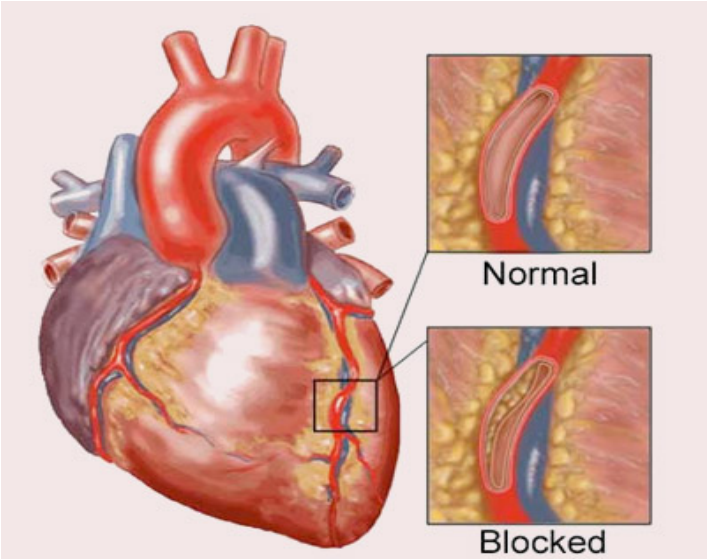
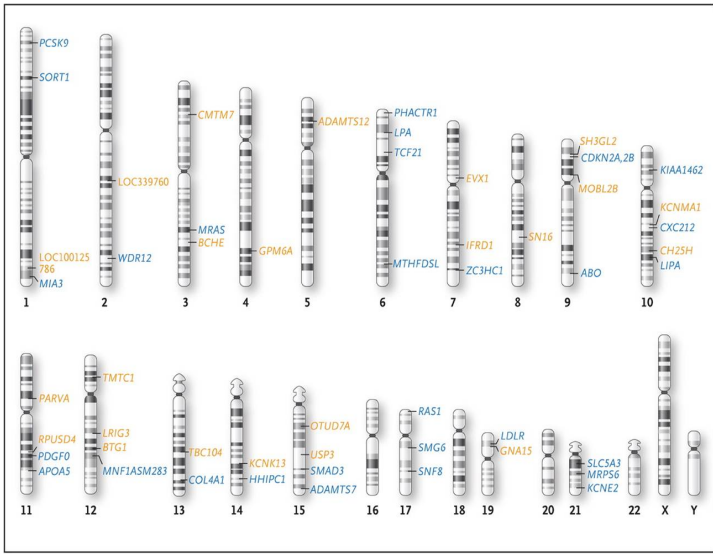
Cardiovascular Genomics





Genomic Testing for Cardiovascular Disease (CVD) Prognosis & Diagnosis

Cardiovascular Disease involving the heart, brain and peripheral circulation is the leading cause of death worldwide and is well known inherited disease with several genes associated with susceptibility and disease progression. Genetic testing for certain types of CVD are clinically recommended. Coronary Artery Disease (CAD) and its clinical manifestation, Myocardial Infarction (MI) are heritable with well-known gene associations. Ischemic Stroke (IS) shares the same genetic risk factors as that of CAD/ MI. Sudden Cardiac Death (SCD) related Channelopathies and Cardiomyopathies are also linked to well known variants in the Human Genome.

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Clinical Genomics

Molecular Genetics

Myocardial Infarction (MI), Coronary Artery Disease (CAD), Ischemic Stroke (IS) and Sudden Cardiac Death (SCD) are all associated with well known molecular markers spread over several genetic location on the Human Genome. ***ALOX5AP*** genetic variants are a known cause of MI and CAD. ***PCSK9*** and ***APO E*** are also strongly linked to susceptibility and disease progression. A non-coding RNA called ***ANRIL*** is a well-known risk factor for atherosclerosis. Hence, Whole Genome Sequencing together with "cascade genomic testing" involving near blood relatives in the family would be ideal to practice better Cardiovascular Precision Medicine. Simultaneous Gene Expression scan with Whole Transcriptome sequencing and analysis in patients with CVD enhances their survival rate.

Pharmacogenomics

- Presence of variant CYP2C19*1 / *2/ *3 causes drug toxicity when treated with Clopidogrel
- Presence of variant CYP2C19 *2+ *3 causes increased sensitivity to Warfarin
- Presence of variant rs2108622 with TT genotype causes increased dosage requirement for Warfarin
- Presence of variant rs1337512 with GG genotype causes increased risk of Rhabdomyolysis leading to SCD when treated with hmgcoa reductase inhibitors

Why myClinGen?

myClinGen is a complete and comprehensive solution from sample collection to NGS Sequencing to BIG data analytics on Supercomputer to Customized reports to Cloud based Knowledgebase hosting to Genetic Counselling at affordable rates and a faster Turn Around Time (TAT).

Please see: www.myclingen.com for more information.

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