indicated for diagnosis. Immunofluorescence will be done if clinically indicated. If the nerve is received in your lab already in formalin, it may be submitted for most studies, except for immunofluorescence.

The specimen should be shipped to arrive at Duke Tuesday through Thursday. Do not ship any specimen on a Friday.

The specimen(s) may be shipped on wet ice or gel pack (do not freeze) to:

Department of Pathology  
Duke Medical Pavilion, Room 3W10  
10 Duke Medicine Circle  
Durham NC 27710  
Tel. 919-681-3909

Please include clinical information, demographics, and insurance information.

The final report will be transmitted by FAX to the consulting pathologist.

Questions should be directed to the attending neuropathologist via:

Lisa Meadows  
Neuropathology Division  
lisa.meadows@dm.duke.edu  
Tel: 919-684-2533   Fax: 919-681-7634