Advanced Report

Physician's Report For:

John Doe

PHARMAZAM

John Doe Personal Profile

For best results, Pharmazam recommends viewing this report with Google Chrome or Firefox. Other viewers may or may not show all pertinent data

CURRENT MEDICATIONS:

- PAXIL 10 MG TABLET
- METFORMIN 500 MG TABLET

CURRENT DISEASES:

ALLERGIES:

FOOD:

SOY	YES
CITRUS	YES
PROTEIN	YES
FIBER	YES
CHOCOLATE	YES
CHEESE	YES
SOUR CREAM	YES
YOGURT	YES
FRUIT	YES
EGG	YES
TOFU	YES
FISH	YES
NUTS	YES

BEVERAGES:

MILK	YES
SODA	YES
TEA	YES
COFFEE	YES

LIFESTYLE:

ALCOHOL	YES
TOBACCO	NO
PREGNANT	NO
MENOPAUSAL	NO
OVER 70	NO

PATIENT INFORMATION SUMMARY PAGE:

This is a summary genetic report for your patient to share with other healthcare providers

PATIENT INFORMATION

John Doe

PHARMAZAM CONTACT INFO

12902 Commodity Place, Bldg. 3
Westchase, FL 33626
Phone: 888-972-9331

PHARMACOGENETIC TEST RESULTS

Your DNA is tested for a comprehensive list of Pharmacogenomics genes and variants. A subset of these genes with their variants with the PharmGKB CPIC clinical annotation levels of evidence of 1A and 1B (High level of evidence), 2A and 2B (Moderate level of evidence) are currently being reported for clinical pharmacogenetic testing. Our recommendations and guidelines are based on publications by International pharmacogenetics expert groups, consortia and regulatory bodies (PharmGKB, CPIC, DPWG, FDA, EMA, FDB). These recommendations and guidelines may change as new scientific information and evidence becomes available.

Gene	SNPs	Genotype / Diplotype	Phenotype
CYP2C19	rs4244285 rs4986893 rs28399504 rs56337013 rs72552267 rs41291556 rs6413438 rs12248560	*1/*1	Normal Metabolizer
CYP2C9	rs1799853 rs1057910 rs28371686 rs9332131 rs7900194 rs28371685	*1/*3	Intermediate Metabolizer
CYP2D6 CNV: 1	rs16947 rs1135840 rs35742686 rs3892097 rs5030655 rs1065852 rs28371706 rs28371725	*1/*1	Normal Metabolizer
CYP3A4	rs2740574 rs4986910 rs4987161 rs35599367	*1/*1	Normal Metabolizer

CYP3A5	rs10264272 rs41303343 rs776746	*3/*3	Poor Metabolizer/Non-Expresser Metabolizer
DPYD	rs3918290 rs1801158 rs1801159 rs1801160 rs1801265 rs67376798	*5/*5	Normal Metabolizer
TPMT	rs1800462 rs1142345 rs1800460 rs1800584	*1/*1	Normal Metabolizer
SLCO1B1	rs2306283 rs4149056	*1A/*1B	Normal Metabolizer
APOE	rs7412	CT	CT genotype may have better response to Atorvastatin, Higher Reduction in LDL
FACTOR II	rs1799963	GG	Normal Risk of Thrombosis (VTE)
FACTOR V	rs6025	CC	Normal Risk of Thrombosis (VTE)
ABCB1	rs1045642	GG	GG genotype may have increased risk of methotrexate toxicity or may have decreased risk of nevirapine hepatotoxicity
ABCC4	rs1751034	TT	TT genotype may have higher renal clearance of tenofovir
ABCG2	rs2231142	GG	GG genotype may have reduced response to rosuvastatin/may have improved response to allopurinol and require lower dose
ANKK1	rs1800497	GG	GG genotype may have decreased risk of hyperprolactinemia and weight gain, but increased risk of tardive dyskinesia, when treated with anti-psychotic drugs
C11ORF65	rs11212617	AC	AC genotype in patients with Diabetes may have increased response to metformin
CALU	rs339097	AA	AA genotype may require lower maintenance dose of warfarin
CCHCR1	rs746647	AG	AG genotype may have increased risk of Nevirapine-induced rash
CES1	rs71647871	CC	CC genotype may have higher on-treatment ADP-induced platelet aggregation and lower levels of clopidogrel active metabolite
CHRNA3	rs1051730	AA	AA genotype may have increased risk for nicotine dependency, decreased lung function when exposed to nicotine
CHRNB2	rs2072661	GG	GG genotype may have decreased risk for smoking addiction, and increased likelihood of smoking cessation

