

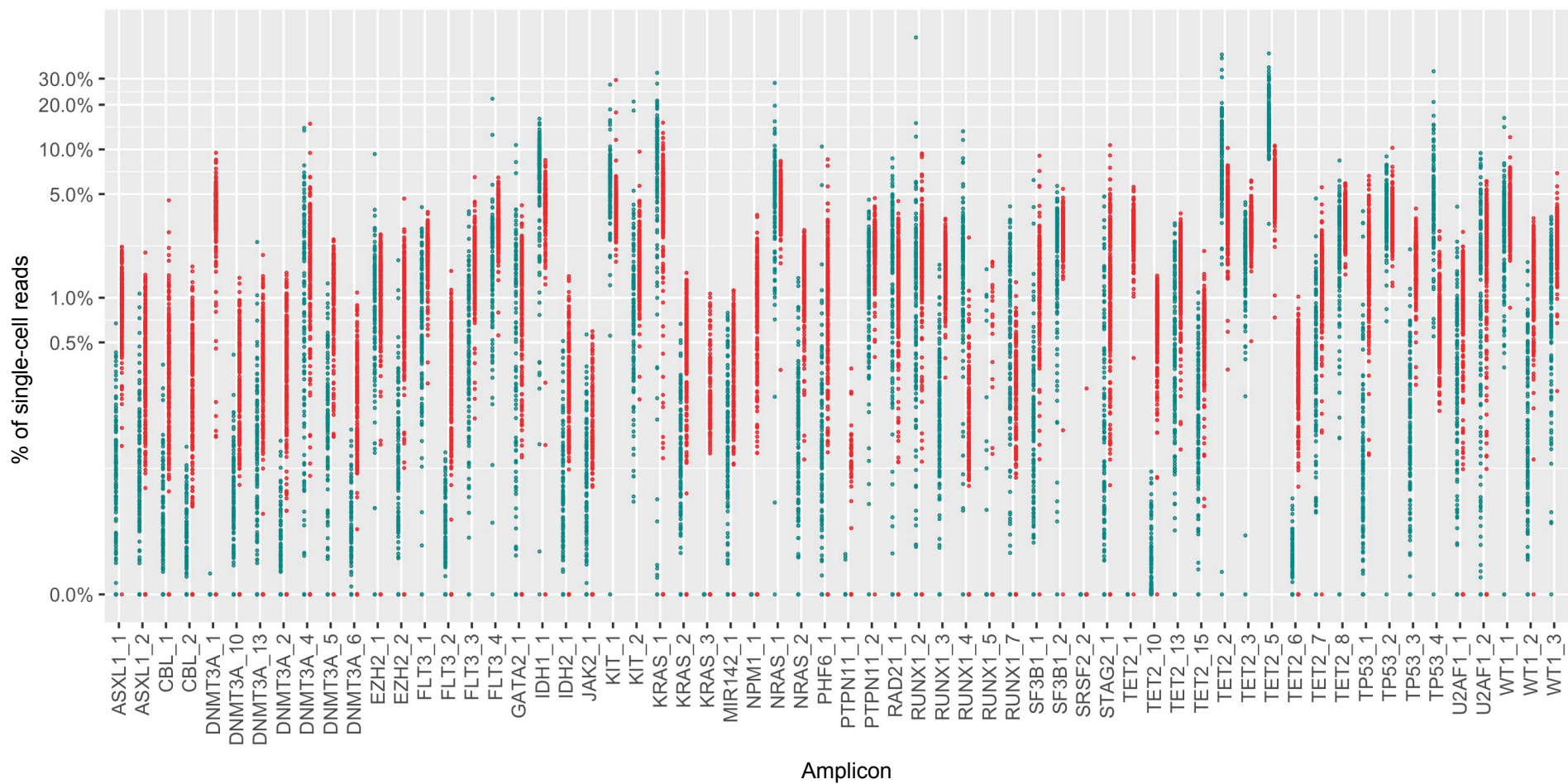
Supplementary Table S1

Chromosome	Gene	Insert start	Insert end	Amplicon name
chr1	NRAS	115256325	115256546	NRAS_1
chr1	NRAS	115258554	115258776	NRAS_2
chr11	WT1	32413416	32413641	WT1_2
chr11	WT1	32414126	32414348	WT1_1
chr11	WT1	32417766	32417992	WT1_3
chr11	CBL	119148819	119149034	CBL_2
chr11	CBL	119149210	119149431	CBL_1
chr12	KRAS	25380260	25380466	KRAS_2
chr12	KRAS	25398184	25398405	KRAS_1
chr12	KRAS	25378550	25378658	KRAS_3
chr12	PTPN11	112888117	112888327	PTPN11_2
chr12	PTPN11	112926780	112926999	PTPN11_1
chr13	FLT3	28592495	28592723	FLT3_1
chr13	FLT3	28602180	28602404	FLT3_3
