Pharmacogenetic PGx Report

Assay Ordered	StatinSelect Panel
Patient Name	Anonymous
Patient ID#	208520850059
DOB	Unknown
Gender	Female
Sample Collection Date	N/A
Version	2.0

The Scylex Inc. Pharmacogenetic (PGx) Report is an analysis of the patient's DNA to identify relevant genetic variants to help inform medication efficacy, safety and dosing. Interpretation of the identified gene variants are done by **Scylex Inc.** and are based on the Clinical Pharmacogenetics Implementation Consortium (CPIC)* focusing on immediately actionable clinical recommendations regarding safer and/or more effective medications and dosing for the patient. If applicable, the Medication Report section pairs genetic variant data with the most current FDA-approved drug labels**. This report is meant as an adjunct to your health care provider's recommended treatments. The interpretation of this report should be done in consultation with a qualified healthcare professional. The information provided in this report serves as a valuable tool to support personalized medicine and facilitate informed decision-making regarding medication selection and dosing. Any additional medications listed that have no FDA approved PGx guidance are optional and only provided for educational purposes.

Key Benefits of your Scylex PGx Report:

- Enhanced medication selection: The test results will help healthcare professionals identify medications that are more likely to be effective and/or safe for you, based on your genetic profile.
- Minimized adverse effects: By considering your genetic variations, healthcare professionals can potentially reduce the risk of adverse drug reactions or unwanted side effects.
- Optimized dosing: Pharmacogenetic testing can aid in determining the appropriate dosage of medications, taking into consideration your genetic factors and individual characteristics. Thereby limiting the common trial and error process of finding the right dosage.
- Improved treatment outcomes: Personalized medication strategies guided by pharmacogenetic information may enhance the effectiveness of treatment and improve health outcomes.

* https://cpicpgx.org

** https://www.fda.gov/medical-devices/precision-medicine/fda-recognition-public-human-genetic-variant-databases

Sections

Section I: Drug Recommendation Summary†

Drug Class	Optimal Outcomes/ Use as Directed	Dose with Caution/ Moderate Gene-drug Interaction	Contraindicated/ May Cause Adverse Effects
Statin [illegible]	atorvastatin (Lipitor®) fenofibrate / simvastatin (Cholib®) fluvastatin (Lescol® Lescol® XL®) lovastatin (Altoprev®) pitavastatin (Livalo®) pravastatin (Pravachol®) rosuvastatin (Crestor®) simvastatin (Zocor®)		

[1] In the [illegible] PGx report 'Drug Recommendation Summary' section, each drug is categorized based on personalized PGx recommendations from CPIC and DPWG databases using each patient's specific genetic profile. Drug prescribing recommendations based on CPIC level A/B are included in this report, please check Section III for more details.

Section II: Dosing Recommendation Summary[2]

Drug	Guideline	Recommendation

[2] Drug Dosing Recommendations listed in this table are sourced from the CPIC and DPWG guidelines, based on PharmGKB's high confidence clinical annotations (CPIC/PharmGKB levels 1A, 1B, 2A, 2B).
For full detailed implications please see Section III.

Section III: Genotype Summary and Implications

atorvastatin

Gene: SLCO1B1 **Diplotype:** *1/*1 **Phenotype:** Normal Function

CPIC * Population general No Action	**Implications** SLCO1B1: Typical myopathy risk and statin exposure **Recommendation** Prescribe desired starting dose and adjust doses based on disease specific guidelines **Other Considerations** The potential for drug-drug interactions and dose limits based on renal and hepatic function and ancestry should be evaluated prior to initiating a statin.

Citations

- The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022 PMID:35152405

fluvastatin

Gene: CYP2C9 **Diplotype:** *1/*1 **Phenotype:** Normal Metabolizer

Gene: SLCO1B1 **Diplotype:** *1/*1 **Phenotype:** Normal Function

CPIC * Population general No Action	**Implications** CYP2C9: Normal exposure SLCO1B1: Typical myopathy risk and statin exposure **Recommendation** Prescribe desired starting dose and adjust doses of fluvastatin based on disease specific guidelines. **Other Considerations** The potential for drug-drug interactions and dose limits based on renal and hepatic function and ancestry should be evaluated prior to initiating a statin.

Citations

- The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022 PMID:35152405

lovastatin

Gene: SLCO1B1 **Diplotype:** *1/*1 **Phenotype:** Normal Function

CPIC [1]	**Implications** SLCO1B1: Typical myopathy risk and statin exposure
Population: general No Action	**Recommendation** Prescribe standard starting dose and adjust doses based on disease-specific guidelines.
	Other Considerations The potential for drug-drug interactions and dose limits based on renal and hepatic function and proximity should be evaluated prior to initiating a statin.

