COVID-19 Genetic Drug Safety Report

During the course of treatment for COVID-19, some medications may be used that may not work as expected for you because of variations in your DNA. **Please share this with your caregivers if you require treatment for COVID-19.**

Drug	Concern	Guidance
Tramadol	CYP2D6: Intermediate metabolizer. One allele showing normal function and one duplicated allele showing little or no function.	FDA drug label: Actionable PGx. Individuals with intermediate metabolizer status have decreased metabolism to more active compounds; the resultant decreased plasma concentrations may increase the probability of pharmacotherapy failure. Consider dose increase. If response is still inadequate; select alternative drug (not oxycodone or codeine) or be alert to symptoms of insufficient pain relief.
Escitalopram	CYP2C19: Ultrarapid metabolizer. Two alleles showing increased activity.	FDA drug label: Actionable PGx. Individuals with ultrarapid metabolizer status have increased metabolism; the resultant lower plasma concentrations may increase the probability of pharmacotherapy failure. Consider alternative drug.
Clonazepam	CYP3A4: Ultrarapid metabolizer. Two alleles showing increased activity.	FDA drug label: Off-label for PGx. Individuals with ultrarapid metabolizer status have increased metabolism of clonazepam; the resultant lower plasma concentrations may increase the probability of pharmacotherapy failure. Select an alternative drug or monitor patient for efficacy and adjust dose appropriately.
Metoprolol	CYP2D6: Intermediate metabolizer. One allele showing normal function and one duplicated allele showing little or no function.	FDA drug label: Informative PGx. Individuals with intermediate metabolizer status have increased risk of adverse drug reactions. For heart failure (indication): select alternative drug (e.g. bisoprolol, carvedilol) or reduce dose by 50%. For other indications: be alert to adverse drug events (e.g. bradycardia, cold extremities) or select alternative drug (e.g. atenolol, bisoprolol).
Hydroxychloroquine	Potential drug interaction	If you are currently taking either Azithromycin or Fluroquinolones, then Hydroxychloroquine should be avoided due to the additive risk of QTC prolongation.

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