

Supplementary Table 1: TruSight Myeloid (Illumina) NGS Gene Panel. (A) Genes in the TruSight Myeloid (Illumina) NGS Gene Panel (B) Exon coverage for hotspot genes (A)

Complete coding region coverage (15/54)	Hotspot coverage (39/54)
<i>BCOR</i>	<i>ABL1</i>
<i>BCORL1</i>	<i>ASXL1</i>
<i>CDKN2A</i>	<i>ATRX</i>
<i>CEBPA</i>	<i>BRAF</i>
<i>CUX1</i>	<i>CALR</i>
<i>DNMT3A</i>	<i>CBL</i>
<i>ETV6/TEL</i>	<i>CBLB</i>
<i>EZH2</i>	<i>CBLC</i>
<i>IKZF1</i>	<i>CSF3R</i>
<i>KDM6A</i>	<i>FBXW7</i>
<i>PHF6</i>	<i>FLT3</i>
<i>RAD21</i>	<i>GATA1</i>
<i>RUNX1</i>	<i>GATA2</i>
<i>STAG2</i>	<i>GNAS</i>
<i>ZRSR2</i>	<i>HRAS</i>
	<i>IDH1</i>
	<i>IDH2</i>
	<i>JAK2</i>
	<i>JAK3</i>
	<i>KIT</i>
	<i>KMT2A</i>
	<i>KRAS</i>
	<i>MPL</i>
	<i>MYD88</i>
	<i>NOTCH1</i>
	<i>NPM1</i>
	<i>NRAS</i>
	<i>PDGFRA</i>
	<i>PTEN</i>
	<i>PTPN11</i>
	<i>SETBP1</i>
	<i>SF3B1</i>
	<i>SMC1A</i>
	<i>SMC3</i>
	<i>SRSF2</i>
	<i>TET2</i>
	<i>TP53</i>
	<i>U2AF1</i>
	<i>WT1</i>

(B)

Hotspot coverage (39/54)	Exon Coverage
<i>ABL1</i>	4-6
<i>ASXL1</i>	12
<i>ATRX</i>	8-10 and 17-31
<i>BRAF</i>	15
<i>CALR</i>	9
<i>CBL</i>	8, 9
<i>CBLB</i>	9, 10
<i>CBLC</i>	9, 10
<i>CSF3R</i>	14-17
<i>FBXW7</i>	9-11
<i>FLT3</i>	14, 15, 20
<i>GATA1</i>	2
<i>GATA2</i>	2-6
<i>GNAS</i>	8, 9
<i>HRAS</i>	2, 3
<i>IDH1</i>	4
<i>IDH2</i>	4
<i>JAK2</i>	12, 14
<i>JAK3</i>	13
<i>KIT</i>	2, 8-11, 13, 17
<i>KMT2A</i>	2, 3
<i>KRAS</i>	5-8
<i>MPL</i>	10
<i>MYD88</i>	3-5
<i>NOTCH1</i>	26-28, 34
<i>NPM1</i>	12
<i>NRAS</i>	2, 3
<i>PDGFRA</i>	12, 14, 18
<i>PTEN</i>	5, 7
<i>PTPN11</i>	3, 13
<i>SETBP1</i>	4 (partial)
<i>SF3B1</i>	13-16
<i>SMC1A</i>	2, 11, 16, 17
<i>SMC3</i>	10, 13, 19, 23, 25, 28
<i>SRSF2</i>	1
<i>TET2</i>	3-11
<i>TP53</i>	2-11
<i>U2AF1</i>	2, 6
<i>WT1</i>	7, 9

Supplementary Table 2: Annotation of variants

UPN	Gene	Transcript ID	cDNA	Protein	Change	VAF (%)	Read Depth	Classification
PT-001	ASXL1	NM_015338.5	c.1773C>G	p.Tyr591*	Nonsense	47.7	8217	Oncogenic
PT-005	ASXL1	NM_015338.5	c.1772dupA	p.Tyr591*	Nonsense	47.1	4985	Oncogenic
PT-010	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	28.7	6084	Oncogenic
PT-011	ASXL1	NM_015338.5	c.4159_4162dupGCTA	p.Thr1388Serfs*5	Frameshift	45.0	3720	Oncogenic
PT-013	ASXL1	NM_015338.5	c.2074C>T	p.Gln692*	Nonsense	39.1	4212	Oncogenic
PT-018	ASXL1	NM_015338.5	c.3000_3001insG	p.Thr1001Aspfs*4	Frameshift	41.5	6409	Oncogenic
PT-020	ASXL1	NM_015338.5	c.2582delC	p.Ala861Aspfs*6	Frameshift	39.3	7053	Oncogenic
PT-021	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	31.4	2021	Oncogenic
PT-024	ASXL1	NM_015338.5	c.1879dupG	p.Ala627Glyfs*8	Frameshift	48.6	1983	Oncogenic
PT-027	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	35.3	4996	Oncogenic
PT-030	ASXL1	NM_015338.5	c.2464dupA	p.Thr822Asnfs*11	Frameshift	26.6	8797	Oncogenic
PT-031	ASXL1	NM_015338.5	c.2407C>T	p.Gln803*	Nonsense	46.9	10503	Oncogenic
PT-033	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	29.3	5278	Oncogenic
PT-034	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	35.9	7301	Oncogenic
PT-036	ASXL1	NM_015338.5	c.3935C>T	p.Ala1312Val	Missense	43.4	10396	VUS
PT-037	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	34.0	6033	Oncogenic
PT-042	ASXL1	NM_015338.5	c.2957A>G	p.Asn986Ser	Missense	49.0	6285	VUS
PT-049	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	34.1	4808	Oncogenic
PT-050	ASXL1	NM_015338.5	c.3509_3510insG	p.Arg1171Lysfs*11	Frameshift	42.7	5805	Oncogenic
PT-051	ASXL1	NM_015338.5	c.2143dupA	p.Arg715Lysfs*3	Frameshift	47.8	5149	Oncogenic
PT-053	ASXL1	NM_015338.5	c.2898_2900delAGG	p.Gly967del	Missense	45.2	7814	VUS
PT-055	ASXL1	NM_015338.5	c.1777A>G	p.Ile593Val	Missense	47.8	5732	VUS
PT-055	ASXL1	NM_015338.5	c.2957A>G	p.Asn986Ser	Missense	49.2	6691	VUS
PT-057	ASXL1	NM_015338.5	c.2560delA	p.Thr854Leufs*13	Frameshift	36.6	6716	Oncogenic
PT-060	ASXL1	NM_015338.5	c.2046_2055dupCACCCCTGGA	p.Lys686Hisfs*35	Frameshift	20.9	4795	Oncogenic
PT-064	ASXL1	NM_015338.5	c.1771dupT	p.Tyr591Leufs*28	Frameshift	41.5	9024	Oncogenic
PT-065	ASXL1	NM_015338.5	c.2324T>G	p.Leu775*	Nonsense	47.2	6846	Oncogenic
PT-068	ASXL1	NM_015338.5	c.2738_2739insTGAATCC	p.Glu917Ilefs*9	Frameshift	12.5	7913	Oncogenic
PT-083	ASXL1	NM_015338.5	c.3052_3053delAC	p.Thr1018*	Nonsense	47.0	6010	Oncogenic
PT-098	ASXL1	NM_015338.5	c.2077C>T	p.Arg693*	Nonsense	35.03	1681	Oncogenic

PT-100	ASXL1	NM_015338.5	c.2564_2567delATTG	p.Asp855Alafs*11	Frameshift	49.7	12997	Oncogenic
PT-108	ASXL1	NM_015338.5	c.2385dupC	p.Trp796Leufs*4	Frameshift	35.7	3914	Oncogenic
PT-171	ASXL1	NM_015338.5	c.2494G>A	p.Asp832Asn	Missense	49.0	5098	VUS
PT-173	ASXL1	NM_015338.5	c.3445A>G	p.Met1149Val	Missense	49.6	2151	VUS
PT-176	ASXL1	NM_015338.5	c.2530dupA	p.Thr844Asnfs*7	Frameshift	31.1	10832	Oncogenic
PT-177	ASXL1	NM_015338.5	c.3671G>C	p.Arg1224Thr	Missense	51.4	10120	VUS
PT-182	ASXL1	NM_015338.5	c.2077C>T	p.Arg693*	Nonsense	36.5	1548	Oncogenic
PT-184	ASXL1	NM_015338.5	c.2740G>T	p.Glu914*	Nonsense	43.7	3668	Oncogenic
PT-188	ASXL1	NM_015338.5	c.1900_1922delAGAGAGGGCCGCCACCACTGCCAT	p.Glu635Argfs*15	Frameshift	43.2	350	Oncogenic
PT-191	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	31.0	7672	Oncogenic
PT-192	ASXL1	NM_015338.5	c.2812_2816delinsTGA	p.Pro938*	Nonsense	21.4	1935	Oncogenic
PT-193	ASXL1	NM_015338.5	c.2077C>T	p.Arg693*	Nonsense	32.7	1077	Oncogenic
PT-193	ASXL1	NM_015338.5	c.3935C>T	p.Ala1312Val	Missense	44.6	2985	VUS
PT-199	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	32.6	1341	Oncogenic
PT-200	ASXL1	NM_015338.5	c.1934dupG	p.Gly646Trpfs*12	Frameshift	40.2	2020	Oncogenic
PT-204	ASXL1	NM_015338.5	c.2957A>G	p.Asn986Ser	Missense	49.1	2741	VUS
PT-021	ATRX	NM_000489.4	c.5579A>G	p.Asn1860Ser	Missense	99.6	2809	VUS
PT-183	ATRX	NM_000489.4	c.5579A>G	p.Asn1860Ser	Missense	50.5	1920	VUS
PT-031	BCOR	NM_001123385.1	c.3226G>A	p.Glu1076Lys	Missense	51.8	2371	VUS
PT-037	BCOR	NM_001123385.1	c.1005delC	p.Ser336Argfs*42	Frameshift	77.5	6841	Oncogenic
PT-043	BCOR	NM_001123385.1	c.1865delC	p.Pro622Glnfs*47	Frameshift	41.1	8298	Oncogenic
PT-097	BCOR	NM_001123385.1	c.4319C>T	p.Pro1440Leu	Missense	99.9	1212	VUS
PT-047	BCORL1	NM_021946.4	c.4880dupA	p.Asp1627Glufs*21	Frameshift	56.0	3862	Oncogenic
PT-068	BCORL1	NM_021946.4	c.3332C>T	p.Thr1111Met	Missense	61.6	4470	VUS
PT-090	BCORL1	NM_021946.4	c.3332C>T	p.Thr1111Met	Missense	47.5	3253	VUS
PT-103	BCORL1	NM_021946.4	c.3158A>G	p.Lys1053Arg	Missense	48.5	1999	VUS
PT-003	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	47.1	184	Oncogenic
PT-005	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	47.1	1414	Oncogenic
PT-008	CALR	NM_004343.3	c.1120_1139delinsG	p.Lys374fs	Frameshift	41	1277	Oncogenic
PT-033	CALR	NM_004343.3	c.1103_1154del	p.Lys368Argfs*45	Frameshift	48.7	2045	Oncogenic
PT-036	CALR	NM_004343.3	c.1099_1150del	p.Leu367Thrfs*46	Frameshift	59.0	2103	Oncogenic
PT-052	CALR	NM_004343.3	c.1094_1139del	p.Gln365Argfs*50	Frameshift	63.5	1832	Oncogenic
PT-073	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	45.2	1650	Oncogenic