chr13	FLT3	28608138	28608361	FLT3_2
chr13	FLT3	28609548	28609769	FLT3_4
chr15	IDH2	90631735	90631962	IDH2_1
chr17	TP53	7576954	7577180	TP53_4
chr17	TP53	7577398	7577615	TP53_2
chr17	TP53	7578087	7578296	TP53_1
chr17	TP53	7578385	7578605	TP53_3

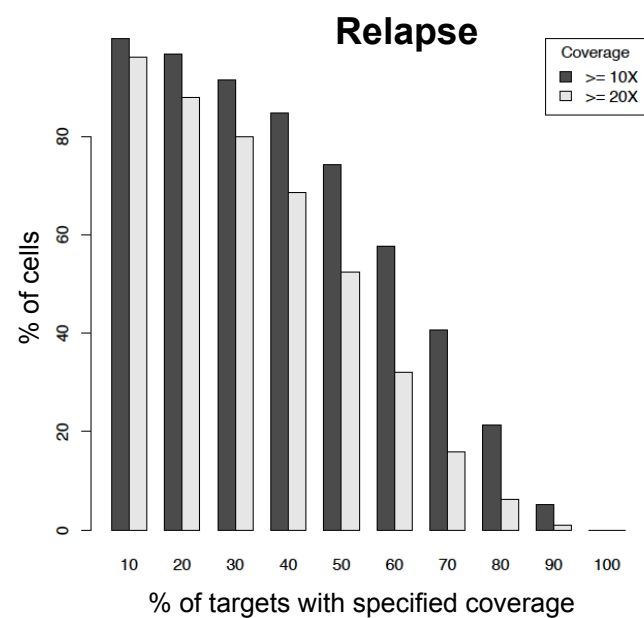
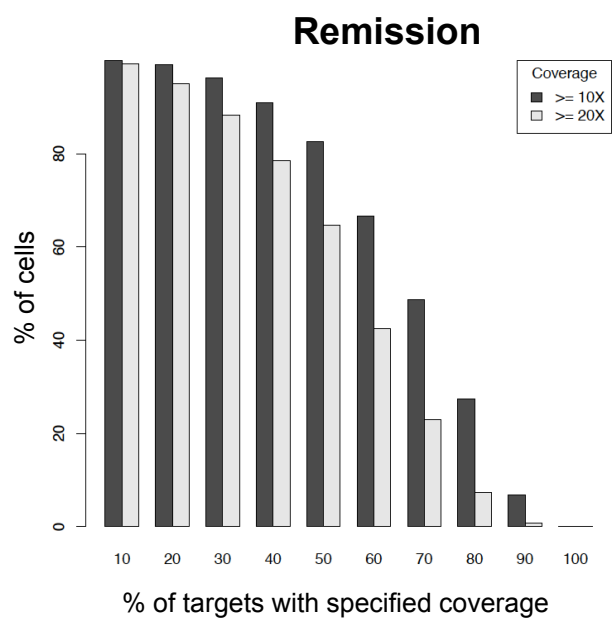
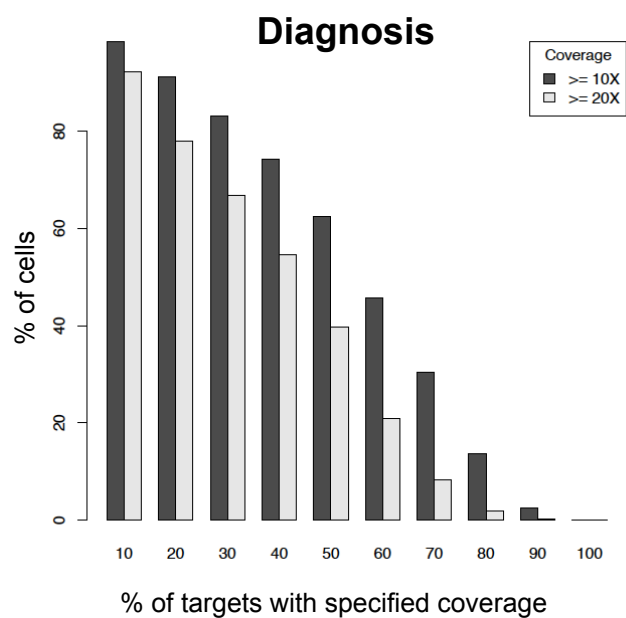
Chromosome	Gene	Insert start	Insert end	Amplicon name
chr17	MIR142	56408608	56408751	MIR142_1
chr17	SRSF2	74732883	74733050	SRSF2_2
chr2	DNMT3A	25457136	25457351	DNMT3A_10
chr2	DNMT3A	25458489	25458714	DNMT3A_6
chr2	DNMT3A	25461897	25462088	DNMT3A_13
chr2	DNMT3A	25463103	25463329	DNMT3A_2
chr2	DNMT3A	25463446	25463673	DNMT3A_5
chr2	DNMT3A	25466627	25466857	DNMT3A_1
chr2	DNMT3A	25470473	25470641	DNMT3A_4
chr2	SF3B1	198266762	198266977	SF3B1_1
chr2	SF3B1	198267157	198267384	SF3B1_2
chr2	IDH1	209112899	209113123	IDH1_1
chr20	ASXL1	31022370	31022586	ASXL1_1
chr20	ASXL1	31022846	31023073	ASXL1_2
chr21	RUNX1	36164786	36164997	RUNX1_5
chr21	RUNX1	36171483	36171710	RUNX1_2
chr21	RUNX1	36206706	36206884	RUNX1_3
chr21	RUNX1	36231605	36231834	RUNX1_4
chr21	RUNX1	36252812	36253007	RUNX1_7
chr21	U2AF1	44514701	44514922	U2AF1_1
chr21	U2AF1	44524280	44524505	U2AF1_2

