

RightMed[®] Oncology Medication Report

The RightMed Oncology Report is a specialty report. It contains a set of medications selected and classified by OneOme for use in the treatment of oncology patients and their supportive care needs.

Patient and report summary

Patient Patient Origina	name: Sample Patient date of birth: 1958-07-04 I report date: 2024-09-06		Orderir Orderir Produc Report	ng provider: Sample Doctor ng facility: LIMSTITUTION t type: Oncology Medication type: Original	
	Major gene- interactions	drug	$3^{\text{Chemotherapeutic}}_{\text{agents}}$	3 Supportive care medications	
	Moderate ge interactions	ene-drug	O Chemotherapeutic agents	8 Supportive care medications	
Repo	ort legend Based or described	n this patient' d below.	s genetic profile, medications a	re reported according to genotype-pro	edicted interactions
	Major gene-drug interaction	Major gen indicates a	otype-drug interaction identifie an elevated risk of adverse read	d that affects the metabolism of the state of the state of the state of efficacy.	medication and/or
	Moderate gene-drug interaction	Moderate or indicate	genotype-drug interaction ider an elevated risk of adverse r	ntified that affects the metabolism of eaction or loss of efficacy.	the medication and/
	Minimal gene-drug interaction	Minimal ge metabolisi	enotype-drug interaction identi m or predict an elevated risk of	fied that does not significantly affect adverse reaction or loss of efficacy.	medication
i	Limited pharmacogenetic impact	No pharma types of go indication-	acogenetic variants demonstra enetic tests that may guide pre establishing testing) are not ta	te a significant impact on medication scribing (e.g., tumor marker testing, o ken into account.	response. Other diagnostic, or
lcon	Some medica provided by I	ations are rep =DA, CPIC, o	ported with icons to indicate tha r other professional associations	t specific clinical annotations and/or d s are available in Vantage.	losing guidelines
*	FDA evidence	This medic variants or found at: h associatior	ation is listed on the FDA Table genetic variant-inferred pheno ttps://www.fda.gov/medical-de ns.	e of Pharmacogenetic Associations. N types may be accounted for. Further vices/precision-medicine/table-pharn	Not all genetic information can be nacogenetic-
+	Increased exposure	Total expos	sure to active compound(s) may	y be increased. Monitor for adverse e	effects.
-	Decreased exposure	Total expos	sure to active compound(s) may	y be decreased. Monitor for lack of th	nerapeutic response.
Z	Difficult to predict	Total expos	sure to active compound(s) is d	ifficult to predict. Monitor patient res	ponse.
ì	Reduced response	Response than expos	to medication may be lowered sure (e.g. receptor function).	due to genetic changes impacting m	echanisms other
 Image: A second s	Additional testing	According	to FDA labeling, additional labe	oratory testing may be indicated.	
	Professional guideline	Medicatior Avoidance	n has professional guidelines as , dose adjustment, or heighten	ssociated with this patient's genetic t ed monitoring may be indicated.	est results.



Report and laboratory comments

Secondary findings

This patient is a carrier for one or more pathogenic or likely pathogenic variants in the following gene(s): DPYD. Please review the *Gene and phenotype summary* for additional information and consider genetic counseling as appropriate.

Genotype-predicted interactions for chemotherapeutic agents

Chemotherapy			
Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	(i) Limited pharmacogenetic impact
 Capecitabine * 🏥 1, 5, 24, 26, 		Belinostat 1, 92, 97 (Beleodaq®)	
33, 62, 86 (Xeloda®) ■ Fluorouracil 🜟 😭 1, 5, 24, 26, 33,		 Docetaxel 1 (Docefrez[®], Taxotere[®]) 	
62, 86 (Adrucil®)		 Irinotecan * 1, 2, 26, 28, 30, 53 (Camptosar[®]) 	
		 Mercaptopurine 1, 3, 26, 59, 74, 92 (Purixan®) 	
		Tamoxifen * 1, 2, 31 (Soltamox®)	
		 Thioguanine 1, 3, 26, 59, 74, 92 (Tabloid®) 	
Kinase inhibitors (KIs) and r	nonoclonal antibodies (m/	Abs)	
🚯 Major gene-drug interaction	/ Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact
Pazopanib * 🙀 1 (Votrient®)		🗖 Dasatinib 🔗 1 (Sprycel®)	
		🛯 Gefitinib 🌟 🧪 1 (Iressa®)	
		 Lapatinib * / 1, 79 (Tykerb[®]) 	
		🔹 Nilotinib 🌟 🧪 1, 4 (Tasigna®)	
		Ruxolitinib 1 (Jakafi [®])	
		Temsirolimus 1 (Torisel®)	
Genotype-predicted i	nteractions for suppo	ortive care medicatior	IS
Gastrointestinal manageme	ent (nausea/vomiting, app	etite, gastritis, GERD)	
Major gene-drug interaction	Moderate gene-drug interaction	 Minimal gene-drug interaction 	(i) Limited pharmacogenetic impact

Chlorpromazine 1, 70, 88

Dronabinol 1, 92 (Marinol®,

Fosaprepitant 1, 65 (Emend)

Haloperidol 1, 2, 69, 87, 95

Metoclopramide
/ 1, 8, 92

(Thorazine®)

Syndros®)

Injection®)

(Haldol®)

(Reglan®)

Dexlansoprazole 1, 56, 92

Lansoprazole 1, 26, 56, 92

Omeprazole 1, 26, 29, 56,

Pantoprazole 👔 1, 26, 56, 92

(Dexilant®)

(Prevacid®)

(Protonix®)

63, 92 (Prilosec®)



Gastrointestinal manage	ement (nausea/vomiting, appe	etite, gastritis, GERD) (cont.)	
Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact
		 Ondansetron 1, 10, 45, 93 (Zofran[®]) 	
Pain management (opio	id therapy)		
() Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact
		Codeine 1, 21, 26, 57, 61, 92	
		 Hydrocodone 1, 19, 20 (Hysingla[®], Zohydro[®]) 	
		 Methadone 1, 21, 27 (Dolophine®, Methadose®) 	
		Tramadol 1, 21, 26, 61, 92 (Ultram [®])	
Neuropathy and non-op	ioid pain management		
Najor gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	(i) Limited pharmacogenetic impact
		 Amitriptyline * 1, 2, 26, 35, 36, 98 (Elavil®) 	Gabapentin (Neurontin®)
		Celecoxib 1, 89, 92 (Celebrex®)	
		 Clomipramine 1, 26, 35, 92 (Anafranil®) 	
		 Desipramine 1, 35, 92 (Norpramin®) 	
		📕 Doxepin 🌟 📔 1, 35 (Silenor®)	
		 Flurbiprofen [1] 1, 89, 92 (Ansaid[®]) 	
		 Ibuprofen * 1, 48, 89 (Advil[®], Motrin[®]) 	
		 Imipramine * 1, 26, 35, 80, 81 (Tofranil[®]) 	
		 Meloxicam 1, 89, 92 (Mobic[®]) 	
		 Nortriptyline 1, 26, 35, 92 (Pamelor[®]) 	
		 Piroxicam * 1, 71, 72, 89 (Feldene[®]) 	
		 Trimipramine * 1, 35, 51, 52 (Surmontil[®]) 	
Mental health (antidepre	essants, anxiolytics)		
Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact
		Bupropion 1, 90, 100 (Wellbutrin®)	
		■ Citalopram 🚉 1, 11, 12, 26, 92 (Celexa®)	
		Diazepam 🜟 1, 40 (Valium®)	



Mental health (antidepressants, anxiolytics) (cont.)

