

A panel covering the exons of 381 cancer-related genes

381 cancer-related genes									
ABL1	ABL2	ACVR1B	ACVR2A	ADAM29	ADGRA2	AKT1	AKT2	AKT3	ALK
AMER1	APC	AR	ARAF	ARFRP1	ARID1A	ARID1B	ARID2	ASXL1	ATM
ATR	ATRX	AURKA	AURKB	AXIN1	AXL	BAP1	BARD1	BCL2	BCL2L1
BCL2L11(BIM)	BCL2L2	BCL6	BCOR	BCORL1	BCR	BIRC5	BLK	BLM	BMX
BRAF	BRCA1	BRCA2	BRD4	BRIP1	BTG1	BTK	C11orf30	CARD11	CBFB
CBL	CCND1	CCND2	CCND3	CCNE1	CD274	CD79A	CD79B	CDC73	CDH1
CDK12	CDK4	CDK6	CDK8	CDKN1A	CDKN1B	CDKN2A	CDKN2B	CDKN2C	CEBPA
CHD2	CHD4	CHEK1	CHEK2	CIC	CRBN	CREBBP	CRKL	CRLF2	CSF1R
CSK	CSNK1A1	CTCF	CTNNA1	CTNNB1	CUL3	CXCR4	CYLD	CYP2C19	CYP2D6
DAXX	DDR1	DDR2	DICER1	DNMT3A	DOT1L	DPYD	EGF	EGFR	EP300
EPHA2	EPHA3	EPHA5	EPHA7	EPHB1	ERBB2	ERBB3	ERBB4	ERCC1	ERG
ERRFI1	ESR1	ETV1	ETV4	ETV5	ETV6	EZH2	FAM135B	FAM46C	FANCA
FANCC	FANCD2	FANCE	FANCF	FANCG	FANCL	FAS	FAT1	FBXW7	FGF10
FGF14	FGF19	FGF23	FGF3	FGF4	FGF6	FGFR1	FGFR2	FGFR3	FGFR4
FGR	FH	FLCN	FLT1	FLT3	FLT4	FOXL2	FOXP1	FRS2	FUBP1
FYN	GABRA6	GATA1	GATA2	GATA3	GATA4	GATA6	GID4	GLI1	GLI2
GLI3	GNA11	GNA13	GNAQ	GNAS	GRIN2A	GRM3	GSK3B	H3F3A	HCK
HGF	HNF1A	HRAS	HSD3B1	HSP90AA 1	IDH1	IDH2	IGF1R	IGF2	IKBKE
IKZF1	IL7R	INHBA	INPP4B	IRF2	IRF4	IRS2	ITK	JAK1	JAK2

Supplementary Table S2. Thirty-five genes of DDR pathway.

35 DDR pathway genes			
Gene Symbol	Gene Description	Location	Pathway
MRE11A	MRE11 homolog A, double strand break repair nuclease	11q21	Homologous recombination repair (HRR)
RAD50	RAD50 double strand break repair protein	5q31.1	Homologous recombination repair (HRR)
BARD1	BRCA1 associated RING domain 1	2q35	Homologous recombination repair (HRR)
BLM	Bloom syndrome, RecQ helicase-like	15q26.1	Homologous recombination repair (HRR)
BRCA1	BRCA1 associated RING domain 1	2q35	Homologous recombination repair (HRR)
BRCA2	breast cancer 2, early onset	13q13.1	Homologous recombination repair (HRR)
BRIP1	BRCA1 interacting protein C-terminal helicase 1	17q23.2	Homologous recombination repair (HRR)
PALB2	partner and localizer of BRCA2	16p12.2	Homologous recombination repair (HRR)
MLH1	mutL homolog 1	3p22.2	Mismatch repair (MMR)
MSH2	mutS homolog 2	2p21-p16.3	Mismatch repair (MMR)
MSH6	mutS homolog 6	2p16.3	Mismatch repair (MMR)
PMS2	PMS1 homolog 2, mismatch repair system component	7p22.1	Mismatch repair (MMR)
POLD1	polymerase (DNA directed), delta 1, catalytic subunit	19q13.3	Mismatch repair (MMR)

ATM	ATM serine/threonine kinase	11q22.3	Damage sensor (DS)
ATR	ATR serine/threonine kinase	3q23	Damage sensor (DS)
CHEK1	checkpoint kinase 1	11q24.2	Damage sensor (DS)
CHEK2	checkpoint kinase 2	22q12.1	Damage sensor (DS)
FANCA	Fanconi anemia, complementation group A	16q24.3	Fanconi anemia (FA)
FANCC	Fanconi anemia, complementation group C	9q22.32	Fanconi anemia (FA)
FANCD2	FANCD2/FANCI-associated nuclease 1	15q13.3	Fanconi anemia (FA)
FANCG	Fanconi anemia, complementation group G	9p13.3	Fanconi anemia (FA)
FANCE	Fanconi anemia, complementation group E	6p21.31	Fanconi anemia (FA)
FANCF	Fanconi anemia, complementation group F	11p14.3	Fanconi anemia (FA)
FANCL	Fanconi anemia, complementation group L	2p16.1	Fanconi anemia (FA)
RAD51	RAD51 recombinase	15q15.1	Fanconi anemia (FA)
CUL3	cullin 3	2q36.2	Nucleotide excision repair (NER)
ERCC1	excision repair cross-complementation group 1	19q13.32	Nucleotide excision repair (NER)
POLE	polymerase (DNA directed), epsilon, catalytic subunit	12q24.33	Nucleotide excision repair (NER)
MUTYH	mutY DNA glycosylase	1p34.1	Base excision repair (BER)
PRKDC	protein kinase, DNA-activated, catalytic polypeptid	8q11.21	Non-homologous end-joining (NHEJ)

PTEN	phosphatase and tensin homolog	10q23.31	others
SMARCA4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4	19p13.2	others
ATRX	ATRX, chromatin remodeler	Xq21.1	others
IDH1	isocitrate dehydrogenase (NADP(+)) 1, cytosolic	2q34	others
WEE1	WEE1 G2 checkpoint kinase	11p15.4	others

Supplementary Table S3. Next generation sequencing detection data from 63 patients in platinum-based chemotherapy group.

Patients	gene	DNA base change	Amino Acid Change	Acid Mutation Type
PT1	TP53	c.G524A	p.R175H	SNV
PT1	KRAS	c.A182T	p.Q61L	SNV
PT1	TP53	c.A701G	p.Y234C	SNV
PT2	EGFR	c.T2573G	p.L858R	SNV
PT2	TP53	c.C742T	p.R248W	SNV
PT2	UGT1A1	c.C686A	p.P229Q	Germline
PT2	BCL2L11	2903-bp deletion		Germline
PT2	RET	c.1469_1488del	p.Q490Pfs*33	SNV
PT3	EGFR	c.T2573G	p.L858R	SNV
PT3	TP53	c.823dup	p.C275Lfs*31	SNV
PT4	TP53	c.584T>C	p.I195T	SNV
PT4	ZNF217		gain	CNV
PT4	CDKN2A	c.343G>T	p.V115L	SNV
PT4	FAT1	c.6265G>A	p.V2089I	SNV
PT4	MTOR	c.2056C>T	p.H686Y	SNV
PT4	AR	c.203A>T	p.Q68L	SNV
PT4	KEAP1	c.1384G>T	p.G462W	SNV
PT4	ZNF217-			fusion
PT5	TP53	c.745A>T	p.R249W	SNV
PT5	CCND1		gain	CNV
PT5	FGF19		gain	CNV
PT5	KRAS		gain	CNV
PT5	PDCD1LG2	c.286G>A	p.D96N	SNV

PT6	KRAS	c.G35A	p.G12D	SNV
PT6	TP53	c.G473T	p.R158L	SNV
PT6	TPMT	c.A719G	p.Y240C	SNV
PT6	UGT1A1	c.G211A	p.G71R	SNV
PT6	MET	c.C4144T	p.R1382*	SNV
PT7	KRAS	c.38G>A	p.G13D	SNV
PT7	KRAS	c.35G>T	p.G12V	SNV
PT7	UGT1A1	c.211G>A	p.G71R	Germline
PT7	TP53	c.604_618del	p.R202_L206del	SNV
PT8	KRAS	c.38G>A	p.G13D	SNV
PT8	TP53	c.820G>T	p.V274F	SNV
PT8	CYP2C19	c.681G>A	p.P227P	Germline
PT8	MYC		gain	CNV
PT8	AR	c.1731T>A	p.C577*	SNV
PT8	BCOR	c.4403A>G	p.H1468R	SNV
PT8	FGFR1	c.1039A>G	p.I347V	SNV
PT8	FGFR3	c.931A>C	p.T311P	SNV
PT8	INHBA	c.355C>A	p.Q119K	SNV
PT8	KDR	c.3213G>T	p.W1071C	SNV
PT8	KIT	c.2643G>C	p.K881N	SNV
PT8	NRG3	c.1128G>T	p.M376I	SNV
PT8	NSD1	c.7256C>T	p.P2419L	SNV
PT8	PREX2	c.2030C>T	p.T677I	SNV
PT8	TIE1	c.2119G>T	p.G707C	SNV
PT8	SRMS	c.946+1G>T	N/A	SNV
PT8	PDCD1LG2	c.554C>T	p.P185L	Germline

