Supplemental data

Control cohort of PV/ET without leukemic transformation

Eighty ET or PV patients who did not transform to acute leukemia with at least 8 years of follow-up were recruited in 2 centers (CHU Angers and Institut Paoli-Calmettes Marseilles). Furthermore, these patients did not present any events - myelofibrosis or myelodysplastic evolution or death - during the follow-up. A sample at the chronic phase was analyzed by NGS: diagnosis in 52/80 cases and during the follow-up in 28/80 cases. NGS data were already available for patients from IPC Marseilles and were comparable to data from Angers with both a similar panel and technology (Haloplex, Agilent®). The control cohort was constituted of 37 PV (all with *JAK2*V617F mutations) and 43 ET (driver mutations were 21 *JAK2*V617F, 15 *CALR*, 1 *MPL*W515 and 6 triple negatives). Characteristics and results of the genomic analysis of patients of the control cohort were summarized in the Supplemental Table SVI.

NGS analysis and bioinformatic pipeline

Libraries were made using HaloplexHS technology, according to manufacturer recommendation. The workflow consists of a digestion and a denaturation of the sample DNA, an hybridization of the probe library to the DNA targets, a ligation and capture of uniquely barcoded targets, and an amplification of the enriched fragments by PCR. These libraries are pooled, then clusters are created and sequenced with an Illumina SBS chemistry on a NextSeq500 (Illumina, San Diego, CA, USA). The family reads used for demultiplexing allow a good sensitivity for mutation with low variant allele frequency (VAF) by removing sequencing errors. Sequence alignment and variant calling were performed with SureCall software (Agilent Technology®) using GenAligners 3.0 tool (Agilent Technology®) with the default settings and SNPPET (Agilent Technology®). Customized parameters were applied on this bayesian based model as follow: minimum allele frequency = 0.02, minimum quality of base = 30, minimum mutated reads = 4, variant threshold = 0.3. We used Integrative Genomics Viewer (IGV, Cambridge, UK) to visualize the read alignment, allowing us to confirm the variant calls. wAnnovar (Yang & Wang, 2015) annotated the variants, confronting the rare ones with COSMIC database and SNPs databases (gnomAD, dbSNP, ExAC, 1000 Genomes, GO-ESP, and TOPMED). We considered nonsynonymous coding variants when Variant Allele Frequency (VAF) was higher than 2%, and coverage of called regions reached 50. Known polymorphisms in 1000 Genomes, gnomAD, and Exac databases were excluded when the minor allele frequency was higher than 1%. Polymorphism Phenotyping (PolyPhen2) and Sorting Intolerant From Tolerant (SIFT) tools gave us the

functional prediction of mutations. Mutations were then classified according to their putative pathogenic effect in three classes described in Table SI.

We evaluated the diagnosis performance of our method by analyzing several samples with known mutations, and by participating since 2016 to the bi-annual control of quality of the French Group of molecular Biology in hematology (GBMHM).

NGS quality and complemental analysis

Sample specific-barcodes primers were used to index PCR products. We used molecular barcodes specific to each DNA fragment of interest, allowing us to obtain a median of 60.8% of duplicate amplicons. The median coverage of NGS was 585X [129; 1671]. The median percentage of uncovered areas was 2.6% [1.1%; 21.7%], which give evidence of a satisfactory average coverage for each sample analyzed.

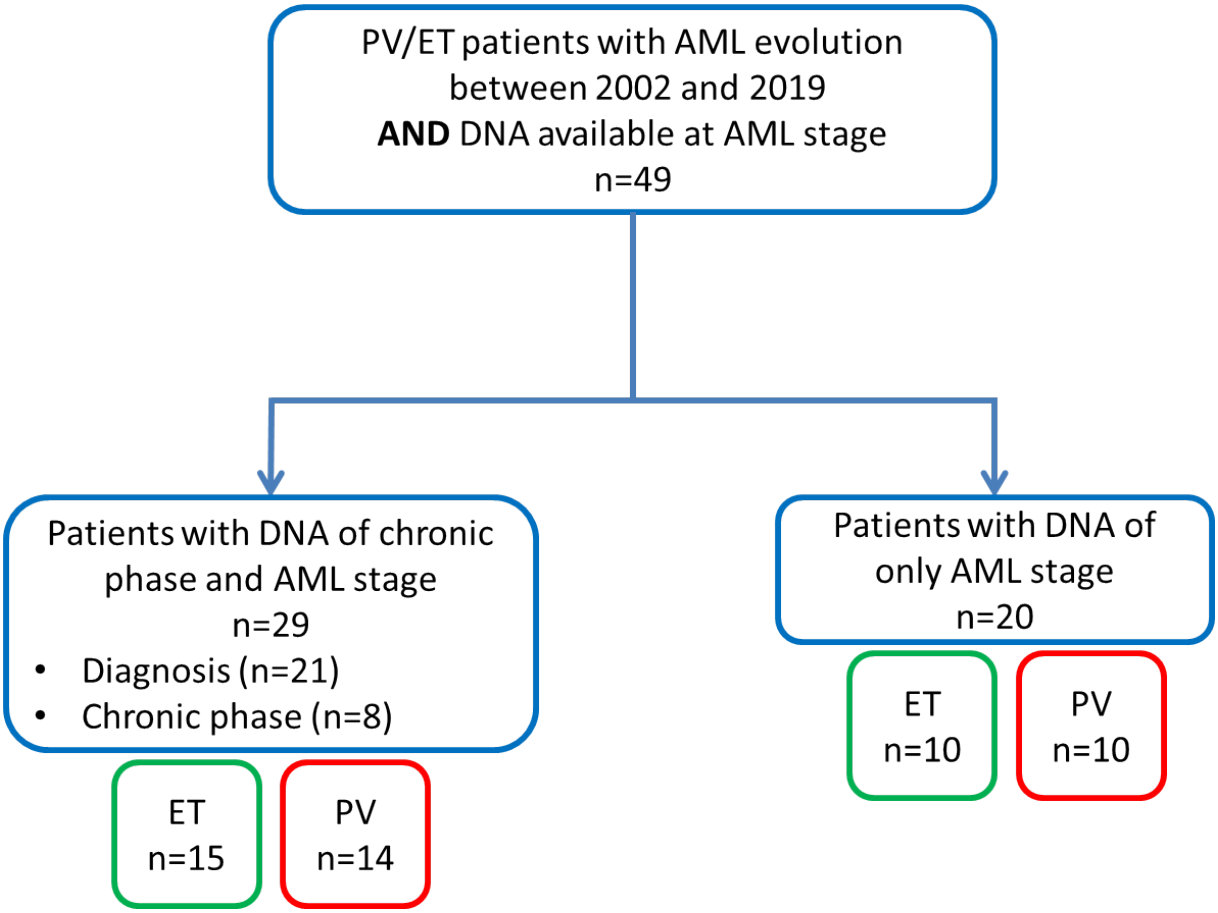

Figure S1: Flow chart description of the cohort

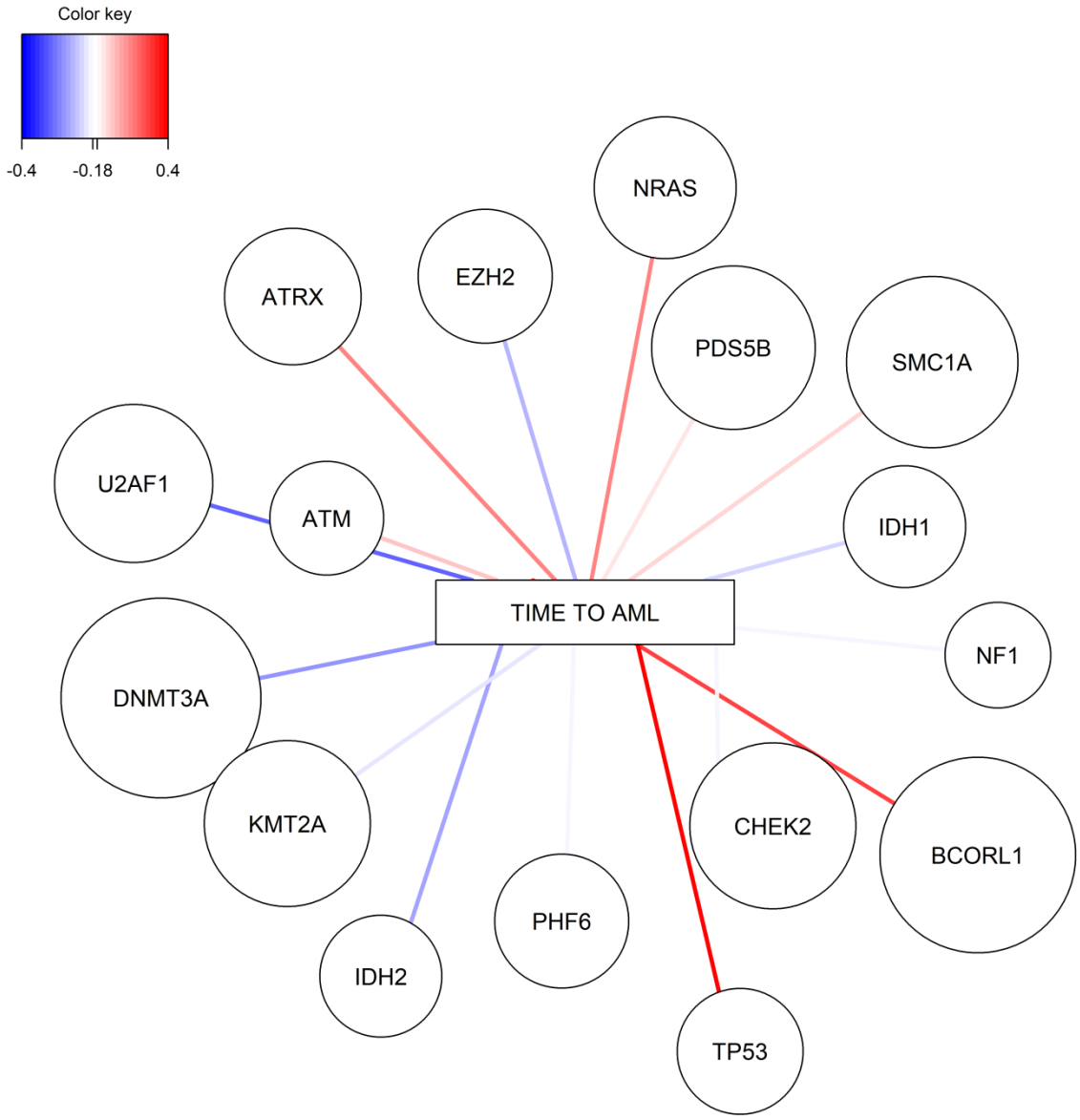

Figure S2: Network of mutated genes associated with the interval of leukemic transformation

Result from the first axis of the sPLS analysis. Genes with a correlation coefficient above 0.18 were represented. The color indicates the correlation between mutations and the time to leukemic transformation. Red color indicates a positive correlation (i.e. a later transformation) whereas blue color indicates a negative correlation (i.e. an early transformation). The size of the circles is arbitrary. All additional mutations were retained.

