

**Supplemental Table S1.** Specific Types of Detected Mutations

Group	Gene	Specific gene mutation
NBNR	<i>EZH1</i>	EZH1:p.Q571R
		EZH1:p.Y642F
	<i>DICER1</i>	DICER1:p.D1709G
		DICER1:p.D1810V
		DICER1:p.E1705K
		DICER1:p.E1813Q
		DICER1:p.E1813K/DICER1:p.D1810V
	<i>EIF1AX</i>	EIF1AX:p.G8E
		EIF1AX:p.G9R
		EIF1AX:p.G9V
		EIF1AX:p.P2R
	<i>PTEN</i>	PTEN:p.C136R
		PTEN:p.R233Ter
RAS	<i>NRAS</i>	NRAS:p.G13R
		NRAS:p.Q61K
		NRAS:p.Q61R
		NRAS:p.Q61R/NRAS:p.Q61K
	<i>KRAS</i>	KRAS:p.G12D
		KRAS:p.G12V
		KRAS:p.Q61R
		KRAS:p.G12V/KRAS:p.G12F/ KRAS:p.G12C
	<i>HRAS</i>	HRAS:p.Q61K
		HRAS:p.Q61R
<i>BRAF<sup>V600E</sup></i>	<i>BRAF<sup>V600E</sup></i>	BRAF:p.V600E BRAF:p.V600E/BRAF:p.G469A (BRAF:p.G509A)
Double mutation	<i>BRAF<sup>V600E</sup>/PIK3CA</i>	BRAF:p.V600E/PIK3CA:p.E542K
	<i>BRAF<sup>V600E</sup>/TP53</i>	BRAF:p.V600E/TP53:p.R110P
	<i>PIK3CA/TERT</i>	PIK3CA:p.K111E/TERT C228T
	<i>EZH1/TP53</i>	EZH1:p.Y642F/TP53:p.R248Q

NBNR, non-*BRAF*-non-*RAS*; *EZH1*, enhancer of zeste 1 polycomb repressive complex 2 subunit; *DICER1*, dicer 1, ribonuclease III; *EIF1AX*, eukaryotic translation initiation factor 1A X-linked; *PTEN*, phosphatase and tensin homolog; *PIK3CA*, phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha; *TP53*, tumor protein p53; *TERT*, telomerase reverse transcriptase.