PT-075	CALR	NM_004343.3	c.1099_1150del	p.Leu367Thrfs*46	Frameshift	56.4	2525	Oncogenic
PT-083	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	86.6	1313	Oncogenic
PT-098	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	37.21	605	Oncogenic
PT-108	CALR	NM_004343.3	c.1153_1154delinsCTTGTC	p.Lys385Thrfs*47	Frameshift	36.0	1283	Oncogenic
PT-179	CALR	NM_004343.3	c.1099_1150del	p.Leu367Thrfs*46	Frameshift	56.6	1702	Oncogenic
PT-184	CALR	NM_004343.3	c.1099_1150del	p.Leu367Thrfs*46	Frameshift	54.3	1014	Oncogenic
PT-188	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	33.2	539	Oncogenic
PT-203	CALR	NM_004343.3	c.1154_1155insTTGTC	p.Lys385Asnfs*47	Frameshift	87.2	1420	Oncogenic
PT-205	CALR	NM_004343.3	c.1099_1150del	p.Leu367Thrfs*46	Frameshift	33.8	411	Oncogenic
PT-018	CBL	NM_005188.3	c.1380_1382dupTGA	p.Asp460dup	In-frame Insertion	43.2	3603	VUS
PT-060	CBL	NM_005188.3	c.1193A>C	p.His398Pro	Missense	40.4	6964	Oncogenic
PT-076	CBL	NM_005188.3	c.1136A>G	p.Gln379Arg	Missense	52.1	5467	Oncogenic
PT-170	CBL	NM_005188.3	c.1202G>A	p.Cys401Tyr	Missense	50.5	4517	Oncogenic
PT-182	CBL	NM_005188.3	c.1151G>T	p.Cys384Phe	Missense	32.8	635	Oncogenic
PT-191	CBLB	NM_170662.3	c.1399G>A	p.Val467Ile	Missense	50.4	3909	VUS
PT-093	CDKN2A	NM_000077.4	c.170C>T	p.Ala57Val	Missense	49.0	1082	VUS
PT-002	CEBPA	NM_004364.3	c.175G>T	p.Glu59*	Nonsense	45.0	229	Oncogenic
PT-043	CEBPA	NM_004364.3	c.896G>T	p.Ser299Ile	Missense	26.5	4709	Oncogenic
PT-063	CEBPA	NM_004364.3	c.168C>A	p.Cys56*	Nonsense	47.0	249	Oncogenic
PT-097	CEBPA	NM_004364.3	c.896G>T	p.Ser299Ile	Missense	27.0	6066	Oncogenic
PT-051	CSF3R	NM_156039.3	c.2503G>A	p.Glu835Lys	Missense	52.1	4641	VUS
PT-057	CSF3R	NM_156039.3	c.2302C>T	p.Gln768*	Nonsense	53.1	260	Oncogenic
PT-057	CSF3R	NM_156039.3	c.1853C>T	p.Thr618Ile	Missense	36.4	1820	Oncogenic
PT-065	CSF3R	NM_156039.3	c.1853C>T	p.Thr618Ile	Missense	43.0	2115	Oncogenic
PT-068	CSF3R	NM_156039.3	c.2467C>A	p.Pro823Thr	Missense	47.3	2506	VUS
PT-178	CSF3R	NM_156039.3	c.2092C>T	p.Arg698Cys	Missense	47.5	826	VUS
PT-198	CSF3R	NM_156039.3	c.2323G>A	p.Asp775Asn	Missense	50.0	222	VUS
PT-205	CSF3R	NM_156039.3	c.2087T>C	p.Met696Thr	Missense	45.0	621	VUS
PT-008	CUX1	NM_001202543.1	c.726G>T	p.Met242Ile	Missense	51.8	5623	VUS
PT-025	CUX1	NM_001202543.1	c.1438A>G	p.Ser480Gly	Missense	52.4	312	VUS
PT-034	CUX1	NM_181552.3	c.3368_3369delinsGT	p.Ser1123Cys	In-frame Deletion/Insertion	50.0	4163	VUS
PT-060	CUX1	NM_181552.3	c.2489C>T	p.Pro830Leu	Missense	50.1	3703	VUS
PT-068	CUX1	NM_181552.3	c.167T>G	p.Leu56Arg	Missense	12.3	3777	VUS

PT-098	CUX1	NM_001202543.1	c.1336C>A	p.Pro446Thr	Missense	84.97	588	VUS
PT-178	CUX1	NM_181552.3	c.923_924delGA	p.Arg308Thrfs*20	Frameshift	19.5	1087	Oncogenic
PT-183	CUX1	NM_001913.4	c.1721A>C	p.Gln574Pro	Missense	54.5	78	VUS
PT-198	CUX1	NM_001202543.1	c.3814C>T	p.Arg1272*	Nonsense	12.7	403	Oncogenic
PT-198	CUX1	NM_001202543.1	c.3047G>A	p.Trp1016*	Nonsense	15.1	232	Oncogenic
PT-003	DNMT3A	NM_022552.4	c.2311C>T	p.Arg771*	Frameshift	48.8	1603	Oncogenic
PT-010	DNMT3A	NM_022552.4	c.1508C>A	p.Thr503Asn	Missense	45.6	3200	VUS
PT-013	DNMT3A	NM_022552.4	c.1123-1G>A	p.?	Splice site	38.8	1530	Oncogenic
PT-017	DNMT3A	NM_022552.4	c.1547delA	p.Asn516Thrfs*135	Frameshift	38.2	4110	Oncogenic
PT-018	DNMT3A	NM_022552.4	c.2606G>A	p.Gly869Asp	Missense	43.2	3553	Oncogenic
PT-024	DNMT3A	NM_022552.4	c.2119G>A	p.Gly707Ser	Missense	55.4	2672	Oncogenic
PT-043	DNMT3A	NM_022552.4	c.2408+1G>A	p.?	Splice site	86.8	3760	Oncogenic
PT-044	DNMT3A	NM_022552.4	c.2645G>A	p.Arg882His	Missense	63.8	3354	Oncogenic
PT-054	DNMT3A	NM_022552.4	c.1628G>C	p.Gly543Ala	Missense	48.6	3519	VUS
PT-061	DNMT3A	NM_022552.4	c.2130_2131dupCA	p.Asn711Thrfs*69	Frameshift	42.4	3083	Oncogenic
PT-070	DNMT3A	NM_022552.4	c.2578T>C	p.Trp860Arg	Missense	44.7	8679	Oncogenic
PT-071	DNMT3A	NM_022552.4	c.2645G>A	p.Arg882His	Missense	14.6	2508	Oncogenic
PT-073	DNMT3A	NM_022552.4	c.2644C>T	p.Arg882Cys	Missense	47.6	2898	Oncogenic
PT-082	DNMT3A	NM_022552.4	c.2645G>A	p.Arg882His	Missense	35.0	2894	Oncogenic
PT-094	DNMT3A	NM_022552.4	c.2408+1G>T	p.?	Splice site	43.8	3331	Oncogenic
PT-095	DNMT3A	NM_022552.4	c.2644C>T	p.Arg882Cys	Missense	49.2	966	Oncogenic
PT-103	DNMT3A	NM_022552.4	c.2635A>G	p.Asn879Asp	Missense	47.3	1172	Oncogenic
PT-171	DNMT3A	NM_022552.4	c.2645G>A	p.Arg882His	Missense	61.0	2305	Oncogenic
PT-172	DNMT3A	NM_022552.4	c.2248C>T	p.Pro750Ser	Missense	44.0	2963	Oncogenic
PT-183	DNMT3A	NM_022552.4	c.2644C>T	p.Arg882Cys	Missense	15.5	385	Oncogenic
PT-188	DNMT3A	NM_022552.4	c.2644C>T	p.Arg882Cys	Missense	43.9	1286	Oncogenic
PT-203	DNMT3A	NM_022552.4	c.2645G>A	p.Arg882His	Missense	48.7	1256	Oncogenic
PT-011	ETV6	NM_001987.4	c.602T>C	p.Leu201Pro	Missense	46.6	3870	VUS
PT-021	ETV6	NM_001987.4	c.219_221dupTGA	p.Ala73_Glu74insAsp	In-frame Insertion	14.7	683	VUS
PT-055	ETV6	NM_001987.4	c.1105C>T	p.Arg369Trp	Missense	9.1	3374	Oncogenic
PT-055	ETV6	NM_001987.4	c.1183T>C	p.Ser395Pro	Missense	26.2	1298	Oncogenic
PT-069	ETV6	NM_001987.4	c.602T>C	p.Leu201Pro	Missense	46.6	2773	VUS
PT-090	ETV6	NM_001987.4	c.496G>A	p.Val166Met	Missense	47.7	1697	VUS

