

Supplementary Materials for

Ultradeep sequencing differentiates patterns of skin clonal mutations associated with sun-exposure status and skin cancer burden

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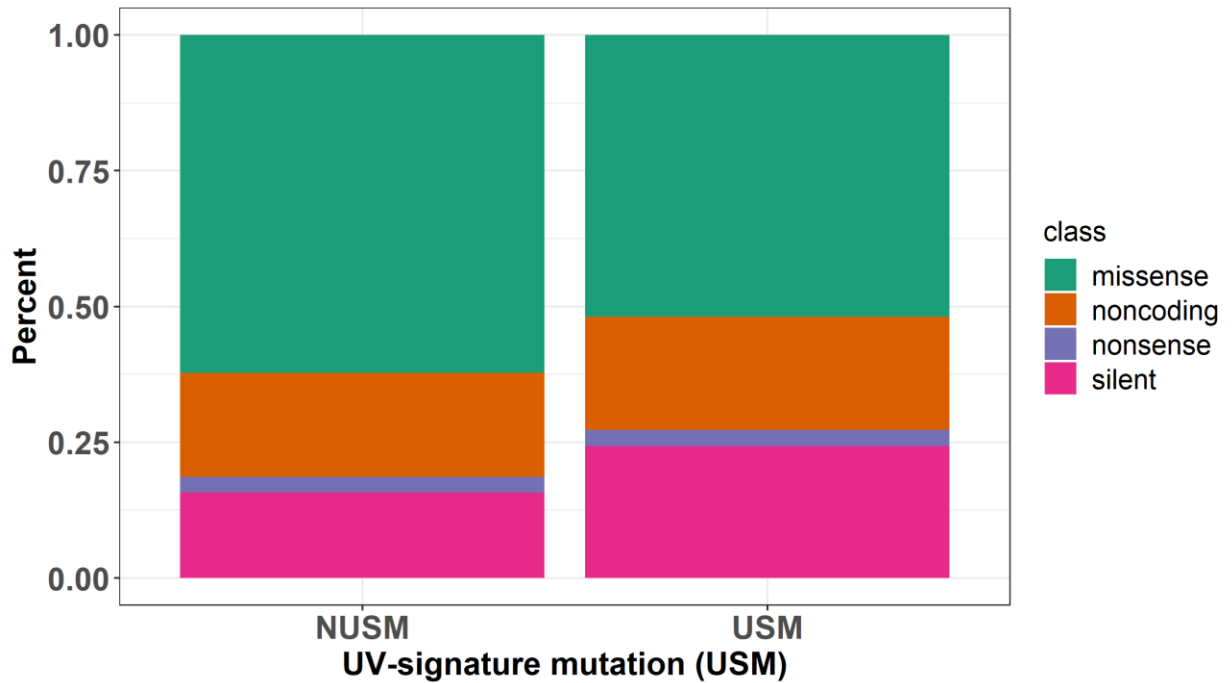
Published 1 January 2021, *Sci. Adv.* 7, eabd7703 (2021)

DOI: 10.1126/sciadv.abd7703

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Figure S1. Composition of all possible mutations by amino-acid change within the targeted regions.



All possible substitution mutations, including single nucleotide variants (SNVs) and the known UV-induced CC>TT dinucleotide variants (DNVs), were simulated within the current panel. The mutations were first grouped by UV signature mutation (USM) or non-UV-signature mutation (NUSM), then further classified by the predicted type of amino-acid changes.

Table S1. The 55 targeted genomic regions.

segment	chr	start	end	gene	length(bp)	CDS(bp)
<i>NOTCH2-1</i>	1	120459200	120459300	<i>NOTCH2</i>	101	101
<i>NOTCH2-2</i>	1	120464900	120465000	<i>NOTCH2</i>	101	101
<i>NOTCH2-3</i>	1	120497600	120497700	<i>NOTCH2</i>	101	38
<i>NOTCH2-4</i>	1	120506300	120506400	<i>NOTCH2</i>	101	101
<i>NOTCH2-5</i>	1	120510000	120510100	<i>NOTCH2</i>	101	45
<i>NOTCH2-6</i>	1	120510100	120510200	<i>NOTCH2</i>	101	101
<i>NOTCH2-7</i>	1	120510201	120510300	<i>NOTCH2</i>	100	44
<i>NOTCH2-8</i>	1	120510700	120510800	<i>NOTCH2</i>	101	101
<i>NOTCH2-9</i>	1	120510801	120510900	<i>NOTCH2</i>	100	55
<i>NOTCH2-10</i>	1	120512100	120512200	<i>NOTCH2</i>	101	67
<i>NOTCH2-11</i>	1	120512200	120512300	<i>NOTCH2</i>	101	101
<i>ARID1A</i>	1	27092700	27092800	<i>ARID1A</i>	101	89
<i>SALL1</i>	16	51174400	51174500	<i>SALL1</i>	101	101
<i>TP53-1</i>	17	7577000	7577100	<i>TP53</i>	101	82
<i>TP53-2</i>	17	7577101	7577200	<i>TP53</i>	100	55
<i>TP53-3</i>	17	7577500	7577600	<i>TP53</i>	101	101
<i>TP53-4</i>	17	7578100	7578200	<i>TP53</i>	101	24
<i>TP53-5</i>	17	7578200	7578300	<i>TP53</i>	101	90
<i>TP53-6</i>	17	7578400	7578500	<i>TP53</i>	101	101
<i>TP53-7</i>	17	7578500	7578600	<i>TP53</i>	101	55
<i>TP53-8</i>	17	7579300	7579400	<i>TP53</i>	101	89
<i>SCN1A</i>	2	166894400	166894500	<i>SCN1A</i>	101	101
<i>ERBB4</i>	2	212570000	212570100	<i>ERBB4</i>	101	58
<i>FAT4-1</i>	4	126329600	126329700	<i>FAT4</i>	101	101
<i>FAT4-2</i>	4	126411600	126411700	<i>FAT4</i>	101	101
<i>FGFR3-1</i>	4	1803500	1803600	<i>FGFR3</i>	101	39
<i>FGFR3-2</i>	4	1806000	1806100	<i>FGFR3</i>	101	44
<i>FGFR3-3</i>	4	1808900	1809000	<i>FGFR3</i>	101	90
<i>ADGRB3</i>	6	70049200	70049300	<i>ADGRB3</i>	101	0
<i>PPP1R3A</i>	7	113518200	113518300	<i>PPP1R3A</i>	101	101
<i>GRM3-1</i>	7	86394500	86394600	<i>GRM3</i>	101	101
<i>GRM3-2</i>	7	86415800	86415900	<i>GRM3</i>	101	101
<i>GRM3-3</i>	7	86416100	86416200	<i>GRM3</i>	101	101
<i>GRM3-4</i>	7	86468800	86468900	<i>GRM3</i>	101	101
<i>NOTCH1-1</i>	9	139393600	139393700	<i>NOTCH1</i>	101	101
<i>NOTCH1-2</i>	9	139395100	139395200	<i>NOTCH1</i>	101	101
<i>NOTCH1-3</i>	9	139396800	139396900	<i>NOTCH1</i>	101	101
<i>NOTCH1-4</i>	9	139399400	139399500	<i>NOTCH1</i>	101	101
<i>NOTCH1-5</i>	9	139401300	139401400	<i>NOTCH1</i>	101	101

<i>NOTCH1-6</i>	9	139401800	139401900	<i>NOTCH1</i>	101	90
<i>NOTCH1-7</i>	9	139410100	139410200	<i>NOTCH1</i>	101	69
<i>NOTCH1-8</i>	9	139411800	139411900	<i>NOTCH1</i>	101	38
<i>NOTCH1-9</i>	9	139412200	139412300	<i>NOTCH1</i>	101	97
<i>NOTCH1-10</i>	9	139412301	139412400	<i>NOTCH1</i>	100	89
<i>NOTCH1-11</i>	9	139412500	139412600	<i>NOTCH1</i>	101	12
<i>NOTCH1-12</i>	9	139412600	139412700	<i>NOTCH1</i>	101	101
<i>NOTCH1-13</i>	9	139412701	139412800	<i>NOTCH1</i>	100	44
<i>NOTCH1-14</i>	9	139413000	139413100	<i>NOTCH1</i>	101	58
<i>NOTCH1-15</i>	9	139413101	139413200	<i>NOTCH1</i>	100	100
<i>NOTCH1-16</i>	9	139413201	139413300	<i>NOTCH1</i>	100	76
<i>NOTCH1-17</i>	9	139417300	139417400	<i>NOTCH1</i>	101	99
<i>NOTCH1-18</i>	9	139417500	139417600	<i>NOTCH1</i>	101	101
<i>NOTCH1-19</i>	9	139417601	139417700	<i>NOTCH1</i>	100	40
<i>NOTCH1-20</i>	9	139418200	139418300	<i>NOTCH1</i>	101	101
<i>NOTCH1-21</i>	9	139418301	139418400	<i>NOTCH1</i>	100	100

* Reference assembly version: GRCh37

Table S2. Patient and sample cohort.**(A). Primary cohort.**

Patient	Control (dermis)	Normal epidermis SE/NE samples					
		Discovery					Validation
		1mm	2mm	3mm*	4mm	6mm	2mm**
Pt1	1		5	4	1	1	
Pt2	1	3	5	4	1	1	
Pt3	1	3	5	4	1	1	
Pt4	1	3	3				
Pt5	1	3	3	3	3	3	5
Pt6	1	3	3	3	3	3	5
Pt7	1	3	3	3	3	3	5
Pt8	1	3	3	3	3	3	5
Pt9	1	3	3	3	3	3	5
Pt10	1	3	3	3	3	3	5
Pt11	1	3	3	3	3	3	5
Pt12	1	3	3	3	3	3	5
Pt13	2	3	3	3	3	3	5
Total	14	36	45	39	30	30	45

* 3 mm punches were obtained by cutting 6 mm punches into quarters

** The validation cohort containing only 2 mm punches

(B). Extend cohort.

Pt	Patient cSCC burden	Sample availability		
		cSCC	Normal skin samples	
			Na*	Nb*
Pt14	high		1	1
Pt15	high	1	1	1
Pt17	high		1	1
Pt20	high	1	1	1
Pt16	low		1	1
Pt18	low	1	1	1
Pt19	low	1	1	1
Pt21	low		1	1

* Na: normal sample A, collected at 1mm from the surgical margin

* Nb: normal sample B, collected at 6mm from the surgical margin

Table S3. Coverage of the targeted regions.

(A). Primary cohort.

Sample	mean	Percentage of the targeted region covered by at least				Batch
		x1000	x10000	x50000	x100000	
Pt1-N-NE-34	63819.5	0.95446	0.8	0.48065	0.2381638	Discovery
Pt1-T-NE-18	48332.2	0.94257	0.79262	0.418	0.1087309	Discovery
Pt1-T-NE-20	99732.7	0.95608	0.8414	0.59892	0.4216022	Discovery
Pt1-T-NE-21	59584.4	0.95608	0.80072	0.45833	0.1836184	Discovery
Pt1-T-NE-22	62811.7	0.95608	0.79496	0.47813	0.2163816	Discovery
Pt1-T-NE-23	55441.1	0.96706	0.80468	0.43852	0.1668767	Discovery
Pt1-T-NE-24	61018.9	0.95464	0.81224	0.46967	0.2342034	Discovery
Pt1-T-NE-25	47835.5	0.95608	0.75302	0.40324	0.1278128	Discovery
Pt1-T-NE-26	50748.3	0.94329	0.73537	0.4054	0.1567957	Discovery
Pt1-T-NE-27	53873.6	0.95608	0.78074	0.41836	0.1485149	Discovery
Pt1-T-NE-32	54172.1	0.91341	0.74689	0.42718	0.1747975	Discovery
Pt1-T-NE-33	9583.34	0.80846	0.39892	0	0	Discovery
Pt1-T-SE-10	52097.8	0.95608	0.80144	0.43168	0.1267327	Discovery
Pt1-T-SE-15	15654.8	0.91305	0.59406	0.03042	0	Discovery
Pt1-T-SE-16	12923.6	0.88515	0.52187	0.0054	0	Discovery
Pt1-T-SE-1	72212.9	0.95608	0.8324	0.54527	0.3033303	Discovery
Pt1-T-SE-2	60975.5	0.96706	0.80972	0.47867	0.1821782	Discovery
Pt1-T-SE-3	94515.2	0.96706	0.87903	0.62844	0.4358236	Discovery
Pt1-T-SE-4	48909.5	0.95608	0.79892	0.40846	0.1060306	Discovery
Pt1-T-SE-5	67494.5	0.92583	0.82088	0.49613	0.2786679	Discovery
Pt1-T-SE-7	48175	0.94365	0.78506	0.41836	0.1193519	Discovery
Pt1-T-SE-8	50187.8	0.95608	0.7946	0.40756	0.1186319	Discovery
Pt1-T-SE-9	57097.4	0.95608	0.80792	0.4405	0.1621962	Discovery
Pt2-N-NE-34	50562.9	0.95608	0.78326	0.41476	0.1339334	Discovery
Pt2-T-NE-20	91764.6	0.96706	0.82304	0.56364	0.3834383	Discovery
Pt2-T-NE-21	86912	0.96076	0.8189	0.54671	0.3836184	Discovery
Pt2-T-NE-22	65020	0.95608	0.80144	0.50135	0.2529253	Discovery
Pt2-T-NE-23	92839.3	0.96706	0.84788	0.60432	0.4005401	Discovery
Pt2-T-NE-24	63258.9	0.93969	0.8117	0.45635	0.2226823	Discovery
Pt2-T-NE-25	81608.4	0.95968	0.82808	0.53753	0.3578758	Discovery
Pt2-T-NE-26	77414.1	0.95608	0.78956	0.50207	0.3225923	Discovery
Pt2-T-NE-27	61682.3	0.95608	0.76256	0.45131	0.219622	Discovery
Pt2-T-NE-29	85750.4	0.95608	0.80144	0.51089	0.350315	Discovery
Pt2-T-NE-31	127346	0.97174	0.85311	0.65671	0.4250225	Discovery
Pt2-T-NE-31A	71397.4	0.97048	0.83726	0.54743	0.2936094	Discovery
Pt2-T-NE-31B	76362.8	0.96706	0.81944	0.54635	0.3162916	Discovery
Pt2-T-NE-32	56138.8	0.95608	0.76742	0.44302	0.1913591	Discovery

Pt2-T-NE-33	69978.1	0.96706	0.80864	0.46463	0.2687669	Discovery
Pt2-T-SE-10	55127.7	0.95608	0.80072	0.42502	0.1738974	Discovery
Pt2-T-SE-11	52551.2	0.95608	0.79712	0.40558	0.1542754	Discovery
Pt2-T-SE-11A	31666.2	0.92511	0.66697	0.26121	0.0455446	Discovery
Pt2-T-SE-11B	72859	0.95608	0.80738	0.52961	0.3119712	Discovery
Pt2-T-SE-15	69357.8	0.95608	0.8171	0.49037	0.2781278	Discovery
Pt2-T-SE-16	78421.9	0.97444	0.86499	0.54257	0.3089109	Discovery
Pt2-T-SE-1	33244.8	0.94221	0.73123	0.25239	0.0608461	Discovery
Pt2-T-SE-3	58412.3	0.96706	0.80558	0.43024	0.1960396	Discovery
Pt2-T-SE-4	64605.2	0.96418	0.81602	0.50441	0.2124212	Discovery
Pt2-T-SE-5	86999.9	0.97426	0.85833	0.57138	0.3569757	Discovery
Pt2-T-SE-6	58225.1	0.95608	0.79964	0.45779	0.1760576	Discovery
Pt2-T-SE-7	60840	0.96706	0.81224	0.45257	0.2052205	Discovery
Pt2-T-SE-8	63617	0.96706	0.80972	0.48083	0.2064806	Discovery
Pt2-T-SE-9	67046.6	0.96706	0.81224	0.51953	0.2592259	Discovery
Pt3-N-NE-34	17085.9	0.88875	0.52781	0.06535	0	Discovery
Pt3-T-NE-18	85196.7	0.95608	0.83726	0.6009	0.3931593	Discovery
Pt3-T-NE-19	61762.1	0.94347	0.8099	0.47885	0.2070207	Discovery
Pt3-T-NE-20	3083.63	0.65977	0.03672	0	0	Discovery
Pt3-T-NE-21	38867.3	0.95608	0.73591	0.33843	0.0853285	Discovery
Pt3-T-NE-22	92076.1	0.98524	0.84068	0.6027	0.3834383	Discovery
Pt3-T-NE-24	18441.5	0.84608	0.49793	0.09883	0	Discovery
Pt3-T-NE-25	107978	0.95608	0.86139	0.6396	0.4239424	Discovery
Pt3-T-NE-26	115776	0.94221	0.83654	0.64572	0.4347435	Discovery
Pt3-T-NE-27	78140.2	0.95608	0.81692	0.55392	0.3645365	Discovery
Pt3-T-NE-31	58155.5	0.95608	0.80306	0.43528	0.1776778	Discovery
Pt3-T-NE-31A	65764.7	0.95608	0.81548	0.50459	0.2642664	Discovery
Pt3-T-NE-31B	70598.3	0.96094	0.81584	0.52745	0.3209721	Discovery
Pt3-T-NE-32	75641.2	0.95608	0.81944	0.53483	0.3666967	Discovery
Pt3-T-NE-33	99771.3	0.97426	0.85239	0.64788	0.4275428	Discovery
Pt3-T-SE-10	93473.8	0.96706	0.85473	0.6351	0.3944194	Discovery
Pt3-T-SE-11	77708.8	0.94347	0.81386	0.49487	0.329793	Discovery
Pt3-T-SE-11A	73581.3	0.95608	0.83456	0.53501	0.3186319	Discovery
Pt3-T-SE-11B	102452	0.97426	0.83294	0.61476	0.4043204	Discovery
Pt3-T-SE-15	71995.8	0.96706	0.82304	0.51683	0.2871287	Discovery
Pt3-T-SE-16	74812.1	0.97516	0.84014	0.55212	0.2592259	Discovery
Pt3-T-SE-1	63518.6	0.95608	0.81206	0.44068	0.2160216	Discovery
Pt3-T-SE-2	48717.9	0.95608	0.77876	0.40612	0.1155716	Discovery
Pt3-T-SE-3	63874.8	0.96706	0.81584	0.47849	0.230063	Discovery
Pt3-T-SE-5	86600.6	0.95968	0.83474	0.60504	0.3873987	Discovery
Pt3-T-SE-6	71000	0.96706	0.81224	0.49253	0.2968497	Discovery
Pt3-T-SE-7	12850.1	0.8495	0.44176	0.01062	0	Discovery
Pt3-T-SE-8	71868	0.96706	0.8297	0.50513	0.2914491	Discovery
Pt3-T-SE-9	32349.3	0.93789	0.70495	0.2054	0.0408641	Discovery

Pt4-N-NE-34	36659.7	0.92529	0.64986	0.29361	0.0777678	Discovery
Pt4-T-NE-18	96693.4	0.95608	0.89541	0.645	0.4091809	Discovery
Pt4-T-NE-22	95861.3	0.95968	0.83402	0.59946	0.4023402	Discovery
Pt4-T-NE-23	91317.1	0.95608	0.85041	0.56058	0.3944194	Discovery
Pt4-T-NE-31	74263.2	0.95626	0.82304	0.54383	0.3184518	Discovery
Pt4-T-NE-31A	33437.6	0.95608	0.70189	0.25797	0.0475248	Discovery
Pt4-T-NE-31B	44624.9	0.94221	0.76004	0.41746	0.109991	Discovery
Pt4-T-SE-11	72897	0.97174	0.83312	0.54239	0.3058506	Discovery
Pt4-T-SE-11A	89597.3	0.97174	0.84068	0.61476	0.3749775	Discovery
Pt4-T-SE-11B	93676	0.97174	0.89451	0.65257	0.4061206	Discovery
Pt4-T-SE-1	46603.1	0.94221	0.7784	0.39316	0.1166517	Discovery
Pt4-T-SE-2	20248.4	0.92817	0.60558	0.07561	0	Discovery
Pt4-T-SE-4	31273.4	0.92943	0.6108	0.23024	0.0608461	Discovery
Pt5-N-NE-44	78662.8	0.9721	0.89001	0.62682	0.3364536	Discovery
Pt5-T-NE-24	51752.8	0.9613	0.83762	0.45041	0.1308731	Discovery
Pt5-T-NE-25	71218.3	0.97444	0.87183	0.55644	0.2727273	Discovery
Pt5-T-NE-26	71071.4	0.9721	0.84194	0.56202	0.2657066	Discovery
Pt5-T-NE-28	65005.6	0.96706	0.83618	0.51845	0.2356436	Discovery
Pt5-T-NE-29	83258	0.9721	0.86625	0.59622	0.3236724	Discovery
Pt5-T-NE-31	78895.7	0.9613	0.86661	0.58506	0.309811	Discovery
Pt5-T-NE-33	84768.4	0.96706	0.87129	0.63096	0.3587759	Discovery
Pt5-T-NE-34	78572	0.9613	0.83852	0.55518	0.3389739	Discovery
Pt5-T-NE-35	70681.1	0.95626	0.86661	0.5946	0.2642664	Discovery
Pt5-T-NE-36	76008.7	0.95626	0.87489	0.59046	0.2977498	Discovery
Pt5-T-NE-37	50048.1	0.95626	0.79586	0.41782	0.1173717	Discovery
Pt5-T-NE-39	76427.2	0.9721	0.86427	0.58128	0.3006301	Discovery
Pt5-T-NE-40	71818.4	0.95644	0.86841	0.57606	0.2691269	Discovery
Pt5-T-NE-41	58987.8	0.96706	0.82646	0.49451	0.19964	Discovery
Pt5-T-NE-42	73711.9	0.9721	0.86661	0.5892	0.2631863	Discovery
Pt5-T-SE-10	74079.5	0.95626	0.89235	0.5973	0.2892889	Discovery
Pt5-T-SE-11	71873.3	0.97444	0.86661	0.57516	0.2813681	Discovery
Pt5-T-SE-12	72868.3	0.95626	0.87741	0.59442	0.2745275	Discovery
Pt5-T-SE-13	74072.3	0.98524	0.89235	0.61026	0.2761476	Discovery
Pt5-T-SE-15	72518.4	0.95644	0.87885	0.58236	0.2939694	Discovery
Pt5-T-SE-16	73569	0.96706	0.88029	0.59478	0.2581458	Discovery
Pt5-T-SE-17	67900.8	0.95626	0.87885	0.55824	0.2145815	Discovery
Pt5-T-SE-19	66351.4	0.95626	0.87885	0.56058	0.2153015	Discovery
Pt5-T-SE-1	76997.9	0.96706	0.89235	0.60324	0.3018902	Discovery
Pt5-T-SE-20	77304.1	0.9721	0.87183	0.6144	0.2721872	Discovery
Pt5-T-SE-3	69457.6	0.98146	0.86103	0.57948	0.2673267	Discovery
Pt5-T-SE-4	78763.8	0.9721	0.89613	0.5955	0.3164716	Discovery
Pt5-T-SE-6	62489.3	0.9721	0.8459	0.50135	0.2232223	Discovery
Pt5-T-SE-7	65080.9	0.94275	0.82754	0.50063	0.2394239	Discovery
Pt5-T-SE-8	64088	0.9721	0.86193	0.56238	0.2156616	Discovery

Pt6-N-NE-44	60781.5	0.9721	0.84014	0.52763	0.209541	Discovery
Pt6-T-NE-24	83132.8	0.9721	0.86139	0.6279	0.3539154	Discovery
Pt6-T-NE-26	64473.3	0.96706	0.86103	0.54959	0.2225023	Discovery
Pt6-T-NE-27	66793.7	0.9721	0.86571	0.55014	0.2466247	Discovery
Pt6-T-NE-28	55754.4	0.95626	0.85977	0.47399	0.190099	Discovery
Pt6-T-NE-29	68124.7	0.95626	0.87255	0.55662	0.2709271	Discovery
Pt6-T-NE-30	60248	0.95626	0.85221	0.47615	0.2009001	Discovery
Pt6-T-NE-33	68503.1	0.97444	0.89235	0.57318	0.2811881	Discovery
Pt6-T-NE-34	70763.2	0.9721	0.8423	0.54941	0.2862286	Discovery
Pt6-T-NE-35	72388.5	0.96706	0.84842	0.57534	0.2919892	Discovery
Pt6-T-NE-36	77013.8	0.96706	0.86661	0.59874	0.3245725	Discovery
Pt6-T-NE-37	78105.2	0.95626	0.8486	0.59676	0.3386139	Discovery
Pt6-T-NE-38	79170.7	0.96706	0.88011	0.60144	0.3157516	Discovery
Pt6-T-NE-40	75146.9	0.9568	0.84338	0.53303	0.3422142	Discovery
Pt6-T-NE-41	60255.2	0.95626	0.83618	0.47597	0.2172817	Discovery
Pt6-T-NE-42	59962.7	0.9613	0.83492	0.46661	0.2136814	Discovery
Pt6-T-SE-10	77325.1	0.9721	0.84392	0.60396	0.3191719	Discovery
Pt6-T-SE-11	81256.5	0.9721	0.8486	0.60972	0.3315932	Discovery
Pt6-T-SE-12	60941	0.9568	0.86373	0.52115	0.2180018	Discovery
Pt6-T-SE-13	68109.9	0.97462	0.86013	0.55518	0.2682268	Discovery
Pt6-T-SE-15	72755.8	0.9721	0.86625	0.59424	0.2642664	Discovery
Pt6-T-SE-16	80015.6	0.9721	0.84824	0.59064	0.3422142	Discovery
Pt6-T-SE-17	74591.6	0.96706	0.88191	0.59154	0.2693069	Discovery
Pt6-T-SE-19	77697.1	0.97084	0.85815	0.60576	0.2914491	Discovery
Pt6-T-SE-20	83463.5	0.95626	0.87093	0.59658	0.3690369	Discovery
Pt6-T-SE-2	87281.1	0.96706	0.87777	0.64032	0.3582358	Discovery
Pt6-T-SE-3	69256	0.9721	0.8459	0.56238	0.2343834	Discovery
Pt6-T-SE-4	99736.9	0.97588	0.91053	0.64212	0.4424842	Discovery
Pt6-T-SE-5	89846.9	0.95626	0.89127	0.64608	0.3504951	Discovery
Pt6-T-SE-6	76755.8	0.95626	0.86787	0.5703	0.2914491	Discovery
Pt6-T-SE-7	80135.4	0.95626	0.89667	0.60252	0.3274527	Discovery
Pt7-N-NE-44	51895.4	0.95626	0.83042	0.44194	0.1391539	Discovery
Pt7-T-NE-24	64854.1	0.9721	0.86067	0.52529	0.2262826	Discovery
Pt7-T-NE-26	67785.5	0.95626	0.84518	0.53519	0.2770477	Discovery
Pt7-T-NE-27	61618.7	0.9721	0.83546	0.48731	0.1985599	Discovery
Pt7-T-NE-29	15340	0.92475	0.5649	0.00918	0	Discovery
Pt7-T-NE-30	72369.3	0.96706	0.84284	0.53591	0.2912691	Discovery
Pt7-T-NE-31	81944.6	0.96706	0.85707	0.56148	0.3348335	Discovery
Pt7-T-NE-33	60220.7	0.95626	0.83816	0.49919	0.2142214	Discovery
Pt7-T-NE-34	82826.2	0.97444	0.86517	0.58542	0.3715572	Discovery
Pt7-T-NE-35	62505.8	0.96148	0.8333	0.47237	0.2126013	Discovery
Pt7-T-NE-36	47712.4	0.95626	0.81188	0.36742	0.1225923	Discovery
Pt7-T-NE-38	46868.1	0.98524	0.8135	0.40234	0.0882088	Discovery
Pt7-T-NE-39	53407.3	0.95626	0.83852	0.44734	0.1857786	Discovery

Pt7-T-NE-40	39624	0.94401	0.80648	0.34563	0.0435644	Discovery
Pt7-T-NE-41	64296.2	0.95626	0.82142	0.48317	0.2581458	Discovery
Pt7-T-NE-43	46907.1	0.96706	0.81386	0.38956	0.0975698	Discovery
Pt7-T-SE-10	69548.9	0.96706	0.86661	0.56382	0.2721872	Discovery
Pt7-T-SE-12	65805.6	0.9721	0.84608	0.54905	0.2565257	Discovery
Pt7-T-SE-13	51562.3	0.95626	0.85491	0.45599	0.1429343	Discovery
Pt7-T-SE-15	68310.8	0.95626	0.86661	0.54563	0.2484248	Discovery
Pt7-T-SE-16	47421.2	0.95626	0.85635	0.34329	0.0907291	Discovery
Pt7-T-SE-18	53706.2	0.96706	0.8486	0.445	0.1492349	Discovery
Pt7-T-SE-19	54011.8	0.9721	0.85707	0.44842	0.1510351	Discovery
Pt7-T-SE-20	57407.9	0.97228	0.84572	0.51323	0.1814581	Discovery
Pt7-T-SE-2	68905	0.9613	0.8486	0.55248	0.269667	Discovery
Pt7-T-SE-3	57346.4	0.96706	0.84284	0.47255	0.2012601	Discovery
Pt7-T-SE-4	73450.2	0.95626	0.85113	0.55986	0.2948695	Discovery
Pt7-T-SE-5	70559.6	0.95626	0.84878	0.56454	0.2842484	Discovery
Pt7-T-SE-6	79491.1	0.9721	0.87777	0.60342	0.3391539	Discovery
Pt7-T-SE-8	69561	0.96706	0.84842	0.57894	0.2878488	Discovery
Pt7-T-SE-9	67150.3	0.95644	0.86211	0.55644	0.2324032	Discovery
Pt8-N-NE-44	45490.1	0.9613	0.81818	0.40828	0.0910891	Discovery
Pt8-T-NE-227	42829.6	0.95626	0.79172	0.37228	0.0817282	Discovery
Pt8-T-NE-24	40516.9	0.95626	0.77624	0.35968	0.0759676	Discovery
Pt8-T-NE-26	43938.1	0.95626	0.79892	0.38974	0.0919892	Discovery
Pt8-T-NE-28	44462.7	0.95626	0.82268	0.39316	0.0921692	Discovery
Pt8-T-NE-29	46768.2	0.95626	0.79856	0.40774	0.0847885	Discovery
Pt8-T-NE-31	47150.5	0.95644	0.79388	0.41548	0.0954095	Discovery
Pt8-T-NE-32	43527.9	0.9613	0.81134	0.38884	0.0856886	Discovery
Pt8-T-NE-34	47163.5	0.95626	0.81602	0.42502	0.0966697	Discovery
Pt8-T-NE-35	38203.8	0.95626	0.79496	0.32043	0.0631863	Discovery
Pt8-T-NE-36	48887.2	0.96706	0.82664	0.44878	0.0982898	Discovery
Pt8-T-NE-37	33344.2	0.95626	0.79514	0.2333	0.0282628	Discovery
Pt8-T-NE-38	47702.8	0.95626	0.8207	0.42394	0.090009	Discovery
Pt8-T-NE-40	35327.1	0.95626	0.80036	0.25185	0.0248425	Discovery
Pt8-T-NE-42	52885.7	0.95626	0.82682	0.47291	0.1213321	Discovery
Pt8-T-NE-43	49228.1	0.9721	0.82646	0.44212	0.1130513	Discovery
Pt8-T-SE-10	52823.2	0.9613	0.83438	0.45527	0.130153	Discovery
Pt8-T-SE-11	49348.9	0.95626	0.81602	0.44014	0.1089109	Discovery
Pt8-T-SE-13	43466.1	0.95626	0.81404	0.37444	0.0784878	Discovery
Pt8-T-SE-14	45479	0.95626	0.82394	0.39694	0.0988299	Discovery
Pt8-T-SE-16	38521.4	0.95644	0.81314	0.31359	0.0252025	Discovery
Pt8-T-SE-17	48783.2	0.95626	0.83996	0.43834	0.1092709	Discovery
Pt8-T-SE-19	41863.2	0.95626	0.81638	0.34869	0.0705671	Discovery
Pt8-T-SE-1	51361	0.95626	0.83204	0.47453	0.1031503	Discovery
Pt8-T-SE-20	42055.4	0.95626	0.81512	0.3541	0.0689469	Discovery
Pt8-T-SE-3	48692.9	0.96148	0.81332	0.41152	0.1056706	Discovery

Pt8-T-SE-4	53509.6	0.95644	0.8369	0.48101	0.1434743	Discovery
Pt8-T-SE-5	48405.1	0.95626	0.8009	0.44086	0.0939694	Discovery
Pt8-T-SE-6	46885.3	0.95626	0.82412	0.4324	0.1022502	Discovery
Pt8-T-SE-7	48238.2	0.95626	0.80576	0.42772	0.0961296	Discovery
Pt8-T-SE-9	50046.2	0.96706	0.81386	0.45779	0.1144914	Discovery
Pt9-N-NE-44	43351.1	0.96706	0.79244	0.36274	0.0770477	Discovery
Pt9-T-NE-25	43849.5	0.95626	0.7874	0.3847	0.0844284	Discovery
Pt9-T-NE-26	38387	0.95626	0.78578	0.32547	0.0628263	Discovery
Pt9-T-NE-27	47099	0.95626	0.79766	0.42268	0.089649	Discovery
Pt9-T-NE-28	46313	0.95626	0.80828	0.40198	0.0907291	Discovery
Pt9-T-NE-30	49291.3	0.95626	0.8081	0.44464	0.09973	Discovery
Pt9-T-NE-31	47086.4	0.95626	0.80072	0.42394	0.1013501	Discovery
Pt9-T-NE-33	50610	0.95626	0.81296	0.43528	0.1323132	Discovery
Pt9-T-NE-34	46883.7	0.95626	0.81116	0.40828	0.1047705	Discovery
Pt9-T-NE-35	52687.1	0.96706	0.82898	0.4405	0.1427543	Discovery
Pt9-T-NE-37	53874.8	0.95644	0.81584	0.45203	0.1625563	Discovery
Pt9-T-NE-38	54272.4	0.9613	0.81314	0.45095	0.1414941	Discovery
Pt9-T-NE-39	54907.3	0.9613	0.82466	0.45257	0.1553555	Discovery
Pt9-T-NE-40	49399.3	0.96706	0.81512	0.4216	0.1015302	Discovery
Pt9-T-NE-41	37551.4	0.95626	0.78704	0.28803	0.0507651	Discovery
Pt9-T-NE-42	50827	0.98524	0.83114	0.42574	0.1186319	Discovery
Pt9-T-SE-11	52190.4	0.95626	0.82916	0.45761	0.1436544	Discovery
Pt9-T-SE-12	43708.8	0.9721	0.79064	0.37642	0.0856886	Discovery
Pt9-T-SE-13	52299.4	0.9613	0.83204	0.44248	0.1265527	Discovery
Pt9-T-SE-14	44263.4	0.95626	0.81098	0.38524	0.080468	Discovery
Pt9-T-SE-16	48033.5	0.96706	0.81602	0.43744	0.0954095	Discovery
Pt9-T-SE-17	46486.5	0.95626	0.81818	0.43384	0.1049505	Discovery
Pt9-T-SE-19	49912.8	0.96706	0.8324	0.44104	0.1175518	Discovery
Pt9-T-SE-1	44721.2	0.95626	0.79856	0.42034	0.089829	Discovery
Pt9-T-SE-20	52597.1	0.96706	0.84176	0.46391	0.1089109	Discovery
Pt9-T-SE-3	45097.3	0.95626	0.818	0.39478	0.0750675	Discovery
Pt9-T-SE-4	48043.7	0.96706	0.82646	0.43474	0.0952295	Discovery
Pt9-T-SE-5	49267.6	0.95626	0.82178	0.45185	0.1148515	Discovery
Pt9-T-SE-6	40225.5	0.95626	0.8045	0.32781	0.0723672	Discovery
Pt9-T-SE-8	47401.5	0.96706	0.78506	0.42916	0.0991899	Discovery
Pt9-T-SE-9	50167.7	0.96706	0.8261	0.43456	0.1036904	Discovery
Pt10-N-NE-44	43544.8	0.95626	0.78704	0.3757	0.0853285	Discovery
Pt10-T-NE-24	45316.4	0.96706	0.81098	0.4108	0.0745275	Discovery
Pt10-T-NE-25	48928.3	0.9613	0.83654	0.42574	0.09973	Discovery
Pt10-T-NE-27	48725.9	0.95626	0.82916	0.44338	0.1125113	Discovery
Pt10-T-NE-28	50727	0.95626	0.82916	0.42556	0.119892	Discovery
Pt10-T-NE-29	45371.2	0.95626	0.79946	0.4036	0.0936094	Discovery
Pt10-T-NE-31	43644.3	0.95626	0.80594	0.38182	0.0847885	Discovery
Pt10-T-NE-32	36917.9	0.95626	0.77444	0.27381	0.0392439	Discovery

