Supplementary Table 2. *NUDT15* variants identified in the Broad Institute Exome Aggregation Consortium (ExAc) database

					Alleles			Minor Allele Frequency (%)					
Chrom	Position	rsID	Annotation	Protein Consequence	Reference	Alternative	Transcript Consequence	All (N=60,706)	Africans (N=5,203)	Hispanics (N=5,789)	East Asians (N=4,327)	Europeans (N=36,677)	South Asians (N=8,256)
13	48619855	rs116855232	missense	p.Arg139Cys	R	C	c.415C>T	2.7854	0.0680	7.1120	10.4345	0.6220	7.0044
13	48611918	rs554405994	inframe insertion	p.Val18_Val19insGlyVal	GV	GVGV	c.36_37insGGAGTC	1.2878	0.1675	12.3050	6.9810	0.5053	0.1385
13	48619856	rs147390019	missense	p.Arg139His	R	H	c.416G>A	0.1823	0.0389	1.7453	0.1387	0.0027	0.0
13	48611934	rs186364861	missense	p.Val18Ile	V	I	c.52G>A	0.1461	0	0	1.5998	0.0037	0.0605
13	48611918	NA	inframe deletion	p.Val14_Gly15del	VG	del	c.36_42delAGGAGTCinsA	0.1597	0.0478	0	0	0.2575	0.0746
13	48611961	rs777311140	frameshift	p.Cys28GlyfsTer28	C	NA	c.79_80insGCGG	0.0677	0	0	0	0.1064	0.0
13	48611917	rs528005656	missense	p.Pro12Leu	P	L	c.35C>T	0.0374	0	0	0	0	0.1500
13	48615174	rs529126695	missense	p.Val93Ile	V	I	c.277G>A	0.0220	0	0	0	0	0.1613
13	48611896	rs761635179	missense	p.Ala5Val	A	V	c.14C>T	0.0148	0	0	0	0.0319	0.0
13	48611887	rs749250312	missense	p.Thr2Met	T	M	c.5C>T	0.0132	0	0	0	0	0.0360
13	48612038	rs149436418	missense	p.Phe52Leu	F	L	c.156C>G	0.0112	0	0	0	0.0178	0.0
13	48611919	rs767290343	missense	p.Gly13Arg	G	R	c.37G>A	0.0105	0	0	0	0.0196	0.0
13	48615239	rs761191455	frameshift	p.Glu115GlyfsTer4	E	NA	c.342_343insG	0.0083	0	0	0.0533	0	0.0315
13	48619907	rs139551410	missense	p.Leu156Gln	L	Q	c.467T>A	0.0083	0.0883	0	0	0	0.0061
13	48611983	rs766023281	missense	p.Arg34Thr	R	T	c.101G>C	0.0083	0	0	0.1183	0	0.0
13	48611896	rs761635179	missense	p.Ala5Gly	A	G	c.14C>G	0.0074	0	0.2915	0	0	0.0
13	48611886	rs780144127	missense	p.Thr2Ala	T	A	c.4_27delACGGCCAGCGCACAGCCGCGCGGGinsGCGGCCAGCGCACAGCCGCGCGGG	0.0045	0.0430	0	0	0	0.0
13	48611981	rs150241065	missense	p.Lys33Asn	K	N	c.99G>C	0.0042	0.0435	0	0	0	0.0
13	48619819	rs746431481	missense	p.Glu127Lys	E	K	c.379G>A	0.0041	0.0388	0.0087	0	0	0.0
13	48611890	rs768620317	missense	p.Ala3Gly	A	G	c.8C>G	0.0041	0	0	0	0	0.0118
13	48611898	rs776779121	missense	p.Gln6Glu	Q	E	c.16C>G	0.0036	0	0	0	0	0.0115
13	48615145	rs773719265	missense	p.Ser83Tyr	S	Y	c.248C>A	0.0033	0	0	0.0116	0	0.0183
13	48611910	rs775629796	missense	p.Arg10Gly	R	G	c.28C>G	0.0030	0	0	0	0.0059	0.0
13	48611914	NA	missense	p.Arg11Gln	R	Q	c.32G>A	0.0028	0	0	0.0324	0	0.0
13	48611920	rs567318719	missense	p.Gly13Ala	G	A	c.38G>C	0.0025	0.0236	0	0	0	0.0
13	48615121	rs763662698	missense	p.Val75Gly	V	G	c.224T>G	0.0025	0.0096	0	0	0.0027	0.0
13	48615240	rs764525662	frameshift	p.Asn117LysfsTer2	N	NA	c.343delGinsGA	0.0024	0	0	0	0.0020	0.0079
13	48612019	NA	missense	p.Pro46Arg	P	R	c.137C>G	0.0023	0	0	0	0.0018	0.0082
13	48611929	rs779488127	missense	p.Val16Asp	V	D	c.47T>A	0.0022	0.0207	0	0	0	0.0
13	48612040	rs752181787	missense	p.Gly53Asp	G	D	c.158G>A	0.0022	0.0242	0	0	0	0.0
13	48612039	rs199676691	missense	p.Gly53Arg	G	R	c.157G>C	0.0022	0.0121	0	0	0.0018	0.0
13	48612039	rs199676691	missense	p.Gly53Ser	G	S	c.157G>A	0.0022	0.0121	0	0	0.0018	0.0
13	48611933	rs768550630	inframe deletion	p.Val19_Val20del	V	_Va	c.52_57delGTCGTG	0.0021	0	0	0	0.0038	0.0