PT8	ROS1	c.1997G>C	p.G666A	Germline
PT9	EGFR	c.T2573G	p.L858R	SNV
PT9	EGFR	c.C2326A	p.R776S	SNV
PT9	TP53	c.A763T	p.I255F	SNV
PT10	TP53	c.G158A	p.W53*	SNV
PT10	ALK	c.G3604A	p.G1202R	SNV
PT10	EPHB1	c.G1026A	p.W342*	SNV
PT10	CYP2C19	c.G681A	p.P227P	Germline
PT10	EML4-ALK			fusion
PT10	LRP1B	c.C9874T	p.P3292S	SNV
PT10	EP300	c.G6167A	p.R2056Q	SNV
PT10	MET	c.T2555C	p.M852T	SNV
PT10	EP300	c.A5102G	p.H1701R	SNV
PT11	PIK3CA	c.A3140T	p.H1047L	SNV
PT11	TP53	c.746_776delinsAGG	p.R249Kfs*87	SNV
PT11	TP53	c.C817T	p.R273C	SNV
PT11	NF1	c.6146del	p.K2049Rfs*9	SNV
PT11	CYP2C19	c.G681A	p.P227P	Germline
PT11	BCL2L1	2903-bp deletion		Germline
PT11	PIK3CA		gain	CNV
PT11	SOX2		gain	CNV
PT11	TP53	c.A776G	p.D259G	SNV
PT12	EGFR	c.T2573G	p.L858R	SNV
PT12	TP53	c.G1010A	p.R337H	Germline
PT12	CDKN2A	c.C242A	p.P81H	SNV
PT13	TP53	c.G734A	p.G245D	SNV

PT13	EGFR	c.2236_2250del	p.E746_A750del	SNV
PT13	UGT1A1	c.G211A	p.G71R	Germline
PT13	BCL2L1	2903-bp deletion		Germline
PT13	DDR2		gain	CNV
PT13	RIT1		gain	CNV
PT13	RICTOR		gain	CNV
PT13	EGFR		gain	CNV
PT13	MET		gain	CNV
PT13	CDK6		gain	CNV
PT13	GLI3		gain	CNV
PT13	NTRK1		gain	CNV
PT13	BRAF		gain	CNV
PT14	TP53	c.G524A	p.R175H	SNV
PT14	NFE2L2	c.C239A	p.T80K	SNV
PT14	CYP2C19	c.G681A	p.P227P	Germline
PT14	MCL1		gain	CNV
PT14	MYCN		gain	CNV
PT14	PIK3CA		gain	CNV
PT14	SOX2		gain	CNV
PT14	ARID1A	c.6532dup	p.D2178Gfs*47	SNV
PT15	CYP2C19	c.681G>A	p.P227P	Germline
PT15	TP53	c.775G>T	p.D259Y	SNV
PT15	EGFR	c.1781C>A	p.T594N	Germline
PT16	TP53	c.C455T	p.P152L	SNV
PT16	EGFR	c.2573_2574delinsGT	p.L858R	SNV
PT16	CYP2C19	c.G681A	p.P227P	Germline

PT16	BCL2L11	2903-bp deletion		Germline
PT16	IRS2		gain	CNV
PT16	RB1	c.T1985C	p.L662P	SNV
PT16	CREBBP	c.6743_6745del	p.Q2248del	SNV
PT16	IRS2	c.C2165T	p.A722V	SNV
PT17	EGFR	c.C2369T	p.T790M	SNV
PT17	EGFR	c.T2573G	p.L858R	SNV
PT17	PIK3CA	c.A3140G	p.H1047R	SNV
PT17	RB1	c.A2428T	p.K810*	SNV
PT17	TP53	c.889dup	p.H297Pfs*9	SNV
PT17	NTRK1		gain	CNV
PT17	ALK	c.C482T	p.A161V	SNV
PT17	EGFR	c.2369C>T	p.T790M	SNV
PT17	EGFR	c.2573T>G	p.L858R	SNV
PT17	PIK3CA	c.3140A>G	p.H1047R	SNV
PT17	RB1	c.2428A>T	p.K810*	SNV
PT17	TP53	c.889dup	p.H297Pfs*9	SNV
PT17	NTRK1		gain	CNV
PT17	NTRK1	c.2131T>A	p.W711R	SNV
PT18	NA	NA	NA	NA
PT19	UGT1A1	c.G211A	p.G71R	Germline
PT19	BCL2L11	2903-bp deletion		Germline
PT19	EML4-ALK			fusion
PT20	ARID1A	c.5715dup	p.R1906Tfs*8	SNV
PT20	ERBB2	c.2313_2324dup	p.Y772_A775dup	SNV
PT20	CYP2C19	c.681G>A	p.P227P	Germline

PT20	UGT1A1	c.211G>A	p.G71R	Germline
PT20	ERBB2		gain	CNV
PT21	CYP2D6	c.C100T	p.P34S	Germline
PT21	CYP2C19	c.G681A	p.P227P	Germline
PT21	NOTCH1	c.A920G	p.Q307R	SNV
PT21	FAT1	c.C6754A	p.L2252M	SNV
PT21	FGFR1	c.A187G	p.S63G	SNV
PT22	APC	c.4395T>G	p.S1465R	SNV
PT22	FAT1	c.1532C>T	p.A511V	SNV
PT22	NF1	c.2165G>T	p.G722V	SNV
PT22	NOTCH1	c.4325C>A	p.P1442Q	SNV
PT22	NTRK1	c.1189C>A	p.P397T	SNV
PT22	ROS1	c.1013A>G	p.Y338C	SNV
PT22	VEGFA	c.1039G>A	p.V347I	SNV
PT23	UGT1A1	c.G211A	p.G71R	Germline
PT23	EML4-ALK			fusion
PT23	NRG1	c.152_158delinsAGCG	p.G51_E53delinsER	SNV
PT24	EML4-ALK			fusion
PT25	KRAS	c.G35T	p.G12V	SNV
PT26	CDKN2A	c.C172T	p.R58*	SNV
PT26	KRAS	c.G34T	p.G12C	SNV
PT27	UGT1A1	c.211G>A	p.G71R	SNV
PT27	KRAS	c.34G>T	p.G12C	SNV
PT27	TP53	c.614A>G	p.Y205C	SNV
PT27	SLIT2	c.3183-1G>A	N/A	SNV
PT27	APC	c.7807G>C	p.E2603Q	SNV

PT27	AR	c.1489T>A	p.F497I	SNV
PT27	ARID1A	c.1637A>G	p.Q546R	SNV
PT27	FAT1	c.5866G>A	p.D1956N	SNV
PT27	MAP3K1	c.3071A>G	p.K1024R	SNV
PT28	KRAS	c.G35A	p.G12D	SNV
PT29	ALK	c.C4460T	p.S1487L	SNV
PT30	ALK	c.833C>T	p.P278L	SNV
PT30	APC	c.3652A>G	p.T1218A	SNV
PT30	DPYD	c.1627A>G	p.I543V	SNV
PT30	MAP3K1	c.917G>A	p.R306H	SNV
PT30	NOTCH1	c.3401A>G	p.Q1134R	SNV
PT30	PIK3CA	c.2198A>G	p.K733R	SNV
PT30	PREX2	c.2215G>A	p.V739I	SNV
PT30	ROS1	c.5995C>A	p.H1999N	SNV
PT31	ARID1A	c.5715dup	p.R1906Tfs*8	SNV
PT31	ERBB2	c.2313_2324dup	p.Y772_A775dup	SNV
PT32	EML4-ALK			fusion
PT33	EML4-ALK			fusion
PT34	KRAS	c.35G>T	p.G12V	SNV
PT35	CDKN2A	c.C172T	p.R58*	SNV
PT36	EGFR	c.2235_2249del	p.E746_A750del	SNV
PT36	TP53	c.589G>T	p.V197L	SNV
PT36	TP53	c.826G>C	p.A276P	SNV
PT36	CDKN2A	c.61G>C	p.A21P	SNV
PT36	DPYD	c.1627A>G	p.I543V	SNV
PT36	TP53	c.379T>A	p.S127T	SNV

PT36	DPYD	c.1627A>G	p.I543V	SNV
PT36	TP53	c.379T>A	p.S127T	SNV
PT36	DPYD	c.1627A>G	p.I543V	SNV
PT36	CBL	c.1413_1414delinsTT	p.K471_T906delinsN	SNV
PT36	CDKN2A	c.61G>C	p.A21P	SNV
PT36	ERRFI1	c.490C>G	p.L164V	SNV
PT36	GLI3	c.4321G>T	p.G1441C	SNV
PT36	LRP1B	c.10096A>T	p.T3366S	SNV
PT36	LRP1B	c.1556C>G	p.P519R	SNV
PT36	LRP1B	c.2298G>C	p.L766F	SNV
PT36	MDM4	c.680del	p.G227Vfs*15	SNV
PT36	NOTCH1	c.1333A>C	p.T445P	SNV
PT36	PREX2	c.1064C>G	p.A355G	SNV
PT36	SPTA1	c.6024G>T	p.E2008D	SNV
PT36	NOTCH3		gain	CNV
PT36	TP53	c.826G>C	p.A276P	SNV
PT36	TP53	c.736A>T	p.M246L	SNV
PT36	APC	c.1699G>T	p.G567*	SNV
PT36	CHEK2	c.1115C>T	p.S372F	SNV
PT36	RB1	c.1215+1G>T	N/A	SNV
PT36	NF1	c.3975-2A>T	N/A	SNV
PT36	DNMT3A	c.1554+1G>A	N/A	SNV
PT36	DDR2		gain	CNV
PT36	NTRK1		gain	CNV
PT36	RIT1		gain	CNV
PT36	IRS2		gain	CNV