Pt10-T-NE-34	44252.6	0.95626	0.79298	0.39478	0.0844284	Discovery
Pt10-T-NE-35	41270.7	0.95626	0.79154	0.37156	0.0563456	Discovery
Pt10-T-NE-37	47166.7	0.96706	0.79568	0.40396	0.0939694	Discovery
Pt10-T-NE-38	40936.1	0.96706	0.79262	0.35338	0.0606661	Discovery
Pt10-T-NE-39	42925	0.96706	0.79838	0.37516	0.0865887	Discovery
Pt10-T-NE-41	20510.2	0.94203	0.64014	0.06157	0	Discovery
Pt10-T-NE-42	49638.1	0.95626	0.7964	0.41008	0.1108911	Discovery
Pt10-T-NE-43	48170.5	0.95626	0.80324	0.40648	0.1285329	Discovery
Pt10-T-SE-10	45446.1	0.95626	0.80234	0.40486	0.0954095	Discovery
Pt10-T-SE-12	38137.6	0.95626	0.77822	0.33429	0.0462646	Discovery
Pt10-T-SE-13	35454.4	0.95626	0.7757	0.25743	0.0378038	Discovery
Pt10-T-SE-14	47566.8	0.9721	0.8045	0.40198	0.1035104	Discovery
Pt10-T-SE-15	43942.1	0.95626	0.78956	0.40288	0.0826283	Discovery
Pt10-T-SE-17	44001	0.9721	0.80486	0.38668	0.0705671	Discovery
Pt10-T-SE-19	40815.3	0.96706	0.79766	0.32079	0.0721872	Discovery
Pt10-T-SE-1	48746.7	0.95626	0.827	0.4378	0.0939694	Discovery
Pt10-T-SE-20	46400.6	0.95626	0.81944	0.38596	0.0990099	Discovery
Pt10-T-SE-2	43759.6	0.95626	0.78884	0.38686	0.0892889	Discovery
Pt10-T-SE-4	42689.9	0.95626	0.80108	0.37462	0.0817282	Discovery
Pt10-T-SE-6	44397.9	0.95626	0.8081	0.40432	0.0844284	Discovery
Pt10-T-SE-7	48614.3	0.96706	0.81836	0.41638	0.0988299	Discovery
Pt10-T-SE-8	47361	0.95626	0.81008	0.4153	0.0977498	Discovery
Pt10-T-SE-9	45589.6	0.95626	0.81152	0.4162	0.0957696	Discovery
Pt11-N-NE-44	61304.5	0.9721	0.86625	0.52475	0.1958596	Discovery
Pt11-T-NE-24	49459.4	0.95626	0.80126	0.40684	0.1272727	Discovery
Pt11-T-NE-26	55808.8	0.95626	0.8396	0.45239	0.1418542	Discovery
Pt11-T-NE-27	53225.3	0.9721	0.83474	0.45545	0.1380738	Discovery
Pt11-T-NE-29	51675.2	0.96706	0.8036	0.45023	0.1146715	Discovery
Pt11-T-NE-30	55234.4	0.95626	0.82304	0.46481	0.1481548	Discovery
Pt11-T-NE-31	58522.7	0.95626	0.83996	0.47237	0.1693969	Discovery
Pt11-T-NE-32	61530.3	0.95626	0.84914	0.50513	0.2021602	Discovery
Pt11-T-NE-34	65754.6	0.95626	0.86121	0.49235	0.2289829	Discovery
Pt11-T-NE-35	57921.7	0.96706	0.84284	0.46103	0.1454545	Discovery
Pt11-T-NE-36	69278.6	0.98524	0.8288	0.55986	0.2754275	Discovery
Pt11-T-NE-37	59674.6	0.86355	0.70783	0.42556	0.2147615	Discovery
Pt11-T-NE-39	64355.3	0.98524	0.82412	0.54239	0.2387039	Discovery
Pt11-T-NE-40	56717.5	0.96706	0.85023	0.49775	0.1688569	Discovery
Pt11-T-NE-41	61976.8	0.95626	0.8477	0.52709	0.2154815	Discovery
Pt11-T-NE-42	62770.2	0.98524	0.84086	0.50243	0.2012601	Discovery
Pt11-T-SE-10	49835.9	0.95626	0.80522	0.41746	0.1107111	Discovery
Pt11-T-SE-11	55206	0.96706	0.8396	0.47471	0.1540954	Discovery
Pt11-T-SE-13	58943.4	0.96706	0.82988	0.47777	0.1769577	Discovery
Pt11-T-SE-14	58841.3	0.95626	0.85005	0.49883	0.149595	Discovery
Pt11-T-SE-16	65822.1	0.96706	0.83492	0.51449	0.2183618	Discovery

Pt11-T-SE-18	63397.6	0.97084	0.84878	0.49883	0.1917192	Discovery
Pt11-T-SE-19	62898.7	0.96706	0.83276	0.52763	0.2381638	Discovery
Pt11-T-SE-1	72655.4	0.95644	0.82538	0.54473	0.319712	Discovery
Pt11-T-SE-20	55611.8	0.95626	0.81476	0.45509	0.1391539	Discovery
Pt11-T-SE-3	67764.5	0.9721	0.84248	0.48749	0.2113411	Discovery
Pt11-T-SE-4	54756.6	0.96706	0.82826	0.45833	0.1355536	Discovery
Pt11-T-SE-6	41814.1	0.95626	0.78722	0.37066	0.0889289	Discovery
Pt11-T-SE-7	65885.5	0.96706	0.83384	0.51539	0.2547255	Discovery
Pt11-T-SE-8	53123.9	0.96706	0.7973	0.44392	0.1261926	Discovery
Pt11-T-SE-9	58117.1	0.9613	0.82106	0.46571	0.1713771	Discovery
Pt12-N-NE-46	84080	0.9721	0.91053	0.63402	0.3476148	Discovery
Pt12-T-NE-24	79090.1	0.9721	0.86877	0.57768	0.3278128	Discovery
Pt12-T-NE-25	62504.8	0.96706	0.84806	0.51863	0.2075608	Discovery
Pt12-T-NE-27	73052.6	0.96706	0.83672	0.55158	0.2777678	Discovery
Pt12-T-NE-28	77652.7	0.97444	0.83852	0.56814	0.3092709	Discovery
Pt12-T-NE-30	66302.3	0.95626	0.8054	0.50855	0.2581458	Discovery
Pt12-T-NE-31	60476.6	0.96706	0.83312	0.48155	0.190279	Discovery
Pt12-T-NE-33	67216.1	0.98524	0.81566	0.51557	0.2626463	Discovery
Pt12-T-NE-34	67910.9	0.95644	0.8081	0.52079	0.2669667	Discovery
Pt12-T-NE-35	53434.8	0.95626	0.81854	0.43438	0.1105311	Discovery
Pt12-T-NE-37	75479.7	0.9613	0.84248	0.55914	0.3494149	Discovery
Pt12-T-NE-38	56041.8	0.96706	0.8045	0.44626	0.1432943	Discovery
Pt12-T-NE-39	79222.3	0.96706	0.84122	0.56868	0.3488749	Discovery
Pt12-T-NE-41	85095.1	0.96706	0.83456	0.57336	0.309991	Discovery
Pt12-T-NE-42	66673.8	0.95626	0.80054	0.48839	0.2385239	Discovery
Pt12-T-NE-43	88764.7	0.96706	0.84428	0.63024	0.3960396	Discovery
Pt12-T-SE-11	67981	0.96706	0.84194	0.53285	0.2428443	Discovery
Pt12-T-SE-12	50088.4	0.9613	0.83132	0.43114	0.1011701	Discovery
Pt12-T-SE-14	56063.8	0.9721	0.84032	0.46553	0.1382538	Discovery
Pt12-T-SE-15	63629.3	0.9721	0.8441	0.49631	0.1969397	Discovery
Pt12-T-SE-16	57033.7	0.9721	0.83492	0.46319	0.1614761	Discovery
Pt12-T-SE-17	60514.3	0.95626	0.83384	0.46733	0.1834383	Discovery
Pt12-T-SE-18	73785.7	0.95626	0.86643	0.60558	0.2819082	Discovery
Pt12-T-SE-20	70585.4	0.95644	0.86409	0.54203	0.270207	Discovery
Pt12-T-SE-2	66740.6	0.97444	0.86373	0.55122	0.229523	Discovery
Pt12-T-SE-3	71918.7	0.95626	0.86445	0.58758	0.2790279	Discovery
Pt12-T-SE-4	81572.4	0.96004	0.88191	0.59622	0.340234	Discovery
Pt12-T-SE-6	72847	0.96706	0.86643	0.5829	0.3022502	Discovery
Pt12-T-SE-7	62057.5	0.96706	0.84068	0.49487	0.1989199	Discovery
Pt12-T-SE-8	69721.2	0.9721	0.85761	0.53699	0.2514851	Discovery
Pt12-T-SE-9	57154.5	0.9613	0.83294	0.45311	0.1632763	Discovery
Pt13-N-NE-44	76428.8	0.9721	0.88047	0.62502	0.3022502	Discovery
Pt13-N-NE-45	64244.6	0.95626	0.86229	0.54005	0.2	Discovery
Pt13-T-NE-25	86277.5	0.9721	0.90657	0.60846	0.3623762	Discovery

Pt13-T-NE-26	81838.1	0.95644	0.87093	0.61152	0.3450945	Discovery
Pt13-T-NE-27	90479.4	0.9721	0.90657	0.62682	0.3765977	Discovery
Pt13-T-NE-28	88893.7	0.9613	0.86301	0.6144	0.3614761	Discovery
Pt13-T-NE-29	65215.4	0.9613	0.83312	0.52943	0.2810081	Discovery
Pt13-T-NE-31	64964.4	0.9613	0.82754	0.51197	0.2610261	Discovery
Pt13-T-NE-32	53755.7	0.95626	0.85113	0.43564	0.1578758	Discovery
Pt13-T-NE-33	79269.4	0.95626	0.86391	0.58776	0.3229523	Discovery
Pt13-T-NE-34	88878.7	0.96706	0.87093	0.61332	0.359496	Discovery
Pt13-T-NE-36	97229.1	0.97066	0.88659	0.64482	0.4158416	Discovery
Pt13-T-NE-37	73362	0.96706	0.8486	0.57102	0.3161116	Discovery
Pt13-T-NE-38	89805.8	0.96706	0.86229	0.62952	0.3819982	Discovery
Pt13-T-NE-40	68991.6	0.9613	0.84212	0.51647	0.2752475	Discovery
Pt13-T-NE-41	77294.2	0.97444	0.8378	0.5694	0.339514	Discovery
Pt13-T-NE-42	76111.1	0.96148	0.86427	0.55158	0.3270927	Discovery
Pt13-T-SE-10	76122	0.95626	0.86859	0.55734	0.3645365	Discovery
Pt13-T-SE-12	75554	0.95644	0.8423	0.55428	0.3330333	Discovery
Pt13-T-SE-13	57789.9	0.9613	0.88047	0.46175	0.1969397	Discovery
Pt13-T-SE-14	88279.1	0.95626	0.86859	0.62322	0.3978398	Discovery
Pt13-T-SE-15	64960.9	0.9721	0.85293	0.52187	0.2234023	Discovery
Pt13-T-SE-18	85311.4	0.97444	0.92259	0.56652	0.339694	Discovery
Pt13-T-SE-19	72403.9	0.9721	0.87903	0.59784	0.2725473	Discovery
Pt13-T-SE-20	69458.4	0.95626	0.90099	0.53897	0.2572457	Discovery
Pt13-T-SE-2	86961.1	0.95626	0.85293	0.59604	0.4082808	Discovery
Pt13-T-SE-3	67547.9	0.95644	0.85311	0.54995	0.2419442	Discovery
Pt13-T-SE-4	74848.1	0.97588	0.84518	0.56274	0.2927093	Discovery
Pt13-T-SE-5	80991.4	0.96706	0.87903	0.62862	0.3323132	Discovery
Pt13-T-SE-6	90677.2	0.96706	0.89469	0.62736	0.3917192	Discovery
Pt13-T-SE-8	80421.4	0.95626	0.87435	0.58938	0.3544554	Discovery
Pt13-T-SE-9	74326.7	0.9613	0.86103	0.56832	0.2970297	Discovery
Pt5-T-NE-1008	73646	0.96706	0.88011	0.58092	0.2640864	Validation
Pt5-T-NE-1011	74020.9	0.9613	0.92709	0.53969	0.2723672	Validation
Pt5-T-NE-1012	75150.4	0.96706	0.91989	0.5712	0.2948695	Validation
Pt5-T-NE-1013	92787.2	0.9721	0.92709	0.65959	0.4230423	Validation
Pt5-T-NE-1014	76412.3	0.97444	0.90567	0.59928	0.3006301	Validation
Pt5-T-SE-1001	75123.1	0.95644	0.90171	0.51233	0.280288	Validation
Pt5-T-SE-1003	56508.4	0.9721	0.88587	0.48011	0.1632763	Validation
Pt5-T-SE-1004	66241.8	0.9613	0.89235	0.55788	0.2592259	Validation
Pt5-T-SE-1005	67616.6	0.95626	0.88065	0.51647	0.2286229	Validation
Pt5-T-SE-1007	78371.1	0.96148	0.90063	0.59982	0.3013501	Validation
Pt6-T-NE-1022	59295.2	0.95626	0.91989	0.51125	0.1906391	Validation
Pt6-T-NE-1023	65049.3	0.95626	0.90387	0.49091	0.1963996	Validation
Pt6-T-NE-1025	68048.8	0.95644	0.90567	0.55878	0.2432043	Validation
Pt6-T-NE-1027	70903.8	0.95626	0.92439	0.55932	0.2693069	Validation
Pt6-T-NE-1028	78877	0.9613	0.89235	0.6018	0.3164716	Validation

Pt6-T-SE-1015	67203	0.9613	0.92259	0.55266	0.2437444	Validation
Pt6-T-SE-1016	70446.8	0.96706	0.92259	0.58506	0.2840684	Validation
Pt6-T-SE-1018	67573.3	0.96508	0.92259	0.55374	0.2010801	Validation
Pt6-T-SE-1020	52477.9	0.96706	0.87597	0.4225	0.1227723	Validation
Pt6-T-SE-1021	61907.8	0.95626	0.92259	0.49811	0.1949595	Validation
Pt7-T-NE-1036	47770.1	0.95626	0.83798	0.3847	0.1227723	Validation
Pt7-T-NE-1038	60727.7	0.97444	0.88065	0.50765	0.1987399	Validation
Pt7-T-NE-1039	55190.7	0.96706	0.87183	0.48083	0.1508551	Validation
Pt7-T-NE-1041	71652	0.96706	0.89163	0.52331	0.2676868	Validation
Pt7-T-NE-1042	71090.8	0.96706	0.90783	0.51629	0.2522052	Validation
Pt7-T-SE-1031	73537.8	0.97444	0.90837	0.55626	0.2547255	Validation
Pt7-T-SE-1032	66476.1	0.96706	0.90837	0.55158	0.2453645	Validation
Pt7-T-SE-1033	71216.6	0.95626	0.91269	0.57894	0.249865	Validation
Pt7-T-SE-1034	57827.3	0.95626	0.89325	0.49865	0.1575158	Validation
Pt7-T-SE-1035	65422.3	0.9721	0.90387	0.50207	0.1963996	Validation
Pt8-T-NE-1050	84992.3	0.97462	0.92709	0.62142	0.3656166	Validation
Pt8-T-NE-1052	74145.3	0.96706	0.90351	0.55338	0.2988299	Validation
Pt8-T-NE-1054	67374.6	0.95626	0.90513	0.56112	0.2568857	Validation
Pt8-T-NE-1055	73452.7	0.98524	0.92259	0.5766	0.309631	Validation
Pt8-T-NE-1056	59682.1	0.95626	0.87975	0.50531	0.1888389	Validation
Pt8-T-SE-1043	81108.8	0.98524	0.89685	0.62322	0.3256526	Validation
Pt8-T-SE-1044	81412.6	0.96706	0.91773	0.60648	0.3162916	Validation
Pt8-T-SE-1045	76311.5	0.96706	0.89235	0.62232	0.2943294	Validation
Pt8-T-SE-1047	86670.8	0.9613	0.92727	0.6477	0.3593159	Validation
Pt8-T-SE-1048	86789.4	0.96706	0.92439	0.5955	0.3890189	Validation
Pt9-T-NE-1064	70922.5	0.95626	0.92709	0.53033	0.2514851	Validation
Pt9-T-NE-1065	81579.7	0.97084	0.91989	0.6126	0.3420342	Validation
Pt9-T-NE-1066	67739.5	0.96706	0.90837	0.55968	0.2667867	Validation
Pt9-T-NE-1067	60049.9	0.95626	0.89487	0.41854	0.1963996	Validation
Pt9-T-NE-1068	65374.5	0.96706	0.89397	0.49793	0.2513051	Validation
Pt9-T-SE-1057	78187.6	0.96148	0.91773	0.5973	0.3051305	Validation
Pt9-T-SE-1058	73942.6	0.95626	0.88875	0.58398	0.2878488	Validation
Pt9-T-SE-1059	81516.1	0.98524	0.87165	0.61458	0.3344734	Validation
Pt9-T-SE-1060	83341.7	0.96148	0.88947	0.63204	0.370297	Validation
Pt9-T-SE-1063	81861.2	0.96004	0.92259	0.61368	0.3247525	Validation
Pt10-T-NE-1080	79522.2	0.94311	0.89019	0.57912	0.3027903	Validation
Pt10-T-NE-1081	79689.6	0.94887	0.87417	0.60756	0.30045	Validation
Pt10-T-NE-1082	62356.5	0.93807	0.87525	0.42322	0.2068407	Validation
Pt10-T-NE-1083	64941.2	0.94635	0.87795	0.48965	0.229883	Validation
Pt10-T-NE-1084	57650.3	0.94887	0.84356	0.48911	0.1726373	Validation
Pt10-T-SE-1071	70220.8	0.9613	0.87111	0.58416	0.2849685	Validation
Pt10-T-SE-1073	60984	0.97156	0.82664	0.51629	0.1974797	Validation
Pt10-T-SE-1074	69190.8	0.95338	0.86805	0.50999	0.2577858	Validation
Pt10-T-SE-1076	73510.1	0.9721	0.84896	0.5793	0.2963096	Validation

Pt10-T-SE-1077	70511.8	0.94311	0.88821	0.51989	0.2549055	Validation
Pt11-T-NE-1094	75247.6	0.96706	0.88929	0.55752	0.2640864	Validation
Pt11-T-NE-1095	84438.5	0.96706	0.90441	0.62124	0.3234923	Validation
Pt11-T-NE-1096	88846	0.96706	0.89019	0.62304	0.3575158	Validation
Pt11-T-NE-1097	87084.1	0.9613	0.88839	0.64014	0.360216	Validation
Pt11-T-NE-1098	74595.6	0.94887	0.88749	0.57174	0.2849685	Validation
Pt11-T-SE-1085	72791.7	0.94761	0.90171	0.51791	0.2711071	Validation
Pt11-T-SE-1086	69410.4	0.93843	0.90171	0.48983	0.2631863	Validation
Pt11-T-SE-1087	69497	0.95392	0.89559	0.51269	0.2466247	Validation
Pt11-T-SE-1089	64896	0.94761	0.87147	0.51647	0.230423	Validation
Pt11-T-SE-1091	79296.1	0.97444	0.88515	0.59442	0.3105311	Validation
Pt12-T-NE-1106	56489.1	0.9721	0.88785	0.45653	0.1848785	Validation
Pt12-T-NE-1108	76477	0.9721	0.87597	0.58722	0.3182718	Validation
Pt12-T-NE-1109	70707.8	0.9613	0.92259	0.52133	0.2657066	Validation
Pt12-T-NE-1110	77638.2	0.96706	0.88461	0.62322	0.3270927	Validation
Pt12-T-NE-1112	76285.9	0.98686	0.90747	0.5532	0.2945095	Validation
Pt12-T-SE-1099	66706	0.9613	0.89163	0.43582	0.2563456	Validation
Pt12-T-SE-1100	57825.7	0.96706	0.85761	0.49055	0.1654365	Validation
Pt12-T-SE-1103	71582.6	0.95626	0.91377	0.54437	0.2624662	Validation
Pt12-T-SE-1104	59338.5	0.95626	0.86409	0.50135	0.2248425	Validation
Pt12-T-SE-1105	58685.8	0.95626	0.87687	0.4405	0.1791179	Validation
Pt13-T-NE-1120	55709.8	0.96058	0.87435	0.39118	0.2021602	Validation
Pt13-T-NE-1121	66930.8	0.95644	0.89199	0.48281	0.2232223	Validation
Pt13-T-NE-1123	55197	0.96706	0.87345	0.45167	0.1819982	Validation
Pt13-T-NE-1124	59214.7	0.92889	0.82484	0.39568	0.2075608	Validation
Pt13-T-NE-1125	50673.3	0.93789	0.78542	0.37444	0.1566157	Validation
Pt13-T-SE-1113	80369.9	0.95626	0.84878	0.60486	0.3438344	Validation
Pt13-T-SE-1114	86304.1	0.95626	0.89073	0.6081	0.3686769	Validation
Pt13-T-SE-1115	70510.1	0.9721	0.92439	0.54689	0.2579658	Validation
Pt13-T-SE-1116	60165.4	0.95626	0.89307	0.47237	0.2030603	Validation
Pt13-T-SE-1118	76625.1	0.96184	0.88623	0.54725	0.3036904	Validation

Sample type: T-SE: sun-exposed normal epidermal skin sample; T-NE: non-sun-exposed normal epidermal skin sample; N-NE: dermal skin sample

(B). Extend cohort.

Sample	mean	Percentage of the targeted region covered by at least		
		1,000	10,000	50,000
Pt14-Na	49,842	0.94947	0.87873	0.40558
Pt14-Nb	48,922	0.95878	0.85301	0.32433
Pt15-Na	53,679	0.95553	0.90409	0.44701
Pt15-Nb	51,919	0.95506	0.90418	0.42484
Pt15-T	42,869	0.9568	0.81758	0.33911
Pt16-Na	62,429	0.96233	0.9217	0.53681
Pt16-Nb	45,145	0.93571	0.80738	0.28922
Pt17-Na	45,116	0.9524	0.89218	0.35609
Pt17-Nb	49,231	0.94759	0.86444	0.39488
Pt18-Na	33,346	0.95537	0.81411	0.23616
Pt18-Nb	37,182	0.96032	0.85845	0.26764
Pt18-T	45,393	0.95905	0.8916	0.37004
Pt19-Na	34,878	0.95994	0.86931	0.23918
Pt19-Nb	40,682	0.96454	0.88358	0.31327
Pt19-T	50,891	0.96529	0.89102	0.41956
Pt20-Na	45,080	0.96136	0.86351	0.33673
Pt20-Nb	62,653	0.96665	0.90935	0.52328
Pt20-T	54,671	0.97022	0.91458	0.45883
Pt21-Na	40,427	0.95717	0.88249	0.30289
Pt21-Nb	51,081	0.94849	0.88589	0.41721

Sample type: T-tumor, Na and Nb-normal skin collected from 1mm or 6mm from the surgical margin

Table S4. All 638 identified mutations identified from the primary cohort.

SAMPLE	Sample Type Coverage USMs	cohort Context	mut_id(GRCh37)*	type	class	gene	mRNA ACC	aachange	VAf
Pt8-T-NE-1055	NE 0.052541582	Validation 6433	16.51174461.G.A USM G[C>T]C	SNV	missense	SALL1	NM_002968		P558S
Pt1-T-SE-9	SE 0.017263327	Discovery 44777	9.139412690.G.A USM T[C>T]C	SNV	missense	NOTCH1	NM_017617		S385F
Pt8-T-SE-7	SE 0.020844403	Discovery 24467	7.86415857.C.T USM T[C>T]C	SNV	missense	GRM3	NM_000840		S250F
Pt2-T-NE-31B	NE 10103 USM	Discovery G[C>T]C	9.139412393.G.A USM G[C>T]C	SNV	intron	NOTCH1	NA NA	0.021280808	
Pt1-T-SE-1	SE 0.021003825	Discovery 46801	9.139412618.C.T NUSM G[C>T]A	SNV	missense	NOTCH1	NM_017617		C409Y
Pt1-T-NE-26	NE 0.012265901	Discovery 16713	9.139412322.C.G NUSM G[C>G]A	SNV	silent	NOTCH1	NM_017617		L441L
Pt13-T-SE-10	SE 0.034161298	Discovery 64576	17.7578427.T.C NUSM C[A>G]C	SNV	missense	TP53	NM_000546		H168R
Pt10-T-NE-38	NE 0.024410917	Discovery 11798	9.139412376.G.A NUSM G[C>T]G	SNV	silent	NOTCH1	NM_017617		C423C
Pt6-T-SE-1020	SE 0.019140565	Validation 150727	9.139417587.C.A NUSM C[C>A]A	SNV	missense	NOTCH1	NM_017617		G153C
Pt11-T-NE-35	NE 0.019157088	Discovery 8091	16.51174456.C.T NUSM G[C>T]A	SNV	silent	SALL1	NM_002968		L559L
Pt7-T-NE-36	NE 22009 USM	Discovery C[C>T]T	9.139412545.G.A USM C[C>T]T	SNV	intron	NOTCH1	NA NA	0.035258303	
Pt10-T-NE-1082	NE 0.032780073	Validation 43319	1.120506359.G.T NUSM T[C>A]A	SNV	missense	NOTCH2	NM_024408		Q585K
Pt9-T-NE-1064	NE 0.015865258	Validation 106396	4.1808958.C.T USM G[C>T]C	SNV	missense	FGFR3	NM_000142		A797V
Pt13-T-NE-1124	NE 0.015892448	Validation 89854	17.7577066.T.G NUSM A[A>C]G	SNV	missense	TP53	NM_000546		K291T
Pt2-T-SE-10	SE 0.015261068	Discovery 33746	9.139412624.G.A USM C[C>T]G	SNV	missense	NOTCH1	NM_017617		P407L
Pt13-T-SE-20	SE 0.037901093	Discovery 106646	17.7577559.G.A USM T[C>T]C	SNV	missense	TP53	NM_000546		S241F

Pt9-T-SE-20 18738	SE USM	Discovery9.139412392.G.A C[C>T]A	SNV	intron	NOTCH1	NA	NA	0.015636674
Pt8-T-NE-36 0.025931216	NE	Discovery7.86415865.C.T 18202 USM C[C>T]G	SNV	missense	GRM3	NM_000840		R253C
Pt12-T-NE-1106 35983	NE NUSM	Validation9.139411857.T.C C[A>G]C	SNV	intron	NOTCH1	NA	NA	0.018870022
Pt11-T-SE-19 0.058618126	SE	Discovery17.7578275.G.A 44389 USM T[C>T]A	SNV	nonsense	TP53	NM_000546		Q192*
Pt11-T-SE-1087 0.076192963	SE	Validation4.126411668.C.T 283412 USM C[C>T]C	SNV	missense	FAT4	NM_001291303		P4566L
Pt8-T-SE-6 0.026597403	SE	Discovery9.139410154.G.A 9625 NUSM G[C>T]A	SNV	missense	NOTCH1	NM_017617		H562Y
Pt4-T-SE-4 20779	SE USM	Discovery9.139417669.C.T G[C>T]T	SNV	intron	NOTCH1	NA	NA	0.019009577
Pt1-T-NE-18 0.045965357	NE	Discovery9.139412381.G.T 11835 NUSM C[C>A]C	SNV	missense	NOTCH1	NM_017617		P422T
Pt8-T-NE-37 0.023690651	NE	Discovery9.139412382.G.A 10215 USM A[C>T]C	SNV	silent	NOTCH1	NM_017617		N421N
Pt13-T-NE-1125 66294	NE NUSM	Validation1.120497645.C.T A[C>T]A	SNV	intron	NOTCH2	NA	NA	0.018810149
Pt11-T-SE-11 0.163083183	SE	Discovery9.139413075.G.A 21627 USM T[C>T]C	SNV	missense	NOTCH1	NM_017617		S356F
Pt5-T-SE-1007 0.015276382	SE	Validation17.7577539.G.A 114425 USM C[C>T]G	SNV	missense	TP53	NM_000546		R248W
Pt2-T-SE-11B 43444	SE USM	Discovery9.139412748.G.A C[C>T]C	SNV	intron	NOTCH1	NA	NA	0.048936562
Pt1-T-NE-20 0.018096989	NE	Discovery9.139412376.G.A 14146 NUSM G[C>T]G	SNV	silent	NOTCH1	NM_017617		
Pt2-T-NE-21 0.015122662	NE	Discovery16.51174459.C.T 8927 NUSM A[C>T]G	SNV	silent	SALL1	NM_002968		P558P
Pt6-T-NE-42 0.014364959	NE	Discovery4.1808963.C.T 76436 USM A[C>T]C	SNV	missense	FGFR3	NM_000142		P799S
Pt3-T-SE-8 0.05794084	SE	Discovery17.7578550.G.A 134482 USM T[C>T]C	SNV	missense	TP53	NM_000546		S127F
Pt1-T-NE-27 7485	NE USM	Discovery9.139412399.G.A G[C>T]C	SNV	intron	NOTCH1	NA	NA	0.016032064

Pt7-T-NE-39	NE	Discovery9.139412382.G.A	SNV	silent	NOTCH1	NM_017617	
0.023160254		10708 USM A[C>T]C					
Pt7-T-NE-36	NE	Discovery4.126329653.A.G	SNV	missense	FAT4	NM_001291303	E1875G
0.023712904		28339 NUSM G[A>G]A					
Pt2-T-SE-9	SE	Discovery6.70049256.C.T	SNV	missense	ADGRB3	NM_001704	P1107S
0.026437264		9532 USM G[C>T]C					
Pt13-T-SE-19	SE	Discovery1.120497662.C.T	SNV	splice	NOTCH2	NM_024408	c.2219+1G>A
0.037968885		174643 USM A[C>T]C					
Pt6-T-NE-1023	NE	Validation1.120510220.G.A	SNV	missense	NOTCH2	NM_024408	A430V
0.015804767		59539 NUSM G[C>T]A					
Pt3-T-SE-15	SE	Discovery9.139412381.G.A	SNV	missense	NOTCH1	NM_017617	P422S
0.046985904		10003 USM C[C>T]C					
Pt11-T-NE-36	NE	Discovery9.139417361.T.A	SNV	missense	NOTCH1	NM_017617	Q228L
0.015179974		32477 NUSM C[A>T]G					
Pt9-T-NE-1068	NE	Validation1.120506353.C.T	SNV	missense	NOTCH2	NM_024408	G587S
0.01684516		54437 USM C[C>T]A					
Pt12-T-SE-20	SE	Discovery17.7577547.C.T	SNV	missense	TP53	NM_000546	G245D
0.022940926		180943 USM G[C>T]C					
Pt2-T-SE-4	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.122190915		14551 USM T[C>T]G					
Pt7-T-SE-5	SE	Discovery9.139412501.C.T	SNV	intron	NOTCH1	NA	NA
80302	NUSM	G[C>T]A					0.016176434
Pt3-T-SE-11A	SE	Discovery9.139412331.G.A	SNV	silent	NOTCH1	NM_017617	
0.009886792		39750 USM G[C>T]C					
Pt3-T-SE-10	SE	Discovery9.139412500.G.A	SNV	intron	NOTCH1	NA	NA
57609	USM	G[C>T]C					0.018174244
Pt4-T-SE-1	SE	Discovery9.139417584.G.A	SNV	nonsense	NOTCH1	NM_017617	Q154*
0.028703736		57658 USM C[C>T]A					
Pt3-T-SE-8	SE	Discovery9.139412302.C.T	SNV	missense	NOTCH1	NM_017617	R448Q
0.0104375		32000 USM T[C>T]G					
Pt12-T-SE-1099	SE	Validation9.139413064.C.T	SNV	missense	NOTCH1	NM_017617	E360K
0.025943484		26789 USM T[C>T]G					
Pt6-T-SE-4	SE	Discovery17.7578290.C.T	SNV	splice	TP53	NM_000546	c.560-1G>A
0.016077113		168998 USM C[C>T]T					
Pt5-T-SE-4	SE	Discovery4.1803553.C.T	SNV	intron	FGFR3	NA	NA
51238	USM	NA					0.01647215

