



PATIENT INFORMATION	SPECIMEN INFORMATION	LAB INFORMATION
Name: CARDIO DEMO1 DOB: 07/01/1966 Sex: Male Patient Id: 12341	Provider: Sam Smith, MD Specimen Id: CARDIO12341 Resulted Date: 06/02/2026 Test Type: Pharmacogenomics Specimen Type: Buccal	Name: DEMO LAB COMPANY Address: 123 Main Street Address 2: Suite 108 City,State,Zip: Memphis, TN 38132 Phone: 888-777-6666 Med Dir: Mike Smith, MD, PhD CLIA#: 44D12345678

PharmD Medication Action Plan/Guidance

FLUOXETINE - SEVERE RISK

ALERTS: 1 Reduced CYP450 Primary pathway(s),5 major DDIs

Fluoxetine serum levels may be impacted which may increase fluoxetine exposure and decrease formation of S-norfluoxetine (active metabolite). Caution advised when using fluoxetine concomitantly with strong/moderate CYP2D6 inhibitor(s) like amiodarone. Monitor the patient for decreased effectiveness and/or consider alternatives not metabolized by CYP2D6.

IRBESARTAN - SEVERE RISK

ALERTS: 1 Reduced CYP450 Primary pathway(s),1 severe DDIs,5 major DDIs

Irbesartan serum concentrations may increase. Caution advised when using irbesartan concomitantly with strong/moderate CYP2C9 inhibitor(s) like amiodarone. If side effects are suspected, consider lowering the dosage or choose alternative therapy not metabolized by CYP2C9, such as, candesartan or telmisartan.

MELOXICAM - SEVERE RISK

ALERTS: 1 Reduced CYP450 Primary pathway(s),1 severe DDIs,5 major DDIs

Meloxicam serum levels may be elevated. This patient is at an increased risk of exaggerated response or side effects, such as GI irritation and/or ulcerations. Caution advised when using meloxicam concomitantly with strong/moderate CYP2C9 inhibitor(s) like amiodarone. Monitor for bleeding risk factors, reduce dose or change to an alternative therapy that is not a CYP2C9 substrate, such as acetaminophen where clinically appropriate.

METOPROLOL - SEVERE RISK

ALERTS: 1 Reduced CYP450 Primary pathway(s),4 major DDIs

Metoprolol may have increased exposure and increased response. Caution advised when using metoprolol concomitantly with strong/moderate CYP2D6 inhibitor(s) like amiodarone. Monitor for side effects. If side effects, such as hypotension, dizziness, and cold extremities, are present, consider reducing the dose or modifying dosing frequency or selecting an alternative that is not a CYP2D6 substrate, such as bisoprolol or atenolol.

This Medication Action Plan provides high-level clinical considerations based on potential compounded risks related to drug-drug interactions, drug-gene interactions, and phenotypic conversions that may affect medication response. It is informed in part by the BluePrintRx Pharmacy Risk Analysis and is not intended to be comprehensive. The information does not include all relevant clinical data (e.g., complete diagnoses, current labs, unreported genetic results) and has not been reviewed by the FDA. This tool is informational only and must be interpreted by a licensed healthcare provider as part of a broader clinical assessment and patient-specific decision-making process.

	Genotype	Phenotype	Substrate	Inhibitor	Inducer	TruType	Activity
ABCB1	*1/*1	Normal	Simvastatin, Apixaban	Simvastatin-(W), Fluoxetine-(W), Amiodarone-(M)(iv)	[]	Slow	
ABCG2	G/G	Normal	Apixaban	[]	[]	Normal	

CYP1A2	*1/*1	Normal	[]	[]	[]	Normal	
CYP2B6	*1/*1	Normal	[]	Amiodarone-(W)(iv)	[]	Normal	
CYP2C19	*1/*1	Normal	[]	Fluoxetine-(ST), Amiodarone-(M)(iv)	[]	Slow	
CYP2C8	*1/*1	Normal	Amiodarone	Amiodarone-(W)	[]	Normal	
CYP2C9	*1/*2	Intermediate	Irbesartan, Meloxicam	Fluoxetine-(W), Amiodarone-(M)(iv)	[]	Slow	
CYP2D6	*1/*1	Normal	Fluoxetine, Metoprolol	Fluoxetine-(ST), Amiodarone-(M)(iv)	[]	Slow	
CYP3A4	*1/*1	Normal	Simvastatin, Amiodarone, Eplerenone, Apixaban	Fluoxetine-(W), Amiodarone-(W)	[]	Normal- slow	
CYP3A5	*1/*1	Normal	[]	[]	[]	Normal	
CYP4F2	*1/*1	Normal	[]	[]	[]	Normal	

SLC01B1	*1/*5	Intermediate	Simvastatin	Irbesartan-(W)	[]	Slower than normal	
---------	-------	--------------	-------------	----------------	----	-----------------------	---

Active Diagnoses

150.9

Current Medications

SEVERE RISK	HIGH RISK	MODERATE RISK	STANDARD RISK
Fluoxetine 100mg Irbesartan 300mg Meloxicam 5mg Metoprolol 100mg		Amiodarone 150mg Eliquis Eplerenone 25mg	Simvastatin 40mg

