

This document lists genes and associated conditions that could be affected. To assist in potential medical necessity, the condition/gene listing should be part of our panel of genes tested. Our genes include: ANKK1/DRD2, APOE, COMT, CYP1A2, CYP2B6, CYP2C19, CYP2C9, CYP2D6, CYP3A4, CYP3A5, F2, F5, MTHFR, OPRM1, SLCO1B1, VKORC1.

Last Updated 9/16/19

| | | | |
|------------------|-------------|--|---|
| Evidence Level 1 | Actionable | ESTABLISHED EVIDENCE-BASED CLINICAL GUIDELINES | Recommendations extracted from evidence based guidelines issued by international pharmacogenetic consortia, professional societies or regulatory bodies (CPIC, DPWG, FDA, EMA, CPNDS, ACMG, RNPg, GPCO)*. Recommendations suitable for implementation in a clinical setting. Guidelines may be updated as new knowledge arises. |
| Evidence Level 2 | Informative | DRUG-GENE ASSOCIATIONS REQUIRING FURTHER INVESTIGATION | There are no established evidence based guidelines issued by experts. The evidence documenting the genetic associations may be limited or insufficient. In some cases the evidence is still disputed. Recommendations are informative and implementation in a clinical setting is optional. |

*ACMG; American College of Medical Genetics and Genomics - CPIC; Clinical Pharmacogenetics Implementation Consortium - CPNDS; Canadian Pharmacogenomics Network for Drug Safety - DPWG; Dutch Pharmacogenetics Working Group - FDA; US Food and Drug Administration - EMA; European Medicines Agency - RNPg; French National Network of Pharmacogenetics - GPCO; Groupe de Pharmacologie Clinique Oncologique

| Category | Gene | Associated Condition | Evidence Level(s) |
|---------------------------------|-------------------------|---|-------------------|
| Cardiovascular | 4q25 | Atrial Fibrillation | 2 |
| | 9p21 | Coronary Artery Disease | 2 |
| | APOE | Type III Hyperlipoproteinemia | 2 |
| | F2, F5 | Thrombosis | 1,1 |
| | F13A1 | Thrombosis | 2 |
| | ITGB3 | Platelet Reactivity | 2 |
| | LPA | Cardiovascular Disease | 2 |
| | MTHFR | Hyperhomocysteinemia | 2 |
| NOS3 | Coronary Artery Disease | 2 | |
| Gastroenterology and Hepatology | UGT1A1 | Gilbert Syndrome | 2 |
| Psychiatry | ADH1B, ALDH2 | Alcohol Related Disorders | 2,2 |
| | ANK3 | Bipolar Disorder | 2 |
| | ANKK1 | Antipsychotic-Induced Hyperprolactinemia, Tardive Dyskinesia, and Weight Gain | 2 |
| | CACNA1C | Bipolar Disorder | 2 |
| | MTHFR | Hyperhomocysteinemia | 2 |
| Rheumatology | ABCG2 | Hyperuricemia and Gout | 2 |