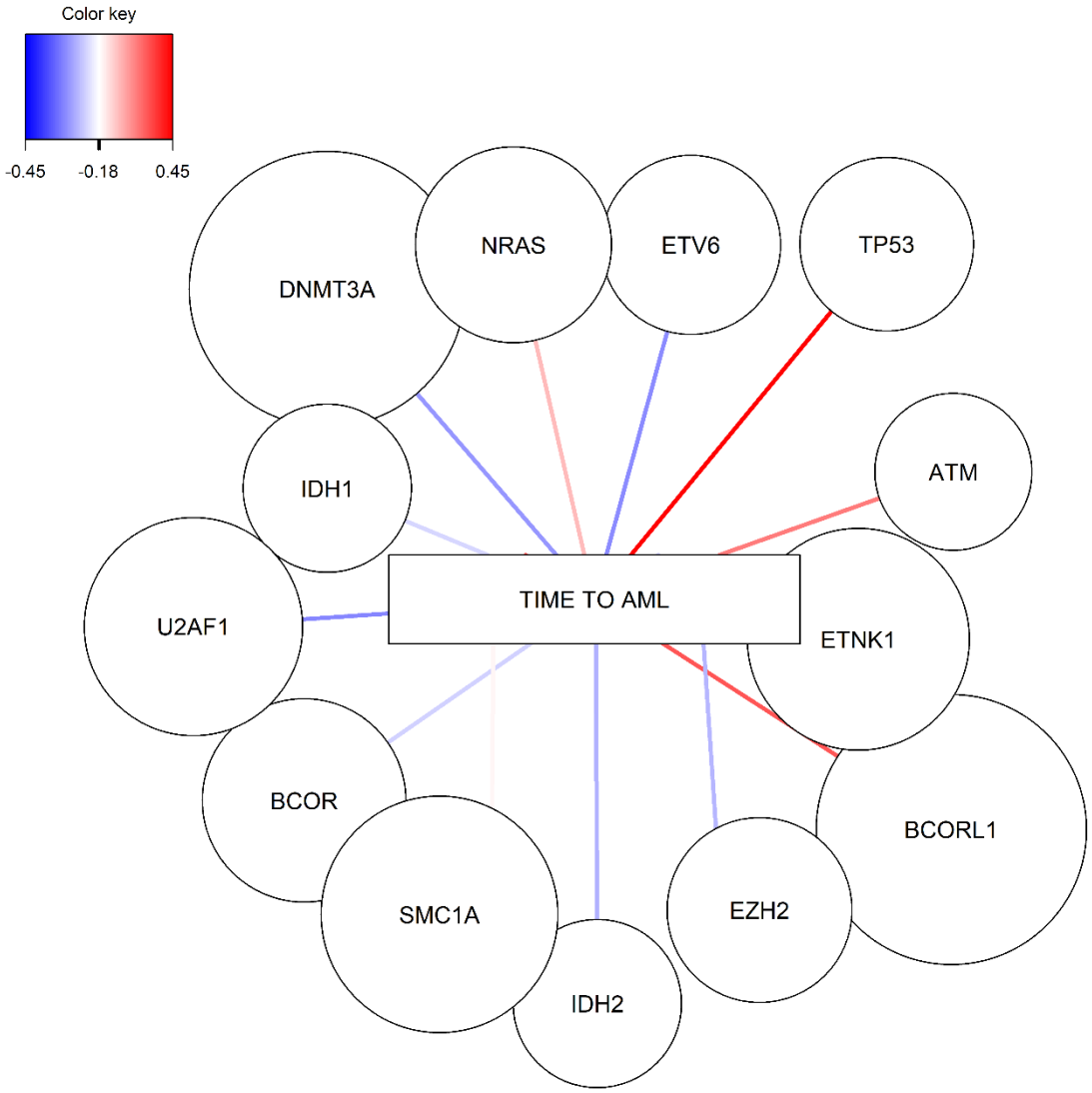

Figure S3: Sensitivity analysis with only deleterious and probably deleterious mutations for the network of mutated genes associated with the interval of leukemic transformation

Result from the first axis of the sPLS analysis. Genes with a correlation coefficient above 0.18 were represented. The color indicates the correlation between mutations and the time to leukemic transformation. Red color indicates a positive correlation (i.e. a later transformation) whereas blue color indicates a negative correlation (i.e. an early transformation). The size of the circles is arbitrary. Only deleterious and probably deleterious mutations were retained.

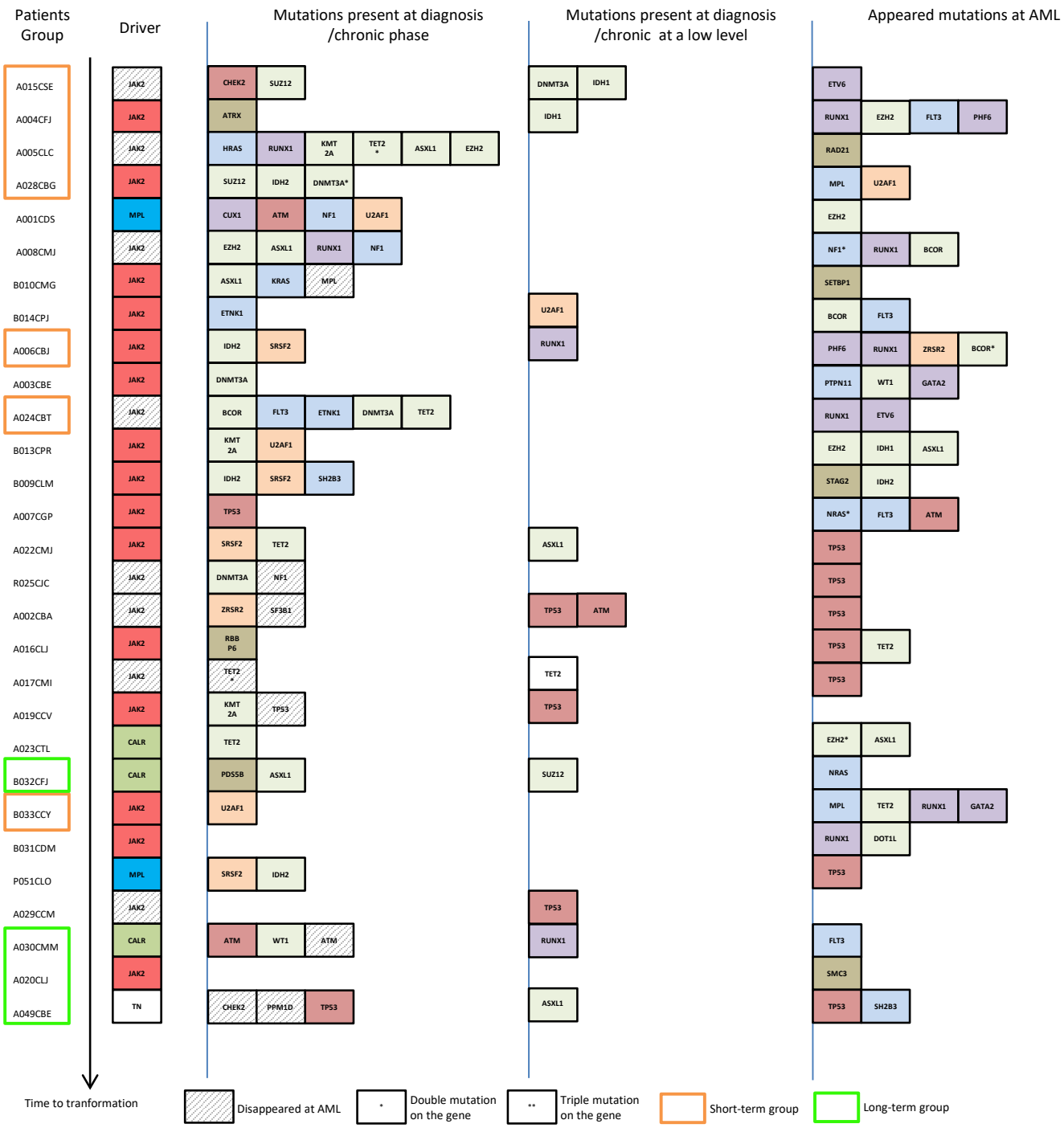

Figure S4: Mutations landscape of leukemic transformation and matched diagnosis/chronic phase

Rows represented patients ordered according to time to leukemic progression. Driver mutations were represented in the first column. Additional mutations were classified into 3 columns for (i) mutation already present at the diagnosis/chronic phase, (ii) mutation present at the diagnosis/chronic phase but not detected and (iii) mutations that appeared at leukemic transformation. Each box represented a mutation and the color were attributed to gene's functions (epigenetic=green, cycle cell=red, splicing=orange, signalization=blue and transcription factors=purple). TN: triple negative.

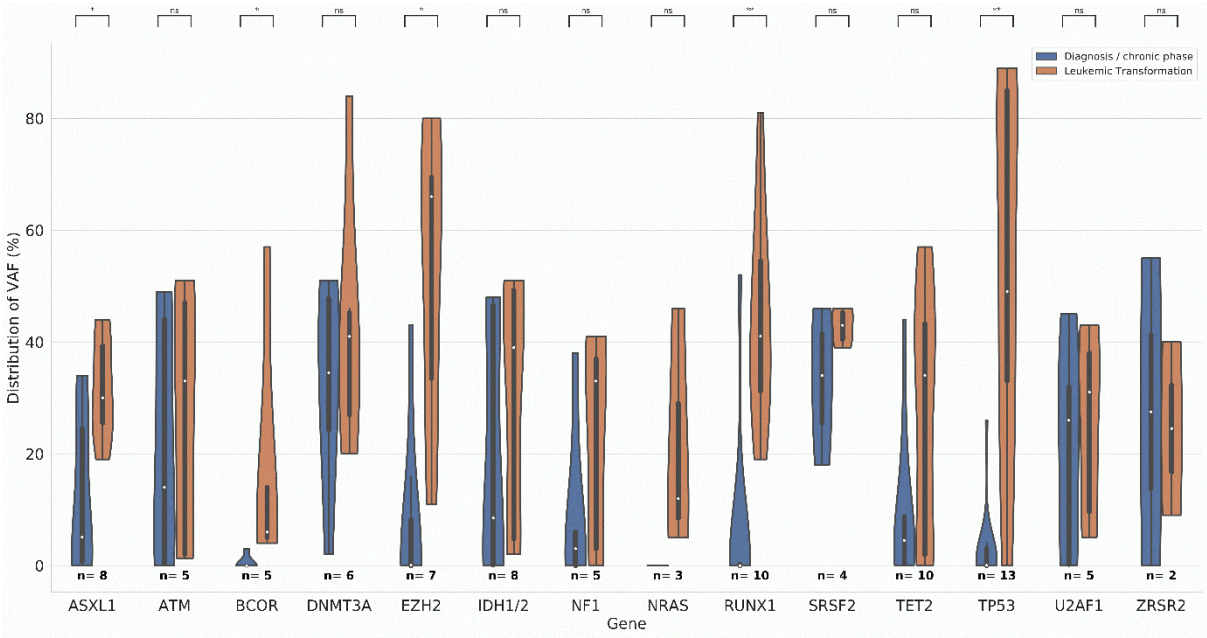

Figure S5: Allele burden comparison of matched diagnosis/chronic phases and leukemic transformations

Violin plots displaying the allele burden distribution of additional mutations at the diagnosis/chronic phase (blue) and at the time of leukemic transformation (orange). These evolutions were tested by paired Wilcoxon tests (ns: non significant, *: $p<0.01$, **: $p<0.001$)

