University of Utah

Cutaneous Nerve Evaluation

Please read through all information BEFORE scheduling patient's biopsy

Right Now…

1) Open the enclosed kit and FREEZE the cold pack for return shipment
2) Keep everything else, including box and Styrofoam cooler, for return shipment

On Biopsy Day…

1) Biopsy patient in clinic
2) Place the biopsy in "FinalFix", our exclusive fixative that protects biopsies in shipment
3) Ship the biopsies the same day (next day also acceptable), using pre-printed FedEx return label to:

University of Utah
Cutaneous Nerve Lab
175 N. Medical Dr. Rm 3335
Salt Lake City, UT 84132
1-801-585-2461

Reports will be sent to the referring physician requesting the test.

If you need immediate assistance, please call Peter Hauer directly at 410-917-3972
Or email biopsy@hsc.utah.edu

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University of Utah
Depts. of Neurology & Dermatology
175 N. Medical Dr. Rm 3335
Salt Lake City, UT 84132
Phone: 801-585-2461
Fax: 801-213-0861

SKIN BIOPSY REQUEST FORM

Affix Patient Label Here

Test Requested	☐ PGP9.5 Immunostaining with Nerve Fiber Analysis

Submitting Physician Information	
Referring Physician Office	
Referring Physician Name	
Street Address	
City, State, Zip	
Phone	( ) -
Fax	( ) -
Physician NPI #	
Physician Signature:	

Patient Information	
Patient Last Name	
Patient First Name	
Gender	☐ Male ☐ Female
Patient DOB	/ /
Street Address	
City, State, Zip	
Phone	( ) -
SSN	

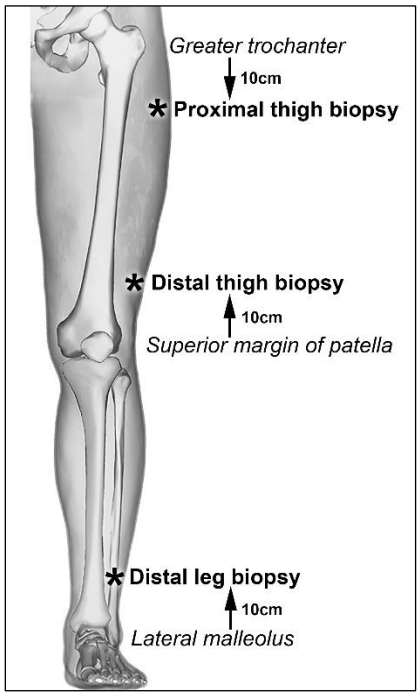
ALL PATIENT INSURANCE CARDS MUST BE INCLUDED IN SHIPMENT BEFORE ANY LAB PROCESSING WILL OCCUR!

Clinical Findings/Reason for Biopsy – REQUIRED!

Clinical History:

Diagnosis/ICD-10 Code(s)

Biopsy Locations (3mm punch)



Specimen Information- Please fill out completely

Collection Date: / /	**Time:** AM/PM

Label EACH tube with patient name, DOB, biopsy side and site!

Check Appropriate Boxes:

☐Left	☐Right	☐ Distal Leg	☐ Distal Thigh	☐ Proximal Thigh
☐Left	☐Right	☐ Distal Leg	☐ Distal Thigh	☐ Proximal Thigh
☐Left	☐Right	☐ Distal Leg	☐ Distal Thigh	☐ Proximal Thigh

*Other: _____

Authorization to Release Information & Pay Benefits: I consent to have testing services performed on my sample being sent to the University of Utah (U of U). I authorize U of U to provide my insurance company with all of the necessary information, including test results, needed to receive payment for my laboratory tests. I also authorize that benefits under this claim may be payable directly to the U of U. I agree to submit within 15 days, to the U of U, any payment for these laboratory services that were made directly to me. I authorize the U of U to file any appeal, grievance or claim review to my insurance carrier on my behalf. I agree and acknowledge that if I do not have applicable insurance coverage or my insurance company denies coverage for services rendered by the U of U, I will be personally responsible for payment to U of U for such services.

PATIENT SIGNATURE: _____ DATE: _____

*Other biopsy sites must have a normal, contralateral biopsy to serve as control

Skin Biopsy Procedure for Nerve Fiber Analysis

A typical skin biopsy can be performed in an outpatient setting in around 15 minutes.
Generally, the skin heals within 1-2 weeks with a low rate of bleeding and infection. Patients who are anticoagulated with INR > 2.5 should NOT be biopsied.

Biopsy Sites - There are **three standard biopsy sites for length-dependent sensory polyneuropathy**. All three are located on the lateral leg and have well-established, given normative values. The advantage to performing two or three biopsies on the *same* leg (one distal and one proximal) is the results can confirm small fiber neuropathy. TRUE small fiber neuropathy is a length-dependent process, meaning that more distal anatomic sites are more severely affected than proximal sites. If a mononeuropathy is suspected, you may biopsy the affected area, accompanied by a second biopsy on the normal (mirror image) side.