Citations

1. The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022. PMID: 34213001

Rosuvastatin

Gene: ABCG2 **Diplotype:** rs2231142 reference (Gln/Gln)/rs2231142 reference (A) **Phenotype:** Normal Function

Gene: SLCO1B1 **Diplotype:** 1a/1a **Phenotype:** Normal Function

CPIC [1]	**Implications** ABCG2: Typical myopathy risk and rosuvastatin exposure SLCO1B1: Typical myopathy risk and statin exposure
Population: general No Action	**Recommendation** Prescribe standard starting dose and adjust doses of rosuvastatin based on disease-specific and specific population guidelines.
	Other Considerations The potential for drug-drug interactions and dose limits based on renal and hepatic function and lower proximity should be evaluated prior to initiating rosuvastatin.

Citations

1. The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022. PMID: 34213001

Simvastatin

Gene: SLCO1B1 **Diplotype:** 1a/1a **Phenotype:** Normal Function

CPIC Population general No Action	**Implications** SLCO1B1: Typical myopathy risk and statin exposure
	Recommendation Prescribe desired starting dose and adjust doses based on disease-specific guidelines
	Other Considerations The potential for drug-drug interactions and dose limits based on renal and hepatic function and ancestry should be evaluated prior to initiating a statin.

Citations

- The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022. PMID:35152405

pitavastatin

Gene: SLCO1B1 **Genotype:** *1/*1 **Phenotype:** Normal Function

CPIC Population general No Action	**Implications** SLCO1B1: Typical myopathy risk and statin exposure
	Recommendation Prescribe desired starting dose and adjust doses based on disease-specific guidelines
	Other Considerations The potential for drug-drug interactions and dose limits based on renal and hepatic function and ancestry should be evaluated prior to initiating a statin.

Citations

- The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022. PMID:35152405

pravastatin

Gene: SLCO1B1 **Genotype:** *1/*1 **Phenotype:** Normal Function

[drug] *	**Implications:** SLCO1B1: Typical myopathy risk and statin exposure
Population: general	**Recommendation:** Prescribe standard starting dose and adjust doses based on disease-specific guidelines.
No Action	**Other Considerations:** The potential for drug-drug interactions and dose limits based on renal and hepatic function and proximity should be evaluated prior to initiating a statin.

Citations

- The clinical pharmacogenetics implementation consortium CPIC guideline for SLCO1B1 and simvastatin-induced myopathy. Clinical pharmacology and therapeutics. 2012. PMID:22617227
- The clinical pharmacogenetics implementation consortium guideline for SLCO1B1 and simvastatin-induced myopathy: 2014 update. Clinical pharmacology and therapeutics. 2014. PMID:24918167
- The Clinical Pharmacogenetics Implementation Consortium Guideline for SLCO1B1, ABCG2, and CYP2C9 genotypes and Statin-Associated Musculoskeletal Symptoms. Clinical pharmacology and therapeutics. 2022. PMID:35152399

Disclaimers and Other Information

A. Unreported Medications

This report is based on current scientific knowledge and available genetic testing data. It may not cover every medication on the market as pharmacogenetic information for some medications may be limited or unavailable. The results contained in this report is presented based on information that is available up to the date of this report. The information is subject to revisions as new drugs are continually being developed and new data is discovered.

B. Uncalled Genotypes

The interpretation of genetic data can be influenced by factors such as the quality of the sample, the specific genetic markers analyzed, and the algorithms used for analysis. In addition, unreported genotypes may occur in individuals with less common variants. As a result, certain genotypes may not be reported due to technical or interpretive limitations. While efforts are made to encompass a wide range of clinically relevant genes, in some cases, pharmacogenetic markers may still remain unlisted or underrepresented.

C. Interpretation of Results

The information contained in this report is intended to be interpreted by a licensed physician or other licensed healthcare professionals. This report is not intended to take the place of professional medical advice. Decisions regarding use of prescribed medications must be made only after consulting with a licensed physician or other licensed healthcare professional and should consider each patient's medical history and current treatment regimen.

D. CPIC Allele Function, Phenotype and Recommendation

All content is sourced from the CPIC database.

E. Level 3 PharmGKB annotations/ Level C CPIC guidelines

These specific drugs are based on level C CPIC guidelines or level 3 clinical annotations derived from the PharmGKB database. Level C CPIC guidelines identifies drugs where evidence does exist, but additional information is required to establish definitive conclusions. Drugs under this classification, therefore, have no current FDA approved prescribing or dosing recommendation at the time of this report. Level C CPIC guidelines indicate a need for cautious consideration and personalized treatment planning.

The drugs listed in this category are based on the current state of scientific knowledge and research available up to the date of this report. It is important to note that drugs categorized in this section and CPIC guidelines are subject to updates and revisions as new research and clinical data become available. It is important to stay informed about any changes that may affect your treatment as new discoveries emerge and/or prescribing information and recommendations are updated.

F. Drug Recommendation Summary and classification criteria using level 3 annotations

Soytes provides a resource that gives the individual the most up-to-date information on how certain drugs interact with that individual based on their specific genetic profile. A large majority of our recommendations come from FDA approved prescribing information and clinical annotations that are CPIC level B or above. For all other CPIC levels we recommend drugs only at PharmGKB level 3 using Soytes's described recommendation criteria.