Biron

View Video Guide

biron.com/pgx-report-video-guide/

or scan this QR code

Interpretation Guide

Pharmacogenomic (PGx) Report

For any questions, contact: 1-866-923-9222 ext 8702 or mcameron@biron.com

The following PGx report is a clinical decision support tool based on individual genetic results. It contributes to a better understanding and prediction of medication response and tolerability. This test does not predict the risk of any health problem. **Since response to medications is multifactorial, clinical judgment supersedes any recommendations provided.**

The report notifies you if the patient carries any genetic variant that can alter the following pharmacological parameters:

- pharmacokinetics: overall **exposure** to a medication depending on metabolic and efflux pump function;
- pharmacodynamics: the potential **efficacy** of a drug and whether the patient is predisposed to certain **atypical effects**.

These results do not change with age, but their interpretation can evolve as new data becomes available. Therefore, the Biron PGx reports are updated periodically. These results can also be useful for other medications, not covered by the report.

How to use pharmacogenomic recommendations

1. Only medications relevant for your patient need to be consulted.
2. Use the **Exposure** column to adjust doses for adequate plasma concentrations.
3. Use the **Efficacy** and **Risk of atypical effect** columns to choose the most compatible medication.

The **Exposure**, **Efficacy** and **Risk of atypical effect** columns are interpreted independently from each other. Medications are ordered by class with the most compatible options listed first within each class.

Exposure

- ↑ A higher dose may be required to achieve adequate plasma concentrations.
- ↓ A lower dose may be required to achieve adequate plasma concentrations.
- ∿ Several metabolic pathways are involved, but their capacities are opposed (e.g., PM and UM). Thus, a calculation of dose adjustments is not possible based on current data and closer monitoring is recommended.
- ✕ Drug not recommended by peer-reviewed guidelines due to a risk of toxicity or lack of efficacy.

Efficacy

When choosing between multiple clinically appropriate medications, you may give preference to a medication in which a lower number of variants have been identified (e.g., 2/2 is better than 4/6), in terms of their association with an increased likelihood of a poorer response or an atypical effect.

- ! Signifies the presence of a high-impact gene variant, which increases the probability of a poorer response.
- ✓ Signifies that all of the tested variants predict an increased likelihood of a better response, compared to non-carriers. This medication may be a good option.

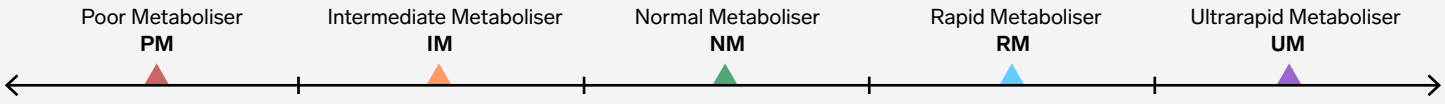
Risk of atypical effect

- ! Signifies the presence of variants associated with an increased risk of particular side effects, compared to non-carriers.
- ✕ Medication not recommended by peer-reviewed guidelines due to a risk of severe side effects,

The notification Normal efficacy* or Normal risk* signifies that there is currently no available data allowing for a genetically-based prediction of medication effect.

Nomenclature for enzyme phenotypes

(e.g., cytochrome P450s or CYP)



NM is generally used to establish standard doses. This dose may be too high for **PM/IM** or too low for **RM/UM**, warranting a dose adjustments or the consideration of an alternative agent. For a pro-drug (e.g., clopidogrel, tramadol), phenotype variability will have the opposite effect.

Inducible Metaboliser **(Ind)** - Specific for CYP1A2, which can have increased function in the presence of an inducer, such as tobacco smoke, comparable to **RM/UM**.