HarmonYX® Test
for Statins*

*ZOCOR® (simvastatin)

WHY IS TESTING IMPORTANT?

Genotype Guided Statin Therapy (GGST) predicts the risk of adverse effects.

Myalgias (muscle pain) and myopathies (muscle disease) are the most common adverse drug reactions associated with simvastatin. They are more commonly seen in patients treated with simvastatin than with other statin drugs.

- SLCO1B1 is strongly associated with statin-induced myopathy[1]
- 6-15% of people have a genetic makeup that makes them 5 times more likely to experience myopathy from taking simvastatin[2]

Pharmacogenetic testing in statin patients increases adherence.[3 4 5]

25-50% of adults who start taking statins stop taking them after 1 year[6], and up to 60% stop them by 2 years.[7] Testing for the presence of SLCO1B1 genetic variants can dramatically increase the chances that your patient will be adherent to his or her prescribed therapy.

"You can improve patient confidence that a drug will be effective and do what it's supposed to do."
- Suzanne Haga, Health Policy Research, Duke University Institute for Genome Sciences and Policy

SUPPORTING CLINICAL EVIDENCE

STRENGTH Trial[6]: Statin-induced Side Effects

Even at lower doses, carriers of SLCO1B1 C allele have a two-fold relative risk of statin-induced myalgias. Patients with at least 1 copy of the C allele on SLCO1B1 had a 37% chance of stopping simvastatin treatment because of side effects, and patients with 2 copies of the C allele had a 50% chance of stopping simvastatin treatment because of side effects.

Duke University Study[3]: Genotype Guided Statin Therapy (GGST)

GGST patients had improved perception of statin necessity and fewer concerns about adverse effects. 55% of GGST patients had new statin prescriptions at one year, compared to 20% of the non-GGST control group. 47% of GGST patients were adherent to statin therapy.

SEARCH Study[2]: SLCO1B1 variants and statin-induced myopathy

This study identified common variants in SLCO1B1 that are strongly associated with increased risk of statin-induced myopathy. The prevalence of SLCO1B1 variance in this study population was 15%. Patients homozygous for the C allele were 16.9% more likely to experience statin related myositis (incipient and definite rhabdomyolysis).

[1]Needham, M and Mastaglia, F. (2013). Statin myotoxicity: a review of genetic susceptibility factors. *Neuromuscular Disorders, 24*(1): 4-15.

[2]SEARCH Collaborative Group, Link E., Parish S., et al. (2008). SLCO1B1 variants and statin-induced myopathy—a genomewide study. N Engl J Med; 359: 789.

[3]Li, J et al (2014). Genetically guided statin therapy on statin perceptions, adherence and cholesterol lowering: a pilot implementation study in primary care patients. *Journal of Personalized Medicine, 4*, 147-162.

[4]Dolgin, E. (2013). Pharmacogenetic tests yield bonus benefit: better drug adherence. *Nature Medicine, 19*(11): 1354-1355.

[5]Charland, S L. (2014). Providing patients with pharmacogenetic test results affects adherence to statin therapy: results of the additional K1F6 risk offers better adherence to statins (AKROBATS) trial. *The Pharmacogenomics Journal, 14,* 272-280.

[6]Voora, D et al (2009). The SLCO1B1 genetic variant is associated with statin-induced side effects. *Journal of the American College of Cardiology, 54*(17): 1609-1616.

[7]Fernandez, G et al. (2011). Statin myopathy: A common dilemma not reflected in clinical trials. *Cleveland Clinic Journal of Medicine, 78*(6): 393-403.