Supplementary Table S11: Comparative analysis of the frequencies of mutations in the 241 genes in luminal A-like MaBC, FBC of luminal A molecular subtype, post-menopausal FBC of luminal A molecular subtype, non-lobular FBC of luminal A molecular subtype and non-lobular post-menopausal FBC of luminal A molecular subtype. Comparisons were performed using Fisher's exact tests. P-values reported are two-tailed.

	Luminal A-like MaBC (n=17)			Post-menopausal FBC of luminal A subtype (n=113)				FBC of luminal A subtype (n=208)				Post-menopausal non-lobular FBC of luminal A subtype (n=93)				Non-lobular FBC of luminal A subtype (n=179)			
	Number of cases altered	Number of cases not altered	Percent of cases altered	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)
ABCA13	0	17	0.0%	5	108	4.4%	1.0000	6	202	2.9%	1.0000	4	89	4.3%	1.0000	5	174	2.8%	1.0000
ABCB1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ADAMTSL1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
AGFG2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
AHNAK2	1	16	5.9%	2	111	1.8%	0.3456	6	202	2.9%	0.4275	2	91	2.2%	0.3987	5	174	2.8%	0.4241
AK9	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
AKAP9	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
AKT1	0	17	0.0%	2	111	1.8%	1.0000	7	201	3.4%	1.0000	2	91	2.2%	1.0000	7	172	3.9%	1.0000
AKT2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
AKT3	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
ANK3	0	17	0.0%	2	111	1.8%	1.0000	4	204	1.9%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
AOAH	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APC	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
APOBEC1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC3A	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
APOBEC3C	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC3D	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC3F	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC3G	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC3H	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
APOBEC4	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ARAF	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
ARID1A	1	16	5.9%	2	111	1.8%	0.3456	4	204	1.9%	0.3273	2	91	2.2%	0.3987	4	175	2.2%	0.3678
ATM	0	17	0.0%	0	113	0.0%	1.0000	4	204	1.9%	1.0000	0	93	0.0%	1.0000	4	175	2.2%	1.0000
ATN1	0	17	0.0%	4	109	3.5%	1.0000	5	203	2.4%	1.0000	4	89	4.3%	1.0000	5	174	2.8%	1.0000
ATR	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ATRX	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
AURKA	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
AURKB	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
AURKC	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
BIRC5	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
BRAF	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
BRCA1	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
BRCA2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
BRIP1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CACNA1A	0	17	0.0%	3	110	2.7%	1.0000	3	205	1.4%	1.0000	3	90	3.2%	1.0000	3	176	1.7%	1.0000
CACNA1C	0	17	0.0%	2	111	1.8%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
CACNA1E	0	17	0.0%	2	111	1.8%	1.0000	3	205	1.4%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
CBFB	0	17	0.0%	2	111	1.8%	1.0000	5	203	2.4%	1.0000	2	91	2.2%	1.0000	5	174	2.8%	1.0000
CDC25A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDC25B	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDC25C	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDH1	1	16	5.9%	14	99	12.4%	0.6912	22	186	10.6%	1.0000	0	93	0.0%	0.1545	4	175	2.2%	0.3678
CDK1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDK4	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDK6	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
CDKN1A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDKN1B	0	17	0.0%	1	112	0.9%	1.0000	3	205	1.4%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
CDKN2A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CDKN2B	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CEP164	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
CHD4	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
CHD6	1	16	5.9%	2	111	1.8%	0.3456	3	205	1.4%	0.2713	2	91	2.2%	0.3987	3	176	1.7%	0.3064
CHEK1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CHEK2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
COL12A1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
CTCF	0	17	0.0%	4	109	3.5%	1.0000	9	199	4.3%	1.0000	4	89	4.3%	1.0000	8	171	4.5%	1.0000
CTNNB1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
CUBN	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
DCHS2	0	17	0.0%	1	112	0.9%	1.0000	3	205	1.4%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