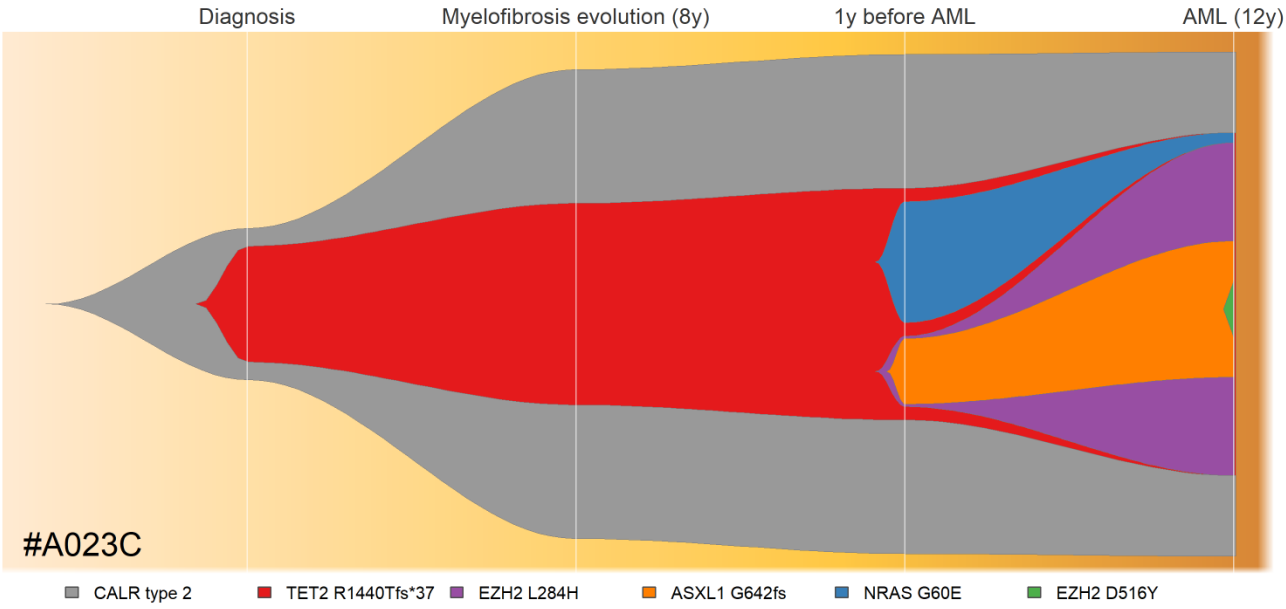

Figure S6: Plotfish showing clonal evolution inferred from NGS sequencing of 4 iterative samples

AML: Acute Myeloid Leukemia, y: years of follow-up

Figure S7: Allele burden evolution of mutations between chronic phase and leukemic transformation (part 1)

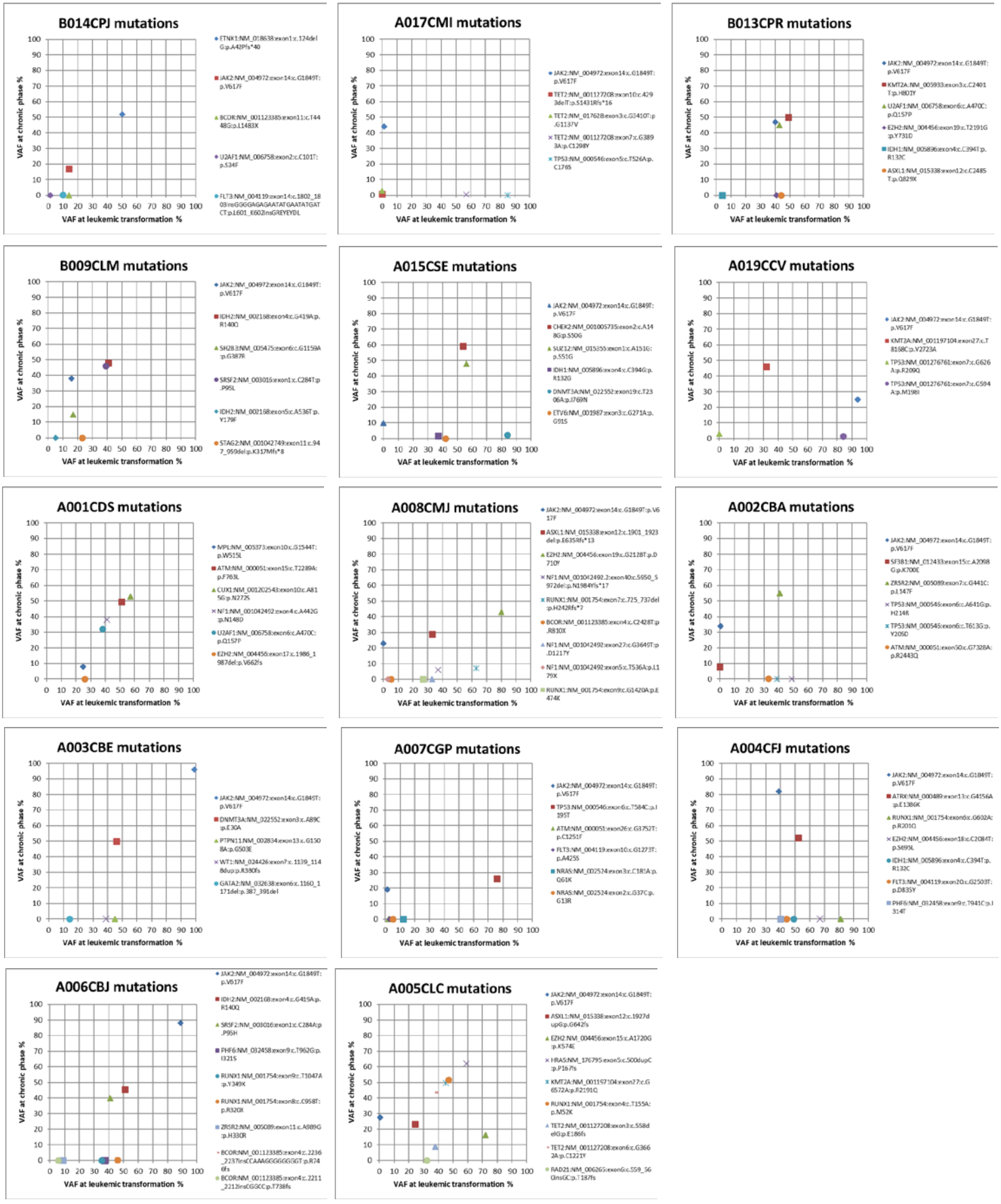

Figure S7: Allele burden evolution of mutations between chronic phase and leukemic transformation (part 2)

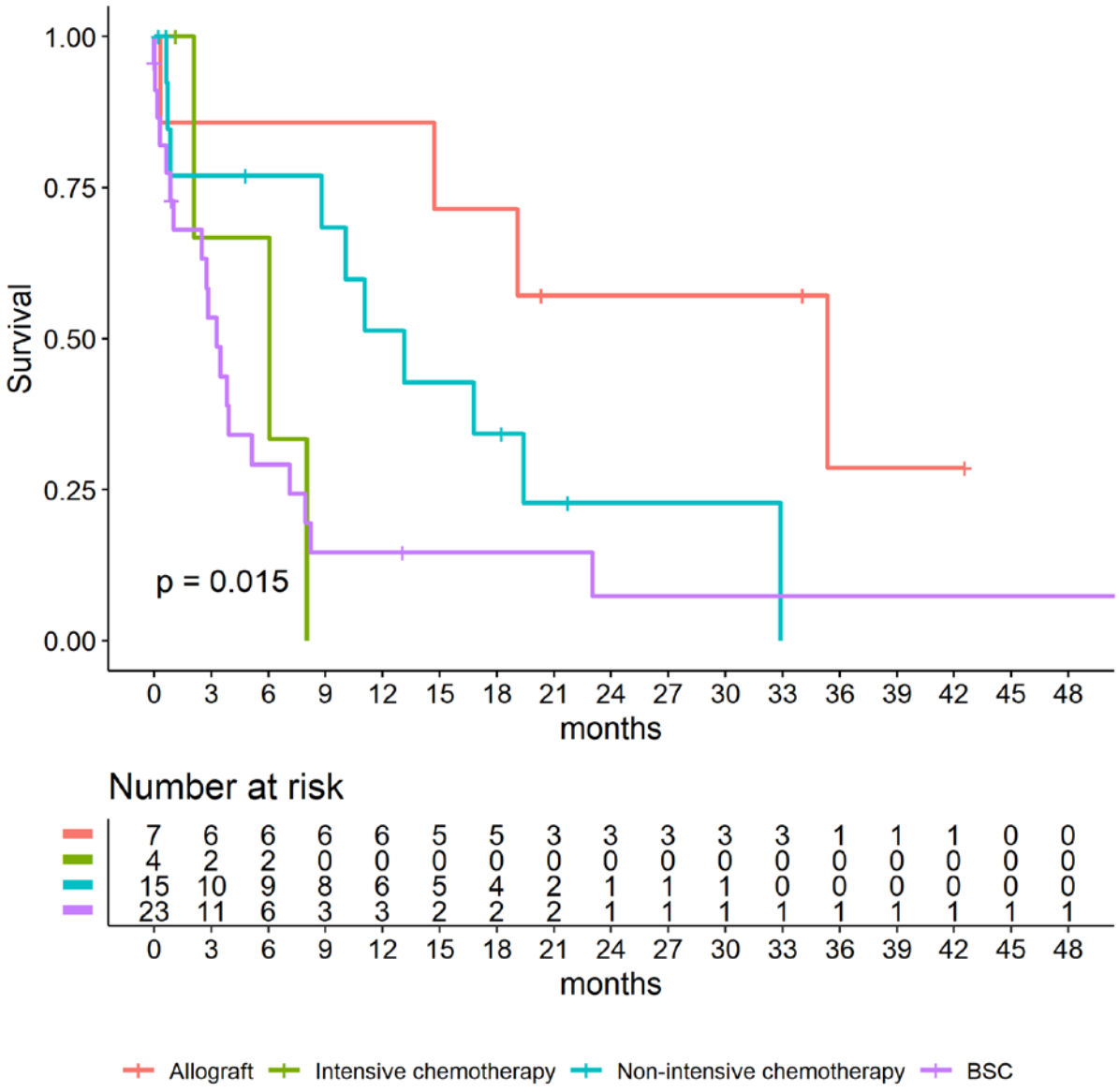

Figure S8: Overall Survival of leukemic transformation according to treatment

BSC: Best Supportive Care.