PT-108	ETV6	NM_001987.4	c.416_417delCT	p.Ser139Tyrfs*14	Frameshift	34.2	4340	Oncogenic
PT-198	ETV6	NM_001987.4	c.1130C>T	p.Ala377Val	Missense	35.5	2067	Oncogenic
PT-001	EZH2	NM_004456.4	c.1311G>A	p.Trp437*	Nonsense	95.5	3976	Oncogenic
PT-013	EZH2	NM_004456.4	c.667delA	p.Ile223Phefs*18	Frameshift	76.7	5754	Oncogenic
PT-032	EZH2	NM_004456.4	c.1506-1G>A	p.?	Splice site	10.2	3084	Oncogenic
PT-032	EZH2	NM_004456.4	c.2018A>C	p.Asn673Thr	Missense	21.1	4124	Oncogenic
PT-033	EZH2	NM_004456.4	c.1690G>T	p.Gly564*	Nonsense	38.7	3993	Oncogenic
PT-033	EZH2	NM_004456.4	c.999G>C	p.Leu333Phe	Missense	48.4	2799	VUS
PT-049	EZH2	NM_004456.4	c.836A>G	p.His279Arg	Missense	93.2	7230	VUS
PT-050	EZH2	NM_004456.4	c.928delA	p.Thr310Leufs*11	Frameshift	41.6	1869	Oncogenic
PT-096	EZH2	NM_004456.4	c.449T>A	p.Ile150Lys	Missense	35.7	2208	VUS
PT-098	EZH2	NM_004456.4	c.2050C>T	p.Arg684Cys	Missense	60.44	3088	Oncogenic
PT-108	EZH2	NM_004456.4	c.1638T>G	p.Asn546Lys	Missense	67.7	4796	Oncogenic
PT-178	EZH2	NM_004456.4	c.836A>G	p.His279Arg	Missense	44.0	3886	VUS
PT-182	EZH2	NM_004456.4	c.1580C>A	p.Pro527His	Missense	43.9	2660	Oncogenic
PT-182	EZH2	NM_004456.4	c.1654T>C	p.Cys552Arg	Missense	44.2	2535	Oncogenic
PT-188	EZH2	NM_004456.4	c.2110+1G>A	p.?	Splice site	20.5	991	Oncogenic
PT-027	FLT3	NM_004119.2	c.2525A>G	p.Tyr842Cys	Missense	47.1	8998	Oncogenic
PT-041	FLT3	NM_004119.2	c.1727T>C	p.Leu576Pro	Missense	7.3	5941	Oncogenic
PT-041	FLT3	NM_004119.2	c.2522A>C	p.Asn841Thr	Missense	9.9	8116	Oncogenic
PT-041	FLT3	NM_004119.2	c.1800_1801insGGATGGGGAGAGCCTCCTTCT	p.Asp600_Leu601ins7	In-frame Insertion	9.7	7330	Oncogenic
PT-076	FLT3	NM_004119.2	c.2503G>C	p.Asp835His	Missense	35.4	9637	Oncogenic
PT-095	FLT3	NM_004119.2	c.2504_2509delinstTTC	p.Asp835_Met837delinsValLeu	In-frame Deletion/Insertion	13.1	872	VUS
PT-100	FLT3	NM_004119.2	c.1758_1793dup	p.Asp586_Tyr597dup	In-frame Insertion	17.0	10389	Oncogenic
PT-001	GATA2	NM_032638.4	c.194_200delACGCGCG	p.His65Argfs*13	Frameshift	33.1	2815	Oncogenic
PT-011	GATA2	NM_032638.4	c.121C>G	p.Pro41Ala	Missense	53.2	750	VUS
PT-055	GATA2	NM_032638.4	c.1168A>G	p.Lys390Glu	Missense	50.4	1303	Oncogenic
PT-068	GATA2	NM_032638.4	c.992C>G	p.Pro331Arg	Missense	8.2	4298	Oncogenic
PT-068	GATA2	NM_032638.4	c.302dupG	p.Lys102Glnfs*83	Frameshift	13.8	1294	Oncogenic
PT-068	GATA2	NM_032638.4	c.1168A>G	p.Lys390Glu	Missense	59.6	1350	Oncogenic
PT-094	GATA2	NM_032638.4	c.1307dupA	p.His436Glnfs*100	Frameshift	37.7	1056	Oncogenic
PT-199	GATA2	NM_032638.4	c.1075T>G	p.Leu359Val	Missense	47.3	223	Oncogenic
PT-207	GATA2	NM_032638.4	c.278C>A	p.Pro93Gln	Missense	22.0	279	VUS

PT-001	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	38.9	5004	Oncogenic
PT-005	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	48.4	4007	Oncogenic
PT-017	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	35.2	5530	Oncogenic
PT-024	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	49.5	6364	Oncogenic
PT-026	IDH1	NM_005896.3	c.395G>A	p.Arg132His	Missense	3.2	5339	Oncogenic
PT-033	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	2.0	4288	Oncogenic
PT-050	IDH1	NM_005896.3	c.394C>A	p.Arg132Ser	Missense	2.4	3187	Oncogenic
PT-056	IDH1	NM_005896.3	c.334A>G	p.Ile112Val	Missense	49.9	3974	VUS
PT-057	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	32.6	4010	Oncogenic
PT-069	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	31.3	4088	Oncogenic
PT-070	IDH1	NM_005896.3	c.395G>A	p.Arg132His	Missense	45.9	5032	Oncogenic
PT-071	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	13.6	3981	Oncogenic
PT-081	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	41.7	5101	Oncogenic
PT-082	IDH1	NM_005896.3	c.395G>A	p.Arg132His	Missense	2.1	4522	Oncogenic
PT-090	IDH1	NM_005896.3	c.395G>A	p.Arg132His	Missense	40.9	3186	Oncogenic
PT-182	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	24.0	974	Oncogenic
PT-193	IDH1	NM_005896.3	c.394C>T	p.Arg132Cys	Missense	5.9	211	Oncogenic
PT-002	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	50.2	5032	Oncogenic
PT-006	IDH2	NM_002168.2	c.508A>G	p.Ile170Val	Missense	15.02	617	VUS
PT-006	IDH2	NM_002168.2	c.514A>T	p.Arg172Trp	Missense	15.04	604	Oncogenic
PT-007	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	50.1	5033	Oncogenic
PT-021	IDH2	NM_002168.3	c.515G>A	p.Arg172Lys	Missense	29.5	1348	Oncogenic
PT-033	IDH2	NM_002168.3	c.515G>A	p.Arg172Lys	Missense	35.9	4057	Oncogenic
PT-038	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	42.8	6083	Oncogenic
PT-043	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	44.6	4213	Oncogenic
PT-046	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	47.8	4740	Oncogenic
PT-047	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	47.4	5346	Oncogenic
PT-051	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	48.6	4949	Oncogenic
PT-054	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	45.9	4718	Oncogenic
PT-082	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	28.7	4341	Oncogenic
PT-091	IDH2	NM_002168.3	c.515G>A	p.Arg172Lys	Missense	31.7	1218	Oncogenic
PT-101	IDH2	NM_002168.2	c.419G>A	p.Arg140Gln	Missense	50.05	1388	Oncogenic
PT-103	IDH2	NM_002168.3	c.515G>A	p.Arg172Lys	Missense	45.9	2101	Oncogenic