Chromosome	Gene	Insert start	Insert end	Amplicon name
chr3	GATA2	128202724	128202891	GATA2_1
chr4	KIT	55589608	55589829	KIT_2
chr4	KIT	55599232	55599448	KIT_1
chr4	TET2	106156635	106156850	TET2_15
chr4	TET2	106156867	106157094	TET2_10
chr4	TET2	106157752	106157947	TET2_13
chr4	TET2	106163914	106164128	TET2_1
chr4	TET2	106164753	106164980	TET2_6
chr4	TET2	106180645	106180865	TET2_8
chr4	TET2	106182821	106183021	TET2_5
chr4	TET2	106190719	106190932	TET2_7
chr4	TET2	106196089	106196313	TET2_3
chr4	TET2	106197100	106197318	TET2_2
chr5	NPM1	170837502	170837616	NPM1_1
chr7	EZH2	148504655	148504874	EZH2_1
chr7	EZH2	148506333	148506547	EZH2_2
chr8	RAD21	117878729	117878946	RAD21_1
chr9	JAK2	5073564	5073785	JAK2_1
chrX	STAG2	123179102	123179318	STAG2_1
chrX	PHF6	133549083	133549301	PHF6_1

Supplementary Figure 1

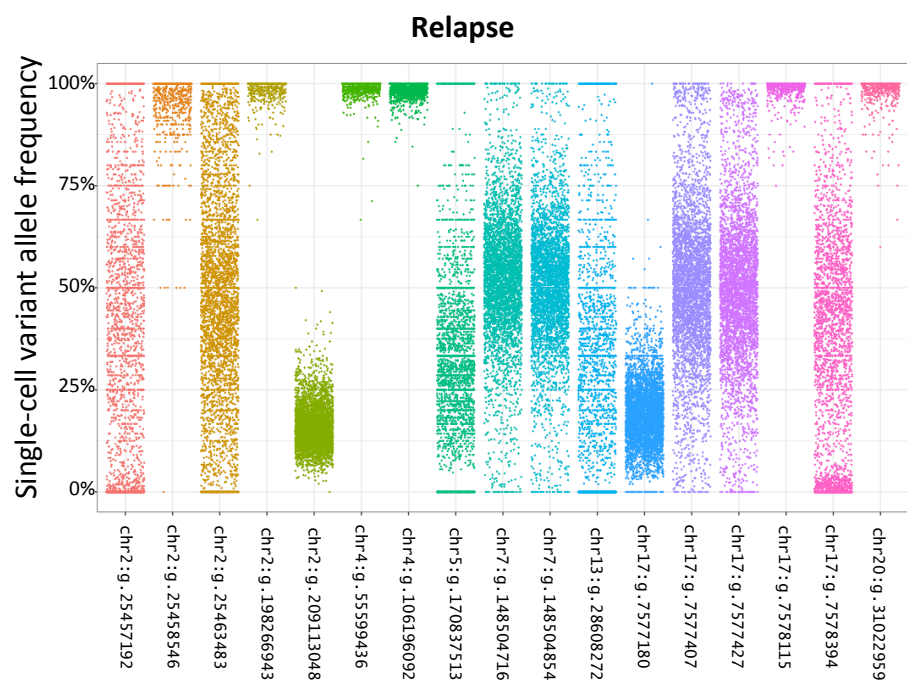
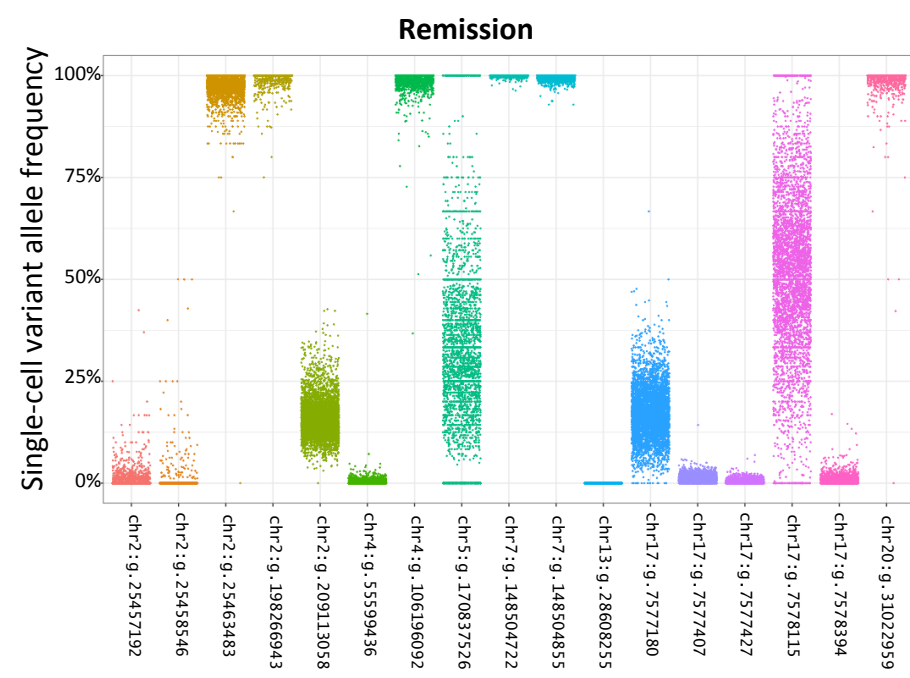
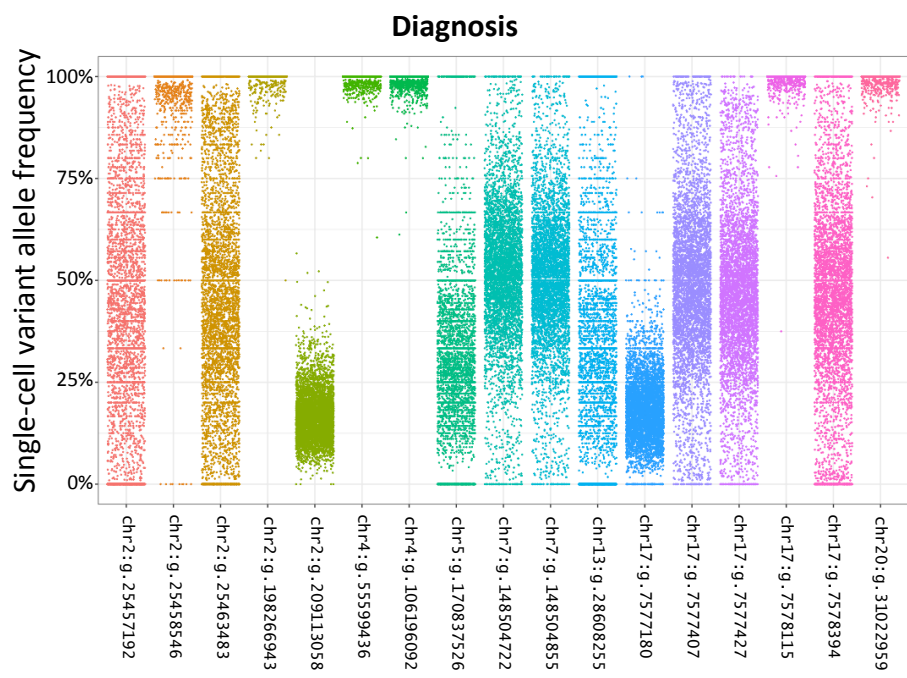


