

## Testing Options after Fluoroquinolones:

Disclaimer: No standalone test confirms fluoroquinolone toxicity, and none of the listed tests make the diagnosis, but are provided for general information and as a discussion with a physician. Test choices and interpretations should be made by a licensed clinician as Fluoroquinolone Toxicity Study does not provide medical advice. *Please verify CPT Codes for services with your medical provider*

## How to Find the Right Practitioner

Locating a doctor with knowledge of fluoroquinolone adverse effects can be very challenging. Look for doctors in osteopathic medicine (DO), functional, or integrative medicine, who focus on root causes.

**See our doctor's list:** <https://fq100.org/find-medical> or check the below:

**American Osteopathic Association:** <https://findado.osteopathic.org>

**IFM-certified Functional Medicine Doctors:** <https://www.ifm.org/find-a-practitioner/>

**The American Board of Integrative Medicine:** <https://www.abpsus.org>

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

**Genova Diagnostics practitioners:** <https://www.gdx.net/patients/patient-resources>

**MosaicDX practitioners:** <https://mosaicdx.com/find-a-practitioner/>

### ◆ 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

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

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

### ➡ Ordering Nutreval FMV without a doctor (includes OAT test)

Link: <https://www.walkinlab.com/products/view/nutreval-fmv-blood-and-urine-genova-test-kit>

### ◆ 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>

◆ **Urine F2-Isoprostane/Creatinine Ratio**

Purpose: Gauge lipid peroxidation and overall oxidative stress

CPT Code: 82542, 82570

Lab: Quest

Link: <https://www.questhealth.com/product/antioxidant-oxidant-stress-test-92771M.html>

◆ **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

◆ **Ultrastructural Collagen Assessment (TEM/SHG)**

Purpose: Collagen testing to document fluoroquinolone-associated tendinopathy and rupture mechanisms: MMP upregulation, oxidative stress, and reduced collagen synthesis/extracellular-matrix damage.

CPT Codes: 88348 (TEM), 88399 (SHG)

Labs: Various

Links USA:

Yale Pathology Electron Microscopy Laboratory – <https://medicine.yale.edu/pathology/ypl/services/electron-microscopy>

UT Health San Antonio Electron Microscopy Laboratory – <https://lsom.uthscsa.edu/pathology/reference-labs/electron-microscopy-laboratory>

Washington University Electron Microscopy Facility – <https://pathologyservices.wustl.edu/labs/electron-microscopy-facility>

University at Buffalo EM Core Lab – <https://medicine.buffalo.edu/centers/hscsf/facilities/electron-microscopy-lab.html>

Thomas Jefferson University Research EM Laboratory – <https://research.jefferson.edu/labs/core-services/research-electron-microscopy-laboratory.html>

UTPath McGovern Medical School EM Laboratory – <https://med.uth.edu/pathology/ut-path/laboratory-services/electron-microscopy>

University of Toledo Diagnostic EM Services –

[https://www.utoledo.edu/med/depts/path/emlab/EM\\_diagnostic\\_services.html](https://www.utoledo.edu/med/depts/path/emlab/EM_diagnostic_services.html)

Links Intl:

Vienna BioCenter Electron Microscopy Facility, Austria

GERSED Belgique

Institut Pasteur Ultrastructural BioImaging Unit, Paris, France

EMBL Electron Microscopy Core Facility, Heidelberg, Germany

Microscopy Services Dähnhardt GmbH, Flintbek, Germany

University of Manchester EM Core, United Kingdom

### **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 available via Mayo Clinic***