PT-207	IDH2	NM_002168.3	c.419G>A	p.Arg140Gln	Missense	25.6	1296	Oncogenic
PT-003	IKZF1	NM_006060.5	c.787G>A	p.Val263Met	Missense	51.0	3111	VUS
PT-034	IKZF1	NM_006060.5	c.55C>G	p.Pro19Ala	Missense	51.5	12136	VUS
PT-170	IKZF1	NM_006060.5	c.476A>G	p.Asn159Ser	Missense	44.3	6365	VUS
PT-171	IKZF1	NM_006060.5	c.660delA	p.Glu221Serfs*36	Frameshift	42.2	700	Oncogenic
PT-182	IKZF1	NM_006060.5	c.476A>G	p.Asn159Ser	Missense	17.6	930	VUS
PT-002	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	54.8	6001	Oncogenic
PT-004	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	76.6	5174	Oncogenic
PT-006	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	5.91	298	Oncogenic
PT-010	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	95.5	5060	Oncogenic
PT-011	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	99.0	10344	Oncogenic
PT-013	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	80.1	5522	Oncogenic
PT-014	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	48.44	2113	Oncogenic
PT-017	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	41.6	7120	Oncogenic
PT-018	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	60.6	7608	Oncogenic
PT-020	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	58.3	3765	Oncogenic
PT-021	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	40.7	2389	Oncogenic
PT-024	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	98.5	6247	Oncogenic
PT-025	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	20.8	460	Oncogenic
PT-030	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	93.1	5076	Oncogenic
PT-031	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	98.3	5239	Oncogenic
PT-038	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	80.9	5880	Oncogenic
PT-042	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	77.1	4980	Oncogenic
PT-043	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	62.6	4164	Oncogenic
PT-044	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	92.8	4663	Oncogenic
PT-045	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	55.4	4354	Oncogenic
PT-046	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	45.7	6116	Oncogenic
PT-047	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	46.4	7080	Oncogenic
PT-048	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	98.4	6659	Oncogenic
PT-050	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	48.1	5101	Oncogenic
PT-054	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	50.4	5717	Oncogenic
PT-056	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	66.5	5778	Oncogenic
PT-058	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	51.5	6892	Oncogenic

PT-059	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	61.1	10063	Oncogenic
PT-061	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	82.8	9475	Oncogenic
PT-063	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	50.1	4798	Oncogenic
PT-066	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	15.4	5975	Oncogenic
PT-069	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	56.1	6823	Oncogenic
PT-070	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	92.9	6150	Oncogenic
PT-074	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	88.7	4078	Oncogenic
PT-078	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	90.7	7779	Oncogenic
PT-080	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	3.2	6222	Oncogenic
PT-082	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	30.1	4912	Oncogenic
PT-084	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	64.5	8912	Oncogenic
PT-085	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	30.9	5827	Oncogenic
PT-086	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	46.8	3669	Oncogenic
PT-090	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	86.0	2989	Oncogenic
PT-094	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	47.1	6285	Oncogenic
PT-095	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	47.8	2175	Oncogenic
PT-097	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	57.9	5443	Oncogenic
PT-101	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	94.13	3093	Oncogenic
PT-102	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	90.81	4762	Oncogenic
PT-103	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	88.1	5074	Oncogenic
PT-105	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	24.0	1358	Oncogenic
PT-107	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	7.7	5610	Oncogenic
PT-111	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	81.1	2595	Oncogenic
PT-170	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	3.0	4001	Oncogenic
PT-171	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	90.7	4839	Oncogenic
PT-172	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	13.5	769	Oncogenic
PT-173	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	94.3	4425	Oncogenic
PT-174	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	81	5749	Oncogenic
PT-176	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	2.0	5535	Oncogenic
PT-177	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	99.2	4605	Oncogenic
PT-178	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	82.2	5714	Oncogenic
PT-182	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	44.7	1746	Oncogenic
PT-193	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	72.8	3213	Oncogenic

PT-198	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	55.3	887	Oncogenic
PT-199	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	49.4	1838	Oncogenic
PT-200	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	96.3	5666	Oncogenic
PT-202	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	14.9	944	Oncogenic
PT-204	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	72.7	7196	Oncogenic
PT-207	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	28.5	1353	Oncogenic
PT-208	JAK2	NM_004972.3	c.1849G>T	p.Val617Phe	Missense	54.9	1631	Oncogenic
PT-071	KDM6A	NM_021140.3	c.1515G>C	p.Met505Ile	Missense	51.6	3377	VUS
PT-026	KIT	NM_000222.2	c.2447A>T	p.Asp816Val	Missense	45.5	2658	Oncogenic
PT-054	KIT	NM_000222.2	c.200C>G	p.Thr67Ser	Missense	48.6	8276	VUS
PT-011	KRAS	NM_033360.3	c.99T>A	p.Asp33Glu	Missense	13.5	6587	Oncogenic
PT-016	KRAS	NM_033360.3	c.182A>G	p.Gln61Arg	Missense	36.8	471	Oncogenic
PT-031	KRAS	NM_033360.3	c.35G>C	p.Gly12Ala	Missense	48.7	4461	Oncogenic
PT-043	KRAS	NM_033360.3	c.35G>T	p.Gly12Val	Missense	2.8	3064	Oncogenic
PT-049	KRAS	NM_033360.3	c.35G>T	p.Gly12Val	Missense	38.2	5162	Oncogenic
PT-055	KRAS	NM_033360.3	c.179G>A	p.Gly60Asp	Missense	79.3	2144	VUS
PT-068	KRAS	NM_033360.3	c.35G>C	p.Gly12Ala	Missense	17.2	5312	Oncogenic
PT-089	KRAS	NM_033360.3	c.204G>T	p.Arg68Ser	Missense	15.1	1893	VUS
PT-095	KRAS	NM_033360.3	c.35G>A	p.Gly12Asp	Missense	7.2	306	Oncogenic
PT-200	KRAS	NM_033360.3	c.34G>C	p.Gly12Arg	Missense	29.4	1627	Oncogenic
PT-007	MPL	NM_005373.2	c.1544G>T	p.Trp515Leu	Missense	97.4	2730	Oncogenic
PT-032	MPL	NM_005373.2	c.1543_1544delinsAA	p.Trp515Lys	Missense	94.2	4449	Oncogenic
PT-049	MPL	NM_005373.2	c.1544G>T	p.Trp515Leu	Missense	91.4	2713	Oncogenic
PT-064	MPL	NM_005373.2	c.1544G>T	p.Trp515Leu	Missense	29.8	5844	Oncogenic
PT-081	MPL	NM_005373.2	c.1544G>T	p.Trp515Leu	Missense	47.5	4131	Oncogenic
PT-089	MPL	NM_005373.2	c.1514G>A	p.Ser505Asn	Missense	16.6	2778	Oncogenic
PT-191	MPL	NM_005373.2	c.1543_1544delinsAA	p.Trp515Lys	Missense	82.7	4872	Oncogenic
PT-091	MYD88	NM_002468.4	c.794T>C	p.Leu265Pro	Missense	9.7	251	Oncogenic
PT-008	NOTCH1	NM_017617.3	c.7157A>G	p.Gln2386Arg	Missense	49.2	1137	VUS
PT-050	NOTCH1	NM_017617.3	c.7488_7504delCACCCCAGCCACCAGC	p.Pro2498Glyfs*3	Frameshift	63.6	1007	Oncogenic
PT-108	NOTCH1	NM_017617.3	c.6625T>C	p.Tyr2209His	Missense	44.4	2366	VUS
PT-192	NOTCH1	NM_017617.3	c.6205G>A	p.Ala2069Thr	Missense	48.9	1305	VUS
PT-026	NPM1	NM_002520.6	c.860_863dupTCTG	p.Trp288Cysfs*12	Frameshift	42.0	2720	Oncogenic

PT-040	NPM1	NM_002520.6	c.863_864insTTTG	p.Trp288Cysfs*12	Frameshift	31.5	3208	Oncogenic
PT-001	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	48.2	10426	Oncogenic
PT-006	NRAS	NM_002524.4	c.35G>A	p.Gly12Asp	Missense	18.52	1605	Oncogenic
PT-013	NRAS	NM_002524.3	c.35G>T	p.Gly12Val	Missense	39.7	7776	Oncogenic
PT-018	NRAS	NM_002524.3	c.35G>C	p.Gly12Ala	Missense	37.0	9073	Oncogenic
PT-020	NRAS	NM_002524.3	c.208C>T	p.Gln70*	Nonsense	57.9	261	VUS
PT-037	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	3.0	10216	Oncogenic
PT-037	NRAS	NM_002524.3	c.35G>T	p.Gly12Val	Missense	30.9	10216	Oncogenic
PT-043	NRAS	NM_002524.3	c.35G>C	p.Gly12Ala	Missense	10.7	9455	Oncogenic
PT-051	NRAS	NM_002524.3	c.190T>G	p.Tyr64Asp	Missense	46.0	465	VUS
PT-068	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	4.1	7230	Oncogenic
PT-080	NRAS	NM_002524.3	c.35G>T	p.Gly12Val	Missense	4.0	10175	Oncogenic
PT-093	NRAS	NM_002524.3	c.34G>A	p.Gly12Ser	Missense	21.9	2137	Oncogenic
PT-171	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	43.0	4553	Oncogenic
PT-200	NRAS	NM_002524.3	c.38G>T	p.Gly13Val	Missense	4.6	421	Oncogenic
PT-202	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	14.9	1301	Oncogenic
PT-203	NRAS	NM_002524.3	c.35G>A	p.Gly12Asp	Missense	23.6	1885	Oncogenic
PT-004	PHF6	NM_032458.2	c.862_864dupGCT	p.Ala288dup	In-frame Insertion	44.7	480	VUS
PT-020	PHF6	NM_032458.2	c.821G>A	p.Arg274Gln	Missense	39.3	1811	Oncogenic
PT-021	PHF6	NM_032458.2	c.133_134dupTG	p.Met46Alafs*36	Frameshift	22.4	356	Oncogenic
PT-053	PHF6	NM_032458.2	c.941T>C	p.Ile314Thr	Missense	27.0	1955	Oncogenic
PT-091	PHF6	NM_032458.2	c.875G>T	p.Cys292Phe	Missense	23.4	572	Oncogenic
PT-097	PHF6	NM_032458.2	c.67_70delAATA	p.Asn23Glufs*9	Frameshift	68.8	1356	Oncogenic
PT-178	PHF6	NM_032458.2	c.937T>A	p.Tyr313Asn	Missense	45.2	1590	Oncogenic
PT-193	PHF6	NM_032458.2	c.418+1G>T	p.?	Splice site	66.8	1304	Oncogenic
PT-204	PHF6	NM_032458.2	c.821G>A	p.Arg274Gln	Missense	18.4	410	Oncogenic
PT-208	PHF6	NM_032458.2	c.461C>G	p.Ser154*	Nonsense	84.3	2063	Oncogenic
PT-036	PTPN11	NM_002834.3	c.215C>T	p.Ala72Val	Missense	36.5	9824	Oncogenic
PT-054	PTPN11	NM_002834.3	c.215C>T	p.Ala72Val	Missense	8.6	9125	Oncogenic
PT-039	RAD21	NM_006265.2	c.1364T>C	p.Val455Ala	Missense	36.0	1798	VUS
PT-065	RAD21	NM_006265.2	c.166T>C	p.Ser56Pro	Missense	20.6	8552	VUS
PT-080	RAD21	NM_006265.2	c.1242T>G	p.Asp414Glu	Missense	50.5	2232	VUS
PT-087	RAD21	NM_006265.2	c.1576G>C	p.Glu526Gln	Missense	49.2	4062	VUS

