

Appendix 8: Mutations in discovery cohort pre-AML and control samples

Sample ID	Type	Chromosome	Position	WT	MT	VAF	Gene	Protein	Effect	Group
EPIC_0001	indel	2	25463314	TGCCCTC	-	0.0119	DNMT3A	p.?	Essential splice	Control
EPIC_0001	sub	2	25463541	G	C	0.0058	DNMT3A	p.S714C	Missense	Control
EPIC_0003	sub	2	25469038	G	C	0.0091	DNMT3A	p.R474G	Missense	Control
EPIC_0003	sub	2	25470581	C	T	0.0048	DNMT3A	p.G298E	Missense	Control
EPIC_0005	sub	17	7578394	T	C	0.1298	TP53	p.H179R	Missense	Pre-AML
EPIC_0005	sub	2	25469542	C	T	0.0105	DNMT3A	p.W409*	Nonsense	Pre-AML
EPIC_0007	sub	2	25467408	C	T	0.0139	DNMT3A	p.?	Essential splice	Control
EPIC_0007	sub	4	106197285	T	C	0.0076	TET2	p.I1873T	Missense	Control
EPIC_0014	sub	2	25467408	C	T	0.0479	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0020	sub	2	25469632	C	T	0.0043	DNMT3A	p.R379H	Missense	Control
EPIC_0022	sub	2	25467448	C	A	0.0177	DNMT3A	p.G543V	Missense	Control
EPIC_0024	sub	2	25466797	C	A	0.0271	DNMT3A	p.V636L	Missense	Control
EPIC_0027	sub	2	25459806	T	G	0.0039	DNMT3A	p.K826T	Missense	Control
EPIC_0028	sub	4	106190775	T	A	0.0123	TET2	p.Y1351*	Nonsense	Control
EPIC_0032	sub	2	25457231	G	A	0.0955	DNMT3A	p.Q886*	Nonsense	Control
EPIC_0034	sub	20	31024116	C	T	0.0032	ASXL1	p.Q1201*	Nonsense	Control
EPIC_0034	indel	4	106196981	ATGTTCA	-	0.0100	TET2	p.L772_F1773del	Inframe	Control
EPIC_0039	sub	2	25464433	G	A	0.0049	DNMT3A	p.H694Y	Missense	Control
EPIC_0039	sub	20	31022592	C	T	0.0039	ASXL1	p.R693*	Nonsense	Control
EPIC_0040	sub	11	119148930	T	C	0.0035	CBL	p.C384R	Missense	Pre-AML
EPIC_0040	sub	2	25463286	C	T	0.0144	DNMT3A	p.R736H	Missense	Pre-AML
EPIC_0043	sub	2	25469539	G	A	0.0092	DNMT3A	p.A410V	Missense	Control
EPIC_0044	indel	17	7578390	GTGGGGCAGCGCCTCACAA	-	0.0099	TP53	p.T170fs*5	Frameshift	Pre-AML
EPIC_0044	sub	21	44524456	G	A	0.0056	U2AF1	p.S34F	Missense	Pre-AML
EPIC_0049	sub	2	25457176	G	A	0.0096	DNMT3A	p.P904L	Missense	Control
EPIC_0051	sub	9	5073770	G	T	0.4345	JAK2	p.V617F	Missense	Pre-AML
EPIC_0051	sub	X	133551305	T	C	0.0101	PHF6	p.I314T	Missense	Pre-AML
EPIC_0053	sub	2	25467023	C	T	0.0410	DNMT3A	p.?	Essential splice	Control
EPIC_0054	sub	12	25398281	C	T	0.0062	KRAS	p.G13D	Missense	Control
EPIC_0056	sub	2	25464576	C	T	0.0087	DNMT3A	p.G646E	Missense	Control
EPIC_0056	sub	2	25470011	A	T	0.0047	DNMT3A	p.L344Q	Missense	Control
EPIC_0058	sub	11	119149287	A	G	0.0102	CBL	p.D432G	Missense	Control
EPIC_0059	sub	2	25463596	G	A	0.0030	DNMT3A	p.Q696*	Nonsense	Control