Major gene-drug interaction

Moderate gene-drug interaction



- Sertraline [] 1, 11, 12 (Zoloft®)
- Venlafaxine 1, 11, 26, 67, 82, 85, 92 (Effexor®)
- Vortioxetine 1, 11, 92 (Trintellix®)

Neuropsychiatry (anticonvulsants, smoking cessation, sleep medication)

Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact	
		Brivaracetam 1, 92 (Briviact®)	Levetiracetam (Keppra [®])	
		 Carbamazepine	 Temazepam (Restoril®) Varoniclino (Chartiv®) 	
		Clobazam 1, 92, 99 (Onfi®)		
		 Eslicarbazepine 1, 6, 47, 73 (Aptiom[®]) 		
		■ Fosphenytoin 1, 2, 6, 13, 16, 60, 68 (Cerebyx [®])		
		Lamotrigine 1, 6, 60, 73 (Lamictal [®])		
		 Nicotine 17, 22, 44, 66 (Nicoderm C-Q[®], Nicorette[®], Nicotrol[®]) 		
		 Oxcarbazepine * 1, 6, 73 (Trileptal[®]) 		
		Phenytoin 1, 2, 6, 13, 16, 60, 68 (Dilantin [®])		
		Quetiapine 1, 9, 50, 91, 94 (Seroquel [®])		
		Trazodone 1 (Desyrel [®])		
Antimicrobial (antibiotics, a	antifungals)			
🕐 Major gene-drug interaction	⚠ Moderate gene-drug interaction	Minimal gene-drug interaction	i Limited pharmacogenetic impact	
		Isavuconazole 1 (Cresemba®)	Fluconazole (Diflucan [®])	
		 Itraconazole 1 (Onmel[®], Sporanox[®]) 	 Levofloxacin (Levaquin®) Moxifloxacin (Avelox®) 	
		 Voriconazole 1, 15, 26, 64, 92 (Vfend®) 		



Antithrombosis and cardiovascular management (hypertension, hyperlipidemia)

() Major gene-drug interaction	Moderate gene-drug interaction	Minimal gene-drug interaction	(i) Limited pharmacogenetic impact
 Lovastatin + 11 1, 18 (Mevacor®) Pitavastatin + 11 1, 18 (Livalo®) Simvastatin + 11 1, 18 (Livalo®) Simvastatin + 11 1, 18 (Livalo®) 	 Atorvastatin 	 Carvedilol * 1 (Coreg®) Cilostazol 1, 91 (Pletal®) Clopidogrel * 1, 2, 26, 83, 84 (Plavix®) Losartan 1, 7, 25, 54, 78 (Cozaar®) Metoprolol * 1, 2, 26 (Lopressor®, Toprol XL®) Ticagrelor 1 (Brilinta®) Warfarin * 1, 14, 42, 43 (Coumadin®, Jantoven®) 	 Lisinopril (Prinivil®, Zestril®) Prasugrel (Effient®) Spironolactone (Aldactone®)
Other	↑ Moderate gene-drug interaction	Minimal gene-drug interaction	(i) Limited pharmacogenetic impact
		 Allopurinol * 23, 34, 38, 49, 76 (Aloprim®, Zyloprim®) Ethinyl estradiol 1, 2 Fesoterodine * 1 (Toviaz®) Tamsulosin * 1 (Flomax®) 	 Risedronate (Actonel®, Atelvia®)

Genotype-derived classification of medications is provided as a service by OneOme and is intended solely for use by a medical professional who has reviewed and understands all sections within this report, including possible limitations of the services provided by OneOme. The relationships between the drugs and pharmacogenes annotated in this report are supported by scientific evidence that meets OneOme's criteria for inclusion. The order in which drugs are listed does not have any clinical or medical implications. Commonly used trade names for medications are listed for reference only. The list may not be inclusive of all trade names available and does not indicate preference or recommendation by OneOme of one medication product over another. For more information on these medications, for a list of additional medications curated but not annotated by OneOme, or to evaluate possible drug-to-drug interactions, please consult Vantage, which is accessible through the provider portal at portal.



Gene and phenotype summary

Gene	Genotype		Phenotype summary / Metabolic status
CYP1A2	*1A/*1A	PM IM NM RM UN	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
CYP2B6	*1/*1	PIN IM NM RM UN	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
CYP2C9	*1/*1	PIN IM NM RM UN	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
CYP2C19	*1/*1	PIN IM NM RM UN	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
CYP2C Cluster	rs12777823 GG		Normal CYP2C rs12777823 homozygous wild-type genotype consistent with normal clearance of a certain medication, independent of the impact of CYP2C9*2 and *3. CYP2C rs12777823, together with CYP4F2, CYP2C9, and VKORC1, may affect treatment management of a certain medication.
CYP2D6	*1/*1	PM IM NM RM UM	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
СҮРЗА4	*1/*1	PM IM NM RM UM	Normal metabolizer Fully functional enzyme activity is likely based on the genotype results. Normal metabolism of the medication affected by this gene is predicted.
СҮРЗА5	*3/*3	PIN IM NM RAY UN	Poor metabolizer This CYP3A5 genotype is associated with the phenotype most prevalent in studies used to define standard dosing guidelines.



Gene and phenotype summary (cont.)

			Normal activity
CYP4F2	*1/*1		Genotype consistent with normal activity of the CYP4F2 enzyme, which catalyzes the metabolism of vitamin K, in counterpoint to the activity of VKORC1. CYP4F2, together with CYP2C9, VKORC1, and a variant in CYP2C Cluster, may affect treatment management of a certain medication.
CONT			Low activity
COMI	rs4680 AA	<u> </u>	The AA (Met/Met) genotype is associated with lower COMT activity than the GG (Val/Val) or GA (Val/Met) genotypes.
			Intermediate metabolizer
DPYD	*1/*13		DPD activity score= 1. This genotype and activity score is consistent with an intermediate metabolizer phenotype. Decreased DPD enzyme activity is associated with an increased risk for severe or fatal drug toxicity when treated with fluoropyrimidine drugs.
		\frown	Normal risk
F2	rs1799963 GG		Normal risk of thrombosis associated with Factor II (prothrombin). Other genetic and clinical factors contribute to the risk for thrombosis.
		\bigcirc	Normal risk
F5	rs6025 GG		Normal risk of thrombosis associated with Factor V. Other genetic and clinical factors contribute to the risk for thrombosis.
		•	Altered receptor function
GRIK4	rs1954787 TT	<u> </u>	Homozygous variant glutamate ionotropic receptor kainate type subunit 4 (GRIK4) genotype is consistent with altered receptor function.
			Normal risk
			Negative for the presence of the HLA-A*31:01 allele. Normal risk of
HLA-A	Negative		structural similarity. Hypersensitivity and severe cutaneous reactions
			may occur regardless of the presence of the HLA-A*31:01 allele, in
			particular the presence of the HLA-B ²¹ 5:02 allele is associated with severe cutaneous reactions induced by certain medications.
			Increased risk: HLA-B*57:01 positive
			Positive for presence of the HLA-B*57:01 allele. Negative for presence of the HLA-B*15:02 and HLA-B*58:01 alleles. Increased risk of
			hypersensitivity and severe hepatotoxicity induced by certain
HLA-B	Positive for		medications. Hypersensitivity, severe cutaneous reactions, and severe
	57.01		HLA-B*57:01, or HLA-B*58:01 alleles. In particular, the presence of the
			HLA-A*31:01 allele is associated with hypersensitivity reactions induced
			by a certain medication, and possibly other medications of structural similarity.



Gene and phenotype summary (cont.)

HTR2A	rs7997012 TT	Variant absent The TT genotype is the wildtype genotype associated with intron 2 of the HTR2A gene.
NUDT15	*1/*1	Normal metabolizer NUDT15 genotype is consistent with normal enzyme activity and is not associated with an increased risk of thiopurine-induced toxicities. Toxicities with thiopurines can occur due to impaired TPMT activity independently from the NUDT15 activity.
OPRM1	rs1799971 AA	Variant absent The AA genotype (or Asn/Asn isoform) is the wildtype genotype associated with the mu-1 opioid receptor.
SLC6A4	L/L (La/La)	Typical to increased expression Genotype consistent with a typical to increased expression of the SLC6A4 transporter compared to other genotypes. This genotype was shown to exhibit different phenotypes in East Asian populations, as opposite outcomes were observed for this genotype in East Asian populations when compared to Caucasian populations.
SLCO1B1	*1/*5	Decreased function SLCO1B1 genotype consistent with decreased function of the OATP1B1 transporter.
ТРМТ	*1/*1	Normal metabolizer TPMT genotype is consistent with a normal metabolizer phenotype and is not associated with an increased risk of thiopurine-induced toxicities. Toxicities with thiopurines can occur due to impaired NUDT15 activity independently from the TPMT activity.
UGT1A1	*1/*1	Normal metabolizer Genotype consistent with fully functional UGT1A1 enzyme activity, or a normal metabolizer phenotype.
VKORC1	rs9923231 GG	Normal activity Genotype consistent with normal activity of the vitamin K epoxide reductase enzyme, associated with c1639GG (rs9923231). VKORC1, together with CYP2C9, CYP4F2, and a variant in CYP2C Cluster, may affect treatment management of a certain medication.