PT-089	RAD21	NM_006265.2	c.127_128dupAG	p.Ser43Argfs*8	Frameshift	35.9	4731	Oncogenic
PT-104	RAD21	NM_006265.2	c.1576G>C	p.Glu526Gln	Missense	23.4	1771	VUS
PT-005	RUNX1	NM_001754.4	c.1346dupA	p.Ser450Glnfs*150	Frameshift	8.5	1948	Oncogenic
PT-005	RUNX1	NM_001754.4	c.334C>G	p.Leu112Val	Missense	27.2	3574	Oncogenic
PT-005	RUNX1	NM_001754.4	c.280_281dupAG	p.Ser94Argfs*29	Frameshift	46.6	3577	Oncogenic
PT-006	RUNX1	NM_001754.4	c.339dupC	p.Ile114HisfsTer24	Frameshift	18.9	470	Oncogenic
PT-007	RUNX1	NM_001754.4	c.292dupC	p.Leu98Profs*40	Frameshift	82.4	1440	Oncogenic
PT-020	RUNX1	NM_001754.4	c.1426_1436delGTGTGGAGGCC	p.Val476Leufs*120	Frameshift	10.0	619	Oncogenic
PT-021	RUNX1	NM_001754.4	c.749_752dupGTGC	p.Ser252Cysfs*10	Frameshift	16.5	245	Oncogenic
PT-023	RUNX1	NM_001754.4	c.330G>T	p.Lys110Asn	Missense	12.3	4933	Oncogenic
PT-024	RUNX1	NM_001754.4	c.329_335delAGACCCT	p.Lys110Serfs*10	Frameshift	50.8	4434	Oncogenic
PT-038	RUNX1	NM_001754.4	c.958C>T	p.Arg320*	Nonsense	5.2	6355	Oncogenic
PT-047	RUNX1	NM_001754.4	c.602G>A	p.Arg201Gln	Missense	45.5	6811	Oncogenic
PT-047	RUNX1	NM_001754.4	c.593A>G	p.Asp198Gly	Missense	45.6	6724	Oncogenic
PT-057	RUNX1	NM_001754.4	c.1090_1103delATCGGCATCGGCAT	p.Ile364Valfs*231	Frameshift	30.0	4787	Oncogenic
PT-059	RUNX1	NM_001754.4	c.611G>A	p.Arg204Gln	Missense	91.1	9618	Oncogenic
PT-069	RUNX1	NM_001754.4	c.778_779dupAA	p.Asn260Lysfs*52	Frameshift	39.4	1237	Oncogenic
PT-070	RUNX1	NM_001754.4	c.805+1delG	p.?	Splice site	61.1	2218	Oncogenic
PT-083	RUNX1	NM_001754.4	c.497G>A	p.Arg166Gln	Missense	43.8	9671	Oncogenic
PT-091	RUNX1	NM_001754.4	c.539dupT	p.Thr181Hisfs*32	Frameshift	30.1	1523	Oncogenic
PT-095	RUNX1	NM_001754.4	c.499A>G	p.Ser167Gly	Missense	47.8	2606	Oncogenic
PT-098	RUNX1	NM_001754.4	c.593A>C	p.Asp198Ala	Missense	35.84	2351	Oncogenic
PT-103	RUNX1	NM_001754.4	c.1407_1414dupCGCGCGCC	p.Leu472Profs*125	Frameshift	18.5	197	Oncogenic
PT-104	RUNX1	NM_001754.4	c.1005G>T	p.Gln335His	Missense	50.7	3124	Oncogenic
PT-171	RUNX1	NM_001754.4	c.592G>T	p.Asp198Tyr	Missense	42.7	1752	Oncogenic
PT-171	RUNX1	NM_001754.4	c.422C>A	p.Ser141*	Nonsense	36.5	2555	Oncogenic
PT-177	RUNX1	NM_001754.4	c.1007_1013dupTCCCCGC	p.Leu339Profs*263	Frameshift	43.8	5991	Oncogenic
PT-182	RUNX1	NM_001754.4	c.958C>T	p.Arg320*	Nonsense	19.8	864	Oncogenic
PT-193	RUNX1	NM_001754.4	c.610C>T	p.Arg204*	Nonsense	13.2	658	Oncogenic
PT-193	RUNX1	NM_001754.4	c.593A>G	p.Asp198Gly	Missense	22.1	1093	Oncogenic
PT-198	RUNX1	NM_001754.4	c.511A>T	p.Lys171*	Nonsense	34.0	2738	Oncogenic
PT-204	RUNX1	NM_001754.4	c.748_749insA	p.Arg250Glnfs*11	Frameshift	17.0	251	Oncogenic
PT-204	RUNX1	NM_001754.4	c.508+2T>A	p.?	Splice site	22.5	1990	Oncogenic

PT-001	SETBP1	NM_015559.2	c.2602G>A	p.Asp868Asn	Missense	4.1	5801	Oncogenic
PT-037	SETBP1	NM_015559.2	c.2608G>A	p.Gly870Ser	Missense	46.1	4050	Oncogenic
PT-060	SETBP1	NM_015559.2	c.2612T>C	p.Ile871Thr	Missense	22.2	5707	Oncogenic
PT-062	SETBP1	NM_015559.2	c.2608G>A	p.Gly870Ser	Missense	83.6	5998	Oncogenic
PT-065	SETBP1	NM_015559.2	c.2608G>A	p.Gly870Ser	Missense	49.2	4440	Oncogenic
PT-089	SETBP1	NM_015559.2	c.2602G>A	p.Asp868Asn	Missense	6.9	3859	Oncogenic
PT-089	SETBP1	NM_015559.2	c.2602G>T	p.Asp868Tyr	Missense	12.9	3859	Oncogenic
PT-093	SETBP1	NM_015559.2	c.2609G>A	p.Gly870Asp	Missense	47.2	2610	Oncogenic
PT-100	SETBP1	NM_015559.2	c.2605A>G	p.Ser869Gly	Missense	49.1	7133	Oncogenic
PT-107	SETBP1	NM_015559.2	c.2608G>A	p.Gly870Ser	Missense	5.4	4040	Oncogenic
PT-183	SETBP1	NM_015559.2	c.2608G>A	p.Gly870Ser	Missense	3.0	88	Oncogenic
PT-188	SETBP1	NM_015559.2	c.2602G>A	p.Asp868Asn	Missense	24.1	927	Oncogenic
PT-026	SF3B1	NM_012433.2	c.1998G>C	p.Lys666Asn	Missense	49.4	4984	Oncogenic
PT-071	SF3B1	NM_012433.2	c.1873C>T	p.Arg625Cys	Missense	13.5	4102	Oncogenic
PT-074	SF3B1	NM_012433.2	c.1998G>T	p.Lys666Asn	Missense	49.1	2129	Oncogenic
PT-076	SF3B1	NM_012433.2	c.1998G>C	p.Lys666Asn	Missense	43.4	4487	Oncogenic
PT-081	SF3B1	NM_012433.2	c.1998G>T	p.Lys666Asn	Missense	43.7	4850	Oncogenic
PT-094	SF3B1	NM_012433.2	c.2098A>G	p.Lys700Glu	Missense	47.5	11294	Oncogenic
PT-102	SF3B1	NM_012433.2	c.1998G>C	p.Lys666Asn	Missense	49.14	1867	Oncogenic
PT-170	SF3B1	NM_012433.2	c.1998G>T	p.Lys666Asn	Missense	55.1	3776	Oncogenic
PT-202	SF3B1	NM_012433.3	c.1865A>T	p.Glu622Val	Missense	44.5	2125	Oncogenic
PT-207	SMC1A	NM_006306.3	c.1756C>T	p.Arg586Trp	Missense	48.0	1029	Oncogenic
PT-062	SMC3	NM_005445.3	c.804+2T>G	p.?	Splice site	41.5	3189	Oncogenic
PT-002	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	53.6	1301	Oncogenic
PT-005	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	50.1	1557	Oncogenic
PT-006	SRSF2	NM_001195427.1	c.281_283dupGCC	p.Arg94dup	In-frame Insertion	21.34	226	Oncogenic
PT-006	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	39.19	415	Oncogenic
PT-007	SRSF2	NM_001195427.1	c.284C>T	p.Pro95Leu	Missense	50.7	1002	Oncogenic
PT-011	SRSF2	NM_001195427.1	c.284C>G	p.Pro95Arg	Missense	43.0	535	Oncogenic
PT-014	SRSF2	NM_001195427.1	c.283C>A	p.Pro95Thr	Missense	48.03	439	Oncogenic
PT-021	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	44.0	691	Oncogenic
PT-037	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	44.1	1892	Oncogenic
PT-038	SRSF2	NM_001195427.1	c.284C>G	p.Pro95Arg	Missense	41.0	2496	Oncogenic