Supplementary Figure 2



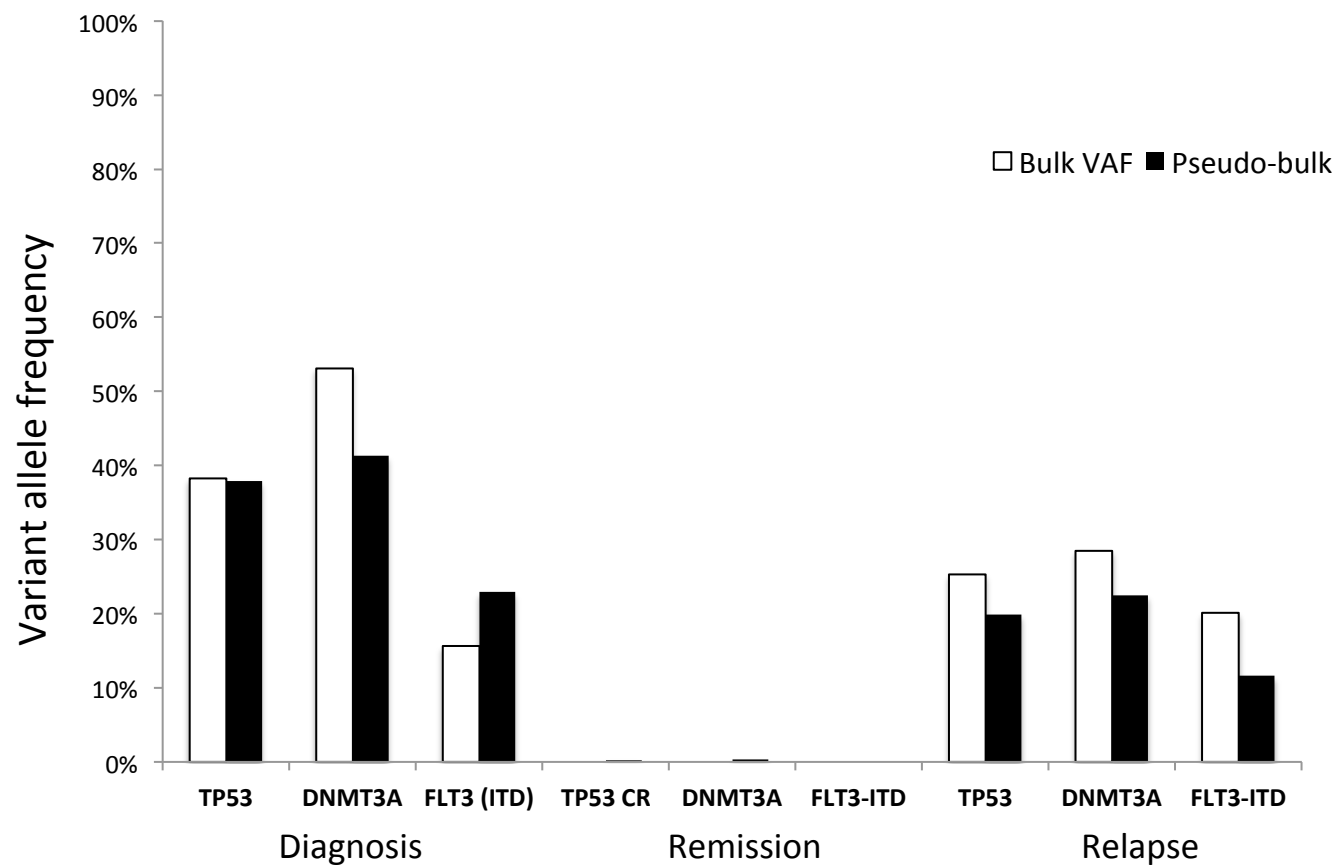
Supplementary Table S2

Gene	Transcript	Strand	Variant coordinates (gDNA/cDNA/protein)	Region
<i>DNMT3A</i>	NM_022552	-	chr2:g.25457192G>A/c.2695C>T/p.R899C	cds_in_exon_23
<i>DNMT3A</i>	NM_022552	-	chr2:g.25458546C>T/c.2597+30G>A/.	intron_between_exon_22_and_23
<i>DNMT3A</i>	NM_022552	-	chr2:g.25463483G>A/c.2173+26C>T/.	intron_between_exon_18_and_19
<i>SF3B1</i>	NM_012433	-	chr2:g.198266943C>T/c.2078-89G>A/.	intron_between_exon_14_and_15
<i>IDH1</i>	NM_001282387	-	chr2:g.209113058delA/c.414+44delT/.	intron_between_exon_4_and_5
<i>KIT</i>	NM_000222	+	chr4:g.55599436T>C/c.2484+78T>C/.	intron_between_exon_17_and_18
<i>TET2</i>	NM_001127208	+	chr4:g.106196092C>T/c.4538-113C>T/.	intron_between_exon_10_and_11
<i>NPM1</i>	NM_002520	+	chr5:g.170837526delT/c.847-5delT/.	intron_between_exon_10_and_11
<i>EZH2</i>	NM_001203247	-	chr7:g.148504722delG/c.2241+21delC/.	3-UTR;noncoding_exon_20
<i>EZH2</i>	NM_001203247	-	chr7:g.148504855_148504859dupGACTT/c.2181-61_2181-57dupAAGTC/.	intron_between_exon_19_and_20
<i>FLT3</i>	NM_004119	-	chr13:g.28608255_28608275dupGATCATATTCATATTCTCTGA/ c.1784_1804dupGAGAATATGAATATGATCTCA/ p.R595_L601dupREYEYDL	cds_in_exon_14
<i>TP53</i>	NM_001126115	-	chr17:g.7577180C>T/c.387-25G>A/.	intron_between_exon_3_and_4
<i>TP53</i>	NM_001126115	-	chr17:g.7577407A>C/c.386+92T>G/.	intron_between_exon_3_and_4
<i>TP53</i>	NM_001126115	-	chr17:g.7577427G>A/c.386+72C>T/.	intron_between_exon_3_and_4
<i>TP53</i>	NM_001126115	-	chr17:g.7578115T>C/c.276+62A>G/.	intron_between_exon_2_and_3
<i>TP53</i>	NM_001126115	-	chr17:g.7578394T>C/c.140A>G/p.H47R	cds_in_exon_1
<i>ASXL1</i>	NM_015338	+	chr20:g.31022959T>C/c.2444T>C/p.L815P	cds_in_exon_12



