Table S1. Number (%) of incident users and average proportion of days covered (PDC) for CPIC Level A, A/B and B medications, stratified by CPIC level [a, b]

CPIC Level A (N=487,800)			CPIC Level A/B (N=21,059)			CPIC Level B (N=258,994)		
Medication (Primary Gene)	**N (%)**	**Mean PDC**	**Medication (Primary Gene)**	**N (%)**	**Mean PDC**	**Medication (Primary Gene)**	**N (%)**	**Mean PDC**
Ivacaftor (CFTR)	**5 (<0.01)**	**0.893**	**Tetrabenazine (CYP2D6)**	**10 (<0.01)**	**0.621**	**Mycophenolic Acid (HPRT1)**	**908 (0.1)**	**0.564**
Tamoxifen (CYP2D6)	**1,424 (0.1)**	**0.666**	Venlafaxine (CYP2D6)	13,312 (1.3)	0.458	Sertraline (CYP2C19)	27,932 (2.7)	0.436
Clopidogrel (CYP2C19)	**7,826 (0.8)**	**0.645**	Hydralazine (NAT2)	2,979 (0.3)	0.456	Methadone (CYP2B6)	759 (0.1)	0.434
Efavirenz (CYP2B6)	**151 (<0.01)**	**0.638**	Vortioxetine (CYP2D6)	772 (0.1)	0.421	Dexlansoprazole (CYP2C19)	3,155 (0.3)	0.422
Abacavir (HLA-B)	**82 (<0.01)**	**0.634**	Divalproex Sodium (POLG)	4,405 (0.4)	0.383	Aripiprazole (CYP2D6)	4,891 (0.5)	0.404
Atorvastatin (SLCO1B1)	**56,599 (5.5)**	**0.615**	Valproic Acid (POLG)	176 (<0.01)	0.287	Fluvoxamine (CYP2D6)	599 (0.1)	0.400
Tacrolimus (CYP3A5)	**480 (<0.01)**	**0.594**	Pimozide (CYP2D6)	9 (<0.01)	0.264	Risperidone (CYP2D6)	3,137 (0.3)	0.364
Pravastatin (SLCO1B1)	**16,827 (1.6)**	**0.562**				Clomipramine (CYP2C19)	1,154 (0.11)	0.348
Rosuvastatin (SLCO1B1)	10,382 (1.0)	0.553				Trimipramine (CYP2D6)	927 (0.09)	0.329
Simvastatin (SLCO1B1)	24,182 (2.3)	0.552				Dapsone (G6PD)	775 (0.07)	0.325
Lovastatin (SLCO1B1)	3,984 (0.4)	0.550				Imipramine (CYP2C19)	611 (0.06)	0.320
Allopurinol (HLA-B)	7,088 (0.7)	0.547				Desipramine (CYP2D6)	553 (0.05)	0.279
Mercaptopurine (TPMT)	239 (<0.01)	0.538				Doxepin (CYP2C19)	292 (0.03)	0.263
Fluvastatin (SLCO1B1)	205 (<0.01)	0.522				*Primaquine (G6PD)*	*292 (0.03)*	*0.065*
Atazanavir (UGT1A1)	63 (<0.01)	0.516				*Methylene Blue (G6PD)*	*267 (0.03)*	*0.046*
Azathioprine (NUDT15)	960 (0.1)	0.514				*Hydrocodone (CYP2D6)*	*38* ***(<0.01)***	*0.039*
Pitavastatin (SLCO1B1)	755 (0.1)	0.474				*Nitrofurantoin (G6PD)*	*4* ***(<0.01)***	*0.033*
Escitalopram (CYP2C19)	21,992 (2.1)	0.454				Moxifloxacin (G6PD)	0 (0)	--
Citalopram (CYP2C19)	23,057 (2.2)	0.437				Nalidixic Acid (G6PD)	0 (0)	--
Warfarin (VKORC1)	7,969 (0.8)	0.437				Norfloxacin (G6PD)	0 (0)	--
Paroxetine (CYP2D6)	9,078 (0.9)	0.406				Sodium Nitrate (G6PD)	0 (0)	--
Phenytoin (CYP2C9)	705 (0.1)	0.397				Sulfadiazine (G6PD)	0 (0)	--
Peginterferon Alfa-2A (IFNL3)	197 (<0.01)	0.392						