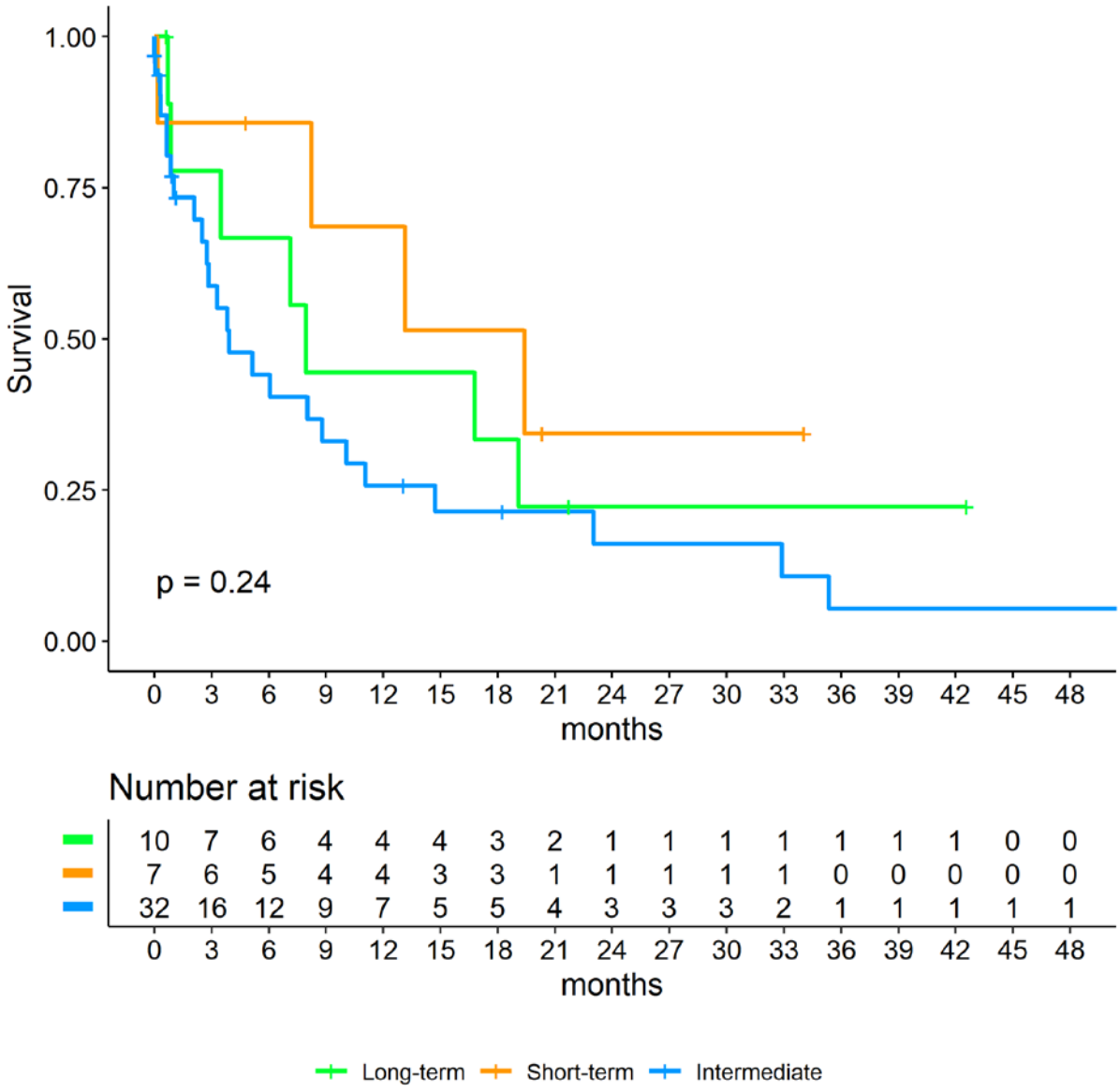

Figure S9: Overall Survival of leukemic transformation according to the groups of time to transformation

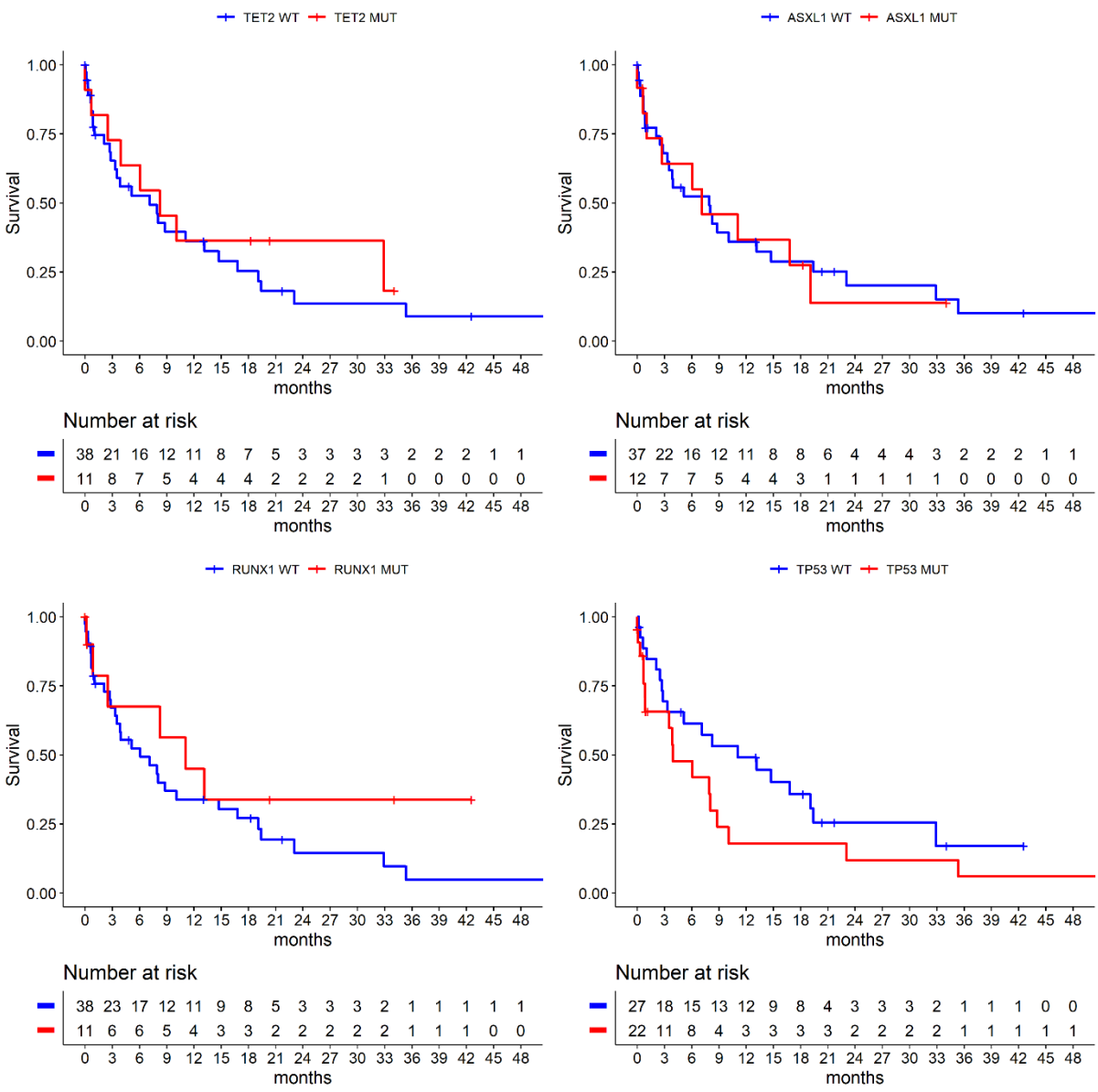

Figure S10: Overall Survival of leukemic transformation according to the presence of additional mutations in *TET2*, *ASXL1*, *RUNX1* or *TP53*

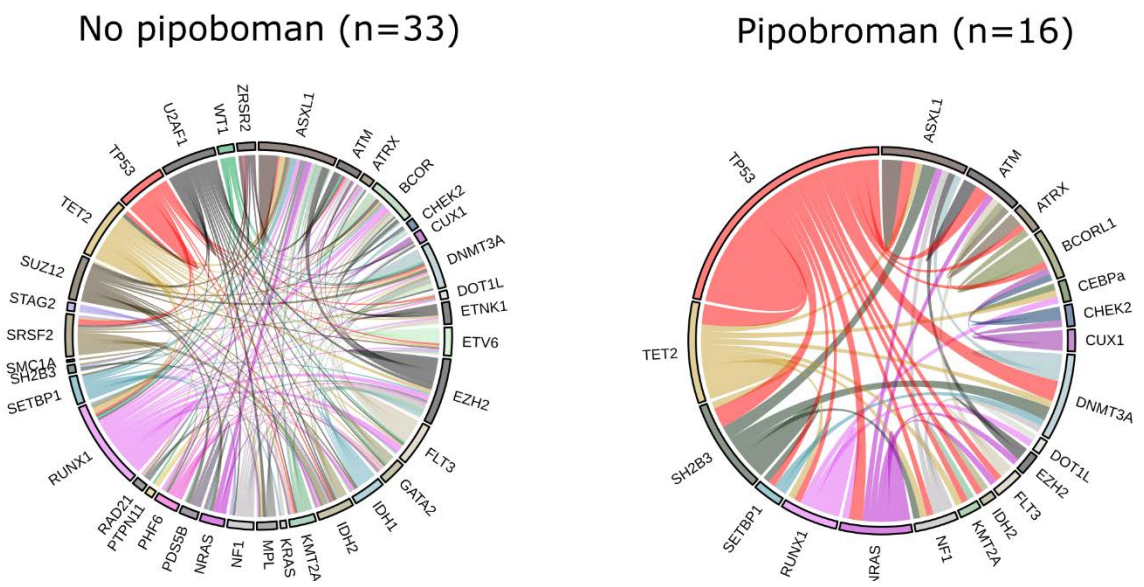

Figure S11: Circos plots representing the mutational landscape of leukemic transformation of patient not treated or treated (i.e. at least 12 months) by pipobroman during chronic phase

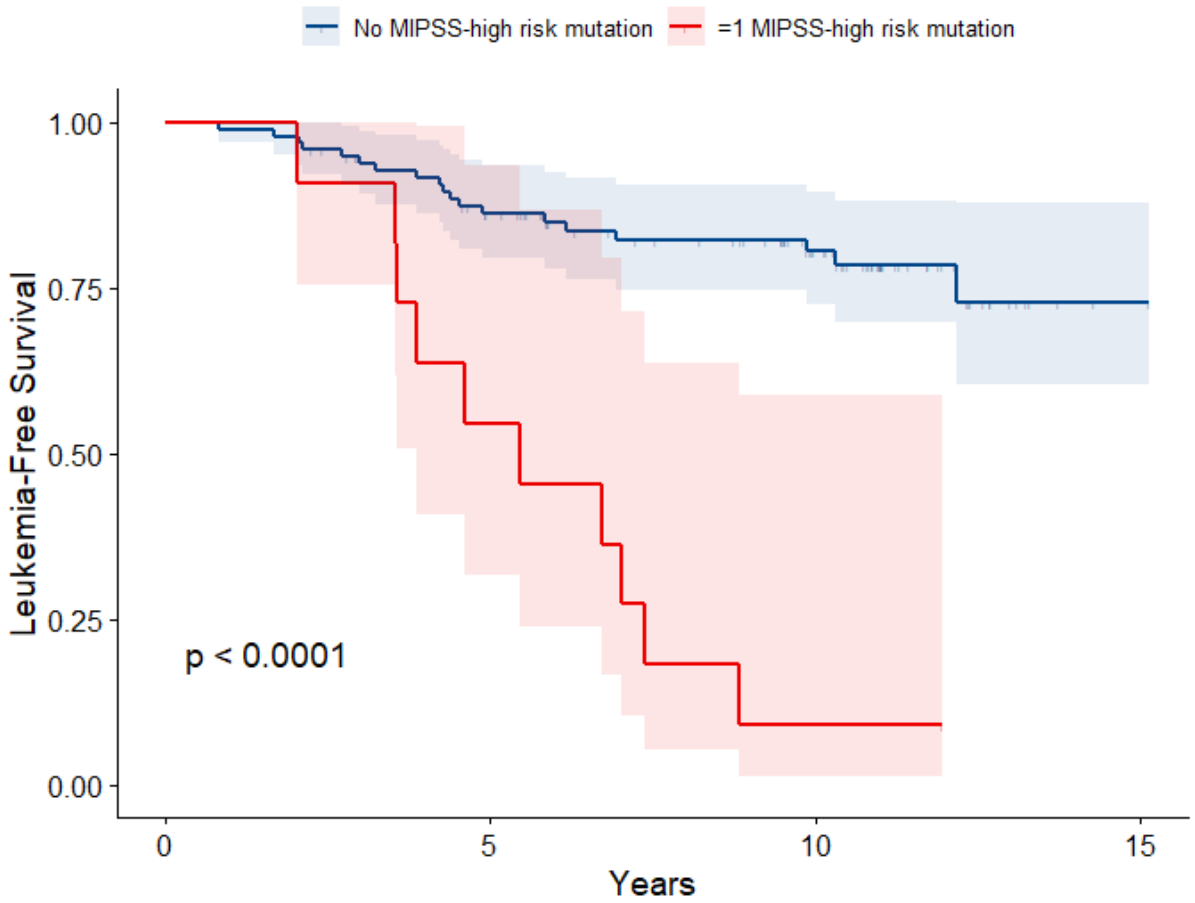

Figure S12: Leukemia-free survival of patients at the chronic phase after according to the presence of at least one MIPSS-PV/ET high-risk mutation

