

**Table S1A: Clinical characteristics of patients and healthy controls in the discovery cohort.**

	<b>CODE</b>	<b>Type</b>	<b>Cohort</b>	<b>paired WBC</b>	<b>Age</b>	<b>Gender</b>	<b>Stage</b>	<b>Pathology</b>	<b>Tumor volume</b>	<b>Tumor location</b>	<b>High risk</b>
1	LBH001	Cancer	Discovery	yes	41	M	II	HCC	4 x 4 x 4,5 cm	Seg VI	HBV
2	LBH002	Cancer	Discovery	yes	87	M	I	Carcinoma	2,7 x 4,3 cm	Seg IV	No
3	LBH003	Cancer	Discovery	yes	38	M	NA	NA	NA	NA	HBV
4	LBH004	Cancer	Discovery	yes	36	M	I	HCC	3,5 x 3 x 3 cm	Seg III	HBV
5	LBH005	Cancer	Discovery	yes	57	M	NA	HCC	NA	NA	HBV
6	LBH006	Cancer	Discovery	yes	51	M	II	HCC	3,2 x 3,7 cm	Seg V	HCV
7	LBH007	Cancer	Discovery	yes	58	F	NA	HCC	9,6 x 10,1 cm	NA	NA
8	LBH008	Cancer	Discovery	yes	73	M	I	HCC	13 x 15 x 9 cm	Seg VI-VII	HBV
9	LBH009	Cancer	Discovery	yes	52	M	NA	HCC	3,5 x 3 x 3 cm	Seg III	HBV
10	LBH010	Cancer	Discovery	yes	69	M	NA	HCC	2,7 x 3,6 cm	Seg V	No
11	LBH011	Cancer	Discovery	yes	50	M	I	HCC	9 x 8 x 5 cm	Seg II-III	HBV
12	LBH012	Cancer	Discovery	yes	61	M	NA	HCC	7,5 x 5,5 x 6,5 cm	Right lobe of liver	HBV
13	LBH013	Cancer	Discovery	yes	69	M	NA	HCC	3,2 x 4 x 2,5 cm	Seg VIII	HCV
14	LBH014	Cancer	Discovery	yes	50	M	II	HCC	3,5 x 2,5 x 2,5 cm	Segment	HCV
15	LBH015	Cancer	Discovery	yes	68	M	II	HCC	3,2 x 4 x 2,5 cm	Posterior segments	HBV
16	LBH016	Cancer	Discovery	yes	50	M	I	HCC	3,5 x 2,5 x 2,5 cm	Seg	HBV
17	LBH017	Cancer	Discovery	yes	68	M	I	HCC	93 x 137 x 119 cm	Right liver	HBV

18	LBH018	Cancer	Discovery	yes	51	M	III	HCC	5,8 X 5,4 X 6,2 cm	NA	No
19	LBH019	Cancer	Discovery	yes	35	M	II	Carcinoma	2.5 x 2.5 x 2 cm	Seg VI	HBV
20	LBH020	Cancer	Discovery	yes	75	M	II	HCC	6 x 5 x 5 cm	Anterior segments	HBV
21	LBH021	Cancer	Discovery	yes	64	M	II	HCC	3,5 x 3 x 3 cm	Seg VIII	HBV
22	LBH022	Cancer	Discovery	yes	57	M	III	HCC	7 x 6 x 6 cm	Right lobe of liver	HBV
23	LBH023	Cancer	Discovery	yes	56	M	III	HCC	12 x 8 x 8 cm	Right lobe of liver	HBV
24	LBH024	Cancer	Discovery	yes	71	F	NA	Carcinoma	4,5 x 4 x 3 cm	Left lobe of liver	HBV
25	LBH025	Cancer	Discovery	yes	64	M	II	HCC	2cm	NA	HBV
26	LBH026	Cancer	Discovery	yes	63	M	II	HCC	8 x 5,5 x 7 cm	Left lobe of liver	No
27	LBH027	Cancer	Discovery	yes	28	M	II	HCC	2,5 x 2 x 1,5 cm	Left lobe of liver	No
28	LBH028	Cancer	Discovery	yes	52	M	II	HCC	2,5 x 2,2 x 1,5 cm	Seg IV	HBV/HCV
29	LBH029	Cancer	Discovery	yes	55	M	II	HCC	4 x 3,8 x 3,5 cm	Left liver	HBV
30	LBH030	Cancer	Discovery	yes	67	M	II	HCC	NA	NA	HBV
31	LBH031	Cancer	Discovery	yes	70	M	II	HCC	4,3 x 3,8 x 3 cm	Seg V	HBV
32	LBH032	Cancer	Discovery	yes	56	M	II	HCC	3,5 x 3,2 x 2,8 cm	Anterior segments	HBV
33	LBH033	Cancer	Discovery	yes	50	M	II	HCC	10,5 x 10 x 8 cm	Seg VI	HBV
34	LBH034	Cancer	Discovery	yes	68	F	II	HCC	4,2 x 3,1 x 3,5 cm	Seg VI	HBV