EPIC_0059	sub	X	44918491	G	A	0.0097	KDM6A	p.?	Essential splice	Control
EPIC_0062	indel	20	31022403	ACCACTGCCATAGAGAGCGGG	-	0.1784	ASXL1	p.H630fs*66	Frameshift	Pre-AML
EPIC_0062	sub	21	36164601	G	A	0.5874	RUNX1	p.P425L	Missense	Pre-AML
EPIC_0062	indel	21	36252852	-	CCT	0.0198	RUNX1	p.?	Essential splice	Pre-AML
EPIC_0064	sub	2	198266834	T	C	0.2949	SF3B1	p.K700E	Missense	Pre-AML
EPIC_0065	sub	2	25463563	C	G	0.0113	DNMT3A	p.G707R	Missense	Control
EPIC_0065	sub	4	106190882	A	T	0.0322	TET2	p.N1387I	Missense	Control
EPIC_0066	sub	2	25463239	A	G	0.0099	DNMT3A	p.F752L	Missense	Control
EPIC_0067	indel	20	31022403	ACCACTGCCATAGAGAGCGGG	-	0.0048	ASXL1	p.H630fs*66	Frameshift	Pre-AML
EPIC_0067	sub	20	31022838	T	A	0.0054	ASXL1	p.L775*	Missense	Pre-AML
EPIC_0067	sub	20	31022839	T	A	0.0021	ASXL1	p.L775*	Nonsense	Pre-AML
EPIC_0069	sub	4	106162529	A	C	0.0967	TET2	p.Y1148S	Missense	Control
EPIC_0071	sub	4	106193748	C	T	0.0063	TET2	p.R1404*	Nonsense	Control
EPIC_0073	sub	2	25462025	G	C	0.0048	DNMT3A	p.F794L	Missense	Control
EPIC_0074	indel	11	119149355	-	ATG	0.3287	CBL	p.Y455fs*16	Frameshift	Control
EPIC_0074	sub	2	25467442	T	C	0.0071	DNMT3A	p.E545G	Missense	Control
EPIC_0074	sub	2	25469647	T	C	0.0039	DNMT3A	p.?	Essential splice	Control
EPIC_0075	sub	2	25466799	C	T	0.0579	DNMT3A	p.R635Q	Missense	Pre-AML
EPIC_0075	sub	2	25470947	T	A	0.0398	DNMT3A	p.K272*	Nonsense	Pre-AML
EPIC_0075	sub	4	106180899	T	G	0.0055	TET2	p.F1309L	Missense	Pre-AML
EPIC_0076	sub	2	25462068	A	C	0.0023	DNMT3A	p.I780S	Missense	Control
EPIC_0076	sub	2	25463182	G	A	0.0131	DNMT3A	p.R771*	Nonsense	Control
EPIC_0076	sub	2	25470549	G	C	0.0048	DNMT3A	p.R309G	Missense	Control
EPIC_0081	sub	2	25469965	G	T	0.0570	DNMT3A	p.Y359*	Nonsense	Pre-AML
EPIC_0081	sub	20	31023395	G	A	0.0026	ASXL1	p.W960*	Nonsense	Pre-AML
EPIC_0082	indel	2	25463316	CC	-	0.1900	DNMT3A	p.G726fs*53	Frameshift	Control
EPIC_0084	sub	12	25398255	G	T	0.0059	KRAS	p.Q22K	Missense	Control
EPIC_0084	indel	19	13054605	GAG	-	0.0025	CALR	p.E378fs*10	Frameshift	Control
EPIC_0084	sub	4	106196306	C	T	0.0076	TET2	p.Q1547*	Nonsense	Control
EPIC_0090	sub	2	25463562	C	G	0.0042	DNMT3A	p.G707A	Missense	Control
EPIC_0090	sub	2	25467198	G	T	0.0028	DNMT3A	p.C559*	Nonsense	Control
EPIC_0090	sub	2	25470533	C	T	0.0277	DNMT3A	p.W314*	Nonsense	Control
EPIC_0095	sub	20	31023504	G	T	0.0031	ASXL1	p.E997*	Nonsense	Control
EPIC_0098	sub	2	25462086	T	G	0.0095	DNMT3A	p.?	Essential splice	Control
EPIC_0099	sub	17	7577580	T	C	0.0078	TP53	p.Y234C	Missense	Pre-AML