Pt8-T-SE-1047	SE	Validation	17.7577543.C.T	SNV	missense TP53	NM_000546	M246I
0.018875817		117134	USM T[C>T]A				
Pt6-T-SE-1018	SE	Validation	9.139412267.G.A	SNV	missense NOTCH1	NM_017617	P460S
0.014924198		63521	USM C[C>T]C				
Pt3-T-NE-25	NE	Discovery	17.7578563.A.G	SNV	UTR_5 TP53	NM_001126115	UTR_5
0.006265359		156256	NUSM A[A>G]G				
Pt5-T-SE-1001	SE	Validation	1.120506371.G.T	SNV	missense NOTCH2	NM_024408	H581N
0.026001493		32152	NUSM C[C>A]A				
Pt13-T-NE-1125	NE	Validation	1.120510234.A.T	SNV	missense NOTCH2	NM_024408	N425K
0.015254486		20453	NUSM G[A>T]T				
Pt3-T-NE-33	NE	Discovery	9.139412394.C.T	SNV	intron NOTCH1	NA NA	0.02026003
12537	NUSM		G[C>T]G				
Pt9-T-NE-1064	NE	Validation	1.120497650.G.T	SNV	intron NOTCH2	NA NA	0.014001363
86563	NUSM		C[C>A]C				
Pt12-T-NE-34	NE	Discovery	9.139417346.C.T	SNV	missense NOTCH1	NM_017617	C233Y
0.016683633		17682	NUSM G[C>T]A				
Pt12-T-NE-30	NE	Discovery	6.70049272.C.T	SNV	missense ADGRB3	NM_001704	T1112M
0.061701278		5008	NUSM A[C>T]G				
Pt10-T-NE-32	NE	Discovery	17.7578416.C.T	SNV	missense TP53	NM_000546	V172I
0.023147796		26266	USM A[C>T]C				
Pt10-T-NE-35	NE	Discovery	9.139393670.C.T	SNV	missense NOTCH1	NM_017617	M1992I
0.018053276		7921	NUSM G[C>T]A				
Pt5-T-SE-7	SE	Discovery	9.139412303.GG.AA	DNV	nonsense NOTCH1	NM_017617	R448*
0.021318699		37901	USM C[CC>TT]G				
Pt4-T-SE-2	SE	Discovery	1.120510232.G.A	SNV	missense NOTCH2	NM_024408	P426L
0.016470838		65874	USM C[C>T]T				
Pt3-T-SE-8	SE	Discovery	17.7577073.G.A	SNV	missense TP53	NM_000546	L289F
0.000653535		197388	USM T[C>T]T				
Pt9-T-NE-1066	NE	Validation	9.139412645.C.T	SNV	missense NOTCH1	NM_017617	C400Y
0.014528198		61742	NUSM G[C>T]A				
Pt13-T-SE-20	SE	Discovery	17.7577539.GG.AA	DNV	missense TP53	NM_000546	R248W
0.024895448		106646	USM A[CC>TT]G				
Pt3-T-SE-11A	SE	Discovery	9.139412309.C.T	SNV	missense NOTCH1	NM_017617	G446S
0.012754717		39750	USM C[C>T]C				
Pt12-T-NE-1106	NE	Validation	4.126329608.T.C	SNV	missense FAT4	NM_001291303	V1860A
0.023142428		29945	NUSM T[A>G]C				

Pt2-T-NE-29	NE	Discovery9.139417409.C.T	SNV	missense	NOTCH1	NM_017617	G212D
0.01447254		60943 USM G[C>T]C					
Pt9-T-NE-1068	NE	Validation7.86394565.T.C	SNV	missense	GRM3	NM_000840	I35T
0.031090546		31553 NUSM T[A>G]T					
Pt7-T-SE-16	SE	Discovery4.1803553.C.T	SNV	intron	FGFR3	NA NA	0.020489305
37727	USM	NA					
Pt11-T-NE-1098	NE	Validation9.139418264.T.C	SNV	missense	NOTCH1	NM_017617	D103G
0.030882212		41804 NUSM G[A>G]C					
Pt12-T-SE-1103	SE	Validation9.139412624.G.A	SNV	missense	NOTCH1	NM_017617	P407L
0.020169972		70600 USM C[C>T]G					
Pt10-T-NE-1082	NE	Validation4.126329651.A.T	SNV	silent	FAT4	NM_001291303	G1874G
0.018000887		31554 NUSM G[A>T]G					
Pt10-T-NE-1084	NE	Validation9.139393661.G.A	SNV	silent	NOTCH1	NM_017617	G1995G
0.047635367		5836 NUSM G[C>T]A					
Pt5-T-SE-1001	SE	Validation9.139412399.G.A	SNV	intron	NOTCH1	NA NA	0.015658813
41127	USM	G[C>T]C					
Pt9-T-SE-1057	SE	Validation2.212570063.C.T	SNV	missense	ERBB4	NM_005235	R393Q
0.019325863		44086 USM C[C>T]G					
Pt8-T-NE-32	NE	Discovery4.1803560.A.T	SNV	splice	FGFR3	NM_000142	c.740-2A>T
0.021552817		19719 NUSM C[A>T]G					
Pt6-T-SE-3	SE	Discovery9.139412263.C.T	SNV	missense	NOTCH1	NM_017617	C461Y
0.096014638		100016 NUSM G[C>T]A					
Pt12-T-SE-16	SE	Discovery9.139412694.C.T	SNV	missense	NOTCH1	NM_017617	G384S
0.017483598		58226 USM C[C>T]C					
Pt8-T-SE-16	SE	Discovery9.139410155.C.T	SNV	silent	NOTCH1	NM_017617	T561T
0.020058087		11018 NUSM G[C>T]G					
Pt12-T-SE-1103	SE	Validation9.139413067.A.T	SNV	missense	NOTCH1	NM_017617	C359S
0.033607107		23864 NUSM C[A>T]G					
Pt6-T-SE-19	SE	Discovery9.139412645.C.A	SNV	missense	NOTCH1	NM_017617	C400F
0.014059911		66999 NUSM G[C>A]A					
Pt5-T-NE-40	NE	Discovery9.139412615.C.G	SNV	missense	NOTCH1	NM_017617	S410T
0.022256261		54187 NUSM G[C>G]T					
Pt3-T-SE-8	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.053543307		8255 USM T[C>T]G					
Pt1-T-SE-8	SE	Discovery9.139412690.G.A	SNV	missense	NOTCH1	NM_017617	S385F
0.029509667		42359 USM T[C>T]C					

Pt10-T-NE-43	NE	Discovery9.139393670.C.T	SNV	missense	NOTCH1	NM_017617	M1992I
0.017189566		8319 NUSM G[C>T]A					
Pt10-T-SE-1077	SE	Validation9.139412258.T.C	SNV	missense	NOTCH1	NM_017617	N463D
0.07122462		151647 NUSM G[A>G]A					
Pt5-T-NE-37	NE	Discovery16.51174456.C.T	SNV	silent	SALL1	NM_002968	L559L
0.015034539		4922 NUSM G[C>T]A					
Pt3-T-SE-8	SE	Discovery9.139412376.G.A	SNV	silent	NOTCH1	NM_017617	
0.026044821		8255 NUSM G[C>T]G					
Pt11-T-SE-13	SE	Discovery9.139395167.G.C	SNV	missense	NOTCH1	NM_017617	T1924R
0.149450768		80294 NUSM A[C>G]A					
Pt11-T-SE-1085	SE	Validation7.86415866.G.A	SNV	missense	GRM3	NM_000840	R253H
0.067448189		47770 NUSM G[C>T]G					
Pt10-T-NE-35	NE	Discovery16.51174466.C.T	SNV	missense	SALL1	NM_002968	G556D
0.018759019		3465 USM G[C>T]C					
Pt6-T-NE-1023	NE	Validation1.120506373.T.C	SNV	missense	NOTCH2	NM_024408	H580R
0.013998711		34146 NUSM C[A>G]C					
Pt13-T-SE-18	SE	Discovery7.86394567.G.T	SNV	nonsense	GRM3	NM_000840	E36*
0.026936416		34600 NUSM T[C>A]T					
Pt13-T-NE-1120	NE	Validation1.120510751.G.C	SNV	missense	NOTCH2	NM_024408	Q405E
0.040209885		36782 NUSM A[C>G]A					
Pt6-T-SE-7	SE	Discovery9.139412520.C.T	SNV	intron	NOTCH1	NA NA	0.016776371
59250	USM	T[C>T]G					
Pt3-T-NE-24	NE	Discovery4.126329633.T.A	SNV	missense	FAT4	NM_001291303	D1868E
0.004121119		28633 NUSM C[A>T]T					
Pt11-T-SE-1089	SE	Validation1.120512148.G.T	SNV	missense	NOTCH2	NM_024408	P365Q
0.014471019		64681 NUSM C[C>A]A					
Pt6-T-NE-42	NE	Discovery9.139393662.C.T	SNV	missense	NOTCH1	NM_017617	G1995D
0.031520533		9010 USM G[C>T]C					
Pt9-T-NE-30	NE	Discovery9.139412399.G.A	SNV	intron	NOTCH1	NA NA	0.014999063
16001	USM	G[C>T]C					
Pt7-T-NE-40	NE	Discovery9.139410155.C.T	SNV	silent	NOTCH1	NM_017617	T561T
0.043769634		9550 NUSM G[C>T]G					
Pt6-T-SE-13	SE	Discovery4.126329653.A.G	SNV	missense	FAT4	NM_001291303	E1875G
0.03579775		55199 NUSM G[A>G]A					
Pt4-T-NE-18	NE	Discovery9.139417343.C.T	SNV	missense	NOTCH1	NM_017617	R234H
0.015152033		29237 NUSM G[C>T]G					

Pt7-T-SE-8	SE	Discovery9.139396851.C.T	SNV	missense NOTCH1	NM_017617	G1753R
0.260634184		14223 USM C[C>T]G				
Pt2-T-SE-16	SE	Discovery9.139412376.G.A	SNV	silent NOTCH1	NM_017617	C423C
0.025066335		17713 NUSM G[C>T]G				
Pt5-T-SE-1005	SE	Validation17.7577539.G.A	SNV	missense TP53	NM_000546	R248W
0.014869024		94559 USM C[C>T]G				
Pt13-T-SE-1113	SE	Validation9.139417359.T.C	SNV	missense NOTCH1	NM_017617	N229D
0.020923033		28103 NUSM G[A>G]A				
Pt10-T-SE-17	SE	Discovery2.212570052.C.T	SNV	missense ERBB4	NM_005235	E397K
0.037576687		5216 USM T[C>T]T				
Pt12-T-NE-1106	NE	Validation4.126329653.A.G	SNV	missense FAT4	NM_001291303	E1875G
0.043558262		29891 NUSM G[A>G]A				
Pt12-T-SE-1103	SE	Validation7.113518253.T.G	SNV	missense PPP1R3A	NM_002711	K965T
0.034761855		38548 NUSM A[A>C]G				
Pt6-T-SE-12	SE	Discovery9.139412381.G.A	SNV	missense NOTCH1	NM_017617	P422S
0.035842021		26282 USM C[C>T]C				
Pt11-T-NE-1095	NE	Validation9.139412376.G.A	SNV	silent NOTCH1	NM_017617	C423C
0.029491007		27466 NUSM G[C>T]G				
Pt7-T-SE-1032	SE	Validation9.139412267.G.A	SNV	missense NOTCH1	NM_017617	P460S
0.032874524		81370 USM C[C>T]C				
Pt6-T-SE-5	SE	Discovery9.139413075.G.A	SNV	missense NOTCH1	NM_017617	S356F
0.022122784		23912 USM T[C>T]C				
Pt8-T-NE-1056	NE	Validation9.139418259.C.T	SNV	missense NOTCH1	NM_017617	A105T
0.015292646		28772 NUSM G[C>T]A				
Pt6-T-SE-1020	SE	Validation9.139413065.G.C	SNV	missense NOTCH1	NM_017617	C359W
0.020158134		25548 NUSM G[C>G]G				
Pt13-T-NE-1125	NE	Validation4.126329650.G.T	SNV	missense FAT4	NM_001291303	G1874V
0.086103152		6980 NUSM T[C>A]C				
Pt11-T-SE-1091	SE	Validation9.139412266.G.A,9.139412267.G.A,9.139412270.T.C:101	CSNV	missense NOTCH1		
NM_017617		N459D,P460L 0.031782572		80799 NUSM C[C>T]G,G[A>G]A		
Pt11-T-SE-20	SE	Discovery16.51174461.G.A	SNV	missense SALL1	NM_002968	P558S
0.016101805		7701 USM G[C>T]C				
Pt8-T-SE-14	SE	Discovery16.51174466.C.T	SNV	missense SALL1	NM_002968	G556D
0.023048556		3254 USM G[C>T]C				
Pt2-T-SE-1	SE	Discovery9.139417601.G.A	SNV	missense NOTCH1	NM_017617	P148L
0.021523212		50643 USM C[C>T]C				

Pt10-T-NE-1082	NE	Validation4.126329622.G.T	SNV	missense FAT4	NM_001291303	A1865S
0.022130058		31586 NUSM G[C>A]T				
Pt8-T-SE-1048	SE	Validation1.27092770.G.A	SNV	missense ARID1A	NM_006015	G931R
0.015493878		56603 USM C[C>T]A				
Pt6-T-SE-16	SE	Discovery9.139412730.G.A	SNV	missense NOTCH1	NM_017617	L372F
0.020003859		46641 USM C[C>T]T				
Pt13-T-SE-20	SE	Discovery17.7578538.T.A	SNV	missense TP53	NM_000546	N131I
0.034774036		133893 NUSM A[A>T]C				
Pt11-T-SE-1085	SE	Validation1.120512219.A.G	SNV	silent NOTCH2	NM_024408	D341D
0.031060252		34256 NUSM A[A>G]T				
Pt5-T-SE-13	SE	Discovery9.139393662.C.T	SNV	missense NOTCH1	NM_017617	G1995D
0.026198213		14772 USM G[C>T]C				
Pt3-T-SE-11A	SE	Discovery16.51174468.G.A	SNV	silent SALL1	NM_002968	V555V
0.015931877		7281 USM T[C>T]G				
Pt8-T-SE-1048	SE	Validation9.139412375.C.T	SNV	missense NOTCH1	NM_017617	E424K
0.094730309		53172 USM T[C>T]G				
Pt12-T-SE-1104	SE	Validation7.86468848.T.C	SNV	missense GRM3	NM_000840	V673A
0.01547203		97854 NUSM G[A>G]C				
Pt9-T-NE-41	NE	Discovery9.139412376.G.A	SNV	silent NOTCH1	NM_017617	C423C
0.018402677		13748 NUSM G[C>T]G				
Pt9-T-NE-1067	NE	Validation1.120510052.T.C	SNV	intron NOTCH2	NA NA	0.018666605
86036	NUSM	A[A>G]A				
Pt3-T-SE-10	SE	Discovery9.139412633.T.A	SNV	missense NOTCH1	NM_017617	Y404F
0.012603027		66730 NUSM T[A>T]C				
Pt2-T-SE-16	SE	Discovery9.139417354.C.A	SNV	silent NOTCH1	NM_017617	G230G
0.018973924		37736 NUSM C[C>A]C				
Pt1-T-SE-8	SE	Discovery17.7578540.G.T	SNV	silent TP53	NM_000546	L130L
0.006475192		85094 NUSM T[C>A]A				
Pt11-T-SE-7	SE	Discovery9.139412628.C.T	SNV	missense NOTCH1	NM_017617	G406S
0.054922679		54513 USM C[C>T]C				
Pt9-T-NE-1064	NE	Validation9.139412746.T.C	SNV	splice NOTCH1	NM_017617	c.1100-2A>G)
0.014624353		87662 NUSM C[A>G]G				
Pt2-T-SE-5	SE	Discovery1.27092764.C.T	SNV	missense ARID1A	NM_006015	P929S
0.029433619		90169 USM T[C>T]C				
Pt11-T-SE-1086	SE	Validation1.120510751.G.C	SNV	missense NOTCH2	NM_024408	Q405E
0.020226372		73419 NUSM A[C>G]A				

Pt5-T-SE-1004	SE	Validation9.139417361.T.G	SNV	missense NOTCH1	NM_017617	Q228P
0.014099262		22909 NUSM C[A>C]G				
Pt12-T-SE-16	SE	Discovery17.7577539.GG.AA	DNV	missense TP53	NM_000546	R248W
0.046030905		64196 USM A[CC>TT]G				
Pt8-T-SE-1047	SE	Validation17.7577547.C.T	SNV	missense TP53	NM_000546	G245D
0.018901429		117134 USM G[C>T]C				
Pt1-T-SE-8	SE	Discovery4.126329614.C.T	SNV	missense FAT4	NM_001291303	A1862V
0.005559693		77882 USM G[C>T]C				
Pt10-T-SE-8	SE	Discovery6.70049256.C.T	SNV	missense ADGRB3	NM_001704	P1107S
0.038866223		9314 USM G[C>T]C				
Pt3-T-NE-31A	NE	Discovery9.139412324.G.A	SNV	silent NOTCH1	NM_017617	
0.006766363		37982 USM T[C>T]T				
Pt1-T-SE-4	SE	Discovery9.139412757.C.T	SNV	intron NOTCH1	NA NA	0.013769629
38781	NUSM	G[C>T]G				
Pt4-T-SE-11	SE	Discovery9.139396860.C.T	SNV	missense NOTCH1	NM_017617	V1750M
0.032727273		6875 NUSM A[C>T]G				
Pt11-T-NE-41	NE	Discovery9.139412645.C.T	SNV	missense NOTCH1	NM_017617	C400Y
0.021794632		48177 NUSM G[C>T]A				
Pt1-T-SE-9	SE	Discovery9.139393662.C.T	SNV	missense NOTCH1	NM_017617	G1995D
0.032794909		6129 USM G[C>T]C				
Pt13-T-SE-1118	SE	Validation9.139412627.C.T	SNV	missense NOTCH1	NM_017617	G406D
0.066309062		87620 USM G[C>T]C				
Pt12-T-SE-1105	SE	Validation4.126329651.A.G	SNV	silent FAT4	NM_001291303	G1874G
0.049139752		16565 NUSM G[A>G]G				
Pt7-T-SE-1032	SE	Validation17.7577559.G.A	SNV	missense TP53	NM_000546	S241F
0.0607994		202502 USM T[C>T]C				
Pt6-T-SE-1021	SE	Validation9.139412267.G.A	SNV	missense NOTCH1	NM_017617	P460S
0.046702204		113121 USM C[C>T]C				
Pt6-T-SE-3	SE	Discovery9.139412391.T.C	SNV	splice NOTCH1	NM_017617	c.1256-2A>G)
0.02031115		16198 NUSM C[A>G]G				
Pt10-T-SE-1074	SE	Validation4.126329653.A.G	SNV	missense FAT4	NM_001291303	E1875G
0.019912272		31689 NUSM G[A>G]A				
Pt6-T-SE-13	SE	Discovery4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.016607279		47148 NUSM G[C>T]G				
Pt9-T-NE-1067	NE	Validation4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.023751294		45387 NUSM G[C>T]G				

Pt10-T-SE-4	SE	Discovery17.7578492.C.T	SNV	nonsense TP53	NM_000546	W146*
0.023792358		56867 USM C[C>T]C				
Pt5-T-NE-24	NE	Discovery16.51174456.C.T	SNV	silent SALL1	NM_002968	L559L
0.021686747		4565 NUSM G[C>T]A				
Pt5-T-SE-16	SE	Discovery9.139412266.G.A	SNV	missense NOTCH1	NM_017617	P460L
0.018837833		129792 USM C[C>T]G				
Pt12-T-NE-1109	NE	Validation4.126329653.A.G	SNV	missense FAT4	NM_001291303	E1875G
0.027997678		43075 NUSM G[A>G]A				
Pt13-T-SE-15	SE	Discovery9.139412381.G.A	SNV	missense NOTCH1	NM_017617	P422S
0.029608939		25060 USM C[C>T]C				
Pt3-T-NE-19	NE	Discovery9.139395175.G.A	SNV	silent NOTCH1	NM_017617	H1921H
0.017725907		43270 NUSM A[C>T]A				
Pt5-T-SE-15	SE	Discovery9.139410151.A.G	SNV	missense NOTCH1	NM_017617	C563R
0.031067382		16770 NUSM C[A>G]G				
Pt11-T-SE-1086	SE	Validation1.120497670.G.T	SNV	missense NOTCH2	NM_024408	L738I
0.0173997		93220 NUSM T[C>A]T				
Pt3-T-SE-3	SE	Discovery9.139417352.C.T	SNV	missense NOTCH1	NM_017617	G231D
0.015312132		24621 USM G[C>T]C				
Pt8-T-NE-42	NE	Discovery9.139412393.G.A	SNV	intron NOTCH1	NA NA	0.014525315
19139	USM	G[C>T]C				
Pt13-T-SE-19	SE	Discovery9.139412613.G.A	SNV	nonsense NOTCH1	NM_017617	Q411*
0.014187154		30873 USM C[C>T]A				
Pt13-T-NE-1124	NE	Validation1.120510761.G.T	SNV	nonsense NOTCH2	NM_024408	C401*
0.061628798		19585 NUSM G[C>A]A				
Pt10-T-SE-1074	SE	Validation9.139396852.G.T	SNV	nonsense NOTCH1	NM_017617	C1752*
0.039003523		31792 NUSM G[C>A]G				
Pt12-T-SE-9	SE	Discovery7.86415870.G.A	SNV	silent GRM3	NM_000840	K254K
0.014952772		29961 USM A[C>T]T				
Pt10-T-NE-1083	NE	Validation1.120497665.A.G	SNV	silent,splice	NOTCH2 NM_024408	
0.018743469		45936 NUSM C[A>G]C				
Pt7-T-SE-19	SE	Discovery7.86416162.C.T	SNV	missense GRM3	NM_000840	R352W
0.031071538		179135 USM C[C>T]G				
Pt12-T-SE-1099	SE	Validation17.7577121.G.T	SNV	missense TP53	NM_000546	R273S
0.048322242		85799 NUSM G[C>A]G				
Pt6-T-SE-16	SE	Discovery9.139412378.A.G	SNV	missense NOTCH1	NM_017617	C423R
0.02809126		20469 NUSM C[A>G]G				

Pt10-T-SE-8	SE	Discovery16.51174461.G.A	SNV	missense SALL1	NM_002968	P558S
0.015285903		5299 USM G[C>T]C				
Pt6-T-NE-35	NE	Discovery9.139396862.A.T	SNV	missense NOTCH1	NM_017617	F1749Y
0.054406964		5514 NUSM G[A>T]A				
Pt4-T-NE-22	NE	Discovery9.139412372.G.A	SNV	missense NOTCH1	NM_017617	H425Y
0.082416051		14354 NUSM G[C>T]A				
Pt3-T-NE-31B	NE	Discovery9.139412322.C.T	SNV	silent	NOTCH1 NM_017617	
0.011108788		38258 NUSM G[C>T]A				
Pt12-T-SE-1104	SE	Validation9.139411850.G.A	SNV	intron	NOTCH1 NA NA	0.013847915
45422	USM	G[C>T]C				
Pt10-T-SE-17	SE	Discovery2.212570053.T.C	SNV	silent	ERBB4 NM_005235	
0.035851227		5216 NUSM G[A>G]G				
Pt1-T-SE-2	SE	Discovery9.139393662.C.T	SNV	missense NOTCH1	NM_017617	G1995D
0.048148148		9450 USM G[C>T]C				
Pt11-T-SE-1091	SE	Validation9.139412266.GG.AA		DNV	missense NOTCH1 NM_017617	P460L
0.028069654		80799 USM C[CC>TT]G				
Pt10-T-SE-15	SE	Discovery9.139417354.C.T	SNV	silent	NOTCH1 NM_017617	G230G
0.016555884		16248 USM C[C>T]C				
Pt12-T-SE-9	SE	Discovery9.139412375.C.T	SNV	missense NOTCH1	NM_017617	E424K
0.061976732		18394 USM T[C>T]G				
Pt11-T-SE-1086	SE	Validation17.7577540.G.A	SNV	silent	TP53 NM_000546	N247N
0.079316038		84800 USM A[C>T]C				
Pt1-T-SE-16	SE	Discovery9.139412690.G.A	SNV	missense NOTCH1	NM_017617	S385F
0.019551229		12122 USM T[C>T]C				
Pt3-T-NE-18	NE	Discovery9.139412632.G.A	SNV	silent	NOTCH1 NM_017617	Y404Y
0.015413998		59167 NUSM A[C>T]A				
Pt8-T-SE-13	SE	Discovery17.7578253.C.T	SNV	missense TP53	NM_000546	G199E
0.015803876		53721 USM T[C>T]C				
Pt6-T-SE-13	SE	Discovery9.139412273.A.G	SNV	missense NOTCH1	NM_017617	S458P
0.022833443		43883 NUSM G[A>G]G				
Pt9-T-NE-1067	NE	Validation1.120512170.C.T	SNV	missense NOTCH2	NM_024408	A358T
0.017492921		41674 USM G[C>T]C				
Pt6-T-NE-1028	NE	Validation16.51174459.C.T	SNV	silent	SALL1 NM_002968	P558P
0.02828443		7566 NUSM A[C>T]G				
Pt4-T-SE-11B	SE	Discovery9.139412307.G.T	SNV	silent	NOTCH1 NM_017617	G446G
0.00526703		67970 NUSM G[C>A]C				

Pt11-T-SE-6	SE	Discovery2.212570064.G.A	SNV	missense ERBB4	NM_005235	R393W
0.014669591		14588 USM T[C>T]G				
Pt10-T-NE-1080	NE	Validation9.139412386.G.A	SNV	missense NOTCH1	NM_017617	A420V
0.015185619		33321 USM G[C>T]C				
Pt3-T-SE-6	SE	Discovery9.139412501.C.T	SNV	intron NOTCH1	NA NA	0.025012444
24108	NUSM	G[C>T]A				
Pt9-T-NE-38	NE	Discovery4.126329689.G.A	SNV	missense FAT4	NM_001291303	G1887D
0.019202115		41610 USM G[C>T]C				
Pt13-T-SE-13	SE	Discovery17.7577550.C.T	SNV	missense TP53	NM_000546	G244D
0.019032574		184841 USM G[C>T]C				
Pt9-T-SE-19	SE	Discovery9.139412399.G.A	SNV	intron NOTCH1	NA NA	0.01859375
12800	USM	G[C>T]C				
Pt3-T-SE-8	SE	Discovery9.139417351.G.A	SNV	silent NOTCH1	NM_017617	G231G
0.030673376		25038 NUSM G[C>T]A				
Pt10-T-NE-1080	NE	Validation9.139412630.G.A	SNV	missense NOTCH1	NM_017617	T405M
0.01685351		66455 NUSM A[C>T]G				
Pt12-T-NE-1109	NE	Validation7.86394551.G.T	SNV	missense GRM3	NM_000840	R30S
0.037305944		33882 NUSM T[C>A]C				
Pt7-T-NE-43	NE	Discovery17.7578426.G.A	SNV	silent TP53	NM_000546	H168H
0.015337867		48377 NUSM A[C>T]A				
Pt10-T-NE-31	NE	Discovery9.139393664.A.T	SNV	missense NOTCH1	NM_017617	D1994E
0.033563814		6942 NUSM C[A>T]T				
Pt3-T-SE-11A	SE	Discovery9.139412322.C.G	SNV	silent NOTCH1	NM_017617	
0.008226415		39750 NUSM G[C>G]A				
Pt13-T-NE-1125	NE	Validation1.120512219.A.G	SNV	silent NOTCH2	NM_024408	D341D
0.043979195		30378 NUSM A[A>G]T				
Pt8-T-NE-40	NE	Discovery9.139412386.G.A	SNV	missense NOTCH1	NM_017617	A420V
0.021554169		10578 USM G[C>T]C				
Pt5-T-NE-25	NE	Discovery9.139396853.C.T	SNV	missense NOTCH1	NM_017617	C1752Y
0.020769091		22052 NUSM G[C>T]A				
Pt8-T-SE-16	SE	Discovery16.51174456.C.T	SNV	silent SALL1	NM_002968	L559L
0.041554632		4091 NUSM G[C>T]A				
Pt1-T-SE-8	SE	Discovery9.139395153.C.T	SNV	missense NOTCH1	NM_017617	E1929K
0.014051261		44907 USM T[C>T]G				
Pt7-T-SE-13	SE	Discovery4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.018090852		30181 NUSM G[C>T]G				

Pt7-T-NE-1042	NE	Validation1.27092765.C.T	SNV	missense ARID1A	NM_006015	P929L
0.026937173		49931 USM C[C>T]T				
Pt13-T-NE-37	NE	Discovery9.139412381.G.A	SNV	missense NOTCH1	NM_017617	P422S
0.028723088		20158 USM C[C>T]C				
Pt10-T-NE-35	NE	Discovery9.139395161.C.T	SNV	missense NOTCH1	NM_017617	R1926H
0.014749821		73967 NUSM G[C>T]G				
Pt8-T-NE-227	NE	Discovery6.70049265.G.C	SNV	missense ADGRB3	NM_001704	A1110P
0.01820964		6535 NUSM G[C>G]C				
Pt8-T-NE-1054	NE	Validation2.212570047.T.C	SNV	missense ERBB4	NM_005235	I398M
0.017709074		33768 NUSM T[A>G]A				
Pt7-T-NE-36	NE	Discovery4.126329651.A.C	SNV	silent FAT4	NM_001291303	
0.027841491		28339 NUSM G[A>C]G				
Pt11-T-SE-13	SE	Discovery9.139412690.G.A	SNV	missense NOTCH1	NM_017617	S385F
0.014988956		57042 USM T[C>T]C				
Pt13-T-NE-1121	NE	Validation1.120510754.G.T	SNV	missense NOTCH2	NM_024408	P404T
0.018414911		66848 NUSM C[C>A]C				
Pt7-T-SE-1031	SE	Validation9.139417355.C.T	SNV	missense NOTCH1	NM_017617	G230E
0.014667923		48814 USM C[C>T]C				
Pt6-T-SE-11	SE	Discovery9.139412378.A.C	SNV	missense NOTCH1	NM_017617	C423G
0.04721635		17028 NUSM C[A>C]G				
Pt3-T-NE-26	NE	Discovery9.139395174.T.C	SNV	missense NOTCH1	NM_017617	N1922D
0.020412193		65843 NUSM C[A>G]A				
Pt7-T-SE-1032	SE	Validation1.27092764.C.T	SNV	missense ARID1A	NM_006015	P929S
0.021840016		49130 USM T[C>T]C				
Pt9-T-NE-1064	NE	Validation9.139410162.G.A	SNV	missense NOTCH1	NM_017617	T559M
0.014428688		28277 NUSM A[C>T]G				
Pt12-T-SE-2	SE	Discovery16.51174478.G.T	SNV	missense SALL1	NM_002968	T552N
0.029484029		3256 NUSM A[C>A]C				
Pt12-T-NE-30	NE	Discovery9.139410154.G.A	SNV	missense NOTCH1	NM_017617	H562Y
0.089238845		5715 NUSM G[C>T]A				
Pt5-T-NE-40	NE	Discovery17.7578280.G.A	SNV	missense TP53	NM_000546	P190L
0.019029173		82610 USM C[C>T]T				
Pt6-T-NE-1025	NE	Validation16.51174460.G.A	SNV	missense SALL1	NM_002968	P558L
0.01851217		8751 USM C[C>T]G				
Pt6-T-SE-1018	SE	Validation17.7578235.T.C	SNV	missense TP53	NM_000546	Y205C
0.039948151		81005 NUSM T[A>G]T				

Pt7-T-SE-1034	SE	Validation17.7577559.G.A	SNV	missense TP53	NM_000546	S241F
0.28074838		141479 USM T[C>T]C				
Pt13-T-SE-8	SE	Discovery9.139412627.C.A	SNV	missense NOTCH1	NM_017617	G406V
0.286406076		60299 NUSM G[C>A]C				
Pt12-T-NE-33	NE	Discovery9.139417364.C.T	SNV	missense NOTCH1	NM_017617	C227Y
0.024086871		20260 NUSM G[C>T]A				
Pt11-T-SE-19	SE	Discovery9.139401363.G.A	SNV	missense NOTCH1	NM_017617	P1236S
0.017786561		120934 USM C[C>T]C				
Pt1-T-NE-18	NE	Discovery4.1808970.G.C	SNV	missense FGFR3	NM_000142	S801T
0.017709202		35970 NUSM A[C>G]T				
Pt5-T-NE-40	NE	Discovery9.139412269.T.C	SNV	missense NOTCH1	NM_017617	N459S
0.01582322		109017 NUSM A[A>G]C				
Pt1-T-NE-22	NE	Discovery9.139412322.C.G	SNV	silent	NOTCH1 NM_017617	L441L
0.009489051		28770 NUSM G[C>G]A				
Pt12-T-SE-1103	SE	Validation4.1803557.C.T	SNV	intron	FGFR3 NA NA	0.017789192
74371	USM	C[C>T]A				
Pt12-T-NE-1106	NE	Validation9.139410155.C.T	SNV	silent	NOTCH1 NM_017617	T561T
0.040782339		25820 NUSM G[C>T]G				
Pt12-T-SE-1105	SE	Validation1.120512219.A.G	SNV	silent	NOTCH2 NM_024408	D341D
0.027325158		35718 NUSM A[A>G]T				
Pt6-T-SE-12	SE	Discovery9.139396872.G.C	SNV	missense NOTCH1	NM_017617	L1746V
0.03404994		14978 NUSM G[C>G]T				
Pt3-T-SE-6	SE	Discovery16.51174459.C.T	SNV	silent	SALL1 NM_002968	P558P
0.015489467		8070 NUSM A[C>T]G				
Pt8-T-NE-34	NE	Discovery9.139393662.C.T	SNV	missense NOTCH1	NM_017617	G1995D
0.021126761		7100 USM G[C>T]C				
Pt5-T-NE-1012	NE	Validation2.212570059.T.C	SNV	silent	ERBB4 NM_005235	T394T
0.018666246		31715 NUSM C[A>G]G				
Pt10-T-SE-13	SE	Discovery17.7578290.C.T	SNV	splice	TP53 NM_000546	c.560-1G>A
0.079360259		49395 USM C[C>T]T				
Pt2-T-SE-5	SE	Discovery9.139396854.A.G	SNV	missense NOTCH1	NM_017617	C1752R
0.031480031		12770 NUSM C[A>G]G				
Pt2-T-SE-3	SE	Discovery1.120512221.C.T	SNV	missense NOTCH2	NM_024408	D341N
0.023379246		85161 USM T[C>T]A				
Pt6-T-SE-5	SE	Discovery9.139412744.C.T	SNV	missense NOTCH1	NM_017617	G367D
0.021074148		69469 USM A[C>T]C				

