

**Supplementary Table 2.** Concordance between plasma NGS and tissue molecular analysis.

DFCI ID	Mutation identified from ctDNA	Plasma Allele Fraction (%)	Tissue NGS
DFCI1	TP53 R283P	0.18072	Identified
DFCI2	BRAF V600E	1.71642	Identified
DFCI3	HER2 V777_G778insGSP TP53 G244C	9.3875 14.575	Identified Identified
DFCI4	TP53 V216L CDKN2A H83Pfs63*	1.8871 0.45161	Identified Identified
DFCI5	KRAS G12C TP53 A159V TP53 T211A	12.19844 0.40856 1.4786	Identified Identified Not identified
DFCI6	KRAS G12C TP53 Q104* CTNNB1 D32Y	3.74375 0.89375 0.04375	Identified Identified Not identified
DFCI7	TP53 G105R TP53 R248Q TP53 97:V/X	34.38679 0.4717 0.16509	Not performed
DFCI8*	KRAS G12C	0.09766	Identified
DFCI9*	KRAS G12C TP53 R196*	7.13235 3.82353	Identified Identified
DFCI10	KRAS G12C	0.15411	Identified
DFCI11	NRAS G12D	0.19231	Not performed
DFCI12	KRAS G12R	1.13281	Identified
DFCI13	TP53 R175H	0.58442	Not identified
DFCI14*	KRAS G12A TP53 V274F STK11 E223*	25.04132 14.21488 25.28926	Identified Not reported Not reported
DFCI15	KRAS G12V NTRK1 M671I	0.11968 0.05319	Identified Not identified
DFCI16	KRAS G12S ESR Q314H TP53 Splice Acceptor Variant	11.5625 3.78024 4.41532	Identified Identified Identified
DFCI17	NRAS G12A	10.85	Not identified
DFCI18	TP53 Y205D	0.17241	Not performed
DFCI19	AKT1 E17K BRAF K601N TP53 E285K	1.82731 1.78715 0.64257	Not identified Not identified Identified
DFCI20	BRAF V600E	0.36875	Identified
DFCI21	EGFR H773_774dup TP53 P278L	29.75 28.07955	Identified Identified
DFCI22	FGFR2 L551H	0.70	Not identified
DFCI23	EGFR L858R TP53 P177R TP53 A159P	19.9125 8.5375 0.8	Identified Identified Not identified

DFCI24	TP53 205:Y/YX TP53 LD206-207FY ALK V1265E	38.25 38.025 20.60625	Not identified Not identified Identified
DFCI25	KRAS Q61H TP53 Splice Acceptor Variant	1.7561 0.09756	Identified Not identified
DFCI26	BRAF L597Q STK11 Splice Acceptor Variant	15.88643 0.70637	Not performed
DFCI27	TP53 R248Q	10.475	Identified
DFCI28	TP53 R283P	0.39683	Identified
DFCI29	TP53 P152L	0.84016	Not performed
DFCI30	TP53 Y220C KRAS G12C	0.96 0.70	Identified Identified
DFCI31	BRAF V600E	0.41667	Identified
DFCI32	KRAS A146V MAP2K1 G128D	3.7312 2.72556	Identified Identified
DFCI33	HER2 D769H	0.09375	Not identified
DFCI34	KRAS G12C TP53 V272M TP53 S241P U2AF1 Q157R	0.33133 0.60241 7.53012 5.96386	Identified Not identified Not identified Not identified
DFCI35	KRAS G12D TP53 E224D	2.10568 0.44164	Identified Identified
DFCI36	MAP2K1 K57N	0.125	Identified
DFCI37	KRAS G12C	3.06391	Identified
DFCI38	PTEN Q171* TP53 Splice Acceptor Variant TP53 L145P CDKN2A R80*	0.77778 0.66667 0.4127 0.38095	Identified Identified Identified Identified
DFCI39	KRAS G12C	2.83991	Identified
DFCI40*	KRAS G12C	0.21154	Identified
DFCI41	TP53 C275F TP53 Y107D	0.27027 19.86486	Not identified Not identified
DFCI42	TP53 G374Vfs*48	67.9	Identified
DFCI43	TP53 C277Y TP53 Y220C	4.59205 0.46025	Not identified Not identified
DFCI44*	KRAS G12A STK11 E130*	0.58468 0.32258	Identified Identified
DFCI45	KRAS G12C CTNNB1 S37F	0.74236 0.79694	Identified Identified

\* Denotes cases that underwent tissue molecular analysis at an outside institution. All other cases underwent tissue next generation sequencing by OncoPanel at DFCI.