PT-041	SRSF2	NM_001195427.1	c.170T>A	p.Phe57Tyr	Missense	49.2	3815	VUS
PT-044	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	48.3	1384	Oncogenic
PT-046	SRSF2	NM_001195427.1	c.284C>G	p.Pro95Arg	Missense	45.2	2081	Oncogenic
PT-047	SRSF2	NM_001195427.1	c.284C>T	p.Pro95Leu	Missense	44.7	1819	Oncogenic
PT-051	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	51.3	1863	Oncogenic
PT-055	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	49.5	1399	Oncogenic
PT-058	SRSF2	NM_001195427.1	c.284_307delCCCCGGACTCACACCACAGCCGCC	p.Pro95_Arg102del	In-frame Insertion	35.0	2174	Oncogenic
PT-059	SRSF2	NM_001195427.1	c.284_307delCCCCGGACTCACACCACAGCCGCC	p.Pro95_Arg102del	In-frame Insertion	50.2	2131	Oncogenic
PT-060	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	23.0	2089	Oncogenic
PT-062	SRSF2	NM_001195427.1	c.284C>T	p.Pro95Leu	Missense	43.4	2035	Oncogenic
PT-064	SRSF2	NM_001195427.1	c.281_284delinsCCCA,	p.Arg94_Pro95delinsProHis	In-frame Deletion/Insertion	39.0	2687	Oncogenic
PT-064	SRSF2	NM_001195427.1	c.188A>T	p.His63Leu	Missense	39.4	2617	VUS
PT-065	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	48.4	2068	Oncogenic
PT-068	SRSF2	NM_001195427.1	c.284_307delCCCCGGACTCACACCACAGCCGCC	p.Pro95_Arg102del	In-frame Deletion	51.2	1198	Oncogenic
PT-081	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	47.8	1734	Oncogenic
PT-093	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	49.6	737	Oncogenic
PT-101	SRSF2	NM_001195427.1	c.284C>T	p.Pro95Leu	Missense	46.67	407	Oncogenic
PT-107	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	5.9	1607	Oncogenic
PT-183	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	6.4	96	Oncogenic
PT-207	SRSF2	NM_001195427.1	c.284C>A	p.Pro95His	Missense	22.6	353	Oncogenic
PT-002	STAG2	NM_001042749.2	c.1840C>T	p.Arg614*	Nonsense	7.3	1391	Oncogenic
PT-004	STAG2	NM_001042749.2	c.1535-3_1535-2insA	p.?	Splice site	40.7	706	Oncogenic
PT-006	STAG2	NM_001042749.1	c.2438T>A	p.Leu813*	Nonsense	12.73	1143	Oncogenic
PT-021	STAG2	NM_001042749.2	c.541G>A	p.Val181Met	Missense	99.0	4320	VUS
PT-029	STAG2	NM_001042749.2	c.940A>G	p.Ile314Val	Missense	45.9	5236	VUS
PT-037	STAG2	NM_001042749.2	c.2096+2T>A	p.?	Splice site	85.7	1086	Oncogenic
PT-043	STAG2	NM_001042749.2	c.913C>T	p.Arg305*	Nonsense	43.3	5834	Oncogenic
PT-045	STAG2	NM_001042749.2	c.1391T>A	p.Leu464*	Nonsense	33.2	12291	Oncogenic
PT-050	STAG2	NM_001042749.2	c.1068T>A	p.Tyr356*	Nonsense	50.9	1485	Oncogenic
PT-051	STAG2	NM_001042749.2	c.775C>T	p.Arg259*	Nonsense	95.4	689	Oncogenic
PT-063	STAG2	NM_001042749.2	c.3372_3376delinsACATG	p.Ile1125_Met1126delinsHisVal	In-frame Deletion/Insertion	75.5	4012	VUS
PT-065	STAG2	NM_001042749.2	c.3383_3384delAG	p.Glu1128Alafs*7	Frameshift	5.7	4686	Oncogenic
PT-080	STAG2	NM_001042749.2	c.2462_2469delinsAGAACTGA	p.Leu821*	Nonsense	6.8	5684	Oncogenic

PT-080	STAG2	NM_001042749.2	c.774_775insGGACCGAAACCTTC	p.Arg259Glyfs*11	Frameshift	17.2	995	Oncogenic
PT-091	STAG2	NM_001042749.2	c.1840C>T	p.Arg614*	Nonsense	29.4	856	Oncogenic
PT-105	STAG2	NM_001042749.2	c.484dupA	p.Thr162Asnfs*16	Frameshift	30.7	998	Oncogenic
PT-170	STAG2	NM_001042749.2	c.1731+1_1731+2insT	p.?	Splice site	86.4	1358	Oncogenic
PT-176	STAG2	NM_001042749.2	c.2984T>A	p.Leu995*	Nonsense	7.5	1173	Oncogenic
PT-003	TET2	NM_001127208.2	c.3100_3104delCAGTT	p.Gln1034Serfs*7	Frameshift	44.9	9968	Oncogenic
PT-003	TET2	NM_001127208.2	c.3116C>T	p.Ser1039Leu	Missense	51.0	11397	VUS
PT-003	TET2	NM_001127208.2	c.3426delA	p.Asp1143Metfs*9	Frameshift	47.5	3619	Oncogenic
PT-006	TET2	NM_001127208.2	c.1648C>T	p.Arg550*	Nonsense	84.88	2116	Oncogenic
PT-011	TET2	NM_001127208.2	c.3965T>A	p.Leu1322Gln	Missense	49.9	12647	Oncogenic
PT-014	TET2	NM_001127208.2	c.5650A>G	p.Thr1884Ala	Missense	68.96	3774	Oncogenic
PT-020	TET2	NM_001127208.2	c.3604A>G	p.Arg1202Gly	Missense	31.9	2355	Oncogenic
PT-026	TET2	NM_001127208.2	c.1700T>A	p.Leu567*	Nonsense	59.1	3669	Oncogenic
PT-026	TET2	NM_001127208.2	c.3251A>C	p.Gln1084Pro	Missense	61.1	5918	VUS
PT-027	TET2	NM_001127208.2	c.1337delT	p.Leu446*	Nonsense	46.2	6043	Oncogenic
PT-027	TET2	NM_001127208.2	c.3579T>G	p.Cys1193Trp	Missense	46.3	9522	Oncogenic
PT-034	TET2	NM_001127208.2	c.2452_2453insTA	p.Pro818Leufs*7	Frameshift	48.0	12084	Oncogenic
PT-034	TET2	NM_001127208.2	c.4642C>T	p.Gln1548*	Nonsense	48.3	3553	Oncogenic
PT-036	TET2	NM_001127208.2	c.3398G>C	p.Cys1133Ser	Missense	90.4	3274	Oncogenic
PT-040	TET2	NM_001127208.2	c.2656C>T	p.Gln886*	Nonsense	34.6	5944	Oncogenic
PT-040	TET2	NM_001127208.2	c.3409+1_3409+2insT	p.?	Splice site	35.1	3820	Oncogenic
PT-044	TET2	NM_001127208.2	c.4386_4387delGA	p.Lys1462Asnfs*15	Frameshift	38.2	4232	Oncogenic
PT-044	TET2	NM_001127208.2	c.4388C>T	p.Thr1463Ile	Missense	49.3	4599	Oncogenic
PT-045	TET2	NM_001127208.2	c.3443_3453delATACCCATCTA	p.Tyr1148Trpfs*5	Frameshift	48.7	4409	Oncogenic
PT-045	TET2	NM_001127208.2	c.4062_4063delAG	p.Arg1354Serfs*46	Frameshift	46.6	1607	Oncogenic
PT-050	TET2	NM_001127208.2	c.5449C>A	p.His1817Asn	Missense	52.1	5968	VUS
PT-053	TET2	NM_001127208.2	c.3885delC	p.Tyr1295*	Nonsense	91.7	4115	Oncogenic
PT-055	TET2	NM_001127208.2	c.3967G>T	p.Glu1323*	Nonsense	98.5	8961	Oncogenic
PT-061	TET2	NM_001127208.2	c.3578G>A	p.Cys1193Tyr	Missense	47.2	8013	Oncogenic
PT-061	TET2	NM_001127208.2	c.4317dupA	p.Arg1440Thrfs*38	Frameshift	39.0	4702	Oncogenic
PT-063	TET2	NM_001127208.2	c.2233C>T	p.Gln745*	Nonsense	46.9	9789	Oncogenic
PT-063	TET2	NM_001127208.2	c.3662G>C	p.Cys1221Ser	Missense	45.9	3996	Oncogenic
PT-064	TET2	NM_001127208.2	c.4241A>G	p.Gln1414Arg	Missense	84.7	6177	Oncogenic

