

PHELIX Rx Intelligence Summary

PHASE 2 POST-PGx | CARDIO12341 | Developer Specification v1.5 FINAL

Patient	DOB	Sex	Provider	Specimen	Diagnosis
CARDIO DEMO1	07/01/1966	Male	Sam Smith, MD	CARDIO12341	I50.9 - Heart failure, unspecified

Current Medications

Fluoxetine 100 mg | Irbesartan 300 mg | Meloxicam 5 mg | Metoprolol 100 mg | Amiodarone 150 mg | Apixaban (Eliquis) | Eplerenone 25 mg | Simvastatin 40 mg

Phase 2 Genetic Results - Actual PGx Replaces Phase 1 Default-Normal Baseline

Gene	Actual genotype	Inherited phenotype / report finding	Current TruTYPE functional activity
CYP2D6	*1/*1	Normal	Slow - fluoxetine strong + amiodarone moderate inhibition
CYP2C19	*1/*1	Normal	Slow - fluoxetine strong + amiodarone moderate inhibition
CYP2C9	*1/*2	Intermediate	Slow - inherited reduction plus fluoxetine weak/amiodarone moderate inhibition
SLCO1B1	*1/*5	Increased risk of simvastatin-associated myopathy	Slower than normal - simvastatin substrate; irbesartan weak inhibition noted
ABCB1	*1/*1	Normal	Slow - simvastatin/fluoxetine weak + amiodarone moderate inhibition
ABCG2	G/G	Normal	Normal
CYP3A4	*1/*1	Normal	Normal-slow in source functional table

1. Clinical Priorities - Review First

Medication	Severity	Why flagged / Phase 2 result	PK Effect	Dosing / Clinical Guidance
Simvastatin 40 mg	SEVERE	SLCO1B1 *1/*5; increased simvastatin-myopathy risk; functional SLCO1B1 Slower than normal.	Source PK statement: decreased SLCO1B1 activity may increase simvastatin systemic exposure. Reduced SLCO1B1 plus ABCB1 activity increases myopathy concern.	CPIC: consider alternative therapy. FDA/source guidance notes OATP1B1/CYP3A4 inhibition may increase simvastatin exposure/myopathy risk; source PK statement notes 20 mg/day if warranted and CK monitoring.
Meloxicam 5 mg	SEVERE	CYP2C9 *1/*2 Intermediate; functional CYP2C9 Slow; Severe DDI with amiodarone.	Source PK statement: reduced CYP2C9 activity decreases metabolism/clearance and may increase meloxicam exposure; inhibitors may compound risk.	CPIC/source: avoid with slow/poor CYP2C9 activity and select non-CYP2C9 alternative. FDA: in known/suspected poor metabolizers consider dose reduction and monitor adverse effects. Monitor BP/kidney function.
Metoprolol 100 mg	MAJOR	CYP2D6 *1/*1 Normal genetically, but functional CYP2D6 Slow from fluoxetine/amiodarone inhibition.	Source PK statement: reduced CYP2D6 activity may increase metoprolol plasma levels/response and risk of bradycardia, syncope and hypotension.	FDA/source: decreased CYP2D6 activity/inhibition may increase exposure and decrease cardioselectivity; strong inhibitors such as fluoxetine can double concentrations. Source PK statement: consider non-CYP2D6 alternative or 50-75% starting dose if warranted.
Fluoxetine 100 mg	MAJOR	CYP2D6/CYP2C19 inherited Normal but both functionally Slow; fluoxetine is a strong inhibitor in source table.	Source PK statement: decreased CYP2D6 may increase fluoxetine exposure and decrease S-norfluoxetine formation; inhibition can reduce metabolism of CYP2D6/CYP2C19 substrates.	Source published guidance: no dosing recommendation available; monitor increased response/adverse events and QTc. FDA notes fluoxetine is a potent CYP2D6 inhibitor and may make normal activity resemble poor-metabolizer behavior.
Irbesartan 300 mg	SEVERE	CYP2C9 *1/*2 Intermediate; functional CYP2C9 Slow; Severe DDI with amiodarone.	Source PK statement: decreased CYP2C9 metabolism increases likelihood of increased systemic exposure.	Source PK guidance: monitor hypotension, fast heart rate, faintness and muscle cramps; consider olmesartan/telmisartan; caution with strong CYP2C9 inhibitors. No separate CPIC/FDA dosing recommendation stated in source section.