Table SI: Variant classification according to the presumed impact of mutation on protein function

Type	Signification	Criteria
A	**Deleterious**	deleterious variant described in myeloid neoplasms in COSMIC and validated somatic undescribed variant causing a truncated protein
B	**Probably deleterious**	variant described in myeloid neoplasms in COSMIC but not validated somatic, absent from the "SNP" bases or with MAF <0.01 (1%) variant not described in myeloid neoplasms in COSMIC, with MAF <0.01 (1%) and described as deleterious by Polyphen and / or SIFT
C	**Of undetermined significance**	variant not described in myeloid neoplasms in COSMIC, with MAF <0.01 (1%) without impact predicted by Polyphen and SIFT

MAF: minor allele frequency; SNP: single-nucleotide polymorphism

Table SII: Allele burden of driver mutation at the chronic phase and at the leukemic transformation

Patient	Disease	Driver	Mutation	VAF at chronic phase (%)	VAF at leukemia (%)
A023CTL	ET	CALR	p.Lys385Cysfs*46	15	100
A030CMM	ET	CALR	p.Lys385Cysfs*46	57	37
B032CFJ	ET	CALR	p.Lys385Cysfs*46	55	54
A002CBA	ET	JAK2	p.V617F	34	0,57
A005CLC	ET	JAK2	p.V617F	27	98
A007CGP	ET	JAK2	p.V617F	19	38
A015CSE	ET	JAK2	p.V617F	10	0,5
A016CLJ	ET	JAK2	p.V617F	25	9
A019CCV	ET	JAK2	p.V617F	25	1,4
A022CMJ	ET	JAK2	p.V617F	16	0
A024CBT	ET	JAK2	p.V617F	9	0
B013CPR	ET	JAK2	p.V617F	47	2
A001CDS	ET	MPL	p.W515L	8	27
P051CLO	ET	MPL	p.W515L	6	16
A003CBE	PV	JAK2	p.V617F	96	1,4
A004CFJ	PV	JAK2	p.V617F	82	94
A006CBJ	PV	JAK2	p.V617F	88	90
A008CMJ	PV	JAK2	p.V617F	23	92
A017CMI	PV	JAK2	p.V617F	44	0
A020CLJ	PV	JAK2	p.V617F	94	47
A028CBG	PV	JAK2	p.V617F	47	1,6
A029CCM	PV	JAK2	p.V617F	10	16
B009CLM	PV	JAK2	p.V617F	38	49
B010CMG	PV	JAK2	p.V617F	39	40
B014CPJ	PV	JAK2	p.V617F	17	14
B031CDM	PV	JAK2	p.V617F	68	57
B033CCY	PV	JAK2	p.V617F	31	11
R025CJC	PV	JAK2	p.V617F	39	0

Table SIII: Distribution by gene and allele burden of frequently mutated genes in leukemic transformation and matched diagnosis/chronic phase

Gene mutated	Number of mutations	Present at diagnosis [VAF(%)]	Present at diagnosis at a low level and not detected [VAF(%)]	Appeared at leukemic transformation
TP53	12	3 [2; 3; 4; 26]	3 [0.05; 1.4; 3]	6
NRAS	3	0	0	3
RUNX1	10	2 [7;52]	2 [0.14; 0.3]	6
IDH1/2	8	4 [15; 46; 48; 48]	2 [0.12]	2
TET2	9	6 [3; 6; 8; 9; 44]	1 [0.5]	2
DNMT3A	6	5 [23; 28; 41; 50; 51]	1 [2]	0
ASXL1	8	4 [9; 23; 29; 34]	2 [1; 1.2]	2
Splicing genes	11	8 [18; 26; 28; 32; 40; 45; 46; 55]	1 [0.2]	2

Table SIV: Results of NGS sequencing of additional samples between diagnosis and leukemic transformation

Patient	Mutations	Diagnosis	Additional samples		Leukemic Transformation
A023CTL	**Duration of follow-up (years)**	0	8	11	12
	TET2:NM_001127208:exon10:c.4312dupA:p.R1440Tfs*37	23	40	46	59
	CALR Type 2	15	93	99	100
	ASXL1:NM_015338:exon12:c.1934dupG:p.G642fs	0	0	13	27
	EZH2:NM_004456:exon8:c.T851A:p.L284H	0	0	10	66
	NRAS:NM_002524:exon3:c.G179A:p.G60E	0	0	24	1,6
	EZH2:NM_004456:exon13:c.G1546T:p.D516Y	0	0	0	11
A006CBJ	**Duration of follow-up (years)**	0	4		5
	JAK2 V617F	88	9		89
	IDH2:NM_002168:exon4:c.G419A:p.R140Q	45,5	20		51
	SRSF2:NM_003016:exon1:c.C284A:p.P95H	40	20		41
	PHF6:NM_032458:exon9:c.T962G:p.I321S	0	0		37
	RUNX1:NM_001754:exon9:c.T1047A:p.Y349X	0	0		35
	RUNX1:NM_001754:exon8:c.C958T:p.R320X	0,14	0,27		46
	ZRSR2:NM_005089:exon11:c.A989G:p.H330R	0	0		9
	BCOR:NM_001123385:exon4:c.2236_2237ins14:p.R746fs	0	0		4,1
	BCOR:NM_001123385:exon4:c.2211_2212ins5:p.T738fs	0	0		5,6
A019CCV	**Duration of follow-up (years)**	0	11		12
	JAK2 V617F	25	88		94
	TP53:NM_001276761:exon7:c.G626A:p.R209Q	3	3		0
	TP53:NM_001276761:exon7:c.G594A:p.M198I	1,4	13		84
B031CDM	**Duration of follow-up (years)**	0	4		6
	JAK2 V617F	68	62		57
	DOT1L:NM_032482:exon24:c.C3271T:p.R1091X	0	0		47
	RUNX1:NM_001754:exon5:c.A484G:p.R162G	0	0		57
B032CFJ	**Duration of follow-up (years)**	0	3		4
	CALR Type 2	55	58		54
	ASXL1:NM_015338:exon12:c.1927dupG:p.G642fs	8,9	11		19
	PDS5B:NM_015032:exon30:c.A3488G:p.N1163S	50	50		49
	SUZ12:NM_015355:exon15:c.A1814T:p.D605V	0,4	32		86
	NRAS:NM_002524:exon2:c.G35A:p.G12D	0	0		45,6
A016CLJ	**Duration of follow-up (years)**	0	11		12
	JAK2 V617F	25	3,8		2,3
	TET2:NM_001127208:exon6:c.C3646T:p.R1216X	0	22		2,3
	TP53:NM_000546:exon6:c.A578T:p.H193L	0	0		33
A017CMI	**Duration of follow-up (years)**	0	8	9	10
	JAK2 V617F	44	80	60	1,4
	TET2:NM_001127208:exon10:c.4293delT:p.S1431Rfs*16	0,6	0	0,8	0
	TET2:NM_017628:exon3:c.G3410T:p.G1137V	3	0	0	0
	TET2:NM_001127208:exon7:c.G3893A:p.C1298Y	0,5	0,26	0,4	57
	TP53:NM_000546:exon5:c.T526A:p.C176S	0	0	0	85

Table SV Multivariate analysis for leukemia-free survival taking into account weighting

	HR [95% IC]	*p* value
Age at the time of sampling	**1.07 [1.03-1.12]**	**0.0004**
Gender (Male)	1.80 [0.73-4.52]	0.203
Diagnosis (PV)	0.59 [0.24-1.50]	0.265
Driver mutation (reference = *CALR*)		
*JAK2*V617F	1.88 [0.45-7.90]	0.391
*MPL*W515	6.45 [1.04-39.7]	0.051
Triple negative	3.13 [0.715-13.7]	0.130
≥ 1 additional mutation	**4.78 [1.75-13.0]**	**0.002**

Table SVI: Characteristics of non-transforming patients in the control cohort of PV and ET

sample	Gender	Diagnosis	Age at the time of sampling	Follow-up from diagnosis (year)	Follow-up post sampling	Driver	Number of additional mutations	Genes mutated
HD-1251	F	ET	56,76	13,73	5,79	CALR	0	
HD-1183	F	ET	75,11	28,54	5,80	CALR	0	
HD-0552	F	ET	50,80	11,67	9,52	CALR	0	
HD-0561	M	ET	51,15	11,83	4,67	JAK2	0	
HD-0581	M	ET	30,33	18,14	8,84	JAK2	0	
HD-0550	F	ET	40,93	16,89	9,83	CALR	0	
HD-1565	M	ET	55,43	25,86	4,94	MPL	0	
HD-0867	F	ET	56,41	11,96	6,29	JAK2	1	CUX1
495196	M	ET	51,23	12,92	4,59	JAK2	2	EZH2, NF1
14C00899	F	ET	66,07	16,19	5,47	JAK2	0	
460976	F	ET	61,58	25,18	2,26	JAK2	0	
HD-1885	F	ET	67,90	19,54	5,90	JAK2	2	NOTCH1, TET2
375976	F	ET	34,40	19,86	9,98	CALR	0	
HD-1351	F	ET	72,48	14,86	5,54	JAK2	1	NFE2
HD-1392	M	ET	57,77	21,57	5,42	JAK2	0	
PA-C026	M	ET	63,38	10,42	10,28	CALR	0	
PA-C027	F	ET	72,31	9,62	9,49	CALR	0	
PA-C028	M	ET	61,20	10,02	9,88	CALR	3	TET2 (n=3)
PA-C029	M	ET	58,17	10,48	10,34	CALR	0	
PA-C030	M	ET	73,41	11,38	11,23	CALR	0	
PA-C031	F	ET	68,75	11,66	10,90	CALR	0	
PA-C032	F	ET	63,54	12,05	11,89	CALR	0	
PA-C033	F	ET	25,23	13,18	13,00	CALR	0	
PA-C034	F	ET	50,74	12,53	12,35	CALR	0	
PA-C035	M	ET	61,19	12,86	12,68	CALR	1	CBL
PA-C036	F	ET	62,85	8,87	8,73	TN	0	
PA-C037	F	ET	65,52	8,34	8,23	TN	0	
PA-C038	M	ET	58,83	13,55	2,93	TN	0	
PA-C039	F	ET	64,93	12,44	12,58	JAK2	0	
PA-C040	M	ET	45,25	12,55	12,38	JAK2	1	SH2B3
PA-C041	F	ET	69,86	10,85	10,81	JAK2	0	
PA-C042	M	ET	68,09	12,90	11,94	JAK2	3	CALR, KMT2A, TP53
PA-C043	F	ET	55,27	11,56	11,28	JAK2	1	ASXL1
PA-C044	F	ET	41,90	12,16	12,69	JAK2	0	
PA-C045	F	ET	70,61	11,97	11,96	JAK2	1	NOTCH1
PA-C046	F	ET	50,50	11,82	11,73	TN	0	
PA-C047	F	ET	34,95	9,67	9,54	TN	0	
PA-C048	F	ET	31,17	13,49	13,23	TN	0	
PA-C049	F	ET	60,77	10,51	10,51	JAK2	0	
PA-C050	F	ET	56,47	10,84	10,76	JAK2	1	STAG2
PA-C051	M	ET	59,04	11,06	11,00	JAK2	4	BCOR, CHEK2 (n=2),