PT36	CCNE1		gain	CNV
PT36	AKT2		gain	CNV
PT36	JAK3		gain	CNV
PT36	RAF1		gain	CNV
PT36	MYC		gain	CNV
PT36	PREX2		gain	CNV
PT36	FAM135B		gain	CNV
PT36	PTK2		gain	CNV
PT36	CD274		gain	CNV
PT36	PDCD1LG2		gain	CNV
PT36	ADGRA2	c.1084C>A	p.R362S	SNV
PT36	ADGRA2	c.3614G>T	p.R1205L	SNV
PT36	EPHA5	c.572G>T	p.R191L	SNV
PT36	EPHA7	c.2384G>T	p.G795V	SNV
PT36	FGFR4	c.1121C>T	p.A374V	SNV
PT36	FGR	c.859A>G	p.K287E	SNV
PT36	FOXL2	c.1022C>A	p.P341Q	SNV
PT36	GLI3	c.4321G>T	p.G1441C	SNV
PT36	HGF	c.708T>G	p.D236E	SNV
PT36	IL7R	c.730A>G	p.T244A	SNV
PT36	LRP1B	c.10096A>T	p.T3366S	SNV
PT36	LRP1B	c.1556C>G	p.P519R	SNV
PT36	LRP1B	c.2298G>C	p.L766F	SNV
PT36	PARK2	c.343G>T	p.D115Y	SNV
PT36	PIK3C2B	c.2059G>T	p.D687Y	SNV
PT36	PIK3CG	c.2450G>T	p.C817F	SNV

PT36	SPTA1	c.6024G>T	p.E2008D	SNV
PT36	TBX3	c.926G>T	p.G309V	SNV
PT36	CBL	c.1413G>T	p.K471N	SNV
PT36	DPYD	c.1627A>G	p.I543V	Germline
PT36	TP53	c.736A>T	p.M246L	SNV
PT36	FANCD2	c.2251G>T	p.E751*	SNV
PT36	NEK11	c.1428del	p.E477Sfs*21	SNV
PT36	RB1	c.1215+1G>T	N/A	SNV
PT36	NF1	c.3975-2A>T	N/A	SNV
PT36	TERT	c.-124C>T	N/A	SNV
PT36	CBL	c.1414G>T	p.E472*	SNV
PT36	STK24		gain	CNV
PT36	IRS2		gain	CNV
PT36	TP53		loss	CNV
PT36	MAP2K4		loss	CNV
PT37	TP53	c.G375T	p.T125T	SNV
PT37	MITF	c.T16G	p.L6V	SNV
PT37	LRP1B	c.G8594T	p.C2865F	SNV
PT37	CREBBP	c.T7271G	p.L2424R	SNV
PT37	MUTYH	c.G384T	p.W128C	SNV
PT37	ASXL1	c.G731T	p.R244L	SNV
PT37	MET	c.G3028C	p.D1010H	SNV
PT37	LRP1B	c.G5082T	p.K1694N	SNV
PT37	SPTA1	c.C2977A	p.P993T	SNV
PT37	PIK3CG	c.C170A	p.A57E	SNV
PT37	LRP1	c.G3409T	p.E1137*	SNV

PT37	MST1R	c.G2537A	p.G846E	SNV
PT37	NOTCH1	c.G4166A	p.S1389N	SNV
PT37	AXIN1	c.G1750A	p.A584T	SNV
PT37	NOTCH1	c.C7207T	p.Q2403*	SNV
PT37	CYP2D6	c.C100T	p.P34S	Germline
PT37	TP53	c.G375T	p.T125T	SNV
PT37	MITF	c.T16G	p.L6V	SNV
PT37	LRP1B	c.G8594T	p.C2865F	SNV
PT37	CREBBP	c.T7271G	p.L2424R	SNV
PT37	MUTYH	c.G384T	p.W128C	SNV
PT37	ASXL1	c.G731T	p.R244L	SNV
PT37	MET	c.G3028C	p.D1010H	SNV
PT37	LRP1B	c.G5082T	p.K1694N	SNV
PT37	SPTA1	c.C2977A	p.P993T	SNV
PT37	PIK3CG	c.C170A	p.A57E	SNV
PT37	LRP1	c.G3409T	p.E1137*	SNV
PT37	MST1R	c.G2537A	p.G846E	SNV
PT37	NOTCH1	c.G4166A	p.S1389N	SNV
PT37	AXIN1	c.G1750A	p.A584T	SNV
PT37	NOTCH1	c.C7207T	p.Q2403*	SNV
PT37	CYP2D6	c.C100T	p.P34S	Germline
PT38	PMS2	c.A1351G	p.R451G	SNV
PT38	SETD2	c.A3524G	p.D1175G	SNV
PT38	DNMT3A	c.A2512G	p.N838D	SNV
PT38	DNMT3A	c.G1687A	p.V563M	SNV
PT38	DNMT3A	c.G1676A	p.C559Y	SNV

PT38	DNMT3A	c.1123-2A>G		SNV
PT38	NOTCH2	c.G3565A	p.D1189N	SNV
PT38	SMARCA2	c.705_707del	p.Q238del	SNV
PT38	IRS2	c.C2483A	p.S828Y	SNV
PT38	KMT2A	c.G7993A	p.E2665K	SNV
PT38	EGFR	c.T2573G	p.L858R	SNV
PT38	CYP2C19	c.G681A	p.P227P	SNV
PT38	BCL2L1	2903-bp deletion		Germline
PT39	DNMT3A	c.2290dup	p.S764Kfs*2	SNV
PT39	KRAS	c.34G>T	p.G12C	SNV
PT39	TP53	c.644G>T	p.S215I	SNV
PT39	AR	c.1414_1415insAG	p.G472Efs*8	SNV
PT39	ATR	c.7130T>C	p.I2377T	SNV
PT39	DNMT3A	c.2245C>T	p.R749C	SNV
PT39	DPYD	c.1627A>G	p.I543V	SNV
PT39	FLT4	c.1427G>T	p.R476L	SNV
PT39	MAP3K1	c.2845_2847del	p.T949del	SNV
PT39	NRAS	c.99T>G	p.D33E	SNV
PT39	STK11	c.125G>T	p.R42L	SNV
PT39	TPMT	c.419+94T>A	N/A	SNV
PT40	TP53	c.C991T	p.Q331*	SNV
PT40	PIK3CA	c.T1031G	p.V344G	SNV
PT40	PIK3CG	c.G559A	p.E187K	SNV
PT40	BRCA2	c.A956G	p.N319S	SNV
PT40	CBL	c.A2716C	p.T906P	SNV
PT40	CDKN2A	c.196dup	p.H66Pfs*54	SNV

PT40	GRM3	c.G152T	p.G51V	SNV
PT40	HCK	c.C552A	p.N184K	SNV
PT40	ZNF750	c.T119G	p.L40R	SNV
PT40	BLK	c.C1210A	p.P404T	SNV
PT40	BCL6	c.C1282T	p.P428S	SNV
PT40	RBM10	c.C1577T	p.S526L	SNV
PT40	UGT1A1	c.G211A	p.G71R	Germline
PT40	EPHA2		gain	CNV
PT40	NOTCH1		gain	CNV
PT40	AXIN1		gain	CNV
PT40	RPTOR		gain	CNV
PT40	EPHA5		loss	CNV
PT40	TP53	c.C991T	p.Q331*	SNV
PT40	PIK3CA	c.T1031G	p.V344G	SNV
PT40	PIK3CG	c.G559A	p.E187K	SNV
PT40	BRCA2	c.A956G	p.N319S	SNV
PT40	CBL	c.A2716C	p.T906P	SNV
PT40	CDKN2A	c.196dup	p.H66Pfs*54	SNV
PT40	GRM3	c.G152T	p.G51V	SNV
PT40	HCK	c.C552A	p.N184K	SNV
PT40	ZNF750	c.T119G	p.L40R	SNV
PT40	BLK	c.C1210A	p.P404T	SNV
PT40	BCL6	c.C1282T	p.P428S	SNV
PT40	RBM10	c.C1577T	p.S526L	SNV
PT40	UGT1A1	c.G211A	p.G71R	Germline
PT40	EPHA2		gain	CNV

PT40	NOTCH1		gain	CNV
PT40	AXIN1		gain	CNV
PT40	RPTOR		gain	CNV
PT40	EPHA5		loss	CNV
PT41	SMARCA4	c.3166G>T	p.E1056*	SNV
PT41	SLIT2	c.1439-2A>G	N/A	SNV
PT41	UGT1A1	c.211G>A	p.G71R	Germline
PT41	ATM	c.8600G>A	p.G2867E	SNV
PT41	EPHA5	c.170C>T	p.P57L	SNV
PT41	ERBB3	c.121G>A	p.D41N	SNV
PT41	FANCA	c.1295T>C	p.L432P	SNV
PT41	FAT1	c.4213G>T	p.D1405Y	SNV
PT41	FH	c.13C>G	p.L5V	SNV
PT41	GLI2	c.633_634delinsAA	p.N211_P212delinsKT	SNV
PT41	IKBKE	c.529G>T	p.E177*	SNV
PT41	KIT	c.779A>G	p.N260S	SNV
PT41	MTOR	c.6221A>G	p.Y2074C	SNV
PT41	MTOR	c.6943G>A	p.D2315N	SNV
PT41	NRG3	c.77C>A	p.A26E	SNV
PT41	PTCH1	c.1453C>A	p.L485M	SNV
PT41	SLIT2	c.797C>A	p.P266H	SNV
PT41	PREX2	c.1444-1G>T	N/A	SNV
PT41	FAM135B	c.543-1G>T	N/A	SNV
PT41	ARID1A	c.5944G>A	p.V1982I	Germline
PT41	DPYD	c.1627A>G	p.I543V	Germline
PT41	ROS1	c.4058A>C	p.Y1353S	Germline

