

Appendix 1. ddPCR result for SNV and INDEL (variants in purple are cell-derived).

Variant Name	AVG AF%	STDEV	Cosmic ID
KRAS G12C	4.47	0.51	COSV55497469
KRAS G12D	6.06	0.58	COSV55497369
KRAS G12V	2.58	0.24	COSV55497419
TP53 R248Q	1.95	0.18	COSV52661580
PIK3CA E545K	4.26	0.43	COSV55873239
PIK3CA H1047R	4.21	0.40	COSV55873195
EGFR T790M	2.55	0.25	COSV51765492
EGFR C797S	2.55	0.25	COSV51766493
EGFR D770_N771insG	2.55	0.25	COSV51769298
EGFR L858R	2.65	0.57	COSV51765161
BRAF V600E	4.22	1.40	COSV56056643
NRAS Q61R	3.21	0.30	COSV54736340
PTEN R130G	5.71	1.10	COSV64288384
TP53 R175H	2.15	0.38	COSV52661038
IDH1 R132H	4.24	0.37	COSV61615239
CTNNB1 T41A	2.09	0.38	COSV62687862
CTNNB1 S33C	2.09	0.38	COSV62687839
FGFR3 S249C	1.72	1.04	COSV53390026
APC Q1429*	3.75	0.30	COSV57322632
APC R1450*	3.75	0.30	COSV57321313
EGFR E746-A750del v1	2.72	0.16	COSV51765119
EGFR E746-A750del v2	3.96	0.46	COSV51765066
KIT D816V	3.33	0.40	COSV55386424
AKT1 E17K	2.66	0.27	COSV62571334
ATM R337C	6.43	0.65	COSV53723836
EGFR G719A	9.47	4.59	COSV51769339
CDKN2A R80*	1.95	0.10	COSV58682746
ESR1 D538G	2.21	0.20	COSV52781024
HRAS Q61R	1.94	0.20	COSV54242436
KIT W557_K558del	7.38	0.22	COSV55387046
MED12 G44D	3.34	1.23	COSV61329353
NF1 I679Dfs*21	2.65	0.23	COSV62191410
NOTCH1 H1601L	1.83	0.05	COSV99489272
PDGFRA D842V	3.05	0.05	COSV57264120
SMARCA4 T910M	2.30	0.22	COSV60785486
TP53 R273H	3.00	0.15	COSV52660980
ERBB2 (S310F)	1.91	0.48	COSV54062198
MAP2K1 (P124S)	2.91	0.22	COSV61068297
MET (Y1253D)	5.75	0.01	COSV59257036
STK11 F354L	3.55	0.07	COSV58819912
MDM2 R189H	4.28	0.76	COSV50698253
MDM4 Q118L	5.21	0.31	COSV65794868
ErbB4 p.R711C	3.36	0.21	COSV53505317
POLE P286R	5.88	0.36	COSV57673247
DDR2 R709*	4.45	0.23	COSV63370359

Appendix 2. ddPCR Result for Fusions

Variant Name	chr	Position	Ref	Alt	AVG AF%	STDEV
ETV6-NTRK3	chr12	11650883	chr15	88254804	7.71	1.87
CCDC6-RET	chr10	59906206	chr10	43079395	6.77	0.58
CD74-ROS1	chr5	150412394	chr6	117420223	7.22	0.21
SLC34A2-ROS1	chr4	25656241	chr6	117420522	6.33	0.29
KIF5B-RET	chr10	32018137	chr10	43116584	3.97	0.14
FGFR2-BICC1 fusion	chr10	121483783	chr10	58702071	3.55	0.06
EML4-ALK v1	chr2	42295515	chr2	29223435	2.96	0.30

Appendix 3. NGS Results (variants in purple are cell-derived).

Variant Name	AVG AF%	STDEV	Cosmic ID
KRAS G12C	4.22	0.46	COSV55497469
KRAS G12D	3.09	0.58	COSV55497369
KRAS G12V	3.00	0.48	COSV55497419
TP53 R248Q	2.62	0.31	COSV52661580
PIK3CA E545K	4.05	0.37	COSV55873239
PIK3CA H1047R	4.16	1.38	COSV55873195
EGFR T790M	1.87	1.05	COSV51765492
EGFR C797S	3.83	1.41	COSV51766493
EGFR D770_N771insG	1.87	1.05	COSV51769298
EGFR L858R	2.52	0.38	COSV51765161
BRAF V600E	4.52	1.04	COSV56056643
NRAS Q61R	3.36	0.59	COSV54736340
PTEN R130G	2.99	0.38	COSV64288384
TP53 R175H	1.80	0.23	COSV52661038
IDH1 R132H	3.40	0.44	COSV61615239
CTNNB1 T41A	1.16	0.33	COSV62687862
CTNNB1 S33C	3.67	0.83	COSV62687839
FGFR3 S249C	1.44	0.30	COSV53390026
APC Q1429*	Not Tested	Not Tested	COSV57322632
APC R1450*	2.58	0.33	COSV57321313
EGFR E746-A750del v1	3.32	0.45	COSV51765119
EGFR E746-A750del v2	3.38	0.44	COSV51765066
KIT D816V	Not Tested	Not Tested	COSV55386424
AKT1 E17K	9.73	1.82	COSV62571334
ATM R337C	0.18	0.22	COSV53723836
EGFR G719A	4.48	1.01	COSV51769339
CDKN2A R80*	18.99	2.34	COSV58682746
ESR1 D538G	8.97	1.03	COSV52781024
HRAS Q61R	12.06	1.69	COSV54242436
KIT W557_K558del	2.18	0.47	COSV55387046
MED12 G44D	9.80	1.40	COSV61329353
NF1 I679Dfs*21	9.55	1.15	COSV62191410
NOTCH1 H1601L	12.20	1.35	COSV99489272
PDGFRA D842V	9.30	1.24	COSV57264120
SMARCA4 T910M	7.31	1.36	COSV60785486
TP53 R273H	5.02	1.04	COSV52660980
ERBB2 (S310F)	7.63	1.56	COSV54062198
MAP2K1 (P124S)	10.58	0.88	COSV61068297
MET (Y1253D)	18.33	2.13	COSV59257036
STK11 F354L	13.12	1.70	COSV58819912
MDM2 R189H	8.32	0.84	COSV50698253
MDM4 Q118L	15.05	2.06	COSV65794868
ErbB4 p.R711C	0.04	1.87	COSV53505317
POLE P286R	14.79	2.36	COSV57673247
DDR2 R709*	16.30	2.57	COSV63370359

Appendix 4. NGS Results for fusions

Variant Name	chr	Position	Ref	Alt	AVG AF%	STDEV
ETV6-NTRK3	chr12	11650883	chr15	88254804	15.1%	3.2%
CCDC6-RET	chr10	59906206	chr10	43079395	19.0%	3.0%
CD74-ROS1	chr5	150412394	chr6	117420223	13.4%	2.0%
SLC34A2-ROS1	chr4	25656241	chr6	117420522	Not Tested	Not Tested
KIF5B-RET	chr10	32018137	chr10	43116584	8.4%	1.7%
FGFR2-BICC1 fusion	chr10	121483783	chr10	58702071	10.9%	2.4%
EML4-ALK v1	chr2	42295515	chr2	29223435	8.6%	1.9%