Pt13-T-NE-1124	NE	Validation1.120512218.A.T	SNV	missense	NOTCH2	NM_024408	C342S
0.01949884		47849 NUSM C[A>T]A					
Pt3-T-SE-3	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.089084065		10361 USM T[C>T]G					
Pt4-T-NE-18	NE	Discovery9.139412671.A.C	SNV	silent	NOTCH1	NM_017617	P391P
0.013439162		64885 NUSM C[A>C]G					
Pt7-T-SE-2	SE	Discovery17.7577539.GG.AA	DNV	missense	TP53	NM_000546	R248W
0.36836699		88591 USM A[CC>TT]G					
Pt2-T-NE-21	NE	Discovery9.139396853.C.T	SNV	missense	NOTCH1	NM_017617	C1752Y
0.014156041		9254 NUSM G[C>T]A					
Pt1-T-NE-26	NE	Discovery1.120512195.T.C,1.120512200.T.G:11	CSNV	missense	NOTCH2	NM_024408	
T348P	0.002908957	86629 NUSM C[A>G]G,T[A>C]C					
Pt11-T-SE-1086	SE	Validation9.139411862.G.T	SNV	intron	NOTCH1	NA NA	0.015697691
71794	NUSM	C[C>A]C					
Pt2-T-SE-7	SE	Discovery9.139412399.G.A	SNV	intron	NOTCH1	NA NA	0.040088827
17112	USM	G[C>T]C					
Pt12-T-NE-35	NE	Discovery9.139393664.A.T	SNV	missense	NOTCH1	NM_017617	D1994E
0.041424056		6011 NUSM C[A>T]T					
Pt11-T-NE-34	NE	Discovery9.139417357.G.C	SNV	missense	NOTCH1	NM_017617	N229K
0.022124214		13831 NUSM A[C>G]G					
Pt8-T-NE-1055	NE	Validation2.212570063.C.T	SNV	missense	ERBB4	NM_005235	R393Q
0.01473849		38335 USM C[C>T]G					
Pt8-T-SE-1048	SE	Validation9.139417352.C.T	SNV	missense	NOTCH1	NM_017617	G231D
0.014539022		72357 USM G[C>T]C					
Pt7-T-NE-39	NE	Discovery9.139412376.G.A	SNV	silent	NOTCH1	NM_017617	
0.016156145		10708 NUSM G[C>T]G					
Pt3-T-SE-15	SE	Discovery4.1808958.C.T	SNV	missense	FGFR3	NM_000142	A797V
0.013957853		51154 USM G[C>T]C					
Pt11-T-SE-1085	SE	Validation1.120510066.C.T	SNV	silent	NOTCH2	NM_024408	L481L
0.016183677		104488 NUSM A[C>T]A					
Pt10-T-NE-1082	NE	Validation16.51174456.C.T	SNV	silent	SALL1	NM_002968	L559L
0.030755314		4422 NUSM G[C>T]A					
Pt11-T-SE-1	SE	Discovery9.139412630.G.A	SNV	missense	NOTCH1	NM_017617	T405M
0.015431393		43742 NUSM A[C>T]G					
Pt2-T-NE-32	NE	Discovery9.139412310.C.G	SNV	silent	NOTCH1	NM_017617	T445T
0.006063248		25234 NUSM C[C>G]G					

Pt8-T-SE-1047	SE	Validation4.1806066.A.T	SNV	missense FGFR3	NM_000142	E362V
0.026808365		14585 NUSM G[A>T]G				
Pt6-T-NE-1023	NE	Validation4.126329651.A.G	SNV	silent FAT4	NM_001291303	G1874G
0.022790895		35365 NUSM G[A>G]G				
Pt12-T-SE-1103	SE	Validation9.139412381.G.A	SNV	missense NOTCH1	NM_017617	P422S
0.026724088		52013 USM C[C>T]C				
Pt4-T-SE-11	SE	Discovery9.139412262.G.A	SNV	silent NOTCH1	NM_017617	C461C
0.018444085		79863 USM G[C>T]C				
Pt12-T-SE-4	SE	Discovery17.7577547.C.T	SNV	missense TP53	NM_000546	G245D
0.050344985		241315 USM G[C>T]C				
Pt3-T-NE-31	NE	Discovery9.139412321.G.A	SNV	nonsense NOTCH1	NM_017617	Q442*
0.008151307		34473 NUSM G[C>T]A				
Pt11-T-NE-42	NE	Discovery4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.014140568		28641 NUSM G[C>T]G				
Pt5-T-NE-41	NE	Discovery9.139410156.G.A	SNV	missense NOTCH1	NM_017617	T561M
0.014906547		8721 NUSM A[C>T]G				
Pt13-T-NE-28	NE	Discovery9.139412588.C.A	SNV	splice NOTCH1	NM_017617	c.1255+1G>T)
0.029016008		60346 NUSM A[C>A]C				
Pt12-T-SE-11	SE	Discovery17.7577106.G.A	SNV	missense TP53	NM_000546	P278S
0.020817671		111732 USM T[C>T]C				
Pt8-T-SE-1047	SE	Validation7.86415873.C.T	SNV	silent GRM3	NM_000840	S255S
0.017860144		41657 USM C[C>T]T				
Pt11-T-SE-13	SE	Discovery9.139417602.G.A	SNV	missense NOTCH1	NM_017617	P148S
0.147206379		113616 USM C[C>T]C				
Pt10-T-NE-1083	NE	Validation9.139396852.G.T	SNV	nonsense NOTCH1	NM_017617	C1752*
0.084053188		20606 NUSM G[C>A]G				
Pt12-T-SE-14	SE	Discovery17.7577547.C.T	SNV	missense TP53	NM_000546	G245D
0.01379037		73167 USM G[C>T]C				
Pt10-T-SE-8	SE	Discovery9.139412632.G.T	SNV	nonsense NOTCH1	NM_017617	Y404*
0.127630439		35783 NUSM A[C>A]A				
Pt2-T-SE-4	SE	Discovery9.139417602.G.A	SNV	missense NOTCH1	NM_017617	P148S
0.06203978		106335 USM C[C>T]C				
Pt5-T-SE-8	SE	Discovery16.51174456.C.A	SNV	missense SALL1	NM_002968	L559F
0.031706204		4384 NUSM G[C>A]A				
Pt4-T-NE-31B	NE	Discovery9.139412310.C.G	SNV	silent NOTCH1	NM_017617	T445T
0.007453246		29249 NUSM C[C>G]G				

Pt7-T-SE-1031	SE	Validation	9.139412628.C.T	SNV	missense	NOTCH1	NM_017617	G406S
0.037629201		75367	USM C[C>T]C					
Pt7-T-SE-4	SE	Discovery	9.139396855.G.C	SNV	silent	NOTCH1	NM_017617	G1751G
0.016545334		19643	NUSM G[C>G]T					
Pt6-T-SE-1018	SE	Validation	9.139412256.G.A	SNV	silent	NOTCH1	NM_017617	
0.013334173		63521	NUSM A[C>T]G					
Pt12-T-SE-11	SE	Discovery	17.7577127.C.T	SNV	missense	TP53	NM_000546	E271K
0.021061477		111863	USM T[C>T]A					
Pt5-T-SE-1005	SE	Validation	9.139412741.A.T	SNV	missense	NOTCH1	NM_017617	L368Q
0.021047533		72265	NUSM C[A>T]G					
Pt11-T-NE-1096	NE	Validation	9.139412624.G.A	SNV	missense	NOTCH1	NM_017617	P407L
0.014723388		86529	USM C[C>T]G					
Pt8-T-SE-13	SE	Discovery	9.139393662.C.T	SNV	missense	NOTCH1	NM_017617	G1995D
0.021233433		7394	USM G[C>T]C					
Pt10-T-NE-1083	NE	Validation	4.126329651.A.G	SNV	silent	FAT4	NM_001291303	
0.024637085		31619	NUSM G[A>G]G					
Pt5-T-SE-1001	SE	Validation	1.120512295.G.A	SNV	missense	NOTCH2	NM_024408	A316V
0.017169923		42225	USM G[C>T]C					
Pt3-T-SE-2	SE	Discovery	17.7577547.C.T	SNV	missense	TP53	NM_000546	G245D
0.009493315		71208	USM G[C>T]C					
Pt12-T-SE-3	SE	Discovery	1.120512166.G.A	SNV	missense	NOTCH2	NM_024408	S359F
0.014364344		104286	USM T[C>T]C					
Pt9-T-NE-40	NE	Discovery	9.139410162.G.C	SNV	missense	NOTCH1	NM_017617	T559R
0.023804971		10460	NUSM A[C>G]G					
Pt3-T-SE-8	SE	Discovery	17.7577072.A.G	SNV	missense	TP53	NM_000546	L289P
0.000900627		197640	NUSM G[A>G]G					
Pt10-T-NE-35	NE	Discovery	4.126329700.C.T	SNV	silent	FAT4	NM_001291303	L1891L
0.019157659		26830	USM C[C>T]T					
Pt13-T-NE-32	NE	Discovery	9.139410162.G.A	SNV	missense	NOTCH1	NM_017617	T559M
0.01976444		12396	NUSM A[C>T]G					
Pt11-T-SE-14	SE	Discovery	9.139395148.G.A	SNV	silent	NOTCH1	NM_017617	T1930T
0.077658605		51559	USM C[C>T]G					
Pt7-T-NE-39	NE	Discovery	9.139411868.C.T	SNV	intron	NOTCH1	NA NA	0.023244814
44397	NUSM		A[C>T]G					
Pt9-T-NE-26	NE	Discovery	9.139410151.A.T	SNV	missense	NOTCH1	NM_017617	C563S
0.033993784		5148	NUSM C[A>T]G					

Pt7-T-NE-36	NE	Discovery4.1806057.C.T	SNV	missense FGFR3	NM_000142	A359V
0.046155591		8818 USM G[C>T]C				
Pt6-T-SE-1018	SE	Validation9.139417584.G.A	SNV	nonsense NOTCH1	NM_017617	Q154*
0.038010163		181241 USM C[C>T]A				
Pt11-T-NE-1095	NE	Validation9.139417354.C.T	SNV	silent NOTCH1	NM_017617	G230G
0.018433381		45678 USM C[C>T]C				
Pt12-T-SE-14	SE	Discovery17.7577551.C.T	SNV	missense TP53	NM_000546	G244S
0.014760753		73167 USM C[C>T]C				
Pt10-T-SE-1074	SE	Validation7.113518268.A.T	SNV	missense PPP1R3A	NM_002711	I960N
0.029593154		41834 NUSM G[A>T]T				
Pt7-T-NE-40	NE	Discovery1.120512288.G.A	SNV	silent NOTCH2	NM_024408	R318R
0.02734017		57827 NUSM G[C>T]A				
Pt10-T-NE-32	NE	Discovery4.1806057.C.T	SNV	missense FGFR3	NM_000142	A359V
0.020172056		6742 USM G[C>T]C				
Pt3-T-SE-6	SE	Discovery9.139412375.C.T	SNV	missense NOTCH1	NM_017617	E424K
0.119846491		18240 USM T[C>T]G				
Pt12-T-NE-1106	NE	Validation9.139412756.G.A	SNV	intron NOTCH1	NA NA	0.023262481
48834	USM	G[C>T]T				
Pt7-T-NE-29	NE	Discovery17.7578514.T.G	SNV	missense TP53	NM_000546	K139T
0.034592506		26393 NUSM A[A>C]G				
Pt4-T-SE-4	SE	Discovery9.139412735.C.T	SNV	missense NOTCH1	NM_017617	C370Y
0.032622673		14775 NUSM G[C>T]A				
Pt13-T-NE-41	NE	Discovery9.139396853.C.T	SNV	missense NOTCH1	NM_017617	C1752Y
0.018356931		12148 NUSM G[C>T]A				
Pt7-T-SE-1031	SE	Validation9.139410171.G.A	SNV	intron NOTCH1	NA NA	0.037174246
15656	USM	C[C>T]A				
Pt6-T-SE-7	SE	Discovery9.139396860.C.T	SNV	missense NOTCH1	NM_017617	V1750M
0.030036673		17179 NUSM A[C>T]G				
Pt5-T-NE-35	NE	Discovery16.51174461.G.A	SNV	missense SALL1	NM_002968	P558S
0.016059138		3923 USM G[C>T]C				
Pt2-T-NE-22	NE	Discovery9.139412372.G.A	SNV	missense NOTCH1	NM_017617	H425Y
0.031919482		13910 NUSM G[C>T]A				
Pt12-T-NE-1106	NE	Validation4.126329651.A.C	SNV	silent FAT4	NM_001291303	
0.021879496		29891 NUSM G[A>C]G				
Pt11-T-NE-31	NE	Discovery4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.019357733		31202 NUSM G[C>T]G				

Pt10-T-NE-1083	NE	Validation4.1806057.C.T	SNV	missense FGFR3	NM_000142	A359V
0.0721538		16645 USM G[C>T]C				
Pt9-T-SE-17	SE	Discovery9.139396852.G.A	SNV	silent NOTCH1	NM_017617	
0.040062319		4493 NUSM G[C>T]G				
Pt13-T-SE-18	SE	Discovery17.7578161.C.T	SNV	intron TP53	NA NA	0.015643735
70891	USM	C[C>T]A				
Pt7-T-NE-40	NE	Discovery1.120459271.G.A	SNV	missense NOTCH2	NM_024408	A2025V
0.016988466		62513 NUSM G[C>T]A				
Pt12-T-SE-1100	SE	Validation17.7578212.G.A	SNV	nonsense TP53	NM_000546	R213*
0.106871215		61925 USM T[C>T]G				
Pt4-T-SE-11B	SE	Discovery9.139413070.AGA.-	Indel	proteinDel	NOTCH1	NM_017617
357_358del		0.069281258 24682	NUSM	NA		
Pt12-T-SE-14	SE	Discovery17.7577539.G.A	SNV	missense TP53	NM_000546	R248W
0.016824525		73167 USM C[C>T]G				
Pt9-T-NE-1067	NE	Validation1.120512200.T.C	SNV	missense NOTCH2	NM_024408	T348A
0.052423392		40955 NUSM T[A>G]C				
Pt5-T-SE-4	SE	Discovery4.126329689.G.A	SNV	missense FAT4	NM_001291303	G1887D
0.01583938		46719 USM G[C>T]C				
Pt13-T-SE-10	SE	Discovery9.139413277.C.A	SNV	splice NOTCH1	NM_017617	c.866-1G>T)
0.021344299		61281 NUSM C[C>A]T				
Pt9-T-NE-1068	NE	Validation4.1806057.C.T	SNV	missense FGFR3	NM_000142	A359V
0.056712044		16381 USM G[C>T]C				
Pt9-T-NE-1065	NE	Validation4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.019390106		40794 NUSM G[C>T]G				
Pt13-T-SE-20	SE	Discovery9.139411851.C.T	SNV	intron NOTCH1	NA NA	0.015895776
64860	NUSM	G[C>T]A				
Pt5-T-NE-35	NE	Discovery9.139410162.G.A	SNV	missense NOTCH1	NM_017617	T559M
0.022293945		16731 NUSM A[C>T]G				
Pt12-T-SE-11	SE	Discovery9.139393662.C.T	SNV	missense NOTCH1	NM_017617	G1995D
0.016278716		6573 USM G[C>T]C				
Pt11-T-SE-1087	SE	Validation4.126329618.T.A	SNV	silent FAT4	NM_001291303	I1863I
0.026062584		23904 NUSM A[A>T]A				
Pt13-T-NE-1123	NE	Validation9.139417368.G.A	SNV	missense NOTCH1	NM_017617	P226S
0.017707521		41056 USM G[C>T]C				
Pt4-T-SE-11	SE	Discovery9.139412332.C.A	SNV	missense NOTCH1	NM_017617	C438F
0.0101416		52260 NUSM G[C>A]A				

Pt2-T-SE-11B	SE	Discovery9.139412658.C.-	Indel	frameshift	NOTCH1	NM_017617	A396fs
0.035859548		50893 NUSM NA					
Pt5-T-NE-1011	NE	Validation9.139396860.C.T	SNV	missense	NOTCH1	NM_017617	V1750M
0.014998148		32404 NUSM A[C>T]G					
Pt8-T-NE-29	NE	Discovery9.139412380.G.C	SNV	missense	NOTCH1	NM_017617	P422R
0.016180012		13288 NUSM C[C>G]C					
Pt6-T-NE-36	NE	Discovery16.51174456.C.T	SNV	silent	SALL1	NM_002968	L559L
0.01771031		4743 NUSM G[C>T]A					
Pt6-T-SE-1015	SE	Validation9.139412267.G.A	SNV	missense	NOTCH1	NM_017617	P460S
0.017486643		136447 USM C[C>T]C					
Pt3-T-SE-9	SE	Discovery9.139418259.C.T	SNV	missense	NOTCH1	NM_017617	A105T
0.041360588		6262 NUSM G[C>T]A					
Pt5-T-NE-41	NE	Discovery9.139396868.A.T	SNV	missense	NOTCH1	NM_017617	L1747Q
0.055167938		6163 NUSM C[A>T]G					
Pt2-T-SE-3	SE	Discovery9.139418393.G.A	SNV	missense	NOTCH1	NM_017617	P60L
0.040294295		72988 USM C[C>T]C					
Pt5-T-SE-1003	SE	Validation17.7577539.G.A	SNV	missense	TP53	NM_000546	R248W
0.014730265		88661 USM C[C>T]G					
Pt3-T-SE-3	SE	Discovery9.139412340.G.A	SNV	silent	NOTCH1	NM_017617	S435S
0.006692548		34516 USM C[C>T]T					
Pt13-T-SE-19	SE	Discovery9.139412255.C.T	SNV	missense	NOTCH1	NM_017617	D464N
0.042503521		78817 USM T[C>T]G					
Pt11-T-SE-1085	SE	Validation9.139410162.G.A	SNV	missense	NOTCH1	NM_017617	T559M
0.021702468		22532 NUSM A[C>T]G					
Pt2-T-SE-11B	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.133178796		22864 USM T[C>T]G					
Pt7-T-NE-1041	NE	Validation9.139412376.G.A	SNV	silent	NOTCH1	NM_017617	C423C
0.014920698		35119 NUSM G[C>T]G					
Pt8-T-NE-34	NE	Discovery9.139412376.G.C	SNV	missense	NOTCH1	NM_017617	C423W
0.034520993		13528 NUSM G[C>G]G					
Pt11-T-SE-1091	SE	Validation6.70049260.T.A	SNV	missense	ADGRB3	NM_001704	L1108H
0.019772615		10115 NUSM A[A>T]G					
Pt2-T-NE-20	NE	Discovery9.139412501.C.T	SNV	intron	NOTCH1	NA NA	0.021892263
34213	NUSM	G[C>T]A					
Pt12-T-NE-27	NE	Discovery4.1803553.C.T	SNV	intron	FGFR3	NA NA	0.015645322
26142	USM	NA					

Pt13-T-SE-20	SE	Discovery9.139412267.G.A	SNV	missense NOTCH1	NM_017617	P460S
0.016865597		109335 USM C[C>T]C				
Pt3-T-SE-8	SE	Discovery9.139412261.G.A	SNV	nonsense NOTCH1	NM_017617	Q462*
0.029064826		48237 USM C[C>T]A				
Pt12-T-SE-18	SE	Discovery7.86415858.C.T	SNV	silent GRM3	NM_000840	S250S
0.050079271		39737 USM C[C>T]A				
Pt2-T-NE-20	NE	Discovery1.120510154.C.G	SNV	missense NOTCH2	NM_024408	R452P
0.016468524		308953 NUSM A[C>G]G				
Pt6-T-NE-34	NE	Discovery9.139396854.A.G	SNV	missense NOTCH1	NM_017617	C1752R
0.01904571		9976 NUSM C[A>G]G				
Pt7-T-SE-13	SE	Discovery9.139412694.C.T	SNV	missense NOTCH1	NM_017617	G384S
0.016249391		51325 USM C[C>T]C				
Pt12-T-SE-7	SE	Discovery17.7577548.C.T	SNV	missense TP53	NM_000546	G245S
0.055891212		172299 USM C[C>T]G				
Pt13-T-SE-5	SE	Discovery1.120510888.G.A	SNV	intron NOTCH2	NA NA	0.042579848
221889	USM	T[C>T]T				
Pt12-T-SE-1103	SE	Validation4.126329641.G.C	SNV	missense FAT4	NM_001291303	G1871A
0.020050201		33067 NUSM A[C>G]C				
Pt12-T-SE-1103	SE	Validation9.139412264.A.T	SNV	missense NOTCH1	NM_017617	C461S
0.054483591		184863 NUSM C[A>T]C				
Pt11-T-SE-1085	SE	Validation9.139417343.C.T	SNV	missense NOTCH1	NM_017617	R234H
0.019091508		104811 NUSM G[C>T]G				
Pt12-T-SE-17	SE	Discovery9.139395171.GG.AA		DNV nonsense NOTCH1	NM_017617	Q1923*
0.021791564		35656 USM A[CC>TT]A				
Pt5-T-SE-6	SE	Discovery9.139412399.G.A	SNV	intron NOTCH1	NA NA	0.024285714
7700	USM	G[C>T]C				
Pt12-T-SE-1099	SE	Validation9.139412266.G.A	SNV	missense NOTCH1	NM_017617	P460L
0.024059459		206530 USM C[C>T]G				
Pt6-T-SE-5	SE	Discovery9.139413065.G.T	SNV	nonsense NOTCH1	NM_017617	C359*
0.029274005		23912 NUSM G[C>A]G				
Pt3-T-SE-15	SE	Discovery9.139412266.GG.AA		DNV missense NOTCH1	NM_017617	P460L
0.027812114		27506 USM C[CC>TT]G				
Pt13-T-SE-1118	SE	Validation9.139413067.A.C	SNV	missense NOTCH1	NM_017617	C359G
0.032607579		19474 NUSM C[A>C]G				
Pt8-T-SE-17	SE	Discovery16.51174456.C.T	SNV	silent SALL1	NM_002968	L559L
0.015719468		5789 NUSM G[C>T]A				

Pt12-T-SE-18	SE	Discovery9.139395171.GG.AA	DNV	nonsense	NOTCH1	NM_017617	Q1923*
0.057087278		38555 USM A[CC>TT]A					
Pt10-T-NE-1083	NE	Validation4.126329647.A.T	SNV	missense	FAT4	NM_001291303	N1873I
0.021284671		31619 NUSM A[A>T]T					
Pt3-T-NE-19	NE	Discovery9.139412316.G.A	SNV	silent	NOTCH1	NM_017617	
0.005104791		31539 USM G[C>T]T					
Pt10-T-SE-1077	SE	Validation9.139418266.C.T	SNV	silent	NOTCH1	NM_017617	L102L
0.093417457		34394 USM C[C>T]A					
Pt8-T-SE-1043	SE	Validation9.139412266.GG.AA	DNV	missense	NOTCH1	NM_017617	P460L
0.095926535		53468 USM C[CC>TT]G					
Pt7-T-SE-9	SE	Discovery9.139412381.G.A	SNV	missense	NOTCH1	NM_017617	P422S
0.030756321		27409 USM C[C>T]C					
Pt10-T-SE-10	SE	Discovery9.139410155.C.T	SNV	silent	NOTCH1	NM_017617	T561T
0.02224151		9217 NUSM G[C>T]G					
Pt8-T-SE-20	SE	Discovery17.7577547.C.T	SNV	missense	TP53	NM_000546	G245D
0.020901444		98797 USM G[C>T]C					
Pt13-T-SE-10	SE	Discovery4.126329699.C.T	SNV	silent	FAT4	NM_001291303	F1890F
0.04157799		51686 USM T[C>T]C					
Pt11-T-SE-19	SE	Discovery9.139412381.G.A	SNV	missense	NOTCH1	NM_017617	P422S
0.051502335		22698 USM C[C>T]C					
Pt13-T-SE-15	SE	Discovery9.139417641.C.T	SNV	splice	NOTCH1	NM_017617	c.404-1G>A)
0.015572124		113472 USM C[C>T]T					
Pt8-T-NE-34	NE	Discovery16.51174459.C.T	SNV	silent	SALL1	NM_002968	P558P
0.022917654		6327 NUSM A[C>T]G					
Pt6-T-SE-10	SE	Discovery17.7577070.G.A	SNV	missense	TP53	NM_000546	R290C
0.017010647		189352 USM C[C>T]G					
Pt8-T-NE-38	NE	Discovery4.1806051.T.C	SNV	intron	FGFR3	NA NA	0.028304698
10069	NUSM	A[A>G]A					
Pt9-T-NE-27	NE	Discovery9.139410154.G.C	SNV	missense	NOTCH1	NM_017617	H562D
0.050055266		6333 NUSM G[C>G]A					
Pt1-T-SE-15	SE	Discovery9.139401360.T.A	SNV	nonsense	NOTCH1	NM_017617	K1237*
0.024318952		34212 NUSM C[A>T]A					
Pt7-T-NE-31	NE	Discovery16.51174465.G.A	SNV	silent	SALL1	NM_002968	G556G
0.023202213		6508 USM G[C>T]C					
Pt13-T-SE-1115	SE	Validation7.86394560.T.C	SNV	silent	GRM3	NM_000840	I33I
0.014976663		38994 NUSM T[A>G]A					

Pt13-T-NE-1120	NE	Validation9.139412740.C.T	SNV	silent	NOTCH1	NM_017617	L368L
0.013719942		81633 NUSM G[C>T]A					
Pt2-T-SE-11B	SE	Discovery9.139412340.G.A	SNV	silent	NOTCH1	NM_017617	S435S
0.011853546		33239 USM C[C>T]T					
Pt6-T-NE-40	NE	Discovery9.139396853.C.T	SNV	missense	NOTCH1	NM_017617	C1752Y
0.03262268		10882 NUSM G[C>T]A					
Pt13-T-SE-13	SE	Discovery1.120510233.G.A	SNV	missense	NOTCH2	NM_024408	P426S
0.020023296		85850 USM T[C>T]C					
Pt6-T-NE-24	NE	Discovery9.139396856.C.A	SNV	missense	NOTCH1	NM_017617	G1751V
0.080765939		9348 NUSM G[C>A]C					
Pt12-T-NE-31	NE	Discovery9.139412397.G.T	SNV	intron	NOTCH1	NA NA	0.025843643
15439	NUSM	C[C>A]T					
Pt3-T-NE-31B	NE	Discovery9.139412331.G.A	SNV	silent	NOTCH1	NM_017617	
0.006612996		38258 USM G[C>T]C					
Pt12-T-SE-9	SE	Discovery16.51174459.C.T	SNV	silent	SALL1	NM_002968	P558P
0.029647931		6476 NUSM A[C>T]G					
Pt6-T-NE-1023	NE	Validation1.120512280.C.T	SNV	missense	NOTCH2	NM_024408	G321D
0.015613172		63408 USM G[C>T]C					
Pt11-T-SE-4	SE	Discovery4.1806047.G.C	SNV	intron	FGFR3	NA NA	0.022742475
14950	NUSM	A[C>G]A					
Pt13-T-SE-3	SE	Discovery9.139418259.C.T	SNV	missense	NOTCH1	NM_017617	A105T
0.022615932		14901 NUSM G[C>T]A					
Pt9-T-NE-1067	NE	Validation1.120459264.C.G	SNV	missense	NOTCH2	NM_024408	K2027N
0.024229405		80068 NUSM T[C>G]T					
Pt12-T-SE-16	SE	Discovery9.139412266.GG.AA		DNV	missense	NOTCH1	NM_017617 P460L
0.023773663		33861 USM C[CC>TT]G					
Pt2-T-SE-11B	SE	Discovery9.139417589.C.G	SNV	missense	NOTCH1	NM_017617	G152A
0.014481238		61666 NUSM A[C>G]C					
Pt6-T-NE-24	NE	Discovery9.139393662.C.T	SNV	missense	NOTCH1	NM_017617	G1995D
0.01799003		13841 USM G[C>T]C					
Pt11-T-SE-1091	SE	Validation17.7577547.C.T	SNV	missense	TP53	NM_000546	G245D
0.046701874		216244 USM G[C>T]C					
Pt13-T-NE-1124	NE	Validation17.7578259.A.G	SNV	missense	TP53	NM_000546	V197A
0.015452376		40641 NUSM C[A>G]C					
Pt3-T-NE-33	NE	Discovery9.139412501.C.T	SNV	intron	NOTCH1	NA NA	0.028772078
42576	NUSM	G[C>T]A					

Pt6-T-SE-13	SE	Discovery9.139412266.G.A	SNV	missense NOTCH1	NM_017617	P460L
0.029031743		43883 USM C[C>T]G				
Pt12-T-SE-14	SE	Discovery17.7578550.G.A	SNV	missense TP53	NM_000546	S127F
0.018985067		91809 USM T[C>T]C				
Pt9-T-NE-1066	NE	Validation1.120510756.C.A	SNV	missense NOTCH2	NM_024408	C403F
0.01564388		108413 NUSM G[C>A]A				
Pt10-T-SE-19	SE	Discovery17.7577559.G.A	SNV	missense TP53	NM_000546	S241F
0.02495168		91577 USM T[C>T]C				
Pt5-T-SE-3	SE	Discovery9.139396854.A.T	SNV	missense NOTCH1	NM_017617	C1752S
0.020026927		17826 NUSM C[A>T]G				
Pt13-T-NE-1120	NE	Validation1.120512195.T.C	SNV	silent NOTCH2	NM_024408	P349P
0.018273717		38580 NUSM C[A>G]G				
Pt7-T-SE-1035	SE	Validation7.86394571.G.A	SNV	missense GRM3	NM_000840	G37D
0.015890344		24732 USM A[C>T]C				
Pt13-T-SE-15	SE	Discovery17.7577556.C.T	SNV	missense TP53	NM_000546	C242Y
0.044578376		191640 NUSM G[C>T]A				
Pt10-T-SE-8	SE	Discovery7.86415852.C.T	SNV	silent GRM3	NM_000840	G248G
0.018768813		16943 USM G[C>T]C				
Pt5-T-SE-1	SE	Discovery9.139412267.G.A	SNV	missense NOTCH1	NM_017617	P460S
0.064849513		110209 USM C[C>T]C				
Pt13-T-SE-20	SE	Discovery9.139417354.C.T	SNV	silent NOTCH1	NM_017617	G230G
0.015009345		52967 USM C[C>T]C				
Pt8-T-SE-1044	SE	Validation9.139412630.G.A	SNV	missense NOTCH1	NM_017617	T405M
0.014123351		89922 NUSM A[C>T]G				
Pt9-T-SE-16	SE	Discovery16.51174459.C.T	SNV	silent SALL1	NM_002968	P558P
0.037297403		5121 NUSM A[C>T]G				
Pt13-T-SE-1115	SE	Validation9.139412737.C.T	SNV	silent NOTCH1	NM_017617	L369L
0.015948684		85587 NUSM A[C>T]A				
Pt7-T-NE-38	NE	Discovery9.139412644.G.A	SNV	silent NOTCH1	NM_017617	C400C
0.019794788		44052 USM G[C>T]C				
Pt12-T-SE-1103	SE	Validation17.7577539.GG.AA	DNV	missense TP53	NM_000546	R248W
0.01675171		81723 USM A[CC>TT]G				
Pt5-T-SE-1004	SE	Validation9.139418372.G.A	SNV	missense NOTCH1	NM_017617	P67L
0.064939791		148399 USM C[C>T]C				
Pt6-T-NE-36	NE	Discovery9.139412326.C.T	SNV	missense NOTCH1	NM_017617	C440Y
0.015629974		62828 NUSM A[C>T]A				

Pt11-T-SE-1087 73298	SE USM	Validation1.120510275.C.T T[C>T]A	SNV	intron	NOTCH2	NA	NA	0.014979945
Pt13-T-SE-4 0.014669518	SE	Discovery17.7578421.G.C 59852 NUSM A[C>G]G	SNV	missense	TP53	NM_000546		T170R
Pt12-T-SE-6 0.014225642	SE	Discovery17.7577547.CC.TT 100593 USM G[CC>TT]G	DNV	missense	TP53	NM_000546		G245N
Pt3-T-SE-15 48812	SE NUSM	Discovery9.139412757.C.T G[C>T]G	SNV	intron	NOTCH1	NA	NA	0.021715971
Pt7-T-SE-6 0.061297921	SE	Discovery9.139412627.C.T 53917 USM G[C>T]C	SNV	missense	NOTCH1	NM_017617		G406D
Pt13-T-SE-9 0.017019618	SE	Discovery9.139412381.G.A 15394 USM C[C>T]C	SNV	missense	NOTCH1	NM_017617		P422S
Pt3-T-SE-1 0.024137819	SE	Discovery9.139401869.C.T 30823 USM C[C>T]C	SNV	silent	NOTCH1	NM_017617		G1177G
Pt11-T-SE-1087 0.02220878	SE	Validation4.126329653.A.G 23144 NUSM G[A>G]A	SNV	missense	FAT4	NM_001291303		E1875G
Pt9-T-NE-1067 124923	NE USM	Validation9.139412520.C.T T[C>T]G	SNV	intron	NOTCH1	NA	NA	0.015185354
Pt13-T-SE-13 0.042958732	SE	Discovery9.139393669.G.A 17156 NUSM G[C>T]A	SNV	missense	NOTCH1	NM_017617		H1993Y
Pt1-T-SE-1 0.036996686	SE	Discovery6.70049261.T.C 22029 NUSM G[A>G]A	SNV	silent	ADGRB3	NM_001704		L1108L
Pt1-T-NE-20 14146	NE USM	Discovery9.139412393.G.A G[C>T]C	SNV	intron	NOTCH1	NA	NA	0.02544889
Pt5-T-NE-1012 0.017602119	NE	Validation4.1803563.G.A 52096 USM G[C>T]T	SNV	silent	FGFR3	NM_000142		E247E
Pt11-T-SE-1085 98724	SE USM	Validation1.120497660.C.T T[C>T]A	SNV	intron	NOTCH2	NA	NA	0.017483084
Pt10-T-NE-41 0.017198042	NE	Discovery9.139412300.A.C 15118 NUSM C[A>C]T	SNV	missense	NOTCH1	NM_017617		C449G
Pt11-T-SE-1086 0.019982718	SE	Validation9.139396861.G.A 27774 USM T[C>T]G	SNV	silent	NOTCH1	NM_017617		F1749F
Pt4-T-NE-22 0.026460382	NE	Discovery9.139396860.C.T 6916 NUSM A[C>T]G	SNV	missense	NOTCH1	NM_017617		V1750M
Pt7-T-SE-1033 0.020707871	SE	Validation4.1806062.G.A 28395 USM T[C>T]C	SNV	missense	FGFR3	NM_000142		E361K

Pt3-T-SE-11 21619	SE NUSM	Discovery9.139412567.C.T G[C>T]A	SNV	intron	NOTCH1	NA	NA	0.016790786
Pt4-T-SE-11A 0.011885158	SE	Discovery17.7578419.C.T 97769 USM T[C>T]C	SNV	missense	TP53	NM_000546		E171K
Pt12-T-NE-1106 72952	NE NUSM	Validation17.7578293.A.C A[A>C]G	SNV	intron	TP53	NA	NA	0.019149578
Pt12-T-SE-18 0.022913385	SE	Discovery9.139412690.G.A 76811 USM T[C>T]C	SNV	missense	NOTCH1	NM_017617		S385F
Pt5-T-SE-10 0.015989266	SE	Discovery9.139393670.C.T 17887 NUSM G[C>T]A	SNV	missense	NOTCH1	NM_017617		M1992I
Pt6-T-SE-19 0.017381038	SE	Discovery9.139412382.G.A 30493 USM A[C>T]C	SNV	silent	NOTCH1	NM_017617		N421N
Pt7-T-NE-39 44499	NE NUSM	Discovery9.139412501.C.T G[C>T]A	SNV	intron	NOTCH1	NA	NA	0.015798108
Pt10-T-SE-4 0.019179014	SE	Discovery9.139417593.T.C 64654 NUSM C[A>G]A	SNV	missense	NOTCH1	NM_017617		N151D
Pt10-T-NE-32 0.02141569	NE	Discovery16.51174468.G.A 4436 USM T[C>T]G	SNV	silent	SALL1	NM_002968		V555V
Pt9-T-SE-3 0.056842756	SE	Discovery9.139412372.G.A 9711 NUSM G[C>T]A	SNV	missense	NOTCH1	NM_017617		H425Y
Pt13-T-NE-1125 0.016420776	NE	Validation17.7578429.C.T 39584 USM G[C>T]T	SNV	silent	TP53	NM_000546		Q167Q
Pt8-T-SE-20 0.028577179	SE	Discovery16.51174456.C.T 4969 NUSM G[C>T]A	SNV	silent	SALL1	NM_002968		L559L
Pt10-T-NE-1082 0.016189058	NE	Validation4.1808958.C.T 139724 USM G[C>T]C	SNV	missense	FGFR3	NM_000142		A797V
Pt5-T-SE-1007 0.018100664	SE	Validation9.139417602.G.A 186402 USM C[C>T]C	SNV	missense	NOTCH1	NM_017617		P148S
Pt6-T-SE-1021 0.019502325	SE	Validation9.139393662.C.T 23228 USM G[C>T]C	SNV	missense	NOTCH1	NM_017617		G1995D
Pt1-T-NE-33 2350	NE USM	Discovery9.139412375.C.T T[C>T]G	SNV	missense	NOTCH1	NM_017617		E424K 0.04
Pt11-T-NE-34 0.025594679	NE	Discovery9.139417351.G.A 13831 NUSM G[C>T]A	SNV	silent	NOTCH1	NM_017617		
Pt1-T-SE-10 15429	SE USM	Discovery9.139412762.G.A A[C>T]C	SNV	intron	NOTCH1	NA	NA	0.017758766