Supplementary Figure 3

Supplementary Figure 4



Supplementary Table S3

List of 295 genes targeted by bulk sequencing

Gene name									
ABCC9	CALR	CUL5	FANCD2	HIST1H2BF	LEF1	NBN	PLA2G2D	SF3B1	TINF2 (TIN2)
ABL1	CARD11	CUX1	FANCE	HIST1H3D	LRP1B	NCOR1	PLCG2	SFRS1	TLR2
ACTG1	CBL	CYLD	FANCG	HIST1H4D	LTB	NCOR2	POT1	SFRS7	TLR9
AKT1	CBLB	DAXX	FANCI	HNRNPK	LUC7L2	NF1	POU2AF1	SGK1	TNFAIP3
ANKRD11	CCND1	DCLRE1C	FANCL	HRAS	LYN	NFE2	PRDM1	SH2B3	TNFRSF14
ARID1A	CCND3	DDX3X	FAS	ICOS	MALT1	NFKB1	PRKCB	SHH	TNKS
ARID1B	CD200	DIS3	FAT1	ID3	MAP2K1	NFKB2	PTEN	SMAD2	TOX
ARID2	CD274	DKC1	FAT3	IDH1	MAPK1	NFKBIA	PTPN1	SMC1A	TP53
ARID5B	CD58	DLC1	FBXW7	IDH2	MAX	NFKBIE	PTPN11	SMC3	TRAF3
ARPP21	CD79A	DNM2	FGFR3	IKBKA	MDM2	NOTCH1	RAD21	SMC5	TRAF6
ASXL1	CD79B	DNMT1	FLI1	IKZF1	MED12	NOTCH2	RAD51C	SNX7	TYK2
ATF7IP	CDK4	DNMT3A	FLT3	IKZF2	MEF2B	NPM1	RAG1	SOCS1	TYK3
ATM	CDKN2A	DNMT3B	FNDC3A	IKZF3	MEF2C	NR3C2	RAG2	SOX5	U2AF1
ATRX	CDKN2B	EBF1	FOXP1	IL7R	MGA	NRAS	RASA2	SP140	U2AF2
B2M	CDKN2C	ECT2L	FYN	IRAK1	miR125a	NSD2	RB1	SPEN	UBR5
BCL10	CEBPA	EED	G6PC3	IRAK4	miR-142	NT5C2	REL	SPIB	USP29
BCL2	CEBPE	EGR1	GAB2	IRF1	miR155	PAG1	RELA	SRSF2	VPREB1
BCL6	CHD2	EGR2	GATA1	IRF4	miR15a	PALB2	RELB	STAG1	WHSC1
BCL7A	CHK2	ELANE	GATA2	IRF7	miR16-1	PAX5	RELN	STAG2	WHSC1L1
BCOR	CIITA	EP300	GATA3	ITPKB	MIR17HG	PDCD1	RHOA	STAT1	WT1
BCR	CNOT3	EPHA7	GCET2	JAK1	miR21	PDCD1LG2	RIPK1	STAT3	XPO1
BIRC3	CREBBP	EPOR	GFI1B	JAK2	mir34b	PDGFRB	ROBO1	SUZ12	ZAP70
BLK	CRLF2	ERG	GNA13	JAK3	mir34c	PEG3	ROR1	SYK	ZMYM2
BMI1	CSF2RA	ETV6	GNAS	JARID2	MLL	PHF6	RPL10	TBL1XR1	ZMYM3
BRAF	CSF3R	EZH2	GNB1	KDM4C	MLL2	PHIP	RPL5	TCF3	ZRSR2
BRIP1	CTBP1	FAM46C	GPRC5A	KDM6A	MLL3	PIGA	RUNX1	TERC	
BTG1	CTBP2	FAM5C	HAX1	KIT	MPL	PIK3CA	RUNX2	TERT	
BTK	CTCF	FANCA	HIST1H1E	KLHL6	MS4A1	PIK3CB	SAMHD1	TET1	
BTLA	CTLA4	FANCB	HIST1H2AD	KRAS	MYB	PIK3CG	SETBP1	TET2	
C22orf194	CTNNA1	FANCC	HIST1H2BE	LAMB4	MYD88	PIK3R1	SETD2	TGDS	

