

UF Health Personalized Medicine Program
CYP2C19 Patient Education Sheet

Title: Genetic Testing for CYP2C19 to predict response to PPIs

As part of a research study that you enrolled in, your doctor ordered a genetic test through the UF Health Personalized Medicine Program to help determine if certain medications, called **proton pump inhibitors (PPIs)**, are likely to work for you.

This sheet provides information about genetic testing for PPIs.

HOW DO MY GENES AFFECT MY RESPONSE TO MEDICATIONS?

Genes, which are made of DNA, act as the instruction manual for making all of the proteins in your body. Proteins help your body process medications, and differences in genes can affect the proteins that process certain medications. Screening for specific genetic variations can help you receive the proper dose, experience fewer side effects or avoid drugs that might not work well.

WHAT ARE PPIs?

PPIs include omeprazole (Prilosec®), esomeprazole (Nexium®), lansoprazole (Prevacid®), and pantoprazole (Protonix®), in addition to other drugs. These medications are used to treat certain gastrointestinal (GI) disorders such as gastroesophageal reflux disease (also known as GERD or gastric reflux) and ulcers.

WHY AM I GETTING A GENETIC TEST?

When someone takes a PPI, a protein called **CYP2C19** (pronounced “SIP-2-cee-19”), helps your body process the medication. This protein may work faster or slower than usual depending on your genetics. If the protein works slower, there may be a higher chance of developing some side effects with usual PPI doses. If the protein works faster, PPIs may not work as well.

Information about your genes that influence CYP2C19 may help your doctor determine the right PPI dose or treatment plan for you.

CAN GENETIC TESTING FOR CYP2C19 HELP WITH OTHER DRUGS

CYP2C19 helps your body process PPIs. It can also process other drugs such as tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), voriconazole (Vfend®) and clopidogrel (Plavix®). If you would like to learn more please see our webpage listed below.

HOW CAN I LEARN ABOUT MY TEST RESULTS?

Your test results will be stored in your UF Health electronic medical record for your doctor and health care team to use in your care. Let your UF Health provider know if you’d like to discuss your test results. Always speak to a health care provider before starting or stopping any medication.

HOW IS MY GENETIC INFORMATION PROTECTED?

UF Health protects all of your health information, including genetic information, with strict security policies and safeguards. Protecting the privacy of our patients is of utmost importance to UF Health.

HOW CAN I LEARN MORE?

- Visit our patient resources page on the UF Health Personalized Medicine Program’s website: <http://personalizedmedicine.ufhealth.org/>.
- Request to speak with a study coordinator or study physician

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