PT42	EGFR	c.G2156C	p.G719A	SNV
PT42	EGFR	c.G2125A	p.E709K	SNV
PT42	BCL2L1	2903-bp deletion		Germline
PT42	TP53	c.T815A	p.V272E	SNV
PT42	EGFR	c.C154T	p.Q52*	SNV
PT42	BCL2L1	2903-bp deletion		Germline
PT42	TP53	c.T815A	p.V272E	SNV
PT42	MLH1	c.1445_1447del	p.V482del	SNV
PT42	IRS2	c.C2438T	p.P813L	SNV
PT43	TP53	c.772del	p.E258Kfs*87	SNV
PT43	BRCA2	c.A3197G	p.N1066S	Germline
PT43	CYP2D6	c.C100T	p.P34S	Germline
PT43	CYP2C19	c.G681A	p.P227P	Germline
PT43	KIF5B-RET			fusion
PT43	TP53	c.772del	p.E258Kfs*87	SNV
PT43	BRCA2	c.A3197G	p.N1066S	Germline
PT43	CYP2D6	c.C100T	p.P34S	Germline
PT43	CYP2C19	c.G681A	p.P227P	Germline
PT43	KIF5B-RET			fusion
PT44	EGFR	c.G2156C	p.G719A	SNV
PT44	EGFR	c.G2303T	p.S768I	SNV
PT44	CYP2D6	c.C100T	p.P34S	Germline
PT44	CYP2C19	c.G681A	p.P227P	Germline
PT44	UGT1A1	c.G211A	p.G71R	Germline
PT44	PIK3CD		gain	CNV
PT44	EPHA2		gain	CNV

PT44	MCL1		gain	CNV
PT44	RIT1		gain	CNV
PT44	PIK3C2B		gain	CNV
PT44	IKBKE		gain	CNV
PT44	VEGFA		gain	CNV
PT44	NOTCH1		gain	CNV
PT44	RPTOR		gain	CNV
PT44	PRKDC		loss	CNV
PT44	FANCF		loss	CNV
PT44	RB1		loss	CNV
PT44	NTRK1		gain	CNV
PT44	BRCA2		loss	CNV
PT44	SMARCA4	c.2826_2831del	p.W942_N944delinsC	SNV
PT44	GLI1	c.C2041A	p.P681T	SNV
PT44	ZNF750		gain	CNV
PT44	FLT3		loss	CNV
PT44	TNFSF11		loss	CNV
PT45	BRAF	c.T1799A	p.V600E	SNV
PT45	BRCA1	c.A2899C	p.T967P	SNV
PT45	CYP2C19	c.G681A	p.P227P	Germline
PT46	ERBB2	c.2313_2324dup	p.Y772_A775dup	SNV
PT46	SMARCA4	c.152C>G	p.S51*	SNV
PT46	TP53	c.742C>T	p.R248W	SNV
PT46	UGT1A1	c.211G>A	p.G71R	Germline
PT46	BCL2L1	2903-bp deletion		Germline
PT47	EGFR	c.2573T>G	p.L858R	SNV

PT47	TP53	c.455C>T	p.P152L	SNV
PT47	CYP2C19	c.681G>A	p.P227P	Germline
PT47	BCL2L11	2903-bp deletion		Germline
PT47	MCL1		gain	CNV
PT47	ADAM29	c.2399_2425del	p.T800_L808del	SNV
PT47	DNMT3A	c.2128T>A	p.C710S	SNV
PT47	IL7R	c.991C>T	p.Q331*	SNV
PT47	NOTCH1	c.1726C>T	p.H576Y	SNV
PT47	DPYD	c.1627A>G	p.I543V	Germline
PT47	BRCA2	c.4376A>G	p.N1459S	Germline
PT47	TP53	c.737T>G	p.M246R	SNV
PT47	BCL2L11		del	CNV
PT47	ERBB2	c.2686C>T	p.R896C	SNV
PT47	IDH1	c.394C>A	p.R132S	SNV
PT47	FGFR2	c.1661G>T	p.C554F	SNV
PT48	CYP2C19	c.681G>A	p.P227P	SNV
PT48	EGFR	c.2573T>G	p.L858R	SNV
PT48	EGFR		gain	CNV
PT48	GLI3		gain	CNV
PT48	MYC		gain	CNV
PT48	FAM135B		gain	CNV
PT48	PTK2		gain	CNV
PT48	DPYD	c.1627A>G	p.I543V	SNV
PT48	BRCA2	c.7102T>G	p.L2368V	SNV
PT48	CCND2	c.439T>G	p.L147V	SNV
PT48	FAT1	c.11818A>G	p.T3940A	SNV

PT48	MAP3K1	c.1118C>T	p.P373L	SNV
PT48	NOTCH3	c.6328C>T	p.P2110S	SNV
PT48	SPTA1	c.5683C>G	p.Q1895E	SNV
PT49	KRAS	c.35G>T	p.G12V	SNV
PT49	RB1	c.1272C>A	p.Y424*	SNV
PT49	TP53	c.97-1G>T	N/A	SNV
PT49	BRCA2	c.8191C>A	p.Q2731K	SNV
PT49	PTEN	c.160G>C	p.V54L	SNV
PT49	TP53	c.884C>T	p.P295L	Germline
PT49	BCL6	c.357C>G	p.D119E	SNV
PT49	GLI2	c.1334C>A	p.T445N	SNV
PT49	IDH1	c.1218_1219delinsTT	p.K406_I407delinsNF	SNV
PT49	JAK2	c.733G>A	p.A245T	SNV
PT49	PDCD1LG2	c.50T>C	p.I17T	SNV
PT49	RXRA	c.1332C>A	p.D444E	SNV
PT49	SMUG1	c.196C>T	p.R66C	SNV
PT49	AR	c.1847G>A	p.R616H	SNV
PT49	KDM6A	c.2486C>T	p.S829F	SNV
PT49	VEGFA	c.560G>A	p.W187*	SNV
PT49	DPYD	c.1627A>G	p.I543V	Germline
PT49	UGT1A1	c.211G>A	p.G71R	Germline
PT49	APC	c.715G>C	p.A239P	Germline
PT50	APC	c.4381G>T	p.E1461*	SNV
PT50	KEAP1	c.1295_1305del	p.H432Pfs*9	SNV
PT50	KRAS	c.34G>T	p.G12C	SNV
PT50	PBRM1	c.835dup	p.I279Nfs*8	SNV

PT50	STK11	c.526G>T	p.D176Y	SNV
PT50	MSH2	c.505A>G	p.I169V	Germline
PT50	PIK3CA	c.2198A>G	p.K733R	Germline
PT50	SPTA1	c.4907C>G	p.A1636G	Germline
PT51	SMARCA4	c.430del	p.Q144Rfs*159	SNV
PT51	PBRM1	c.2779+1G>T	N/A	SNV
PT51	UGT1A1	c.211G>A	p.G71R	Germline
PT51	STK11-			fusion
PT51	IRF4	c.833A>G	p.H278R	SNV
PT51	BRCA2	c.2491G>T	p.V831F	SNV
PT51	MED12	c.1450A>T	p.I484F	SNV
PT51	NOTCH2	c.4193A>T	p.Y1398F	SNV
PT51	PIK3CB	c.1451A>G	p.Y484C	SNV
PT51	FAM135B	c.331C>A	p.L111I	SNV
PT51	SMARCA4	c.431A>T	p.Q144L	SNV
PT51	PREX2	c.237C>A	p.D79E	SNV
PT51	FGF6	c.91C>G	p.L31V	SNV
PT51	PIK3C2B	c.180G>T	p.W60C	SNV
PT52	CDKN2A	c.322G>A	p.D108N	SNV
PT52	FBXW7	c.7C>T	p.Q3*	SNV
PT52	NFE2L2	c.101G>C	p.R34P	SNV
PT52	TP53	c.535C>A	p.H179N	SNV
PT52	TPMT	c.719A>G	p.Y240C	Germline
PT52	UGT1A1	c.211G>A	p.G71R	Germline
PT52	CCND1		gain	CNV
PT52	FGF23	c.706G>C	p.A236P	SNV

PT52	GABRA6	c.44A>T	p.E15V	SNV
PT52	NOTCH3	c.6463G>A	p.G2155R	SNV
PT52	PRDM1	c.605G>C	p.R202P	SNV
PT52	SLIT2	c.3127G>A	p.D1043N	SNV
PT52	SMO	c.76_95del	p.P26Efs*103	SNV
PT52	BRCA1	c.2347A>G	p.I783V	Germline
PT52	MUTYH	c.706G>A	p.V236I	Germline
PT52	NTRK2	c.35T>C	p.M12T	Germline
PT52	VEGFA	c.520C>T	p.P174S	Germline
PT52	TPMT	c.419+94T>A	N/A	Germline
PT53	ARID2	c.1134_1135delinsTCT	p.L378Ffs*10	SNV
PT53	EP300	c.1787del	p.D596Vfs*5	SNV
PT53	PIK3CG	c.2414_2415delinsA	p.A805Dfs*72	SNV
PT53	PTCH1	c.2833C>T	p.R945*	SNV
PT53	TP53	c.795_796delinsTT	p.G266*	SNV
PT53	ATRX	c.5786+1G>A	N/A	SNV
PT53	CYP2C19	c.681G>A	p.P227P	Germline
PT53	EGFR		gain	CNV
PT53	ARID1B	c.4398G>T	p.Q1466H	SNV
PT53	CDK12	c.1894C>G	p.L632V	SNV
PT53	LRP1B	c.12938C>A	p.P4313Q	SNV
PT53	MYCN	c.901G>T	p.V301L	SNV
PT53	PIK3R2	c.1844C>T	p.P615L	SNV
PT53	RUNX1T1	c.1580C>A	p.P527H	SNV
PT53	SPOP	c.478G>A	p.E160K	SNV
PT53	STK11	c.1258G>T	p.A420S	SNV