EPIC_0099	sub	17	7578555	C	T	0.0739	TP53	p.?	Essential splice	Pre-AML
EPIC_0100	sub	11	119148912	T	G	0.0069	CBL	p.F378V	Missense	Control
EPIC_0106	sub	20	31022853	C	T	0.0037	ASXL1	p.Q780*	Nonsense	Control
EPIC_0106	sub	4	106155612	C	A	0.0028	TET2	p.C171*	Nonsense	Control
EPIC_0111	sub	2	25467204	G	T	0.0145	DNMT3A	p.C557*	Nonsense	Control
EPIC_0112	sub	11	119148930	T	C	0.0022	CBL	p.C384R	Missense	Control
EPIC_0116	sub	4	106180849	A	T	0.0040	TET2	p.M1293L	Missense	Control
EPIC_0119	sub	17	29683508	C	G	0.0029	NF1	p.S2549*	Nonsense	Control
EPIC_0119	sub	4	106190798	G	C	0.0109	TET2	p.R1359P	Missense	Control
EPIC_0120	sub	4	106162529	A	G	0.0150	TET2	p.Y1148C	Missense	Control
EPIC_0123	indel	19	13054627	-	TTGTC	0.1380	CALR	p.K385fs*5	Frameshift	Control
EPIC_0125	sub	2	25466834	G	T	0.0110	DNMT3A	p.V623*	Nonsense	Control
EPIC_0126	sub	2	25462021	C	A	0.0061	DNMT3A	p.G796C	Missense	Control
EPIC_0127	sub	2	25459829	A	T	0.0055	DNMT3A	p.C818*	Nonsense	Control
EPIC_0127	sub	2	25467504	A	T	0.0026	DNMT3A	p.C524*	Nonsense	Control
EPIC_0129	sub	2	25464531	A	T	0.0102	DNMT3A	p.I661N	Missense	Control
EPIC_0132	sub	2	25463179	A	G	0.0051	DNMT3A	p.F772L	Missense	Pre-AML
EPIC_0132	sub	21	36206716	G	A	0.4918	RUNX1	p.Q266*	Nonsense	Pre-AML
EPIC_0132	sub	4	106197287	G	C	0.0224	TET2	p.E1874Q	Missense	Pre-AML
EPIC_0132	sub	X	133551203	G	A	0.0063	PHF6	p.C280Y	Missense	Pre-AML
EPIC_0135	sub	4	106197296	A	G	0.0050	TET2	p.K1877E	Missense	Control
EPIC_0137	sub	4	106197296	A	G	0.0103	TET2	p.K1877E	Missense	Control
EPIC_0138	sub	4	106190827	T	C	0.0541	TET2	p.S1369P	Missense	Control
EPIC_0141	sub	17	74732959	G	C	0.3732	SRSF2	p.P95R	Missense	Pre-AML
EPIC_0141	sub	2	209113113	G	A	0.0318	IDH1	p.R132C	Missense	Pre-AML
EPIC_0141	sub	9	5073770	G	T	0.1759	JAK2	p.V617F	Missense	Pre-AML
EPIC_0142	sub	2	198267342	G	A	0.0023	SF3B1	p.A672V	Missense	Control
EPIC_0147	sub	17	74732959	G	C	0.2108	SRSF2	p.P95R	Missense	Pre-AML

EPIC_0147	indel	20	31022536	ACCCTGAG	-	0.0622	ASXL1	p.E676fs*25	Frameshift	Pre-AML
EPIC_0149	sub	4	106156747	C	T	0.0088	TET2	p.R550*	Nonsense	Control
EPIC_0152	sub	2	25463169	A	G	0.0020	DNMT3A	p.?	Essential splice	Control
EPIC_0152	sub	2	25466797	C	T	0.0131	DNMT3A	p.V636M	Missense	Control
EPIC_0156	sub	2	25463568	A	G	0.0113	DNMT3A	p.I705T	Missense	Control
EPIC_0158	sub	4	106156975	C	T	0.0019	TET2	p.Q626*	Nonsense	Control
EPIC_0165	indel	2	25458595	AT	-	0.0110	DNMT3A	p.L859fs*22	Frameshift	Pre-AML
EPIC_0165	sub	2	198267484	G	A	0.0377	SF3B1	p.R625C	Missense	Pre-AML
