FOR HEALTHCARE PROFESSIONALS

Alnylam Act®

Genetic Testing and Counseling Programs*† for
Acute Hepatic Porphyria Offered at No Charge‡

Consider genetic testing and counseling for your patients; Alnylam Act® provides one option for eligible individuals

*While program is sponsored by Alnylam Pharmaceuticals, all services are performed by independent third parties.
†Genetic counseling only available in the U.S.
‡To patients, physicians, or payers.

What Is Acute Hepatic Porphyria (AHP)?

AHP is a family of rare genetic diseases characterized by potentially life-threatening attacks, and for some people, chronic debilitating symptoms that negatively impact daily function and quality of life.[1-4] Some types of AHP can have symptoms that affect the skin—specifically blistering skin lesions on sun-exposed areas. Skin symptoms can be present with or without attacks.[3,5,6]

Attacks are commonly characterized by severe abdominal pain, vomiting, nausea, rapid heart rate, and constipation. During an attack, a person may also experience weakness, seizures, low sodium levels, and mental status changes such as anxiety or confusion, or hallucinations in severe cases.[1,3,7]

All 4 types of AHP—acute intermittent porphyria (AIP), variegate porphyria (VP), hereditary coproporphyria (HCP), and ALAD-deficient porphyria (ADP)—are characterized by acute, potentially life-threatening attacks and in some patients, chronic debilitating symptoms that negatively impact patients' quality of life.[1-3]

Up to 15 years can elapse from symptom onset to an accurate diagnosis[1,8,9]

AHP can resemble other conditions, and it is often misdiagnosed. Common misdiagnoses include[8-11]:

- Irritable bowel syndrome
- Guillain-Barré syndrome
- Cholecystitis
- Appendicitis
- Hepatitis
- Endometriosis

Delays in diagnosis may lead to unnecessary surgeries and increased disease burden.[1,3]

Diagnosis of AHP

Biochemical Testing[9,12]

A random (spot) urine tested for ALA, PBG, and porphyrins may be used to make a diagnosis of acute hepatic porphyria. ALA and PBG are factors associated with attacks and other disease manifestations of AHP. These neurotoxins are elevated during an attack. The optimal time to test is during or shortly after an attack.

1. PBG elevated levels are diagnostic for AHP and must be normalized to urine creatinine before interpretation.
2. ALA is helpful for differential diagnosis and confirmation of ADP.
3. Porphyrins are used to help determine the type of AHP. This biochemical test is non-specific and should not be used in isolation for the diagnosis of AHP.

Biochemical testing is not available through Alnylam Act®.

Genetic Testing[5,6,13]

Genetic testing can confirm a diagnosis and the specific type of AHP. One genetic testing option is the Alnylam Act® program that includes next generation sequencing with deletion/duplication testing, which detects approximately 99% of disease-causing mutations in the following AHP genes:

	Gene
AIP: Acute Intermittent Porphyria	***HMBS***
VP: Variegate Porphyria	***PPOX***
HCP: Hereditary Coproporphyria	***CPOX***
ADP: ALAD-deficiency Porphyria	***ALAD***

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Step 1: Determine Eligibility for Genetic Testing

To be eligible for genetic testing through Alnylam Act®, patients must be at least 16 years old and meet one of the three requirements below:

- ☑ **Family history of AHP, or**
- ☑ **Elevated (>ULN) urinary porphobilinogen (PBG) or aminolevulinic acid (ALA) levels, or**
- ☑ **Combination of AHP symptoms***

*Refer to the Alnylam Act® AHP requisition form for full details of eligibility criteria.

Step 2: Order Genetic Test

- Genetic testing can tell a person if they carry a mutation in a gene associated with AHP
- Testing can be performed regardless of whether a person is currently experiencing attack symptoms
- Not everyone with a mutation associated with AHP will experience symptoms or attacks
- Once you and your patient have decided to undergo genetic testing:

1

Place your order

a. Complete the Invitae requisition form for Alnylam Act® (Acute Hepatic Porphyria), and fax it to 415-276-4164 or insert it in the Invitae specimen collection kit.

-or-

b. Place an order through the online ordering portal at invitae.com/alnylam-act-ahp.

2

Submit patient sample

a. Collect a blood or saliva sample using Invitae's specimen collection kit. Request kits at invitae.com/request-a-kit.

b. Follow the shipping instructions inside the Invitae kit.

3

Review results

a. Receive results in 10-21 days.

For assistance with genetic testing, contact Invitae at **invitae.com/contact** or **1-800-436-3037**

Note: Invitae offers the ability to send saliva collection kits directly to patients for at-home saliva collection.

Refer Patient for Genetic Counseling at Any Time

Individuals who have a diagnosis of AHP, have a known family history, or who are undergoing a clinical evaluation and potential genetic testing for AHP are eligible for genetic counseling through InformedDNA, an independent genetic counseling provider. This service is only available in the U.S. Once you and your patient have decided to undergo genetic counseling:

1 

Instruct your patient to call InformedDNA at 1-888-475-3128 to schedule an appointment.

– Patients may seek multiple genetic counseling sessions throughout the process. Genetic counseling is available before, during, or after genetic testing

2 

Prepare patients for onboarding.

– Patients will need to reference the Alnylam Act® program and provide your contact information (name, address, phone, and fax number) when scheduling their appointment

3 

Receive results.

– A detailed summary report of your patient's genetic counseling session will be delivered to you via fax

For assistance with genetic counseling, call InformedDNA at **1-888-475-3128**

The Alnylam Act® program was created to provide access to genetic testing and counseling to patients as a way to help people make more informed decisions about their health.

- While Alnylam 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
- Alnylam receives de-identified patient data from this program, but at no time does Alnylam receive patient-identifiable information. Alnylam uses healthcare professional contact information for research and commercial purposes
- Genetic testing is available in the US and Canada. Genetic counseling is only available in the US
- Healthcare professionals or patients who use this program have no obligation to recommend, purchase, order, prescribe, promote, administer, use, or support any Alnylam product
- No payers, including government payers, are billed for this program

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