DEPTOR	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
DMC1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
DOCK11	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
EGFR	1	16	5.9%	1	112	0.9%	0.2453	1	207	0.5%	0.1457	0	93	0.0%	0.1545	0	179	0.0%	0.0867
EME1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
EME2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
EPPK1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ERBB2	0	17	0.0%	1	112	0.9%	1.0000	3	205	1.4%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
ERBB3	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
ERBB4	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
ERCC1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
ERCC2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ERCC3	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ERCC5	0	17	0.0%	2	111	1.8%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
ESR1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
ESR2	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
FAM157B	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCA	0	17	0.0%	2	111	1.8%	1.0000	4	204	1.9%	1.0000	2	91	2.2%	1.0000	4	175	2.2%	1.0000
FANCB	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCC	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
FANCD2	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
FANCE	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCF	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCG	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCI	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCL	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FANCM	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
FBN1	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
FGFR1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FGFR2	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
FGFR3	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
FGFR4	1	16	5.9%	0	113	0.0%	0.1308	1	207	0.5%	0.1457	0	93	0.0%	0.1545	1	178	0.6%	0.1664
FMN2	0	17	0.0%	1	112	0.9%	1.0000	3	205	1.4%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
FOXA1	1	16	5.9%	4	109	3.5%	0.5096	5	203	2.4%	0.3793	3	90	3.2%	0.4943	4	175	2.2%	0.3678
FOXC2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
FRG1B	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
GATA3	0	17	0.0%	12	101	10.6%	0.3641	29	179	13.9%	0.1379	11	82	11.8%	0.2086	28	151	15.6%	0.1386
GRB2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
GRIN2A	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
GRIN2B	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000

HECW1	1	16	5.9%	1	112	0.9%	0.2453	2	206	1.0%	0.2108	0	93	0.0%	0.1545	1	178	0.6%	0.1664
HERC2	2	15	11.8%	0	113	0.0%	0.0162	1	207	0.5%	0.0155	0	93	0.0%	0.0227	1	178	0.6%	0.0202
HIF1A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
HRAS	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
HRNR	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
HSP90AA1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
HSP90AB1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
HUWE1	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
IGF1R	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
INPP4B	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
IRS1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
JAK1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
JAK2	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
KIT	0	17	0.0%	0	113	0.0%	1.0000	3	205	1.4%	1.0000	0	93	0.0%	1.0000	3	176	1.7%	1.0000
KMT2C	1	16	5.9%	13	100	11.5%	0.6926	17	191	8.2%	1.0000	11	82	11.8%	0.6876	15	164	8.4%	1.0000
KMT2D	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
KRAS	0	17	0.0%	3	110	2.7%	1.0000	3	205	1.4%	1.0000	2	91	2.2%	1.0000	2	177	1.1%	1.0000
LAMA1	2	15	11.8%	0	113	0.0%	0.0162	1	207	0.5%	0.0155	0	93	0.0%	0.0227	1	178	0.6%	0.0202
LAMA5	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MACF1	1	16	5.9%	4	109	3.5%	0.5096	5	203	2.4%	0.3793	3	90	3.2%	0.4943	4	175	2.2%	0.3678
MAP1A	0	17	0.0%	1	112	0.9%	1.0000	3	205	1.4%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
MAP2K1	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
MAP2K2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAP2K3	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAP2K4	0	17	0.0%	7	106	6.2%	0.5934	16	192	7.7%	0.6170	5	88	5.4%	1.0000	14	165	7.8%	0.6157
MAP2K6	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAP3K1	2	15	11.8%	18	95	15.9%	1.0000	30	178	14.4%	1.0000	17	76	18.3%	0.7319	29	150	16.2%	1.0000
MAP3K10	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAP3K4	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
MAP4K4	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAPK1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MAPK8	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