EPIC_0165	sub	4	106164020	T	G	0.0144	TET2	p.I1177S	Missense	Pre-AML
EPIC_0166	sub	4	106164084	C	T	0.0225	TET2	p.W1198C	Missense	Control
EPIC_0166	sub	4	106193801	G	G	0.0058	TET2	p.Y1421*	Nonsense	Control
EPIC_0169	sub	11	119148958	T	A	0.0018	CBF	p.I393N	Missense	Control
EPIC_0169	sub	2	25458579	T	A	0.1495	DNMT3A	p.E865V	Missense	Control
EPIC_0170	sub	2	25463298	A	C	0.0040	DNMT3A	p.F732C	Missense	Control
EPIC_0171	sub	21	44524456	G	A	0.0078	U2AF1	p.S34F	Missense	Pre-AML
EPIC_0174	sub	4	106164752	A	G	0.0029	TET2	p.E1207G	Missense	Control
EPIC_0175	sub	2	25467411	G	T	0.0059	DNMT3A	p.C555*	Nonsense	Control
EPIC_0176	sub	2	25463307	C	T	0.0039	DNMT3A	p.R729Q	Missense	Pre-AML
EPIC_0176	sub	2	25470516	G	A	0.0581	DNMT3A	p.R320*	Nonsense	Pre-AML
EPIC_0176	sub	20	31021187	C	T	0.0043	ASXL1	p.Q396*	Nonsense	Pre-AML
EPIC_0176	sub	21	44514777	T	C	0.0540	U2AF1	p.Q157R	Missense	Pre-AML
EPIC_0177	sub	20	31022839	T	G	0.0094	ASXL1	p.L775*	Nonsense	Control
EPIC_0177	sub	4	106193850	A	T	0.0033	TET2	p.K1438*	Nonsense	Control
EPIC_0181	sub	2	25470498	G	A	0.0048	DNMT3A	p.R326C	Missense	Control
EPIC_0184	sub	4	106180870	T	G	0.0061	TET2	p.F1300V	Missense	Control
EPIC_0184	sub	4	106190855	G	A	0.0237	TET2	p.C1378Y	Missense	Control
EPIC_0184	sub	4	106193751	G	T	0.0071	TET2	p.E1405*	Nonsense	Control
EPIC_0185	sub	4	106196627	C	T	0.0341	TET2	p.Q1654*	Nonsense	Control
EPIC_0186	sub	2	25459806	T	C	0.0037	DNMT3A	p.K826R	Missense	Control
EPIC_0186	sub	2	25463247	C	T	0.0199	DNMT3A	p.R749H	Missense	Control
EPIC_0186	sub	2	25464433	G	A	0.0044	DNMT3A	p.H694Y	Missense	Control
EPIC_0186	sub	2	25466812	T	C	0.0148	DNMT3A	p.R631G	Missense	Control
EPIC_0186	sub	2	25467059	G	A	0.0100	DNMT3A	p.Q606*	Nonsense	Control
EPIC_0191	sub	2	25459804	C	T	0.0999	DNMT3A	p.?	Essential splice	Control
EPIC_0194	indel	17	74732959	G	GGGC	0.2175	SRSF2	p.R94_P95insH	Inframe	Pre-AML
EPIC_0194	sub	4	106156747	C	T	0.0027	TET2	p.R550*	Nonsense	Pre-AML
EPIC_0194	sub	4	106164914	G	A	0.0051	TET2	p.R1261H	Missense	Pre-AML
EPIC_0194	sub	4	106193995	C	G	0.0039	TET2	p.S1486*	Nonsense	Pre-AML
EPIC_0195	sub	2	25469028	C	T	0.0184	DNMT3A	p.?	Essential splice	Control
EPIC_0196	indel	2	25457160	AA	-	0.0174	DNMT3A	p.F909fs*13	Frameshift	Control
EPIC_0196	sub	2	25464498	A	C	0.0080	DNMT3A	p.V672G	Missense	Control
EPIC_0196	sub	2	25468888	C	T	0.0078	DNMT3A	p.?	Essential splice	Control
EPIC_0197	sub	2	25470005	G	A	0.0087	DNMT3A	p.P346L	Missense	Control
EPIC_0202	sub	17	29663350	G	T	0.0050	NF1	p.?	Essential splice	Control
