

Overview

Useful For

Evaluating diseases of the nerve and disorders that affect nerve function

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
SS2PC	SpecStain, Grp II, other	No, (Bill Only)	No
COSPC	Consult, Outside Slide	No, (Bill Only)	No
CUPPC	Consult, w/USS Prof	No, (Bill Only)	No
CRHPC	Consult, w/Comp Rvw of His	No, (Bill Only)	No
NTFPC	Teased Fiber	No, (Bill Only)	No
IHPCI	IHC Initial	No, (Bill Only)	No
IHPCA	IHC Additional	No, (Bill Only)	No
LV4RP	Level 4 Gross and Microscopic, RB	No, (Bill Only)	No
CSPPC	Consult, w/Slide Prep	No, (Bill Only)	No
EM	Electron Microscopy	Yes, (Bill Only)	No

Testing Algorithm

A battery of enzyme histochemical stains or immunostains are performed; other tests can be performed as indicated at an additional charge. The reviewing neuromuscular pathologist will determine the need for additional testing.

Wet tissue for consultation: When adequate tissue is provided, routine testing will include teased fiber examination, Congo red stain, methyl violet stain, Masson's trichrome stain, leukocyte common antigen, luxol fast blue/PAS stain, KP-1 macrophage, methylene blue stain, hematoxylin and eosin stain, and Turnbull blue stain or Perl's Prussian blue stain.

Slides and blocks sent for consultation: Special stains and studies performed on the case should be sent with the case for review. In order to determine an accurate diagnosis, some of these stains or studies may be deemed to warrant repeat testing, at an additional charge, at the discretion of the reviewing Mayo Clinic neuromuscular pathologist. In addition, testing requested by the referring physician (immunostains, molecular studies, etc) may not be performed if deemed unnecessary by the reviewing Mayo Clinic neuromuscular pathologist. For all consultations, ancillary testing necessary to determine a diagnosis is ordered at the discretion of the Mayo Clinic neuromuscular pathologist. An interpretation, which includes an evaluation of the specimen and determination of a diagnosis, will be provided within a formal pathology report.

See [Pathology Consultation Ordering Algorithm](#) in Special Instructions.

Special Instructions

- [Nerve Biopsy Patient Information](#)

- [Nerve Biopsy Specimen Preparation Instruction](#)
- [Pathology/Cytology Information](#)
- [Pathology Consultation Ordering Algorithm](#)

Method Name

Nerve Biopsy Surgical Pathology Consultation and Review of Outside Material

NY State Available

Yes

Specimen

Specimen Type

Varies

Additional Testing Requirements

Biopsies from same site will be processed as 1 specimen. **Biopsies from different sites require** separate orders and separate specimen vials.

Examples:

1. Three (3) segments vials of left sural nerve are processed as 1 specimen, 1 order number.
2. One (1) left sural nerve and 1 left superficial peroneal nerve requires 2 separate orders.

Necessary Information

[Nerve Biopsy Patient Information](#) (T458) **is required**, containing the following information

1. Tentative clinical diagnosis
2. Name of nerve biopsied
3. Date of biopsy
4. Indication for nerve biopsy

A copy of the Neurology Clinical Notes and electromyography (EMG) results are also required for testing. Testing may be delayed if this information is not provided.

Specimen Required

Supplies: [Nerve Biopsy Specimen Prep Instruction \(T580\)](#)

Specimen Type: Nerve biopsy tissue, slides, or block

Collection Instructions: Prepare and transport specimen per instructions in [Nerve Biopsy Specimen Preparation Instruction](#) (T580) in Special Instructions. A Nerve Biopsy Kit (call 507-284-8065 to order) containing fixatives and buffer is available for an additional fee.

Forms

1. [Pathology/Cytology Information](#) (T707) in Special Instructions
2. [Nerve Biopsy Patient Information](#) (T458) in Special Instructions

Reject Due To

No specimen should be rejected.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Frozen		

Clinical & Interpretive

Clinical Information

Nerve biopsies provide information about nerve fibers and the interstitium of the nerve. Neuropathic abnormalities include decreased density of myelinated fibers, segmental demyelination, and axonal degeneration. Some possible interstitial abnormalities that affect nerves include necrotizing vasculitis and amyloidosis.

This consultation is for fixed tissue, slides, or blocks.

Reference Values

An interpretive report will be provided.

Interpretation

The clinical and neurological history is reviewed with the interpretation of the biopsy.

The histologic slides, special stains, and history, along with the physician's report are correlated by a neuromuscular pathologist. An interpretive report will be provided.

Cautions

Poor fixation, orientation, and improper handling of the nerve tissue may hinder the neuromuscular pathologist's interpretation of the biopsy. See directions for [Nerve Biopsy Specimen Preparation](#) in Special Instructions. Kits containing the proper tissue fixatives and buffers are available upon request.

Clinical Reference

1. Tracy JA, Dyck PJ, Klein CJ, Engelstad JK, Meyer JE, Dyck PJB: Onion-bulb patterns predict acquired or inherited demyelinating polyneuropathy. *Muscle Nerve*. 2019 Jun;59(6):665-670
2. Xu M, Pinto M, Sun C, et al: Expanded teased nerve fibre pathological conditions in disease association. *J Neurol Neurosurg Psychiatry*. 2019 Feb;90(2):138-140
3. Dyck PJB, Spinner RJ, Amrami KK, Klein CJ, Engelstad JK, Dyck PJ: MRI-targeted fascicular nerve biopsies of proximal nerves: historic reports and illustrative case reports. In: Dyck PJ, Dyck PJB, Engelstad JK, et al, eds. *Companion to Peripheral Neuropathy: Illustrated Cases and New Developments*. Elsevier; 2010:3-14
4. Dyck PJ, Dyck PJB, Engelstad J: Pathologic alterations of nerves. In: Dyck PJ, Thomas PK, eds. *Peripheral Neuropathy*, Vol. 1. 4th ed. Elsevier; 2005:733-829

Performance

Method Description

A battery of special stains and teased nerve fiber analysis will be performed if fixed tissue is provided. Nerve morphometry and electron microscopy to determine diameter size histograms and ultrastructural abnormalities may be performed based on a preliminary review by the neuropathologist. (Unpublished Mayo method)

PDF Report

No

Day(s) Performed

Monday through Friday

Report Available

7 to 14 days

Specimen Retention Time

Material made at Mayo Clinic may be retained at Mayo Clinic indefinitely.

Performing Laboratory Location

Rochester

Fees & Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test was developed, and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

88305-(if appropriate)
88313-(if appropriate)
88321-(if appropriate)
88323-(if appropriate)
88323-26-(if appropriate)
88325-(if appropriate)
88362-(if appropriate)
88348-(if appropriate)
88342-(if appropriate)
88341-(if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
PNBX	Peripheral Nerve Path Consult	In Process

Result ID	Test Result Name	Result LOINC® Value
601774	Interpretation	59465-5
601775	Participated in the Interpretation	No LOINC Needed
601776	Report electronically signed by	19139-5
601777	Addendum	35265-8
601778	Gross Description	22634-0
601779	Material Received	81178-6
601912	Disclaimer	62364-5
601823	Case Number	80398-1