PT-066	TET2	NM_001127208.2	c.3008G>A	p.Trp1003*	Nonsense	14.5	8279	Oncogenic
PT-071	TET2	NM_001127208.2	c.4627_4644delAGACCCCAGCAGCAGCAG	p.Arg1543_Gln1548del	In-frame Deletion	38.1	2683	VUS
PT-078	TET2	NM_001127208.2	c.4149_4154delAGACTT	p.Asp1384_Leu1385del	In-frame Deletion	81.2	1851	Oncogenic
PT-080	TET2	NM_001127208.2	c.2771A>G	p.His924Arg	Missense	52.4	6421	VUS
PT-082	TET2	NM_001127208.2	c.5103G>A	p.Met1701Ile	Missense	48.8	6571	VUS
PT-083	TET2	NM_001127208.2	c.5103G>A	p.Met1701Ile	Missense	50.0	7609	VUS
PT-093	TET2	NM_001127208.2	c.5482C>T	p.Gln1828*	Nonsense	48.0	960	Oncogenic
PT-094	TET2	NM_001127208.2	c.2737C>T	p.Gln913*	Nonsense	49.1	5903	Oncogenic
PT-094	TET2	NM_001127208.2	c.3854_3856delTCT	p.Phe1285del	In-frame Deletion	44.3	6481	Oncogenic
PT-095	TET2	NM_001127208.2	c.4546C>T	p.Arg1516*	Nonsense	48.3	1086	Oncogenic
PT-097	TET2	NM_001127208.2	c.1852C>T	p.Gln618*	Nonsense	85.4	10666	Oncogenic
PT-097	TET2	NM_001127208.2	c.2786delC	p.Pro929Leufs*24	Frameshift	10.6	5979	Oncogenic
PT-102	TET2	NM_001127208.2	c.4500delA	p.Lys1500Asnfs*71	Frameshift	48.03	2554	Oncogenic
PT-102	TET2	NM_001127208.2	c.3781C>T	p.Arg1261Cys	Missense	49.64	1590	Oncogenic
PT-173	TET2	NM_001127208.2	c.4661_4664delCAGA	p.Thr1554Serfs*16	Frameshift	96.8	1530	Oncogenic
PT-177	TET2	NM_001127208.2	c.2839C>T	p.Gln947*	Nonsense	49.5	5989	Oncogenic
PT-178	TET2	NM_001127208.2	c.474_475insC	p.Ala159Argfs*3	Frameshift	50.2	7786	Oncogenic
PT-178	TET2	NM_001127208.2	c.5618T>C	p.Ile1873Thr	Missense	44.2	772	Oncogenic
PT-183	TET2	NM_001127208.2	c.4210C>T	p.Arg1404*	Nonsense	7.5	216	Oncogenic
PT-199	TET2	NM_001127208.2	c.2599T>C	p.Tyr867His	Missense	46.7	2730	VUS
PT-199	TET2	NM_001127208.2	c.5167C>T	p.Pro1723Ser	Missense	48.8	5833	VUS
PT-203	TET2	NM_001127208.2	c.5618T>C	p.Ile1873Thr	Missense	48.7	907	Oncogenic
PT-208	TET2	NM_001127208.2	c.4097G>A	p.Arg1366His	Missense	93.5	1780	Oncogenic
PT-014	TP53	NM_000546.5	c.824G>A	p.Cys275Tyr	Missense	77.84	1247	Oncogenic
PT-016	TP53	NM_000546.5	c.524G>A	p.Arg175His	Missense	96.7	1493	Oncogenic
PT-017	TP53	NM_000546.5	c.578A>C	p.His193Pro	Missense	62.0	1634	Oncogenic
PT-028	TP53	NM_000546.5	c.742C>T	p.Arg248Trp	Missense	20.9	9511	Oncogenic
PT-039	TP53	NM_000546.5	c.743G>A	p.Arg248Gln	Missense	75.0	4683	Oncogenic
PT-052	TP53	NM_000546.5	c.827C>A	p.Ala276Asp	Missense	96.2	4385	Oncogenic
PT-061	TP53	NM_000546.5	c.892delG	p.Glu298Serfs*47	Frameshift	25.1	3258	Oncogenic
PT-066	TP53	NM_000546.5	c.859G>T	p.Glu287*	Nonsense	48.5	3875	Oncogenic
PT-073	TP53	NM_000546.5	c.659A>G	p.Tyr220Cys	Missense	82.4	1203	Oncogenic
PT-078	TP53	NM_000546.5	c.742C>T	p.Arg248Trp	Missense	77.6	5484	Oncogenic

PT-084	TP53	NM_000546.5	c.267delC	p.Ser90Profs*33	Frameshift	73.1	1279	Oncogenic
PT-086	TP53	NM_000546.5	c.711G>A	p.Met237Ile	Missense	88.7	7299	Oncogenic
PT-087	TP53	NM_000546.5	c.718A>G	p.Ser240Gly	Missense	25.0	8978	Oncogenic
PT-087	TP53	NM_000546.5	c.737T>C	p.Met246Thr	Missense	27.6	8957	Oncogenic
PT-096	TP53	NM_000546.5	c.707A>G	p.Tyr236Cys	Missense	61.4	3684	Oncogenic
PT-104	TP53	NM_000546.5	c.646G>A	p.Val216Met	Missense	79.3	906	Oncogenic
PT-171	TP53	NM_000546.5	c.524G>A	p.Arg175His	Missense	4.3	132	Oncogenic
PT-176	TP53	NM_000546.5	c.818G>A	p.Arg273His	Missense	56.3	3688	Oncogenic
PT-178	TP53	NM_000546.5	c.713G>A	p.Cys238Tyr	Missense	29.0	5110	Oncogenic
PT-184	TP53	NM_000546.5	c.524G>A	p.Arg175His	Missense	2.7	45	Oncogenic
PT-187	TP53	NM_000546.5	c.659A>G	p.Tyr220Cys	Missense	86.8	2257	Oncogenic
PT-205	TP53	NM_000546.5	c.476C>T	p.Ala159Val	Missense	17.5	505	Oncogenic
PT-018	U2AF1	NM_001025203.1	c.101C>T	p.Ser34Phe	Missense	40.3	8309	Oncogenic
PT-020	U2AF1	NM_001025203.1	c.470A>C	p.Gln157Pro	Missense	35.4	1719	Oncogenic
PT-027	U2AF1	NM_001025203.1	c.101C>T	p.Ser34Phe	Missense	51.9	7999	Oncogenic
PT-034	U2AF1	NM_001025203.1	c.101C>T	p.Ser34Phe	Missense	48.5	10558	Oncogenic
PT-050	U2AF1	NM_001025203.1	c.470A>G	p.Gln157Arg	Missense	48.1	2320	Oncogenic
PT-057	U2AF1	NM_001025203.1	c.470A>C	p.Gln157Pro	Missense	36.8	1793	Oncogenic
PT-083	U2AF1	NM_001025203.1	c.101C>A	p.Ser34Tyr	Missense	42.5	9773	Oncogenic
PT-086	U2AF1	NM_001025203.1	c.470A>G	p.Gln157Arg	Missense	46.8	1884	Oncogenic
PT-089	U2AF1	NM_001025203.1	c.470A>C	p.Gln157Pro	Missense	34.9	1649	Oncogenic
PT-095	U2AF1	NM_001025203.1	c.101C>A	p.Ser34Tyr	Missense	47.4	3202	Oncogenic
PT-200	U2AF1	NM_001025203.1	c.101C>T	p.Ser34Phe	Missense	46.0	3740	Oncogenic
PT-074	WT1	NM_024426.3	c.1108_1109insT	p.Arg370Leufs*15	Frameshift	10.7	3493	Oncogenic
PT-013	ZRSR2	NM_005089.3	c.55_57delinsTGAAGAA	p.Arg19*	Nonsense	28.0	375	Oncogenic
PT-030	ZRSR2	NM_005089.3	c.827+2T>G	p.?	Splice site	68.2	4774	Oncogenic
PT-030	ZRSR2	NM_005089.3	c.857T>C	p.Leu286Pro	Missense	18.3	1057	VUS
PT-064	ZRSR2	NM_005089.3	c.298C>T	p.Gln100*	Nonsense	29.2	1447	Oncogenic
PT-065	ZRSR2	NM_005089.3	c.653_656dupACTA	p.Tyr219*	Nonsense	44.2	4652	Oncogenic
PT-107	ZRSR2	NM_005089.3	c.988C>T	p.His330Tyr	Missense	8.9	3775	VUS
PT-202	ZRSR2	NM_005089.3	c.892_896delCAGTG	p.Gln298*	Nonsense	62.9	581	Oncogenic

Supplementary Table 3: Baseline characteristics of all patients with post MPN-AML comparing patients with and without an available tissue sample