EPIC_0203	sub	2	25457243	G	A	0.0221	DNMT3A	p.R882C	Missense	Control
EPIC_0203	sub	2	25463284	G	A	0.0021	DNMT3A	p.L737F	Missense	Control
EPIC_0203	sub	2	25463579	G	C	0.0038	DNMT3A	p.F701L	Missense	Control
EPIC_0203	sub	2	25467523	T	C	0.0034	DNMT3A	p.?	Essential splice	Control
EPIC_0205	sub	4	106164824	T	C	0.0022	TET2	p.L1231P	Missense	Control
EPIC_0205	sub	4	106196213	C	T	0.0072	TET2	p.R1516*	Nonsense	Control
EPIC_0208	sub	11	119149238	T	A	0.0057	CBF	p.C416S	Missense	Control
EPIC_0208	sub	2	25470583	C	G	0.0025	DNMT3A	p.W297C	Missense	Control
EPIC_0208	sub	4	106180817	G	C	0.0040	TET2	p.G1282A	Missense	Control
EPIC_0209	sub	2	25462086	T	C	0.0084	DNMT3A	p.?	Essential splice	Control
EPIC_0212	sub	X	133559301	C	T	0.0119	PHF6	p.R347*	Nonsense	Pre-AML
EPIC_0213	indel	2	25463298	AAG	-	0.0041	DNMT3A	p.F732fs*1	Frameshift	Control
EPIC_0213	sub	2	25464463	C	A	0.0053	DNMT3A	p.V684F	Missense	Control
EPIC_0213	sub	20	31022592	C	T	0.0032	ASXL1	p.R693*	Nonsense	Control
EPIC_0215	sub	2	25466787	A	C	0.0050	DNMT3A	p.L639R	Missense	Control
EPIC_0218	sub	2	25469032	T	A	0.0018	DNMT3A	p.R476*	Nonsense	Control
EPIC_0219	sub	2	25459804	C	T	0.0037	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0220	sub	20	31024242	C	T	0.0022	ASXL1	p.Q1243*	Nonsense	Control
EPIC_0221	sub	2	25464483	T	C	0.0049	DNMT3A	p.H677R	Missense	Control
EPIC_0223	sub	1	115256535	G	T	0.0209	NRAS	p.A59D	Missense	Pre-AML
EPIC_0223	sub	12	112888148	A	G	0.0360	PTPN11	p.K55R	Missense	Pre-AML
EPIC_0223	sub	17	74732959	G	T	0.3172	SRSF2	p.P95H	Missense	Pre-AML
EPIC_0223	sub	4	106156725	G	C	0.0124	TET2	p.K542N	Missense	Pre-AML
EPIC_0224	sub	2	25467432	C	T	0.2043	DNMT3A	p.M548I	Missense	Control
EPIC_0225	sub	2	25468192	A	T	0.0030	DNMT3A	p.I495N	Missense	Control
EPIC_0226	sub	12	112924336	G	A	0.0143	PTPN11	p.V428M	Missense	Control
EPIC_0226	sub	2	25458574	A	T	0.0486	DNMT3A	p.?	Essential splice	Control
EPIC_0230	indel	2	25459845	AGCT	-	0.1946	DNMT3A	812_L183delit	Inframe	Control
EPIC_0230	indel	2	25469513	GGCCAGAGGCTGGAA	-	0.0063	DNMT3A	14_G418delFC	Inframe	Control
EPIC_0234	sub	15	90631934	C	T	0.0375	IDH2	p.R140Q	Missense	Pre-AML
EPIC_0234	sub	2	25463287	G	A	0.1087	DNMT3A	p.R736C	Missense	Pre-AML
EPIC_0236	sub	4	106155530	T	A	0.0021	TET2	p.L144*	Nonsense	Control
EPIC_0241	sub	20	31021472	C	T	0.0234	ASXL1	p.Q491*	Nonsense	Control
EPIC_0246	sub	2	25469161	T	A	0.0058	DNMT3A	p.K433*	Nonsense	Pre-AML
EPIC_0248	sub	4	106156057	G	T	0.0034	TET2	p.E320*	Nonsense	Control
EPIC_0249	sub	20	31022418	G	T	0.4608	ASXL1	p.E635*	Nonsense	Pre-AML
