

S3 Table. List of mutations with pathogenic variants

Gene	Variant	Patient number	Gene	Variant	Patient number	Gene	Variant	Patient number
<i>ARID1A</i>	Del.	1	<i>JAK3</i>	Q501H	1	<i>ERBB3</i>	V104L	1
<i>CCNE1</i>	Amp.	1		R657Q	1		V104M	2
<i>RICTOR</i>	Amp.	1	<i>IDH1</i>	R132C	1		G284R	2
<i>RUNX1</i>	Amp.	1		R132L	1		E928G	1
<i>TSC2</i>	R622W	1	<i>TSHR</i>	R450H	3	<i>MAP2K1</i>	K57T	2
<i>TP63</i>	R97C	1	<i>RET</i>	E511K	1		K57N	2
<i>TERT</i>	T726M	1		R833C	1		I99T	1
	Amp.	1		P1039L	1		C121S	2
<i>SPOP</i>	E50K	1	<i>PTEN</i>	R130Q	2		Y130H	1
<i>SETBP1</i>	G870D	1		P246L	1	<i>FGFR4</i>	D127H	8
<i>RAD51C</i>	R312Q	1	<i>JAK2</i>	V617F	3	<i>CDH1</i>	V832M	10
<i>NOTCH3</i>	R182C	1	<i>HRAS</i>	A59T	2	<i>AKT1</i>	E17K	9
<i>NF1</i>	R1276Q	1		Q61K	1		L52R	2
<i>MYC</i>	P72S	1		Amp.	1	<i>MSH6</i>	T1102fs	3
<i>MSH2</i>	E878D	1	<i>SMO</i>	K575M	4		T1355fs	9
	Del.	1	<i>PTPN11</i>	E69K	1	<i>FANCA</i>	R435C	5
<i>MAP3K1</i>	G616R	1		R498W	17		S1088F	8
<i>MAP2K4</i>	S251N	1	<i>MDM2</i>	Amp.	2	<i>ERBB2</i>	R217C	2
<i>KIT</i>	D52N	1	<i>MET</i>	Amp.	3		S310F	2
<i>GNAS</i>	R201C	1	<i>CDK4</i>	Amp.	3		S310Y	1
<i>DNMT3A</i>	R882H	1	<i>AURKA</i>	Amp.	3		R678Q	2
<i>CSF1R</i>	M766T	1	<i>EGFR</i>	Amp.	5		L755S	2
<i>CHEK2</i>	R181H	1	<i>FLT3</i>	Amp.	5		D769Y	1
<i>BRCA1</i>	E597*	1	<i>FGFR1</i>	Amp.	6		V777L	1
<i>ASXL1</i>	R1068*	1	<i>CCND1</i>	Amp.	6		V842I	2
<i>AR</i>	V731M	1	<i>PTCH1</i>	S827G	4		Amp.	10
<i>STAT1</i>	R274Q	1	<i>POLE</i>	P286R	2	<i>CTNNB1</i>	G34E	1
	R274W	1		V411L	2		I35S	1
<i>SF3B1</i>	K666R	1	<i>ATM</i>	P292L	1		S37F	1
	G742D	1		R2486*	1		T41A	4
<i>RB1</i>	L491P	1		R2832C	1		T41I	1
	R698S	1		R3008C	1		S45F	4
<i>NOTCH1</i>	T596M	1	<i>CDKN2A</i>	M53I	1		S45P	1
	R1594Q	1		P81L	1		G575R	1
<i>MLH1</i>	T117M	2		D84N	1			
<i>KMT2D</i>	R5214H	2		D84A	1			