13	48611954	rs549709884	missense	p.Lys24Asn	K	N	c.72G>T	0.0018	0	0	0	0	0.0096
13	48611958	rs561923692	missense	p.Pro26Ala	P	A	c.76C>G	0.0017	0	0	0	0.0028	0.0
13	48611959	rs775476759	missense	p.Pro26Leu	P	L	c.77C>T	0.0017	0	0	0	0	0.0095
13	48615142	rs767909886	frameshift	p.Phe84LeufsTer12	F	NA	c.246_249delTTCT	0.0017	0	0	0	0.0027	0.0
13	48615108	rs369372549	missense	p.His71Tyr	H	Y	c.211C>T	0.0017	0	0	0	0.0027	0.0
13	48611962	rs763051893	missense	p.Arg27Leu	R	L	c.80G>T	0.0016	0	0	0	0	0.0094
13	48611966	rs774866501	missense	p.Cys28Trp	C	W	c.84C>G	0.0016	0	0	0.0216	0	0.0
13	48611967	rs762270086	missense	p.Val29Leu	V	L	c.85G>C	0.0016	0	0	0.0214	0	0.0
13	48611979	rs768057637	missense	p.Lys33Glu	K	E	c.97A>G	0.0014	0	0	0	0.0022	0.0
13	48615249	rs753865201	frameshift	p.Ser119ValfsTer23	S	NA	c.352_353delGAinsG	0.0014	0.0159	0	0	0	0.0
13	48611988	rs753319151	missense	p.Gly36Arg	G	R	c.106G>C	0.0013	0	0	0	0	0.0089
13	48611988	rs753319151	missense	p.Gly36Cys	G	C	c.106G>T	0.0013	0	0.0273	0	0	0.0
13	48611992	rs778722701	missense	p.Ser37Leu	S	L	c.110C>T	0.0013	0	0	0	0.0021	0.0
13	48611992	rs778722701	missense	p.Ser37Trp	S	W	c.110C>G	0.0013	0	0	0	0.0021	0.0
13	48612004	rs746780341	missense	p.Gly41Ala	G	A	c.122G>C	0.0012	0	0	0	0.0019	0.0
13	48615240	rs79026553	missense	p.Glu115Gln	E	Q	c.343G>C	0.0012	0	0	0	0.0020	0.0
13	48612015	rs775735812	missense	p.Leu45Phe	L	F	c.133C>T	0.0012	0.0125	0	0	0	0.0
13	48612024	rs774287683	missense	p.Gly48Ser	G	S	c.142G>A	0.0011	0	0	0	0	0.0081
13	48612037	rs761080311	missense	p.Phe52Tyr	F	Y	c.155T>A	0.0011	0	0	0	0.0018	0.0
13	48612030	rs772679803	missense	p.Leu50Val	L	V	c.148C>G	0.0011	0	0	0	0.0018	0.0
13	48615201	rs765568874	missense	p.Asp102Tyr	D	Y	c.304G>T	0.0009	0.0102	0	0	0	0.0
13	48615189	rs755815170	missense	p.Lys98Glu	K	E	c.292A>G	0.0009	0	0	0	0	0.0063
13	48615187	rs750263044	missense	p.Met97Thr	M	T	c.290T>C	0.0009	0	0	0	0.0014	0.0
13	48615067	rs138667875	missense	p.Glu57Gly	E	G	c.170A>G	0.0008	0	0	0	0.0014	0.0
13	48615079	rs777094347	missense	p.Gln61Pro	Q	P	c.182A>C	0.0008	0	0	0	0.0014	0.0
13	48619796	rs751683170	missense	p.Ser119Asn	S	N	c.356G>A	0.0008	0	0	0.0116	0	0.0
13	48615151	rs761856125	missense	p.Ile85Thr	I	T	c.254T>C	0.0008	0	0	0.0116	0	0.0
13	48615149	rs753019895	inframe deletion	p.Ile85del	I	del	c.253_255delATT	0.0008	0	0	0	0.0014	0.0
13	48619921	rs751671087	missense	p.Gly161Arg	G	R	c.481G>A	0.0008	0	0	0.0116	0	0.0
13	48619807	rs781726752	missense	p.Val123Ile	V	I	c.367G>A	0.0008	0	0	0	0.0014	0.0
13	48619915	rs142636030	missense	p.Tyr159Asn	Y	N	c.475T>A	0.0008	0.0098	0	0	0	0.0
13	48619909	NA	missense	p.Val157Leu	V	L	c.469G>T	0.0008	0	0	0	0.0014	0.0
13	48615103	rs769463678	missense	p.Ala69Val	A	V	c.206C>T	0.0008	0	0.0086	0	0	0.0
13	48619821	rs756603433	missense	p.Glu127Asp	E	D	c.381A>C	0.0008	0	0	0	0	0.0061
13	48619823	rs749618301	missense	p.Leu128Pro	L	P	c.383T>C	0.0008	0	0.0087	0	0	0.0
13	48619826	rs768324690	missense	p.Pro129Arg	P	R	c.386C>G	0.0008	0	0	0	0.0014	0.0
13	48619871	rs772773911	missense	p.Gln144Arg	Q	R	c.431A>G	0.0008	0	0	0	0.0014	0.0
13	48619870	rs773703261	frameshift	p.Gln144LeufsTer4	Q	NA	c.430_431insT	0.0008	0.0097	0	0	0	0.0
13	48619835	rs769861583	frameshift	p.Gln133SerfsTer9	Q	NA	c.396delC	0.0008	0	0	0	0	0.0061
13	48619848	rs778377158	missense	p.Trp136Cys	W	C	c.408G>C	0.0008	0	0	0	0.0014	0.0

Red denotes variants identified in the ALL patient cohorts.