COMT	rs4680	AA	AA genotype may have increased likelihood of smoking cessation and decreased risk of relapse on nicotine replacement therapy
COQ2	rs4693075	GC	GC genotype may have increased risk of statin-related muscle symptoms
CYP19A1	rs4646	CC	CC genotype may have decreased treatment efficacy to tamoxifen pre-menopausal women and increased treatment efficacy in post-menopausal women
CYP2B6	rs28399499	TT	TT genotype may have decreased plasma drug exposure when treated with nevirapine and efavirenz
CYP2B6	rs3745274	GT	GT genotype may have decreased clearance of efavirenz and nevirapine
CYP2B6	rs4803419	CT	CT genotype may have higher plasma concntration of efavirenz
CYP4F2	rs2108622	CC	CC genotype may require lower dose of warfarin and acenocoumarol
EPHX1	rs2234922	AA	AA genotype may require decreased dose of carbamazepine
EPHX1-1	rs1051740	TT	TT genotype may have lower metabolsm and may require decreased dose of carbamazepine
FKBP5	rs4713916	GG	GG genotype may have reduced response to antidepressants
GGCX	rs11676382	CC	CC genotype may need increased dose of warfarin
GP1BA	rs6065	CC	CC genotype may have increased risk for aspirin resistance
GSTP1	rs1695	GG	GG genotype patients with cancer treated with platinum-based drugs may have decreased risk of toxicity/may have better treatment outcome to fluorouracil and oxaliplatin
HMGCR	rs17244841	AA	AA genotype may more likely to respond to statins
HTR1A	rs6295	CG	CG genotype with panic disorder treated with paroxetine may have reduced response
HTR2C	rs1414334	G-	Male patients with the G genotype treated with anti-psychotics may have decreased risk of developing metabolic syndrome
INFL3	rs12979860	CT	CT genotype in patient with Hepatitis C genotype 1 may have decreased response to peg interferon alpha
KIF6	rs20455	GG	GG genotype may have higher risk to coronary disease and more likely to benefit from pravastatin and atorvastatin treatment
LTC4S	rs730012	AA	AA genotype treated with aspirin may have decreased risk of urticaria

MTHFR	rs1801133	AA	AA genotype may require lower dose of methotrexate, may have poorer response to treatment and increased risk of toxicity
NUDT15	rs116855232	CC	CC genotype may have reduced side effects from thiopurines
OPRM1	rs1799971	AA	AA genotype may have lower cortisol response/ may have improved response to opioids and may require lower dose
SCN1A	rs3812718	CT	AG genotype may have increased risk for non-response to aspirin

Interaction Levels No Interaction Minimal Interaction Moderate Interaction Major Interaction

Prescription Medications: Always review all results with physician! Over-the-Counter Medications: Always review all results with pharmacist or physician! All results assume that all relevant patient and third party information collected and organized is accurate and up-to-date.

RISK FACTOR DETECTED

WARFARIN AND CYP2C9 GENE

PHARM D RECOMMENDATIONS

PATIENTS WITH AC GENOTYPE MAY REQUIRE AN DECREASED DOSE OF WARFARIN COMPARED TO PATIENTS WITH THE AA GENOTYPE.

