RPRD DIAGNOSTICS

— Right Patient | Right Drug —

MAKE PRECISION MEDICINE PART OF YOUR PRACTICE

Whole Pharmocogenomics Scan (WPS®)

Elevate Standard of Care with Preemptive Pharmacogenomics (PGx) Testing

Whole Pharmacogenomics Scan (WPS) is the most comprehensive, customizable, and scalable preemptive pharmacogenomics (PGx) test, which can analyze nearly all pharmacogenetic genes of a patient with a single, one-time test.[1]

1. WPS solution was developed based on the PharmacoScan™ assay. www.thermofisher.com/order/catalog/product/90302

IMPLEMENTING WPS

COMPREHENSIVE

Multiple genes may affect the response of one drug and each gene/drug combination has a different level of evidence and actionability.

We guide our customers to integrate the right level of PGx information that meets their system's needs and provides actionable clinical value to their patients.

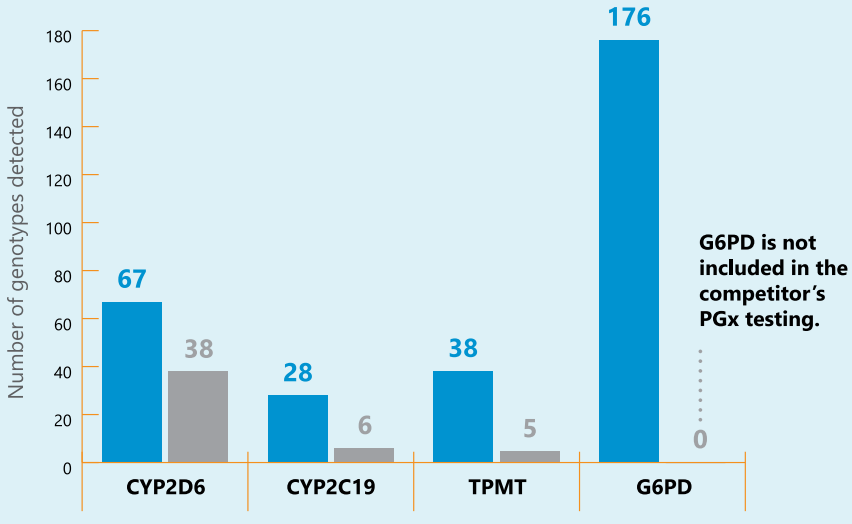
WPS

+ Provides deep coverage of genetic variants, including many rare alleles that are not identified by most other assays, and analysis of duplications/deletions, complex structural arrangements, and copy number information
+ Leads to more accurate and precise genotyping/ phenotyping of each PGx gene, including complex genes, such as CYP2D6
+ Enables the detection of many rare genotypes which is critical when diagnosing patients from diverse populations

COMPREHENSIVE COVERAGE

Source of info: The Clinical Pharmacogenetics Implementation Consortium (CPIC®), Pharmacogenomics knowledge base (PharmGKB)