CYP phenotype abbreviations

DM	Poor metabolizer
1 101	
IM	Intermediate metabolizer
NM	Normal metabolizer
RM	Rapid metabolizer
UM	Ultrarapid metabolizer



Test information

Specimen ID: 8871789060668	Clinical testing performed by:	Reported by: Ellie Jhun in None
Specimen type: Buccal swab	OneOme	CLIA: 24D2109855
Collection date: 2024-09-01	807 Broadway St. NE Suite 100	CAP: 9432670
Receive date: 2024-09-06	Minneapolis, MN 55412, United States	NY PFI: 9226

Test results

The following analytical results were interpreted by OneOme to produce the pharmacogenomic interpretations and annotations described in the *Gene and phenotype summary*. Method-specific analytical limitations or inferred haplotypes may limit the ability to produce a definitive phenotype interpretation. See *Methodology and limitations* and/or the *Report and laboratory comments* sections for additional information.

1775551 NM_0007614:c-9140C-A CC Ins7254933 NM_000108.2:76.78644ACT ACTA/ 17209326 NM_0007614:c-10-1037-G TT Ins72649338 NM_000106.5::76.78644ACT ACTA/ 17209326 NM_0007614:c-10-1037-G TT Ins72649338 NM_000106.5::76.786444ET TT 172729438 NM_0007614:c-10-1037-G TT Ins72649328 NM_000106.5::76.737.3884FT T 172729438 NM_0007614:c-10-1013C-T CC Ins9243938 NM_000106.5::5056-(A,T) GG 172729434 NM_0007674:c-1650-T GG Ins220046 NM_000106.5::5056-(A,T) GG 172729434 NM_0007674:c-1680-T GG Ins2201725 NM_000106.5::5056-(A,T) GG 172729434 NM_0007674:c-156C-T CC Ins220174 NM_0007674:c-156C-T CC 172729014 NM_0007674:c-156C-T CC Ins25093967 NM_0007774:c-219:276-A AA 17272917 C T Ins250648 NM_0007774:c-219:276-A GG 17272917 CC Ins264820 NM_0007774:c-219:276-A GG 1737241812 NM_0000771:3::44960-A GG <	CYP1A2 *1A	/*1A		rs5030656	NM_000106.5:c.841_843deIAAG	AAGAAG
no.006914 N.G. 000431.2g.283380:A GG ms704565 N.M. 0007614:c.104132-T T ns7209526 N.M. 0007614:c.104132-T CC ms70461 N.M. 000166.5:c.1584:C-G CC ns7209526 N.M. 0007614:c.:104132-T CC ms70467100 N.M. 000166.5:c.1584:C-G CC ns7205726 N.M. 0007674:c.:1635461T T ms70467100 N.M. 000166.5:c.:1584:C-G CC ns7205727 N.M. 0007674:c.:1650-T GG ms70474:c.:1693:MS M.G. 000166.5:c.:082-A GG ns7205731 N.M. 000767.4:c.:1650-T CG CYP2A6 11/1 GG ns320371 N.M. 000767.4:c.:1630-C T ms70460.5:c.:393:C-C T ms70460.5:c.:393:C-S AA ns32039186 N.M. 000767.4:c.:1630-T CC T ms70457 N.M. 000777.4:c.:19:276-A GG ms7090185 N.M. 000777.3:c.:0831-C T ms70460.5:c.:392:C-T CC C CYP345 '1/1 T T ms70460.5:c.:392:C-T CC C CYP345 'N.M. 000777.4:c.:19:276-A GG GG ms70618 N.M. 000777.4:c.:19:276-A GG GG ms706784 <td< td=""><td>rs762551</td><td>NM 000761.4:c9-154C>A</td><td>СС</td><td>rs72549353</td><td>NM_000106.5:c.765_768delAACT</td><td>ΔΔΟΤΔΔΟΤ</td></td<>	rs762551	NM 000761.4:c9-154C>A	СС	rs72549353	NM_000106.5:c.765_768delAACT	ΔΔΟΤΔΔΟΤ
n2005926 NM_000761.4.4::04037:6 T T rr37427100 NM_0000165.c:137.1381nsT - n32594136 NM_000761.4.4::0137:6 T T rr5080985 NM_000165.c:10126-A GG CYP2B6 11/11 TT rr5080985 NM_000165.c:10126-A GG ns32594136 NM_00077.4.c:1605-17 GG rr52549348 NM_000165.c:008_10891nsGT - ns3242310 NM_00077.4.c:1605-17 GG GG rr52493434 NM_000165.c:085.c08396-A GG ns3223311 NM_00077.4.c:1458C-T CC rr52749343 NM_00774.6:0.5c.392C9-A AA ns3607386 NM_000771.3c:1458C-T CC rr576746 NM_000777.4:c29.219.CT CC rs7930194 NM_000771.3c:0496-A GG rs176746 NM_000777.4:c035_10361nsT - rs5932131 NM_000771.3c:0476-C TT rs2837865 NM_000777.4:c035_10361nsT - rs58424560 NM_000771.3c:0476-C CC rs4130333 NM_000777.4:c035_10361nsT - rs58424560 NM_000771.3c:0476-C CC rs41803248 NM_000777.4:c1976-A GG rs85665452	rs2069514		GG	rs5030655	NM_000106.5:c.454delT	TT
ns1220461 NM_0007614.c.1013C-T CC ns1080985 NML_000106.5.c.102C-A GG CYP286 1/11 ns2537725 NM_000106.5.c.102C-A GG ns2345274 NM_0007674.c.5160-T GG ns23473725 NML_000106.5.c.1032-A GG ns242378 NM_0007674.c.788Ar-G AA CYP286 NML_000106.5.c.1032-A GG ns3422310 NM_0007674.c.788Ar-G AA CYP3A4 1/1" Intermediate AA rs3209399 NM_0007674.c.788Ar-G CC ns3559387 NML_000774.c.2109.c.302-A AA rs3209399 NM_0007674.c.489-C TT ns3559387 NML_001774.c.2109.2376-A GG rs3509316 NM_000771.3.c.4096-A GG ns10264272 NM_0007774.c.2109.2376-A GG rs3506452 NM_000771.3.c.10767-C TT rs206574 NML_000774.c.2109.2376-A GG rs3287686 NM_000771.3.c.10767-C TT rs20862 NM_0000769.2.c.806C-T CC rs2839768 NM_0007769.2.c.806C-T CC rs4680 NM_00010.3.c.1276-A GG rs2839261 NM_0000769.2.c.806C-T CC rs75	rs2069526	NM 000761.4:c10+103T>G	TT	rs774671100	NM_000106.5:c137_138insT	
https://international.com/inter	rs12720461	NM 000761.4:c10+113C>T	CC	rc1080985	NM_000106.5:c.1584C>G	CC
CYP2BG 1/1/1 m2337025 NM_000106.5::956/396A GG m3745274 NM_000165.5::956/396A GG m3745274 NM_000165.5::5056/AT GG m3745274 NM_000167.4::5166>T GG m3232131 NM_000167.4::535A:G AA CYP2BG NM_000167.4::4580-T CC m323131 NM_000167.4::4580-T CC m33599360 NM_0001767.4::4580-T CC m33599367 NM_000177.4::219-2376-A GG m35079186 NM_000177.3::4380-T CC m33599353 NM_000177.3::4380-T CC m3237656 NM_000177.3::4396-A GG m31507510 NM_00017.3::496-A GG m3237665 NM_00017.3::1075A-C AA m3237666 NM_00017.3::1075A-C AA m32376676 C	rs35694136	NM 000761.4:c1635delT	TT	rs 50//21388	NM_000106.5:c.10126>0	ee ee
CYP2B6 11/11 ImD0007674:c5160-71 GG rs3253724 NM0007674:c5160-71 GG rs5030865 NM000106.5:c5056-[A,T] GG rs32279333 NM000767.4:c.5160-71 GG rs5030865 NM001746.5:c.593C-A AA rs32371371 NM000767.4:c.5185.c5937-C TT rs27474574 NM01746.0.5:c.593C-A AA rs32599499 NM000771.3:c.439C-T CC rs776746 NM000777.4:c.219-2376>A GG rs7900194 NM000771.3:c.439C-T CC rs41303343 NM000777.4:c.219-2376>A GG rs1059710 NM000771.3:c.10767-C TT rs2108622 NM000777.4:c.219-2376>A GG rs22371865 NM000771.3:c.10767-C TT rs2108622 NM001082.4:c.12976>A GG rs212445650 NM000771.3:c.10767-C TT rs2108622 NM001082.4:c.12976>A GG rs21244550 NM000769.2:c.636C-T CC CC CYP2C19 *1/*13 rs2247863 NM000769.2:c.636C-T CC rs507182 NM00010.4:c.129-5923C-6 CC <td></td> <td></td> <td></td> <td>rs28371725</td> <td>NM_000106.5:c.101202A</td> <td>GG</td>				rs28371725	NM_000106.5:c.101202A	GG
rs3745274 NM_000767.4:: 5166>T GG rs5030865 NM_000106.5:: 5036>(A,T) GG rs32745274 NM_000767.4:: 755A>G AA CYP3A4 *1/*1 rs32239343 NM_000767.4:: 755A>G AA CYP3A4 *1/*1 rs321371 NM_000767.4:: 755A>G AA CYP3A4 *1/*1 rs32093980 NM_000767.4:: 755A>G AA CYP2C9 *1/*1 cc rs32839499 NM_000767.4:: 758A>G GG rs35599367 NM_017460.5:: -392G>A AA cYP2C9 *1/*1 rs2767.4:: 7837 NM_000777.4:: 219-237G>A GG rs179585 NM_000771.3:: 449G>A GG rs176746 NM_000777.4:: 219-237G>A GG rs1059710 NM_000771.3:: 4036C>G CC rs41303343 NM_000777.4:: 219-237G>A GG rs1059780 NM_000751.3:: 61767>C TT rs2108622 NM_000779.2: 2.129 GG rs1224856 NM_000769.2:: 6816>A GG rs17974 rs4680 AA cYP2C19<*1/*1	CYP2B6 *1/*	*1		rs72549346	NM_000106.5:c1088_1089insGT	
