Patient Information: Genetic Drug Sensitivity Testing

**Why test my genes before prescribing a drug?**
Just as gene variation controls hair or eye color, it also controls how the body reacts to certain drugs. Before prescribing one of those drugs, your physician may give you a genotype test to make sure the drug will be safe and effective for you. A genotype is an analysis of some aspect of your genetic make-up. Knowing your genotype will help you and your doctor choose the most effective treatment path.

**What is CYP450?**
CytochromeP450, abbreviated CYP450, is a complex of genes that controls liver enzymes that digest certain drugs. Those drugs include Plavix®, Coumadin®, warfarin, beta blockers, common pain medications and antidepressants, among many others. Different genes within the CYP450 complex control the metabolization of different drugs. CYP2C19, for example, indicates Plavix sensitivity, and CYP2C9 is commonly analyzed before prescribing Coumadin/warfarin.

**What will the test tell me?**
Specifically, how quickly your body filters a given drug out of your bloodstream. A high metabolizer flushes drugs out of the body quickly, and might never realize any benefit from taking a “normal” dose. A poor metabolizer is just the opposite, with a “normal” dose building to potentially dangerous levels. Understanding how quickly you will metabolize a drug helps your doctor calculate the safest, most effective dose for you.

**What is required to perform this test?**
You will need to provide a DNA sample using a buccal swab. A buccal swab is a sterile cotton swab made for DNA collection. You gather DNA simply and painlessly by rubbing the buccal swabs on the insides of your cheeks. The swabs are then sealed and shipped to the lab for testing.

**What happens to my DNA once the test is complete?**
Your privacy is assured. Samples and genetic information are stored securely in accord with HIPAA and other government regulations.

**Is there a cost for this test?**
This is a routine clinical laboratory test covered by Medicare and most private insurance plans. There may be a co-pay, depending on the specifics of your policy.

**How do I get my test results?**
Results will be sent to your doctor 3-5 business days after your sample is collected.