MAPK9	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
MDM2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MDN1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
MED12	1	16	5.9%	0	113	0.0%	0.1308	2	206	1.0%	0.2108	0	93	0.0%	0.1545	2	177	1.1%	0.2394
MET	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
MGAM	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
MGMT	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
MLH1	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
MLH3	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MRE11A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MSH2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MSH3	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MSH5	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
MSH6	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MST1L	0	17	0.0%	3	110	2.7%	1.0000	3	205	1.4%	1.0000	3	90	3.2%	1.0000	3	176	1.7%	1.0000
MTOR	0	17	0.0%	3	110	2.7%	1.0000	5	203	2.4%	1.0000	1	92	1.1%	1.0000	3	176	1.7%	1.0000
MUTYH	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
MXRA5	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
NBEAL2	1	16	5.9%	1	112	0.9%	0.2453	2	206	1.0%	0.2108	0	93	0.0%	0.1545	1	178	0.6%	0.1664
NBN	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
NBPF1	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
NCOA3	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
NCOR1	0	17	0.0%	5	108	4.4%	1.0000	10	198	4.8%	1.0000	4	89	4.3%	1.0000	8	171	4.5%	1.0000
NCOR2	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
NEB	2	15	11.8%	6	107	5.3%	0.2807	9	199	4.3%	0.1974	5	88	5.4%	0.2951	8	171	4.5%	0.2108
NF1	0	17	0.0%	3	110	2.7%	1.0000	6	202	2.9%	1.0000	2	91	2.2%	1.0000	3	176	1.7%	1.0000
NF2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
NR1H2	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
NRAS	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PALB2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PARP1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PARP2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PARP3	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
PCNXL2	0	17	0.0%	2	111	1.8%	1.0000	3	205	1.4%	1.0000	2	91	2.2%	1.0000	3	176	1.7%	1.0000
PDGFRA	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PDGFRB	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PGR	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PIK3CA	2	15	11.8%	57	56	50.4%	0.0032	96	112	46.2%	0.0052	49	44	52.7%	0.0027	85	94	47.5%	0.0044
PIK3CB	1	16	5.9%	1	112	0.9%	0.2453	2	206	1.0%	0.2108	0	93	0.0%	0.1545	1	178	0.6%	0.1664
PIK3R1	0	17	0.0%	3	110	2.7%	1.0000	4	204	1.9%	1.0000	3	90	3.2%	1.0000	4	175	2.2%	1.0000
PLEC	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
PLK1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PLXNA4	1	16	5.9%	2	111	1.8%	0.3456	3	205	1.4%	0.2713	1	92	1.1%	0.2864	2	177	1.1%	0.2394
PMS1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
PMS2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
POLB	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
POLD1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
POLE	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
POLH	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
POLQ	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
PRKCA	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PRKCB	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
PRKCD	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PRKCG	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
PTCH1	0	17	0.0%	2	111	1.8%	1.0000	2	206	1.0%	1.0000	2	91	2.2%	1.0000	2	177	1.1%	1.0000
PTEN	1	16	5.9%	7	106	6.2%	1.0000	9	199	4.3%	0.5518	4	89	4.3%	0.5754	6	173	3.4%	0.4756
PTK2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
RAD50	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RAD51	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RAD51B	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RAD51C	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RAD51D	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
RAD52	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RAD54B	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	2	177	1.1%	1.0000
RAD54L	0	17	0.0%	2	111	1.8%	1.0000	2	206	1.0%	1.0000	2	91	2.2%	1.0000	2	177	1.1%	1.0000
RAF1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
RB1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RBBP8	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RELN	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
RICTOR	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RPS6KB1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RPTOR	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
RUNX1	0	17	0.0%	6	107	5.3%	1.0000	11	197	5.3%	1.0000	3	90	3.2%	1.0000	7	172	3.9%	1.0000
SHC1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