PT53	TGFBR2	c.758G>T	p.G253V	SNV
PT53	ATM	c.8921C>T	p.P2974L	Germline
PT53	DICER1	c.1681A>G	p.I561V	Germline
PT53	DPYD	c.1627A>G	p.I543V	Germline
PT53	JAK2	c.376A>G	p.S126G	Germline
PT53	MTOR	c.5609C>G	p.T1870S	Germline
PT53	MUTYH	c.758C>T	p.T253I	Germline
PT53	NF1	c.1985A>G	p.K662R	Germline
PT53	PALB2	c.2345C>A	p.P782Q	Germline
PT54	TP53	c.G473T	p.R158L	SNV
PT54	BRAF	c.1405_1406delinsTT	p.G469L	SNV
PT54	UGT1A1	c.G211A	p.G71R	Germline
PT54	BCL2L1	2903-bp deletion		Germline
PT54	PTEN	c.T791C	p.M264T	SNV
PT55	NTRK1	c.1189C>A	p.P397T	SNV
PT55	ROS1	c.1013A>G	p.Y338C	SNV
PT55	POLE	c.4024G>T	p.A1342S	SNV
PT56	BLM	c.3117A>G	p.I1039M	SNV
PT57	CUL3			fusion
PT58	KRAS	c.34G>T	p.G12C	SNV
PT58	TP53	c.614A>G	p.Y205C	SNV
PT58	PALB2	c.567_568del	p.R189Sfs*5	SNV
PT58	APC	c.7807G>C	p.E2603Q	SNV
PT58	FAT1	c.4213G>T	p.D1405Y	SNV
PT58	MAP3K1	c.3071A>G	p.K1024R	SNV
PT59	BRIP1	c.1801del	p.S601Qfs*12	SNV

PT60	CHEK2	c.1212T>A	p.Y404*	SNV
PT61	ROS1	c.5995C>A	p.H1999N	SNV
PT61	BRCA2	c.1856A>G	p.Q619R	SNV
PT62	RAD50	c.3580G>C	p.A1194P	SNV
PT63	CYP2C19	c.681G>A	p.P227P	SNV
PT63	UGT1A1	c.211G>A	p.G71R	SNV
PT63	ATM	c.6007-1_6007delinsTT	N/A	SNV
PT63	CBL	c.2366C>T	p.T789I	SNV
PT63	DNMT3A	c.2191T>G	p.F731V	SNV
PT63	DNMT3A	c.2656C>T	p.Q886*	SNV
PT63	DPYD	c.1627A>G	p.I543V	SNV
PT63	FGFR1	c.1107G>T	p.M369I	SNV

Supplementary Table S4. Next generation sequencing detection data from 37 patients in immunization plus platinum-based chemotherapy group.

Patients	gene	DNA base change	Amino Acid Change	Acid Mutation Type
PT1	TP53	c.G524A	p.R175H	SNV
PT1	EGFR	c.T2573G	p.L858R	SNV
PT1	PIK3CA	c.G1624A	p.E542K	SNV
PT1	CDKN2A	c.C53T	p.T18M	SNV
PT1	ERBB2	c.G1367A	p.R456H	SNV
PT2	NOTCH1	c.A920G	p.Q307R	SNV
PT2	FAT1	c.C6754A	p.L2252M	SNV
PT3	BCL2L11		del	CNV
PT3	EGFR	c.2126A>G	p.E709G	SNV
PT3	EGFR	c.2573T>G	p.L858R	SNV
PT3	TP53	c.833C>T	p.P278L	SNV
PT3	EGFR	c.2126A>G	p.E709G	SNV
PT3	EGFR	c.2573T>G	p.L858R	SNV
PT3	TP53	c.833C>T	p.P278L	SNV
PT3	CCNE1		gain	CNV
PT3	BTK		gain	CNV
PT3	FAM47C	c.1905_1944delinsTGAG	p.K636_N648delinsE	SNV
PT3	MBD4	c.939del	p.E314Kfs*4	SNV
PT3	DPYD	c.1627A>G	p.I543V	Germline
PT3	CYP2C19	c.681G>A	p.P227P	Germline
PT3	MGMT	N/A	N/A	Germline
PT3	CD74	N/A	N/A	Germline
PT3	VEGFA	N/A	N/A	Germline
PT3	RAC1	N/A	N/A	Germline

PT3	RAC1	N/A	N/A	Germline
PT3	RET	c.961G>A	p.G321R	Germline
PT3	SLX4	c.2854_2855delinsAT	p.A952M	Germline
PT3	CEBPA		gain	CNV
PT3	GNAS	c.601C>A	p.R201S	SNV
PT3	SETD2	c.7571del	p.C2524Lfs*13	SNV
PT3	ROS1	c.6517T>A	p.Y2173N	SNV
PT3	ESR1	c.932C>T	p.T311M	SNV
PT4	KEAP1	c.1364del	p.P455Qfs*3	SNV
PT4	SLIT2	c.1614-1G>T	N/A	SNV
PT4	TP53	c.376-1G>T	N/A	SNV
PT4	BCL2L11	2903-bp deletion		Germline
PT4	ARID2	c.5482G>C	p.E1828Q	SNV
PT4	AXIN2	c.2447C>T	p.A816V	SNV
PT4	EPHA7	c.2867C>A	p.A956D	SNV
PT4	FAAP100	c.530C>T	p.S177F	SNV
PT4	FAM47C	c.940C>T	p.R314C	SNV
PT4	FAN1	c.1174G>T	p.D392Y	SNV
PT4	FAT1	c.10310C>T	p.A3437V	SNV
PT4	FLT3	c.2428A>G	p.R810G	SNV
PT4	MEF2B	c.124G>A	p.E42K	SNV
PT4	POLG	c.2386A>C	p.K796Q	SNV
PT4	DPYD	c.1627A>G	p.I543V	Germline
PT4	MGMT	N/A	N/A	Germline
PT4	CD74	N/A	N/A	Germline
PT4	VEGFA	N/A	N/A	Germline

PT4	RAC1	N/A	N/A	Germline
PT4	TSC2	c.4469A>G	p.E1490G	Germline
PT5	MET		gain	CNV
PT5	CDKN2A		loss	CNV
PT5	MDM2		gain	CNV
PT5	MET	c.2661dup	p.H888Tfs*3	SNV
PT5	TP53	c.1073A>T	p.E358V	Germline
PT6	GRIN2A	c.3625C>T	p.Q1209*	SNV
PT6	BCL2L11	2903-bp deletion		Germline
PT6	TP53	c.577C>T	p.H193Y	SNV
PT6	CDKN2A			fusion
PT6	CDH10	c.1414C>T	p.R472C	SNV
PT6	DDX6	c.1064C>G	p.S355C	SNV
PT6	MAP3K1	c.1350G>A	p.M450I	SNV
PT6	MDM2	c.533C>G	p.S178*	SNV
PT6	NTRK2	c.1111G>A	p.E371K	SNV
PT6	PAX3	c.604G>A	p.D202N	SNV
PT6	POLQ	c.3933A>C	p.L1311F	SNV
PT6	PPP4R1	c.2176C>G	p.Q726E	SNV
PT6	PTPRT	c.1387T>G	p.L463V	SNV
PT6	RIF1	c.7338G>C	p.E2446D	SNV
PT6	SMARCA1	c.9G>C	p.Q3H	SNV
PT6	SPOP	c.585G>T	p.E195D	SNV
PT6	CYP2C19	c.681G>A	p.P227P	Germline
PT6	MGMT	N/A	N/A	Germline
PT6	VEGFA	N/A	N/A	Germline

PT6	RAC1	N/A	N/A	Germline
PT6	FLCN	c.992C>T	p.S331F	Germline
PT7	GNAS	c.601C>T	p.R201C	SNV
PT7	LRP1B	c.7058del	p.N2353Mfs*32	SNV
PT7	DPYD	c.1627A>G	p.I543V	SNV
PT7	ARID1A	c.1657C>A	p.Q553K	SNV
PT7	ESR1	c.428A>G	p.E143G	SNV
PT7	MET	c.1154G>A	p.C385Y	SNV
PT7	NTRK3	c.536A>G	p.E179G	SNV
PT8	TP53	c.584T>C	p.I195T	SNV
PT8	CDKN2A	c.343G>T	p.V115L	SNV
PT8	FAT1	c.6265G>A	p.V2089I	SNV
PT8	KEAP1	c.1188C>G	p.Y396*	SNV
PT9	APC	c.G1381T	p.E461*	SNV
PT9	AR	c.1489T>A	p.F497I	SNV
PT9	ARID1A	c.1637A>G	p.Q546R	SNV
PT10	UGT1A1	c.211G>A	p.G71R	SNV
PT10	TP53	c.619del	p.D207Mfs*40	SNV
PT10	DPYD	c.1627A>G	p.I543V	SNV
PT10	ALK	c.1111G>A	p.A371T	SNV
PT10	FGFR1	c.1285G>A	p.V429M	SNV
PT10	NOTCH1	c.7357G>A	p.V2453M	SNV
PT10	TP53	c.1131del	p.S378Pfs*44	SNV
PT11	KDM5C	c.2740G>T	p.E914*	SNV
PT11	KRAS	c.34G>T	p.G12C	SNV
PT11	SIK1	c.1339_1366del	p.E447Rfs*34	SNV

