

LIVING WITH NEUTROPENIA OR PRIMARY IMMUNODEFICIENCY? NO-COST GENETIC TESTING AVAILABLE*



PATH4WARD GENETIC TESTING

There are many genes that may be associated with primary immunodeficiencies (PIs) including WHIM syndrome. WHIM syndrome is a rare PI in which the body's immune system does not function properly and has trouble fighting infections. Some PIs, including WHIM syndrome, may cause neutropenia. Neutropenia is a rare blood condition that causes reduced or complete lack of neutrophils, a type of white blood cell.

No-cost genetic testing is available for eligible people living with chronic neutropenia to help them learn more about their condition.

This genetic test focuses on genes that may be associated with PIs and inherited, also called congenital, neutropenia. There may be other genes associated with PIs and/or neutropenia that are not included in this test.

WHO CAN GET TESTED?

*You may be eligible for genetic testing if 1, 2 and 3 **ALL** apply to you:

1. You suspect you have congenital neutropenia OR a primary immunodeficiency
2. You have any prior history or a current absolute neutrophil count (ANC) of less than or equal to 1,000 on multiple occasions (not related to drugs, chemotherapy or a viral infection)
3. You have one or more of the following:
 - Repeat and/or severe infections for you or a family member
 - Lymphopenia, or not having enough white blood cells or lymphocytes to help fight infection
 - Hypogammaglobulinemia, or low antibody levels that make it hard to fight infections
 - Warts that are hard to treat or won't go away
 - A family history of neutropenia

WHY GENETIC TESTING?

Genetic testing can help you learn more about your disease, possible treatment options, and more.



Get a genetic diagnosis faster—this test looks at several hundred genes that may be associated with neutropenia and PIs



Learn the risk for your family members and inform your family planning



Help you make informed choices about your healthcare



Better understand your options for taking part in clinical research



Find resources, like patient communities and organizations, specific to your condition

Learn more at:

www.invitae.com/PATH4WARD

Not sure if you meet the criteria?

Share this information with your care team.

HOW DOES IT WORK?

You can order the test through a genetic counselor or through your doctor. The PATH4WARD program is administered by Invitae.

ORDER THROUGH A GENETIC COUNSELOR



1. Visit <https://www.GenomeMedical.com/Programs/path4ward> to schedule time to speak with a genetic counselor to see if you are eligible for the no-cost genetic test



2. Once you receive the sample collection kit, **complete the kit instructions** and provide a sample



3. **Mail the sample collection kit** back



4. Your genetic counselor will **share results** with you in about 20 days



5. **Schedule** a no-cost genetic counseling appointment to discuss your results. Call Genome Medical at 877-688-0992 or email clinical@genomemedical.com

ORDER THROUGH YOUR DOCTOR



1. **Ask your doctor** to request a sample collection kit from www.invitae.com/path4ward



2. **Provide a sample** at your doctor's office or at home



3. **Your doctor** will mail the sample collection kit back if you're provided a sample at the office. If you collect the sample at home, mail the sample collection kit back with the completed requisition form from your doctor.



4. **Results are emailed** to your doctor. Check with your doctor in about 20 days for results.



5. **Schedule** a genetic counseling appointment to discuss your results. Call Invitae at 1-800-436-3037 or schedule online at: <https://tinyurl.com/4bhzjpdj>

GENETIC COUNSELING

Genetic counselors can help you learn more about genetic testing and if it is right for you. Genome Medical partners with Invitae to provide genetic counselors to help you understand your PATH4WARD test results. This service is provided at no charge.

FAMILY TESTING

If a test result shows a genetic mutation or variant that might be associated with inherited neutropenia, blood relatives may also be eligible for testing at no cost, within a certain timeframe. Ask your genetic counselor for details.

NO-COST TESTING

There is no cost for this testing.

X4 Pharmaceuticals provides financial support to Invitae, a third-party genetic testing company, for this testing program. X4 receives testing results data without identifiable patient information, along with contact information for healthcare providers who use this program.



x4pharma.com



Invitae.com/PATH4WARD

REFERENCES

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Geier CB et al. Disease Progression of WHIM Syndrome in an International Cohort of 66 Pediatric and Adult Patients. 2021. *J Clin Immunol.* 2022;42:748-1765.

While X4 Pharmaceuticals, Inc. (X4 Pharma) provides financial support for this program, tests and services are performed by independent third parties. Healthcare professionals must confirm that patients meet certain criteria to use the program. X4 Pharma receives de-identified patient data from this program, but at no time does X4 Pharma receive patient identifiable information. X4 Pharma receives contact information for healthcare providers who use this program. PATH4WARD genetic testing is available in the United States. Healthcare professionals who use this program have no obligation to recommend, purchase, order, prescribe, promote, administer, use, or support any X4 Pharmaceuticals product.