2. High-Priority DDIs - Prioritized by Current Exposure Risk

Exposure-risk class	Major/Severe examples from source regimen	Phase 2 interpretation
2+ drugs with increased exposure risk	Meloxicam + Metoprolol; Meloxicam + Simvastatin; Irbesartan + Simvastatin; Fluoxetine + Apixaban	Actual CYP2C9/SLCO1B1 results strengthen exposure-risk interpretation where those pathways are involved; functional slowing remains medication-dependent for CYP2D6/ABCB1.
1 drug with increased exposure risk	Irbesartan + Amiodarone (SEVERE); Meloxicam + Amiodarone (SEVERE); Fluoxetine + Amiodarone; Metoprolol + Amiodarone	At least one interacting drug maps to a Slow/Slower pathway; preserve source severity and review patient-specific clinical context.

3. TruMAP - Functional PK Map

Pathway	Inherited result	Modifiers	Final TruTYPE	Affected CURRENT drugs
CYP2D6	*1/*1 Normal	Fluoxetine strong; amiodarone moderate	Slow	Fluoxetine; Metoprolol
CYP2C19	*1/*1 Normal	Fluoxetine strong; amiodarone moderate	Slow	Fluoxetine / relevant future substrates
CYP2C9	*1/*2 Intermediate	Fluoxetine weak; amiodarone moderate	Slow	Irbesartan; Meloxicam
SLCO1B1	*1/*5 increased simvastatin-myopathy risk	Irbesartan weak inhibition noted	Slower than normal	Simvastatin
ABCB1	*1/*1 Normal	Simvastatin/fluoxetine weak; amiodarone moderate	Slow	Simvastatin; Apixaban
ABCG2	G/G Normal	None reported	Normal	Apixaban

4. TruIMPACT

Group 1 - affects 2+ pathways: Fluoxetine: strong CYP2D6 + CYP2C19 inhibition; Amiodarone: clinically relevant multi-pathway inhibition in the source functional table. Active substrate effects include metoprolol (CYP2D6), irbesartan/meloxicam (CYP2C9), and simvastatin/apixaban transporter context. Phase 2 keeps inherited phenotype separate from medication-driven functional activity.

5. TruSELECT - Screened Alternatives

Use only controlled QuickSELECT/TruSELECT alternatives and rescreen the entire current regimen before selection. The source report supplies alternatives but does not document that the provider has selected a replacement. Therefore no alternative is converted to a CONSIDERED medication in this Phase 2 summary.

6. Autogenerated EMR Note

CARDIO12341 Phase 2 PGx results reviewed. CYP2C9 *1/*2 is Intermediate and current functional CYP2C9 is Slow, affecting irbesartan/meloxicam exposure context. SLCO1B1 *1/*5 is reported as increased risk of simvastatin-associated myopathy with current functional activity Slower than normal. CYP2D6 *1/*1 and CYP2C19 *1/*1 are inherited Normal but both are functionally Slow due to medication inhibition, demonstrating phenoconversion. ABCB1 *1/*1 is inherited Normal with current functional activity Slow; ABCG2 G/G remains Normal. Medication-specific risks and current Major/Severe DDIs should be reviewed in clinical context.

7. Suggested Medication Action Plan

Medication	Phase 2 Suggested MAP
Simvastatin	Review SLCO1B1 *1/*5 result, myopathy symptoms/tolerance, dose and controlled statin options; rescreen any alternative against full regimen.
Meloxicam	Review CYP2C9 *1/*2 Intermediate / functional Slow status, renal/GI/bleeding risk and Severe amiodarone interaction; consider dose/therapy reassessment if clinically indicated.
Metoprolol	Inherited CYP2D6 is Normal but functional CYP2D6 is Slow. Review HR/BP, adverse effects and need for dose/therapy adjustment if clinically indicated.
Fluoxetine	Inherited CYP2D6/CYP2C19 are Normal but functional activity is Slow from inhibition. Review response, adverse effects and compounded interaction burden.
Irbesartan	Review CYP2C9 *1/*2 Intermediate / functional Slow status plus BP, renal function, potassium and Severe amiodarone interaction.

Clinician / PharmD Comments