The updated guideline for pharmacogenetics-guided warfarin dosing is published by the CPIC. The recommendations for dosing is for both pediatric and adult patients that are specific to continental ancestry and are based on genotypes from CYP2C9, VKORC1, CYP4F2 and rs12777823. Level of evidence: High. Dosing recommendation for ADULT patients: If VKORC1 and CYP2C9*2 and *3 genotype is available, non-African ancestry, for VKORC1-1639G>A and CYP2C9*2 and *3: calculate dose of warfarin based on validated published pharmacogenetic algorithms. Classification of recommendation: Strong. For loading dose, a pharmacogenetic-based initiations dose algorithm could be considered. Classification of recommendation: Optional. Carriers of CYP2C9*5, *6, *8 or *11 variant alleles, decrease calculated dose by 15-30%. Classification of recommendation: Optional. Carriers of CYP4F2 rs2108622 T allele: increase dose by 5-10%. Classification of recommendation: Optional. If VKORC1 and CYP2C9*2 and *3 genotype is not available, dose clinically. African ancestry: If CYP2C9*5, *6, *8, and *11 also tested, for VKORC1-1639G>A and CYP2C9*2 and *3: calculate dose of warfarin based on validated published pharmacogenetic algorithms. Carriers of CYP2C9*5, *6, *8 or *11 variant alleles, decrease calculated dose by 15-30%. Classification of recommendation: Moderate. If not CYP2C9*5, *6, *8, and *11 also tested, dose clinically. If African-American and rs12777623 tested: rs12777823 A carriers: decrease dose by 10-25%. Classification of recommendation: Moderate. If not African-American: For loading dose, a pharmacogenetic-based initiations dose algorithm could be considered. Classification of recommendation: Optional. ----------Dosing recommendation for PEDIATRIC patients: If VKORC1 and CYP2C9*2 and *3 genotype is available, European ancestry, for VKORC1-1639G>A and CYP2C9*2 and *3: calculate dose of warfarin based on validated published pharmacogenetic algorithms. Classification of recommendation: Moderate. Non-European ancestry: Dose clinically; If VKORC1 and CYP2C9*2 and *3 genotype is not available, dose clinically. For GGCX gene with rs11676382 variant, patients (race: Asian, White) with the CC genotype may need an increased dose of warfarin as compared to patients with the CG and GG genotypes. Level of evidence: Moderate. For CALU gene with rs339097 variant, patients (race: Black) with the AA genotype who are treated with warfarin may need a lower maintenance dose as compared to patients with the AG or GG genotype. Level of evidence: Moderate.

Interaction Levels No Interaction Minimal Interaction Moderate Interaction Major Interaction

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RISK FACTOR DETECTED

WARFARIN AND VKORC1 GENE

PHARM D RECOMMENDATIONS

PATIENTS WITH CT GENOTYPE MAY REQUIRE AN DECREASED DOSE OF WARFARIN AS COMPARED TO PATIENTS WITH THE CC GENOTYPE.

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RISK FACTOR DETECTED

WARFARIN AND GGCX GENE

PHARM D RECOMMENDATIONS

PATIENTS WITH CC GENOTYPE MAY NEED AN INCREASED DOSE OF WARFARIN AS COMPARED TO PATIENTS WITH THE CG AND GG GENOTYPES.

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RISK FACTOR DETECTED

WARFARIN AND CALU GENE

PHARM D RECOMMENDATIONS

PATIENTS WITH AA GENOTYPE MAY REQUIRE A LOWER DOSE OF WARFARIN.

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Interaction Levels No Interaction Minimal Interaction Moderate Interaction Major Interaction

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RISK FACTOR DETECTED

WARFARIN AND CYP4F2 GENE

PHARM D RECOMMENDATIONS

PATIENTS WITH CC GENOTYPE MAY REQUIRE A LOWER DOSE OF WARFARIN.

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Reaction Levels No Conflict Moderate Severe Interaction Contraindicated

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RISK FACTOR DETECTED

WARFARIN 4 MG TABLET AND PAXIL 10 MG TABLET INTERACTION

Severe Interaction - Action is required to reduce risk of severe adverse interaction.

PHARM D RECOMMENDATIONS

Concurrent use of selected anticoagulants and SSRIs or SNRIs may increase the risk for bleeding.

WARFARIN 4 MG TABLET AND PAXIL 10 MG TABLET MAY INTERACT BASED ON THE POTENTIAL INTERACTION BETWEEN SELECTED ANTICOAGULANTS (VITAMIN K ANTAGONISTS) AND SSRIS; SNRIS.

Reaction Levels No Conflict Significant More Significant Most Significant

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RISK FACTOR DETECTED

More Significant - Documented(more clinical data may be needed): Assess risk to patient and take action as needed.

The use of warfarin 4 mg tablet may interact with food in that FOOD HIGH IN VITAMIN K MAY DECREASE EFFECT.

PHARM D RECOMMENDATIONS

KEEP VITAMIN K CONTENT OF DIET CONSISTENT.