COMPREHENSIVE DETECTION



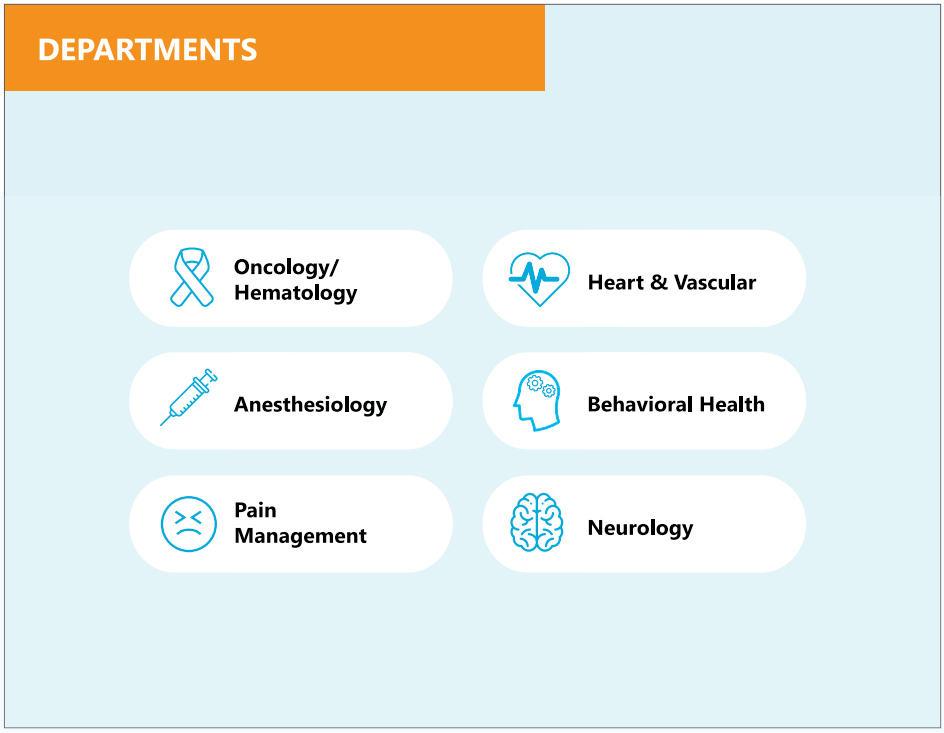
SCALABLE

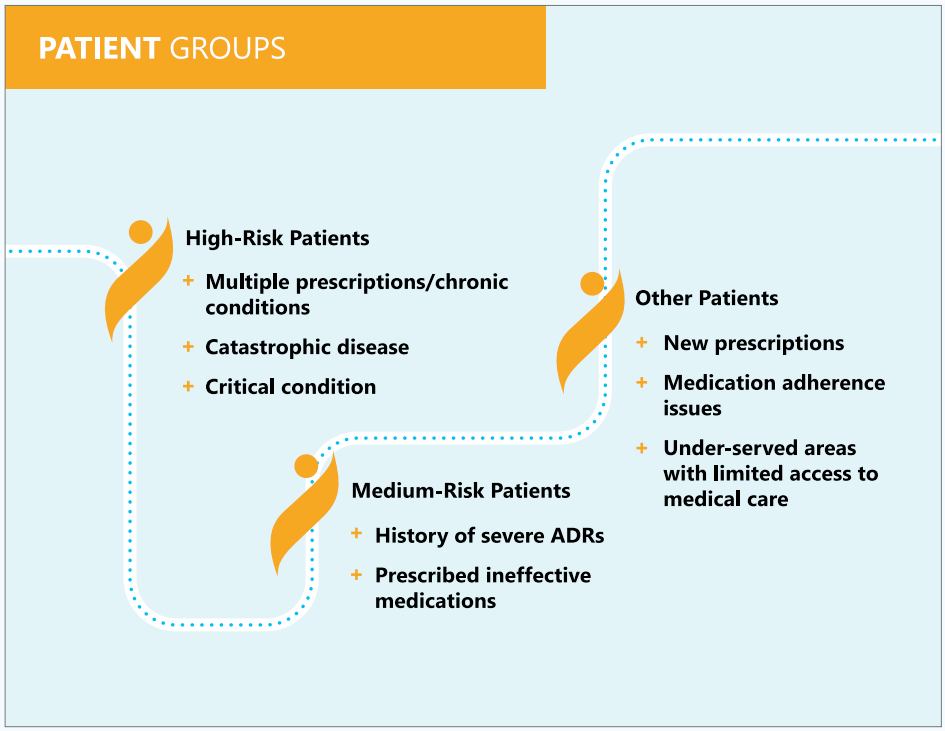
WPS customers can build their unique precision medicine program by beginning with one or multiple medical conditions or focusing on a particular group of patients. WPS knowledge base can expand to meet additional medical conditions and patient groups as the program grows.

By creating a patient's complete PGx database, WPS enables continuous re-analysis of the patient's PGx profile and updates clinical recommendations as new clinical guidelines and evidence become available to guide choice of medications and dosing.