Fluoxetine Fluoxetine 100mg	SEVERE TruRISK 	<table><tr><th>Gene</th><th>Phenotype</th><th>TruTYPE</th></tr><tr><td>CYP2D6</td><td>Normal</td><td>Slow</td></tr></table>	Gene	Phenotype	TruTYPE	CYP2D6	Normal	Slow
Gene	Phenotype	TruTYPE						
CYP2D6	Normal	Slow						
Severe DDIs: None		Major DDIs: Simvastatin, Irbesartan, Amiodarone, Metoprolol, Apixaban						
TruRISK Alerts: 1 Reduced CYP450 Primary pathway(s) - 5 major DDIs								

TruSELECT

Alternative Medications Information for Fluoxetine

Drug Name	Pathway	TruTYPE	Inhibitor	Inducer	DDIs	TruRISK
Bupropion	CYP2B6	Normal	CYP2D6	---	Severe: Metoprolol Major: 1	
Desvenlafaxine	CYP3A4	Normal	---	---	Severe: Amiodarone Major: 2	
Escitalopram	ABCB1 CYP2C19 CYP3A4	Slower than normal Normal Normal	CYP2D6	---	Severe: Amiodarone Major: 3	

Irbesartan Irbesartan 300mg	SEVERE TruRISK 	Gene	Phenotype	TruTYPE
		CYP2C9	Intermediate	Slow
Severe DDIs: Amiodarone		Major DDIs: Simvastatin, Fluoxetine, Eplerenone, Meloxicam, Apixaban		
TruRISK Alerts: 1 Reduced CYP450 Primary pathway(s) - 1 severe DDIs - 5 major DDIs				

TruSELECT

Alternative Medications Information for Irbesartan

Drug Name	Pathway	TruTYPE	Inhibitor	Inducer	DDIs	TruRISK
Olmesartan	SLC01B1	Slower than normal	---	---	Major: 3	
Telmisartan	---	---	ABCB1 CYP2C19	---	Major: 5	
Candesartan	ABCB1	Slow	---	---	Severe: Simvastatin, Amiodarone, Apixaban Major: 3	

Meloxicam

Meloxicam 5mg

SEVERE

TruRISK

Gene	Phenotype	TruTYPE
CYP2C9	Intermediate	Slow

Severe DDIs:

Amiodarone

Major DDIs:

Simvastatin, Irbesartan, Eplerenone, Metoprolol, Apixaban

TruRISK Alerts:

1 Reduced CYP450 Primary pathway(s) - 1 severe DDIs - 5 major DDIs

TruSELECT

Alternative Medications Information for Meloxicam

Drug Name	Pathway	TruTYPE	Inhibitor	Inducer	DDIs	TruRISK
Oxaprozin	---	---	---	---	Major: 4	
Acetaminophen	ABCG2	Normal	---	---	Severe: Amiodarone Major: 2	
Ketorolac	---	---	---	---	Severe: Amiodarone Major: 5	
Naproxen	---	---	ABCB1	---	Severe: Amiodarone Major: 5	

Metoprolol

Metoprolol 100mg

SEVERE

TruRISK

Gene	Phenotype	TruTYPE
CYP2D6	Normal	Slow

Severe DDIs:

None

Major DDIs:

Simvastatin, Fluoxetine, Amiodarone, Meloxicam

TruRISK Alerts:

1 Reduced CYP450 Primary pathway(s) - 4 major DDIs

TruSELECT

Alternative Medications Information for Metoprolol

Drug Name	Pathway	TruTYPE	Inhibitor	Inducer	DDIs	TruRISK
Acebutolol	---	---	---	---	Major: 4	
Atenolol	ABCB1	Slow	---	---	Major: 4	
Bisoprolol	ABCB1	Slow	ABCB1	---	Major: 5	
Labetalol	---	---	---	---	Major: 5	
Nadolol	---	---	---	---	Major: 3	

Pharmacogenetic Testing Results

Gene	Genotype	Phenotype
ABCB1	*1/*1	Normal
ABCG2	G/G	Normal
APOE	E3/E4	Increased Risk
COMT	A/A	Reduced Activity
CYP1A2	*1/*1	Normal
CYP2B6	*1/*1	Normal
CYP2C19	*1/*1	Normal
CYP2C8	*1/*1	Normal
CYP2C9	*1/*2	Intermediate
CYP2D6	*1/*1	Normal
CYP3A4	*1/*1	Normal
CYP3A5	*1/*1	Normal
CYP4F2	*1/*1	Normal
DPYD	*1/*1	Normal
DRD2;ANKK1	G/G	Decreased Risk
Factor II	G/G	No increased risk
Factor V	C/C	No increased risk
HTR1A	C/G	Increased Response
MTHFR1298	G/T	Increased risk
MTHFR677	G/A	Normal risk
NUDT15	*1/*1	Normal
OPRM1	A/A	Normal response to opioid therapy is expected
SLC01B1	*1/*5	Increased Risk of Simvastatin-Associated Myopathy
TPMT	*1/*1	Normal
VKORC1	*1/*2	Intermediate Sensitivity