

**Tests supportive of fluoroquinolone toxicity:**  
Please verify CPT Codes with your medical provider  
CPT Codes are for services

**MitoSwab™**

Purpose: Analyzes components of the Electron Transport Chain and measures citrate synthase activity - an indicator of the overall mitochondrial content within the cells

Please Note: Basic snapshot of mitochondrial enzyme health / cannot see full picture or energy output

Availability: Available nationwide; ordering via Integrative, DO, or Functional medicine doctors

Link: <https://www.mitoswab.com/index.php>

**Nutreval FMV by Genova Diagnostics**

Purpose: Comprehensive panel assessing nutrients, mitochondria, oxidative stress, and more (includes OAT test)

CPT Codes: Includes 82139, 83921x19, 83497, 83520, 82542x2

Lab: Genova Diagnostics

Availability: Available nationwide; ordering via Integrative, DO, or Functional medicine doctors

Link: <https://www.gdx.net/products/nutreval>

**Neurofilament Light Chain (NfL) – Plasma**

Purpose: Detects nerve damage

CPT Code: 83520

Lab: Labcorp

Link: <https://www.labcorp.com/tests/140555/neurofilament-light-chain-plasma>

**Small Fiber Neuropathy Testing (Skin Biopsy)**

Purpose: Diagnoses small fiber nerve damage via epidermal nerve fiber density

CPT Codes: 88305, 88356

Lab: Therapath

Link: <http://therapath.com/epidermal-nerve-fiber-density-test-biopsy-sites>

**Histamine Determination – Plasma**

Purpose: Assesses histamine levels, relevant for histamine intolerance

CPT Code: 83088

Lab: Labcorp

Link: <https://www.labcorp.com/tests/144600/histamine-determination-plasma>

**8-OHdG – Urine Oxidative Stress Test**

Purpose: Measures DNA damage from oxidative stress

CPT Code: 82542

Lab: Doctor's Data

Link: <https://www.doctorsdata.com/DNA-Oxidative-Damage-Assay-urine>

**Mitochondrial Antibody Screen with Reflex to Titer**

Purpose: Evaluates mitochondrial dysfunction and autoimmunity

CPT Code: 86381

Availability: Available nationwide; ordering via Integrative, DO, or Functional medicine doctors

**Drug Monitoring Panel (custom fluoroquinolone testing)**

Purpose: Measures fluoroquinolone and other drug levels in serum/plasma

CPT Code: Varies by lab

Lab: specialty toxicology labs

## **MCAS (Mast Cell Activation Syndrome):**

### **Tryptase – Serum**

Purpose: Detects mast cell activation (best drawn within 1–4 hours of a flare)

CPT Code: 83520

Lab: LabCorp

Link: <https://www.labcorp.com/tests/004280/tryptase>

### **Histamine – Plasma**

Purpose: Measures histamine released during mast cell degranulation; requires chilled processing

CPT Code: 83088

Lab: Quest Diagnostics

Link: <https://testdirectory.questdiagnostics.com/test/test-detail/36586/histamine-plasma?p=r&q=83088&cc=MET>

### **Chromogranin A**

Purpose: General neuroendocrine marker, occasionally elevated in MCAS

CPT Code: 82397

Lab: Quest Diagnostics

Link: <https://testdirectory.questdiagnostics.com/test/test-detail/31911/chromogranin-a-lcmsms?cc=MASTER>

### **Heparin – Plasma (Specialty Lab Only)**

Purpose: Indicates mast cell mediator release; rarely used but can be supportive

CPT Code: Varies by lab

Lab: Specialty immunology labs

Link: *must request via physician referral*

### **Therapath Neuropathology**

Service: Specializes in neuropathology services, including skin biopsies for small fiber neuropathy and mast cell staining.

Location: Based in New York, but accepts samples from across the United States.

Contact: Details provided on their website

### **Mayo Clinic Laboratories**

Website: <https://www.mayocliniclabs.com/>

Use their test catalog to search for CD117 staining services or contact them directly for more information

### **ARUP Laboratories**

Website: <https://www.aruplab.com>

Explore their test offerings or reach out to inquire about CD117 staining

***Other MCAS tests also available via Mayo Clinic***

## **How to Find the Right Practitioner**

See our doctor's list: <https://fq100.org/find-medical>

IFM-certified functional medicine doctors: <https://www.ifm.org/find-a-practitioner/>

Environmental medicine specialists via AAEM: <https://www.aaemonline.org>

Genova Diagnostics Provider Locator: <https://www.gdx.net/patients/patient-resources>

Great Plains Laboratory (now MosaicDX): <https://mosaicdx.com/find-a-practitioner/>