CLIA # 18D1100471
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PATIENT INFORMATION		PHYSICIAN		SPECIMEN DETAILS	
Name:	**John Doe**	Provider:	**Doe, Jane**	Specimen ID:	**TEST**
Patient ID:	**P123456**	Location:	**TEST Clinic**	Specimen Type:	**Buccal**
DOB:	**01/01/1970**	Client #:	**123456**	Collection Date:	**08/01/2022**
Sex:	**Male**	Phone:	**555-555-5555**	Received Date:	**08/02/2022**
				Report Date:	**09/20/2022**

Order Choice: *Gravity Pain NEW*

Substantial Drug-Gene Interaction
Genetic information should be strongly considered to change the prescribing of the indicated medication due to an increased risk of adverse reactions or a reduction in efficacy.

Moderate Drug-Gene Interaction
Genetic information should be considered as the identified medication may have an increased risk of adverse reactions or a reduction in efficacy.

Limited Drug-Gene Interaction
The standard precautions for prescribing the indication medication should be followed.

LEVEL OF EVIDENCE

FDA: The FDA labeling for the identified drug may contain specific actions to be taken based on genetic information. There may be alleles not accounted for based on the inferred phenotypes.

CPIC Level A: Preponderance of evidence is high or moderate in favor of changing prescribing of identified drug based on genetic information.

CPIC Level B: Preponderance of evidence is weak with little conflicting data in favor of changing prescribing of identified drug based on genetic information and alternative therapies/dosing are extremely likely to be as effective and as safe as non-genetically based dosing.

CPIC Level C: There are published studies at varying levels of evidence, some with mechanistic rationale, but no prescribing actions are recommended.

The reported drug-gene interactions are based on consensus scientific evidence referenced from the dosing guidelines on the FDA label or the Clinical Pharmacogenetics Implementation Consortium (CPIC) recommendations.

! Please note: Do not make any changes to your medication without consulting a physician. This report is intended to aid healthcare providers in determining the proper treatment options for a patient and should be used in the context of other clinical factors to change or select medications and dosage.

Current Patient Medications

Clomipramine, Sertraline, Desipramine, Ondansetron, Metformin

Clomipramine | Psychiatry
CYP2C19 Ultra Rapid Metabolizer — CPIC Level B

Sertraline | Psychiatry
CYP2C19 Ultra Rapid Metabolizer — CPIC Level B

Desipramine | Psychiatry
CYP2D6 Normal (Extensive) Metabolizer — CPIC Level B, FDA

Ondansetron | Gastroenterology
CYP2D6 Normal (Extensive) Metabolizer — CPIC Level A, FDA

Medications outside the scope of the report: Metformin

POTENTIALLY IMPACTED MEDICATIONS

Disclaimer: The medications listed in this report are not fully inclusive of all medications available in each category.

Cardiovascular

	Substantial Drug-Gene Interaction	Moderate Drug-Gene Interaction	Limited Drug-Gene Interaction
Antiarrhythmics			Propafenone
Anticoagulants			Acenocoumarol Warfarin
Antiplatelets		Clopidogrel	
Beta Blockers			Carvedilol Metoprolol Nebivolol Propranolol
Statins			Atorvastatin Fluvastatin Lovastatin Pitavastatin Pravastatin Rosuvastatin Simvastatin
Thrombopoietin Receptor Agonists			Avatrombopag

Gastroenterology

	Substantial Drug-Gene Interaction	Moderate Drug-Gene Interaction	Limited Drug-Gene Interaction
Antiemetics			Dronabinol Metoclopramide Ondansetron Tropisetron
Proton Pump Inhibitors		Dexlansoprazole Esomeprazole Lansoprazole Omeprazole Pantoprazole Rabeprazole	

DOSING GUIDANCE

Amitriptyline | Antidepressant — CPIC Level A

CYP2C19 Ultra Rapid Metabolizer

Implications: Increased metabolism of tertiary amines compared to Normal (Extensive) Metabolizers. Greater conversion of tertiary amines to secondary amines may affect response or side effects.

Therapeutic Recommendations: Avoid tertiary amine use due to potential for sub-optimal response. Consider alternative drug not metabolized by CYP2C19. TCAs without major CYP2C19 metabolism include the secondary amines nortriptyline and desipramine. If a tertiary amine is warranted, utilize therapeutic drug monitoring to guide dose adjustments.

Citalopram | Antidepressant — CPIC Level A, FDA

CYP2C19 Ultra Rapid Metabolizer

Implications: Increased metabolism when compared to Normal (Extensive) Metabolizers. Lower plasma concentrations will increase probability of pharmacotherapy failure.

Therapeutic Recommendations: Consider an alternative drug not predominantly metabolized by CYP2C19.

Clomipramine | Antidepressant — CPIC Level B

CYP2C19 Ultra Rapid Metabolizer

Implications: Increased metabolism of tertiary amines compared to Normal (Extensive) Metabolizers. Greater conversion of tertiary amines to secondary amines may affect response or side effects.

Therapeutic Recommendations: Avoid tertiary amine use due to potential for sub-optimal response. Consider alternative drug not metabolized by CYP2C19. TCAs without major CYP2C19 metabolism include the secondary amines nortriptyline and desipramine. If a tertiary amine is warranted, utilize therapeutic drug monitoring to guide dose adjustments.

Doxepin | Antidepressant — CPIC Level B, FDA

CYP2C19 Ultra Rapid Metabolizer

Implications: Increased metabolism of tertiary amines compared to Normal (Extensive) Metabolizers. Greater conversion of tertiary amines to secondary amines may affect response or side effects.

Therapeutic Recommendations: Avoid tertiary amine use due to potential for sub-optimal response. Consider alternative drug not metabolized by CYP2C19. TCAs without major CYP2C19 metabolism include the secondary amines nortriptyline and desipramine. If a tertiary amine is warranted, utilize therapeutic drug monitoring to guide dose adjustments.

Escitalopram | Antidepressant — CPIC Level A, FDA

CYP2C19 Ultra Rapid Metabolizer

Implications: Increased metabolism when compared to Normal (Extensive) Metabolizers. Lower plasma concentrations will increase probability of pharmacotherapy failure.

Therapeutic Recommendations: Consider an alternative drug not predominantly metabolized by CYP2C19.