

Supplementary Table S3. List of mutations identified in the paired bile cfDNA and tissue DNA (left) or bile cfDNA (right) of each patient. Asterisk (*) indicates the presence of actionable mutations.

PATIENT ID	GENE NAME	BILE		TISSUE	PATIENT ID	GENE NAME	BILE	
		MUTATIONS		MUTATION			MUTATIONS	
#1	KRAS	G12R		G12R	#18	KRAS	G12R	
	TP53	V218E		V218E		TP53	R175H	
#2	KRAS	G12D		G12D	#19	KRAS	G13D	
	KRAS	G12D		G12D		KRAS	G12V	G13D
#3*	FGFR3	F384L		nd	#20*	PIK3CA	Q546P	
	KRAS	G12D		G12D		GNAS	R201H	
#4*	TP53	na	P151H	R337C		FBXW7	R689W	R505C
	ERBB2	S310F		nd		IDH2	R140Q	
	ERBB3	V104L		nd		PTEN	R173C	
#5*	ERBB2	G776V		nd		EGFR	R451C	
	KRAS	G12R		G12R	RET	R912W	R912Q	
#6	KRAS	G12D		G12D	#21*	PIK3CA	E545K	
	ERBB3	V104M	G284R	nd		ERBB3	D297Y	
#7*	GNAS	R201C		nd	#22	KRAS	G12V	
	KRAS	nd		G12D		SMAD4	R361C	
#8	TP53	nd	C135F	R248Q	#23*	ERBB3	V104M	
	FBXW7	R465C		nd		GNAS	R201C	
#9*	KRAS	G13D		G13D	#24*	KRAS	G12V	Q61H
	TP53	723delC	R273H	723delC		BRAF	G596R	
	FBXW7	R465C	R689W	R465C	#25	KRAS	G12V	
	IDH2	R140Q		nd		KRAS	G12V	
	MAP2K1	E203K		nd	#26*	TP53	R248W	
	TP53	na		673-2A>C		BRAF	D594G	
#10*	PIK3CA	E524K		E542K	#27	TP53	R282W	
	ERBB2	S310F		nd		#28	KRAS	G12V
#11	KRAS	G12V		G12V	TP53		R248W	
	TP53	903delA		903delA	#29*	GNAS	R201C	
KRAS	G12D		G12D	APC		R1450		
#12*	TP53	662_663delAG		662_663delAG		KIT	T670I	
	ERBB3	V104M		nd		#30	TP53	E285K
RB1	na		1850delG	SMAD4	R361C			
#13	KRAS	G12D		nd	GNAS		R201H	
	KRAS	G12R		nd	PTEN		R173C	
#15	KRAS	G12D		nd	APC		R1114*	
	TP53	H193R		nd	#31*	TP53	M246V	
#16	KRAS	nd		G12D		#32	KRAS	G12V
	TP53	nd		H179Q	PIK3CA		E545K	
#47	KRAS	G12R		G12R	ERBB3		V104L	
	TP53	780delC		780delC	GNAS	R201H		
#48	KRAS	G12D		G12D	#33	KRAS	G12C	
	TP53	G262V		G262V		TP53	R248W	
	SF3B1	K700E		K700E	#42	KRAS	G12R	
KRAS	G12V		G12V	#43*		KIT	V530I	
#49*	TP53	H214R			nd	#44*	KRAS	G12V
	IDH1	R132C		R132C	TP53		E285K	H179R
	KRAS	G12D		G12D	BRAF		D594N	
#50*	SMAD4	R361H		R361H	GNAS	R201H		
	ERBB3	V104M		nd	CTNNB1	S45P		
	KRAS	G12D		G12D	#45*	KRAS	G12D	
TP53	657delC		657delC	ERBB3		V104M	G284R	
#51*	ERBB3	G284R	T355I	nd	GNAS	R201C	R201H	
	KRAS	G12R		G12R	#46*	KRAS	G12V	
	TP53	G154V		G154V		ERBB3	V104M	
#52*	ERBB3	V104M		nd	CTNBB1	S45F		
	KRAS	G12C		nd	#57*	KRAS	G12V	
#53*	MAP2K1	F53I		nd		IDH1	R132G	
	TP53	na		1028_1029delAG	GNAS	R201S		
#54*	ERBB3	D297Y		nd	#58	KRAS	G12D	Q61P
	ERBB2	S310F		nd		CTNNB1	S45P	T41A
	NF1	na		R711C	#59	TP53	S241F	V173L
#55	KRAS	G12D		G12D		KRAS	G12D	G13D
	TP53	V173M		nd	#61*	PIK3CA	R93W	
BRAF	G466A		G466A	IDH1		R132H		
CDKN2A	na		Y129*	TP53		R282W		
#56*	KRAS	G12D		nd		BRAF	V600E	
	ERBB2	V777L		nd	PTEN	R173C		
#66*	TP53	S241F		S241F	EGFR	R451C		
	NF1	na		E1387G	MET	R988C		
	RB1	na		1332+2T>C	MTOR	R2217W		
#67	SMAD4	R361C		nd	#63*	KRAS	G12D	
	KRAS	G12D		G12D		TP53	Y220C	
#68	TP53	R273H		nd	ERBB3	V104M		
	KRAS	G12D		G12D	#64*	FGFR2	A648T	
TP53	R273H		nd	KRAS		G12D		
#65	TP53	R248Q		R248Q	TP53	R248Q		
	FBXW7	S582L		S582L	FBXW7	S582L		

■ Common mutations (n=32)
■ Mutations detected in bile (n=34)
■ Mutations detected in tissue analyzed in bile (n=4)
■ Mutations detected in tissue not analyzed in bile (n=8)