Iss/32/14 INI_00076/34:38631 GG Iss/32/14 NM_00076/34:38365 AA Iss/32/13/1 NM_000767.34:38365 AA Iss/32/13/1 NM_000767.34:38365 AA Iss/32/13/1 NM_000767.34:38365 AA CYP2C9 *1/*1 CYP3A5 *3/*3 S559367 NM_017460.5:c.522:91C-T CC Isr/76746 NM_000771.3:c.430C-T CC rs/76746 NM_000777.4:c.219-2376>A G6 Isr/76745 NM_000771.3:c.430C-T CC rs/76746 NM_000777.4:c.219-2376>A G6 Isr/76746 NM_000771.3:c.1075A-C AA G6 rs/76746 NM_000777.4:c.219-2376>A G6 Isr/76746 NM_000771.3:c.1076A-C AA CYP2C19 *1/*1 - - Isr2837168 NM_000771.3:c.1076A-C TT rs/2108622 NM_000769.2:c.210-5A G6 Isr2837168 NM_000769.2:c.806C-T CC CC CYP2C19 *1/*1 - Isr2248560 NM_000769.2:c.436C-A G6 rs/5071782 NM_00010.4:c.199.502.6.36 C rs/5071782 NM_00010.3:c.1979.6 T6 Isr2248560				rs5030865	NM_000106.5:c.505G>[A,T]	GG
132273433 NM_0007674::1436:C3 AA CYP3A4 *1/*1 rs3223304 NM_0007674::1436:C-T CC rs2740574 NM_017460.5:c.3926:A AA rs32073166 NM_0007674::1436:C-T CC rs37559367 NM_017460.5:c.52.191C-T CC cYP2C9 *1/*1 rs776746 NM_007774::c.219.2376:A GG GG rs1700194 NM_000771.3::c.4396:A GG rs10264272 NM_0007774::c.219.2376:A GG rs1057910 NM_000771.3::c1036:C-5 CC rs41303343 NM_0007774::c.1035_1036insT - rs28371686 NM_000771.3::c1078:AC AA CVP4E2 *1/*1 rs2108622 NM_0007774::c.12976:A GG rs328371685 NM_000769.2::c.836C>T CC CYP4E42 *1/*1 rs4680 AA crs4244285 NM_000769.2::c.836C>T CC rs4680 AA COMT rs4680 AA C cryp2C19 *1/*1 rs46800 NM_000169.2:c.836C>T CC rs55886062 NM_000110.3:c.6797.6 TG rs4244285 NM_000769.2:c.836C>T CC rs55886062 NM_000110.3:c.6797.6 TG rs22778	153/452/4	NM_000767.4:c.516621	00			
15342304 NM_000767.3::217C 11 15342304 NM_000767.3::3217C TT 15360739166 NM_000767.4::4985-T CC 15360739166 NM_000767.4::4985-T TT 15360739166 NM_00077.1.2::037.2: TT 1537300 NM_00077.1.2::037.2: GG 151793953 NM_000771.3::01075.2: A 151793710 NM_000771.3::01075.2: AA 1528371655 NM_000771.3::01075.2: CC 1528371655 NM_000771.3::01075.2: CC 1528371655 NM_000771.3::01075.2: CC 1528371655 NM_000771.3::01075.2: TT 1528371655 NM_000771.3::01075.2: TT 1528371655 NM_000769.2::636C-5 CC CYP2C19 1/11 152108622 NM_000769.2::636C-3 GG 152248550 NM_000769.2::636C-3 GG 1575017182 NM_00010.4::129.592.2:-6 CC 1524424285 NM_000769.2::636C-3 GG 1575017182 NM_00010.4::129.592.2:-6 CC 1522389504 NM_000769.2::636C-3 GG 1575077182 NM_000110.4::129.592.2:-6 <td>rs22/9343</td> <td>NM_000767.4:C./85A>G</td> <td></td> <td>CYP3A4 *1/*</td> <td>'1</td> <td></td>	rs22/9343	NM_000767.4:C./85A>G		CYP3A4 *1/*	'1	
rs221371 NM_007674.c.193625.1 CC rs2740574 NM_017460.5c.39262A AA rs3007916 NM_0007673.c.59375.C TT rs35599367 NM_017460.5c.522.191C-T CC CYP2C9 *1/*1 rs7507916 NM_000771.3c.40965.c.522.191C-T CC rs790914 NM_000771.3c.40965.A GG rs10264272 NM_0007771.4c.219-2376-A GG rs1057910 NM_000771.3c.4075A-C AA GC rs41303343 NM_0007771.4c.219-2376-A GG rs28371685 NM_000771.3c.4075A-C AA GC rs41303343 NM_0007771.4c.219-2376-A GG rs28371685 NM_000771.3c.1075A-C AA GC rs41303343 NM_000771.4c.219-5246-A GG rs224525 NM_000771.3c.1075A-C AA AA COMT rs4680 AA COMT rs4680 AA CYP2C19 *1/*1 rs2108622 NM_00108.2c.412976-A AA rs12248560 NM_000769.2c.6386-A GG rs75017182 NM_000101.4c.1129-59232-G CC rs4244285 NM_000769.2c.6386-A GG rs7576788 NM_000101.4c.129-59232-G CC rs4244285 NM_000769.2c.6386-C<	1534223104	NM_000767.5:C-821>C	11			
rs3b0/798b NM_00076/3:c:9312 TI rs35599367 NM_017460.5:c.522.191C>T CC CYP2C9 *1/*1 CYP3A5 *3/*3 CYP3A5 *3/*3 rs700194 NM_000771.3:c.439C>T CC rs76746 NM_000777.4:c.219.237G>A GG rs1057910 NM_000771.3:c.1075A>C AA GG rs10264272 NM_000777.4:c.219.237G>A GG rs2837685 NM_000771.3:c.10075A>C AA CYP4E2 *1/*1 rs105651452 NM_000771.3:c.1003C>T CC rs4807865 NM_000771.3:c.1003C>T CC CYP4E2 *1/*1 rs108622 NM_001082.4:c.1297G>A GG rs42248560 NM_000769.2:c.681G>A GG rs4680 AA COMT rs4680 AA rs424825 NM_000769.2:c.681G>A GG rs5707182 NM_00010.4:cf129.5923C>G CC rs424826 NM_000769.2:c.681G>A GG rs5707182 NM_00010.4:cf129.5923C>G CC rs22489504 NM_000769.2:c.681G>A GG rs5707182 NM_00010.4:cf129.5923C>G CC	rs3211371	NM_000767.4:c.1459C>1		rs2740574	NM_017460.5:c392G>A	AA
rs22399499 NM_000/6/4:c931>C TI CYP2C9 *1/*1 rs70014 NM_000771.3:c496>A GG rs71799853 NM_000771.3:c1036C>T CC rs41303343 NM_000777.4:c219.2376>A GG rs28371686 NM_000771.3:c1075A>C AA GC rs41303343 NM_000777.4:c1035_1036insT rs28371685 NM_000771.3:c1076A>C CC CYP3A5 *3/*3 GG rs28371685 NM_000771.3:c1076A>C TT T rs2108622 NM_001082.4:c1297G>A GG rs28371685 NM_000771.3:c.1076A>C TT T rs4680 AA COMT rs4680 AA GG cryp2c19 *1/*1 rs4680 NM_000769.2:c.6816>A GG Fs7507182 NM_00010.4:c.1129-5923C>G CC rs424425 NM_000769.2:c.6816>A GG rs7507182 NM_00010.3:c.16971>G TG rs424425 NM_000769.2:c.6816>A GG rs7507182 NM_00010.3:c.16971>G TG rs424425 NM_000769.2:c.6816>A GG rs7507182 NM_00010.3:c.1697	rs36079186	NM_000767.5:c.5931>C		rs35599367	NM_017460.5:c.522-191C>T	CC
CYP2C9 *1/*1 CYP3C9 *1/*1 rs7900194 NM_000771.3::c.4496>A GG rs70746 NM_000777.4::c.29.2376>A GG rs7090194 NM_000771.3::c.3430C>T CC rs70746 NM_000777.4::c.29.2376>A GG rs71264272 NM_000771.3::c.1075A>C AA GG rs10264272 NM_000777.4::c.29.2376>A GG rs581565452 NM_000771.3::c.1075A>C AA GG rs10264272 NM_000777.4::c.1035_1036insT rs581565452 NM_000771.3::c.1075A>C AA GG CYP42C *1/*1 rs2108622 NM_00077.4::c.109.5_1036insT rs581565452 NM_000771.3::c.0816>-A AA COMT rs4680 AA COMT rs4680 AA CYP2C19<*1/*1	rs28399499	NM_000767.4:c.9831>C	11		*2	
rs7900194 NM_000771.3:c.219-2376-A GG rs7900194 NM_000771.3:c.219-2376-A GG rs1057910 NM_000771.3:c.430C-T CC rs1057910 NM_000771.3:c.1035_1036-C AA rs28371685 NM_000771.3:c.1036-C T rs58165452 NM_000771.3:c.1030C-T CC rs9332131 NM_000771.3:c.1030C-T CC rs9332131 NM_000771.3:c.1036-C TT rs1248560 NM_000771.3:c.1030C-T CC rs4244251 NM_000769.2:c.6306-T CC rs4244255 NM_000769.2:c.6306-X GG rs4244255 NM_000769.2:c.6306-X GG rs4244254 NM_000769.2:c.6306-X GG rs4244255 NM_000769.2:c.6306-X CC rs4244254 NM_000769.2:c.6306-X CC rs4284256 NM_000769.2:c.6306-X CC rs52837064 NM_000769.2:c.6306-X CC rs5283706 NM_000769.2:c.6306-X CC rs12777823 NC_000010.5:c.320C>T CC rs2837706 N	CYP2C9 *1/*	*1		CYP3A5 *3/	*3	
rs/900194 NM_000771.3:c.439GA GG rs/0264272 NM_000777.4:c.624GA GG rs/10983 NM_000771.3:c.1076A>C AA rs/100571.3:c.1005C>G CC rs28371686 NM_000771.3:c.1075A>C AA CYP4F2 *1/*1 rs28371685 NM_000771.3:c.1076T>C TT rs2105622 NM_001082.4:c.1297G>A GG rs9332131 NM_000771.3:c.1003C>T CC CC TS4680 AA GG CYP2C19<*1/*1				rs776746	NM_000777.4:c.219-237G>A	GG
rs1799853 NM_000771.3::c.1075A-C AA rs1057910 NM_000771.3::c.1075A-C AA rs28371686 NM_000771.3::c.1075A-C TT rs56165452 NM_000771.3::c.1076T-C TT rs28371686 NM_000771.3::c.1076T-C TT rs28371655 NM_000771.3::c.1076T-C TT rs28371655 NM_000771.3::c.1076T-C TT rs28371656 NM_000771.3::c.1076T-C TT rs28371655 NM_0000771.3::c.1076T-C TT rs28371656 NM_0000771.3::c.1076A-C GG rs7932131 NM_0000769.2::c.6816>A GG rs4244285 NM_0000769.2::c.6816>A GG rs43808693 NM_0000769.2::c.680C>T CC rs43808693 NM_0000769.2::c.680C>T CC rs43810000769.2::c.4366>A GG rs5757678 NM_00010.4::c.1129-5923C>G CG rs2837106 NM_0000769.2::c.4366>A GG rs5786798 NM_00010.3::c.1905+1G>A AA rs12777823 NC_000010.10::g.96405502G>A GG F2 rs1799963 GG rs1 rs12777823 NC_000010.5::c.320C>T CC rs5025	rs7900194	NM_000771.3:c.449G>A	GG	rs10264272	NM_000777.4:c.624G>A	GG