	NGS = Yes (n = 122)	NGS = No (n = 58)	P value
Proportion male, n (%)	72 (59)	39 (67)	0.29
MPN diagnosis at AP/BP, n (%)			0.23
PV/ PPV-MF	40 (33)	12 (21)	
ET/ PET-MF	38 (31)	18 (31)	
PMF	34 (28)	24 (41)	
MPN-U	10 (8)	4 (7)	
Age at AP/BP, yrs, median (range)	69 (36-86)	66 (36-89)	0.18
Time from MPN diagnosis to AP/BP, yrs, median (range)	5.4 (0.0-43.0)	5.2 (0.1-40.1)	0.60
Prior MPN therapies, n (%)			0.94
0 or 1	73 (60)	35 (60)	
2	25 (21)	11 (19)	
≥3	24 (20)	11 (19)	
Status at time of NGS, n (%)			0.19
Accelerated phase	14 (11)	12 (21)	
AML*	107 (88)	44 (76)	
Other	1 (1)	2 (3)	
ECOG at AP/BP, n (%)			0.83
0 or 1	88 (72)	39 (67)	
2	17 (14)	9 (16)	
≥ 3	14 (12)	8 (14)	
Not available	3 (3)	2 (3)	
Hemoglobin, g/L median (range) (n = 120)	88 (51-183)	88 (58-144)	0.73
White Blood Cells, x10 ⁹ /L median (range) (n = 121)	12.8 (0.8-278.0)	16.7 (0.9-173.0)	0.83
Platelets, x10 ⁹ /L median (range) (n = 120)	62 (7-1918)	65.5 (1-620)	0.73
Blasts in PB, % median (range) (n = 121)	24 (0-96)	18.5 (0-97)	0.04
Blasts in BM, % median (range) (n = 100)	35 (0-95)	18.5 (7-95)	0.51
LDH, U/L median (range)	624 (144-4274)	740 (129-5893)	0.74
Albumin, g/L median (range)	37 (23-48)	36 (25-46)	0.44
Spleen status, n (%)			0.27
Splenectomy	8 (7)	4 (7)	
Not palpable	40 (33)	13 (22)	
Spleen ≤10cm BCM	30 (25)	12 (21)	
Spleen >11cm BCM	37 (30)	22 (38)	
Missing	7 (6)	7 (12)	
Cytogenetic status, n (%)			0.19
Cytogenetics available	94 (77)	41 (71)	
Failed	11 (9)	3 (5)	
Not done	17 (14)	14 (24)	
Cytogenetic abnormalities, n (%)			0.76
Normal	30 (25)	10 (24)	
1 abnormality	18 (15)	9 (22)	
2 abnormalities	14 (12)	5 (12)	
3 or more abnormalities	32 (26)	17 (41)	
Monosomal Karyotype			0.67
Yes	22 (23)	12 (21)	
Karyotype as per revised MRC, n (%)			0.93
Favorable	2 (2)	1 (2)	
Intermediate	58 (62)	24 (59)	
Adverse	34 (36)	16 (39)	
Treatment received, n (%)			0.82
Induction	43 (35)	23 (40)	

3+7	20 (16)	12 (21)	
FLAG-IDA	13 (11)	3 (5)	
NOVE-HIDAC	10 (8)	7 (12)	
Other APL protocol	0(0)	1 (2)	
Transplant upfront	1 (1)	0 (0)	
HMA	16 (13)	7 ()	
Clinical trial	10 (8)	2 (4)	
Low dose chemotherapy	1 (1)	1 (2)	
Best supportive care	51 (42)	24 (42)	
Missing	0 (0)	1 (2)	
Allogeneic transplant, n (%)			
Yes	19 (16)	9 (16)	0.99
No	103 (84)	49 (84)	
Overall survival, months median (range)	5.8 (0.0-167.8)	3.6 (0.0-72.6)	0.14
2yr survival from AP/BP [#] , % (SE)	15 (4)	13 (5)	0.17

*AML includes myeloid sarcoma; Other includes MPAL and APL; [#]comparison of the whole curve, not simply at 2 years

Abbreviations: NGS, next generation sequencing; MPN, myeloproliferative neoplasm; AP, accelerated phase; BP, blast phase; PV, polycythemia vera; PPV-MF, post PV myelofibrosis; ET, essential thrombocythemia; PET-MF, post ET myelofibrosis; PMF, primary myelofibrosis; MPN-U, myeloproliferative neoplasm-unclassifiable; AML, acute myeloid leukemia; ECOG, Eastern Cooperative Oncology Group; PB, peripheral blood; BM, bone marrow; LDH, lactate dehydrogenase; BCM, below costal margin; MRC, Medical Research Council (United Kingdom); HMA, hypomethylating agent; SE, standard error; MPAL, mixed phenotype acute leukemia; APL, acute promyelocytic leukemia.

Supplementary Table 4: Baseline characteristics and outcomes stratified by treatment approach

	Intensive Therapy n = 44	Non-Intensive Therapy n = 27	Best Supportive Care n = 51	P Value
Proportion male, n (%)	27 (61)	19 (70)	26 (51)	0.23
MPN diagnosis at AP/BP, n (%)				0.62
PV/ PPV-MF	15 (34)	7 (26)	18 (35)	
ET/ PET-MF	11 (25)	11 (41)	16 (31)	
PMF	12 (27)	7 (26)	15 (29)	
MPN-U	6 (14)	2 (7)	2 (4)	
Age at AP/BP, yrs, median (range)	57.7 (36.3-76.1)	73.9 (58.8-83.1)	73.5 (49.5-86.4)	<0.0001
Time from MPN diagnosis to AP/BP, yrs, median (range)	3.2 (0.2-29.3)	6.5 (0.6-26.6)	6.6 (0.0-43.0)	0.45
Prior MPN therapies, n (%)				0.78
0 or 1	26 (59)	18 (67)	29 (57)	
2	8 (18)	6 (22)	11 (22)	
≥3	10 (23)	3 (11)	11 (22)	
Status at time of NGS, n (%)				0.06
Accelerated phase	1 (2)	5 (19)	8 (16)	
AML*	43 (98)	22(81)	42 (82)	
MPAL	0 (0)	0 (0)	1 (2)	
ECOG at AP/BP, n (%)				<0.0001
0 or 1	41 (93)	22 (82)	25 (49)	
2	2 (5)	4 (15)	11 (22)	
≥ 3	0 (0)	1 (4)	13 (26)	
Missing	1 (2)	0 (0)	2 (4)	
Hemoglobin, g/L median (range)	92 (55-177)	86 (51-112)	88 (68-183)	0.21
White Blood Cells, x10 ⁹ /L median (range)	16.1 (1.3-213)	10.1 (0.9-138.8)	11.7 (0.8-278.0)	0.61
Platelets, x10 ⁹ /L median (range)	78 (8-865)	100 (14-1918)	47 (7-863)	0.08
Blasts in PB, % median (range)	25 (0-90)	17 (0-83)	27 (0-96)	0.33
Blasts in BM, % median (range)	35 (0-90)	28 (1-90)	42 (0-95)	0.53
LDH, U/L median (range)	726 (144-3944)	530 (156-4000)	624 (168-4274)	0.46
Albumin, g/L median (range)	37 (27-47)	37 (31-48)	36 (23-47)	0.04
Spleen status, n (%)				0.41
Splenectomy	5 (11)	0 (0)	3 (6)	
Not palpable	13 (30)	9 (33)	18 (35)	
Spleen ≤10 cm BCM	8 (18)	7 (26)	15 (29)	
Spleen >11 cm BCM	14 (32)	11 (41)	12 (24)	
Missing	4 (9)	0 (0)	3 (6)	
Cytogenetic abnormalities, n (%)				0.17
Normal	16 (42)	7 (35)	7 (19)	
1 abnormality	5 (13)	6 (30)	7 (19)	
2 abnormalities	5 (13)	4 (20)	5 (14)	
3 or more abnormalities	12 (32)	3 (15)	17 (47)	
Not available [#]	6 (14)	7 (26)	15 (29)	
AML stratified by driver mutation, n (%)				0.40
JAK2 mutated AML	21 (48)	13 (48)	33 (65)	
CALR mutated AML	8 (18)	5 (19)	3 (6)	
MPL mutated AML	2 (5)	2 (7)	3 (6)	
Triple negative AML	13 (30)	7 (26)	12 (24)	

Overall survival, months median (range)	9.7 (0.1-167.8)	10.8 (1.3-45.4)	1.9 (0-45.5)	<0.0001
2 yr survival from AP/BP, % (SE)	18 (6)	15 (9)	9 (4)	<0.0001

*AML includes myeloid sarcoma; #Includes failed and not done

Abbreviations: MPN, myeloproliferative neoplasm; AP, accelerated phase; BP, blast phase; PV, polycythemia vera; PPV-MF, post PV myelofibrosis; ET, essential thrombocythemia; PET-MF, post ET myelofibrosis; PMF, primary myelofibrosis; MPN-U, myeloproliferative neoplasm-unclassifiable; NGS, next generation sequencing; AML, acute myeloid leukemia; MPAL, mixed phenotype acute leukemia, ECOG, Eastern Cooperative Oncology Group; PB, peripheral blood; BM, bone marrow; LDH, lactate dehydrogenase; BCM, below costal margin; MRC, Medical Research Council (United Kingdom); SE, standard error.

Supplementary Table 5: Table showing overall survival for patients with mutations in none, one or both RAS and JAK-STAT signaling pathways*

	Median OS (Months)	HR(95%CI)	Global p-value
JAK-STAT Pathway Mutations ^a Yes (n=92) No (n=30)	5.7 6.9	Reference 0.90 (0.58,1.41)	0.65
RAS Pathway Mutations ^b Yes (n=28) No (n=94)	2.5 8.6	Reference 0.58 (0.37,0.92)	0.02
JAK-STAT Mutations AND RAS Mutations Yes (n=17) RAS Mutations No (n=75)	1.7 8.0	Reference 0.46 (0.27,0.81)	0.01
NO JAK-STAT Mutations RAS Mutations Yes (n=11) RAS Mutations No (n=19)	6.5 8.6	Reference 0.78 (0.35,1.75)	0.55

^aMutations in *JAK2*, *CALR*, *MPL*, *CSF3R*

^bMutations in *NRAS*, *KRAS*, *PTPN11*, *CBL*, *FLT3*, *KIT*

*Mutations in *MYD88* (Toll-like receptor signaling pathway) and *NOTCH1* (Notch signaling pathway) were only seen in 1 patient each, and consequently these classes were not included in this analysis.