35	LBH035	Cancer	Discovery	yes	59	M	II	HCC	4,6 x 3,2 x 3,5 cm	Left liver	HBV
36	LBH036	Cancer	Discovery	yes	58	M	II	HCC	6,5 x 6 x 5 cm	Left liver	HBV
37	LBH037	Cancer	Discovery	yes	60	M	I	Carcinoma	3,4 x 3 x 3 cm	Seg V	HBV
38	LBH038	Cancer	Discovery	yes	64	F	II	HCC	5,5 x 4 x 3 cm	Posterior segments	HBV
39	LBH039	Cancer	Discovery	yes	74	M	I	Carcinoma	9,8 x 9,5 x 7 cm	Hepatoblastoma	HBV
40	LBH040	Cancer	Discovery	yes	59	M	II	HCC	4 x 3,5 x 2,6 cm	Seg VI	HBV
41	LBH041	Cancer	Discovery	yes	53	M	II	HCC	4,1 x 4,6 cm	Seg V-VI	HBV
42	LBH042	Cancer	Discovery	yes	64	F	NA	HCC	9 x 9 x 7 cm	Right liver	HBV
43	LBH043	Cancer	Discovery	yes	32	M	II	HCC	9,5 x 7,5 x 7 cm	Left liver	HBV
44	LBH044	Cancer	Discovery	yes	24	F	II	HCC	9 x 7 x 6 cm	Seg VI	No
45	LBH045	Cancer	Discovery	yes	36	M	II	HCC	4 x 3 x 3 cm	Seg VIII	HBV
46	LBH046	Cancer	Discovery	yes	77	M	II	HCC	9,5 x 6,5 x 5 cm	Right liver	HBV
47	LBH047	Cancer	Discovery	yes	64	M	NA	HCC	9 x 6 x 5 cm	Right liver	HBV
48	LBH048	Cancer	Discovery	yes	47	M	NA	HCC	7 x 6 x 4,5 cm	Posterior segments	HBV
49	LBH049	Cancer	Discovery	yes	53	M	II	HCC	2 x 1,6 x 1,4 cm	Right liver	HBV
50	LBH050	Cancer	Discovery	yes	59	M	II	HCC	4,5 x 3,2 x 2,8 cm	Seg IV	HBV
51	LBH051	Cancer	Discovery	yes	71	F	NA	HCC	NA	NA	HBV
52	LBH052	Cancer	Discovery	yes	55	M	II	HCC	7,3cm	Left lobe of liver	HBV
53	LBH054	Cancer	Discovery	yes	58	M	I	HCC	4 x 3 x 3.5 cm	Seg IV	HBV

54	LBH055	Cancer	Discovery	yes	36	M	NA	HCC	2.5 x 2 x 2 cm	Posterior segments	HBV
55	LBH056	Cancer	Discovery	yes	61	F	NA	NA	NA	NA	NA
56	LBHC001	Healthy- control	Discovery	yes	43	M	NA	NA	NA	NA	NA
57	LBHC003	Healthy- control	Discovery	yes	27	M	NA	NA	NA	NA	NA
58	LBHC005	Healthy- control	Discovery	yes	28	M	NA	NA	NA	NA	NA
59	LBHC006	Healthy- control	Discovery	yes	35	M	NA	NA	NA	NA	NA
60	LBHC011	Healthy- control	Discovery	yes	34	F	NA	NA	NA	NA	NA
61	LBHC013	Healthy- control	Discovery	yes	61	M	NA	NA	NA	NA	NA
62	LBHC015	Healthy- control	Discovery	yes	48	M	NA	NA	NA	NA	NA
63	LBHC017	Healthy- control	Discovery	yes	44	F	NA	NA	NA	NA	NA
64	LBHC023	Healthy- control	Discovery	yes	61	M	NA	NA	NA	NA	NA
65	LBHC024	Healthy- control	Discovery	yes	37	F	NA	NA	NA	NA	NA
66	LBHC029	Healthy- control	Discovery	yes	50	F	NA	NA	NA	NA	NA
67	LBHC032	Healthy- control	Discovery	yes	69	M	NA	NA	NA	NA	NA
68	LBHC033	Healthy- control	Discovery	yes	62	F	NA	NA	NA	NA	NA
69	LBHC034	Healthy- control	Discovery	yes	43	M	NA	NA	NA	NA	NA