PT11	CYP2C19	c.681G>A	p.P227P	Germline
PT11	UGT1A1	c.211G>A	p.G71R	Germline
PT11	CREBBP	c.4070T>A	p.V1357D	SNV
PT11	LRP1B	c.9925G>T	p.D3309Y	SNV
PT11	DPYD	c.1627A>G	p.I543V	Germline
PT11	ALK	c.3784C>T	p.P1262S	Germline
PT12	TP53	c.743_744delinsTT	p.R248L	SNV
PT12	CREBBP	c.1898C>G	p.A633G	SNV
PT12	FAT1	c.8916A>G	p.I2972M	SNV
PT12	RB1	c.2043G>A	p.W681*	SNV
PT12	FAT1	c.7189G>T	p.A2397S	SNV
PT12	PIK3CG	c.622C>A	p.P208T	SNV
PT12	DDR1	c.565G>T	p.D189Y	SNV
PT12	KMT2D	c.5737G>T	p.G1913*	SNV
PT12	PIK3CG	c.94C>A	p.L32M	SNV
PT12	SPTA1	c.3166C>T	p.R1056C	SNV
PT12	CYP2C19	c.681G>A	p.P227P	Germline
PT12	ERF1		loss	CNV
PT12	TP53	c.743_744delinsTT	p.R248L	SNV
PT12	CREBBP	c.1898C>G	p.A633G	SNV
PT12	FAT1	c.8916A>G	p.I2972M	SNV
PT12	RB1	c.2043G>A	p.W681*	SNV
PT12	FAT1	c.7189G>T	p.A2397S	SNV
PT12	PIK3CG	c.622C>A	p.P208T	SNV
PT12	DDR1	c.565G>T	p.D189Y	SNV
PT12	KMT2D	c.5737G>T	p.G1913*	SNV

PT12	PIK3CG	c.94C>A	p.L32M	SNV
PT12	SPTA1	c.3166C>T	p.R1056C	SNV
PT12	CYP2C19	c.681G>A	p.P227P	Germline
PT12	ERRFI1		loss	CNV
PT13	EGFR	c.2240_2257del	p.L747_P753delinsS	SNV
PT13	CYP2C19	c.681G>A	p.P227P	Germline
PT13	DDR2	c.1322T>A	p.M441K	SNV
PT13	CDK6	c.17T>C	p.L6P	SNV
PT13	NOTCH1	c.6738T>A	p.F2246L	SNV
PT14	TP53	c.817C>T	p.R273C	SNV
PT14	NRAS	c.37G>C	p.G13R	SNV
PT14	ERRFI1		loss	CNV
PT14	IGF1R	c.1309C>T	p.R437C	SNV
PT14	SPTA1	c.6752G>A	p.R2251Q	SNV
PT15	DPYD	c.1627A>G	p.I543V	SNV
PT16	UGT1A1	c.G211A	p.G71R	Germline
PT17	TP53	c.G818T	p.R273L	SNV
PT18	DPYD	c.1627A>G	p.I543V	SNV
PT18	ALK	c.1528C>T	p.R510W	SNV
PT18	BRCA1	c.2006T>C	p.M669T	SNV
PT19	TP53	c.181del	p.D61Mfs*62	SNV
PT19	GLI2		gain	CNV
PT19	PIK3CB		gain	CNV
PT19	SOX2		gain	CNV
PT19	BCL6		gain	CNV
PT19	MYC		gain	CNV

PT19	RET		gain	CNV
PT19	KDM5A		gain	CNV
PT19	CCND2		gain	CNV
PT19	KRAS		gain	CNV
PT19	CRKL		gain	CNV
PT19	PIK3CA		gain	CNV
PT19	ATM	c.2573T>G	p.F858C	SNV
PT19	CUL3	c.48_49delinsAT	p.M16_R17delinsIW	SNV
PT19	HLTF	c.1004A>T	p.N335I	SNV
PT19	MSH3	c.169G>C	p.A57P	SNV
PT19	MSH3	c.172G>C	p.A58P	SNV
PT19	PRDM16	c.1420C>T	p.P474S	SNV
PT19	PRSS1	c.458A>T	p.D153V	SNV
PT19	NFIB	c.1060+1G>A	N/A	SNV
PT19	DPYD	c.1896T>C	p.F632F	Germline
PT19	CYP2C19	c.681G>A	p.P227P	Germline
PT19	MGMT	N/A	N/A	Germline
PT19	CYP2D6	c.100C>T	p.P34S	Germline
PT19	CD74	N/A	N/A	Germline
PT19	VEGFA	N/A	N/A	Germline
PT19	RAC1	N/A	N/A	Germline
PT19	RAC1	N/A	N/A	Germline
PT19	FANCA	c.2941T>C	p.C981R	Germline
PT19	FANCA	c.1573A>G	p.I525V	Germline
PT19	POLD1	c.371T>C	p.V124A	Germline
PT20	KRAS	c.35G>C	p.G12A	SNV

PT20	TP53	c.128_154del	p.L43*	SNV
PT20	BRAF	c.1492T>A	p.F498I	SNV
PT20	ESR1	c.1179G>A	p.W393*	SNV
PT20	PTEN	c.672A>G	p.I224M	SNV
PT20	MCL1		gain	CNV
PT20	FANCA	2903-bp deletion		Germline
PT20	DMC1	c.112A>G	p.K38E	SNV
PT20	DPYD	c.1896T>C	p.F632F	Germline
PT20	KRAS	c.35G>C	p.G12A	SNV
PT20	NTRK1		gain	CNV
PT20	N/A	N/A	N/A	N/A
PT20	FGFR2	c.781G>A	p.G261R	SNV
PT20	DPYD	c.1896T>C	p.F632F	Germline
PT21	KRAS	c.34G>T	p.G12C	SNV
PT21	TP53	c.892G>T	p.E298*	SNV
PT21	UGT1A1	c.211G>A	p.G71R	SNV
PT21	CCND1		gain	CNV
PT21	FGF19		gain	CNV
PT21	RICTOR	c.3581A>G	p.H1194R	SNV
PT21	SETD2	c.368C>T	p.T123I	SNV
PT21	SPTA1	c.2463T>A	p.L821L	SNV
PT21	BRCA1	c.3650C>G	p.S1217C	SNV
PT22	TP53	c.844C>T	p.R282W	SNV
PT22	BRAF	c.1406G>C	p.G469A	SNV
PT22	CYP2C19	c.681G>A	p.P227P	Germline
PT22	BAP1	c.38-2A>G		Germline

PT22	WT1	c.1267T>C	p.C423R	SNV
PT22	BLM	c.3117A>G	p.I1039M	SNV
PT22	FGFR2	c.1357T>C	p.S453P	SNV
PT22	KIT	c.1254C>A	p.Y418*	SNV
PT22	KEL	c.590T>A	p.L197Q	SNV
PT22	SPEN	c.5824G>T	p.A1942S	SNV
PT22	BRCA2	c.4493G>A	p.G1498D	SNV
PT22	POLE	c.5035C>T	p.R1679C	Germline
PT22	APC	c.3374T>C	p.V1125A	Germline
PT22	POLE	c.4603G>A	p.G1535S	Germline
PT23	RB1	c.2330del	p.P777Lfs*33	SNV
PT23	TP53	c.743G>A	p.R248Q	SNV
PT23	UGT1A1	c.211G>A	p.G71R	Germline
PT23	RAD50		loss	CNV
PT23	CHD4	c.417_419del	p.E139del	SNV
PT23	CHD4	c.3193G>A	p.G1065S	SNV
PT23	FGF19	c.460T>C	p.Y154H	SNV
PT23	GNAS	c.1082C>T	p.P361L	SNV
PT23	HGF	c.1226G>T	p.G409V	SNV
PT23	KDM6A	c.302A>G	p.H101R	SNV
PT23	SYK	c.1789G>T	p.A597S	SNV
PT23	CTNNB1	c.1466A>G	p.Y489C	Germline
PT23	SUFU	c.1015C>T	p.R339W	Germline
PT23	TSC1	c.3124_3129dup	p.S1042_S1043dup	Germline
PT24	TP53	c.272G>A	p.W91*	SNV
PT24	CYP2C19	c.681G>A	p.P227P	Germline

PT24	UGT1A1	c.211G>A	p.G71R	Germline
PT24	ALK	c.185C>G	p.S62W	SNV
PT24	APC	c.4180G>T	p.D1394Y	SNV
PT24	ARID1B	c.5425G>T	p.G1809C	SNV
PT24	CCNE1	c.1216G>T	p.G406W	SNV
PT24	CDKN2A	c.266G>T	p.G89V	SNV
PT24	CREBBP	c.4929C>G	p.I1643M	SNV
PT24	ESR1	c.795_797delinsTGAT	p.L265Ffs*9	SNV
PT24	FGF19	c.614G>T	p.G205V	SNV
PT24	FGF3	c.695C>A	p.S232Y	SNV
PT24	KEAP1	c.1439G>T	p.G480V	SNV
PT24	KMT2D	c.3854_3855delinsGT	p.E1285G	SNV
PT24	LRP1B	c.11156G>A	p.R3719K	SNV
PT24	LRP1B	c.3628A>G	p.K1210E	SNV
PT24	LRP1B	c.458G>C	p.C153S	SNV
PT24	NF1	c.7243A>T	p.T2415S	SNV
PT24	NRG1	c.1447C>A	p.L483M	SNV
PT24	PALB2	c.1471G>T	p.A491S	SNV
PT24	PLCG2	c.1938G>T	p.W646C	SNV
PT24	PTCH1	c.4172G>A	p.R1391Q	SNV
PT24	RXRA	c.994G>C	p.V332L	SNV
PT24	SIK1	c.949G>T	p.V317L	SNV
PT24	SMARCA4	c.1761G>T	p.K587N	SNV
PT24	SPTA1	c.3646T>A	p.F1216I	SNV
PT24	SPTA1	c.6631C>A	p.R2211S	SNV
PT24	TAF1	c.2008G>T	p.D670Y	SNV