The kit contains a 3mm punch biopsy, forceps, and a scalpel.
Your office should have the following in order to prepare for biopsy:

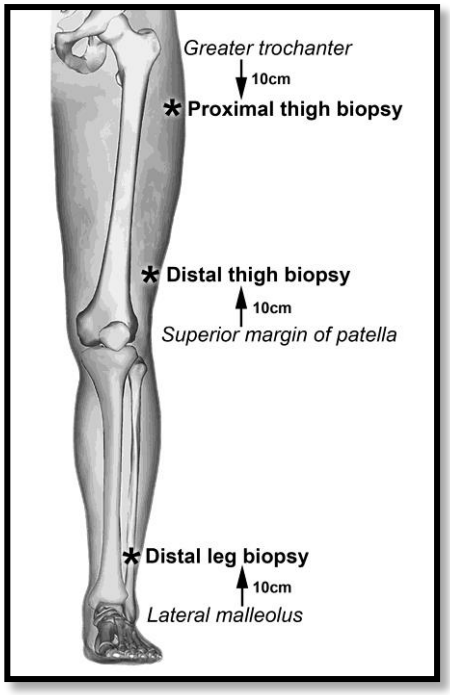
- Injectable local anesthetic such as Lidocaine (HCl 1% or 2% with epinephrine 1:100,000)
- Syringe (1/2 or 1cc Tuberculin syringe)
- Sterile gauze pads (2x2 size is best)
- Gloves
- Band-aids
- Tape Measure
- Skin marker

Step 1: Prep Biopsy Site

Explain the procedure to the patient and take his/her clinical history; be sure to ask about allergies to lidocaine, adhesives or latex. Determine biopsy site(s) using measuring tape and skin marker. The three standard biopsy sites for small fiber neuropathy are found on the lateral leg (all from same leg):

- **Distal Leg Site: 10cm proximal to lateral malleolus**
- **Distal Thigh Site: 10cm proximal to patella**
- **Proximal Thigh Site: 10cm distal to greater trochanter**

Mark the area using a square or circle around the area to be biopsied (Do not biopsy over marker). Swab the area with an alcohol prep pad.



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Any questions or concerns regarding this procedure please call:
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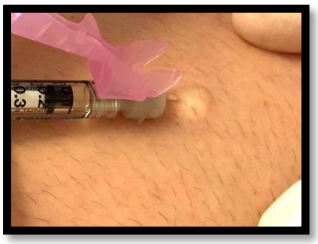
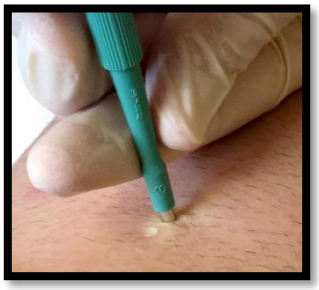
Step 2: Anesthetize the Skin



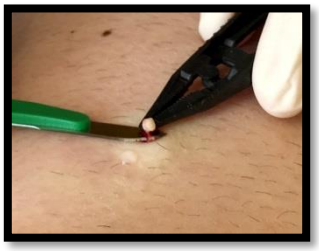
Infiltrate the anesthetic just under the epidermis using Tuberculin syringe until a bleb forms that is greater than 3mm in diameter, usually 0.5cc is enough. To check for numbness, perform a single needle prick AWAY FROM AREA TO BE BIOPSIED, along the edge of the bleb or bubble. If area is anesthetized properly, the patient should feel no pain. A pressure sensation is normal when performing the biopsy.

Step 3: Perform Skin Biopsy



Identify the area to be biopsied: stay AWAY from needle tracks, but within the anesthetized bleb. Using the sterile 3mm skin punch, **gently press punch into the skin at a 90-degree angle while ROTATING the instrument back and forth. Applying gentle pressure and using a twisting or "drilling" motion will ensure that the biopsy will be flat and uniform. The biopsy tool should penetrate ½ to ¾ the length of the tool head.** Biopsy to the level of subcutaneous fat, which will allow the sample to be removed easily. Remove the punch instrument.

Step 4: Excise the Biopsy



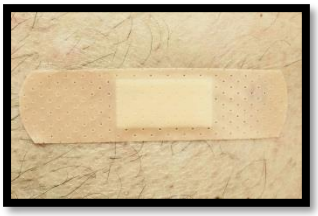
Wipe away excess blood with sterile gauze to visualize the biopsy. Once the core is excised from the surrounding tissue, the connective tissue at its base needs to be cut with a scalpel or scissors. There are two ways to lift, or excise, the biopsy from the surrounding tissue:

1) Using a small gauge hypodermic needle, stab the biopsy through the DEEP DERMIS and lift outward to excise sample.
2) Using atraumatic forceps GENTLY grab the DEEP DERMIS of cored skin and lift up.

******Great care should be taken to not crush or damage the epidermis!*** ***

Following either of these methods, the connective tissue and subdermal fat will need to be cut with a scalpel or scissors. Place the biopsy into Zamboni's fixative (yellow fluid) immediately, do NOT allow sample to sit out!

Step 5: Bandage the Biopsy Site



Bleeding should be absorbed with sterile gauze and the biopsy site covered with a band-aid. Excess gauze can be left under the band-aid to prevent bleeding soaking though. The wound may continue to bleed and ooze for the remainder of the day; provide patient with post-biopsy care instructions.

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Email questions to: biopsy@hsc.utah.edu

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Shipping Manifest for Skin Biopsies

Must accompany all biopsy shipments

Outside Referring Physician Contact Info:	University Of Utah, Clinical Neurosciences Center Dept. of Neurology / Cutaneous Nerve Lab 175 N. Medical Dr. Rm 3335 Salt Lake City, UT 84132 biopsy@hsc.utah.edu Phone 801-585-2461 - Fax 801-213-0861

Patient information **Anatomic sites**

Patient 1

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year

Patient 2

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year

Patient 3

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year

Patient 4

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year

Patient 5

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year

Patient 6

_____

	Left	Right
Distal leg	☐	☐
Distal Thigh	☐	☐
Proximal Thigh	☐	☐

Other sites_____

Biopsy Date
____/____/_____
month day year