SHROOM4	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
SMO	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
SOS1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
SPEN	1	16	5.9%	5	108	4.4%	0.5763	7	201	3.4%	0.4721	4	89	4.3%	0.5754	6	173	3.4%	0.4756
SPRY1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
SPTA1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
SRCAP	0	17	0.0%	2	111	1.8%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
STAT1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000

STAT3	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
SVEP1	2	15	11.8%	0	113	0.0%	0.0162	4	204	1.9%	0.0674	0	93	0.0%	0.0227	3	176	1.7%	0.0607
TBX3	0	17	0.0%	2	111	1.8%	1.0000	5	203	2.4%	1.0000	2	91	2.2%	1.0000	4	175	2.2%	1.0000
TENM1	0	17	0.0%	0	113	0.0%	1.0000	3	205	1.4%	1.0000	0	93	0.0%	1.0000	3	176	1.7%	1.0000
TGFBR1	1	16	5.9%	0	113	0.0%	0.1308	0	208	0.0%	0.0756	0	93	0.0%	0.1545	0	179	0.0%	0.0867
TGFBR2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
TGFBR3	0	17	0.0%	0	113	0.0%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	1	178	0.6%	1.0000
TOP2A	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
TP53	1	16	5.9%	17	96	15.0%	0.4647	24	184	11.5%	0.7011	16	77	17.2%	0.4635	23	156	12.8%	0.6999
TP53BP1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
TSC1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
TSC2	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
TYK2	0	17	0.0%	1	112	0.9%	1.0000	2	206	1.0%	1.0000	1	92	1.1%	1.0000	1	178	0.6%	1.0000
UBR4	1	16	5.9%	2	111	1.8%	0.3456	3	205	1.4%	0.2713	2	91	2.2%	0.3987	3	176	1.7%	0.3064
USP36	0	17	0.0%	0	113	0.0%	1.0000	2	206	1.0%	1.0000	0	93	0.0%	1.0000	2	177	1.1%	1.0000
WDFY3	1	16	5.9%	3	110	2.7%	0.4332	4	204	1.9%	0.3273	2	91	2.2%	0.3987	3	176	1.7%	0.3064
XBP1	0	17	0.0%	1	112	0.9%	1.0000	1	207	0.5%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
XPA	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
XPC	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
XRCC1	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
XRCC2	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
XRCC3	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ZFHX3	0	17	0.0%	1	112	0.9%	1.0000	5	203	2.4%	1.0000	1	92	1.1%	1.0000	4	175	2.2%	1.0000
ZFHX4	2	15	11.8%	3	110	2.7%	0.1272	5	203	2.4%	0.0902	3	90	3.2%	0.1698	5	174	2.8%	0.1149
ZNF384	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000
ZNF703	0	17	0.0%	0	113	0.0%	1.0000	0	208	0.0%	1.0000	0	93	0.0%	1.0000	0	179	0.0%	1.0000

Supplementary Table S12: Comparative analysis of the frequencies of mutations in the 241 genes in luminal B-like MaBC, FBC of luminal B molecular subtype, post-menopausal FBC of luminal B molecular subtype, non-lobular FBC of luminal B molecular subtype and non-lobular post-menopausal FBC of luminal B molecular subtype. Comparisons were performed using Fisher's exact tests. P-values reported are two-tailed.

	Luminal B-like MaBC (n=42)			Post-menopausal FBC of luminal B subtype (n=51)				FBC of luminal B subtype (n=107)				Post-menopausal non-lobular FBC of luminal B subtype (n=48)				Non-lobular FBC of luminal B subtype (n=101)			
	Number of cases altered	Number of cases not altered	Percent of cases altered	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)	Number of cases altered	Number of cases not altered	Percent of cases altered	Fisher p-value (vs MaBC)
ABCA13	3	39	7.1%	1	50	2.0%	0.3245	2	105	1.9%	0.1363	1	47	2.1%	0.3356	2	99	2.0%	0.1510
ABCB1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
ADAMTSL1	1	41	2.4%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	0	48	0.0%	0.4667	1	100	1.0%	0.5026
AGFG2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
AHNAK2	2	40	4.8%	1	50	2.0%	0.5873	1	106	0.9%	0.1918	1	47	2.1%	0.5967	1	100	1.0%	0.2063
AK9	0	42	0.0%	0	51	0.0%	1.0000	2	105	1.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
AKAP9	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
AKT1	0	42	0.0%	2	49	3.9%	0.4993	2	105	1.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
AKT2	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
AKT3	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
ANK3	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
AOAH	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APC	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
APOBEC1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC3A	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC3C	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC3D	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC3F	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC3G	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
APOBEC3H	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
APOBEC4	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
ARAF	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