rs1057910 NM_000771.3::075A>C AA rs28371665 NM_000771.3::0103C>C TT rs28371665 NM_000771.3::0103C>T CC rs9332131 NM_000771.3::0103C>T CC CYP2C19 *1/*1 rs10880 AA GG rs12327665 NM_000769.2::-806C>T CC rs4284560 NM_000769.2::-636C>A GG rs4284285 NM_000769.2::-636C>A GG rs4284295 NM_0001010.3::-61797SG CC rs4284295 NM_0001010.3::-61797SG GC rs152777823 NC_000010.10::::96405502G>A<	rs1799853	NM_000771.3:c.430C>T	CC	rs41303343	NM_000777.4:c.1035_1036insT	
rs23371666 NM_000771.3:c.1080C>G CC CYP4F2 "1/"1 rs56165452 NM_000771.3:c.1030C>T CC rs108622 NM_001082.4:c.1297G>A GG rs9332131 NM_000771.3:c.1003C>T CC rs108622 NM_001082.4:c.1297G>A GG rs12248560 NM_000769.2:c.806C>T CC rs4680 AA rs12248560 NM_000769.2:c.681G>A GG GG rs4244285 NM_000769.2:c.681G>A GG rs4386893 NM_000769.2:c.680C>T CC rs50507678 NM_00010.4:c.1129.5923C>G CC rs4388693 NM_000769.2:c.680C>T CC rs50507789 NM_00010.3:c.1679T>G TG rs28379504 NM_000769.2:c.680C>T CC rs50318290 NM_00010.3:c.1905+1G>A GG rs12777823 NC_000010.10:g.96405502G>A GG rs115232898 NM_00010.3:c.1905+1G>A GG rs12871706 NM_000106.5:c.1319G>A GG rs17799963 NM_00010.4:c.1601G>A GG rs128777823 NC_00010.5:c.1319G>A GG rs6025 NM_00010.4:c.1601G>A GG rs16947 NM_000106.5:c.1319G>A GG rs6025 S	rs1057910	NM_000771.3:c.1075A>C	AA			
rs56165452 NM_000771.3:c.1076T>C TT rs2837(655 NM_000771.3:c.1076T>C TC rs9332131 NM_000771.3:c.1076T>C CC rs9332131 NM_000771.3:c.1076T>C CC rs12248560 NM_000769.2:c.4306C>T CC rs4244285 NM_000769.2:c.6316SA GG rs4244285 NM_000769.2:c.636C>T CC rs43838 NM_000769.2:c.636C>T CC rs434438 NM_000769.2:c.636C>T CC rs434438 NM_000769.2:c.638C>T CC rs43898693 NM_000769.2:c.638C>T CC rs43898693 NM_000769.2:c.638C>T CC rs58380602 NM_00010.3:c.1679T>G TG rs528370504 NM_000769.2:c.1A>G AA CYP2C Cluster rs1277782.3 GG GG rs15232898 rs12777823 NC_00010.0:g.96405502G>A GG F2 rs1799963 GG rs12777823 NC_000010.5:c.320C>T CC rs1799963 NM_00010.4:c.16016>A GG rs128371706 NM_000106.5:c.1319G>A GG F5 rs6025 S GG	rs28371686	NM_000771.3:c.1080C>G	CC	CYP4F2 *1/*	1	
rs2837/685 NM_000771.3:c.003C>T CC rs2108822 NM_00052.4:c.129/63A GG rs9332131 NM_000771.3:c.817delA AA CVP2C19 *1/*1 rs4680 AA cr12248560 NM_000769.2:c.806C>T CC rs4680 NM_000759.2:c.6816>A AA rs424285 NM_000769.2:c.6816>A GG DPYD *1/*13 rs458602 NM_00010.3:c.1679T>G CC rs4386893 NM_000769.2:c.6816>A GG rs75017182 NM_000110.4:c.1129.5923C>G CC rs4384818 NM_000769.2:c.680C>T CC rs55886062 NM_000110.4:c.129.5923C>G CC rs52399504 NM_000769.2:c.1A>G AA rs575017182 NM_000110.4:c.129.5923C>G CC rs12777823 NC_00010.0:g.96405502G>A GG rs115232898 NM_000110.4:c.1905+16>A GG rs12777823 NC_000106.5:c.320C>T CC rs1799963 SG F2 rs1799963 GG rs28371706 NM_000106.5:c.13196>A GG F5 rs6025 SG GG rs79292917 NM_000106.5:c.13196>A GG F5 rs6025 GG rs6025 SM_000103.4:c.1	rs56165452	NM_000771.3:c.1076T>C	TT	****	NM 001082 4:-12070-1	<u> </u>
rs9332131 NM_000771.3:c.817deIA AA COMT rs4680 AA CYP2C19 *1/*1 rs424285 NM_000769.2:c.636C>T CC rs4244285 NM_000769.2:c.636C>A GG DPYD *1/*13 rs43986893 NM_000769.2:c.638C>A GG rs75017182 NM_000110.4:c.1129-5923C>G CC rs6438438 NM_000769.2:c.638C>T CC rs55886062 NM_000110.3:c.1679T>G TG rs2339504 NM_000769.2:c.1A>G AA rs57507182 NM_000110.3:c.1679T>G TG rs122777823 NC_000010.10:g.96405502G>A GG rs15232898 NM_000110.4:c.157A>G AA rs28371706 NM_000106.5:c.320C>T CC rs1729963 GG F2 rs1799963 GG CYP2D6 *1/*1 rs267608319 NM_000106.5:c.320C>T CC rs6025 S6025 GG rs195292917 NM_000106.5:c.1319G>A GG F5 rs6025 GG rs6025 S1M_000130.4:c.1601G>A GG rs1954987 NM_000106.5:c.1457G>C GG rs6025 NM_000130.4:c.1601G>A GG rs1954787 NM_000130.4:c.1601	rs28371685	NM_000771.3:c.1003C>T	CC	152100022	NM_001082.4.C.12976-A	66
CYP2C19 *1/*1 rs4880 NM_000759.2:c.806C>T CC rs4244285 NM_000769.2:c.801G>A GG DPYD *1/*13 rs4986893 NM_000769.2:c.680C>T CC rs55880662 NM_000101.4:c.1129-5923C>G CC rs6413438 NM_000769.2:c.680C>T CC rs55880662 NM_000110.4:c.1129-5923C>G CC rs52399504 NM_000769.2:c.1A>G AA rs55880662 NM_000110.3:c.1905+1G>A GG CYP2C Cluster rs12777823 GG rs67376798 NM_000110.3:c.1905+1G>A GG rs12777823 NC_000010.10:g.96405502G>A GG F2 rs1799963 NM_00010.4:c.1597A>G AA rs23371706 NM_00016.5:c.320C>T CC rs50308619 NM_000106.5:c.13196>A GG rs129777 NM_000106.5:c.13196>A GG F5 rs6025 GG rs6025 GG rs10647 NM_000106.5:c.13196>A GG GG rs6025 NM_000130.4:c.16016>A GG rs1065852 NM_000106.5:c.1457G>C GG rs6025 NM_000130.4:c.160	rs9332131	NM_000771.3:c.817delA	AA	COMT rs46	80 AA	
Instruct 248560 NM_000769.2:c.806C>T CC DPYD *1/*13 rs4244285 NM_000769.2:c.681G>A GG rs75017182 NM_000110.4:c.1129-5923C>G CC rs6413438 NM_000769.2:c.680C>T CC rs55886062 NM_000110.3:c.1679T>G TG rs28399504 NM_000769.2:c.1A>G AA rs53886062 NM_000110.3:c.1679T>G TG CYP2C Cluster rs12777823 GG rs12777823 GG GG F2 rs1799963 NM_000110.3:c.1905+16>A AA rs28399504 NM_000106.5:c.320C>T CC rs199963 NM_00010.4:c.157A>G AA rs28371706 NM_000106.5:c.320C>T CC rs199963 NM_000130.4:c.16016>A GG rs16587 NM_000106.5:c.320C>T CC rs1799963 NM_000130.4:c.16016>A GG rs165947 NM_000106.5:c.3105A GG F5 rs6025 G rs6025 S GG rs105852 NM_000106.5:c.1457G>C GG rs105847 rs10584787 GG GG rs3892097 NM_000106.5:c.1457G>C GG rs1954787 rs1954787 T T rs39503862 </td <td>CYP2C19 *1,</td> <td>/*1</td> <td></td> <td>rs4680</td> <td>NM_000754.3:c.472G>A</td> <td>АА</td>	CYP2C19 *1,	/*1		rs4680	NM_000754.3:c.472G>A	АА
rs4244285 NM_000769.2:c.681G>A GG DPYD *1/*13 rs4986893 NM_000769.2:c.636G>A GG rs75017182 NM_000110.4:c.1129-5923C>G CC rs28399504 NM_000769.2:c.680C>T CC rs55886062 NM_000110.3:c.1679T>G TG rs28399504 NM_000769.2:c.1A>G AA rs67376798 NM_000110.3:c.1679T>G TG rs12777823 NC_000010.10:g.96405502G>A GG rs15232898 NM_000110.4:c.557A>G AA rs12777823 NC_00010.10:g.96405502G>A GG F2 rs1799963 GG CYP2D6 *1/*1 rs12777823 NM_000106.5:c.320C>T CC rs1799963 GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 GG F5 rs16947 NM_000106.5:c.3975G>A GG F5 rs6025 GG rs6025 SG GG rs105852 NM_000106.5:c.1975G>A GG GG rs1954787 TT F3 F3 F3 GG F3 F3 F3 GG F3 F3 F3 GG F3 F3 F3 GG F3 F3	rs12248560	NM_000769.2:c806C>T	CC			
rs4986893 NM_000769.2:c.636G>A GG rs75017182 NM_000110.4:c.1129-5923C>G CC rs6413438 NM_000769.2:c.680C>T CC rs55886062 NM_000110.3:c.1679T>G TG rs28399504 NM_000769.2:c.1A>G AA rs5750776798 NM_000110.3:c.1679T>G TG CYP2C Cluster rs12777823 GG CC rs7376798 NM_000110.3:c.1905+16>A GG rs12777823 NC_000010.10:g.964055026>A GG F2 rs1799963 NM_00010.4:c.157A>G GG CYP2D6 *1/*1 rs28371706 NM_000106.5:c.320C>T CC rs1799963 NM_000506.4:c.*97G>A GG rs267608319 NM_000106.5:c.1319G>A GG F5 rs6025 GG rs6025 GG rs10010.4:c.16016>A GG rs105852 NM_000106.5:c.100C>T CC rs6025 NM_000130.4:c.16016>A GG rs105852 NM_000106.5:c.100C>T CC rs6025 NM_000130.4:c.16016>A GG rs135840 NM_000106.5:c.14576>C GG rs1054787 TT rs1054787 TT rs3892097 NM_000106.5:c.164>A GG GG rs1954787 NM_001282470.	rs4244285	NM_000769.2:c.681G>A	GG	DPYD *1/*13		
