



Patient Access To Hope
for Rare Primary Immunodeficiencies

LIVING WITH CONGENITAL OR CHRONIC NEUTROPENIA? FREE GENETIC TESTING IS AVAILABLE



PATH4WARD GENETIC TESTING

There are 407 genes known to cause primary immune deficiencies (PIDs), some of which may cause neutropenia.

There are many types of neutropenia. Some types of neutropenia are more serious or may last longer than others.

Free genetic testing is available for people living with congenital, chronic, and/or idiopathic neutropenia to help them learn more about their condition.

This genetic testing is only looking at the 407 genes known to cause PIDs and won't tell you if you're at risk for other conditions.

WHO CAN GET TESTED?

Ask your doctor about genetic testing if you have had an ANC \leq 750/ μ L for over 6 months and you believe you have:

- chronic
- idiopathic, or
- congenital neutropenia

WHY GENETIC TESTING?

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



Help you make informed decisions about your healthcare



Get a better diagnosis faster – this test looks at 407 genes



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



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



Better understand your options for participating in clinical research

Not sure if you meet the criteria? Email us at patientinfo@x4pharma.com

HOW DOES IT WORK?

You can take the test at your doctor's office or at home.

AT YOUR DOCTOR'S OFFICE



1. **Ask your doctor** to request a saliva testing kit from [Invitae.com/PATH4WARD](https://www.invitae.com/PATH4WARD)



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



3. **Your doctor** will mail the test kit back



4. **Results are emailed** to your doctor in about 20 days

AT HOME



1. **Ask your doctor** to request a saliva testing kit from [Invitae.com/PATH4WARD](https://www.invitae.com/PATH4WARD)



2. **Your doctor** needs to fill out a requisition form and send it to your home



3. After the saliva testing kit arrives, **complete the test kit** instructions and provide a saliva sample



4. **Mail the test kit** back along with the requisition form your doctor completed



5. **Results** are emailed to your doctor in about 20 days

FREE GENETIC COUNSELING

Individuals tested through the PATH4WARD program are eligible for post-test genetic counseling to help them understand their test results. This service is provided through GeneMatters, a third-party genetic counseling service, and is made available by Invitae at no charge as part of the program.

To schedule a genetic counseling appointment, please contact GeneMatters at 1-866-741-5331 or schedule online at www.gene-matters.com using partner code: PATH

FAMILY TESTING

If test results show a genetic mutation or variant that might cause inherited neutropenia, all blood relatives can also get tested at no cost within 90 days of the original person's test.

Learn more at [Invitae.com/PATH4WARD](https://www.invitae.com/PATH4WARD)

Questions? Email patientinfo@x4pharma.com

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 and receives de-identified patient data and contact information for healthcare providers who use this program.



[x4pharma.com](https://www.x4pharma.com)



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REFERENCES

Immune Deficiency Foundation Patient & Family Handbook for Primary Immunodeficiency Diseases, Chapter 21 Chronic Granulomatous Disease and Other Phagocyte Disorders, Leukocyte Adhesion Deficiency and Neutropenia - Immune Deficiency Foundation. (6th Edition, 2019). Retrieved August 13, 2020, from <https://primaryimmune.org/idf-patient-family-handbook-individual-chapters>

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. Genetic testing is available in the U.S. and Canada only with the potential for expansion into other countries where third party genetic testing is permitted by local rules and regulations. Healthcare professionals who use this program have no obligation to recommend, purchase, order, prescribe, promote, administer, use, or support any X4 Pharma product.

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