Ambry Genetics®

Variant of Unknown Significance and Family Studies

PATIENT GUIDE

The Basics of Genetic Testing

- Your DNA is like a book of genetic instructions and is made up of a sequence of chemical letters. Genes are like pages in the book that provide instructions for how your body works.
- Genetic testing looks for changes in your DNA by looking for changes in the sequence of the chemical letters. There are several types of DNA changes:
  - *Mutations* are DNA changes known to cause a genetic condition.
  - *Benign variants* are DNA changes that are harmless and do not cause disease.
  - *Variants of unknown significance* are DNA changes with too little information known to classify as either mutations or benign variants, and it is unknown whether they contribute to a medical condition.
- Based on your personal and/or family history, your healthcare provider ordered genetic testing to detect possible changes in your DNA.

What Your Test Result Means

The test DID NOT detect any changes in your DNA that have been classified as mutations (changes that cause a genetic condition). However, the test DID detect a change in your DNA that is a Variant of Unknown Significance (a change for which there currently insufficient information to classify it as either a mutation or as a harmless benign variant).

What you need to know about a Variant of Unknown Significance (VUS):

- Collecting information about variants of unknown significance detected by our laboratory is an ongoing project at Ambry Genetics.
- If new information becomes available about your variant that would change its classification, the healthcare provider that ordered your test will be notified.
- For now, your healthcare provider should assess your medical management based on your personal and family history.
- Some possible reasons why a mutation was not detected even though you have been diagnosed with or have symptoms that are suggestive of a genetic condition:
  - You may carry a mutation in the gene(s) that was tested that cannot be detected by our current testing technology
  - You may carry a mutation in a gene that was not tested
  - You may have another condition unrelated to the testing performed

MEDICAL MANAGEMENT

- At this time we still do not have a genetic explanation for the symptoms you are experiencing.
- Assessment of your treatment and medical management should be based on your personal and family history.
- Your healthcare provider can help determine if you and/or your family members need additional genetic testing.

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FAMILY INVOLVEMENT

Based on your test result, it is unclear if you have a genetic change that causes the condition of concern. Certain family members may qualify for our Family Studies Program. Variant testing on members of a single family usually does not yield enough information to classify the variant, but the information from testing members of multiple families can sometimes provide enough additional information to classify the variant.

Talk to your healthcare provider and your relatives about the option of familial variant testing. If you and your relatives are interested in participating, please ask your healthcare provider to contact Ambry Genetics at 949.457.4773 for information on the enrollment process for our Family Studies Program.

A sample letter that can be sent to relatives who may qualify for variant study can be found at ambrygen.com/family-studies-program.

PATIENT RESOURCES

- To locate a genetic counselor who can help explain familial variant testing and coordinate testing of your relatives for the Family Studies Program, please visit the National Society of Genetic Counselor website at nsgc.org
- Your healthcare provider can help you determine the most appropriate next steps in your medical care.
- The healthcare provider who ordered your test can provide you with a copy of your lab results. We cannot give test results directly to patients, unless a signed authorization to release information is submitted.
- Stay in contact with your healthcare provider on a regular basis for new information, and keep them updated about any changes in your personal or family history.
- It is recommended that major, non-reversible decisions regarding medical management and/or reproductive choices should not be made based on the presence or absence of a variant of unknown significance until further information is known about the variant. Talk to your healthcare provider or genetic counselor about your concerns.

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