

Patient Genotypes and Phenotypes

CYP2D6

Ultrarapid Metabolizer

***2A/*2A**

CYP2D6 *2A: This allele produces increased enzyme activity.

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Comment: This genotype is associated with the ultrarapid metabolizer phenotype. This individual may not be able to achieve therapeutic drug concentrations, or adequate clinical response, using the usual drug dosage for drugs metabolized by CYP2D6.

CYP2C19

Intermediate Metabolizer

***1/*2**

CYP2C19*1: This allele produces normal enzyme activity.

CYP2C19*2: This allele produces no enzyme activity.

Comment: This genotype is most consistent with the intermediate metabolizer phenotype. This patient may have reduced enzyme activity as compared to individuals with the normal genotype.

CYP1A2

Ultrarapid Metabolizer

-163C>A - A/A

This individual is expected to be an extensive (normal) metabolizer unless induced, in which case increased metabolism to ultrarapid metabolizer is possible. This individual has a polymorphism(s) which leads to increased inducibility when exposed to certain substances including tobacco smoke (see other inducers listed below). If CYP1A2 inducers are stopped or started, a change in phenotype is possible.

SLC6A4

High Activity

L/L

This patient is homozygous for the long promoter polymorphism of the serotonin transporter gene. The long promoter allele is reported to express normal levels of the serotonin transporter. The patient is predicted to have a normal time to response with selective serotonin reuptake inhibitors.

HTR2A

Reduced Activity

G/G

This individual is homozygous variant for the G allele of the -1438G>A polymorphism for the Serotonin Receptor Type 2A. They carry two copies of the G allele. This genotype has been associated with an increased risk of adverse drug reactions with certain selective serotonin reuptake inhibitors.