								DNMT3A
PA-C052	M	ET	49,13	11,12	11,01	JAK2	0	
PA-C053	F	ET	59,06	13,43	13,28	JAK2	0	
HD-0578	F	PV	57,70	15,89	7,24	JAK2	0	
HD-1270	M	PV	35,06	14,86	5,90	JAK2	0	
HD-1820	M	PV	57,75	25,65	5,88	JAK2	0	
HD-1393	F	PV	56,20	17,58	5,18	JAK2	1	NOTCH1
HD-0503	F	PV	58,68	13,98	9,60	JAK2	1	NOTCH1
416901	F	PV	59,78	28,84	7,55	JAK2	0	
14C05968	F	PV	69,19	12,19	4,92	JAK2	0	
HD-2392	F	PV	65,92	12,61	2,96	JAK2	0	
HD-2005	F	PV	66,10	17,45	5,56	JAK2	1	TET2
HD-2452	F	PV	83,50	19,16	2,40	JAK2	2	DNMT3A, IDH2
HD-1731	M	PV	84,86	21,15	6,84	JAK2	0	
HD-2369	F	PV	60,13	24,03	2,79	JAK2	1	TET2
PA-C001	M	PV	57,61	13,68	13,72	JAK2	1	NFE2
PA-C002	F	PV	33,93	15,35	15,14	JAK2	0	
PA-C003	F	PV	41,67	9,54	9,49	JAK2	2	BCORL1, CBL
PA-C004	F	PV	46,20	9,78	9,24	JAK2	0	
PA-C005	M	PV	68,22	10,06	9,93	JAK2	3	DNMT3A, NFE2, TET2
PA-C006	M	PV	53,09	11,10	13,11	JAK2	2	DNMT3A, PDS5B
PA-C007	M	PV	54,38	14,47	14,27	JAK2	2	NFE2, TET2
PA-C008	F	PV	57,53	11,09	11,03	JAK2	0	
PA-C009	M	PV	60,81	11,13	10,89	JAK2	0	
PA-C010	F	PV	65,49	11,18	11,05	JAK2	0	
PA-C011	F	PV	75,08	12,54	12,35	JAK2	0	
PA-C012	M	PV	57,38	9,65	9,55	JAK2	1	NOTCH1
PA-C013	F	PV	80,92	10,60	10,45	JAK2	2	TET2 (n=2)
PA-C014	M	PV	26,08	11,04	10,99	JAK2	0	
PA-C015	M	PV	50,79	10,07	9,96	JAK2	0	
PA-C016	M	PV	65,95	11,54	11,43	JAK2	0	
PA-C017	M	PV	65,83	10,27	10,18	JAK2	1	TET2
PA-C018	M	PV	49,56	10,27	10,13	JAK2	0	
PA-C019	F	PV	78,88	10,94	10,82	JAK2	1	TET2
PA-C020	M	PV	62,60	10,53	10,41	JAK2	0	
PA-C021	F	PV	71,84	11,79	11,74	JAK2	0	
PA-C022	M	PV	56,11	11,11	10,96	JAK2	0	
PA-C023	F	PV	70,30	11,12	11,02	JAK2	1	TET2
PA-C024	M	PV	66,80	8,96	8,92	JAK2	1	TET2
PA-C025	M	PV	63,49	12,31	12,14	JAK2	0	

Table SVII: List of mutations found in leukemic transformation and matched diagnosis/chronic phases

									Chronic phase		Leukemic transformation	
N° Patient	Disease	Gene	Transcript	Exon	Mutation on cDNA	Proteic change	COSMIC	Classification	VAF %	Depth (X)	VAF %	Depth (X)
A001CDS	TE	MPL	NM_005373	10	c.G1544T	p.W515L	COSM3719407;COSM18918	A	8	719	27	973
A001CDS	TE	ATM	NM_000051	15	c.T2289A	p.F763L	-	C	49	639	51	494
A001CDS	TE	CUX1	NM_001202543	10	c.A815G	p.N272S	-	C	53	240	57	332
A001CDS	TE	NF1	NM_001042492	4	c.A442G	p.N148D	-	B	38	830	41	600
A001CDS	TE	U2AF1	NM_006758	6	c.A470C	p.Q157P	-	A	32	2712	38	2212
A001CDS	TE	EZH2	NM_004456	17	c.1986_1987del	p.V662fs	-	A	0	1316	26	864
A002CBA	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	34	2055	0,57	494
A002CBA	TE	SF3B1	NM_012433	15	c.A2098G	p.K700E	COSM84677	A	8	2374	0	622
A002CBA	TE	ZRSR2	NM_005089	7	c.G441C	p.L147F	-	C	55	1798	40	731
A002CBA	TE	TP53	NM_000546	6	c.A641G	p.H214R	COSM307279	A	0.05	4172	49	473
A002CBA	TE	TP53	NM_000546	6	c.T613G	p.Y205D	COSM43687	A	0	4259	39	1820
A002CBA	TE	ATM	NM_000051	50	c.G7328A	p.R2443Q	COSM20404	B	0.5	1984	33	570
A003CBE	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	96	1748	98	934
A003CBE	PV	DNMT3A	NM_022552	3	c.A89C	p.E30A	COSM307361	B	50	2690	46	1323
A003CBE	PV	PTPN11	NM_002834	13	c.G1508A	p.G503E	COSM13021	A	0	2470	45	1493
A003CBE	PV	WT1	NM_024426	7	c.1139_1148dup	p.R380fs	-	A	0	2270	39	831
A003CBE	PV	GATA2	NM_032638	6	c.1160_1171del	p.387_391del	-	A	0	2110	14	911
A004CFJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	82	825	38	472
A004CFJ	PV	ATRX	NM_000489	13	c.G4156A	p.E1386K	-	B	52	1546	52	550
A004CFJ	PV	RUNX1	NM_001754	6	c.G602A	p.R201Q	COSM24805	A	0	1937	81	368
A004CFJ	PV	EZH2	NM_004456	18	c.C2084T	p.S695L	-	B	0	394	67	136
A004CFJ	PV	IDH1	NM_005896	4	c.C394T	p.R132C	COSM28747	A	0.12	3408	49	401
A004CFJ	PV	FLT3	NM_004119	20	c.G2503T	p.D835Y	COSM783	A	0	4736	44	370
A004CFJ	PV	PHF6	NM_032458	9	c.T941C	p.I314T	-	B	0	6646	40	478

A005CLC	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	27	2161	0.5	734
A005CLC	TE	ASXL1	NM_015338	12	c.1927dupG	p.G642fs	COSM4170082;COSM1411076	A	23	1499	24	542
A005CLC	TE	EZH2	NM_004456	15	c.A1720G	p.K574E	COSM5879093;COSM5879094	A	16	373	72	230
A005CLC	TE	HRAS	NM_176795	5	c.500dupC	p.P167fs	-	A	62	616	59	153
A005CLC	TE	KMT2A	NM_001197104	27	c.G6572A	p.R2191Q	-	C	50	431	47	271
A005CLC	TE	RUNX1	NM_001754	4	c.T155A	p.M52K	COSM42095	A	52	2065	47	505
A005CLC	TE	TET2	NM_001127208	3	c.558delG	p.E186fs	-	A	9	3382	38	1227
A005CLC	TE	TET2	NM_001127208	6	c.G3662A	p.C1221Y	COSM211717	A	44	963	38	894
A005CLC	TE	RAD21	NM_006265	6	c.559_560insGC	p.T187fs	-	A	0	765	32	271
A006CBJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	88	1128	89	638
A006CBJ	PV	IDH2	NM_002168	4	c.G419A	p.R140Q	COSM41590	A	46	1641	51	1232
A006CBJ	PV	SRSF2	NM_003016	1	c.C284A	p.P95H	COSM211505;COSM211029;COSM211504	A	40	393	41	534
A006CBJ	PV	PHF6	NM_032458	9	c.T962G	p.I321S	-	B	0	711	37	393
A006CBJ	PV	RUNX1	NM_001754	9	c.T1047A	p.Y349X	-	A	0	1885	35	1528
A006CBJ	PV	RUNX1	NM_001754	8	c.C958T	p.R320X	COSM41699	A	0,14	1849	46	1741
A006CBJ	PV	ZRSR2	NM_005089	11	c.A989G	p.H330R	-	B	0	418	9	308
A006CBJ	PV	BCOR	NM_001123385	4	c.2236_2237insCCAAAGGGGGGGT	p.R746fs	-	A	0	432	4	316
A006CBJ	PV	BCOR	NM_001123385	4	c.2211_2212insCGGCC	p.T738fs	-	A	0	573	6	445
A007CGP	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	19	1247	1,4	717
A007CGP	TE	TP53	NM_000546	6	c.T584C	p.I195T	COSM3421936;COSM116924	A	26	1979	76	628
A007CGP	TE	ATM	NM_000051	26	c.G3752T	p.C1251F	-	C	0	697	2	478
A007CGP	TE	FLT3	NM_004119	10	c.G1273T	p.A425S	-	C	0	658	3	367
A007CGP	TE	NRAS	NM_002524	3	c.C181A	p.Q61K	COSM580	A	0	1031	12	399
A007CGP	TE	NRAS	NM_002524	2	c.G37C	p.G13R	COSM569	A	0	1494	5	771
A008CMJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	23	1182	0	1196
A008CMJ	PV	ASXL1	NM_015338	12	c.1901_1923del	p.E635Rfs*13	-	A	29	658	33	740
A008CMJ	PV	EZH2	NM_004456	19	c.G2128T	p.D710Y	-	B	43	491	80	802
A008CMJ	PV	NF1	NM_001042492	40	c.5950_5972del	p.N1984Yfs*17	-	A	6	973	37	763