rs6413438 NM_000769.2:c.680C>T CC rs7307/62 NM_000104:C.1129-5923C>G CC rs28399504 NM_000769.2:c.1A>G AA rs55886062 NM_000110.3:c.1697>G TG rs28399504 NM_000769.2:c.1A>G AA rs55886062 NM_000110.3:c.1697>G TG rs12777823 NC_000010.10:g.96405502G>A GG rs115232898 NM_000110.4:c.1557A>G AA rs12777823 NC_000010.10:g.96405502G>A GG F2 rs1799963 GG F2 rs1799963 GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 NM_000506.4:c.*97G>A GG rs16947 NM_000106.5:c.1319G>A GG F5 rs6025 GG rs6025 S S GG rs1065852 NM_000106.5:c.157G>A GG rs105277 CC GRIK4 rs1954787 TT GG GG rs135840 NM_000106.5:c.150C>T CG GG rs1954787 TT TT rs3892097 NM_000106.5:c.150C>C GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG GG	rs4986893	NM_000769.2:c.636G>A	GG	xo7E017190	NM 000110 4:01120 E022020	<u> </u>
rs28399504 NM_000769.2:c:1A>G AA rs6336806.2 NM_000110.3:c.16/91/3/5 TG CYP2C Cluster rs12777823 GG rs67376798 NM_000110.3:c.2846A>T AA rs12777823 NC_000010.10:g.96405502G>A GG rs115232898 NM_000110.4:c.557A>G AA CYP2D6 *1/*1 rs12777823 NM_000106.5:c.320C>T CC rs1799963 GG F2 rs1799963 GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 NM_000506.4:c.*97G>A GG rs16947 NM_000106.5:c.319G>A GG F5 rs6025 GG rs6025 NM_000130.4:c.1601G>A GG rs105852 NM_000106.5:c.1457G>C GG F5 rs6025 GG rs10584787 TT GG rs1135840 NM_000106.5:c.1457G>C GG GRIK4 rs1954787 TT GG rs3892097 NM_000106.5:c.316>A GG rs1954787 TT TT rs769258 NM_000106.5:c.316>A GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG F1954787 NM_001282470.2:c.83-10039T>C TT	rs6413438	NM 000769.2:c.680C>T	CC	15/501/162	NM_000110.4.c.1129-5923C/G	TC
CYP2C Cluster rs12777823 GG rs3918290 NM_000110.3:c.1905+1G>A GG rs12777823 NC_000010.10:g.96405502G>A GG F2 rs1799963 GG AA CYP2D6 *1/*1 rs12777823 NM_000106.5:c.320C>T CC rs1799963 GG GG F2 rs1799963 GG GG CYP2D6 *1/*1 rs28371706 NM_000106.5:c.320C>T CC rs1799963 GG GG F5 rs6025 GG F5 rs6025 GG GG F5 rs6025 GG GG F5 rs6025 GG F5 rs6025 GG F5 rs6025 GG F5	rs28399504	NM_000769.2:c.1A>G	AA	1555660002	NM_000110.3.c.107912G	10
CYP2C Cluster rs12777823 GG rs398290 NM_00010.3:C.1905+163A GG rs12777823 NC_000010.10:g.96405502G>A GG F2 rs1799963 GG AA CYP2D6 *1/*1 rs1799963 GG rs1799963 GG rs1799963 GG GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 GG GG GG rs16947 NM_000106.5:c.1319G>A GG F5 rs6025 GG rs6025 NM_000106.30.4:c.1601G>A GG rs1065852 NM_000106.5:c.975G>A GG GG rs6025 NM_000130.4:c.1601G>A GG rs1135840 NM_000106.5:c.1457G>C GG GG rs1954787 TT T T rs769258 NM_000106.5:c.31G>A GG GG F31954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG GG HLA-A Negative T				150/3/0/90	NM_000110.3.c.2646A>1	
rs12777823 NC_000010.10:g.96405502G>A GG F2 rs1792963 GG CYP2D6 *1/*1 rs1799963 NM_000506.4:c.*976>A GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 NM_000506.4:c.*976>A GG rs267608319 NM_000106.5:c.1319G>A GG F5 rs6025 SG GG rs106947 NM_000106.5:c.975G>A GG rs6025 NM_000130.4:c.1601G>A GG rs105852 NM_000106.5:c.1457G>C GG rs6025 ST GG rs1135840 NM_000106.5:c.506.1G>A GG GG F1954787 TT rs769258 NM_000106.5:c.31G>A GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG HLA-A Negative T	CYP2C Clust	er rs12777823 GG		153918290	NM_000110.3:C.1905+1G>A	GG
rs127/7823 NC_000010.10:g.96405502G>A GG F2 rs1799963 GG CYP2D6 *1/*1 rs1799963 NM_000506.4:c.*976>A GG rs28371706 NM_000106.5:c.320C>T CC rs1799963 NM_000506.4:c.*976>A GG rs267608319 NM_000106.5:c.1319G>A GG F5 rs6025 SG GG rs79929217 NM_000106.5:c.9756>A GG F5 rs6025 NM_000130.4:c.16016>A GG rs1065852 NM_000106.5:c.1457G>C GG GG F1/*4 F1 F1 rs135840 NM_000106.5:c.31G>A GG GG GG F1 F1 F1 rs769258 NM_000106.5:c.124G>A GG F1 F				15115252696	NM_000110.4.c.557A/G	AA
CYP2D6 *1/*1 rs1799963 NM_000506.4:c.*976>A GG rs28371706 NM_000106.5:c.320C>T CC F5 rs6025 GG rs16947 NM_000106.5:c.1319G>A GG F5 rs6025 NM_000130.4:c.1601G>A GG rs105852 NM_000106.5:c.100C>T CC GG F5 rs6025 GG rs1135840 NM_000106.5:c.160C>T CC GRIK4 rs1954787 TT T rs3892097 NM_000106.5:c.31G>A GG Fs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG FLA-A Negative T	rs12777823	NC_000010.10:g.96405502G>A	GG	F2 rs179996	53 GG	
rs28371706 NM_000106.5:c.320C>T CC F5 rs6025 G rs267608319 NM_000106.5:c.1319G>A GG F5 rs6025 G rs16947 NM_000106.5:c.886C>T CC rs6025 G rs79292917 NM_000106.5:c.975G>A GG GG rs1065852 NM_000106.5:c.1457G>C GG GRIK4 rs1954787 TT rs1135840 NM_000106.5:c.506.1G>A GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs6025 NM_000106.5:c.31G>A GG GG F1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.124G>A GG HLA-A Negative L	CYP2D6 *1/	*1		rs1799963	NM_000506.4:c.*97G>A	GG
rs267608319 NM_000106.5::1319G>A GG F0 F15022 CC rs16947 NM_000106.5::1319G>A GG rs6025 CC rs79292917 NM_000106.5::0975G>A GG rs6025 NM_000130.4::.1601G>A GG rs1065852 NM_000106.5::00C>T CC GRIK4 rs1954787 TT GG GG rs3892097 NM_000106.5::06.1G>A GG Fs1954787 NM_001282470.2::.83-10039T>C TT rs769258 NM_000106.5::.11G>A GG GG HLA-A Negative TT	rs28371706	NM_000106.5:c.320C>T	СС	F5_rs6025.0	36	
rs16947 NM_000106.5:c.886C>T CC rs6025 NM_000130.4:c.1601G>A GG rs79292917 NM_000106.5:c.975G>A GG	rs267608319	NM_000106.5:c.1319G>A	GG	15 130025 (
rs79292917 NM_000106.5:c.975G>A GG rs1065852 NM_000106.5:c.100C>T CC GG rs135840 NM_000106.5:c.1457G>C GG rs3892097 NM_000106.5:c.506.1G>A GG rs769258 NM_000106.5:c.31G>A GG rs5030862 NM_000106.5:c.124G>A GG HLA-A Negative	rs16947	NM_000106.5:c.886C>T	CC	rs6025	NM_000130.4:c.1601G>A	GG
rs1065852 NM_000106.5:c.100C>T CC GRIK4 rs1954787 TT rs1135840 NM_000106.5:c.1457G>C GG	rs79292917	NM_000106.5:c.975G>A	GG			
rs1135840 NM_000106.5:c.1457G>C GG rs3892097 NM_000106.5:c.506.1G>A GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.13G>A GG GG HLA-A Negative	rs1065852	NM_000106.5:c.100C>T	CC	GRIK4 rs195	54787 TT	
rs3892097 NM_000106.5:c.506-1G>A GG rs1954787 NM_001282470.2:c.83-10039T>C TT rs769258 NM_000106.5:c.1G>A GG rs5030862 NM_000106.5:c.124G>A GG <u>HLA-A Negative</u>	rs1135840	NM_000106.5:c.1457G>C	GG			
rs769258 NM_000106.5:c.31G>A GG rs5030862 NM_000106.5:c.124G>A GG HLA-A Negative	rs3892097	NM_000106.5:c.506-1G>A	GG	rs1954787	NM_001282470.2:c.83-10039T>C	TT
rs5030862 NM_000106.5:c.124G>A GG HLA-A Negative	rs769258	NM_000106.5:c.31G>A	GG			
	rs5030862	NM_000106.5:c.124G>A	GG	HLA-A Nega	ative	
rs201377835 NM_000106.5:c.181-1G>C GG NM_002416 (interrepreted at much 2) NM_002416 (interrepreted at much 2) NM_0024	rs201377835	NM_000106.5:c.181-1G>C	GG		NM 002116 (interregeted at ever 2)	Nogativa
rs5030867 NM_000106.5:c:971A>C AA HLAUUU97 NM_002116 (Interrogated at exon 2) Negativ	rs5030867	NM_000106.5:c.971A>C	AA	TLAU0097	INIM_002116 (Interrogated at exon 2)	negative
rs765776661 NM_000106.5:c.1411_1412insTGCCCACTG GTGCCCACGTGCCC AC	rs765776661	NM_000106.5:c.1411_1412insTGCCCACTG	GTGCCCACGTGCCC AC	HLA-B Posit	ive for *57:01	



