Pharmacogenomic (PGx) Testing
Tests Guide Appropriate Drug Selection and Dosing

Pharmacogenomic (PGx) testing (also known as pharmacogenomic biomarker testing) is a component of precision medicine that involves examining a patient’s inherited genes to detect variations that may impact the way a drug is broken down, absorbed and used within the body. Sometimes these variations can impact the safety and effectiveness of treatment. The same treatment given to patients with the same disease can produce different responses based on each person's inherited genes.

**PREScribing WITHOUT PHARMACOGENOMIC TESTING**

- **Same Drug and Dose**
  - **Same Disease**
  - Desired Response
  - No Response
  - Serious side effects

PGx testing can lead to better clinical outcomes for people with cancer by improving the effectiveness of treatment or by reducing the risk of adverse drug reactions that can cause a patient to stop treatment, or in some cases can lead to death.

**PREScribing WITH PHARMACOGENOMIC TESTING**

- **Same Disease**
  - PGx Testing
  - Responds to standard dose
  - A higher dose is needed for desired response
  - Lower dose is needed for desired response and to avoid serious side effects
  - Will not respond to this drug, a different drug is needed
  - Serious side effects cannot be avoided, a different drug is needed

By connecting patients to the right treatment and the right dose at the right time PGx-guided cancer treatment can also be cost-effective or cost-saving [2,3].

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