

## PHARMACOGENOMIC TESTING FOR

# ALLOPURINOL

#### What is pharmacogenomic testing?

Pharmacogenomic testing looks at changes in your genetic code, called polymorphisms, that can affect how you respond to certain medications. Some genetic changes may make it more likely to have side effects from a medication, while other genetic changes may make it less likely that the medication will help treat your symptoms. Knowing whether or not you carry these genetic changes can help your healthcare provider select the medication and/or dose that will work best for you.

Pharmacogenomic testing may not be accurate for people who have received some types of transplants. Talk to your healthcare provider if you are a transplant recipient.



## How do genetics affect my response to allopurinol?

Every person has multiple types of HLA genes, which play an important role in the immune system. These genes give specific instructions for making special HLA proteins that can recognize things that are harmful to the body and get rid of them. Variations in these instructions could cause

your body to recognize allopurinol as harmful and result in a reaction to the medication.

Patients who have certain types of HLA gene polymorphisms will be much more likely to have severe skin reactions and hypersensitivity (an undesirable reaction produced by the immune system) to allopurinol, which could be life-threatening. These individuals could experience harm from taking allopurinol.

### What can pharmacogenomic testing for allopurinol tell me?

Allopurinol is a medication that is most commonly used for treating hyperuricemia (elevated uric acid level in the blood) and gout. Knowing what type of HLA genes you have can help your healthcare providers select the right medication for your condition and prevent harmful effects. Your doctor may select a different medication that is not affected by the specific HLA gene.

It is important to know that pharmacogenomic testing can influence decisions about which medication is best for you, but it is not the only factor. Other things that can affect the selection of a medication include your age, sex, the symptoms of your condition, other medications or supplements you are taking, any other health conditions you have (for example, liver or kidney problems)—and possibly other changes to your genetic code that have not been discovered yet.

#### What can't this pharmacogenomic test tell me?

- This pharmacogenomic test cannot tell you how your family members might respond to this medication.
- This pharmacogenomic test cannot tell you about your diagnosis.
- This pharmacogenomic test cannot tell you about your risk for diseases.

#### What should I do after I receive my test results?

Talk to your doctor or pharmacist about your results to determine whether any changes should be made to your medications. Ask them:

- What do these results mean?
- How will these results affect how I take my medication?
- Do these results affect any other medications I am taking?

DO NOT START, STOP, OR CHANGE DOSES OF YOUR MEDICATIONS WITHOUT CONSULTING YOUR HEALTHCARE PROVIDER.