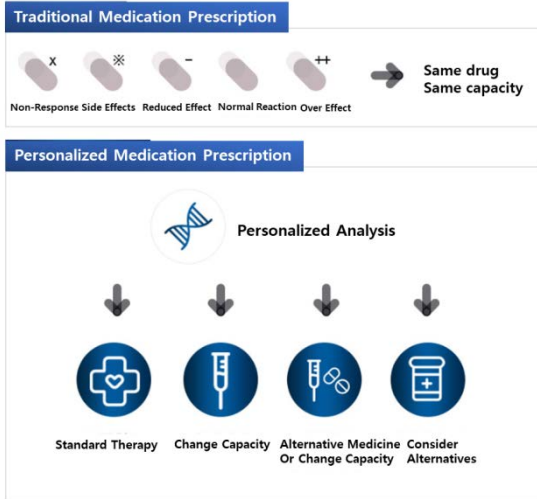


SPMED™ Pharmacogenetic Test Services

Pharmacogenetic Testing to Support Drug Prescription

What is Pharmacogenetic Testing?

People respond differently to the same medications – and people can even experience different side effects from the same drug. This means that a drug that is effective for one person may be less effective for another or that a drug that is safe for one person may be less safe for another person – even at the same dose. This is caused by variations in the expression levels and activities of enzymes involved in drug metabolism which can be determined by individual genetic characteristics. Pharmacogenetic tests are screening tests that examine the genotypes associated with drug reactions and provide information that can help doctors prescribe drugs based on scientific and clinical utility.



How do you Prepare the Specimen?

Specimen Type	Minimum Requirement	Retention Method
Whole Blood (Heparin or EDTA)	≥500μℓ	Frozen (≤-20°C, < 12month)
DNA	≥1μg(≥20ng/μℓ)	Frozen (≤-20°C, < 12month)
Dried Blood Spot (DBS)	Diameter 2.5cm, Two pieces	Room Temperature (dry, < 12month)

※ The required amount of sample may vary depending on the sample status or the number of genes(SNPs) being tested.

List of Services

✓ Pharmacogenetic Tests for Diagnosis

Inspection Name	Inspection List	Related Drugs
Drug Selection and Dose Prediction	CYP2C9	Celecoxib*, Glucocorticoids, Glimperide\$, Phenytoin*†\$, Warfarin*†, etc.
	CYP2C19	Amiripryline†, Citalopram*†\$, Clopidogrel*†\$, Doxepin*†, Omeprazole*†, Phenytoin*, etc.
	CYP2D6	Amiripryline*†\$, Aripiprazole\$, Atomoxetine\$, Clozapine\$, Codeine*†\$, Eliglustat*, Flecainide\$, Haloperidol\$, Metoprolol*†\$, Olanzapine\$, Propranolol*, Tamoxifen\$, Tolterodine*, Tramadol*†\$, etc.
	VKORC1	Acenocoumarol\$, Phenprocoumon\$, Warfarin*†\$, etc.
Preventing Side Effects of Anticancer Drugs	NAT2	Hydralazine, Isoniazid/Pyrazinamide/Rifampin*, Sulfasalazine*, etc.
	HLA-A	Carbamazepine*, etc.
	HLA-B	Abacavir*†\$, Allopurinol†, Carbamazepine*†, Pazopanib†, Phenytoin*†\$, Ribavirin\$, etc.
Prevention of Drug Hypersensitivity Reaction	UGT1A1	Arformoterol*, Atazanavir†, Belinostat†, Indacaterol*, Irinotecan\$, Nilotinib†, Pazopanib*, etc.
	TPMT	Azathioprine*†\$, Cisplatin†, Mercaptopurine*†\$, Thioguanine*†\$, etc.
	HLA-DQA1	Lapatinib*, etc.
	HLA-DRB1	Lapatinib*, etc.
Disease Anxiety Test	TGFB1	-
	MTHFR	-

* USFDA Pharmacogenetic biomarkers † CPIC Pharmacogenetic biomarkers \$ DPWG Pharmacogenetic biomarkers

✓ Research Support Services

	List	Elemental Technology
Pharmacogenetic Test for Research	Phase I Enzymes	CYPs(CYP1A2, CYP2C8, CYP3A7, CYP4F2, etc.), etc.
	Phase II Enzymes	NAT2, UGTs, SULTs etc.
	Transcription Factors	NR112, NR113, etc.
	Transporters	ABCs, SLCs, etc.
	Pharmacodynamics	VKORC1, IL28B, PON1, POR, TYMS etc.
Research Support Service	Method Development	Sequencing, SNaPshot, Real-time PCR, NGS, etc.
	Haplotype, LD Analysis	Haploview, SNPalyzer, PLINK, Seattle SNPs Analysis
	Prediction of SNP Function	Polyphen, SIFT, Blasome, Transfec
	CNV Analysis	Real-Time PCR using CNV Probe
	Gene Expression Analysis	Real-Time PCR using Gene Probe
Specimen Management	Related Articles Search & Selection of drug Related Genes	Search for Relevant Articles and Select Drug-Related Genes
	Systematic Management of Clinical Specimen	Nucleic Acid Isolation, Production of Immortalized Cell Line, Quality Control

Procedure for Pharmacogenetic Test



Preparation for Pharmacogenetic Test

- Required Documents:
 - Diagnosis: Request and Consent for Genetic Test
 - Research: Request and Consent for Genetic Test, Notice of IRB Deliberation Results
- Preparation of Specimen: Whole blood, DNA, DBS, etc.

- Please check the precautions for each specimen before sending.
- Testing or research support services for Pharmacogenetic-based studies.
- Customized test methods upon request.
- For more information, please visit [http://www.spmed.kr].



<http://www.spmed.kr>
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