Pt11-T-SE-1	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.165809307		16718 USM T[C>T]G					
Pt7-T-NE-1042	NE	Validation9.139412393.G.A	SNV	intron	NOTCH1	NA NA	0.0243217
39142	USM	G[C>T]C					
Pt5-T-SE-10	SE	Discovery9.139396859.A.T	SNV	missense	NOTCH1	NM_017617	V1750E
0.024108488		19910 NUSM C[A>T]C					
Pt4-T-SE-4	SE	Discovery9.139417515.G.A	SNV	nonsense	NOTCH1	NM_017617	Q177*
0.018079959		15708 NUSM G[C>T]A					
Pt3-T-SE-5	SE	Discovery9.139412375.C.T	SNV	missense	NOTCH1	NM_017617	E424K
0.150644138		15447 USM T[C>T]G					
Pt3-T-NE-22	NE	Discovery9.139412271.C.A	SNV	silent	NOTCH1	NM_017617	S458S
0.014720455		69631 NUSM T[C>A]G					
Pt1-T-NE-32	NE	Discovery9.139410155.C.T	SNV	silent	NOTCH1	NM_017617	T561T
0.02661827		3306 NUSM G[C>T]G					
Pt11-T-SE-6	SE	Discovery9.139412588.C.A	SNV	splice	NOTCH1	NM_017617	c.1255+1G>T)
0.024366319		25486 NUSM A[C>A]C					
Pt10-T-SE-1074	SE	Validation16.51174462.C.T	SNV	silent	SALL1	NM_002968	L557L
0.055264564		9355 NUSM G[C>T]A					
Pt12-T-SE-3	SE	Discovery16.51174466.C.T	SNV	missense	SALL1	NM_002968	G556D
0.021201413		9339 USM G[C>T]C					
Pt5-T-SE-4	SE	Discovery17.7577547.CC.TT	DNV	missense	TP53	NM_000546	G245N
0.025153171		117679 USM G[CC>TT]G					
Pt1-T-SE-7	SE	Discovery9.139412690.G.A	SNV	missense	NOTCH1	NM_017617	S385F
0.095596511		28432 USM T[C>T]C					
Pt12-T-SE-1105	SE	Validation9.139393662.C.T	SNV	missense	NOTCH1	NM_017617	G1995D
0.041094737		11875 USM G[C>T]C					
Pt7-T-SE-1034	SE	Validation9.139412378.A.G	SNV	missense	NOTCH1	NM_017617	C423R
0.030234987		19150 NUSM C[A>G]G					
Pt2-T-NE-31B	NE	Discovery9.139412394.C.G	SNV	intron	NOTCH1	NA NA	0.031475799
10103	NUSM	G[C>G]G					
Pt9-T-SE-11	SE	Discovery4.1803564.C.T	SNV	missense	FGFR3	NM_000142	R248C
0.019485723		27456 NUSM G[C>T]G					
Pt7-T-SE-1034	SE	Validation9.139412269.T.C	SNV	missense	NOTCH1	NM_017617	N459S
0.01537889		99422 NUSM A[A>G]C					
Pt13-T-NE-25	NE	Discovery9.139396860.C.T	SNV	missense	NOTCH1	NM_017617	V1750M
0.024852071		25350 NUSM A[C>T]G					

Pt8-T-SE-11	SE	Discovery4.1806057.C.T	SNV	missense FGFR3	NM_000142	A359V
0.0250134		5597 USM G[C>T]C				
Pt5-T-NE-1008	NE	Validation9.139412376.G.A	SNV	silent NOTCH1	NM_017617	C423C
0.017660456		26783 NUSM G[C>T]G				
Pt13-T-SE-1118	SE	Validation7.113518248.G.T	SNV	missense PPP1R3A	NM_002711	P967T
0.028210383		29280 NUSM C[C>A]C				
Pt12-T-NE-31	NE	Discovery9.139396860.C.T	SNV	missense NOTCH1	NM_017617	V1750M
0.041863393		9531 NUSM A[C>T]G				
Pt1-T-NE-25	NE	Discovery9.139417343.C.T	SNV	missense NOTCH1	NM_017617	R234H
0.024790376		13715 NUSM G[C>T]G				
Pt13-T-SE-3	SE	Discovery16.51174465.G.A	SNV	silent SALL1	NM_002968	G556G
0.025671377		13517 USM G[C>T]C				
Pt11-T-SE-1086	SE	Validation7.86394552.A.T	SNV	nonsense GRM3	NM_000840	R31*
0.030973696		36192 NUSM G[A>T]G				
Pt11-T-SE-1089	SE	Validation4.126329653.A.G	SNV	missense FAT4	NM_001291303	E1875G
0.020783791		42052 NUSM G[A>G]A				
Pt13-T-NE-1125	NE	Validation1.120510755.G.A	SNV	silent NOTCH2	NM_024408	C403C
0.026960991		11869 USM G[C>T]C				
Pt9-T-NE-1064	NE	Validation17.7578421.G.C	SNV	missense TP53	NM_000546	T170R
0.017539772		77253 NUSM A[C>G]G				
Pt11-T-SE-1086	SE	Validation7.86415870.G.C	SNV	missense GRM3	NM_000840	K254N
0.024508237		46923 NUSM A[C>G]T				
Pt7-T-NE-38	NE	Discovery9.139410155.C.T	SNV	silent NOTCH1	NM_017617	T561T
0.030225282		15980 NUSM G[C>T]G				
Pt9-T-NE-42	NE	Discovery9.139417343.C.T	SNV	missense NOTCH1	NM_017617	R234H
0.024662732		23720 NUSM G[C>T]G				
Pt7-T-SE-5	SE	Discovery16.51174459.C.T	SNV	silent SALL1	NM_002968	P558P
0.059174029		9734 NUSM A[C>T]G				
Pt13-T-NE-40	NE	Discovery9.139412252.C.T	SNV	missense NOTCH1	NM_017617	A465T
0.020116953		35741 NUSM G[C>T]G				
Pt9-T-SE-20	SE	Discovery16.51174459.C.T	SNV	silent SALL1	NM_002968	P558P
0.017876169		8447 NUSM A[C>T]G				
Pt12-T-NE-1106	NE	Validation4.126329628.G.A	SNV	missense FAT4	NM_001291303	D1867N
0.022608115		29945 USM T[C>T]C				
Pt3-T-SE-2	SE	Discovery4.1808958.C.T	SNV	missense FGFR3	NM_000142	A797V
0.013279416		38330 USM G[C>T]C				

Pt9-T-NE-30	NE	Discovery9.139410162.G.A	SNV	missense NOTCH1 NM_017617	T559M
0.01540107		4675 NUSM A[C>T]G			
Pt13-T-SE-14	SE	Discovery9.139412738.A.T	SNV	missense NOTCH1 NM_017617	L369Q
0.048403034		65781 NUSM C[A>T]G			
Pt3-T-SE-5	SE	Discovery9.139412639.G.A	SNV	missense NOTCH1 NM_017617	S402L
0.016474944		48073 USM T[C>T]G			
Pt12-T-NE-1112	NE	Validation4.126329617.T.A	SNV	missense FAT4 NM_001291303	I1863N
0.015664098		39964 NUSM A[A>T]T			
Pt2-T-NE-32	NE	Discovery9.139417547.C.T	SNV	missense NOTCH1 NM_017617	C166Y
0.008360328		51553 NUSM G[C>T]A			
Pt12-T-SE-1099	SE	Validation1.120510748.C.A	SNV	missense NOTCH2 NM_024408	G406C
0.054887611		21043 NUSM C[C>A]T			
Pt12-T-NE-1112	NE	Validation4.126329626.C.T	SNV	missense FAT4 NM_001291303	T1866M
0.016314683		39964 NUSM A[C>T]G			
Pt10-T-SE-4	SE	Discovery9.139412266.G.A	SNV	missense NOTCH1 NM_017617	P460L
0.271987821		45980 USM C[C>T]G			
Pt11-T-NE-1094	NE	Validation9.139412621.G.A	SNV	missense NOTCH1 NM_017617	A408V
0.014987889		74727 USM G[C>T]C			
Pt11-T-NE-1098	NE	Validation9.139412372.G.A	SNV	missense NOTCH1 NM_017617	H425Y
0.014063906		53328 NUSM G[C>T]A			
Pt7-T-SE-1035	SE	Validation7.86415872.C.T	SNV	missense GRM3 NM_000840	S255F
0.024975025		37037 USM T[C>T]C			
Pt12-T-NE-41	NE	Discovery9.139412399.G.A	SNV	intron NOTCH1 NA NA	0.016979642
22792	USM	G[C>T]C			
Pt8-T-NE-1056	NE	Validation9.139396854.A.G	SNV	missense NOTCH1 NM_017617	C1752R
0.0238737		23373 NUSM C[A>G]G			
Pt1-T-SE-10	SE	Discovery9.139412375.C.T	SNV	missense NOTCH1 NM_017617	E424K
0.047438145		10266 USM T[C>T]G			
Pt2-T-SE-11A	SE	Discovery9.139412671.A.C	SNV	silent NOTCH1 NM_017617	P391P
0.010930193		17749 NUSM C[A>C]G			
Pt1-T-SE-2	SE	Discovery9.139412689.GG.AA	DNV	missense NOTCH1 NM_017617	S385F
0.01804165		49940 USM T[CC>TT]A			
Pt6-T-SE-4	SE	Discovery17.7577568.C.A	SNV	missense TP53 NM_000546	C238F
0.028918898		295689 NUSM A[C>A]A			
Pt12-T-SE-1105	SE	Validation9.139393678.C.T	SNV	missense NOTCH1 NM_017617	A1990T
0.029557895		11875 NUSM G[C>T]A			

Pt12-T-NE-42 7236	NE USM	Discovery4.1803555.C.T NA	SNV	intron	FGFR3	NA	NA	0.094250967
Pt6-T-NE-28 0.013930348	NE	Discovery9.139410162.G.A 15075 NUSM A[C>T]G	SNV	missense	NOTCH1	NM_017617		T559M
Pt6-T-SE-7 0.049211254	SE	Discovery9.139412266.GG.AA 55658 USM C[CC>TT]G		DNV	missense	NOTCH1	NM_017617	P460L
Pt1-T-NE-27 0.04793578	NE	Discovery16.51174471.T.G 4360 NUSM C[A>C]G	SNV	silent	SALL1	NM_002968		S554S
Pt2-T-SE-6 0.073725055	SE	Discovery9.139413065.G.C 16236 NUSM G[C>G]G	SNV	missense	NOTCH1	NM_017617		C359W
Pt10-T-NE-1083 0.015978753	NE	Validation1.120497666.C.T 45936 USM A[C>T]T	SNV	missense,splice	NOTCH2	NM_024408		S739N
Pt8-T-SE-1043 0.017658698	SE	Validation9.139412744.C.T 93495 USM A[C>T]C	SNV	missense	NOTCH1	NM_017617		G367D
Pt8-T-SE-1043 0.019131772	SE	Validation9.139412624.G.A 76731 USM C[C>T]G	SNV	missense	NOTCH1	NM_017617		P407L
Pt13-T-SE-20 0.046323021	SE	Discovery1.120497662.C.T 125769 USM A[C>T]C	SNV	splice	NOTCH2	NM_024408		c.2219+1G>A
Pt5-T-SE-1005 0.015927484	SE	Validation17.7577073.G.A 182138 USM T[C>T]T	SNV	missense	TP53	NM_000546		L289F
Pt6-T-SE-1016 0.025904876	SE	Validation4.126329687.T.A 16715 NUSM C[A>T]T	SNV	missense	FAT4	NM_001291303		D1886E
Pt10-T-NE-1084 48813	NE NUSM	Validation9.139411854.C.T A[C>T]A	SNV	intron	NOTCH1	NA	NA	0.017638744
Pt12-T-SE-12 0.026100022	SE	Discovery1.120512219.A.G 77203 NUSM A[A>G]T	SNV	silent	NOTCH2	NM_024408		D341D
Pt7-T-NE-1036 22093	NE NUSM	Validation9.139412400.C.T G[C>T]A	SNV	intron	NOTCH1	NA	NA	0.018603177
Pt7-T-SE-16 0.019134618	SE	Discovery9.139412624.G.A 37001 USM C[C>T]G	SNV	missense	NOTCH1	NM_017617		P407L
Pt5-T-SE-1003 0.020038952	SE	Validation9.139417344.G.A 42617 USM C[C>T]G	SNV	missense	NOTCH1	NM_017617		R234C
Pt10-T-SE-7 0.015342674	SE	Discovery9.139412373.C.T 15773 USM G[C>T]T	SNV	silent	NOTCH1	NM_017617		E424E
Pt7-T-SE-1034 0.013681462	SE	Validation9.139412389.C.T 19150 USM A[C>T]C	SNV	missense,splice	NOTCH1	NM_017617		G419D

Pt11-T-SE-1091	SE	Validation9.139396860.C.T	SNV	missense	NOTCH1	NM_017617	V1750M
0.016048397		47606 NUSM A[C>T]G					
Pt11-T-SE-9	SE	Discovery9.139395153.C.A	SNV	nonsense	NOTCH1	NM_017617	E1929*
0.057442135		59190 NUSM T[C>A]G					
Pt13-T-NE-31	NE	Discovery4.1803553.C.T	SNV	intron	FGFR3	NA NA	0.022631462
13521	USM	NA					
Pt7-T-SE-19	SE	Discovery9.139412748.G.T	SNV	intron	NOTCH1	NA NA	0.014526518
43782	NUSM	C[C>A]C					
Pt11-T-SE-14	SE	Discovery1.120510155.G.A	SNV	missense	NOTCH2	NM_024408	R452C
0.032756129		143912 USM T[C>T]G					
Pt12-T-NE-1108	NE	Validation4.1806050.T.C	SNV	intron	FGFR3	NA NA	0.059718347
15054	NUSM	A[A>G]G					
Pt12-T-SE-1104	SE	Validation17.7577539.G.A	SNV	missense	TP53	NM_000546	R248W
0.026041154		91509 USM C[C>T]G					
Pt7-T-SE-10	SE	Discovery17.7577569.A.T	SNV	missense	TP53	NM_000546	C238S
0.019649235		193748 NUSM C[A>T]C					
Pt13-T-NE-1124	NE	Validation4.126329601.T.C	SNV	missense	FAT4	NM_001291303	S1858P
0.101160035		8017 NUSM G[A>G]A					
Pt9-T-SE-1059	SE	Validation9.139417357.G.A	SNV	silent	NOTCH1	NM_017617	N229N
0.017599609		32728 NUSM A[C>T]G					
Pt12-T-NE-1106	NE	Validation7.86468858.C.T	SNV	silent	GRM3	NM_000840	G676G
0.018330353		73812 NUSM G[C>T]G					
Pt5-T-SE-6	SE	Discovery9.139410166.A.T	SNV	missense	NOTCH1	NM_017617	Y558N
0.024776094		11947 NUSM T[A>T]C					
Pt11-T-NE-37	NE	Discovery1.120512194.C.T	SNV	missense	NOTCH2	NM_024408	G350S
0.033242326		27104 USM C[C>T]T					
Pt4-T-SE-11A	SE	Discovery9.139412582.C.G	SNV	intron	NOTCH1	NA NA	0.011735777
44735	NUSM	G[C>G]A					
Pt13-T-NE-1121	NE	Validation1.120506358.T.C	SNV	missense	NOTCH2	NM_024408	Q585R
0.025531387		48411 NUSM C[A>G]G					
Pt13-T-NE-34	NE	Discovery9.139412745.C.T	SNV	splice	NOTCH1	NM_017617	c.1100-1G>A)
0.018075174		75186 USM C[C>T]T					
Pt3-T-NE-26	NE	Discovery9.139412332.C.T	SNV	missense	NOTCH1	NM_017617	C438Y
0.010971524		59700 NUSM G[C>T]A					
Pt13-T-NE-31	NE	Discovery9.139417352.C.T	SNV	missense	NOTCH1	NM_017617	G231D
0.014532544		21125 USM G[C>T]C					

Pt13-T-SE-20	SE	Discovery17.7577539.G.A	SNV	missense TP53	NM_000546	R248W
0.018716126		106646 USM C[C>T]G				
Pt11-T-SE-19	SE	Discovery17.7578262.C.T	SNV	missense TP53	NM_000546	R196Q
0.077947239		44389 USM T[C>T]G				
Pt12-T-SE-4	SE	Discovery9.139412266.GG.AA		DNV missense NOTCH1	NM_017617	P460L
0.031491691		50426 USM C[CC>TT]G				
Pt10-T-NE-28	NE	Discovery9.139412744.C.A	SNV	missense NOTCH1	NM_017617	G367V
0.082621593		39106 NUSM A[C>A]C				
Pt10-T-SE-1074	SE	Validation9.139412375.C.T	SNV	missense NOTCH1	NM_017617	E424K
0.132327057		18749 USM T[C>T]G				
Pt11-T-NE-24	NE	Discovery2.212570061.T.C	SNV	missense ERBB4	NM_005235	T394A
0.017283404		22565 NUSM G[A>G]C				
Pt6-T-NE-28	NE	Discovery9.139396852.G.T	SNV	nonsense NOTCH1	NM_017617	C1752*
0.141488452		5845 NUSM G[C>A]G				
Pt7-T-NE-38	NE	Discovery4.1803564.C.T	SNV	missense FGFR3	NM_000142	R248C
0.033893478		17555 NUSM G[C>T]G				
Pt1-T-SE-2	SE	Discovery16.51174469.A.T	SNV	missense SALL1	NM_002968	V555D
0.139952153		4180 NUSM G[A>T]C				
Pt12-T-SE-1100	SE	Validation4.126329653.A.G	SNV	missense FAT4	NM_001291303	E1875G
0.0228709		33230 NUSM G[A>G]A				
Pt5-T-SE-16	SE	Discovery16.51174459.C.T	SNV	silent SALL1	NM_002968	P558P
0.043780894		9913 NUSM A[C>T]G				
Pt9-T-NE-25	NE	Discovery9.139410156.G.C	SNV	missense NOTCH1	NM_017617	T561R
0.074898352		4673 NUSM A[C>G]G				
Pt12-T-NE-1106	NE	Validation1.120510270.G.A	SNV	intron NOTCH2	NA NA	0.014501611
71992	USM	C[C>T]A				
Pt9-T-NE-1064	NE	Validation1.120510767.A.T	SNV	nonsense NOTCH2	NM_024408	Y399*
0.015283392		67786 NUSM T[A>T]T				
Pt10-T-SE-9	SE	Discovery9.139412315.A.T	SNV	missense NOTCH1	NM_017617	Y444N
0.017967934		32558 NUSM T[A>T]G				
Pt7-T-NE-1042	NE	Validation2.212570046.T.A	SNV	missense,splice ERBB4	NM_005235	T399S
0.037374727		13271 NUSM A[A>T]C				
Pt13-T-NE-1125	NE	Validation1.120512195.T.C	SNV	silent NOTCH2	NM_024408	P349P
0.02426164		29017 NUSM C[A>G]G				
Pt11-T-NE-1094	NE	Validation9.139412387.C.T	SNV	missense NOTCH1	NM_017617	A420T
0.016171922		36854 NUSM G[C>T]A				

Pt4-T-NE-31 18991	NE USM	Discovery9.139412399.G.A G[C>T]C	SNV	intron	NOTCH1 NA	NA	0.017060713
Pt11-T-SE-1086 0.018173958	SE	Validation7.113518251.G.T 60141 NUSM G[C>A]A	SNV	missense	PPP1R3A	NM_002711	H966N
Pt12-T-SE-11 0.014095654	SE	Discovery1.120510068.G.A 212264 USM T[C>T]T	SNV	silent	NOTCH2	NM_024408	L481L
Pt12-T-NE-35 11749	NE USM	Discovery9.139412399.G.A G[C>T]C	SNV	intron	NOTCH1 NA	NA	0.01455443
Pt11-T-NE-41 0.025243475	NE	Discovery9.139396860.C.T 12835 NUSM A[C>T]G	SNV	missense	NOTCH1	NM_017617	V1750M
Pt11-T-NE-31 0.016815612	NE	Discovery9.139417354.C.T 27415 USM C[C>T]C	SNV	silent	NOTCH1	NM_017617	G230G
Pt13-T-SE-1114 0.043934067	SE	Validation9.139412381.G.T 31001 NUSM C[C>A]C	SNV	missense	NOTCH1	NM_017617	P422T
Pt11-T-SE-9 0.017731806	SE	Discovery16.51174461.G.A 5414 USM G[C>T]C	SNV	missense	SALL1	NM_002968	P558S
Pt6-T-SE-1020 0.021900923	SE	Validation9.139418261.T.A 25798 NUSM A[A>T]T	SNV	missense	NOTCH1	NM_017617	N104I
Pt4-T-SE-11 0.008821278	SE	Discovery9.139412322.C.G 52260 NUSM G[C>G]A	SNV	silent	NOTCH1	NM_017617	
Pt13-T-NE-1123 0.027703819	NE	Validation4.126329635.A.G 29671 NUSM G[A>G]C	SNV	missense	FAT4	NM_001291303	D1869G
Pt6-T-SE-11 0.029598309	SE	Discovery9.139412390.C.T 17028 USM C[C>T]T	SNV	splice,intron	NOTCH1	NA	NA
Pt6-T-SE-1015 0.01519717	SE	Validation9.139396860.C.T 30532 NUSM A[C>T]G	SNV	missense	NOTCH1	NM_017617	V1750M
Pt8-T-NE-37 0.048882035	NE	Discovery9.139410155.C.T 6485 NUSM G[C>T]G	SNV	silent	NOTCH1	NM_017617	T561T
Pt12-T-SE-1100 0.016069816	SE	Validation4.126329627.G.T 33230 NUSM C[C>A]G	SNV	silent	FAT4	NM_001291303	
Pt3-T-SE-11A 0.190100609	SE	Discovery9.139418262.T.C 16102 NUSM C[A>G]A	SNV	missense	NOTCH1	NM_017617	N104D
Pt11-T-SE-1087 0.016202904	SE	Validation4.126329646.A.G 23144 NUSM G[A>G]A	SNV	missense	FAT4	NM_001291303	N1873D
Pt12-T-SE-1104 0.01530364	SE	Validation1.120510222.A.T 100695 NUSM C[A>T]T	SNV	missense	NOTCH2	NM_024408	H429Q

Pt6-T-NE-29	NE	Discovery9.139412645.C.A	SNV	missense	NOTCH1	NM_017617	C400F	
0.022852192		70409 NUSM G[C>A]A						
Pt3-T-NE-22	NE	Discovery9.139412302.C.T	SNV	missense	NOTCH1	NM_017617	R448Q	
0.011915102		44901 USM T[C>T]G						
Pt9-T-SE-13	SE	Discovery17.7577543.C.T	SNV	missense	TP53	NM_000546	M246I	
0.016251162		135498 USM T[C>T]A						
Pt2-T-SE-11A	SE	Discovery9.139412319.C.A	SNV	missense	NOTCH1	NM_017617	Q442H	
0.021238938		13560 NUSM C[C>A]T						
Pt10-T-NE-31	NE	Discovery1.120512295.G.A	SNV	missense	NOTCH2	NM_024408	A316V	
0.015128682		33843 USM G[C>T]C						
Pt1-T-SE-10	SE	Discovery9.139412750.C.T	SNV	intron	NOTCH1	NA NA	0.023591937	
15429	NUSM	G[C>T]A						
Pt8-T-SE-1044	SE	Validation9.139417581.A.T	SNV	missense	NOTCH1	NM_017617	C155S	
0.034794998		94755 NUSM C[A>T]C						
Pt2-T-SE-11	SE	Discovery9.139418267.A.G	SNV	missense	NOTCH1	NM_017617	L102P	
0.026292916		9204 NUSM C[A>G]G						
Pt11-T-SE-1089	SE	Validation7.86415865.C.T	SNV	missense	GRM3	NM_000840	R253C	
0.024840079		33454 USM C[C>T]G						
Pt12-T-NE-1112	NE	Validation9.139417595.G.A	SNV	missense	NOTCH1	NM_017617	A150V	
0.014912722		151012 USM G[C>T]C						
Pt12-T-SE-16	SE	Discovery17.7577058.C.T	SNV	missense	TP53	NM_000546	E294K	
0.017740603		123502 USM T[C>T]C						
Pt7-T-NE-1039	NE	Validation9.139418257.G.T	SNV	silent	NOTCH1	NM_017617	A105A	
0.035553125		14626 NUSM C[C>A]T						
Pt3-T-NE-25	NE	Discovery9.139412319.C.A	SNV	missense	NOTCH1	NM_017617	Q442H	
0.01260544		52755 NUSM C[C>A]T						
Pt3-T-SE-8	SE	Discovery17.7577071.G.A	SNV	silent	TP53	NM_000546	L289L	
0.000705303		199914 USM T[C>T]C						
Pt2-T-SE-11B	SE	Discovery9.139412689.GG.AA		DNV	missense	NOTCH1	NM_017617	S385F
0.026013102		52512 USM T[CC>TT]A						
Pt8-T-SE-3	SE	Discovery7.86415874.T.C	SNV	missense	GRM3	NM_000840	Y256H	
0.020642515		21945 NUSM T[A>G]G						
Pt11-T-SE-1087	SE	Validation7.86415852.C.T	SNV	silent	GRM3	NM_000840	G248G	
0.019988367		37822 USM G[C>T]C						
Pt1-T-SE-1	SE	Discovery9.139412565.C.T	SNV	intron	NOTCH1	NA NA	0.012526539	
42390	USM	C[C>T]G						

Pt11-T-SE-1087	SE	Validation17.7577540.G.A	SNV	silent	TP53	NM_000546	N247N
0.023050552		80215 USM A[C>T]C					
Pt8-T-NE-1052	NE	Validation4.126329635.A.G	SNV	missense	FAT4	NM_001291303	D1869G
0.015326081		37322 NUSM G[A>G]C					
Pt13-T-SE-10	SE	Discovery9.139412255.C.T	SNV	missense	NOTCH1	NM_017617	D464N
0.028584904		59367 USM T[C>T]G					
Pt5-T-SE-16	SE	Discovery9.139412689.GG.AA		DNV	missense	NOTCH1	NM_017617
0.015028683		79315 USM T[CC>TT]A					S385F
Pt6-T-SE-1018	SE	Validation17.7577551.C.T	SNV	missense	TP53	NM_000546	G244S
0.007704605		90076 USM C[C>T]C					
Pt7-T-SE-10	SE	Discovery6.70049256.C.T	SNV	missense	ADGRB3	NM_001704	P1107S
0.017179256		15542 USM G[C>T]C					
Pt4-T-SE-11	SE	Discovery9.139412386.G.A	SNV	missense,splice	NOTCH1	NM_017617	A420V
0.013340701		12668 USM G[C>T]C					
Pt1-T-SE-10	SE	Discovery1.120510155.G.A	SNV	missense	NOTCH2	NM_024408	R452C
0.05321433		97812 USM T[C>T]G					
Pt12-T-SE-1099	SE	Validation17.7577539.G.A	SNV	missense	TP53	NM_000546	R248W
0.04517822		98698 USM C[C>T]G					
Pt9-T-NE-1067	NE	Validation1.120510232.G.T	SNV	missense	NOTCH2	NM_024408	P426H
0.028242223		39055 NUSM C[C>A]T					
Pt13-T-NE-42	NE	Discovery9.139412389.C.T	SNV	missense	NOTCH1	NM_017617	G419D
0.017779424		21598 USM A[C>T]C					
Pt7-T-SE-10	SE	Discovery1.120512285.A.G	SNV	silent	NOTCH2	NM_024408	N319N
0.039025566		95399 NUSM C[A>G]T					
Pt12-T-SE-15	SE	Discovery9.139412264.A.C	SNV	missense	NOTCH1	NM_017617	C461G
0.023012688		46105 NUSM C[A>C]C					
Pt3-T-SE-2	SE	Discovery17.7577547.CC.TT	DNV	missense	TP53	NM_000546	G245N
0.019323671		71208 USM G[CC>TT]G					
Pt3-T-NE-32	NE	Discovery9.139412376.G.A	SNV	silent	NOTCH1	NM_017617	C423C
0.024796298		19882 NUSM G[C>T]G					
Pt5-T-SE-1004	SE	Validation9.139412255.C.T	SNV	missense	NOTCH1	NM_017617	D464N
0.016712873		114343 USM T[C>T]G					
Pt5-T-NE-35	NE	Discovery9.139412625.G.A	SNV	missense	NOTCH1	NM_017617	P407S
0.014902376		43483 USM C[C>T]C					
Pt6-T-SE-5	SE	Discovery4.1803560.A.T	SNV	splice	FGFR3	NM_000142	c.740-2A>T
0.020378414		33614 NUSM C[A>T]G					

Pt7-T-NE-1042	NE	Validation2.212570055.T.A	SNV	nonsense ERBB4	NM_005235	R396*
0.014090875		13271 NUSM C[A>T]G				
Pt12-T-SE-7	SE	Discovery9.139412266.G.A	SNV	missense NOTCH1	NM_017617	P460L
0.01425618		78843 USM C[C>T]G				
Pt2-T-SE-11A	SE	Discovery4.126329603.T.A	SNV	silent FAT4	NM_001291303	S1858S
0.005567359		50832 NUSM A[A>T]G				
Pt3-T-NE-31	NE	Discovery9.139412263.C.A	SNV	missense NOTCH1	NM_017617	C461F
0.038000228		52526 NUSM G[C>A]A				
Pt8-T-SE-6	SE	Discovery9.139417352.C.T	SNV	missense NOTCH1	NM_017617	G231D
0.015634837		19060 USM G[C>T]C				
Pt9-T-NE-1067	NE	Validation9.139412623.C.T	SNV	silent NOTCH1	NM_017617	P407P
0.022751192		76963 USM C[C>T]G				
Pt11-T-SE-7	SE	Discovery9.139393670.C.T	SNV	missense NOTCH1	NM_017617	M1992I
0.019357195		5476 NUSM G[C>T]A				
Pt13-T-SE-1113	SE	Validation17.7577537.CC.TT	DNV	missense TP53	NM_000546	R248Q
0.016858955		118572 USM T[CC>TT]G				
Pt7-T-SE-2	SE	Discovery17.7577539.G.A	SNV	missense TP53	NM_000546	R248W
0.030725469		88591 USM C[C>T]G				
Pt8-T-NE-28	NE	Discovery4.1806060.A.T	SNV	missense FGFR3	NM_000142	E360V
0.056692591		4886 NUSM G[A>T]G				

***mut_id**: the mutation id in the format of chr.posi.ref.mut, coordinates in GRCh37

Table S5. TP53 (p.217-280) mutations in Yizhak et al. Science. 2019

Hugo Symbol	Chromosome.x	Start Position	End Position	Variant Classification	Variant	Type	Reference Allele	Alternate Allele	Sample Name	Matched	Normal	Sample	Name
Fraction	Transcript Strand	Protein Change	SwissProt entry Id	Reference Context	Allele	Alternate Count	Reference Count	Tissue.x	Chromosome.y	Tissue.y			
TP53	17	7577539	7577539	Missense_Mutation	SNP	G	A						
	Sample-276	Individual-62	-	p.R248W	P53_HUMAN			0.049383	4	77	Skin	17	Skin -
	ATGGGCCTCCGGTTCATGCCG												
Sun Exposed (Lower leg)													
TP53	17	7577538	7577538	Missense_Mutation	SNP	C	T						
	Sample-442	Individual-94	-	p.R248Q	P53_HUMAN			0.101266	6	71	Skin	17	Skin -
	GATGGGCCTCCGGTTCATGCC												
Sun Exposed (Lower leg)													
TP53	17	7577105	7577105	Missense_Mutation	SNP	G	A						
	Sample-551	Individual-113	-	p.P278L	P53_HUMAN			0.039683	4	121	Skin	17	Skin -
	GTCTCTCCCAGGACAGGCACA												
Sun Exposed (Lower leg)													
TP53	17	7577543	7577543	Missense_Mutation	SNP	C	T						
	Sample-826	Individual-173	-	p.M246I	P53_HUMAN			0.105882	7	76	Skin	17	Skin -
	GCCTCCGGTTCATGCCGCCA												
Sun Exposed (Lower leg)													

Table S6. Frequencies of NOTCH1 E424K in cBioPortal GENIE.*NOTCH1* E424K frequency in skin cancers

Type	Total	Mutated	%
Merkel Cell Carcinoma	185	0	0
Cutaneous Squamous Cell Carcinoma	158	2	1.27%
Basal Cell Carcinoma	42	0	0
Other	82	0	0
Melanoma	2492	1	0.04%

All other squamous cell carcinoma	2409	2	0.08%
All other cancers	54069	5	0.01%

Date of query	4/29/2019
Version	GENIE v5.0-public
Total non-melanoma	467

Table S7. Sample-level UV-signature mutation (USM) summary.