A008CMJ	PV	RUNX1	NM_001754	7	c.725_737del	p.H242Rfs*7	-	A	7	261	63	401
A008CMJ	PV	BCOR	NM_001123385	4	c.C2428T	p.R810X	COSM2150191;COSM2150192	A	0	683	5	614
A008CMJ	PV	NF1	NM_001042492	27	c.G3649T	p.D1217Y	-	B	0	641	33	530
A008CMJ	PV	NF1	NM_001042492	5	c.T536A	p.L179X	-	A	0	734	3	526
A008CMJ	PV	RUNX1	NM_001754	9	c.G1420A	p.E474K	-	B	0	391	27	249
B009CLM	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	38	543	16	391
B009CLM	PV	IDH2	NM_002168	4	c.G419A	p.R140Q	COSM41590	A	48	374	41	202
B009CLM	PV	SH2B3	NM_005475	6	c.G1159A	p.G387R	COSM6022915	A	15	311	17	105
B009CLM	PV	SRSF2	NM_003016	1	c.C284T	p.P95L	COSM146288;COSM211506;COSM211028	A	46	186	39	44
B009CLM	PV	IDH2	NM_002168	5	c.A536T	p.Y179F	-	B	0	771	5	386
B009CLM	PV	STAG2	NM_001042749	11	c.947_959del	p.K317Mfs*8	-	A	0	285	23	123
B010CMG	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	39	275	49	243
B010CMG	PV	ASXL1	NM_015338	12	c.2343dupG	p.H782Afs*4	-	A	34	122	43	51
B010CMG	PV	KRAS	NM_033360	3	c.G178C	p.G60R	COSM4384680;COSM4384681	A	29	485	11	247
B010CMG	PV	MPL	NM_005373	10	c.1543TG>GC	p.W515A	OCM27289	A	8	979	0	506
B010CMG	PV	SETBP1	NM_015559	4	c.A2605C	p.S869R	COSM1716867	A	0	11647	32	338
B011CNA	TE	ASXL1	NM_015338	12	c.1888_1910del	p.E635Rfs*13	-	A	NA	NA	8	220
B011CNA	TE	NRAS	NM_002524	2	c.G37T	p.G13C	COSM570	A	NA	NA	7	601
B011CNA	TE	EZH2	NM_004456	14	c.G1650T	p.K550N	-	B	NA	NA	68	347
B012CPL	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	33	1274
B012CPL	TE	KMT2A	NM_001197104	27	c.G8432A	p.R2811H	-	C	NA	NA	48	1857
B012CPL	TE	TET2	NM_001127208	11	c.5526_5538del	p.N1843Gfs*39	-	A	NA	NA	35	1971
B012CPL	TE	TP53	NM_000546	8	c.C844G	p.R282G	COSM10992;COSM3675520;COSM99934; COSM1725698	A	NA	NA	20	2620
B012CPL	TE	TP53	NM_000546	4	c.G273A	p.W91X	COSM562611;COSM562612;COSM44492; COSM1646881;COSM3958856	A	NA	NA	29	2531
B013CPR	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	47	5490	40	455
B013CPR	TE	KMT2A	NM_005933	3	c.C2401T	p.H801Y	-	B	50	2258	49	600
B013CPR	TE	U2AF1	NM_006758	6	c.A470C	p.Q157P	COSM211534;COSM1318797	A	45	7886	43	836
B013CPR	TE	EZH2	NM_004456	19	c.T2191G	p.Y731D	COSM4384242;COSM53021	A	0.03	8465	41	386

B013CPR	TE	IDH1	NM_005896	4	c.C394T	p.R132C	COSM28747	A	0	576	4	247
B013CPR	TE	ASXL1	NM_015338	12	c.C2485T	p.Q829X	COSM97040;COSM5989689	A	0	1314	44	554
B014CPJ	PV	ETNK1	NM_018638	1	c.124delG	p.A42Pfs*40	-	A	52	1141	50	307
B014CPJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	17	2419	14	2138
B014CPJ	PV	BCOR	NM_001123385	11	c.T4448G	p.L1483X	-	A	0	2784	14	609
B014CPJ	PV	U2AF1	NM_006758	2	c.C101T	p.S34F	-	A	0.2	4393	9.6	785
B014CPJ	PV	FLT3	NM_004119	14	c.1802_1803insGGGGAGAGAATATGAATATGATCT	p.L601_K602insGREYEYDL	-	A	0	11433	1.5	3168
A015CSE	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	10	666	0	1254
A015CSE	TE	CHEK2	NM_001005735	2	c.A148G	p.S50G	-	B	59	326	54	756
A015CSE	TE	SUZ12	NM_015355	1	c.A151G	p.S51G	-	C	48	211	56	416
A015CSE	TE	IDH1	NM_005896	4	c.C394G	p.R132G	COSM28749	A	2	951	37	348
A015CSE	TE	DNMT3A	NM_022552	19	c.T2306A	p.I769N	-	B	2	624	84	1645
A015CSE	TE	ETV6	NM_001987	3	c.G271A	p.G91S	-	B	0	873	42	1353
A016CLJ	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	25	1284	2	1023
A016CLJ	TE	RBBP6	NM_006910	18	c.C4705T	p.R1569C	-	B	46	934	48	723
A016CLJ	TE	TET2	NM_001127208	6	c.C3646T	p.R1216X	COSM42029	A	0	712	2	512
A016CLJ	TE	TP53	NM_000546	6	c.A578T	p.H193L	COSM11066;COSM99918;COSM2744772	A	0	889	33	833
A017CMI	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	44	1010	1.4	1244
A017CMI	PV	TET2	NM_001127208	10	c.4293delT	p.S1431Rfs*16	-	A	0,6	1681	0	2149
A017CMI	PV	TET2	NM_017628	3	c.G3410T	p.G1137V	COSM3735043	B	3	631	0	1274
A017CMI	PV	TET2	NM_001127208	7	c.G3893A	p.C1298Y	COSM87138	B	0.5	1626	57	2550
A017CMI	PV	TP53	NM_000546	5	c.T526A	p.C176S	COSM44146;COSM1324781	A	0	1050	85	924
A019CCV	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	25	1284	94	373
A019CCV	TE	KMT2A	NM_001197104	27	c.T8168C	p.V2723A	-	C	46	376	32	41
A019CCV	TE	TP53	NM_001276761	7	c.G626A	p.R209Q	COSM99602;COSM99021;COSM99020	A	3	1102	0	286
A019CCV	TE	TP53	NM_001276761	7	c.G594A	p.M198I	COSM1640835;COSM99646;COSM10834	A	1.4	1973	84	366
A020CLJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	94	400	90	976
A020CLJ	PV	SMC3	NM_005445	24	c.2799_2801del	p.K936del	-	B	0	150	41	464

A022CMJ	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	16	972	92	296
A022CMJ	TE	SRSF2	NM_003016	1	c.C284A	p.P95H	COSM211505;COSM211029;COSM211504	A	18	227	45	22
A022CMJ	TE	TET2	NM_001127208	11	c.G5633A	p.R1878H	-	C	8	1311	45	218
A022CMJ	TE	ASXL1	NM_015338	12	c.2591delA	p.D864Afs*2	-	A	1.2	896	38	189
A022CMJ	TE	TP53	NM_000546	5	c.G524A	p.R175H	COSM10648;COSM3355994;COSM99022	A	0	745	88	192
A023CTL	TE	CALR	NM_004343	9	c.1153_1154delinsTGTC	p.Lys385Cysfs*46	-	A	15	8022	100	316
A023CTL	TE	TET2	NM_001127208	10	c.4312dupA	p.E1437fs	COSM4385603	A	23	11980	49	1199
A023CTL	TE	ASXL1	NM_015338	12	c.1934dupG	p.G642fs	COSM4170082;COSM1411076	A	0	16217	27	973
A023CTL	TE	EZH2	NM_004456	13	c.G1546T	p.D516Y	-	B	0	5875	11	135
A023CTL	TE	EZH2	NM_004456	8	c.T851A	p.L284H	-	B	0.36	37714	66	1808
A024CBT	TE	BCOR	NM_001123385	12	c.G4741T	p.D1581Y	COSM4109395;COSM4109396;COSM4109397	B	3	354	57	286
A024CBT	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	9	610	0	837
A024CBT	TE	DNMT3A	NM_022552	23	c.C2644T	p.R882C	COSM53042;COSM1166704	A	28	359	20	294
A024CBT	TE	ETNK1	NM_018638	3	c.G734A	p.G245D	-	C	3	692	25	651
A024CBT	TE	ETV6	NM_001987	3	c.302_303insCTTGGGTCT	p.D101_F102insLGL	-	B	0	627	16	592
A024CBT	TE	FLT3	NM_004119	9	c.C1197A	p.N399K	-	C	49	406	55	242
A024CBT	TE	RUNX1	NM_001754	9	c.1036delC	p.R346Afs*247	-	A	0	721	19	711
A024CBT	TE	TET2	NM_001127208	4	c.A3467T	p.N1156I	-	B	6	420	2	401
R025CJC	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	39	1366	0	796
R025CJC	PV	DNMT3A	NM_022552	23	c.C2644T	p.R882C	COSM53042;COSM1166704	A	23	860	23	405
R025CJC	PV	NF1	NM_001042492	40	c.C5902T	p.R1968X	COSM3402748;COSM30766	A	3	949	0	185
R025CJC	PV	TP53	NM_000546	7	c.G743A	p.R248Q	COSM99602;COSM99021;COSM99020	A	0	1167	87	672
A028CBG	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	47	591	47	561
A028CBG	PV	DNMT3A	NM_022552	23	c.C2701G	p.L901V	-	B	41	297	43	284
A028CBG	PV	DNMT3A	NM_022552	15	c.G1685A	p.C562Y	COSM249136;COSM5878817	A	51	370	39	268
A028CBG	PV	IDH2	NM_002168	4	c.G419A	p.R140Q	COSM41590	A	48	408	50	458
A028CBG	PV	MPL	NM_005373	12	c.G1775A	p.R592Q	COSM2170465	A	0	456	42	434
A028CBG	PV	SUZ12	NM_015355	16	c.G2016A	p.M672I	-	C	49	629	52	511

A028CBG	PV	U2AF1	NM_006758	6	c.A470C	p.Q157P	COSM211534;COSM1318797	A	0	897	5	900
A029CCM	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	10	1894	1.6	818
A029CCM	PV	TP53	NM_000546	7	c.G734A	p.G245D	COSM3388189	B	3	1464	45	882
A030CMM	TE	CALR	NM_004343	9	c.1154_1155insTTGTC	p.K385fs	COSM1738056	A	57	1415	37	881
A030CMM	TE	ATM	NM_000051	34	c.A5071C	p.S1691R	COSM6005491	C	44	424	47	358
A030CMM	TE	WT1	NM_024426	2	c.C745T	p.P249S	COSM5611197;COSM5611198;COSM21963	C	40	932	43	684
A030CMM	TE	ATM	NM_000051	61	c.G8845A	p.V2949I	-	B	14	4032	1.3	1306
A030CMM	TE	FLT3	NM_004119	14	c.1808_1819dup	p.603insFDFREYEYDLK	-	A	0	1162	41	1570
A030CMM	TE	RUNX1	NM_001754	6	c.A580G	p.K194E	-	B	0.3	3107	36	2518
B031CDM	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	68	868	57	976
B031CDM	PV	DOT1L	NM_032482	24	c.C3271T	p.R1091X	-	A	0	450	47	437
B031CDM	PV	RUNX1	NM_001754	5	c.A484G	p.R162G	COSM4385181;COSM24718	A	0	491	57	825
B032CFJ	TE	CALR	NM_004343	9	c.1154_1155insTTGTC	p.K385fs	COSM1738056	A	55	183	54	356
B032CFJ	TE	ASXL1	NM_015338	12	c.1927dupG	p.G646Wfs*10	COSM1411076	A	9	179	19	260
B032CFJ	TE	PDS5B	NM_015032	30	c.A3488G	p.N1163S	-	B	50	940	49	726
B032CFJ	TE	SUZ12	NM_015355	15	c.A1814T	p.D605V	COSM4745721	B	0.4	484	86	84
B032CFJ	TE	NRAS	NM_002524	2	c.G35A	p.G12D	COSM564	A	0	870	46	804
B033CCY	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	31	1422	11	926
B033CCY	PV	U2AF1	NM_006758	6	c.A470G	p.Q157R	COSM1724986;COSM211532	A	26	11502	31	2157
B033CCY	PV	GATA2	NM_001145661	4	c.635_636insTCAA	p.K212Nfs*70	-	A	0	3689	11	1426
B033CCY	PV	RUNX1	NM_001754	5	c.459_460insAC	p.Q154Tfs*22	-	A	0	2299	30	1186
B033CCY	PV	MPL	NM_005373	12	c.1844delC	p.C616Afs*13	-	A	0	3025	31	1607
B033CCY	PV	TET2	NM_001127208	8	c.G4021C	p.A1341P	-	B	0	2829	30	480
A034CSP	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	42	557
A034CSP	TE	TP53	NM_000546	5	c.A536G	p.H179R	COSM1645241	A	NA	NA	93	638
A034CSP	TE	ETV6	NM_001987	5	c.T602C	p.L201P	-	C	NA	NA	56	197
A035CMM	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	73	603