Test results (cont.)

rs144012689	NM_005514.7:c.1012+104A>T	TT	SLCO1B1 *1/*5		
HLA00386	NM_005514 (interrogated at exon 2 and intron 2)	Negative	rs2306283	NM_006446.4:c.388A>G	Not tested
HLA00381	NM_005514 (interrogated at exon 3)	Negative	rs4149056	NM_006446.4:c.521T>C	TC
			rs4149015	NM_006446.4:c910G>A	Not tested
HTR2A rs79	97012 TT				
rc7997012	NM_0006214:c 614-2211T>C	тт	IPMI *1/*1		
13/33/012	NW_000021.4.0.014-22111/C		rs1142345	NM_000367.3:c.719A>G	AA
NUDT15 *1/*	1		rs1800584	NM_000367.3:c.626-1G>A	СС
			rs1800462	NM_000367.3:c.238G>C	GG
rs116855232	NM_018283.3:c.415C>T	CC	rs1800460	NM_000367.3:c.460G>A	GG
OPRM1 rs17	99971 AA		UGT1A1 *1/*	*1	
rs1799971	NM_000914.4:c.118A>G	AA	rs4148323	NM_001072.3:c.862-6536G>A	GG
	<i>a a x</i>		rs1976391	NM_001072.3:c.862-9697A>G	AA
SLC6A4 L/L	(La/La)				
rs25531	NM_001045.5:c1936A>G	AA	VKORC1 rs	9923231 GG	
rs774676466	NM_001045.5:c19171875del43	LL	rs7200749	NM_024006.5:c.358C>T	GG
			rs9923231	NM_001311311.1:c1639G>A	GG