70	LBHC035	Healthy-control	Discovery	yes	48	F	NA	NA	NA	NA	NA
71	LBHC036	Healthy-control	Discovery	yes	31	F	NA	NA	NA	NA	NA
72	LBHC039	Healthy-control	Discovery	yes	42	F	NA	NA	NA	NA	NA
73	LBHC040	Healthy-control	Discovery	yes	40	F	NA	NA	NA	NA	NA
74	LBHC043	Healthy-control	Discovery	yes	36	M	NA	NA	NA	NA	NA
75	LBHC055	Healthy-control	Discovery	yes	28	F	NA	NA	NA	NA	NA
76	LBHC059	Healthy-control	Discovery	yes	81	M	NA	NA	NA	NA	NA
77	LBHC061	Healthy-control	Discovery	yes	40	M	NA	NA	NA	NA	NA
78	LBHC065	Healthy-control	Discovery	yes	61	F	NA	NA	NA	NA	NA
79	LBHC067	Healthy-control	Discovery	yes	37	M	NA	NA	NA	NA	NA
80	LBHC075	Healthy-control	Discovery	yes	37	F	NA	NA	NA	NA	NA
81	LBHC078	Healthy-control	Discovery	yes	41	F	NA	NA	NA	NA	NA
82	LBHC079	Healthy-control	Discovery	yes	46	F	NA	NA	NA	NA	NA
83	LBHC080	Healthy-control	Discovery	yes	70	M	NA	NA	NA	NA	NA
84	LBHC082	Healthy-control	Discovery	yes	49	F	NA	NA	NA	NA	NA
85	LBHC087	Healthy-control	Discovery	yes	55	M	NA	NA	NA	NA	NA

86	LBHC088	Healthy-control	Discovery	yes	37	F	NA	NA	NA	NA	NA
87	LBHC094	Healthy-control	Discovery	yes	25	F	NA	NA	NA	NA	NA
88	LBHC095	Healthy-control	Discovery	yes	48	F	NA	NA	NA	NA	NA
89	LBHC097	Healthy-control	Discovery	yes	46	F	NA	NA	NA	NA	NA
90	LBHC099	Healthy-control	Discovery	yes	47	F	NA	NA	NA	NA	NA
91	LBHC102	Healthy-control	Discovery	yes	39	M	NA	NA	NA	NA	NA
92	LBHC103	Healthy-control	Discovery	yes	67	F	NA	NA	NA	NA	NA
93	LBHC104	Healthy-control	Discovery	yes	52	M	NA	NA	NA	NA	NA
94	LBHC106	Healthy-control	Discovery	yes	47	M	NA	NA	NA	NA	NA
95	LBHC002	Healthy-control	Discovery	yes	29	M	NA	NA	NA	NA	NA
96	LBHC009	Healthy-control	Discovery	yes	34	F	NA	NA	NA	NA	NA
97	LBHC010	Healthy-control	Discovery	yes	38	F	NA	NA	NA	NA	NA
98	LBHC014	Healthy-control	Discovery	yes	60	F	NA	NA	NA	NA	NA
99	LBHC018	Healthy-control	Discovery	yes	61	F	NA	NA	NA	NA	NA
100	LBHC019	Healthy-control	Discovery	yes	41	M	NA	NA	NA	NA	NA
101	LBHC020	Healthy-control	Discovery	yes	37	M	NA	NA	NA	NA	NA

102	LBHC026	Healthy-control	Discovery	yes	40	F	NA	NA	NA	NA	NA
103	LBHC038	Healthy-control	Discovery	yes	30	F	NA	NA	NA	NA	NA
104	LBHC051	Healthy-control	Discovery	yes	39	F	NA	NA	NA	NA	NA
105	LBHC056	Healthy-control	Discovery	yes	35	F	NA	NA	NA	NA	NA
106	LBHC064	Healthy-control	Discovery	yes	35	F	NA	NA	NA	NA	NA
107	LBHC072	Healthy-control	Discovery	yes	40	M	NA	NA	NA	NA	NA
108	LBHC089	Healthy-control	Discovery	yes	48	F	NA	NA	NA	NA	NA
109	LBHC098	Healthy-control	Discovery	yes	44	F	NA	NA	NA	NA	NA
110	LBHC107	Healthy-control	Discovery	yes	43	M	NA	NA	NA	NA	NA