A035CMM	PV	TP53	NM_000546	5	c.T487C	p.Y163H	COSM1522497	A	NA	NA	6	298
A036CJA	PV	TP53	NM_000546	6	c.A659G	p.Y220C	COSM10758	A	NA	NA	49	614
A036CJA	PV	SH2B3	NM_005475	2	c.A197G	p.Q66R	-	C	NA	NA	45	143
A036CJA	PV	SETBP1	NM_015559	4	c.A2738C	p.N913T	-	C	NA	NA	28	393
A036CJA	PV	DNMT3A	NM_022552	19	c.2307_2315del	p.769_772del	-	B	NA	NA	10	1311
L037CRP	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	76	683
L037CRP	PV	RUNX1	NM_001754	6	c.A593G	p.D198G	COSM4816274;COSM24799	A	NA	NA	35	920
L037CRP	PV	RUNX1	NM_001754	5	c.G493T	p.G165C	COSM5030995;COSM96547	A	NA	NA	35	516
L037CRP	PV	SRSF2	NM_003016	1	c.C284T	p.P95L	COSM146288;COSM211506;COSM211028	A	NA	NA	22	103
L037CRP	PV	TP53	NM_000546	5	c.460_461insTCC	p.G154delinsVR	-	A	NA	NA	2	508
L037CRP	PV	HMGA2	NM_003484	4	c.A307G	p.K103E	-	C	NA	NA	48	943
L037CRP	PV	DOT1L	NM_032482	13	c.C1058G	p.A353G	-	C	NA	NA	52	190
B038CLL	PV	NRAS	NM_002524	2	c.G37C	p.G13R	COSM569	A	NA	NA	49	591
B038CLL	PV	RUNX1	NM_001754	4	c.C332A	p.T111N	COSM42101	A	NA	NA	44	318
B038CLL	PV	TP53	NM_000546	7	c.C742T	p.R248W	COSM120006;COSM120005;COSM1640831	A	NA	NA	47	494
B038CLL	PV	TP53	NM_000546	7	c.719_781delinsTC	p.(Ser240Ilefs*85)	COSM3356966;COSM984905;COSM984907	A	NA	NA	29	623
B039CLJ	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	11	526
B039CLJ	PV	IDH2	NM_002168	4	c.G419A	p.R140Q	COSM41590	A	NA	NA	2,5	2655
B039CLJ	PV	TP53	NM_000546	6	c.A641G	p.H214R	COSM307281;COSM3388198;COSM1640840	A	NA	NA	16	3420
B039CLJ	PV	TP53	NM_000546	5	c.384_385del	p.A129Pfs*18	-	A	NA	NA	40	676
B040CPJ	TE	CALR	NM_004343	9	c.1154_1155insTTGTC	p.K385Nfs*46	COSM1738056	A	NA	NA	44	288
B040CPJ	TE	ASXL1	NM_015338	12	c.2672dupT	p.S892Ffs*1	-	A	NA	NA	39	293
B040CPJ	TE	GATA2	NM_032638	6	c.C1186T	p.R396W	-	A	NA	NA	7	1520
B040CPJ	TE	NRAS	NM_002524	2	c.G38A	p.G13D	COSM573	A	NA	NA	38	1096
B041CRM	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	55	790
B041CRM	TE	CEBPA	NM_004364	1	c.G866A	p.R289H	-	B	NA	NA	29	906
B041CRM	TE	CEBPA	NM_004364	1	c.541_542insCCTT	p.Y181Sfs*140	-	A	NA	NA	26	174

B041CRM	TE	RUNX1	NM_001754	5	c.460_462del	p.Q154del	-	B	NA	NA	32	638
B041CRM	TE	TET2	NM_001127208	9	c.C4100G	p.P1367R	COSM4170044	B	NA	NA	41	193
B041CRM	TE	TET2	NM_001127208	11	c.G5644C	p.A1882P	COSM87185	A	NA	NA	28	749
B041CRM	TE	TET2	NM_001127208	3	c.1643dupA	p.T549Nfs*17	-	A	NA	NA	7	515
A042CGJ	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	14	561
A042CGJ	TE	TP53	NM_000546	5	c.T487C	p.Y163H	COSM1522497	A	NA	NA	48	170
A042CGJ	TE	DNMT3A	NM_022552	23	c.G2645A	p.R882H	COSM442676	A	NA	NA	22	176
A043CBM	PV	ATRX	NM_000489	9	c.T3364A	p.C1122S	-	C	NA	NA	99	413
A043CBM	PV	BCORL1	NM_021946	3	c.A3158G	p.K1053R	-	B	NA	NA	99	373
A043CBM	PV	TP53	NM_000546	8	c.G841A	p.D281N	COSM3932743;COSM43596;COSM1649341;COSM146336	A	NA	NA	90	1049
A043CBM	PV	ATM	NM_000051	8	c.C998T	p.S333F	COSM5020962;COSM5020963	B	NA	NA	52	509
A044CMM	PV	ASXL1	NM_015338	12	c.2894_2896del	p.965_966del	-	B	NA	NA	41	664
A044CMM	PV	DNMT3A	NM_022552	23	c.G2645A	p.R882H	COSM52944;COSM442676	A	NA	NA	43	419
A044CMM	PV	NF1	NM_001042492	4	c.T7010C	p.L2337P	-	B	NA	NA	29	70
A044CMM	PV	SH2B3	NM_005475	8	c.C1696T	p.R566W	-	B	NA	NA	39	217
A044CMM	PV	TET2	NM_001127208	3	c.A1355C	p.E452A	-	B	NA	NA	48	456
A044CMM	PV	TP53	NM_000546	10	c.C1009T	p.R337C	COSM117591;COSM11071	A	NA	NA	47	695
A045CVB	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	58	848
A045CVB	TE	EZH2	NM_004456	8	c.G857A	p.C286Y	-	B	NA	NA	46	972
A045CVB	TE	NF1	NM_001042492	37	c.A5039G	p.Y1680C	-	B	NA	NA	45	464
A046CBN	TE	CALR	NM_004343	9	c.1154_1155insTTGTC	p.K385Nfs*46	COSM1738056	A	NA	NA	48	311
A046CBN	TE	CUX1	NM_001202543	18	c.G2206A	p.D736N	-	C	NA	NA	45	110
A047CRG	PV	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	5	489
A047CRG	PV	BCORL1	NM_021946	3	c.A1003C	p.T335P	-	B	NA	NA	23	266
A047CRG	PV	BCORL1	NM_021946	3	c.C2752T	p.Q918X	-	A	NA	NA	6	463
A047CRG	PV	BCORL1	NM_021946	6	c.G3969C	p.E1323D	-	B	NA	NA	44	50
A047CRG	PV	CHEK2	NM_001005735	5	c.720delA	p.V241Ffs*6	-	A	NA	NA	46	164
A047CRG	PV	CUX1	NM_001202543	18	c.G2206A	p.D736N	-	C	NA	NA	56	143

A048CBA	PV	TP53	NM_000546	5	c.A395G	p.K132R	COSM3388223;COSM1646844;COSM1158 2	A	NA	NA	94	50
A049CBE	TE	ASXL1	NM_015338	12	c.1927dupG	p.G646Wfs*10	COSM4170082;COSM1411076	A	1	392	26	164
A049CBE	TE	CHEK2	NM_001005735	16	c.1696delC	p.R566Vfs*41	-	A	7	171	0	680
A049CBE	TE	PPMD1	NM_003620	6	c.1427delA	p.N477Ifs*5	-	A	7	801	0	460
A049CBE	TE	TP53	NM_000546	7	c.G734A	p.G245D	COSM3388189;COSM43606;COSM179807	A	4	540	3	72
A049CBE	TE	SH2B3	NM_005475	7	c.C1298T	p.S433L	-	B	93	212	40	126
A049CBE	TE	TP53	NM_000546	7	c.C742T	p.R248W	COSM120006;COSM120005	A	2	456	89	56
P050CGR	TE	CALR	NM_004343	9	c.1092_1143del	p.Glu364fs	COSM1738057	A	NA	NA	16	64
P050CGR	TE	ASXL1	NM_015338	12	c.3150dupG	p.R1051Afs*35	-	A	NA	NA	37	633
P050CGR	TE	NRAS	NM_002524	2	c.G35T	p.G12V	COSM566	A	NA	NA	5	967
P050CGR	TE	PDS5B	NM_015032	12	c.G1355A	p.R452Q	-	B	NA	NA	28	334
P050CGR	TE	SETBP1	NM_015559	4	c.G1933A	p.E645K	-	B	NA	NA	46	1334
P050CGR	TE	SUZ12	NM_015355	15	c.T1808G	p.F603C	-	B	NA	NA	44	296
P051CLO	TE	MPL	NM_005373	10	c.G1544T	p.W515L	COSM3719407;COSM18918	A	6	128	16	307
P051CLO	TE	IDH2	NM_002168	4	c.G419A	p.R140Q	COSM41590	A	15	492	2	431
P051CLO	TE	SRSF2	NM_003016	1	c.C284G	p.P95R	COSM211661;COSM4385016	A	28	241	46	442
P051CLO	TE	TP53	NM_000546	7	c.A736G	p.M246V	COSM251431;COSM251429;COSM172638 2	A	0	677	18	1061
A053CFJ	PV	TP53	NM_000546	7	c.G743A	p.R248Q	COSM99602;COSM99021;COSM99020	A	NA	NA	69	503
P054CRP	TE	JAK2	NM_004972	14	c.G1849T	p.V617F	COSM12600	A	NA	NA	50	828
P054CRP	TE	SUZ12	NM_015355	9	c.A1009G	p.I337V	-	B	NA	NA	30	503
P054CRP	TE	TET2	NM_001127208	3	c.2064delT	p.S689Pfs*10	-	A	NA	NA	49	471
P054CRP	TE	TET2	NM_001127208	3	c.3348dupA	p.N1118Kfs*10	COSM4613615;COSM4613616	A	NA	NA	53	341
P054CRP	TE	U2AF1	NM_006758	2	c.C101A	p.S34Y	COSM1190367;COSM146287	A	NA	NA	46	347