Supplementary Table S4

Gene	Transcript	Strand	Variant coordinates (gDNA/cDNA/protein)	Region
<i>NRAS</i>	NM_002524	-	chr1:g.115258745C>G/c.37G>C/p.G13R	cds_in_exon_2
<i>SF3B1</i>	NM_012433	-	chr2:g.198266943C>T/c.2078-89G>A/.	intron_between_exon_14_and_15
<i>SF3B1</i>	XM_005246428	-	chr2:g.198267246_198267247insG/c.1639+33_1639+34insC/.	intron_between_exon_15_and_16
<i>IDH1</i>	XM_005246524	-	chr2:g.209113058delA/c.414+44delT/.	intron_between_exon_2_and_3
<i>KIT</i>	NM_000222	+	chr4:g.55599436T>C/c.2484+78T>C/.	intron_between_exon_17_and_18
<i>NPM1</i>	NM_002520	+	chr5:g.170837457A>G/c.847-74A>G/.	intron_between_exon_10_and_11
<i>NPM1</i>	NM_002520	+	chr5:g.170837526delT/c.847-5delT/.	intron_between_exon_10_and_11
<i>EZH2</i>	NM_001203249	-	chr7:g.148504718G>A/c.2088+20C>T/.	3-UTR;noncoding_exon_19
<i>EZH2</i>	NM_001203249	-	chr7:g.148504855_148504859dupGACTT/c.2028-61_2028-57dupAAGTC/.	intron_between_exon_18_and_19
<i>JAK2</i>	NM_004972	+	chr9:g.5073691delT/c.1777-7delT/.	intron_between_exon_13_and_14
<i>WT1</i>	XM_005253120	-	chr11:g.32417945T>C/c.852A>G/p.R284R	cds_in_exon_6
<i>WT1</i>	XM_005253120	-	chr11:g.32417962A>G/c.844-9T>C/.	intron_between_exon_5_and_6
<i>FLT3</i>	NM_004119	-	chr13:g.28592546T>C/c.2541+58A>G/.	intron_between_exon_20_and_21
<i>FLT3</i>	NM_004119	-	chr13:g.28602256C>T/c.2053+59G>A/.	intron_between_exon_16_and_17
<i>IDH2</i>	XM_005254893	-	chr15:g.90631934C>T/c.263G>A/p.R140Q	cds_in_exon_4
<i>TP53</i>	NM_001126115	-	chr17:g.7577180C>T/c.387-25G>A/.	intron_between_exon_3_and_4
<i>TP53</i>	NM_001126115	-	chr17:g.7578115T>C/c.276+62A>G/.	intron_between_exon_2_and_3
<i>SRSF2</i>	NM_001195427	-	chr17:g.74732959G>T/c.284C>A/p.P95H	cds_in_exon_1
<i>ASXL1</i>	NM_015338	+	chr20:g.31022449dupG/c.1934dupG/p.G646Wfs*12	cds_in_exon_13
<i>ASXL1</i>	NM_015338	+	chr20:g.31022959T>C/c.2444T>C/p.L815P	cds_in_exon_13