**Table S1B: Clinical characteristics of patients and healthy controls in the validation cohort.**

	<b>LABCODE</b>	<b>Type</b>	<b>Cohort</b>	<b>Age</b>	<b>Gender</b>	<b>Imaging Diagnosis</b>	<b>Tumor volume</b>	<b>Tumor location</b>	<b>High risk</b>
1	LBHC004	Healthy-control	Validation	35	F	NA	NA	NA	NA
2	LBHC016	Healthy-control	Validation	49	F	NA	NA	NA	NA
3	LBHC021	Healthy-control	Validation	47	F	NA	NA	NA	NA
4	LBHC022	Healthy-control	Validation	17	F	NA	NA	NA	NA
5	LBHC025	Healthy-control	Validation	75	F	NA	NA	NA	NA
6	LBHC027	Healthy-control	Validation	30	M	NA	NA	NA	NA
7	LBHC030	Healthy-control	Validation	42	F	NA	NA	NA	NA
8	LBHC045	Healthy-control	Validation	54	M	NA	NA	NA	NA
9	LBHC048	Healthy-control	Validation	59	M	NA	NA	NA	NA
10	LBHC074	Healthy-control	Validation	28	M	NA	NA	NA	NA
11	LBHC105	Healthy-control	Validation	51	M	NA	NA	NA	NA
12	LBHC007	Healthy-control	Validation	27	M	NA	NA	NA	NA
13	LBHC008	Healthy-control	Validation	48	M	NA	NA	NA	NA
14	LBHC012	Healthy-control	Validation	35	F	NA	NA	NA	NA
15	LBHC028	Healthy-control	Validation	31	F	NA	NA	NA	NA
16	LBHC031	Healthy-control	Validation	53	M	NA	NA	NA	NA
17	LBHC041	Healthy-control	Validation	39	F	NA	NA	NA	NA
18	LBHC047	Healthy-control	Validation	54	M	NA	NA	NA	NA
19	LBHC057	Healthy-control	Validation	35	M	NA	NA	NA	NA
20	LBHC077	Healthy-control	Validation	38	F	NA	NA	NA	NA
21	LBHC037	Healthy-control	Validation	37	F	NA	NA	NA	NA
22	LBHC042	Healthy-control	Validation	28	F	NA	NA	NA	NA
23	LBHC044	Healthy-control	Validation	45	F	NA	NA	NA	NA
24	LBHC046	Healthy-control	Validation	48	F	NA	NA	NA	NA
25	LBHC049	Healthy-control	Validation	42	M	NA	NA	NA	NA
26	LBHC050	Healthy-control	Validation	47	F	NA	NA	NA	NA
27	LBHC052	Healthy-control	Validation	33	F	NA	NA	NA	NA
28	LBHC053	Healthy-control	Validation	61	M	NA	NA	NA	NA



29	LBHC054	Healthy-control	Validation	32	F	NA	NA	NA	NA
30	LBHC058	Healthy-control	Validation	43	M	NA	NA	NA	NA
31	LBHC060	Healthy-control	Validation	45	F	NA	NA	NA	NA
32	LBHC062	Healthy-control	Validation	55	F	NA	NA	NA	NA
33	LBHC063	Healthy-control	Validation	56	M	NA	NA	NA	NA
34	LBHC066	Healthy-control	Validation	46	F	NA	NA	NA	NA
35	LBHC068	Healthy-control	Validation	31	F	NA	NA	NA	NA
36	LBHC069	Healthy-control	Validation	43	M	NA	NA	NA	NA
37	LBHC070	Healthy-control	Validation	26	M	NA	NA	NA	NA
38	LBHC071	Healthy-control	Validation	35	F	NA	NA	NA	NA
39	LBHC073	Healthy-control	Validation	33	F	NA	NA	NA	NA
40	LBHC076	Healthy-control	Validation	48	M	NA	NA	NA	NA
41	LBHC081	Healthy-control	Validation	47	F	NA	NA	NA	NA
42	LBHC083	Healthy-control	Validation	63	F	NA	NA	NA	NA
43	LBHC084	Healthy-control	Validation	64	M	NA	NA	NA	NA
44	LBHC085	Healthy-control	Validation	33	F	NA	NA	NA	NA
45	LBHC086	Healthy-control	Validation	39	M	NA	NA	NA	NA
46	LBHC090	Healthy-control	Validation	40	F	NA	NA	NA	NA
47	LBHC091	Healthy-control	Validation	53	M	NA	NA	NA	NA
48	LBHC092	Healthy-control	Validation	67	M	NA	NA	NA	NA
49	LBHC093	Healthy-control	Validation	58	F	NA	NA	NA	NA
50	LBHC096	Healthy-control	Validation	38	F	NA	NA	NA	NA
51	LBHC100	Healthy-control	Validation	29	M	NA	NA	NA	NA
52	LBHC101	Healthy-control	Validation	47	M	NA	NA	NA	NA
53	LBHC108	Healthy-control	Validation	31	M	NA	NA	NA	NA
54	LBM005	Cancer	Validation	58	M	Non-metastatic HCC	NA	NA	HCV
55	LBM006	Cancer	Validation	73	M	Non-metastatic HCC	NA	NA	HCV
56	LBM010	Cancer	Validation	47	M	Non-metastatic HCC	NA	NA	HBV
57	LBM016	Cancer	Validation	33	M	Non-metastatic HCC	NA	NA	HBV
58	LBM018	Cancer	Validation	63	M	Non-metastatic HCC	NA	NA	HBV
59	LBM022	Cancer	Validation	69	M	Non-metastatic HCC	NA	NA	HCV