Sample	Type	Batch	Size	N_mut
Pt1-T-NE-18	NE	Discovery	2mm	0
Pt1-T-NE-20	NE	Discovery	2mm	1
Pt1-T-NE-21	NE	Discovery	2mm	0
Pt1-T-NE-22	NE	Discovery	2mm	0
Pt1-T-NE-23	NE	Discovery	2mm	0
Pt1-T-NE-24	NE	Discovery	3mm	0
Pt1-T-NE-25	NE	Discovery	3mm	0
Pt1-T-NE-26	NE	Discovery	3mm	0
Pt1-T-NE-27	NE	Discovery	3mm	1
Pt1-T-NE-32	NE	Discovery	4mm	0
Pt1-T-NE-33	NE	Discovery	6mm	1
Pt2-T-NE-20	NE	Discovery	2mm	0
Pt2-T-NE-21	NE	Discovery	2mm	0
Pt2-T-NE-22	NE	Discovery	2mm	0
Pt2-T-NE-23	NE	Discovery	2mm	0
Pt2-T-NE-24	NE	Discovery	3mm	0
Pt2-T-NE-25	NE	Discovery	3mm	0
Pt2-T-NE-26	NE	Discovery	3mm	0
Pt2-T-NE-27	NE	Discovery	3mm	0
Pt2-T-NE-29	NE	Discovery	2mm	1
Pt2-T-NE-31	NE	Discovery	1mm	0
Pt2-T-NE-31A	NE	Discovery	1mm	0
Pt2-T-NE-31B	NE	Discovery	1mm	1
Pt2-T-NE-32	NE	Discovery	4mm	0
Pt2-T-NE-33	NE	Discovery	6mm	0
Pt3-T-NE-18	NE	Discovery	2mm	0
Pt3-T-NE-19	NE	Discovery	2mm	1
Pt3-T-NE-21	NE	Discovery	2mm	0
Pt3-T-NE-22	NE	Discovery	2mm	1
Pt3-T-NE-24	NE	Discovery	3mm	0
Pt3-T-NE-25	NE	Discovery	3mm	0
Pt3-T-NE-26	NE	Discovery	3mm	0
Pt3-T-NE-27	NE	Discovery	3mm	0
Pt3-T-NE-31	NE	Discovery	1mm	0
Pt3-T-NE-31A	NE	Discovery	1mm	1
Pt3-T-NE-31B	NE	Discovery	1mm	1
Pt3-T-NE-32	NE	Discovery	4mm	0
Pt3-T-NE-33	NE	Discovery	6mm	0
Pt4-T-NE-18	NE	Discovery	2mm	0

Pt4-T-NE-22	NE	Discovery	2mm	0
Pt4-T-NE-23	NE	Discovery	2mm	0
Pt4-T-NE-31	NE	Discovery	1mm	1
Pt4-T-NE-31A	NE	Discovery	1mm	0
Pt4-T-NE-31B	NE	Discovery	1mm	0
Pt5-T-NE-1008	NE	Validation	2mm	0
Pt5-T-NE-1011	NE	Validation	2mm	0
Pt5-T-NE-1012	NE	Validation	2mm	1
Pt5-T-NE-1013	NE	Validation	2mm	0
Pt5-T-NE-1014	NE	Validation	2mm	0
Pt5-T-NE-24	NE	Discovery	1mm	0
Pt5-T-NE-25	NE	Discovery	1mm	0
Pt5-T-NE-26	NE	Discovery	1mm	0
Pt5-T-NE-28	NE	Discovery	2mm	0
Pt5-T-NE-29	NE	Discovery	2mm	0
Pt5-T-NE-31	NE	Discovery	2mm	0
Pt5-T-NE-33	NE	Discovery	3mm	0
Pt5-T-NE-34	NE	Discovery	3mm	0
Pt5-T-NE-35	NE	Discovery	3mm	2
Pt5-T-NE-36	NE	Discovery	4mm	0
Pt5-T-NE-37	NE	Discovery	4mm	0
Pt5-T-NE-39	NE	Discovery	4mm	0
Pt5-T-NE-40	NE	Discovery	6mm	1
Pt5-T-NE-41	NE	Discovery	6mm	0
Pt5-T-NE-42	NE	Discovery	6mm	0
Pt6-T-NE-1022	NE	Validation	2mm	0
Pt6-T-NE-1023	NE	Validation	2mm	1
Pt6-T-NE-1025	NE	Validation	2mm	1
Pt6-T-NE-1027	NE	Validation	2mm	0
Pt6-T-NE-1028	NE	Validation	2mm	0
Pt6-T-NE-24	NE	Discovery	1mm	1
Pt6-T-NE-26	NE	Discovery	1mm	0
Pt6-T-NE-27	NE	Discovery	1mm	0
Pt6-T-NE-28	NE	Discovery	2mm	0
Pt6-T-NE-29	NE	Discovery	2mm	0
Pt6-T-NE-30	NE	Discovery	2mm	0
Pt6-T-NE-33	NE	Discovery	3mm	0
Pt6-T-NE-34	NE	Discovery	3mm	0
Pt6-T-NE-35	NE	Discovery	3mm	0
Pt6-T-NE-36	NE	Discovery	4mm	0
Pt6-T-NE-37	NE	Discovery	4mm	0
Pt6-T-NE-38	NE	Discovery	4mm	0

Pt6-T-NE-40	NE	Discovery	6mm	0
Pt6-T-NE-41	NE	Discovery	6mm	0
Pt6-T-NE-42	NE	Discovery	6mm	2
Pt7-T-NE-1036	NE	Validation	2mm	0
Pt7-T-NE-1038	NE	Validation	2mm	0
Pt7-T-NE-1039	NE	Validation	2mm	0
Pt7-T-NE-1041	NE	Validation	2mm	0
Pt7-T-NE-1042	NE	Validation	2mm	2
Pt7-T-NE-24	NE	Discovery	1mm	0
Pt7-T-NE-26	NE	Discovery	1mm	0
Pt7-T-NE-27	NE	Discovery	1mm	0
Pt7-T-NE-29	NE	Discovery	2mm	0
Pt7-T-NE-30	NE	Discovery	2mm	0
Pt7-T-NE-31	NE	Discovery	2mm	1
Pt7-T-NE-33	NE	Discovery	3mm	0
Pt7-T-NE-34	NE	Discovery	3mm	0
Pt7-T-NE-35	NE	Discovery	3mm	0
Pt7-T-NE-36	NE	Discovery	4mm	2
Pt7-T-NE-38	NE	Discovery	4mm	1
Pt7-T-NE-39	NE	Discovery	4mm	1
Pt7-T-NE-40	NE	Discovery	6mm	0
Pt7-T-NE-41	NE	Discovery	6mm	0
Pt7-T-NE-43	NE	Discovery	6mm	0
Pt8-T-NE-1050	NE	Validation	2mm	0
Pt8-T-NE-1052	NE	Validation	2mm	0
Pt8-T-NE-1054	NE	Validation	2mm	0
Pt8-T-NE-1055	NE	Validation	2mm	2
Pt8-T-NE-1056	NE	Validation	2mm	0
Pt8-T-NE-227	NE	Discovery	1mm	0
Pt8-T-NE-24	NE	Discovery	1mm	0
Pt8-T-NE-26	NE	Discovery	1mm	0
Pt8-T-NE-28	NE	Discovery	2mm	0
Pt8-T-NE-29	NE	Discovery	2mm	0
Pt8-T-NE-31	NE	Discovery	2mm	0
Pt8-T-NE-32	NE	Discovery	3mm	0
Pt8-T-NE-34	NE	Discovery	3mm	1
Pt8-T-NE-35	NE	Discovery	3mm	0
Pt8-T-NE-36	NE	Discovery	4mm	1
Pt8-T-NE-37	NE	Discovery	4mm	1
Pt8-T-NE-38	NE	Discovery	4mm	0
Pt8-T-NE-40	NE	Discovery	6mm	1
Pt8-T-NE-42	NE	Discovery	6mm	1

Pt8-T-NE-43	NE	Discovery	6mm	0
Pt9-T-NE-1064	NE	Validation	2mm	1
Pt9-T-NE-1065	NE	Validation	2mm	0
Pt9-T-NE-1066	NE	Validation	2mm	0
Pt9-T-NE-1067	NE	Validation	2mm	3
Pt9-T-NE-1068	NE	Validation	2mm	2
Pt9-T-NE-25	NE	Discovery	1mm	0
Pt9-T-NE-26	NE	Discovery	1mm	0
Pt9-T-NE-27	NE	Discovery	1mm	0
Pt9-T-NE-28	NE	Discovery	2mm	0
Pt9-T-NE-30	NE	Discovery	2mm	1
Pt9-T-NE-31	NE	Discovery	2mm	0
Pt9-T-NE-33	NE	Discovery	3mm	0
Pt9-T-NE-34	NE	Discovery	3mm	0
Pt9-T-NE-35	NE	Discovery	3mm	0
Pt9-T-NE-37	NE	Discovery	4mm	0
Pt9-T-NE-38	NE	Discovery	4mm	1
Pt9-T-NE-39	NE	Discovery	4mm	0
Pt9-T-NE-40	NE	Discovery	6mm	0
Pt9-T-NE-41	NE	Discovery	6mm	0
Pt9-T-NE-42	NE	Discovery	6mm	0
Pt10-T-NE-1080	NE	Validation	2mm	1
Pt10-T-NE-1081	NE	Validation	2mm	0
Pt10-T-NE-1082	NE	Validation	2mm	1
Pt10-T-NE-1083	NE	Validation	2mm	2
Pt10-T-NE-1084	NE	Validation	2mm	0
Pt10-T-NE-24	NE	Discovery	1mm	0
Pt10-T-NE-25	NE	Discovery	1mm	0
Pt10-T-NE-27	NE	Discovery	1mm	0
Pt10-T-NE-28	NE	Discovery	2mm	0
Pt10-T-NE-29	NE	Discovery	2mm	0
Pt10-T-NE-31	NE	Discovery	2mm	1
Pt10-T-NE-32	NE	Discovery	3mm	3
Pt10-T-NE-34	NE	Discovery	3mm	0
Pt10-T-NE-35	NE	Discovery	3mm	2
Pt10-T-NE-37	NE	Discovery	4mm	0
Pt10-T-NE-38	NE	Discovery	4mm	0
Pt10-T-NE-39	NE	Discovery	4mm	0
Pt10-T-NE-41	NE	Discovery	6mm	0
Pt10-T-NE-42	NE	Discovery	6mm	0
Pt10-T-NE-43	NE	Discovery	6mm	0
Pt11-T-NE-1094	NE	Validation	2mm	1

Pt11-T-NE-1095	NE	Validation	2mm	1
Pt11-T-NE-1096	NE	Validation	2mm	1
Pt11-T-NE-1097	NE	Validation	2mm	0
Pt11-T-NE-1098	NE	Validation	2mm	0
Pt11-T-NE-24	NE	Discovery	1mm	0
Pt11-T-NE-26	NE	Discovery	1mm	0
Pt11-T-NE-27	NE	Discovery	1mm	0
Pt11-T-NE-29	NE	Discovery	2mm	0
Pt11-T-NE-30	NE	Discovery	2mm	0
Pt11-T-NE-31	NE	Discovery	2mm	1
Pt11-T-NE-32	NE	Discovery	3mm	0
Pt11-T-NE-34	NE	Discovery	3mm	0
Pt11-T-NE-35	NE	Discovery	3mm	0
Pt11-T-NE-36	NE	Discovery	4mm	0
Pt11-T-NE-37	NE	Discovery	4mm	1
Pt11-T-NE-39	NE	Discovery	4mm	0
Pt11-T-NE-40	NE	Discovery	6mm	0
Pt11-T-NE-41	NE	Discovery	6mm	0
Pt11-T-NE-42	NE	Discovery	6mm	0
Pt12-T-NE-1106	NE	Validation	2mm	3
Pt12-T-NE-1108	NE	Validation	2mm	0
Pt12-T-NE-1109	NE	Validation	2mm	0
Pt12-T-NE-1110	NE	Validation	2mm	0
Pt12-T-NE-1112	NE	Validation	2mm	1
Pt12-T-NE-24	NE	Discovery	1mm	0
Pt12-T-NE-25	NE	Discovery	1mm	0
Pt12-T-NE-27	NE	Discovery	1mm	1
Pt12-T-NE-28	NE	Discovery	2mm	0
Pt12-T-NE-30	NE	Discovery	2mm	0
Pt12-T-NE-31	NE	Discovery	2mm	0
Pt12-T-NE-33	NE	Discovery	3mm	0
Pt12-T-NE-34	NE	Discovery	3mm	0
Pt12-T-NE-35	NE	Discovery	3mm	1
Pt12-T-NE-37	NE	Discovery	4mm	0
Pt12-T-NE-38	NE	Discovery	4mm	0
Pt12-T-NE-39	NE	Discovery	4mm	0
Pt12-T-NE-41	NE	Discovery	6mm	1
Pt12-T-NE-42	NE	Discovery	6mm	1
Pt12-T-NE-43	NE	Discovery	6mm	0
Pt13-T-NE-1120	NE	Validation	2mm	0
Pt13-T-NE-1121	NE	Validation	2mm	0
Pt13-T-NE-1123	NE	Validation	2mm	1

Pt13-T-NE-1124	NE	Validation	2mm	0
Pt13-T-NE-1125	NE	Validation	2mm	2
Pt13-T-NE-25	NE	Discovery	1mm	0
Pt13-T-NE-26	NE	Discovery	1mm	0
Pt13-T-NE-27	NE	Discovery	1mm	0
Pt13-T-NE-28	NE	Discovery	2mm	0
Pt13-T-NE-29	NE	Discovery	2mm	0
Pt13-T-NE-31	NE	Discovery	2mm	2
Pt13-T-NE-32	NE	Discovery	3mm	0
Pt13-T-NE-33	NE	Discovery	3mm	0
Pt13-T-NE-34	NE	Discovery	3mm	1
Pt13-T-NE-36	NE	Discovery	4mm	0
Pt13-T-NE-37	NE	Discovery	4mm	1
Pt13-T-NE-38	NE	Discovery	4mm	0
Pt13-T-NE-40	NE	Discovery	6mm	0
Pt13-T-NE-41	NE	Discovery	6mm	0
Pt13-T-NE-42	NE	Discovery	6mm	1
Pt1-T-SE-1	SE	Discovery	2mm	1
Pt1-T-SE-10	SE	Discovery	3mm	3
Pt1-T-SE-15	SE	Discovery	4mm	0
Pt1-T-SE-16	SE	Discovery	6mm	1
Pt1-T-SE-2	SE	Discovery	2mm	2
Pt1-T-SE-3	SE	Discovery	2mm	0
Pt1-T-SE-4	SE	Discovery	2mm	0
Pt1-T-SE-5	SE	Discovery	2mm	0
Pt1-T-SE-7	SE	Discovery	3mm	1
Pt1-T-SE-8	SE	Discovery	3mm	3
Pt1-T-SE-9	SE	Discovery	3mm	2
Pt2-T-SE-1	SE	Discovery	2mm	1
Pt2-T-SE-10	SE	Discovery	3mm	1
Pt2-T-SE-11	SE	Discovery	1mm	0
Pt2-T-SE-11A	SE	Discovery	1mm	0
Pt2-T-SE-11B	SE	Discovery	1mm	4
Pt2-T-SE-15	SE	Discovery	4mm	0
Pt2-T-SE-16	SE	Discovery	6mm	0
Pt2-T-SE-3	SE	Discovery	2mm	2
Pt2-T-SE-4	SE	Discovery	2mm	2
Pt2-T-SE-5	SE	Discovery	2mm	1
Pt2-T-SE-6	SE	Discovery	2mm	0
Pt2-T-SE-7	SE	Discovery	3mm	1
Pt2-T-SE-8	SE	Discovery	3mm	0
Pt2-T-SE-9	SE	Discovery	3mm	1

Pt3-T-SE-1	SE	Discovery	2mm	1
Pt3-T-SE-10	SE	Discovery	3mm	1
Pt3-T-SE-11	SE	Discovery	1mm	0
Pt3-T-SE-11A	SE	Discovery	1mm	3
Pt3-T-SE-11B	SE	Discovery	1mm	0
Pt3-T-SE-15	SE	Discovery	4mm	3
Pt3-T-SE-16	SE	Discovery	6mm	0
Pt3-T-SE-2	SE	Discovery	2mm	3
Pt3-T-SE-3	SE	Discovery	2mm	3
Pt3-T-SE-5	SE	Discovery	2mm	2
Pt3-T-SE-6	SE	Discovery	2mm	1
Pt3-T-SE-7	SE	Discovery	3mm	0
Pt3-T-SE-8	SE	Discovery	3mm	6
Pt3-T-SE-9	SE	Discovery	3mm	0
Pt4-T-SE-1	SE	Discovery	2mm	1
Pt4-T-SE-11	SE	Discovery	1mm	2
Pt4-T-SE-11A	SE	Discovery	1mm	1
Pt4-T-SE-11B	SE	Discovery	1mm	0
Pt4-T-SE-2	SE	Discovery	2mm	1
Pt4-T-SE-4	SE	Discovery	2mm	1
Pt5-T-SE-1	SE	Discovery	1mm	1
Pt5-T-SE-10	SE	Discovery	3mm	0
Pt5-T-SE-1001	SE	Validation	2mm	2
Pt5-T-SE-1003	SE	Validation	2mm	2
Pt5-T-SE-1004	SE	Validation	2mm	2
Pt5-T-SE-1005	SE	Validation	2mm	2
Pt5-T-SE-1007	SE	Validation	2mm	2
Pt5-T-SE-11	SE	Discovery	3mm	0
Pt5-T-SE-12	SE	Discovery	3mm	0
Pt5-T-SE-13	SE	Discovery	4mm	1
Pt5-T-SE-15	SE	Discovery	4mm	0
Pt5-T-SE-16	SE	Discovery	4mm	2
Pt5-T-SE-17	SE	Discovery	6mm	0
Pt5-T-SE-19	SE	Discovery	6mm	0
Pt5-T-SE-20	SE	Discovery	6mm	0
Pt5-T-SE-3	SE	Discovery	1mm	0
Pt5-T-SE-4	SE	Discovery	1mm	3
Pt5-T-SE-6	SE	Discovery	2mm	1
Pt5-T-SE-7	SE	Discovery	2mm	1
Pt5-T-SE-8	SE	Discovery	2mm	0
Pt6-T-SE-10	SE	Discovery	3mm	1
Pt6-T-SE-1015	SE	Validation	2mm	1

Pt6-T-SE-1016	SE	Validation	2mm	0
Pt6-T-SE-1018	SE	Validation	2mm	3
Pt6-T-SE-1020	SE	Validation	2mm	0
Pt6-T-SE-1021	SE	Validation	2mm	2
Pt6-T-SE-11	SE	Discovery	3mm	1
Pt6-T-SE-12	SE	Discovery	3mm	1
Pt6-T-SE-13	SE	Discovery	4mm	1
Pt6-T-SE-15	SE	Discovery	4mm	0
Pt6-T-SE-16	SE	Discovery	4mm	1
Pt6-T-SE-17	SE	Discovery	6mm	0
Pt6-T-SE-19	SE	Discovery	6mm	1
Pt6-T-SE-2	SE	Discovery	1mm	0
Pt6-T-SE-20	SE	Discovery	6mm	0
Pt6-T-SE-3	SE	Discovery	1mm	0
Pt6-T-SE-4	SE	Discovery	1mm	1
Pt6-T-SE-5	SE	Discovery	2mm	2
Pt6-T-SE-6	SE	Discovery	2mm	0
Pt6-T-SE-7	SE	Discovery	2mm	2
Pt7-T-SE-10	SE	Discovery	3mm	1
Pt7-T-SE-1031	SE	Validation	2mm	3
Pt7-T-SE-1032	SE	Validation	2mm	3
Pt7-T-SE-1033	SE	Validation	2mm	1
Pt7-T-SE-1034	SE	Validation	2mm	2
Pt7-T-SE-1035	SE	Validation	2mm	2
Pt7-T-SE-12	SE	Discovery	3mm	0
Pt7-T-SE-13	SE	Discovery	4mm	1
Pt7-T-SE-15	SE	Discovery	4mm	0
Pt7-T-SE-16	SE	Discovery	4mm	2
Pt7-T-SE-18	SE	Discovery	6mm	0
Pt7-T-SE-19	SE	Discovery	6mm	1
Pt7-T-SE-2	SE	Discovery	1mm	2
Pt7-T-SE-20	SE	Discovery	6mm	0
Pt7-T-SE-3	SE	Discovery	1mm	0
Pt7-T-SE-4	SE	Discovery	1mm	0
Pt7-T-SE-5	SE	Discovery	2mm	0
Pt7-T-SE-6	SE	Discovery	2mm	1
Pt7-T-SE-8	SE	Discovery	2mm	1
Pt7-T-SE-9	SE	Discovery	3mm	1
Pt8-T-SE-1	SE	Discovery	1mm	0
Pt8-T-SE-10	SE	Discovery	3mm	0
Pt8-T-SE-1043	SE	Validation	2mm	3
Pt8-T-SE-1044	SE	Validation	2mm	0

Pt8-T-SE-1045	SE	Validation	2mm	0
Pt8-T-SE-1047	SE	Validation	2mm	3
Pt8-T-SE-1048	SE	Validation	2mm	3
Pt8-T-SE-11	SE	Discovery	3mm	1
Pt8-T-SE-13	SE	Discovery	4mm	2
Pt8-T-SE-14	SE	Discovery	4mm	1
Pt8-T-SE-16	SE	Discovery	4mm	0
Pt8-T-SE-17	SE	Discovery	6mm	0
Pt8-T-SE-19	SE	Discovery	6mm	0
Pt8-T-SE-20	SE	Discovery	6mm	1
Pt8-T-SE-3	SE	Discovery	1mm	0
Pt8-T-SE-4	SE	Discovery	1mm	0
Pt8-T-SE-5	SE	Discovery	2mm	0
Pt8-T-SE-6	SE	Discovery	2mm	1
Pt8-T-SE-7	SE	Discovery	2mm	1
Pt8-T-SE-9	SE	Discovery	3mm	0
Pt9-T-SE-1	SE	Discovery	1mm	0
Pt9-T-SE-1057	SE	Validation	2mm	1
Pt9-T-SE-1058	SE	Validation	2mm	0
Pt9-T-SE-1059	SE	Validation	2mm	0
Pt9-T-SE-1060	SE	Validation	2mm	0
Pt9-T-SE-1063	SE	Validation	2mm	0
Pt9-T-SE-11	SE	Discovery	3mm	0
Pt9-T-SE-12	SE	Discovery	3mm	0
Pt9-T-SE-13	SE	Discovery	4mm	1
Pt9-T-SE-14	SE	Discovery	4mm	0
Pt9-T-SE-16	SE	Discovery	4mm	0
Pt9-T-SE-17	SE	Discovery	6mm	0
Pt9-T-SE-19	SE	Discovery	6mm	1
Pt9-T-SE-20	SE	Discovery	6mm	1
Pt9-T-SE-3	SE	Discovery	1mm	0
Pt9-T-SE-4	SE	Discovery	1mm	0
Pt9-T-SE-5	SE	Discovery	2mm	0
Pt9-T-SE-6	SE	Discovery	2mm	0
Pt9-T-SE-8	SE	Discovery	2mm	0
Pt9-T-SE-9	SE	Discovery	3mm	0
Pt10-T-SE-1	SE	Discovery	1mm	0
Pt10-T-SE-10	SE	Discovery	3mm	0
Pt10-T-SE-1071	SE	Validation	2mm	0
Pt10-T-SE-1073	SE	Validation	2mm	0
Pt10-T-SE-1074	SE	Validation	2mm	1
Pt10-T-SE-1076	SE	Validation	2mm	0

Pt10-T-SE-1077	SE	Validation	2mm	1
Pt10-T-SE-12	SE	Discovery	3mm	0
Pt10-T-SE-13	SE	Discovery	4mm	1
Pt10-T-SE-14	SE	Discovery	4mm	0
Pt10-T-SE-15	SE	Discovery	4mm	1
Pt10-T-SE-17	SE	Discovery	6mm	1
Pt10-T-SE-19	SE	Discovery	6mm	1
Pt10-T-SE-2	SE	Discovery	1mm	0
Pt10-T-SE-20	SE	Discovery	6mm	0
Pt10-T-SE-4	SE	Discovery	1mm	2
Pt10-T-SE-6	SE	Discovery	2mm	0
Pt10-T-SE-7	SE	Discovery	2mm	1
Pt10-T-SE-8	SE	Discovery	2mm	3
Pt10-T-SE-9	SE	Discovery	3mm	0
Pt11-T-SE-1	SE	Discovery	1mm	1
Pt11-T-SE-10	SE	Discovery	3mm	0
Pt11-T-SE-1085	SE	Validation	2mm	1
Pt11-T-SE-1086	SE	Validation	2mm	2
Pt11-T-SE-1087	SE	Validation	2mm	4
Pt11-T-SE-1089	SE	Validation	2mm	1
Pt11-T-SE-1091	SE	Validation	2mm	2
Pt11-T-SE-11	SE	Discovery	3mm	1
Pt11-T-SE-13	SE	Discovery	4mm	2
Pt11-T-SE-14	SE	Discovery	4mm	2
Pt11-T-SE-16	SE	Discovery	4mm	0
Pt11-T-SE-18	SE	Discovery	6mm	0
Pt11-T-SE-19	SE	Discovery	6mm	4
Pt11-T-SE-20	SE	Discovery	6mm	1
Pt11-T-SE-3	SE	Discovery	1mm	0
Pt11-T-SE-4	SE	Discovery	1mm	0
Pt11-T-SE-6	SE	Discovery	2mm	1
Pt11-T-SE-7	SE	Discovery	2mm	1
Pt11-T-SE-8	SE	Discovery	2mm	0
Pt11-T-SE-9	SE	Discovery	3mm	1
Pt12-T-SE-1099	SE	Validation	2mm	3
Pt12-T-SE-11	SE	Discovery	3mm	4
Pt12-T-SE-1100	SE	Validation	2mm	1
Pt12-T-SE-1103	SE	Validation	2mm	4
Pt12-T-SE-1104	SE	Validation	2mm	2
Pt12-T-SE-1105	SE	Validation	2mm	1
Pt12-T-SE-12	SE	Discovery	3mm	0
Pt12-T-SE-14	SE	Discovery	4mm	4

Pt12-T-SE-15	SE	Discovery	4mm	0
Pt12-T-SE-16	SE	Discovery	4mm	4
Pt12-T-SE-17	SE	Discovery	6mm	1
Pt12-T-SE-18	SE	Discovery	6mm	3
Pt12-T-SE-2	SE	Discovery	1mm	0
Pt12-T-SE-20	SE	Discovery	6mm	1
Pt12-T-SE-3	SE	Discovery	1mm	2
Pt12-T-SE-4	SE	Discovery	1mm	2
Pt12-T-SE-6	SE	Discovery	2mm	1
Pt12-T-SE-7	SE	Discovery	2mm	2
Pt12-T-SE-8	SE	Discovery	2mm	0
Pt12-T-SE-9	SE	Discovery	3mm	2
Pt13-T-SE-10	SE	Discovery	3mm	2
Pt13-T-SE-1113	SE	Validation	2mm	1
Pt13-T-SE-1114	SE	Validation	2mm	0
Pt13-T-SE-1115	SE	Validation	2mm	0
Pt13-T-SE-1116	SE	Validation	2mm	0
Pt13-T-SE-1118	SE	Validation	2mm	1
Pt13-T-SE-12	SE	Discovery	3mm	0
Pt13-T-SE-13	SE	Discovery	4mm	2
Pt13-T-SE-14	SE	Discovery	4mm	0
Pt13-T-SE-15	SE	Discovery	4mm	2
Pt13-T-SE-18	SE	Discovery	6mm	1
Pt13-T-SE-19	SE	Discovery	6mm	3
Pt13-T-SE-2	SE	Discovery	1mm	0
Pt13-T-SE-20	SE	Discovery	6mm	6
Pt13-T-SE-3	SE	Discovery	1mm	1
Pt13-T-SE-4	SE	Discovery	1mm	0
Pt13-T-SE-5	SE	Discovery	2mm	1
Pt13-T-SE-6	SE	Discovery	2mm	0
Pt13-T-SE-8	SE	Discovery	2mm	0
Pt13-T-SE-9	SE	Discovery	3mm	1

Table S8. All 535 mutations identified from the extended cohort.

Mut_id (GRCh37) VAF	Type Context	Sample USM	Sample Type	Gene	aachange	class	Coverage
1.115251228.G.A A[C>T]C	SNV	Pt15-Nb	NS_H	NRAS	Y166Y	silent	85663 0.093739421
1.115252272.C.T 0.011075899	SNV	Pt21-Na	NS_L	NRAS	R123K	missense	31239
		C[C>T]T	USM				
1.115252297.C.A 0.003619473	SNV	Pt17-Nb	NS_H	NRAS	G115*	nonsense	33154
		C[C>A]C	NUSM				
1.115256381.A.C G[T>G]G	SNV	Pt20-Nb	NS_H	NRAS	NA	intron	34091 0.007597313
			NUSM				
1.115256385.A.G C[T>C]T	SNV	Pt21-Nb	NS_L	NRAS	NA	intron	10359 0.002896032
			NUSM				
1.115256438.C.T C[C>T]G	SNV	Pt20-Nb	NS_H	NRAS	A91A	silent	36614 0.007565412
			USM				
1.115256463.G.C 0.002644453	SNV	Pt21-Nb	NS_L	NRAS	A83G	missense	15126
		G[C>G]C	NUSM				
1.115256476.G.T 0.00223093	SNV	Pt16-Na	NS_L	NRAS	L79I	missense	88304
		C[C>A]T	NUSM				
1.120458023.G.A 0.042603127	SNV	Pt15-T Tumor	NOTCH2		T2441I	missense	25139
		A[C>T]C	USM				
1.120458040.G.T 0.01286616	SNV	Pt15-T Tumor	NOTCH2		D2435E	missense	24716
		A[C>A]T	NUSM				
1.120458178.C.T 0.010699775	SNV	Pt18-T Tumor	NOTCH2		Q2389Q	silent	39627
		G[C>T]T	USM				
1.120458203.C.T 0.008567849	SNV	Pt15-T Tumor	NOTCH2		G2381D	missense	44702
		G[C>T]C	USM				
1.120458574.C.T 0.034462583	SNV	Pt15-T Tumor	NOTCH2		M2257I	missense	17091
		C[C>T]A	USM				

1.120458944.G.T 0.03778184	SNV T[C>A]T	Pt20-Na NUSM	NS_H NOTCH2	S2134Ymissense	16410		
1.120458991.G.A 0.002304046	SNV A[C>T]C	Pt15-T Tumor USM	NOTCH2	N2118N silent	68141		
1.120459009.C.G 0.007409588	SNV G[C>G]A	Pt14-Nb NUSM	NS_H NOTCH2	M2112I missense	20379		
1.120459012.G.A C[C>T]A	SNV USM	Pt15-T Tumor USM	NOTCH2	T2111T silent	65816	0.002932418	
1.120459239.G.A 0.015949347	SNV T[C>T]G	Pt15-Na USM	NS_H NOTCH2	R2036* nonsense	24954		
1.120459355.C.A A[C>A]A	SNV NUSM	Pt19-T Tumor NUSM	NOTCH2	NA intron	21358	0.020928926	
1.120460367.C.A 12244 0.016171186	SNV C[C>A]A	Pt19-Nb NUSM	NS_L NOTCH2	W1983L missense			
1.120460376.G.T 15817 0.005057849	SNV G[C>A]T	Pt21-Na NUSM	NS_L NOTCH2	A1980D missense			
1.120460386.C.T 0.045241715	SNV C[C>T]T	Pt15-T Tumor USM	NOTCH2	c.5930-1G>A) splice	16445		
1.120460391.G.T 0.009257281	SNV C[C>A]T	Pt15-Nb NUSM	NS_H NOTCH2	NA intron	14043		
1.120460392.G.T 0.00674252	SNV C[C>A]C	Pt20-Na NUSM	NS_H NOTCH2	NA intron	7119		
1.120461108.C.A C[C>A]A	SNV NUSM	Pt20-T Tumor NUSM	NOTCH2	L1950L silent	59791	0.012777843	
1.120461127.C.A 21893 0.022929704	SNV A[C>A]C	Pt20-Na NUSM	NS_H NOTCH2	G1944V missense			
1.120462039.C.T 0.017937406	SNV G[C>T]A	Pt17-Nb NUSM	NS_H NOTCH2	A1893T missense	24028		
1.120462941.G.T 0.010703605	SNV G[C>A]A	Pt18-Na NUSM	NS_L NOTCH2	A1797E missense	12706		

1.120462948.C.A	SNV	Pt20-T Tumor	NOTCH2	E1795*	nonsense	32196		
0.02838862	T[C>A]A	NUSM						
1.120462962.G.A	SNV	Pt18-Na	NS_L NOTCH2	T1790I	missense	12766		
0.016449945	A[C>T]A	NUSM						
1.120462965.C.T	SNV	Pt15-Na	NS_H NOTCH2	W1789*	nonsense	26346		
0.011728536	C[C>T]A	USM						
1.120464417.T.C	SNV	Pt15-T Tumor	NOTCH2	Q1743Q	silent	35202		
0.008209761	C[T>C]T	NUSM						
1.120464946.A.T	SNV	Pt16-Nb	NS_L NOTCH2	L1709H	missense	6510		
0.018740399	C[T>A]C	NUSM						
1.120464957.C.T	SNV	Pt19-Nb	NS_L NOTCH2	K1705K	silent	14758		
0.005827348	G[C>T]T	USM						
1.120464960.A.T	SNV	Pt15-Na	NS_H NOTCH2	R1704R	silent	33370		
0.007791429	G[T>A]A	NUSM						
1.120464961.C.T	SNV	Pt19-Na	NS_L NOTCH2	R1704H	missense			
14724	0.015077425	A[C>T]G	NUSM					
1.120464966.T.C	SNV	Pt18-Na	NS_L NOTCH2	R1702R	silent	8972		
0.008470798	T[T>C]C	NUSM						
1.120465119.C.A	SNV	Pt15-T Tumor	NOTCH2	NA	intron	44122	0.017723585	
	T[C>A]A	NUSM						
1.120465149.A.T	SNV	Pt14-Nb	NS_H NOTCH2	NA	intron	20012		
0.006546072	T[T>A]G	NUSM						
1.120465158.C.A	SNV	Pt19-T Tumor	NOTCH2	NA	intron	33775	0.012227979	
	C[C>A]T	NUSM						
1.120465167.C.T	SNV	Pt19-Na	NS_L NOTCH2	NA	intron	28915		
0.011274425	T[C>T]C	USM						
1.120465177.T.A	SNV	Pt18-Na	NS_L NOTCH2	NA	intron	21703		
0.008984933	A[T>A]A	NUSM						
1.120465185.T.A	SNV	Pt19-Nb	NS_L NOTCH2	NA	intron	15605		
0.009996796	C[T>A]A	NUSM						