ARID1A	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
ATM	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
ATN1	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
ATR	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
ATRX	0	42	0.0%	2	49	3.9%	0.4993	4	103	3.7%	0.5773	2	46	4.2%	0.4966	3	98	3.0%	0.5555
AURKA	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
AURKB	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
AURKC	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
BIRC5	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
BRAF	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
BRCA1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
BRCA2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
BRIP1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CACNA1A	2	40	4.8%	2	49	3.9%	1.0000	3	104	2.8%	0.6210	2	46	4.2%	1.0000	3	98	3.0%	0.6307
CACNA1C	1	41	2.4%	0	51	0.0%	0.4516	2	105	1.9%	1.0000	0	48	0.0%	0.4667	2	99	2.0%	1.0000
CACNA1E	3	39	7.1%	1	50	2.0%	0.3245	2	105	1.9%	0.1363	1	47	2.1%	0.3356	2	99	2.0%	0.1510
CBFB	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
CDC25A	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
CDC25B	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
CDC25C	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
CDH1	0	42	0.0%	2	49	3.9%	0.4993	5	102	4.7%	0.3222	1	47	2.1%	1.0000	2	99	2.0%	1.0000
CDK1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
CDK4	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CDK6	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
CDKN1A	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CDKN1B	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	0	101	0.0%	0.2937
CDKN2A	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
CDKN2B	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CEP164	2	40	4.8%	2	49	3.9%	1.0000	2	105	1.9%	0.3156	2	46	4.2%	1.0000	2	99	2.0%	0.5809
CHD4	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
CHD6	2	40	4.8%	3	48	5.9%	1.0000	3	104	2.8%	0.6210	3	45	6.3%	1.0000	3	98	3.0%	0.6307
CHEK1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CHEK2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
COL12A1	0	42	0.0%	2	49	3.9%	0.4993	3	104	2.8%	0.5591	2	46	4.2%	0.4966	3	98	3.0%	0.5555
CTCF	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
CTNNB1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
CUBN	1	41	2.4%	3	48	5.9%	0.6240	3	104	2.8%	1.0000	3	45	6.3%	0.6199	3	98	3.0%	1.0000
DCHS2	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
DEPTOR	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
DMC1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
DOCK11	2	40	4.8%	1	50	2.0%	0.5873	2	105	1.9%	0.3156	1	47	2.1%	0.5967	2	99	2.0%	0.5809
EGFR	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
EME1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
EME2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
EPPK1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
ERBB2	1	41	2.4%	0	51	0.0%	0.4516	2	105	1.9%	1.0000	0	48	0.0%	0.4667	1	100	1.0%	0.5026
ERBB3	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
ERBB4	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
ERCC1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
ERCC2	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
ERCC3	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
ERCC5	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
ESR1	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
ESR2	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
FAM157B	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
FANCA	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
FANCB	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCC	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCD2	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
FANCE	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCF	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCG	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCI	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
FANCL	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FANCM	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
FBN1	2	40	4.8%	0	51	0.0%	0.2013	1	106	0.9%	0.1918	0	48	0.0%	0.2150	1	100	1.0%	0.2063
FGFR1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
FGFR2	1	41	2.4%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
FGFR3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FGFR4	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
FMN2	1	41	2.4%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
FOXA1	0	42	0.0%	0	51	0.0%	1.0000	2	105	1.9%	1.0000	0	48	0.0%	1.0000	2	99	2.0%	1.0000
FOXC2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
FRG1B	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