EPIC_0249	sub	4	106156852	T	G	0.0036	TET2	p.S585A	Missense	Pre-AML
EPIC_0254	sub	2	25467477	G	C	0.0038	DNMT3A	p.Y533*	Nonsense	Control
EPIC_0261	sub	17	7576852	C	T	0.0740	TP53	p.?	Essential splice	Pre-AML
EPIC_0261	sub	2	25470015	T	A	0.0144	DNMT3A	p.K343*	Nonsense	Pre-AML
EPIC_0261	sub	21	44514777	T	G	0.0607	U2AF1	p.Q157P	Missense	Pre-AML
EPIC_0261	sub	4	106180784	G	C	0.0029	TET2	p.C1271S	Missense	Pre-AML
EPIC_0261	sub	7	151875055	G	A	0.0543	KMT2C	p.Q2495*	Nonsense	Pre-AML
EPIC_0261	sub	7	151878286	T	C	0.0024	KMT2C	p.Q2220R	Missense	Pre-AML
EPIC_0263	sub	17	7579358	C	G	0.0044	TP53	p.R110P	Missense	Control
EPIC_0263	sub	2	25464568	C	T	0.0037	DNMT3A	p.V649M	Missense	Control
EPIC_0269	sub	2	25458649	G	A	0.0081	DNMT3A	p.Q842*	Nonsense	Pre-AML
EPIC_0269	sub	20	31023717	C	T	0.0038	ASXL1	p.R1068*	Nonsense	Pre-AML
EPIC_0269	sub	21	44514777	T	G	0.0658	U2AF1	p.Q157P	Missense	Pre-AML
EPIC_0270	sub	2	25463170	C	T	0.0473	DNMT3A	p.?	Essential splice	Control
EPIC_0270	sub	2	25463235	C	T	0.0030	DNMT3A	p.W753*	Nonsense	Control
EPIC_0271	sub	4	106156875	T	A	0.1784	TET2	p.Y592*	Nonsense	Pre-AML
EPIC_0271	sub	4	106180795	G	T	0.2218	TET2	p.G1275W	Missense	Pre-AML
EPIC_0272	sub	2	25458625	C	T	0.0032	DNMT3A	p.V850I	Missense	Control
EPIC_0272	sub	4	106197149	C	T	0.0051	TET2	p.Q1828*	Nonsense	Control
EPIC_0274	indel	21	36164771	-	ATGCCG	0.3451	RUNX1	p.M368fs*228	Frameshift	Control

EPIC_0275	sub	2	25464451	G	T	0.0082	DNMT3A	p.R688S	Missense	Control
EPIC_0279	sub	2	25468919	C	A	0.2569	DNMT3A	p.E482*	Nonsense	Pre-AML
EPIC_0280	sub	2	25457173	A	C	0.0066	DNMT3A	p.L905R	Missense	Control
EPIC_0281	sub	2	25463568	A	G	0.0043	DNMT3A	p.I705T	Missense	Control
EPIC_0281	sub	4	106180795	G	C	0.0081	TET2	p.G1275R	Missense	Control
EPIC_0285	sub	2	25469548	A	C	0.0030	DNMT3A	p.I407S	Missense	Control
EPIC_0289	sub	2	25462011	G	C	0.0047	DNMT3A	p.P799R	Missense	Control
EPIC_0289	sub	2	25464456	T	A	0.0054	DNMT3A	p.D686V	Missense	Control
EPIC_0290	sub	2	25466770	T	C	0.0139	DNMT3A	p.T645A	Missense	Control
EPIC_0290	sub	4	106156255	G	C	0.0022	TET2	p.V386L	Missense	Control
EPIC_0291	sub	11	119148976	T	A	0.0491	CBL	p.L399H	Missense	Control
EPIC_0291	sub	17	7578478	G	C	0.0030	TP53	p.P151R	Missense	Control
EPIC_0291	sub	2	25466791	A	T	0.0032	DNMT3A	p.S638T	Missense	Control
EPIC_0292	sub	12	25398284	C	A	0.0030	KRAS	p.G12V	Missense	Control
EPIC_0292	sub	17	7577149	A	C	0.0040	TP53	p.N263K	Missense	Control
EPIC_0292	sub	17	7578413	C	A	0.0055	TP53	p.V173L	Missense	Control