CPIC Level A (N=487,800)			CPIC Level A/B (N=21,059)	CPIC Level B (N=258,994)
Oxcarbazepine (HLA-B)	1,834 (0.2)	0.378		
Pantoprazole (CYP2C19)	28,652 (2.8)	0.364		
Peginterferon Alfa-2B (IFNL3)	63 (<0.01)	0.359		
Omeprazole (CYP2C19)	70,496 (6.8)	0.347		
Carbamazepine (HLA-B)	1,590 (0.2)	0.347		
Amitriptyline (CYP2C19)	13,143 (1.3)	0.320		
Capecitabine (DPYD)	417 (<0.01)	0.311		
Nortriptyline (CYP2D6)	5,508 (0.5)	0.306		
Atomoxetine (CYP2D6)	1,608 (0.2)	0.297		
Lansoprazole (CYP2C19)	7,597 (0.7)	0.290		
Voriconazole (CYP2C19)	157 (<0.01)	0.256		
Celecoxib (CYP2C9)	10,061 (1.0)	0.251		
Irinotecan (UGT1A1)	3 (<0.01)	0.238		
Meloxicam (CYP2C9)	58,819 (5.7)	0.207		
Piroxicam (CYP2C9)	1,882 (0.2)	0.186		
Amikacin (MT-RNR1)	12 (<0.01)	0.126		
Tobramycin (MT-RNR1)	17 (<0.01)	0.112		
Fluorouracil (DPYD)	61 (<0.01)	0.098		
Flurbiprofen (CYP2C9)	1,014 (0.1)	0.090		
Tramadol (CYP2D6)	*6,123 (0.6)*	*0.089*		
Streptomycin (MT-RNR1)	*2 (<0.01)*	*0.070*		
Ibuprofen (CYP2C9)	*140,020 (13.5)*	*0.063*		
Thioguanine (TPMT)	*5 (<0.01)*	*0.035*		
Ondansetron (CYP2D6)	*81,201 (7.8)*	*0.029*		

CPIC Level A (N=487,800)			CPIC Level A/B (N=21,059)	CPIC Level B (N=258,994)
Codeine (CYP2D6)	*106,201 (10.3)*	*0.028*		
Desflurane (CACNA1S)	0 (0)	--		
Fosphenytoin (CYP2C9)	0 (0)	--		
Gentamicin (MT-RNR1)	0 (0)	--		
Kanamycin (MT-RNR1)	0 (0)	--		
Sevoflurane (CACNA1S)	0 (0)	--		
Streptomycin (MT-RNR1)	0 (0)	--		

[a] Drug-gene pairs in bold are those with the 10 highest PDCs in the study; drug-gene pairs in italics are those with the 10 lowest PDCs in the study.

[b] CPIC Level A indicates: "Genetic information should be used to change prescribing of [the] affected drug. Preponderance of evidence is high or moderate in favor of changing prescribing. At least one moderate or strong action (change in prescribing) [is] recommended." CPIC Level A/B indicates: "Preliminary review indicates it is likely that the definitive CPIC level will be either A or B. Full evidence review [is] needed to assess level of evidence, but prescribing actionability is likely. Full review by expert guideline group [is needed] to assign strength of recommendation." CPIC level B indicates: "Genetic information could be used to change prescribing of the affected drug because alternative therapies/dosing are extremely likely to be as effective and as safe as non-genetically based dosing. Preponderance of evidence is weak with little conflicting data. At least one optional action (change in prescribing) is recommended." [5]