60	LBM023	Cancer	Validation	66	M	Non-metastatic HCC	NA	NA	HBV
61	LBM025	Cancer	Validation	69	F	Non-metastatic HCC	NA	NA	HBV
62	LBM028	Cancer	Validation	77	F	Non-metastatic HCC	NA	NA	HBV
63	LBM031	Cancer	Validation	52	M	Non-metastatic HCC	NA	NA	HBV
64	LBM033	Cancer	Validation	56	M	Non-metastatic HCC	NA	NA	HBV
65	LBM036	Cancer	Validation	62	F	Non-metastatic HCC	NA	NA	HCV
66	LBM037	Cancer	Validation	48	M	Non-metastatic HCC	NA	NA	HBV
67	LBM038	Cancer	Validation	73	M	Non-metastatic HCC	NA	NA	NA
68	LBM040	Cancer	Validation	60	F	Non-metastatic HCC	NA	NA	HBV
69	LBM043	Cancer	Validation	65	M	Non-metastatic HCC	NA	NA	HCV
70	LBM053	Cancer	Validation	69	M	Non-metastatic HCC	NA	NA	HBV
71	LBM054	Cancer	Validation	55	M	Non-metastatic HCC	NA	NA	HCV
72	LBM056	Cancer	Validation	64	F	Non-metastatic HCC	NA	NA	HCV
73	LBM065	Cancer	Validation	66	M	Non-metastatic HCC	NA	NA	HCV
74	LBM070	Cancer	Validation	71	M	Non-metastatic HCC	NA	NA	HBV
75	LBM001	Cancer	Validation	72	F	Non-metastatic HCC	NA	NA	No
76	LBM002	Cancer	Validation	51	M	Non-metastatic HCC	NA	NA	No
77	LBM003	Cancer	Validation	34	M	Non-metastatic HCC	NA	NA	HBV
78	LBM004	Cancer	Validation	63	F	Non-metastatic HCC	NA	NA	HBV
79	LBM007	Cancer	Validation	61	F	Non-metastatic HCC	NA	NA	HBV
80	LBM009	Cancer	Validation	71	M	Non-metastatic HCC	NA	NA	HBV
81	LBM011	Cancer	Validation	56	F	Non-metastatic HCC	NA	NA	HBV
82	LBM012	Cancer	Validation	52	M	Non-metastatic HCC	NA	NA	HBV
83	LBM013	Cancer	Validation	57	M	Non-metastatic HCC	NA	NA	HBV
84	LBM014	Cancer	Validation	56	M	Non-metastatic HCC	NA	NA	No
85	LBM015	Cancer	Validation	50	M	Non-metastatic HCC	NA	NA	HBV
86	LBM017	Cancer	Validation	57	M	Non-metastatic HCC	NA	NA	No
87	LBM019	Cancer	Validation	60	M	Non-metastatic HCC	NA	NA	HBV
88	LBM021	Cancer	Validation	61	F	Non-metastatic HCC	NA	NA	HBV
89	LBM024	Cancer	Validation	65	M	Non-metastatic HCC	NA	NA	NA
90	LBM026	Cancer	Validation	64	F	Non-metastatic HCC	NA	NA	HBV