Electronically signed by: Ellie Jhun in None

2024-09-06



Methodology and limitations

This test was developed, and its performance characteristics determined by OneOme, LLC, a clinical laboratory located at 807 Broadway Street NE Suite 100, Minneapolis, MN 55413. These tests have not been cleared or approved by the U.S. Food and Drug Administration. The FDA does not require this test to go through premarket FDA review. OneOme is certified under CLIA-88 and accredited by the College of American Pathologists as qualified to perform high-complexity testing. This test is approved for clinical use by the New York State Department of Health. This test should not be regarded as investigational or for research.

Genomic DNA was analyzed by PCR using Thermo Fisher TaqMan[®] and/or LGC Biosearch BHQ[®] probe-based methods to interrogate the variant locations listed in the Test results table above. For tests that include CYP2D6, the CYP2D6 copy number status was assessed at sites within the promoter, intron 2, intron 6, and exon 9. The test detects CYP2D6 deletions, duplications/multiplications, and hybrid alleles, but cannot differentiate duplications in the presence of a deletion.

Legacy nomenclature for applicable genes and alleles is used to remain consistent with industry language.

The test does not detect all known and unknown variations in the gene(s) tested, nor does absence of a detectable variant (designated as *1 for genes encoding drug metabolizing enzymes) rule out the presence of other, non-detected variants.

As with other common SNP genotyping techniques, these assays cannot differentiate between the maternal and paternal chromosomes. In cases where observed variants are associated with more than one haplotype, OneOme infers and reports the most likely diplotype based on published allele frequency and/or ethnicity data. Inferences with potential clinical impact are reported in the Report and laboratory comments section.

PCR may be subject to general interference by factors such as reaction inhibitors and low quality or quantity of extracted DNA. When present, these interferents typically yield no result rather than an inaccurate one. Very infrequent variants or polymorphisms occurring in primer- or probe-binding regions may affect testing and could produce an erroneous result or assay failure. Variant locations tested by the assay but not assigned a genotype call are reported as "No Call."

The variant detection methods validated by OneOme provide >99.9% accuracy for the adult population; however, clinical interpretation may be inaccurate for patients who have undergone or are receiving non-autologous blood transfusions, tissue, and/or organ transplant therapies. Although extremely rare, results could also be impacted by other factors not addressed above, such as laboratory error.

Pharmacogenetic correlation is largely based on studies of adult populations. Gene-drug guidance may not be informative in pediatric patients. For patients that may carry a probabilistic risk of disease, patients and providers should consider the benefits of consulting with a trained genetic counseling professional, physician, or pharmacogenomic specialist. For additional support, contact OneOme through the website or by calling 844-663-6635.



OneOme liability disclaimer

The interpretations and clinical annotations provided by OneOme are intended solely for use by a medical professional in the treatment of adult patients and do not constitute medical advice by OneOme. The treating provider remains ultimately responsible for all diagnosis and treatment decisions for the patient. OneOme disclaims liability for any errors, omissions or ambiguities in any translation or interpretation of a report by a third party, including without limitation direct, indirect, incidental, special, consequential or exemplary damages, whether such damages arise in contract, negligence, tort, under statute, in equity, at law or otherwise. Information included in this report is based upon scientific literature, including information from and guidelines published by professional associations (e.g., CPIC, FDA, DPWG), and does not take into account other genetic variants and environmental or social factors that may affect a patient's response. Other factors not included in this report include, but are not limited to, environmental factors (e.g., smoking), health factors (e.g., diet), social and familial factors, various medical conditions, and drug-to-drug interactions. Administration of any medication, including the ones listed in the OneOme reports, requires careful therapeutic monitoring regardless of the phenotype or genotype-predicted interaction reported. As a matter of practice, OneOme will routinely update its pharmacogenomic database as new information becomes available to the scientific community. Genotype-predicted interactions and annotations found on the patient's RightMed Comprehensive Test Report, Vantage Reports, or RightMed specialty reports are therefore dependent on the date of generation and/or the database version used to generate that report. Providers may access these reports with updated annotations using OneOme's latest released version through the provider portal at portal.oneome.com.



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