GATA3	9	33	21.4%	8	43	15.7%	0.5920	16	91	15.0%	0.3402	8	40	16.7%	0.5993	16	85	15.8%	0.4711
GRB2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
GRIN2A	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
GRIN2B	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
HECW1	2	40	4.8%	1	50	2.0%	0.5873	2	105	1.9%	0.3156	0	48	0.0%	0.2150	1	100	1.0%	0.2063
HERC2	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
HIF1A	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
HRAS	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
HRNR	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
HSP90AA1	0	42	0.0%	2	49	3.9%	0.4993	2	105	1.9%	1.0000	2	46	4.2%	0.4966	2	99	2.0%	1.0000
HSP90AB1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
HUWE1	0	42	0.0%	2	49	3.9%	0.4993	4	103	3.7%	0.5773	2	46	4.2%	0.4966	4	97	4.0%	0.3206
IGF1R	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000

INPP4B	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
IRS1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
JAK1	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
JAK2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
KIT	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
KMT2C	2	40	4.8%	3	48	5.9%	1.0000	5	102	4.7%	1.0000	3	45	6.3%	1.0000	5	96	5.0%	1.0000
KMT2D	2	40	4.8%	2	49	3.9%	1.0000	3	104	2.8%	0.6210	2	46	4.2%	1.0000	3	98	3.0%	0.6307
KRAS	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
LAMA1	2	40	4.8%	1	50	2.0%	0.5873	1	106	0.9%	0.1918	1	47	2.1%	0.5967	1	100	1.0%	0.2063
LAMA5	1	41	2.4%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	0	48	0.0%	0.4667	1	100	1.0%	0.5026
MACF1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP1A	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP2K1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MAP2K2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP2K3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP2K4	1	41	2.4%	1	50	2.0%	1.0000	3	104	2.8%	1.0000	1	47	2.1%	1.0000	3	98	3.0%	1.0000
MAP2K6	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP3K1	3	39	7.1%	3	48	5.9%	1.0000	6	101	5.6%	0.7121	3	45	6.3%	1.0000	6	95	5.9%	0.7221
MAP3K10	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAP3K4	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
MAP4K4	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
MAPK1	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAPK8	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MAPK9	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MDM2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MDN1	2	40	4.8%	0	51	0.0%	0.2013	2	105	1.9%	0.3156	0	48	0.0%	0.2150	2	99	2.0%	0.5809
MED12	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
MET	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MGAM	1	41	2.4%	1	50	2.0%	1.0000	3	104	2.8%	1.0000	1	47	2.1%	1.0000	3	98	3.0%	1.0000
MGMT	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MLH1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MLH3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MRE11A	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
MSH2	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
MSH3	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MSH5	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MSH6	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
MST1L	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
MTOR	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MUTYH	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
MXRA5	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
NBEAL2	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
NBN	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
NBPF1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
NCOA3	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
NCOR1	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
NCOR2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
NEB	3	39	7.1%	2	49	3.9%	0.6550	3	104	2.8%	0.3510	2	46	4.2%	0.6612	3	98	3.0%	0.3593
NF1	0	42	0.0%	0	51	0.0%	1.0000	3	104	2.8%	0.5591	0	48	0.0%	1.0000	3	98	3.0%	0.5555
NF2	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
NR1H2	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
NRAS	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PALB2	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
PARP1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PARP2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PARP3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PCNXL2	0	42	0.0%	3	48	5.9%	0.2489	4	103	3.7%	0.5773	3	45	6.3%	0.2449	4	97	4.0%	0.3206
PDGFRA	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PDGFRB	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PGR	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
PIK3CA	10	32	23.8%	14	37	27.5%	0.8129	32	75	29.9%	0.5460	13	35	27.1%	0.8107	29	72	28.7%	0.6809