EPIC_0295	sub	4	106196621	C	T	0.0041	TET2	p.Q1652*	Nonsense	Control
EPIC_0297	sub	2	25463297	A	C	0.0152	DNMT3A	p.F732L	Missense	Control
EPIC_0300	sub	2	25458696	T	C	0.0181	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0300	sub	4	106155430	A	T	0.0112	TET2	p.K111*	Nonsense	Pre-AML
EPIC_0300	sub	4	106156069	C	T	0.0343	TET2	p.Q324*	Nonsense	Pre-AML
EPIC_0303	sub	2	25464451	G	A	0.0055	DNMT3A	p.R688C	Missense	Control
EPIC_0303	sub	2	25467190	C	T	0.0031	DNMT3A	p.C562Y	Missense	Control
EPIC_0305	sub	2	25457243	G	T	0.0069	DNMT3A	p.R882S	Missense	Control
EPIC_0305	sub	4	55599321	A	T	0.0081	KIT	p.D816V	Missense	Control
EPIC_0306	sub	2	25459805	C	G	0.0033	DNMT3A	p.K826N	Missense	Control
EPIC_0307	sub	2	25468163	C	A	0.1741	DNMT3A	p.E505*	Nonsense	Control
EPIC_0308	sub	2	25467482	C	T	0.0152	DNMT3A	p.G532S	Missense	Control
EPIC_0309	sub	17	7577121	G	A	0.1051	TP53	p.R273C	Missense	Pre-AML
EPIC_0309	sub	17	7578524	G	C	0.1643	TP53	p.Q136E	Missense	Pre-AML
EPIC_0309	sub	2	25463229	A	C	0.1641	DNMT3A	p.F755C	Missense	Pre-AML
EPIC_0309	sub	2	25463532	T	A	0.0034	DNMT3A	p.N717I	Missense	Pre-AML
EPIC_0309	sub	2	25467023	C	A	0.0523	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0309	sub	4	106156741	C	T	0.0050	TET2	p.Q548*	Nonsense	Pre-AML
EPIC_0311	sub	15	90631934	C	T	0.4299	IDH2	p.R140Q	Missense	Pre-AML
EPIC_0311	sub	17	74732959	G	T	0.4382	SRSF2	p.P95H	Missense	Pre-AML
EPIC_0312	sub	4	106190867	A	G	0.0056	TET2	p.H1382R	Missense	Control
EPIC_0315	sub	2	25466823	G	C	0.0130	DNMT3A	p.P627R	Missense	Control
EPIC_0315	indel	4	106180830	TT	-	0.0146	TET2	p.F1287fs*76	Frameshift	Control
EPIC_0315	indel	4	106196766	AT	-	0.0049	TET2	p.N1700fs*19	Frameshift	Control
EPIC_0317	sub	17	7577539	G	C	0.0030	TP53	p.R248G	Missense	Pre-AML
EPIC_0317	sub	2	25464534	T	C	0.0570	DNMT3A	p.Y660C	Missense	Pre-AML
EPIC_0317	sub	9	5073770	G	T	0.0149	JAK2	p.V617F	Missense	Pre-AML
EPIC_0318	sub	2	25463287	G	A	0.0271	DNMT3A	p.R736C	Missense	Control
EPIC_0325	sub	4	106164769	G	A	0.0030	TET2	p.W1182*	Nonsense	Control
EPIC_0327	sub	2	25457176	G	A	0.0242	DNMT3A	p.P904L	Missense	Pre-AML
EPIC_0327	indel	4	106156316	TT	-	0.0117	TET2	p.S407fs*20	Frameshift	Pre-AML
EPIC_0329	sub	2	25466790	G	T	0.0068	DNMT3A	p.S638Y	Missense	Control
EPIC_0332	sub	2	25467023	C	T	0.0051	DNMT3A	p.?	Essential splice	Control
EPIC_0336	sub	2	25463289	T	G	0.0110	DNMT3A	p.V735S	Missense	Pre-AML
EPIC_0337	sub	2	25463170	C	T	0.0131	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0337	sub	2	25469150	G	T	0.0075	DNMT3A	p.Y436*	Nonsense	Pre-AML
