CPT Codes for Pharmacogenomic Tests

The table below lists CPT codes and lab fee information for pharmacogenomic tests as established by the Centers for Medicare and Medicaid Services. It was compiled by the IGNITE Clinical Validity, Utility, and Economics Working Group.

Perm Code	New Code	New Code Descriptor	Test Purpose and Method	Crosswalk Recomm-endation	Descriptor	Rationale	NLA	Meeting Notes	Prelim. Determinations
81230	**81X30**	CYP3A4 (cytochrome P450 family 3 subfamily A member 4) (eg, drug metabolism), gene analysis, common variant(s) (eg, *2, *22)	**Purpose**: to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81374 X 2	HLA Class I typing, one antigen equivalent (eg, B*27), each	The test methods and materials used to query 2 SNPs are comparable to twice those required for one SNP.	$99.79 X 2	**Crosswalk to 2 X 81374 (6)**; Crosswalk to 81227 (3)	81227 (NLA - $176.03)

Perm Code	New Code	New Code Descriptor	Test Purpose and Method	Crosswalk Recomm-endation	Descriptor	Rationale	NLA	Meeting Notes	Prelim. Determinations
81231	**81X31**	CYP3A5 (cytochrome P450 family 3 subfamily A member 5) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3,*4, *5 *6, *7)	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81225	CYP2C19 (cytochrome P450, family 2, subfamily C, polypeptide 19) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3, *4, *8, *17)	The test methods and materials used to test 6 SNPS in CYP3A5 are comparable to those used to query 5 SNPS in CYP2C19.	$293.40	**Crosswalk to 81225 (7)**; Crosswalk to 81227 (2)	81227 (NLA - $176.03)
81232	**81X32**	DPYD (dihydropyrimidine dehydrogenase) (eg, 5-fluorouracil/5-FU and capecitabine drug metabolism), gene analysis, common variant(s) (eg, *2A, *4, *5, *6)	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81227	CYP2C9 (cytochrome P450, family 2, subfamily C, polypeptide 9)(eg, drug metabolism), gene analysis, common variants (eg. *2, *3, *5, *6)	The test methods and materials used to query 4 SNPs are comparable across both assays.	$176.03	**Crosswalk to 81227 (8**); Crosswalk to 81321 (1)	81227

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81247	**81X37**	G6PD (glucose-6-phosphate dehydrogenase) (eg, hemolytic anemia, jaundice) gene analysis; common variant(s) (eg, A, A-)	**Purpose:** to detect genetic variants causative of G6PD deficiency (X-linked) **Methods:** PCR amplification followed by genotyping for single nucleotide variant (SNV); Multiplexed Ligation-dependent Probe Amplification (MLPA) for del/dup variants	81374 X 2	HLA Class I typing, one antigen equivalent (eg, B*27)	The test methods and materials employed to query 2 SNPs are comparable to twice those required for one SNP.	$99.79 X 2	Crosswalk to 81314 X 2 (3); Crosswalk to 81215 (3); **Crosswalk to 81227 (3) (NLA of 81227 is $176.03 and was the ACLA rec)**	81227
81248	**81X38**	G6PD (glucose-6-phosphate dehydrogenase) (eg, hemolytic anemia, jaundice) gene analysis; known familial variant(s)	**Purpose:** to detect genetic variants causative of G6PD deficiency (X-linked) **Methods:** PCR amplification followed by genotyping for SNV; MLPA for del/dup variants (two variants tested in affected females)	81215	BRCA1 (breast cancer 1) (eg, hereditary breast and ovarian cancer) gene analysis; known familial variant	The test methods used and the deletion and substitution types of variants tested for are both comparable to that for BRCA1 known familial variant.	$93.75	Crosswalk to 81215 (9)	81322 ($58.72)
81249	**81X40**	G6PD (glucose-6-phosphate dehydrogenase) (eg, hemolytic anemia, jaundice) gene analysis; full gene sequence (13 exons)	**Purpose:** to detect genetic variants causative of G6PD deficiency (X-linked) **Methods:** bi-directional sequencing of coding regions as well as exon-intron junctions by Sanger sequencing or next generation sequencing.	81321	PTEN (phosphatase and tensin homolog) (eg, cowden syndrome, PTEN hamartoma tumor syndrome) gene analysis; full gene analysis.	The test methods used for sequencing and the amount of DNA sequenced for G6PD both comparable to that for PTEN (priced by gapfill).	$604.00	**Crosswalk to 81321 (6)**; Crosswalk to 81161 (3)	81295 ($152.54)

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81283	**81X33**	IFNL3 (interferon, lambda 3) (eg, drug response), gene analysis, rs12979860 variant	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81241	F5 (coagulation Factor V) (eg, hereditary hypercoagulability) gene analysis; Leiden variant	The test methods and materials used to detect the type of point mutation tested for in the IFNL3 gene are comparable to that for F5.	$83.82	**Crosswalk to 81241 (8**); Crosswalk to 81374 (2)	81322 ($58.72)
81328	**81X34**	SLCO1B1 (solute carrier organic anion transporter family, member 1B1) (eg, adverse drug reaction), gene analysis, common variant(s) (eg, *5)	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81376	HLA Class II typing, low resolution, one locus (eg, HLA-DRB1, -DRB3/4/5, -DQB1, -DQA1, -DPB1, or DPA1), each	The test methods and materials used to detect one SNP in the SLCO1B1 gene are comparable to that for HLA class II typing.	$167.66	**Crosswalk to 81376 (7)**; Crosswalk to 81381 (2)	81227 ($176.03)

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81335	**81X35**	TPMT (thiopurine S-methyltransferase) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3)	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81374 X 2	HLA Class I typing, one antigen equivalent (eg, B*27), each	The test methods and materials used to query 2 SNPs are comparable to twice those required for one SNP.	$99.79 X 2	**Crosswalk to 81374 X 2 (5)**; Crosswalk to 81227 (4)	81227 ($176.03)
81346	**81X36**	TYMS (thymidylate synthetase) (eg, 5-fluorouracil/5-FU drug metabolism), gene analysis, common variant(s) (eg, tandem repeat variant)	**Purpose:** to identify genetic variants in patients which impact drug metabolism and lead to altered dosing of the drug **Methods:** PCR amplification followed by a genotyping for single nucleotide germline variants or fragment analysis for repeat expansion variants	81245	FLT3 (fms-related tyrosine kinase 3) (eg, acute myeloid leukemia), gene analysis, internal tandem duplication (ITD) variants (ie, exons 14, 15)	The test methods (eg, PCR followed by CE analysis) and materials used are comparable for the detection of each of these tandem repeat variants.	$166.84	**Crosswalk to 81245 (9)**	81227 ($176.03)