PT24	TGFBR1	c.1339G>C	p.E447Q	SNV
PT24	TYK2	c.2975G>T	p.R992L	SNV
PT24	DPYD	c.1627A>G	p.I543V	Germline
PT24	BRCA2	c.215A>G	p.N72S	Germline
PT24	NTRK1	c.659G>A	p.R220Q	Germline
PT24	TSC1	c.2285A>G	p.N762S	Germline
PT24	LRP1B			fusion
PT24	LRP1B			fusion
PT25	PIK3CA	c.353G>A	p.G118D	SNV
PT25	TP53	c.774A>T	p.E258D	SNV
PT25	CYP2C19	c.681G>A	p.P227P	Germline
PT25	BCL2L11	2903-bp deletion		Germline
PT25	ADAM29	c.2399_2425del	p.T800_L808del	SNV
PT25	LRP1	c.11003C>T	p.P3668L	SNV
PT25	PIK3CG	c.53G>A	p.R18Q	SNV
PT25	RICTOR	c.220G>A	p.E74K	SNV
PT25	SPOP	c.81C>G	p.I27M	SNV
PT25	TNK2	c.1495G>A	p.V499M	SNV
PT25	ATR	c.190A>G	p.T64A	Germline
PT25	BAP1	c.1825A>G	p.S609G	Germline
PT25	BRIP1	c.2048T>G	p.V683G	Germline
PT25	ROS1	c.6116G>A	p.R2039H	Germline
PT25	TSC1	c.2485A>C	p.S829R	Germline
PT26	FBXW7	c.1570A>T	p.K524*	SNV
PT26	TP53	c.743G>A	p.R248Q	SNV
PT26	CYP2C19	c.681G>A	p.P227P	Germline

PT26	UGT1A1	c.211G>A	p.G71R	Germline
PT26	BCL6		gain	CNV
PT26	CCND2		gain	CNV
PT26	FGF23		gain	CNV
PT26	FGF6		gain	CNV
PT26	BRD4		gain	CNV
PT26	JAK3		gain	CNV
PT26	PIK3R2		gain	CNV
PT26	CRKL		gain	CNV
PT26	PIK3CA		gain	CNV
PT26	ARID2	c.65A>T	p.E22V	SNV
PT26	CUL3	c.700A>G	p.I234V	SNV
PT26	EPHA7	c.2758C>A	p.P920T	SNV
PT26	EPHB1	c.755G>A	p.R252Q	SNV
PT26	GRIN2A	c.3612C>A	p.S1204R	SNV
PT26	KMT2C	c.6887G>A	p.R2296H	SNV
PT26	KMT2C	c.14493C>A	p.N4831K	SNV
PT26	KMT2D	c.4199G>A	p.C1400Y	SNV
PT26	LRP1B	c.5114G>T	p.G1705V	SNV
PT26	LYN	c.1301A>T	p.Y434F	SNV
PT26	NOTCH1	c.2365C>T	p.Q789*	SNV
PT26	DPYD	c.1627A>G	p.I543V	Germline
PT26	ROS1	c.374C>G	p.S125C	Germline
PT26	KLHL6		gain	CNV
PT26	NOTCH3		gain	CNV
PT26	CHD4-ITFG2			fusion

PT27	TP53	c.742C>T	p.R248W	SNV
PT27	TPMT	c.719A>G	p.Y240C	Germline
PT27	MCL1		gain	CNV
PT27	GNA13		gain	CNV
PT27	KIF5B-RET			fusion
PT27	MAP3K1	c.53G>A	p.R18K	SNV
PT27	DPYD	c.1627A>G	p.I543V	Germline
PT27	TPMT	c.419+94T>A	N/A	Germline
PT27	ATM	c.6101G>A	p.R2034Q	Germline
PT27	KIT	c.1049A>G	p.Y350C	Germline
PT27	ROS1	c.2872A>G	p.I958V	Germline
PT28	CYP2C19	c.681G>A	p.P227P	Germline
PT28	DPYD	c.1627A>G	p.I543V	Germline
PT28	FANCA	c.4225C>T	p.R1409W	Germline
PT28	NF1	c.563C>A	p.A188E	Germline
PT29	KRAS	c.33_34delinsCT	p.G12C	SNV
PT29	CCND3		gain	CNV
PT29	NKX2-1		gain	CNV
PT29	DPYD	c.1896T>C	p.F632F	Germline
PT29	DPYD	c.1627A>G	p.I543V	Germline
PT29	MGMT	N/A	N/A	Germline
PT29	VEGFA	N/A	N/A	Germline
PT29	RAC1	N/A	N/A	Germline
PT29	BRIP1	c.1688A>G	p.D563G	Germline
PT29	PTCH1	c.500C>A	p.A167D	Germline
PT30	FAT1	c.4781del	p.N1594Mfs*18	SNV

PT30	KRAS		gain	CNV
PT30	DPYD	c.1627A>G	p.I543V	SNV
PT30	ATM	c.8228C>T	p.T2743M	SNV
PT30	FANCA	c.1573A>G	p.I525V	SNV
PT30	MET	c.475C>A	p.H159N	SNV
PT30	MSH6	c.1106C>G	p.T369S	SNV
PT30	MTOR	c.6588G>C	p.E2196D	SNV
PT31	ARID1B	c.3333_3340del	p.E1111Dfs*27	SNV
PT31	FOXA1	c.798C>G	p.F266L	SNV
PT31	NFE2L2	c.235G>A	p.E79K	SNV
PT31	TET2	c.4141del	p.A1381Pfs*67	SNV
PT31	TP53	c.672+1G>T	N/A	SNV
PT31	SOX2		gain	CNV
PT31	BCL6		gain	CNV
PT31	FBXW7		loss	CNV
PT31	ZNF703		gain	CNV
PT31	FGFR1		gain	CNV
PT31	PIK3CA		gain	CNV
PT31	CUL5	c.314A>G	p.D105G	SNV
PT31	ELF3	c.895C>T	p.H299Y	SNV
PT31	GALNT12	c.1307T>A	p.L436Q	SNV
PT31	GAS7	c.1321G>C	p.V441L	SNV
PT31	MLLT3	c.501_506del	p.S189_S190del	SNV
PT31	MMS19	c.3092G>C	p.*1031Sext*17	SNV
PT31	NFE2L2	c.163G>C	p.E55Q	SNV
PT31	PICALM	c.1226C>G	p.S409*	SNV

PT31	POLG	c.125G>A	p.R42Q	SNV
PT31	RAD50	c.3580G>C	p.A1194P	SNV
PT31	RGS7	c.1285C>A	p.L429M	SNV
PT31	ZBTB16	c.700C>T	p.R234W	SNV
PT31	DPYD	c.1896T>C	p.F632F	Germline
PT31	CYP2C19	c.636G>A	p.W212*	Germline
PT31	CYP2C19	c.681G>A	p.P227P	Germline
PT31	MGMT	N/A	N/A	Germline
PT31	UGT1A1	c.686C>A	p.P229Q	Germline
PT31	CYP2D6	c.100C>T	p.P34S	Germline
PT31	VEGFA	N/A	N/A	Germline
PT31	RAC1	N/A	N/A	Germline
PT31	FANCG	c.373_375dup	p.V125dup	Germline
PT31	NOTCH2-NOTCH2NLA			fusion
PT32	CDKN1B	c.275del	p.P92Rfs*27	SNV
PT32	DNMT3A	c.1990G>T	p.E664*	SNV
PT32	FUBP1	c.1165G>T	p.G389*	SNV
PT32	KDM5C	c.3306_3307del	p.C1103Pfs*26	SNV
PT32	MAP2K1	c.171G>T	p.K57N	SNV
PT32	PTPN11	c.1508G>T	p.G503V	SNV
PT32	SLIT2	c.4191_4192delinsA	p.C1397*	SNV
PT32	SPEN	c.1921_1942del	p.T641Gfs*161	SNV
PT32	SPTA1	c.957+1G>T	N/A	SNV
PT32	CCND1		gain	CNV
PT32	FGF19		gain	CNV
PT32	FGF4		gain	CNV

PT32	FGF3		gain	CNV
PT32	KEAP1	c.997G>A	p.G333S	SNV
PT32	TP53	c.577C>T	p.H193Y	SNV
PT32	ABCB11	c.2296G>A	p.G766R	SNV
PT32	ACKR3	c.973G>T	p.E325*	SNV
PT32	ACSL3	c.2055A>T	p.E685D	SNV
PT32	ACVR1B	c.293C>G	p.T98S	SNV
PT32	ALK	c.37C>A	p.L13M	SNV
PT32	APC	c.2194A>G	p.N732D	SNV
PT32	ARID2	c.1119A>C	p.R373S	SNV
PT32	BTK	c.740G>A	p.S247N	SNV
PT32	CAMTA1	c.2606G>T	p.R869L	SNV
PT32	CBLB	c.1363_1364delinsAT	p.R455I	SNV
PT32	CD79B	c.288_289delinsTT	p.M96_E229delinsI	SNV
PT32	CDH10	c.2039C>A	p.A680D	SNV
PT32	CDX2	c.46A>T	p.S16C	SNV
PT32	CEBPA	c.568T>C	p.S190P	SNV
PT32	CIC	c.152C>T	p.P51L	SNV
PT32	CREBBP	c.6470A>T	p.Q2157L	SNV
PT32	CUX1	c.2600G>A	p.R867H	SNV
PT32	CUX1	c.3932G>C	p.G1311A	SNV
PT32	DDR2	c.202G>T	p.G68W	SNV
PT32	DNMT3A	c.2679G>T	p.W893C	SNV
PT32	EPHB1	c.1790C>G	p.P597R	SNV
PT32	EPHB1	c.1790C>A	p.P597H	SNV
PT32	EPHB1	c.1091G>T	p.R364L	SNV

