Your CYP2C Cluster Genetic Test Results and What They Mean

CYP2C Cluster: Warfarin Most Sensitive

Pharmacogenomic Testing Overview

Pharmacogenomic (PGx) testing looks at how your genes affect your response to certain medications. Genes are pieces of DNA that provide instructions to make our bodies look and work as they do. Some genes affect the way medications work in the body. When comparing a group of people, there can be slight differences in the structure of each person's genes. These differences can affect how people respond to medications.

Some gene differences might make it harder for the body to get rid of some medications. This means that the usual dose of the medication may cause unexpected side effects. Some gene differences can cause the body to use up a medication too fast. This means that normal doses will not work as well, and the person may need higher doses. Some gene differences will not let certain medications work in the body at all. This means a different medication may work better. Some gene differences increase your chances of side effects to medications. This means that you may need to avoid certain medications.

This gene test may have been part of a panel of genes or a single gene test. The results and affected medications described below may not be relevant to your current care, but could be in the future.

About the CYP2C Gene Cluster

The test we did was for a gene called the Cytochrome P450 2C Gene Cluster (abbreviated CYP2C Cluster). Variations in the CYP2C Cluster can impact how our body metabolizes or breaks down the blood thinner warfarin. Depending on these variations, people are considered to be CYP2C Cluster Normal Function, Warfarin Sensitive, or Warfarin Most Sensitive. CYP2C is one of several genes that plays a role in how our body responds to warfarin. If indicated to treat or prevent blood clots, your healthcare provider can also analyze the results of these other genes and additional factors, like your diet, when determining what warfarin dose to choose. It is also important to note that current evidence only supports a clinical effect of CYP2C Cluster in adult patients of West African ancestry.

Your CYP2C Cluster result puts you in the warfarin most sensitive group. In people who are warfarin most sensitive for the CYP2C Cluster, they may need a lower starting dose of the

blood thinner warfarin. Your healthcare provider can look at your results for additional genes and other clinical factors before deciding what dose of warfarin to use.

The following medication is affected by the CYP2C Cluster:

Warfarin (used to treat and prevent blood clots)

Do not make any adjustments to your medications without first speaking to your healthcare provider.

Because your genes stay the same even as you age, it is important for you to share this result with your other doctors and pharmacists outside Children's Mercy. This result may affect how doctors prescribe medications throughout your life.

More Information

- Research continues to be done on what medications are affected by genetic test results. For more details about the CYP2C Gene Cluster, please go to www.clinpgx.org.
- If you have questions about your pharmacogenetic test results or specific treatment options, discuss them with your healthcare provider or call 816-601-3360 to schedule an appointment at the Children's Mercy GOLDILOKs Clinic.
- If interested in volunteering for pharmacogenetic research, please contact the Children's Mercy Research Institute at pharmacogeneticsresearch@cmh.edu.

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