1.120466525.G.A	SNV	Pt21-Nb	NS_L	NOTCH2	L1532L silent	14979	
0.100941318	G[C>T]T	USM					
1.120466539.C.A	SNV	Pt20-Nb	NS_H	NOTCH2	C1527F missense	29645	
0.003002193	A[C>A]A	NUSM					
1.120468225.G.A	SNV	Pt21-Nb	NS_L	NOTCH2	P1405L missense	9641	
0.006949487	C[C>T]A	USM					
1.120468308.G.A	SNV	Pt19-Na	NS_L	NOTCH2	G1377G	silent	10850
0.006267281	G[C>T]T	USM					
1.120468368.A.T	SNV	Pt20-Nb	NS_H	NOTCH2	C1357* nonsense	3901	
0.025121764	G[T>A]G	NUSM					
1.120468377.C.T	SNV	Pt21-Nb	NS_L	NOTCH2	G1354G	silent	4478
0.012505583	C[C>T]C	USM					
1.120468388.A.G	SNV	Pt16-Na	NS_L	NOTCH2	C1351R	missense	
7771	0.013769142	A[T>C]G	NUSM				
1.120468399.C.T	SNV	Pt19-Nb	NS_L	NOTCH2	G1347E	missense	
5157	0.052549932	T[C>T]C	USM				
1.120468407.G.A	SNV	Pt19-T Tumor	NOTCH2		S1344S silent	3088	0.063471503
	G[C>T]A	NUSM					
1.120471643.T.C	SNV	Pt19-T Tumor	NOTCH2		Q1283R	missense	57860
0.002696163	C[T>C]G	NUSM					
1.120471692.C.T	SNV	Pt15-Nb	NS_H	NOTCH2	E1267K missense	63315	
0.06628761	T[C>T]G	USM					
1.120478115.G.A	SNV	Pt16-Nb	NS_L	NOTCH2	S1212F missense	12972	
0.033533765	T[C>T]T	USM					
1.120479989.A.T	SNV	Pt15-Nb	NS_H	NOTCH2	C1146* nonsense	23445	
0.010236724	G[T>A]G	NUSM					
1.120479990.C.T	SNV	Pt18-Na	NS_L	NOTCH2	C1146Y	missense	
16561	0.013586136	A[C>T]A	NUSM				
1.120480534.C.T	SNV	Pt15-T Tumor	NOTCH2		G1095S	missense	69602
0.019424729	C[C>T]A	USM					

1.120484470.G.A	SNV	Pt20-Nb	NS_H	NOTCH2	NA	intron	56502	
0.002707869	C[C>T]C	USM						
1.120484477.C.A	SNV	Pt18-T Tumor	NOTCH2		NA	intron	48583	0.002799333
G[C>A]A	NUSM							
1.120491104.G.A	SNV	Pt19-Na	NS_L	NOTCH2	Y895Y	silent	17096	
0.01620262	A[C>T]A	NUSM						
1.120491123.T.A	SNV	Pt21-Nb	NS_L	NOTCH2	H889L	missense		34666
0.003144291	A[T>A]G	NUSM						
1.120493317.C.A	SNV	Pt14-Nb	NS_H	NOTCH2	NA	intron	2813	
0.01955208	T[C>A]T	NUSM						
1.120493319.G.-	Indel	Pt15-Na	NS_H	NOTCH2	NA	intron	1663	
0.138304269	-	NUSM						
1.120493448.T.A	SNV	Pt16-Na	NS_L	NOTCH2	Q793L	missense		4237
0.02029738	C[T>A]G	NUSM						
1.120497748.G.A	SNV	Pt14-Nb	NS_H	NOTCH2	P712S	missense		38932
0.001669578	A[C>T]C	USM						
1.120497761.T.C	SNV	Pt20-T Tumor	NOTCH2		I707M	missense		30882
0.014733502	A[T>C]A	NUSM						
1.120497865.A.G	SNV	Pt17-Nb	NS_H	NOTCH2	NA	intron	16482	
0.010132266	C[T>C]T	NUSM						
1.120497870.G.A	SNV	Pt14-Nb	NS_H	NOTCH2	NA	intron	34401	
0.070463068	T[C>T]C	USM						
1.120502099.C.T	SNV	Pt20-T Tumor	NOTCH2		D648N	missense		35787
0.013328862	T[C>T]A	USM						
1.120502108.T.A	SNV	Pt18-T Tumor	NOTCH2		N645Y	missense		19300
0.016839378	T[T>A]A	NUSM						
1.120506283.T.A	SNV	Pt16-Nb	NS_L	NOTCH2	E610V	missense		67196
0.005461635	T[T>A]C	NUSM						
1.120506293.G.A	SNV	Pt15-T Tumor	NOTCH2		Q607*	nonsense		74154
0.114154327	C[C>T]A	USM						

1.120508178.G.A	SNV	Pt18-Na	NS_L	NOTCH2	P527S	missense	30267	
0.004856775	G[C>T]C	USM						
1.120510766.T.C	SNV	Pt15-Na	NS_H	NOTCH2	I400V	missense	37631	
0.013313492	A[T>C]A	NUSM						
1.120512238.C.T	SNV	Pt17-Na	NS_H	NOTCH2	C335Y	missense	19032	
0.004361076	G[C>T]A	NUSM						
1.120512304.C.-	Indel	Pt20-Na	NS_H	NOTCH2	G313fs	frameshift	2674	
0.084517577	-	NUSM						
1.120512459.C.A	SNV	Pt19-Na	NS_L	NOTCH2	NA	intron	7725	
0.01618123	C[C>A]T	NUSM						
1.120611974.C.T	SNV	Pt18-T Tumor	NOTCH2	W16*	nonsense	2160		
0.02037037	C[C>T]A	USM						
1.120611996.G.T	SNV	Pt20-Nb	NS_H	NOTCH2	L9M	missense	4808	
0.021422629	G[C>A]T	NUSM						
1.145209385.C.A	SNV	Pt16-Nb	NS_L	NoMatch	UTR_5	UTR_5	6276	
0.023741236	T[C>A]T	NUSM						
11.532708.G.A	SNV	Pt15-Na	NS_H	HRAS	H166H	silent	52658	0.005393293
A[C>T]A	NUSM							
11.533472.G.T	SNV	Pt15-Na	NS_H	HRAS	T144N	missense	46811	0.006771913
A[C>A]C	NUSM							
11.533599.G.A	SNV	Pt14-Nb	NS_H	HRAS	R102W	missense	23474	0.016954929
A[C>T]G	NUSM							
11.533849.G.C	SNV	Pt19-T Tumor	HRAS	D69E	missense	64884	0.005394242	
A[C>G]C	NUSM							
11.533953.G.A	SNV	Pt20-Na	NS_H	HRAS	NA	intron	13079	0.005275633
C[C>T]T	USM							
11.534060.-.C	Indel	Pt19-T Tumor	HRAS	NA	intron	11420	0.017425569	- NUSM
11.534093.C.T	SNV	Pt17-Na	NS_H	HRAS	NA	intron	11322	0.00830242
G[C>T]A	NUSM							

11.534200.C.T NUSM	SNV	Pt20-T Tumor	HRAS	NA	intron	3435	0.020087336	G[C>T]G
12.25362773.T.A 0.004733252	SNV	Pt15-Na	NS_H	KRAS	K175*	nonsense	89579	
	T[T>A]A	NUSM						
12.25362778.T.C A[T>C]C	SNV	Pt19-T Tumor	KRAS	D173G	missense	134744	0.002612361	
	NUSM							
12.25362823.G.A A[C>T]A	SNV	Pt19-T Tumor	KRAS	T158I	missense	135780	0.002864929	
	NUSM							
12.25378647.T.C A[T>C]T	SNV	Pt16-Nb	NS_L	KRAS	K117K	silent	6095	0.023133716
	NUSM							
12.25380130.T.A C[T>A]C	SNV	Pt20-T Tumor	KRAS	NA	intron	131476	0.01179683	
	NUSM							
12.25398301.A.C T[T>G]G	SNV	Pt15-Na	NS_H	KRAS	L6L	silent	34539	0.016966328
	NUSM							
12.25398304.T.C G[T>C]T	SNV	Pt15-Na	NS_H	KRAS	K5K	silent	34365	0.017634221
	NUSM							
12.25398313.A.C C[T>G]G	SNV	Pt15-Na	NS_H	KRAS	T2T	silent	35454	0.016189993
	NUSM							
15.40675321.C.T 0.010614531	SNV	Pt14-Na	NS_H	KNSTRN	NA	intron	95341	
	T[C>T]T	USM						
15.40678665.C.T 0.003852215	SNV	Pt20-Nb	NS_H	KNSTRN	T136I	missense	34266	
	A[C>T]A	NUSM						
15.40681802.C.A 0.009476696	SNV	Pt19-Nb	NS_L	KNSTRN	T194N	missense	16778	
	A[C>A]T	NUSM						
15.40683776.G.T 0.005121535	SNV	Pt19-Na	NS_L	KNSTRN	NA	intron	12301	
	C[C>A]T	NUSM						
15.40683778.G.A 0.006931813	SNV	Pt15-Nb	NS_H	KNSTRN	NA	intron	20341	
	G[C>T]C	USM						
15.40683801.G.T C[C>A]C	SNV	Pt20-T Tumor	KNSTRN	NA	intron	14691	0.014294466	
	NUSM							

15.40685656.G.T 0.011260127	SNV	Pt21-Nb	NS_L	KNSTRN	UTR_3	UTR_3	73445	
	A[C>A]A	NUSM						
15.40685955.A.G A[T>C]T	SNV	Pt15-T Tumor	KNSTRN		UTR_3	UTR_3	10459	0.030213214
	NUSM							
17.7572986.G.A 0.098817263	SNV	Pt15-Nb	NS_H	TP53	Q375*	nonsense	44304	
	T[C>T]A	USM						
17.7573993.T.A SNV A[T>A]T	Pt17-Na	NS_H	TP53	N345I	missense	67383	0.090556965	
	NUSM							
17.7574003.G.A C[C>T]G	SNV	Pt19-T Tumor	TP53	R342*	nonsense	21313	0.720123868	
	USM							
17.7574018.G.A G[C>T]G	SNV	Pt15-T Tumor	TP53	R337C	missense	33287	0.0519422	
	NUSM							
17.7574021.C.A 0.032341067	SNV	Pt20-Na	NS_H	TP53	E336*	nonsense	22541	
	T[C>A]A	NUSM						
17.7574024.G.A G[C>T]G	SNV	Pt20-T Tumor	TP53	R335C	missense	66988	0.003791724	
	NUSM							
17.7574031.G.A T[C>T]C	SNV	Pt15-Nb	NS_H	TP53	I332I	silent	60527	0.019379781
	USM							
17.7574033.T.A SNV A[T>A]C	Pt20-T Tumor	TP53	I332F	missense	63422	0.004336035		
	NUSM							
17.7577047.G.A A[C>T]G	SNV	Pt14-Nb	NS_H	TP53	H297H	silent	31060	0.003927882
	NUSM							
17.7577073.G.A 0.095455699	SNV	Pt15-Nb	NS_H	TP53	L289F	missense	35451	
	T[C>T]T	USM						
17.7577082.C.T SNV T[C>T]C	Pt15-T Tumor	TP53	E286K	missense	13003	0.077828193		
	USM							
17.7577176.G.A T[C>T]T	SNV	Pt15-Nb	NS_H	TP53	NA	intron	78811	0.022065448
	USM							
17.7577376.T.C SNV A[T>C]G	Pt14-Nb	NS_H	TP53	NA	intron	47036	0.009226975	
	NUSM							

17.7577509.C.TSNV T[C>T]C	Pt14-Nb USM	NS_H	TP53	E258K	missense	56471	0.06360787
17.7577538.C.TSNV C[C>T]G	Pt17-Na USM	NS_H	TP53	R248Q	missense	107051	0.060503872
17.7577559.G.A 0.052436278	SNV Pt19-Na T[C>T]C	NS_L	TP53	S241F	missense	61713	
17.7577609.C.TSNV C[C>T]T	Pt15-Nb USM	NS_H	TP53	c.673-1G>A	splice	47381	0.082839113
17.7578216.A.T,17.7578217.G.A:01 0.000834299	SNV Pt15-T A[C>T]T	Tumor	TP53	T211I	missense	21575	
17.7578216.AG.TA CT>TA	DNV Pt15-T USM	Tumor	TP53	T211I	missense	21575	0.063499421
17.7578217.G.A A[C>T]T	SNV Pt15-T USM	Tumor	TP53	T211I	missense	20470	0.089545677
17.7578217.G.A 0.071948513	SNV Pt19-Nb A[C>T]T	NS_L	TP53	T211I	missense	22530	
17.7578324.G.T T[C>A]C	SNV Pt15-T NUSM	Tumor	TP53	NA	intron	71596	0.004595229
17.7578338.A.G C[T>C]G	SNV Pt15-T NUSM	Tumor	TP53	NA	intron	63817	0.004716612
17.7578395.G.A 0.02018017	SNV Pt14-Na C[C>T]A	NS_H	TP53	H179Y	missense	73042	
17.7578616.T.CSNV C[T>C]G	Pt19-Nb NUSM	NS_L	TP53	UTR_5	UTR_5	37566	0.002741841
17.7579395.G.A 0.019877785	SNV Pt21-Nb C[C>T]C	NS_L	TP53	P98S	missense	69877	
17.7579591.C.TSNV A[C>T]T	Pt18-T USM	Tumor	TP53	c.97-1G>A	splice	14656	0.111694869
17.7579850.G.T A[C>A]C	SNV Pt15-T NUSM	Tumor	TP53	D21E	missense	4951	0.015956372

17.7580043.G.A	SNV	Pt20-Nb	NS_H	TP53	NA	intron	11988	0.003503504
T[C>T]A	USM							
19.15271524.G.T	SNV	Pt19-Nb	NS_L	NOTCH3		T2305T	silent	18729
0.007314859	C[C>A]C	NUSM						
19.15271549.G.T	SNV	Pt14-Na	NS_H	NOTCH3		P2297H		missense
19845	0.004988662	C[C>A]C	NUSM					
19.15271553.C.T	SNV	Pt19-Nb	NS_L	NOTCH3		V2296I	missense	18521
0.008800821	A[C>T]A	NUSM						
19.15271583.C.T	SNV	Pt17-Nb	NS_H	NOTCH3		A2286T	missense	9406
0.011800978	G[C>T]C	USM						
19.15271588.G.T	SNV	Pt19-Na	NS_L	NOTCH3		T2284N	missense	18170
0.010401761	A[C>A]T	NUSM						
19.15271956.G.A	SNV	Pt20-T Tumor	NOTCH3		G2161G		silent	30430
0.00768978	G[C>T]C	USM						
19.15271961.G.T	SNV	Pt17-Nb	NS_H	NOTCH3		L2160M		missense
33815	0.008812657	C[C>A]T	NUSM					
19.15272399.C.T	SNV	Pt15-T Tumor	NOTCH3		E2014K		missense	145275
0.002429874	T[C>T]C	USM						
19.15272571.G.T	SNV	Pt21-Nb	NS_L	NOTCH3		NA	intron	49962
0.004783636	A[C>A]T	NUSM						
19.15273383.G.C	SNV	Pt15-Nb	NS_H	NOTCH3		NA	intron	22356
0.007201646	T[C>G]A	NUSM						
19.15276168.T.C	SNV	Pt17-Nb	NS_H	NOTCH3		NA	intron	19563
0.006849665	C[T>C]G	NUSM						
19.15276271.G.A	SNV	Pt20-Na	NS_H	NOTCH3		T1908M		missense
53135	0.008525454	A[C>T]G	NUSM					
19.15278128.G.A	SNV	Pt21-Nb	NS_L	NOTCH3		A1765V	missense	45509
0.01303039	G[C>T]C	USM						
19.15278129.C.A	SNV	Pt15-T Tumor	NOTCH3		A1765S		missense	22190
0.081883731	G[C>A]T	NUSM						

19.15278149.G.A 0.008117684	SNV G[C>T]T	Pt15-T Tumor USM	NOTCH3	A1758V	missense	22297
19.15281197.C.A 0.015046792	SNV G[C>A]C	Pt18-Na NUSM	NS_L NOTCH3	A1687S	missense	16349
19.15281423.G.A C[C>T]G	SNV USM	Pt20-T Tumor USM	NOTCH3	NA	intron	35128 0.011700068
19.15281438.C.A C[C>A]C	SNV NUSM	Pt20-T Tumor NUSM	NOTCH3	NA	intron	30248 0.019340122
19.15281512.C.T 25933 0.016079898	SNV T[C>T]C	Pt21-Nb USM	NS_L NOTCH3 USM	D1621N	missense	
19.15281633.C.T 0.004829095	SNV C[C>T]G	Pt20-Na USM	NS_H NOTCH3	S1580S	silent	26506
19.15281646.C.T A[C>T]A	SNV NUSM	Pt15-T Tumor NUSM	NOTCH3	NA	intron	20551 0.00603377
19.15284946.GG.AA missense	DNV 224584 0.032793966	Pt16-Na USM	NS_L NOTCH3 CC>TT USM		missense:P1557S silent:F1556F	
19.15284969.G.A 0.020283932	SNV G[C>T]G	Pt14-Nb NUSM	NS_H NOTCH3	A1549V	missense	139963
19.15285168.G.T 1336 0.088323353	SNV C[C>A]G	Pt16-Nb NUSM	NS_L NOTCH3 NUSM	R1483S	missense	
19.15288413.G.A 0.019950428	SNV G[C>T]G	Pt20-T Tumor NUSM	NOTCH3	C1442C	silent	106915
19.15288417.C.T 32462 0.011860021	SNV G[C>T]G	Pt20-Na NUSM	NS_H NOTCH3 NUSM	R1441H	missense	
19.15288435.C.T 16296 0.011966127	SNV G[C>T]G	Pt18-Nb NUSM	NS_L NOTCH3 NUSM	R1435H	missense	
19.15289699.C.G 0.028260112	SNV C[C>G]A	Pt15-T Tumor NUSM	NOTCH3	G1258R	missense	40198
19.15289741.G.A 0.040219879	SNV T[C>T]A	Pt15-T Tumor USM	NOTCH3	Q1244*	nonsense	40204

19.15289897.G.A	SNV	Pt21-Nb	NS_L	NOTCH3	T1219T silent	11285	
0.007975188	C[C>T]C	USM					
19.15289905.C.T	SNV	Pt21-Nb	NS_L	NOTCH3	A1217T missense	11593	
0.011989994	G[C>T]C	USM					
19.15289908.C.T	SNV	Pt19-Nb	NS_L	NOTCH3	A1216T missense	11489	
0.009139177	G[C>T]G	NUSM					
19.15289912.G.T	SNV	Pt20-Na	NS_H	NOTCH3	C1214* nonsense	15086	
0.032613019	G[C>A]C	NUSM					
19.15290035.C.T	SNV	Pt18-Na	NS_L	NOTCH3	G1173G	silent	21563
0.008254881	G[C>T]C	USM					
19.15290116.G.T	SNV	Pt14-Nb	NS_H	NOTCH3	NA	exon	52480
0.005564024	A[C>A]C	NUSM					
19.15290128.T.C	SNV	Pt20-Nb	NS_H	NOTCH3	NA	exon	101431
0.003795684	A[T>C]G	NUSM					
19.15290134.C.T	SNV	Pt14-Na	NS_H	NOTCH3	NA	exon	81280
0.004539862	A[C>T]A	NUSM					
19.15290136.G.A	SNV	Pt18-T Tumor	NOTCH3	NA	exon	81774	0.002800401
G[C>T]T	USM						
19.15290207.C.G	SNV	Pt21-Na	NS_L	NOTCH3	R1143P	missense	
35326	0.004359395	G[C>G]G	NUSM				
19.15290217.G.T	SNV	Pt19-T Tumor	NOTCH3	L1140I	missense	40413	
0.01014525	C[C>A]T	NUSM					
19.15290238.G.C	SNV	Pt15-Nb	NS_H	NOTCH3	H1133D	missense	
56718	0.00373779	G[C>G]A	NUSM				
19.15290238.G.C	SNV	Pt14-Nb	NS_H	NOTCH3	H1133D	missense	
32334	0.005968949	G[C>G]A	NUSM				
19.15291247.G.A	SNV	Pt15-T Tumor	NOTCH3	NA	intron	13766	0.02092111
G[C>T]A	NUSM						
19.15291480.G.A	SNV	Pt14-Nb	NS_H	NOTCH3	NA	intron	17532
0.005019393	G[C>T]A	NUSM					

19.15291589.G.A	SNV	Pt17-Nb	NS_H	NOTCH3	C1015C	silent	18099
0.006851207	G[C>T]G	NUSM					
19.15291986.G.A	SNV	Pt14-Nb	NS_H	NOTCH3	NA	intron	23830
0.047712967	T[C>T]C	USM					
19.15292010.G.A	SNV	Pt18-T Tumor	NOTCH3	NA	intron	44264	0.013419483
G[C>T]G	NUSM						
19.15292642.C.T	SNV	Pt20-T Tumor	NOTCH3	NA	intron	52826	0.015560519
A[C>T]C	USM						
19.15292645.A.T	SNV	Pt20-T Tumor	NOTCH3	NA	intron	48142	0.021644302
G[T>A]A	NUSM						
19.15292660.G.T	SNV	Pt20-T Tumor	NOTCH3	NA	intron	52501	0.004571341
G[C>A]T	NUSM						
19.15295194.G.A	SNV	Pt17-Nb	NS_H	NOTCH3	C826C	silent	29350
0.013833049	G[C>T]A	NUSM					
19.15295202.C.A	SNV	Pt18-T Tumor	NOTCH3	G824C	missense		29311
0.021220702	C[C>A]A	NUSM					
19.15295247.G.A	SNV	Pt14-Nb	NS_H	NOTCH3	Q809*	nonsense	15097
0.12777373	G[C>T]A	NUSM					
19.15295939.C.A	SNV	Pt19-Nb	NS_L	NOTCH3	NA	intron	16863
0.004447607	C[C>A]A	NUSM					
19.15296106.C.A	SNV	Pt19-Na	NS_L	NOTCH3	G753V	missense	21381
0.010850755	T[C>A]C	NUSM					
19.15297946.A.T	SNV	Pt15-Na	NS_H	NOTCH3	Y604N	missense	71340
0.00444351	G[T>A]A	NUSM					
19.15297964.G.T	SNV	Pt15-T Tumor	NOTCH3	L598I	missense		40665
0.012221812	C[C>A]T	NUSM					
19.15297993.C.T	SNV	Pt20-Na	NS_H	NOTCH3	S588N	missense	51705
0.007446088	G[C>T]T	USM					
19.15298067.G.A	SNV	Pt20-T Tumor	NOTCH3	I563I	silent	85145	0.008679312
T[C>T]G	USM						

19.15300091.G.A	SNV	Pt14-Nb	NS_H	NOTCH3	C395C	silent	27055	
0.012456108	G[C>T]T	USM						
19.15300321.G.A	SNV	Pt14-Nb	NS_H	NOTCH3	NA	intron	19890	
0.017647059	A[C>T]G	NUSM						
19.15300330.G.T	SNV	Pt17-Nb	NS_H	NOTCH3	NA	intron	28108	
0.012985627	A[C>A]A	NUSM						
19.15302441.T.A	SNV	Pt17-Na	NS_H	NOTCH3	E277V	missense	40021	
0.00272357	C[T>A]C	NUSM						
19.15302459.C.T	SNV	Pt15-T Tumor	NOTCH3		C271Y	missense	85275	
0.020521841	G[C>T]A	NUSM						
19.15302587.G.A	SNV	Pt18-Nb	NS_L	NOTCH3	T257T	silent	30827	
0.001849028	C[C>T]T	USM						
19.15302665.C.T	SNV	Pt20-Na	NS_H	NOTCH3	Q231Q	silent	16421	
0.007551306	T[C>T]T	USM						
19.15302678.C.G	SNV	Pt21-Nb	NS_L	NOTCH3	G227A	missense	20478	
0.012159391	C[C>G]C	NUSM						
19.15302687.G.A	SNV	Pt15-Na	NS_H	NOTCH3	NA	intron	15249	
0.010689226	T[C>T]C	USM						
19.15302691.G.A	SNV	Pt20-Na	NS_H	NOTCH3	NA	intron	17061	
0.022331634	C[C>T]C	USM						
19.15302699.G.A	SNV	Pt14-Na	NS_H	NOTCH3	NA	intron	15587	
0.005517418	T[C>T]C	USM						
3.10183514.G.A	SNV	Pt19-T Tumor	VHL	UTR_5	UTR_5	70659	0.010260547	
A[C>T]C	USM							
3.10183536.C.G	SNV	Pt19-Nb	NS_L	VHL	P2R	missense	43195	
0.009931705	C[C>G]C	NUSM						
3.10183901.G.A	SNV	Pt20-T Tumor	VHL	NA	intron	27865	0.003947605	
G[C>T]T	USM							
4.1795807.C.T	SNV	Pt16-Na	NS_L	FGFR3	NA	intron	56774	0.022069962
C[C>T]C	USM							

4.1795822.C.A SNV NUSM	Pt15-T Tumor	FGFR3 NA	intron	28711	0.017414928	G[C>A]G
4.1801631.CC.TT CC>TT USM	DNV Pt21-Na	NS_L FGFR3 NA	intron	77736	0.00828445	
4.1803338.C.T SNV C[C>T]C	Pt17-Nb USM	NS_H FGFR3 NA	intron	66342	0.01079256	
4.1803552.G.A SNV G[C>T]A	Pt14-Na NUSM	NS_H FGFR3 NA	intron	11847	0.00759686	
4.1803584.C.A SNV NUSM	Pt19-T Tumor	FGFR3 I254I	silent	69521	0.007911279	T[C>A]C
4.1803646.G.A SNV G[C>T]A	Pt15-T Tumor NUSM	FGFR3 C275Y	missense	68950	0.02337926	
4.1805519.C.A SNV T[C>A]T	Pt20-T Tumor NUSM	FGFR3 S344Y	missense	24372	0.028762514	
4.1806210.C.T SNV A[C>T]C	Pt18-T Tumor USM	FGFR3 T410I	missense	23343	0.019577604	
4.1807221.A.T SNV C[T>A]G	Pt17-Na NUSM	NS_H FGFR3 NA	intron	26761	0.011135608	
4.1807237.G.A SNV G[C>T]C	Pt15-Na USM	NS_H FGFR3 NA	intron	32950	0.01047041	
4.1807246.G.A SNV G[C>T]G	Pt19-Na NUSM	NS_L FGFR3 NA	intron	19389	0.01217185	
4.1807246.G.A SNV NUSM	Pt20-T Tumor	FGFR3 NA	intron	28681	0.01042502	G[C>T]G
4.1807259.G.A SNV T[C>T]A	Pt14-Nb USM	NS_H FGFR3 NA	intron	21423	0.015684078	
4.1807320.G.A SNV A[C>T]A	Pt19-Na NUSM	NS_L FGFR3 V523V	silent	16443	0.020373411	
4.1807448.C.T SNV G[C>T]A	Pt14-Nb NUSM	NS_H FGFR3 NA	intron	14873	0.008404491	

4.1807630.A.G SNV C[T>C]G	Pt15-Nb NUSM	NS_H	FGFR3 Q600R	missense	86759	0.004495211	
4.1807636.C.T SNV G[C>T]C	Pt19-Nb USM	NS_L	FGFR3 A602V	missense	72093	0.005298711	
4.1807738.G.A SNV C[C>T]T	Pt14-Nb USM	NS_H	FGFR3 NA	intron	58525	0.002272533	
4.1808189.G.A SNV NUSM	Pt15-T Tumor	FGFR3 NA	intron	92624	0.00996502	G[C>T]G	
4.1808312.G.C SNV NUSM	Pt19-T Tumor	FGFR3 L690L	silent	14501	0.040066202	C[C>G]A	
4.1808317.G.A SNV G[C>T]C	Pt19-T Tumor USM	FGFR3 G692D	missense	14645	0.022806419		
4.1808332.G.A SNV G[C>T]C	Pt15-Nb USM	NS_H	FGFR3 G697D	missense	22707	0.009952878	
4.1808338.C.A SNV C[C>A]T	Pt17-Nb NUSM	NS_H	FGFR3 P699H	missense	26032	0.004724954	
4.1808340.G.A SNV A[C>T]A	Pt20-Nb NUSM	NS_H	FGFR3 V700M	missense	24604	0.008494554	
4.1808354.C.T SNV T[C>T]A	Pt20-Na USM	NS_H	FGFR3 F704F	silent	24122	0.00845701	
4.1808361.C.T SNV G[C>T]T	Pt15-Na USM	NS_H	FGFR3 L707L	silent	27605	0.013367144	
4.1808366.G.T SNV C[C>A]T	Pt14-Na NUSM	NS_H	FGFR3 K708N	missense	18905	0.011425549	
4.1808367.G.A SNV T[C>T]C	Pt18-Na USM	NS_L	FGFR3 E709K	missense	7639	0.052362875	
4.1808371.G.C SNV G[C>G]C	Pt19-Nb NUSM	NS_L	FGFR3 G710A	missense	11622	0.020048184	
4.1808372.C.T SNV USM	Pt15-T Tumor	FGFR3 G710G	silent	10295	0.021369597	G[C>T]C	

4.187521278.C.A	SNV	Pt18-T Tumor	FAT1	Q3959H	missense	36011
0.013412568	C[C>A]T	NUSM				
4.187524314.C.T	SNV	Pt18-T Tumor	FAT1	NA	intron	44406 0.018668648
A[C>T]A	NUSM					
4.187524443.T.A	SNV	Pt15-T Tumor	FAT1	K3746M	missense	29990
0.027975992	C[T>A]T	NUSM				
4.187524526.G.A	SNV	Pt19-T Tumor	FAT1	S3718S	silent	38368 0.005473311
C[C>T]G	USM					
4.187524726.G.A	SNV	Pt15-Na	NS_H	FAT1	P3652S	missense 28309
0.041576884	T[C>T]C	USM				
4.187524738.C.T	SNV	Pt15-T Tumor	FAT1	A3648T	missense	14101 0.015459896
G[C>T]A	NUSM					
4.187525637.A.G	SNV	Pt20-Na	NS_H	FAT1	V3481A	missense 45291
0.009516239	G[T>C]A	NUSM				
4.187527315.C.A	SNV	Pt20-Nb	NS_H	FAT1	R3420I	missense 55798
0.002921252	T[C>A]T	NUSM				
4.187531050.C.A	SNV	Pt20-T Tumor	FAT1	V3325L	missense	69173 0.011160424
A[C>A]A	NUSM					
4.187531064.G.T	SNV	Pt15-T Tumor	FAT1	T3320N	missense	25757 0.013044997
A[C>A]T	NUSM					
4.187532615.C.A	SNV	Pt21-Nb	NS_L	FAT1	E3260*	nonsense 32699
0.00990856	T[C>A]A	NUSM				
4.187532789.C.A	SNV	Pt19-Nb	NS_L	FAT1	V3202L	missense 46702
0.004774956	A[C>A]A	NUSM				
4.187532791.G.A	SNV	Pt20-Na	NS_H	FAT1	A3201V	missense 10331
0.013454651	G[C>T]T	USM				
4.187532906.A.G	SNV	Pt15-Na	NS_H	FAT1	S3163P	missense 57724
0.002425334	C[T>C]C	NUSM				
4.187533029.GTGCAGT.-	Indel	Pt15-Na	NS_H	FAT1	NA	intron 38526
0.010823859	-	NUSM				

4.187534333.G.A C[C>T]A	SNV	Pt14-Nb USM	NS_H	FAT1	A3131A	silent	25590	0.003595154
4.187534346.G.A 0.008944048	SNV	Pt20-Na G[C>T]C USM	NS_H	FAT1	A3127V	missense	28846	
4.187534359.G.T 0.005272192	SNV	Pt18-Nb C[C>A]C NUSM	NS_L	FAT1	P3123T	missense	24468	
4.187535425.G.T 0.038597734	SNV	Pt17-Nb G[C>A]A NUSM	NS_H	FAT1	A3050E	missense	5648	
4.187538387.A.G T[T>C]T	SNV	Pt18-Nb NUSM	NS_L	FAT1	NA	intron	9835	0.008947636
4.187539051.G.A C[C>T]A	SNV	Pt18-T Tumor USM	FAT1	Q2897*	nonsense		55347	0.079444234
4.187539187.T.A G[T>A]G	SNV	Pt14-Nb NUSM	NS_H	FAT1	S2851S	silent	37913	0.002795875
4.187539424.C.A 0.014216806	SNV	Pt15-T Tumor A[C>A]T NUSM	FAT1	K2772N		missense	7878	
4.187539429.T.C 0.017821968	SNV	Pt18-Na G[T>C]T NUSM	NS_L	FAT1	T2771A	missense	10661	
4.187539438.G.T 0.010322226	SNV	Pt20-Nb T[C>A]A NUSM	NS_H	FAT1	H2768N		missense	25479
4.187539449.T.C 0.024577227	SNV	Pt16-Nb C[T>C]T NUSM	NS_L	FAT1	K2764R		missense	8870
4.187539460.C.A T[C>A]A	SNV	Pt20-T Tumor NUSM	FAT1	L2760L	silent		20753	0.055172746
4.187539467.C.T 0.025047417	SNV	Pt19-T Tumor C[C>T]C USM	FAT1	G2758E		missense	17926	
4.187539478.G.T 0.024165708	SNV	Pt19-T Tumor A[C>A]A NUSM	FAT1	D2754E		missense	18249	
4.187539482.A.T A[T>A]T	SNV	Pt18-T Tumor NUSM	FAT1	I2753N	missense		56642	0.003725151

4.187539568.G.A T[C>T]A	SNV	Pt15-Na	NS_H	FAT1	L2724L silent	48854	0.006836697
	USM						
4.187539585.C.A C[C>A]A	SNV	Pt19-T Tumor	FAT1	G2719*	nonsense	41067	0.010300241
	NUSM						
4.187539598.C.A 0.007502657	SNV	Pt15-Na	NS_H	FAT1	E2714D	missense	47050
	C[C>A]T	NUSM					
4.187539605.A.C 0.007287322	SNV	Pt15-Na	NS_H	FAT1	V2712G	missense	44598
	G[T>G]G	NUSM					
4.187539607.T.A C[T>A]G	SNV	Pt18-T Tumor	FAT1	T2711T	silent	32542	0.006453199
	NUSM						
4.187539951.G.A 0.019634918	SNV	Pt16-Nb	NS_L	FAT1	R2597*	nonsense	29692
	T[C>T]G	USM					
4.187540000.G.C 0.006847212	SNV	Pt15-Na	NS_H	FAT1	C2580W	missense	65136
	G[C>G]A	NUSM					
4.187540074.G.A 0.0244486	SNV	Pt17-Nb	NS_H	FAT1	R2556*	nonsense	36362
	T[C>T]G	USM					
4.187540130.T.A 0.019275226	SNV	Pt14-Nb	NS_H	FAT1	K2537I	missense	32010
	T[T>A]T	NUSM					
4.187540133.G.A G[C>T]C	SNV	Pt19-T Tumor	FAT1	A2536V	missense	34121	0.011664371
	USM						
4.187540162.G.T 0.015364717	SNV	Pt17-Nb	NS_H	FAT1	H2526Q	missense	44843
	A[C>A]G	NUSM					
4.187540298.G.T A[C>A]T	SNV	Pt20-T Tumor	FAT1	T2481N	missense	56974	0.004107137
	NUSM						
4.187540315.G.A C[C>T]A	SNV	Pt15-T Tumor	FAT1	S2475S	silent	29331	0.095632607
	USM						
4.187540438.A.G 0.005389285	SNV	Pt17-Nb	NS_H	FAT1	D2434D	silent	46945
	A[T>C]C	NUSM					
4.187540491.C.T G[C>T]A	SNV	Pt20-T Tumor	FAT1	A2417T	missense	81180	0.016777531
	NUSM						