PT32	ERCC3	c.1480A>G	p.M494V	SNV
PT32	EXO1	c.2307G>C	p.K769N	SNV
PT32	FAM135B	c.4035G>T	p.M1345I	SNV
PT32	FANCB	c.1450G>T	p.D484Y	SNV
PT32	FAT4	c.7357C>G	p.L2453V	SNV
PT32	FES	c.881G>C	p.G294A	SNV
PT32	FLCN	c.212C>T	p.S71F	SNV
PT32	FLT1	c.3433C>A	p.P1145T	SNV
PT32	FLT3	c.76A>G	p.T26A	SNV
PT32	GATA3	c.463C>G	p.P155A	SNV
PT32	GLI1	c.643C>A	p.L215M	SNV
PT32	GLI2	c.3958A>T	p.S1320C	SNV
PT32	IKBKE	c.1026G>T	p.Q342H	SNV
PT32	IL6ST	c.547_548delinsTT	p.T183F	SNV
PT32	IRS2	c.2311C>T	p.P771S	SNV
PT32	ITK	c.1699G>T	p.V567L	SNV
PT32	KMT2C	c.962G>A	p.S321N	SNV
PT32	LRP1B	c.6142G>T	p.D2048Y	SNV
PT32	LRP1B	c.3045T>A	p.S1015R	SNV
PT32	MBD4	c.577A>G	p.S193G	SNV
PT32	MLH3	c.2290G>T	p.V764F	SNV
PT32	MLLT3	c.1707A>T	p.*569Cext*32	SNV
PT32	MSH4	c.913G>T	p.G305C	SNV
PT32	MTOR	c.271G>T	p.A91S	SNV
PT32	NTRK3	c.1316C>A	p.A439D	SNV
PT32	NTRK3	c.1540C>A	p.P514T	SNV

PT32	PML	c.2455G>T	p.G819C	SNV
PT32	PPP4R1	c.2032_2033delinsTT	p.G678L	SNV
PT32	PRDM9	c.289C>A	p.P97T	SNV
PT32	PREX2	c.3717dup	p.V1240Cfs*2	SNV
PT32	PTPRD	c.2834C>A	p.A945E	SNV
PT32	PTPRD	c.4773G>T	p.Q1591H	SNV
PT32	PTPRT	c.3757G>T	p.A1253S	SNV
PT32	PTPRT	c.2029C>A	p.Q677K	SNV
PT32	RAD54B	c.1090G>T	p.G364*	SNV
PT32	RPTOR	c.3277A>T	p.I1093F	SNV
PT32	SDHA	c.1136G>T	p.R379L	SNV
PT32	SOS1	c.3841G>C	p.E1281Q	SNV
PT32	SOS1	c.3809G>A	p.R1270K	SNV
PT32	SOX9	c.751G>T	p.D251Y	SNV
PT32	SPEN	c.1982G>T	p.W661L	SNV
PT32	TDG	c.647T>A	p.V216E	SNV
PT32	TDP1	c.1313A>G	p.Y438C	SNV
PT32	USP8	c.1867A>T	p.T623S	SNV
PT32	WT1	c.1331G>A	p.R444K	SNV
PT32	ZFHX3	c.2942G>T	p.G981V	SNV
PT32	ZNF703	c.400G>T	p.A134S	SNV
PT32	EPS15	c.1918+1G>T	N/A	SNV
PT32	DPYD	c.1896T>C	p.F632F	Germline
PT32	DPYD	c.1627A>G	p.I543V	Germline
PT32	CYP2C19	c.636G>A	p.W212*	Germline
PT32	MGMT	N/A	N/A	Germline

PT32	UGT1A1	c.211G>A	p.G71R	Germline
PT32	CD74	N/A	N/A	Germline
PT32	VEGFA	N/A	N/A	Germline
PT32	RAC1	N/A	N/A	Germline
PT32	CHEK2	c.1111C>T	p.H371Y	Germline
PT33	CYP2C19	c.681G>A	p.P227P	Germline
PT33	APC	c.7798C>G	p.Q2600E	Germline
PT33	APC	c.385G>C	p.E129Q	Germline
PT33	ATM	c.125A>G	p.H42R	Germline
PT33	AXIN2	c.2332C>T	p.R778W	Germline
PT33	FANCD2	c.2723C>T	p.T908I	Germline
PT33	MET	c.4087G>A	p.A1363T	Germline
PT33	POLE	c.712A>T	p.I238F	Germline
PT34	CDH1	c.2329_2339delinsT	p.D777Lfs*3	SNV
PT34	NF1	c.7909C>T	p.R2637*	SNV
PT34	NFE2L2	c.92G>C	p.G31A	SNV
PT34	PIK3CA	c.1624G>A	p.E542K	SNV
PT34	TP53	c.1002del	p.R335Vfs*10	SNV
PT34	TP53	c.1024C>T	p.R342*	SNV
PT34	BCOR		loss	CNV
PT34	NF1			fusion
PT34	ALK	c.1710G>T	p.E570D	SNV
PT34	ATM	c.2600G>C	p.S867T	SNV
PT34	ATRX	c.5135G>A	p.G1712D	SNV
PT34	AXIN1	c.1506G>C	p.M502I	SNV
PT34	EMSY	c.2018T>C	p.V673A	SNV

PT34	EP300	c.1540A>G	p.M514V	SNV
PT34	ESR1	c.453G>T	p.R151S	SNV
PT34	EXT1	c.1634T>G	p.V545G	SNV
PT34	FAM135B	c.2340G>T	p.E780D	SNV
PT34	FANCM	c.3433G>A	p.D1145N	SNV
PT34	FH	c.1120C>G	p.P374A	SNV
PT34	G6PD	c.1388G>A	p.R463H	SNV
PT34	LATS2	c.1342C>T	p.R448C	SNV
PT34	LRP1B	c.5767A>T	p.T1923S	SNV
PT34	LRP1B	c.12815C>A	p.T4272N	SNV
PT34	LRP1B	c.5752C>T	p.H1918Y	SNV
PT34	LRP1B	c.8542G>A	p.E2848K	SNV
PT34	NF1	c.2312C>T	p.A771V	SNV
PT34	NRG1	c.204C>G	p.F68L	SNV
PT34	POLH	c.956T>G	p.I319S	SNV
PT34	SHOC2	c.1158G>A	p.M386I	SNV
PT34	SOX9	c.184_186del	p.K62del	SNV
PT34	ZFHX3	c.7960G>C	p.E2654Q	SNV
PT34	PSIP1	c.149+1G>A	N/A	SNV
PT34	DPYD	c.1896T>C	p.F632F	Germline
PT34	MGMT	N/A	N/A	Germline
PT34	CD74	N/A	N/A	Germline
PT34	VEGFA	N/A	N/A	Germline
PT34	RAC1	N/A	N/A	Germline
PT35	TP53	c.578A>T	p.H193L	SNV
PT35	RB1	c.1498+1G>T	N/A	SNV

PT35	BCL2L11	2903-bp deletion		Germline
PT35	IL7R		gain	CNV
PT35	RICTOR		gain	CNV
PT35	FAM135B		gain	CNV
PT35	CTNND2	c.677_679del	p.P226del	SNV
PT35	PREX2	c.34G>A	p.E12K	SNV
PT35	DPYD	c.1896T>C	p.F632F	Germline
PT35	CYP2C19	c.681G>A	p.P227P	Germline
PT35	MGMT	N/A	N/A	Germline
PT35	CD74	N/A	N/A	Germline
PT35	VEGFA	N/A	N/A	Germline
PT35	RAC1	N/A	N/A	Germline
PT35	BARD1	c.1685C>G	p.T562S	Germline
PT35	BARD1	c.1694G>A	p.R565H	Germline
PT35	TSC2	c.4967A>G	p.D1656G	Germline
PT36	NFE2L2	c.101G>C	p.R34P	SNV
PT36	TP53	c.404G>A	p.C135Y	SNV
PT36	AMER1	c.3406T>C	p.*1136Qext*7	SNV
PT36	APC	c.7592C>G	p.S2531C	SNV
PT36	BRCA2	c.556G>A	p.A186T	SNV
PT36	EPHA3	c.1149_1150delinsAT	p.P384S	SNV
PT36	GRIN2A	c.2010T>A	p.F670L	SNV
PT36	INPP4B	c.511G>C	p.D171H	SNV
PT36	IRS2	c.2627G>T	p.R876L	SNV
PT36	NOTCH1	c.4591del	p.L1531Cfs*49	SNV
PT36	NOTCH1	c.3577C>T	p.Q1193*	SNV

PT36	POT1	c.1147C>A	p.P383T	SNV
PT36	RAD23A	c.586G>A	p.E196K	SNV
PT36	RAD9B	c.428A>G	p.Q143R	SNV
PT36	SMARCA1	c.2729A>G	p.Q910R	SNV
PT36	SPTA1	c.1060C>T	p.H354Y	SNV
PT36	XRCC2	c.472G>A	p.D158N	SNV
PT36	DPYD	c.1627A>G	p.I543V	Germline
PT36	MGMT	N/A	N/A	Germline
PT36	UGT1A1	c.211G>A	p.G71R	Germline
PT36	CD74	N/A	N/A	Germline
PT36	CD74	N/A	N/A	Germline
PT36	VEGFA	N/A	N/A	Germline
PT36	RAC1	N/A	N/A	Germline
PT36	ATM	c.8797A>G	p.K2933E	Germline
PT37	PIK3CA	c.1633G>A	p.E545K	SNV
PT37	EGFR	c.1351C>T	p.R451C	SNV
PT37	TP53	c.747G>T	p.R249S	SNV
PT37	MYC		gain	CNV
PT37	KRAS		gain	CNV
PT37	CDKN2A	c.158_166del	p.M53_G55del	SNV
PT37	BRCA2	c.684T>A	p.N228K	SNV
PT37	CDH10	c.1873C>A	p.L625M	SNV
PT37	DDB2	c.839G>C	p.S280T	SNV
PT37	SLC25A13	c.1909G>T	p.V637F	SNV
PT37	DPYD	c.1896T>C	p.F632F	Germline
PT37	CYP2C19	c.681G>A	p.P227P	Germline

PT37

FANCA

c.1573A>G

p.I525V

Germline