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				G101W	1			
<i>MTOR</i>	C1483F	1	<i>FBXW7</i>	R347C	13	<i>KRAS</i>	G12A	16
	C1483R	1		R347H	5		G12C	30
	E1799K	3		R361Q	3		G12D	144
	V2006F	1		R387C	5		G12R	4
	S2215F	1		R387L	2		G12S	22
	S2215Y	1		R465C	5		G12V	76
	R2217W	1		R479Q	2		G13C	5
	M2327I	1		R505C	2		G13D	84
	E2419K	1		R505H	1		G13R	1
	L2427Q	1	<i>BRAF</i>	G469V	1		G13V	1
	L2427R	2		G469A	1		Q22K	2
	I2500F	2		G466R	1		Q61H	14
<i>BRCA2</i>	R2494*	2		G466A	1		Q61L	2
	K2729N	17		G464E	1		Q61R	3
<i>SMAD4</i>	R135*	1		N581S	2		T58I	1
	D351H	2		N581T	1		A59T	2
	G386D	1		D594E	1		K117N	6
	G386S	1		D594G	4		A146T	17
	R361C	13		D594H	1		A146V	4
	R361S	1		D594N	2		Amp.	8
	R445*	2		F595L	1	<i>NRAS</i>	G12D	11
	R496H	1		G596R	1		G12V	1
	R496C	1		L597V	1		G13D	1
	D537G	1		V600E	47		G13V	1
<i>STK11</i>	P281L	16					Q61H	3
	F354L	8					Q61K	2
							Q61L	6
							Q61R	7
<i>PIK3CA</i>	R38H	1	<i>TP53</i>	W53*	1	<i>TP53</i>	C242F	1
	E39K	1		E62*	1		G244S	2
	E81K	3		G105V	1		G244V	2
	R88Q	4		R110L	1		G245C	2
	R93W	1		T125M	1		G245D	6
	P104L	1		Y126C	1		G245R	1
	G106V	3		Y126D	1		G245S	24
	R108H	1		S127F	2		G245V	1

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APC	V344G	1	L130F	2	M246R	1		
	V344M	1	L130V	2	R248Q	31		
	N345K	1	K132E	3	R248W	18		
	C420R	3	K132M	1	R249G	1		
	E542K	22	K132N	1	R249M	1		
	E542V	1	K132R	1	R249S	3		
	E545A	4	K132T	1	R249W	1		
	E545K	31	C135F	1	I251S	1		
	E545Q	2	C135Y	1	I255del	1		
	Q546E	1	C141G	1	I255F	1		
	Q546K	4	V143M	1	I255N	1		
	Q546R	2	Q144*	1	I255S	1		
	Y1021H	1	L145P	2	I255T	1		
	M1043I	2	P151S	5	L257Q	1		
	M1043V	1	P151T	2	E258K	1		
	N1044K	2	P152L	5	D259Y	1		
	H1047L	4	T155N	2	G266E	1		
	H1047Q	1	R156C	1	G266R	2		
	H1047R	30	R156H	1	R267P	1		
	G1049R	3	V157F	3	R267W	1		
	E365K	1	R158H	5	F270L	1		
	C604R	1	Y163C	1	F270S	1		
	C378R	1	Y163N	1	V272L	2		
	Q195*	1	Q165*	2	V272M	3		
	R213*	2	V172F	2	R273C	24		
	R216*	4	V173E	1	R273G	1		
	R232*	7	V173L	4	R273H	25		
	R283*	3	V173M	1	R273P	1		
	Q424*	1	R175C	1	R273S	3		
	R499*	5	R175H	65	V274F	2		
	W553*	1	C176F	4	C275F	1		
	R554*	3	C176R	1	C275Y	2		
	R564*	4	C176Y	1	P278L	1		
	W593*	1	P177R	1	P278R	1		
	R640W	1	H178N	1	P278S	1		
	K693*	1	H179R	3	R280K	1		
	L779*	1	H179Y	1	R280T	1		

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	E855fs	1		R181C	3		D281E	1
	R876*	5		R181H	1		D281G	1
	E893*	1		A189V	3		R282G	3
	S932*	2		H193R	1		R282P	1
	Y935*	3		H193Y	1		R282W	39
	S943*	1		L194R	5		E285K	3
	Q1062*	1		I195T	3		E286K	1
	R1114*	2		R196*	6		E286V	1
	Q1131*	1		Y205C	2		E294*	1
	Q1230*	1		Y205D	3		R306*	3
	Q1291*	1		R213*	2		R342*	8
	Q1294*	1		R213L	2		E349*	1
	T1301fs	1		H214R	1			
	Q1338*	2		S215G	1			
	E1353*	2		V216M	3			
	S1356*	1		Y220C	8			
	Q1367*	1		I232T	1			
	E1379*	1		Y234C	3			
	Q1406*	2		Y234D	2			
	Q1429*	1		Y234H	1			
	R1450*	11		Y236C	3			
	E1464fs	1		M237I	7			
	Q1469*	2		C238Y	1			
	A1474fs	2		N239S	1			
	S1545*	1		S241C	2			