4.187540608.C.T 0.005128711	SNV	Pt18-T Tumor	FAT1	V2378M	missense	20278
	A[C>T]C	USM				
4.187540729.G.A G[C>T]A	SNV	Pt18-T Tumor	FAT1	S2337S	silent	26041 0.009907454
	NUSM					
4.187540736.A.T 0.007942841	SNV	Pt14-Nb	NS_H	FAT1	V2335E	missense 27572
	G[T>A]A	NUSM				
4.187540897.A.T C[T>A]G	SNV	Pt19-T Tumor	FAT1	P2281P	silent	31001 0.014838231
	NUSM					
4.187540908.C.A 0.004110885	SNV	Pt14-Nb	NS_H	FAT1	D2278Y	missense 27488
	T[C>A]A	NUSM				
4.187541032.G.T T[C>A]A	SNV	Pt14-Nb	NS_H	FAT1	I2236I	silent 60019 0.003065696
	NUSM					
4.187541038.T.C C[T>C]C	SNV	Pt18-T Tumor	FAT1	G2234G	silent	53693 0.011174641
	NUSM					
4.187541073.G.T 0.003891051	SNV	Pt14-Nb	NS_H	FAT1	P2223T	missense 56797
	C[C>A]C	NUSM				
4.187541220.C.T A[C>T]A	SNV	Pt19-T Tumor	FAT1	V2174I	missense	32311 0.018229086
	NUSM					
4.187541268.C.T 0.021567143	SNV	Pt15-Nb	NS_H	FAT1	D2158N	missense 38299
	T[C>T]T	USM				
4.187541273.G.A G[C>T]A	SNV	Pt19-T Tumor	FAT1	A2156V	missense	39061 0.005837024
	NUSM					
4.187541344.C.A 0.00723067	SNV	Pt15-Na	NS_H	FAT1	L2132F	missense 60437
	C[C>A]A	NUSM				
4.187541367.CA.AC nonsense	DNV	Pt21-Nb	NS_L	FAT1	missense:H2124Q nonsense:E2125*	
	72101 0.052065852	CA>AC	NUSM			
4.187541369.T.C 0.016771666	SNV	Pt15-T Tumor	FAT1	H2124R	missense	70953
	A[T>C]G	NUSM				
4.187541507.G.A 0.012369932	SNV	Pt20-Na	NS_H	FAT1	A2078V	missense 46322
	G[C>T]G	NUSM				

4.187541508.C.T	SNV	Pt20-Na	NS_H	FAT1	A2078Tmissense	46865	
0.008535154	G[C>T]A	NUSM					
4.187541520.G.A	SNV	Pt14-Na	NS_H	FAT1	Q2074* nonsense	102418	
0.073200023	C[C>T]A	USM					
4.187541520.G.A	SNV	Pt14-Nb	NS_H	FAT1	Q2074* nonsense	65469	
0.065985428	C[C>T]A	USM					
4.187541610.G.T	SNV	Pt14-Nb	NS_H	FAT1	Q2044K	missense	39296
0.003537256	G[C>A]A	NUSM					
4.187541652.C.T	SNV	Pt17-Na	NS_H	FAT1	G2030R	missense	55260
0.017861021	C[C>T]T	USM					
4.187541776.C.A	SNV	Pt18-T Tumor	FAT1	V1988V	silent	32635	0.017588479
T[C>A]A	NUSM						
4.187541801.G.A	SNV	Pt14-Nb	NS_H	FAT1	T1980I	missense	37070
0.002292959	A[C>T]C	USM					
4.187542287.G.A	SNV	Pt14-Nb	NS_H	FAT1	T1818I	missense	26676
0.004423452	A[C>T]A	NUSM					
4.187542291.G.T	SNV	Pt14-Nb	NS_H	FAT1	H1817N	missense	26659
0.004988934	A[C>A]A	NUSM					
4.187542326.G.A	SNV	Pt18-T Tumor	FAT1	A1805V	missense	25745	0.009749466
G[C>T]T	USM						
4.187542521.G.A	SNV	Pt20-T Tumor	FAT1	T1740I	missense	32700	0.026911315
A[C>T]T	USM						
4.187542671.G.T	SNV	Pt18-Na	NS_L	FAT1	T1690K	missense	24490
0.005512454	A[C>A]A	NUSM					
4.187542694.A.G	SNV	Pt15-Na	NS_H	FAT1	I1682I	silent	51249
T[T>C]G	NUSM						0.011688033
4.187549500.G.A	SNV	Pt15-T Tumor	FAT1	P1540S	missense	39416	0.026867262
G[C>T]C	USM						
4.187549581.C.T	SNV	Pt19-Na	NS_L	FAT1	NA	intron	29007
A[C>T]G	NUSM						0.012858965

4.187549619.A.G C[T>C]C	SNV	Pt19-T Tumor	FAT1	NA	intron	40022	0.008070561	
		NUSM						
4.187554935.C.T 0.007889736	SNV	Pt15-Na	NS_H	FAT1	G1409E		missense	41573
		T[C>T]C						USM
4.187557410.G.A C[C>T]C	SNV	Pt21-Na	NS_L	FAT1	NA	intron	18017	0.023588833
		USM						
4.187557428.C.T T[C>T]A	SNV	Pt15-Na	NS_H	FAT1	NA	intron	13950	0.009175627
		USM						
4.187557465.G.A C[C>T]A	SNV	Pt15-Na	NS_H	FAT1	NA	intron	13429	0.032988309
		USM						
4.187557903.G.A G[C>T]C	SNV	Pt20-T Tumor	FAT1	P1270S	missense		74963	0.015074103
		USM						
4.187560904.C.A 0.017000391	SNV	Pt19-Na	NS_L	FAT1	R1205L	missense		28117
		T[C>A]G						NUSM
4.187584492.C.T 0.01957887	SNV	Pt15-T Tumor	FAT1	G1181R		missense		16242
		C[C>T]A						USM
4.187628004.T.C 0.007324401	SNV	Pt16-Nb	NS_L	FAT1	K993R	missense		77549
		C[T>C]T						NUSM
4.187628037.G.A G[C>T]A	SNV	Pt15-T Tumor	FAT1	A982V		missense	106224	0.018555129
		NUSM						
4.187628125.C.T T[C>T]G	SNV	Pt19-T Tumor	FAT1	D953N		missense	27681	0.4198909
		USM						
4.187628153.T.C T[T>C]C	SNV	Pt16-Nb	NS_L	FAT1	G943G	silent	59512	0.012434467
		NUSM						
4.187628320.G.A 0.014963313	SNV	Pt17-Na	NS_H	FAT1	Q888*	nonsense		72778
		G[C>T]A						NUSM
4.187628491.C.T 0.008442008	SNV	Pt16-Na	NS_L	FAT1	V831M	missense		15873
		A[C>T]T						USM
4.187628747.G.A A[C>T]A	SNV	Pt19-T Tumor	FAT1	D745D		silent	66760	0.004988017
		NUSM						

4.187628809.G.A 0.049093048	SNV T[C>T]A	Pt16-Na USM	NS_L	FAT1	Q725*	nonsense	16153	
4.187628814.C.A 0.011091476	SNV A[C>A]C	Pt15-Na NUSM	NS_H	FAT1	G723V	missense	26597	
4.187628951.A.T C[T>A]G	SNV NUSM	Pt20-Nb	NS_H	FAT1	T677T	silent	59950	0.002018349
4.187628976.A.G C[T>C]G	SNV NUSM	Pt15-T Tumor	FAT1	L669P	missense	31662	0.006474638	
4.187628979.T.A C[T>A]T	SNV NUSM	Pt20-T Tumor	FAT1	K668M	missense	38635	0.006548466	
4.187629089.C.T 0.002949246	SNV C[C>T]A	Pt18-Nb USM	NS_L	FAT1	M631I	missense	43740	
4.187629337.G.T C[C>A]G	SNV NUSM	Pt14-Nb	NS_H	FAT1	R549R	silent	10792	0.012138621
4.187629341.G.T 0.022126668	SNV A[C>A]C	Pt15-Na NUSM	NS_H	FAT1	Y547*	nonsense	11163	
4.187629345.G.A 0.015144288	SNV C[C>T]G	Pt19-Na USM	NS_L	FAT1	P546L	missense	8386	
4.187629351.C.T 0.021647355	SNV G[C>T]C	Pt15-Na USM	NS_H	FAT1	G544D	missense	11133	
4.187629378.G.T 0.014920029	SNV A[C>A]T	Pt17-Na NUSM	NS_H	FAT1	T535N	missense	8378	
4.187629648.G.T 0.003147972	SNV G[C>A]G	Pt14-Nb NUSM	NS_H	FAT1	A445E	missense	57815	
4.187629821.G.A T[C>T]A	SNV USM	Pt20-T Tumor	FAT1	V387V	silent	46957	0.016972975	
4.187629978.G.T 0.004076011	SNV A[C>A]A	Pt18-Nb NUSM	NS_L	FAT1	T335K	missense	35574	
4.187629982.G.A 0.004206271	SNV T[C>T]T	Pt18-Nb USM	NS_L	FAT1	L334F	missense	36612	

4.187630007.C.T C[C>T]C	SNV	Pt15-T Tumor	FAT1	W325*	nonsense	47784	0.130106312
4.187630031.G.T T[C>A]A	SNV	Pt19-T Tumor	FAT1	V317V	silent	88667	0.006157872
4.187630123.C.A C[C>A]A	SNV	Pt20-T Tumor	FAT1	G287C	missense	77069	0.014869792
4.187630132.C.T 0.004083259	SNV	Pt17-Nb C[C>T]C	NS_H USM	FAT1	G284S	missense	30123
4.187630219.G.A 0.015616922	SNV	Pt17-Na T[C>T]C	NS_H USM	FAT1	P255S	missense	65762
4.187630271.G.T T[C>A]A	SNV	Pt20-Na	NS_H	FAT1	I237I	silent	41919 0.008802691
4.187630291.A.T 0.010739274	SNV	Pt20-Na G[T>A]T	NS_H NUSM	FAT1	L231M	missense	36874
4.187630303.G.T 0.007597181	SNV	Pt18-Na C[C>A]G	NS_L NUSM	FAT1	R227S	missense	23693
4.187630451.G.C 0.008133056	SNV	Pt14-Nb A[C>G]A	NS_H NUSM	FAT1	D177E	missense	35534
4.187630459.C.T 0.037170348	SNV	Pt21-Nb T[C>T]C	NS_L USM	FAT1	D175N	missense	42507
4.187630469.G.T T[C>A]A	SNV	Pt15-Na	NS_H	FAT1	V171V	silent	47934 0.005799641
4.187630474.T.A 0.022385945	SNV	Pt17-Na C[T>A]T	NS_H NUSM	FAT1	R170*	nonsense	45877
4.187630477.C.T 0.022759874	SNV	Pt16-Nb G[C>T]G	NS_L NUSM	FAT1	A169T	missense	10457
4.187630491.A.T A[T>A]A	SNV	Pt20-T Tumor	FAT1	I164K	missense	42582	0.006716453
4.187631018.G.T T[C>A]T	SNV	Pt20-T Tumor	FAT1	NA	intron	174639	0.008010811

5.176523177.C.T 0.021457821	SNV	Pt18-Na	NS_L	NoMatch	S647S	silent	6105	
	G[C>T]A	NUSM						
5.176523201.C.A A[C>A]T	SNV	Pt20-T Tumor	NoMatch	NA	intron	6841	0.022365151	
	NUSM							
6.32178998.T.A A[T>A]T	SNV	Pt16-Nb	NS_L	NoMatch	NA	intron	1704	0.048122066
	NUSM							
7.140434669.T.A G[T>A]G	SNV	Pt14-Na	NS_H	BRAF	NA	intron	13533	0.013005246
	NUSM							
7.140439685.C.A 0.00369797	SNV	Pt18-Na	NS_L	BRAF	C685F	missense	46512	
	A[C>A]A	NUSM						
7.140439831.C.T G[C>T]T	SNV	Pt18-T Tumor	BRAF	NA	intron	37417	0.009033327	
	USM							
7.140453145.A.T 0.011951335	SNV	Pt18-Na	NS_L	BRAF	L597Q	missense	23261	
	C[T>A]A	NUSM						
7.140453150.A.C T[T>G]G	SNV	Pt15-T Tumor	BRAF	F595L	missense	28545	0.017446138	
	NUSM							
7.140453152.A.G 0.027152653	SNV	Pt17-Nb	NS_H	BRAF	F595L	missense	21729	
	T[T>C]T	NUSM						
7.140454050.C.A T[C>A]A	SNV	Pt18-Na	NS_L	BRAF	NA	intron	6275	0.014820717
	NUSM							
7.140454051.A.G A[T>C]G	SNV	Pt15-T Tumor	BRAF	NA	intron	1930	0.022797927	
	NUSM							
7.140476799.C.A 0.002750409	SNV	Pt14-Nb	NS_H	BRAF	S536I	missense	61809	
	G[C>A]T	NUSM						
7.140476933.T.C T[T>C]T	SNV	Pt19-Nb	NS_L	BRAF	NA	intron	4609	0.045996962
	NUSM							
7.140476971.G.T C[C>A]G	SNV	Pt14-Nb	NS_H	BRAF	NA	intron	3717	0.034705408
	NUSM							
7.140477885.A.T T[T>A]G	SNV	Pt15-T Tumor	BRAF	NA	intron	19905	0.022255715	
	NUSM							

9.139390774.C.T	SNV	Pt19-T Tumor	NOTCH1	V2473I missense	75152
0.001264105	A[C>T]C	USM			
9.139390895.G.T	SNV	Pt18-T Tumor	NOTCH1	S2432R missense	60437
0.0032265	G[C>A]T	NUSM			
9.139390925.GCTCACGCCAAGGTGCGGCTGT.-	Indel	Pt19-Na	NS_L NOTCH1		
P2415fs	frameshift	62295	0.011124488	- NUSM	
9.139390962.G.A	SNV	Pt20-T Tumor	NOTCH1	P2410L missense	33390
0.012159329	C[C>T]G	USM			
9.139390977.T.A	SNV	Pt18-T Tumor	NOTCH1	Q2405L missense	34031
0.008668567	C[T>A]G	NUSM			
9.139390978.G.T	SNV	Pt18-Na	NS_L NOTCH1	Q2405K missense	
17071	0.008142464	G[C>A]A	NUSM		
9.139390984.G.A	SNV	Pt18-T Tumor	NOTCH1	Q2403* nonsense	43540
0.005925586	C[C>T]A	USM			
9.139390993.C.T	SNV	Pt16-Nb	NS_L NOTCH1	A2400T missense	11573
0.006394193	G[C>T]T	USM			
9.139391019.T.A	SNV	Pt19-Na	NS_L NOTCH1	Q2391L missense	32581
0.016205764	C[T>A]G	NUSM			
9.139391153.C.A	SNV	Pt17-Na	NS_H NOTCH1	M2346I missense	72315
0.006720597	C[C>A]A	NUSM			
9.139391219.G.A	SNV	Pt14-Na	NS_H NOTCH1	N2324N silent	43573
0.002822849	A[C>T]C	USM			
9.139391816.G.T	SNV	Pt15-Na	NS_H NOTCH1	H2125Q missense	
126839	0.005550343	A[C>A]G	NUSM		
9.139391980.C.T	SNV	Pt21-Na	NS_L NOTCH1	E2071K missense	9001
0.061215421	T[C>T]C	USM			
9.139392000.G.A	SNV	Pt19-T Tumor	NOTCH1	P2064L missense	7768
0.870365602	C[C>T]C	USM			
9.139392007.C.A	SNV	Pt19-Nb	NS_L NOTCH1	E2062* nonsense	8009
0.059807716	T[C>A]C	NUSM			

9.139392062.C.A	SNV	Pt18-T Tumor	NOTCH1	NA	intron	8268	0.011490082
A[C>A]C		NUSM					
9.139393449.C.T	SNV	Pt18-T Tumor	NOTCH1	c.6083-1G>A)	splice	15496	
0.009357253		C[C>T]T	USM				
9.139393459.G.T	SNV	Pt15-T Tumor	NOTCH1	NA	intron	10957	0.026375833
T[C>A]T		NUSM					
9.139393545.C.T	SNV	Pt19-Na	NS_L NOTCH1	NA	intron	29259	
0.014252025		C[C>T]G	USM				
9.139393632.A.C	SNV	Pt19-T Tumor	NOTCH1	L2005R	missense	39105	
0.018309679		C[T>G]G	NUSM				
9.139395118.G.C	SNV	Pt16-Na	NS_L NOTCH1	R1940R	silent	54147	
0.056512826		G[C>G]T	NUSM				
9.139395202.G.T	SNV	Pt15-T Tumor	NOTCH1	D1912E	missense	136661	
0.002626938		A[C>A]T	NUSM				
9.139395263.C.T	SNV	Pt17-Na	NS_H NOTCH1	G1892E	missense		
37366	0.008296312	C[C>T]C	USM				
9.139395263.C.T	SNV	Pt17-Nb	NS_H NOTCH1	G1892E	missense		
49975	0.017648824	C[C>T]C	USM				
9.139395281.A.T	SNV	Pt17-Nb	NS_H NOTCH1	M1886K	missense		
44580	0.020457604	A[T>A]G	NUSM				
9.139395282.T.A	SNV	Pt18-Na	NS_L NOTCH1	M1886L	missense		
16727	0.015962217	A[T>A]G	NUSM				
9.139395296.C.T	SNV	Pt15-T Tumor	NOTCH1	G1881D	missense	40404	
0.020938521		G[C>T]C	USM				
9.139395298.A.T	SNV	Pt16-Nb	NS_L NOTCH1	D1880E	missense		
72422	0.012068156	A[T>A]G	NUSM				
9.139395310.A.T	SNV	Pt14-Nb	NS_H NOTCH1	NA	intron	30723	
0.005923901		C[T>A]G	NUSM				
9.139396310.C.T	SNV	Pt19-Na	NS_L NOTCH1	W1843*	nonsense	28818	
0.010201957		C[C>T]A	USM				

9.139396800.G.A,9.139396801.G.A,9.139396802.A.C:001	SNV	Pt15-T Tumor	NOTCH1					
F1769Cmissense		79670	0.004192293	T[T>G]C	NUSM			
9.139396800.GG.AA	DNV	Pt15-T Tumor	NOTCH1		missense:P1770S silent:F1769F			
missense		79670	0.045324463	CC>TT	USM			
9.139396851.C.T	SNV	Pt16-Na	NS_L NOTCH1		G1753R		missense	
57318		0.023831955	C[C>T]G	USM				
9.139396861.G.A	SNV	Pt17-Nb	NS_H NOTCH1		F1749F	silent	35152	
0.020624716		T[C>T]G	USM					
9.139399217.G.A	SNV	Pt14-Nb	NS_H NOTCH1		D1642D		silent	32987
0.006366144		A[C>T]G	NUSM					
9.139399436.C.T	SNV	Pt20-T Tumor	NOTCH1		L1569L	silent	9870	0.009321175
C[C>T]A		USM						
9.139399439.C.G	SNV	Pt15-T Tumor	NOTCH1		R1568S		missense	10478
0.022905135		G[C>G]C	NUSM					
9.139399450.C.T	SNV	Pt15-T Tumor	NOTCH1		V1565I		missense	11572
0.009332872		A[C>T]A	NUSM					
9.139399642.C.T	SNV	Pt20-T Tumor	NOTCH1		NA	intron	8862	0.024599413
G[C>T]G		NUSM						
9.139399646.G.A	SNV	Pt15-T Tumor	NOTCH1		NA	intron	7514	0.291855204
C[C>T]C		USM						
9.139399657.C.T	SNV	Pt15-T Tumor	NOTCH1		NA	intron	7877	0.046591342
G[C>T]A		NUSM						
9.139399659.C.T	SNV	Pt15-Na	NS_H NOTCH1		NA	intron	24541	
0.017969928		A[C>T]C	USM					
9.139399759.T.C	SNV	Pt20-T Tumor	NOTCH1		NA	intron	50214	0.010913291
T[T>C]A		NUSM						
9.139399926.CC.TT	DNV	Pt17-Nb	NS_H NOTCH1		W1474*	nonsense		83788
0.010669786		CC>TT	USM					
9.139400023.G.A	SNV	Pt15-Na	NS_H NOTCH1		P1442L		missense	58434
0.002994832		C[C>T]G	USM					

9.139400216.A.G 0.012707802	SNV C[T>C]T	Pt20-T Tumor NUSM	NOTCH1	F1378L missense	49025		
9.139400238.G.A 0.01331336	SNV C[C>T]A	Pt19-Na USM	NS_L NOTCH1	P1370P silent	53405		
9.139401084.G.A 0.017176207	SNV G[C>T]T	Pt15-T Tumor USM	NOTCH1	R1303R silent	147355		
9.139401476.G.T G[C>A]A	SNV NUSM	Pt20-T Tumor	NOTCH1	NA intron	37911	0.005776688	
9.139401848.G.A T[C>T]G	SNV USM	Pt18-T Tumor	NOTCH1	I1184I silent	22826	0.016647682	
9.139401858.G.A 0.081438089	SNV T[C>T]T	Pt21-Na USM	NS_L NOTCH1	S1181F missense	17412		
9.139402388.-.C 0.04130912	Indel -	Pt14-Nb NUSM	NS_H NOTCH1	NA intron	5011		
9.139402712.C.G A[C>G]A	SNV NUSM	Pt15-T Tumor	NOTCH1	V1099V silent	12911	0.02184184	
9.139402843.G.A 0.011633741	SNV T[C>T]C	Pt14-Na USM	NS_H NOTCH1	NA intron	31890		
9.139403399.G.T 21780 0.013498623	SNV G[C>A]A	Pt18-Na NUSM	NS_L NOTCH1	H1032N missense			
9.139403421.C.A 42060 0.006752259	SNV A[C>A]T	Pt19-Na NUSM	NS_L NOTCH1	E1024D missense			
9.139403421.C.A 0.047166103	SNV A[C>A]T	Pt20-T Tumor NUSM	NOTCH1	E1024D missense	38163		
9.139403422.T.G 0.004802015	SNV C[T>G]C	Pt21-Nb NUSM	NS_L NOTCH1	E1024A missense	50812		
9.139403429.C.A 0.01408979	SNV A[C>A]A	Pt19-T Tumor NUSM	NOTCH1	V1022F missense	42655		
9.139404244.G.A 0.0065792	SNV C[C>T]T	Pt20-Na USM	NS_H NOTCH1	T970T silent	103964		

9.139404285.C.T 0.003331175	SNV C[C>T]G	Pt17-Na USM	NS_H NOTCH1	G957R missense	95762
9.139405197.G.T 0.00561388	SNV T[C>A]C	Pt15-Na NUSM	NS_H NOTCH1	S883Y missense	104206
9.139405210.GG.AA missense:R879W nonsense:C878*	DNV	Pt15-Nb	NS_H NOTCH1 nonsense	114518 0.022651461 CC>AT	USM
9.139405217.G.A G[C>T]C	SNV USM	Pt20-T Tumor	NOTCH1	S876S silent	52943 0.025461345
9.139405691.C.T 0.02497197	SNV G[C>T]A	Pt15-Na NUSM	NS_H NOTCH1	A834T missense	9811
9.139407683.C.T 0.006486146	SNV G[C>T]C	Pt14-Na USM	NS_H NOTCH1	NA intron	15880
9.139407774.C.T 0.012517314	SNV C[C>T]G	Pt17-Na USM	NS_H NOTCH1	NA intron	19493
9.139407901.C.G 0.002146856	SNV C[C>G]G	Pt18-Na NUSM	NS_L NOTCH1	G766R missense	36798
9.139407901.C.G 0.010275215	SNV C[C>G]G	Pt14-Nb NUSM	NS_H NOTCH1	G766R missense	24817
9.139407907.T.A 0.003373535	SNV T[T>A]G	Pt20-T Tumor NUSM	NOTCH1	N764Y missense	47428
9.139407907.T.G 0.002111324	SNV T[T>G]G	Pt18-Na NUSM	NS_L NOTCH1	N764H missense	36470
9.139407908.G.A T[C>T]A	SNV USM	Pt20-T Tumor	NOTCH1	V763V silent	49611 0.003063837
9.139407909.A.G 0.00953794	SNV G[T>C]C	Pt14-Nb NUSM	NS_H NOTCH1	V763A missense	23590
9.139407932.ATT.- 7685 0.382433312	Indel -	Pt16-Nb NUSM	NS_L NOTCH1	755_755del	proteinDel
9.139407985.T.C 0.019476019	SNV T[T>C]G	Pt20-Nb NUSM	NS_H NOTCH1	K738E missense	14428

9.139407990.C.T 0.006089576	SNV C[C>T]T	Pt17-Na USM	NS_H NOTCH1	c.2208-1G>A)	splice	15272
9.139408002.C.T 0.008015353	SNV A[C>T]C	Pt15-Nb USM	NS_H NOTCH1	NA	intron	17716
9.139408003.C.T 0.008927296	SNV C[C>T]A	Pt14-Na USM	NS_H NOTCH1	NA	intron	14002
9.139408012.G.T C[C>A]T	SNV NUSM	Pt19-T Tumor	NOTCH1	NA	intron	11386 0.030915159
9.139409864.G.A 0.006234334	SNV G[C>T]C	Pt14-Nb USM	NS_H NOTCH1	NA	intron	46677
9.139409930.G.A 0.006722979	SNV G[C>T]C	Pt20-Na USM	NS_H NOTCH1	NA	intron	58010
9.139410206.A.T 0.014036989	SNV G[T>A]C	Pt19-Na NUSM	NS_L NOTCH1	NA	intron	40607
9.139410243.G.A 0.00343633	SNV A[C>T]C	Pt14-Nb USM	NS_H NOTCH1	NA	intron	35794
9.139410425.G.A 0.021321962	SNV G[C>T]T	Pt16-Na USM	NS_L NOTCH1	NA	intron	42679
9.139411782.G.T 0.012325961	SNV G[C>A]C	Pt15-Na NUSM	NS_H NOTCH1	C499*	nonsense	28801
9.139411783.C.T 0.006957923	SNV G[C>T]A	Pt15-T Tumor NUSM	NOTCH1	C499Y	missense	27307
9.139411788.G.A 0.013565509	SNV G[C>T]C	Pt21-Na USM	NS_L NOTCH1	S497S	silent	20272
9.139411800.C.T 0.009598331	SNV A[C>T]T	Pt21-Na USM	NS_L NOTCH1	E493E	silent	19170
9.139411809.G.A A[C>T]A	SNV NUSM	Pt15-T Tumor	NOTCH1	N490N	silent	26630 0.004543748
9.139411814.C.T 0.009764986	SNV A[C>T]C	Pt20-Na USM	NS_H NOTCH1	V489I	missense	21403

9.139411815.C.T C[C>T]T	SNV	Pt18-T Tumor	NOTCH1	E488E	silent	23514	0.005911372
	USM						
9.139411837.C.A 0.019969656	SNV	Pt15-Nb	NS_H	NOTCH1	G481V	missense	24387
	G[C>A]C	NUSM					
9.139411851.C.T 0.010270021	SNV	Pt15-Na	NS_H	NOTCH1	NA	intron	17332
	G[C>T]A	NUSM					
9.139411858.G.A 0.020507232	SNV	Pt18-Na	NS_L	NOTCH1	NA	intron	10094
	T[C>T]A	USM					
9.139411877.C.T C[C>T]C	SNV	Pt18-T Tumor	NOTCH1	NA	intron	14374	0.009252818
	USM						
9.139411914.G.A 0.011353088	SNV	Pt18-Na	NS_L	NOTCH1	NA	intron	14005
	T[C>T]T	USM					
9.139411914.G.A 0.010228319	SNV	Pt14-Na	NS_H	NOTCH1	NA	intron	20629
	T[C>T]T	USM					
9.139412266.G.A 0.02474787	SNV	Pt16-Nb	NS_L	NOTCH1	P460L	missense	67723
	C[C>T]G	USM					
9.139412282.C.T 0.027190003	SNV	Pt17-Na	NS_H	NOTCH1	E455K	missense	73299
	T[C>T]G	USM					
9.139412297.C.T 0.018792592	SNV	Pt16-Na	NS_L	NOTCH1	E450K	missense	91419
	T[C>T]G	USM					
9.139412297.C.T 0.020009007	SNV	Pt18-Nb	NS_L	NOTCH1	E450K	missense	46629
	T[C>T]G	USM					
9.139412658.C.T 0.031616286	SNV	Pt17-Na	NS_H	NOTCH1	A396T	missense	12968
	G[C>T]C	USM					
9.139412660.T.G 0.029910358	SNV	Pt17-Na	NS_H	NOTCH1	K395T	missense	11267
	C[T>G]T	NUSM					
9.139412663.CC.TT 0.003906963	DNV	Pt20-Na	NS_H	NOTCH1	G394N	missense	27387
	CC>TT	USM					
9.139412663.CC.TT 0.065510174	DNV	Pt17-Nb	NS_H	NOTCH1	G394N	missense	40986
	CC>TT	USM					

9.139412705.G.A	SNV	Pt15-Na	NS_H	NOTCH1	P380L	missense	19737	
0.038861022	C[C>T]C	USM						
9.139412707.G.A	SNV	Pt14-Nb	NS_H	NOTCH1	N379N	silent	1019	
0.142296369	A[C>T]C	USM						
9.139412717.C.T	SNV	Pt19-T Tumor		NOTCH1	C376Y	missense	10350	
0.016811594	G[C>T]A	NUSM						
9.139412718.A.C	SNV	Pt16-Na	NS_L	NOTCH1	C376G	missense	15116	
0.049748611	A[T>G]G	NUSM						
9.139413920.G.A	SNV	Pt15-T Tumor		NOTCH1	N280N	silent	12417	0.025287912
A[C>T]T	USM							
9.139413924.T.A	SNV	Pt17-Nb	NS_H	NOTCH1	Y279F	missense	24724	
0.018848083	G[T>A]A	NUSM						
9.139413929.G.T	SNV	Pt18-T Tumor		NOTCH1	N277K	missense	18108	
0.00695825	A[C>A]A	NUSM						
9.139413934.C.T	SNV	Pt15-Na	NS_H	NOTCH1	V276M	missense	27476	
0.012592808	A[C>T]G	NUSM						
9.139413955.C.A	SNV	Pt18-T Tumor		NOTCH1	G269W	missense	18296	
0.025032794	C[C>A]G	NUSM						
9.139417387.G.A	SNV	Pt21-Nb	NS_L	NOTCH1	Y219Y	silent	15527	
0.011463902	A[C>T]G	NUSM						
9.139418373.G.A	SNV	Pt19-Na	NS_L	NOTCH1	P67S	missense	40789	
0.052612224	C[C>T]C	USM						
9.139418387.G.A	SNV	Pt21-Nb	NS_L	NOTCH1	P62L	missense	97996	
0.026205151	C[C>T]G	USM						
9.21968792.T.A	SNV	Pt14-Nb	NS_H	CDKN2A	NA	intron	24907	0.003613442
A[T>A]T	NUSM							
9.21968798.C.T	SNV	Pt18-T Tumor		CDKN2A	NA	intron	24719	0.009385493
T[C>T]A	USM							
9.21968806.C.T	SNV	Pt15-Na	NS_H	CDKN2A	NA	intron	42497	0.008965339
T[C>T]T	USM							

9.21970992.G.A 0.009691784	SNV G[C>T]C	Pt14-Na USM	NS_H CDKN2A	G122G	silent	11453	
9.21971001.C.TSNV C[C>T]T	Pt15-T USM	Tumor USM	CDKN2A	E119E	silent	23060	0.022289679
9.21971093.CC.TT missense	DNV 44286	Pt21-Nb 0.013209592	NS_L CDKN2A CC>TT	USM	missense:G89S silent:E88E		
9.21971096.C.A 0.241385614	SNV T[C>A]C	Pt19-T NUSM	Tumor CDKN2A	E88*	nonsense	43764	
9.21974679.GG.AA nonsense	DNV 74362	Pt18-T 0.155213684	Tumor CDKN2A CC>TT	USM	nonsense:Q50* silent:I49I		
9.21974680.G.A T[C>T]C	SNV USM	Pt18-T USM	Tumor CDKN2A	I49I	silent	86890	0.149073541
9.21974681.A.TSNV A[T>A]C	Pt19-T NUSM	Tumor NUSM	CDKN2A	I49N	missense	49039	0.009563817
9.21974894.C.TSNV C[C>T]A	Pt18-Na USM	NS_L CDKN2A	UTR_5	UTR_5	16489	0.018375887	
9.21974915.C.TSNV G[C>T]C	Pt19-T USM	Tumor USM	CDKN2A	UTR_5	UTR_5	6907	0.029824815
9.21975101.C.TSNV T[C>T]C	Pt15-Na USM	NS_H CDKN2A	UTR_5	UTR_5	20859	0.017210796	
9.21975103.C.A 0.016424214	SNV C[C>A]C	Pt19-Nb NUSM	NS_L CDKN2A	UTR_5	UTR_5	14917	
9.21994214.C.G G[C>G]G	SNV NUSM	Pt20-T NUSM	Tumor CDKN2A	A39A	silent	92743	0.014890612

*mut_id: the mutation id in the format of chr.posi.ref.mut, coordinates in GRCh37

Table S9. CRCA values of all 20 samples in the extended cohort.

Group	Sample	Type	USMs	CRCA (all USMs)	CRCA (USMs with VAF<1%)
NS_H	HSM14-Na	Pt14-Na	10	0.318604554	0.066890986
NS_H	HSM14-Nb	Pt14-Nb	13	0.875413552	0.039001776
NS_H	HSM16-Na	Pt15-Na	18	0.577021682	0.089721948
NS_H	HSM16-Nb	Pt15-Nb	12	1.095405966	0.049800088
NS_H	HSM18-Na	Pt17-Na	9	0.366044962	0.035434126
NS_H	HSM18-Nb	Pt17-Nb	9	0.374404788	0.008166518
NS_H	HSM25-Na	Pt20-Na	12	0.210527186	0.138954616
NS_H	HSM25-Nb	Pt20-Nb	3	0.02755357	0.02755357
NS_L	HSM17-Na	Pt16-Na	7	0.352690986	0.016884016
NS_L	HSM17-Nb	Pt16-Nb	4	0.168621492	0.012788386
NS_L	HSM19-Na	Pt18-Na	6	0.231421476	0.026223312
NS_L	HSM19-Nb	Pt18-Nb	4	0.058027104	0.01800909
NS_L	HSM20-Na	Pt19-Na	8	0.351003676	0.012534562
NS_L	HSM20-Nb	Pt19-Nb	4	0.271249008	0.022252118
NS_L	HSM26-Na	Pt21-Na	7	0.417533064	0.035765562
NS_L	HSM26-Nb	Pt21-Nb	11	0.531869468	0.02984935
Tumor	HSM16-T	Pt15-T	28	2.661436156	0.05037234
Tumor	HSM19-T	Pt18-T	18	1.272287466	0.146843948
Tumor	HSM20-T	Pt19-T	10	4.23344271	0.013474832
Tumor	HSM25-T	Pt20-T	13	0.33974045	0.065403418

Group: NS_H (normal skin high-cSCC patients), NS_L (normal skin low-cSCC patients).

Type: tumor, or normal skin collected at 1mm (Na) and 6mm (Nb) from the surgical margin.

USMs: UV-signature mutations.

CRCA: Cumulative Relative Clonal Area of USMs.