WPS IMPROVES PATIENT OUTCOMES AND REDUCES COSTS

+ Guides choice of medications and dosing based on genetic profile
  - 18% of all the prescriptions in the US are affected by actionable PGx genes [2,3]
  - 90-99% of the population has high-risk variant for at least one established PGx gene [4,5]



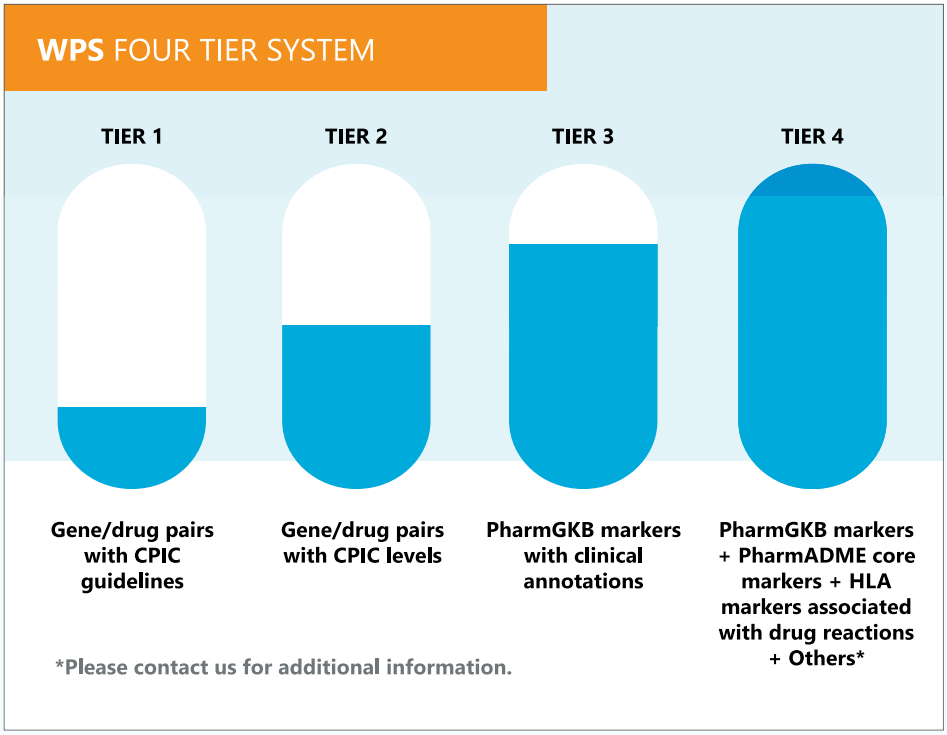


2. Clinical Pharmacogenetics Implementation Consortium (CPIC®). www. CPICpgx.org
3. Relling MV and Evans WE. *Nature*. 2015; 526(7573):343–350.
4. Ji Y et al, *J. Mol. Diagn*. 2016; 18:438-446
5. Dunnenberger HM, et al. *Annu. Rev. Pharmacol. Toxicol.* 2015; 55:89-106.

CUSTOMIZABLE

Customers can choose the genes/drugs combinations that provide best value to their patients with WPS four tier system.

We work closely with each customer to create a customized clinical report that best aligns with their medical practice and also adjust the clinical report as their teams and practices evolve.



INSTITUTING WPS PREEMPTIVE TESTING

Allows patient's PGx profile to be available before clinical decisions are made regarding future medications