PIK3CB	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
PIK3R1	0	42	0.0%	2	49	3.9%	0.4993	4	103	3.7%	0.5773	2	46	4.2%	0.4966	4	97	4.0%	0.3206
PLEC	3	39	7.1%	2	49	3.9%	0.6550	2	105	1.9%	0.1363	2	46	4.2%	0.6612	2	99	2.0%	0.1510
PLK1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PLXNA4	1	41	2.4%	2	49	3.9%	1.0000	3	104	2.8%	1.0000	2	46	4.2%	1.0000	3	98	3.0%	1.0000
PMS1	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
PMS2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
POLB	1	41	2.4%	1	50	2.0%	1.0000	1	106	0.9%	0.4857	1	47	2.1%	1.0000	1	100	1.0%	0.5026
POLD1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
POLE	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
POLH	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
POLQ	0	42	0.0%	2	49	3.9%	0.4993	2	105	1.9%	1.0000	2	46	4.2%	0.4966	2	99	2.0%	1.0000
PRKCA	2	40	4.8%	0	51	0.0%	0.2013	0	107	0.0%	0.0781	0	48	0.0%	0.2150	0	101	0.0%	0.0848
PRKCB	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PRKCD	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
PRKCG	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
PTCH1	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
PTEN	0	42	0.0%	1	50	2.0%	1.0000	5	102	4.7%	0.3222	1	47	2.1%	1.0000	5	96	5.0%	0.3216
PTK2	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
RAD50	1	41	2.4%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
RAD51	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
RAD51B	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RAD51C	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
RAD51D	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RAD52	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RAD54B	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
RAD54L	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RAF1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RB1	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
RBBP8	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RELN	1	41	2.4%	4	47	7.8%	0.3734	6	101	5.6%	0.6735	4	44	8.3%	0.3665	5	96	5.0%	0.6708
RICTOR	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RPS6KB1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
RPTOR	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
RUNX1	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	2	99	2.0%	1.0000
SHC1	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
SHROOM4	1	41	2.4%	0	51	0.0%	0.4516	1	106	0.9%	0.4857	0	48	0.0%	0.4667	1	100	1.0%	0.5026
SMO	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
SOS1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
SPEN	5	37	11.9%	1	50	2.0%	0.0874	2	105	1.9%	0.0193	1	47	2.1%	0.0937	2	99	2.0%	0.0232
SPRY1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
SPTA1	1	41	2.4%	1	50	2.0%	1.0000	3	104	2.8%	1.0000	1	47	2.1%	1.0000	3	98	3.0%	1.0000
SRCAP	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
STAT1	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
STAT3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
SVEP1	0	42	0.0%	1	50	2.0%	1.0000	3	104	2.8%	0.5591	1	47	2.1%	1.0000	3	98	3.0%	0.5555
TBX3	1	41	2.4%	2	49	3.9%	1.0000	5	102	4.7%	1.0000	1	47	2.1%	1.0000	4	97	4.0%	1.0000
TENM1	0	42	0.0%	0	51	0.0%	1.0000	2	105	1.9%	1.0000	0	48	0.0%	1.0000	2	99	2.0%	1.0000
TGFBR1	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
TGFBR2	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
TGFBR3	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
TOP2A	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
TP53	4	38	9.5%	22	29	43.1%	0.0004	36	71	33.6%	0.0021	21	27	43.8%	0.0003	35	66	34.7%	0.0018
TP53BP1	2	40	4.8%	1	50	2.0%	0.5873	2	105	1.9%	0.3156	1	47	2.1%	0.5967	2	99	2.0%	0.5809
TSC1	0	42	0.0%	1	50	2.0%	1.0000	2	105	1.9%	1.0000	1	47	2.1%	1.0000	2	99	2.0%	1.0000
TSC2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
TYK2	2	40	4.8%	0	51	0.0%	0.2013	1	106	0.9%	0.1918	0	48	0.0%	0.2150	1	100	1.0%	0.2063
UBR4	0	42	0.0%	0	51	0.0%	1.0000	1	106	0.9%	1.0000	0	48	0.0%	1.0000	1	100	1.0%	1.0000
USP36	2	40	4.8%	1	50	2.0%	0.5873	1	106	0.9%	0.1918	1	47	2.1%	0.5967	1	100	1.0%	0.2063

WDFY3	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
XBP1	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
XPA	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
XPC	1	41	2.4%	0	51	0.0%	0.4516	0	107	0.0%	0.2819	0	48	0.0%	0.4667	0	101	0.0%	0.2937
XRCC1	0	42	0.0%	1	50	2.0%	1.0000	1	106	0.9%	1.0000	1	47	2.1%	1.0000	1	100	1.0%	1.0000
XRCC2	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
XRCC3	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
ZFHX3	3	39	7.1%	0	51	0.0%	0.0885	0	107	0.0%	0.0212	0	48	0.0%	0.0977	0	101	0.0%	0.0241
ZFHX4	3	39	7.1%	2	49	3.9%	0.6550	2	105	1.9%	0.1363	2	46	4.2%	0.6612	2	99	2.0%	0.1510
ZNF384	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000
ZNF703	0	42	0.0%	0	51	0.0%	1.0000	0	107	0.0%	1.0000	0	48	0.0%	1.0000	0	101	0.0%	1.0000