91	LBM027	Cancer	Validation	58	M	Non-metastatic HCC	NA	NA	No
92	LBM029	Cancer	Validation	51	M	Non-metastatic HCC	NA	NA	HBV
93	LBM030	Cancer	Validation	67	F	Non-metastatic HCC	NA	NA	HBV
94	LBM032	Cancer	Validation	51	M	Non-metastatic HCC	NA	NA	HBV
95	LBM034	Cancer	Validation	59	F	Non-metastatic HCC	NA	NA	No
96	LBM035	Cancer	Validation	48	M	Non-metastatic HCC	NA	NA	HBV
97	LBM039	Cancer	Validation	68	M	Non-metastatic HCC	NA	NA	HBV
98	LBM042	Cancer	Validation	46	M	Non-metastatic HCC	NA	NA	NA
99	LBM044	Cancer	Validation	53	M	Non-metastatic HCC	NA	NA	NA
100	LBM045	Cancer	Validation	42	M	Non-metastatic HCC	NA	NA	HBV
101	LBM046	Cancer	Validation	57	M	Non-metastatic HCC	NA	NA	HBV/HCV
102	LBM055	Cancer	Validation	72	F	Non-metastatic HCC	NA	NA	No
103	LBM057	Cancer	Validation	50	M	Non-metastatic HCC	NA	NA	HBV
104	LBM058	Cancer	Validation	72	F	Non-metastatic HCC	NA	NA	HCV
105	LBM069	Cancer	Validation	63	M	Non-metastatic HCC	NA	NA	HCV
106	LBM073	Cancer	Validation	73	F	Non-metastatic HCC	NA	NA	HBV
107	LBM083	Cancer	Validation	55	M	Non-metastatic HCC	NA	NA	HBV

**Table S2: Gene panel for targeted sequencing**

<b>Target</b>	<b>Target region size (bp)</b>	<b>Chromosome</b>	<b>Start</b>	<b>Stop</b>	<b>Strand</b>
APC	8931	5	112043415	112179823	+
ARID1A	6858	1	27022895	27107247	+
AXIN1	2886	16	338122	402434	-
BRAF	10204	7	140419134	140624305	-
CDKN2A	2627	9	21968228	21994357	-
CTNNB1	2346	3	41265560	41280833	+
EGFR	4952	7	55086971	55273310	+
KRAS	1273	12	25362445	25398329	-
PIK3CA	3207	3	178916614	178952152	+
PTEN	1212	10	89624226	89725229	+
STK11	4617	19	1206913	1228081	+
TP53	1689	17	7572927	7579912	-
TERT (promoter)	300	5	1253282	1295184	-

**Table S3 Frequencies of mutations of difference sources in 55 HCC patients**

Gene	LB_unique				TDM				LB-shared-WBC				VUS			
	Mutation (N=3620)		Sample (N=55)		Mutation (N=30)		Sample (N=55)		Mutation (N=66)		Sample (N=55)		Mutation (N=3596)		Sample (N=55)	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
APC	592	16%	53	96%	2	7%	1	2%	7	11%	32	58%	591	16%	53	96%
ARID1A	590	16%	54	98%	3	10%	3	5%	7	11%	13	24%	588	16%	54	98%
AXIN1	259	7%	54	98%	3	10%	3	5%	5	8%	17	31%	257	7%	54	98%
BRAF	621	17%	55	100%	3	10%	3	5%	6	9%	27	49%	619	17%	55	100%
CDKN2A	139	4%	50	91%	0	0%	0	0%	3	5%	27	49%	139	4%	50	91%
CTNNB1	99	3%	30	55%	4	13%	4	7%	1	2%	7	13%	95	3%	28	51%
EGFR	436	12%	49	89%	3	10%	3	5%	13	20%	45	82%	433	12%	49	89%
KRAS	45	1%	22	40%	0	0%	0	0%	3	5%	12	22%	45	1%	22	40%
PIK3CA	162	4%	39	71%	0	0%	0	0%	0	0%	0	0%	162	5%	39	71%
PTEN	93	3%	33	60%	2	7%	2	4%	1	2%	1	2%	91	3%	32	58%
STK11	428	12%	53	96%	2	7%	2	4%	16	24%	32	58%	426	12%	53	96%
TERT	22	1%	25	45%	1	3%	4	7%	1	2%	11	20%	21	1%	23	42%
TP53	134	4%	44	80%	7	23%	11	20%	3	5%	26	47%	129	4%	41	75%