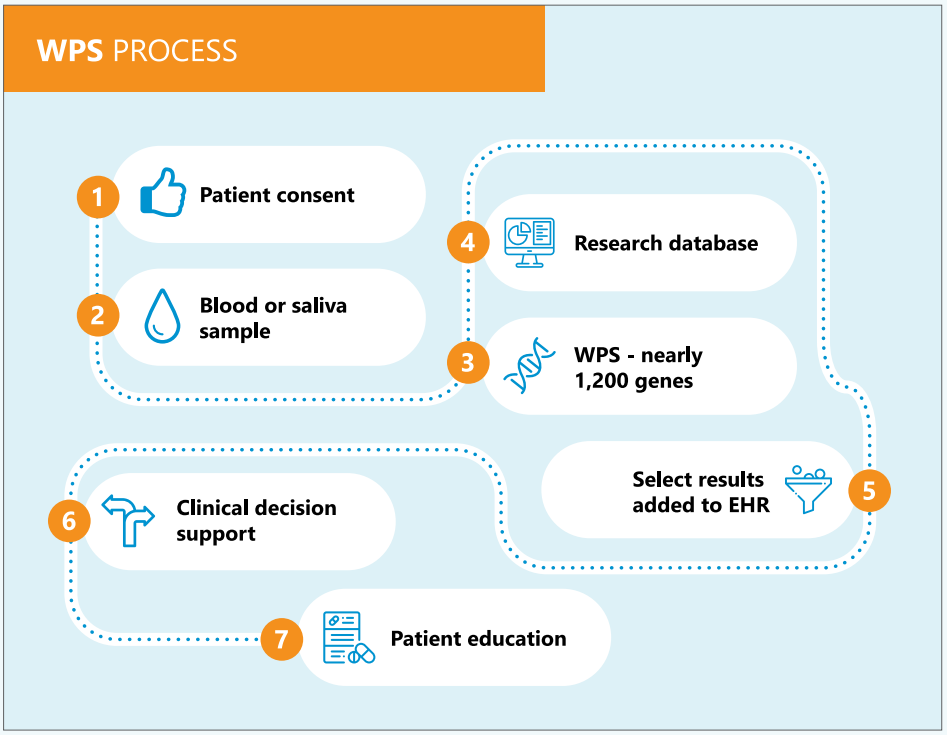
Improves potentially life-threatening decisions regarding best treatment options

Is cost effective since one test can potentially meet a patient's life-long PGx needs

CASE EXAMPLE

Leading Pediatric Hospital

+ Implemented preemptive PGx for patient care, using WPS and its predecessor since 2011[6,7]
+ Nearly 4,500 patients have benefited from the program as of November 2018[8]



KEYS TO SUCCESFUL WPS IMPLEMENTATION[6]

+ Get institutional support
+ Partner with a knowledgable clinical laboratory
+ Develop a process to manage any incidental findings
+ Develop a strategy to educate clinicians and patients
+ Develop a process to return results
+ Extensive use of informatics, especially clinical decision support, integrated to EHR

6. Hoffman JM, et al., *Am J Med Genet C Semin Med Genet.* 2014; 166C(1):45-55.
7. https://www.prnewswire.com/news-releases/rprd-diagnostics-partners-with-st-jude-childrens-research-hospital-to-offer-comprehensive-pharmacogenetics-testing-300539615.html
8. PG4KDS: Clinical Implementation of Pharmacogenetics. https://www.stjude.org/research/clinical-trials/pg4kds-pharmaceutical-science.html

ORDERING WPS

Ordering WPS fits into a standard laboratory ordering process. Complete the Test Requisition Form located on RPRDx.com and ship the sample to our CLIA-certified laboratory. The typical turnaround time to receive clinical results is 4-6 weeks from receipt of samples that meet specified requirements. Test results are reported Monday through Friday.

TEST	GENES	CPT CODE
WPS	4,627 markers in 1,191 genes of known PGx value	81479

Specimen Requirements

COLLECTION	3-5mL peripheral whole blood in EDTA tube
	Saliva in Oragene Dx, part# OGD-500
LABELING	Must label with the patient name plus one additional unique identifier, such as date of birth, medical record number, or date of collection
SHIPPING	Ambient temperature. Ship for RPRD receipt on Monday through Friday only
STABILITY	Samples must be received by RPRD within 7 days from time of collection
REJECTION	Blood sample may be rejected if frozen, hemolyzed, or clotted

ABOUT RPRD DIAGNOSTICS

RPRD Diagnostics specializes in providing innovative and complete precision medicine solutions including diagnostics, analytical, and supporting services to clinicians, researchers, and drug developers. RPRD's team of experts strive to unlock the power of science enabling personalized care for today and accelerating personalized therapies for tomorrow.

1225 Discovery Parkway, Ste 260
Milwaukee, WI 53226 USA

RPRDx.com
info@rprdx.com
Tel: +1 (414) 316-3097
Fax: +1 (414) 777-0058