

Appendix 1—method

List of 160 genes involved in cancer to be analyzed by GeneRead DNaseq Targeted HC panel v2

ABL1	AKT1	AKT2	ALK	AMER1	APC	AR	ARID1A	ARID2	ASXL1
ATM	ATRX	BAP1	BCL6	BCOR	BRAF	BRCA1	BRCA2	BRIP1	BTK
BUB1B	CARD11	CBL	CBLB	CD79A	CD79B	CDC73	CDH1	CDK12	CDK4
CDKN2A	CHEK2	CIC	CREBBP	CRLF2	CSF1R	CTNNB1	CYLD	DAXX	DDB2
DDR2	DICER1	DNMT3A	ECT2L	EGFR	EP300	EPCAM	ERBB2	ERBB3	ERBB4
ERCC5	ESR1	EZH2	FAM46C	FANCA	FANCD2	FANCE	FAS	FBXO11	FBXW7
FGFR2	FGFR3	FH	FLCN	FLT3	FUBP1	GATA1	GATA2	GATA3	GNA11
GNAQ	GNAS	GPC3	GRIN2A	H3F3A	HIST1H3B	HNF1A	HRAS	HSPH1	IDH1
IDH2	IKZF1	IL6ST	IL7R	JAK1	JAK2	JAK3	KDM6A	KDR	KIT
KLF6	KMT2D	KRAS	MAP2K1	MAP2K2	MAP2K4	MAP3K1	MAP4K3	MDM2	MED12
MEN1	MET	MLH1	MSH2	MSH6	MTOR	MUTYH	MYC	MYD88	NF1
NF2	NFE2L2	NFKBIA	NOTCH1	NOTCH2	NPM1	NRAS	PALB2	PAX5	PBRM1
PDGFRA	PHF6	PIK3CA	PIK3R1	PMS2	PPP2R1A	PRDM1	PRKAR1A	PTCH1	PTEN
PTPN11	RAC1	RB1	RET	ROS1	SDHB	SETD2	SF3B1	SLC7A8	SMAD4
SMARCA4	SMARCB1	SMO	SPOP	SRC	STK11	SUFU	TERT	TNFAIP3	TNFRSF14
TP53	TSC1	TSC2	TSHR	U2AF1	VHL	WT1	XPC	ZNF2	ZRSR2

Appendix 2—method

List of 49 RTKs measuring relative phosphorylation status on antibody arrays

ALK/CD246Axl	DDR1	DDR2	Dtk	EGF R	EphA1	EphA2	EphA3	EphA4	
EphA5	EphA6	EphA7	EphA10	EphB1	EphB2	EphB3	EphB4	EphB6	ErbB2
ErbB3	ErbB4	FGF R1	FGF R2 α	FGF R3	FGF R4	Flt-3/Flk-2	HGF R/c-MET	IGF-I R	Insulin R/CD220
M-CSF R	Mer	MSP R/Ron	MuSK	PDGF R α	PDGF R β	c-Ret	ROR1	ROR2	Ryk
SCF R/c-kit	Tie-1	Tie-2	TrkA	TrkB	TrkC	VEGF R1/Flt-1	VEGF R2/KDR	VEGF R3/Flt-4	

RTK, receptor tyrosine kinase.

Table S1 Mutations and variants in patients LC-1 and LC-6

Cases	chr	Gene name	Variant type	Amino acid change	Pre-DT treatment (mutant/wild-type allele fraction)	Post-DT treatment (mutant/wild-type allele fraction)
LC-1	chr7	<i>BRAF</i>	SNP	p.V600E	0.177	0.570
	chr17	<i>TP53</i>	SNP	p.V272M	0.221	0.866
	chr1	<i>H3F3A</i>	SNP	p.R43W	0.172	0.191
	chr16	<i>GRIN2A</i>	SNP	p.N1085Y	0.174	0.590
	chr12	<i>HNF1A</i>	SNP	p.S487N	0.341	–
LC-6	chr7	<i>BRAF</i>	SNP	p.V600E	0.060	0.776
	chr1	<i>ARID1A</i>	SNP	p.S2264L	–	0.462
	chr1	<i>ARID1A</i>	SNP	p.S2269*	–	0.391

chr, chromosome; DT, dabrafenib and trametinib; SNP, single nucleotide polymorphism.