EPIC_0339	sub	2	25467436	A	T	0.0131	DNMT3A	p.L547H	Missense	Pre-AML
EPIC_0341	sub	21	44524456	G	T	0.2561	U2AF1	p.S34Y	Missense	Pre-AML
EPIC_0346	sub	2	25464429	A	G	0.0477	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0346	sub	9	5073784	G	C	0.1247	JAK2	p.E621D	Missense	Pre-AML
EPIC_0347	sub	4	106155781	A	T	0.0015	TET2	p.K228*	Nonsense	Pre-AML
EPIC_0348	sub	17	7579538	A	G	0.0019	TP53	p.I50T	Missense	Pre-AML
EPIC_0348	sub	2	25467496	T	G	0.0020	DNMT3A	p.Q527P	Missense	Pre-AML
EPIC_0349	sub	11	119148891	T	C	0.1271	CBL	p.Y371H	Missense	Pre-AML
EPIC_0350	sub	4	106164793	T	G	0.0034	TET2	p.C1221G	Missense	Control
EPIC_0354	sub	2	25467190	C	A	0.0095	DNMT3A	p.C562F	Missense	Control
EPIC_0362	sub	2	25469641	G	T	0.1486	DNMT3A	p.A376D	Missense	Control
EPIC_0367	sub	2	25470545	A	G	0.0048	DNMT3A	p.I310T	Missense	Control
EPIC_0367	sub	4	106155439	C	T	0.0037	TET2	p.Q114*	Nonsense	Control
EPIC_0367	sub	4	106197248	G	A	0.0052	TET2	p.G1861R	Missense	Control
EPIC_0368	sub	12	25398281	C	T	0.0064	KRAS	p.G13D	Missense	Control
EPIC_0368	sub	17	7577124	C	T	0.0064	TP53	p.V272M	Missense	Control
EPIC_0371	indel	4	106196282	CAG	-	0.0067	TET2	p.Q1539fs*38	Frameshift	Control
EPIC_0372	sub	4	106163989	A	T	0.0034	TET2	p.?	Essential splice	Control
EPIC_0377	sub	4	106190860	C	G	0.3476	TET2	p.H1380D	Missense	Pre-AML
EPIC_0377	indel	4	106196430	-	ATGGAAGCACCAG	0.1272	TET2	p.Y1589fs*30	Frameshift	Pre-AML
EPIC_0378	sub	2	25457242	C	T	0.1671	DNMT3A	p.R882H	Missense	Pre-AML
EPIC_0379	sub	2	25464578	T	C	0.0047	DNMT3A	p.?	Essential splice	Control
EPIC_0381	sub	2	25466800	G	A	0.0278	DNMT3A	p.R635W	Missense	Pre-AML
EPIC_0382	sub	4	106156348	C	T	0.0044	TET2	p.Q417*	Nonsense	Control
EPIC_0389	sub	2	25467073	C	A	0.0189	DNMT3A	p.W601L	Missense	Control
EPIC_0389	sub	2	25468122	C	A	0.0054	DNMT3A	p.K518N	Missense	Control
EPIC_0392	sub	11	119148892	A	G	0.0034	CBL	p.Y371C	Missense	Pre-AML
EPIC_0392	sub	2	25457242	C	T	0.3685	DNMT3A	p.R882H	Missense	Pre-AML
EPIC_0392	sub	2	198267371	G	C	0.1042	SF3B1	p.H662Q	Missense	Pre-AML
EPIC_0392	sub	20	31021319	A	C	0.0031	ASXL1	p.K440Q	Missense	Pre-AML
EPIC_0395	indel	4	106180798	CTGGATCC	-	0.0046	TET2	p.L1276fs*85	Frameshift	Control
EPIC_0396	sub	4	106164020	T	G	0.0050	TET2	p.I1177S	Missense	Control
EPIC_0397	sub	11	119148537	C	T	0.0317	CBL	p.H360Y	Missense	Pre-AML
EPIC_0397	sub	17	74732959	G	T	0.2987	SRSF2	p.P95H	Missense	Pre-AML
EPIC_0397	sub	4	106155354	T	G	0.0067	TET2	p.Y85*	Nonsense	Pre-AML
EPIC_0397	sub	4	106197248	G	T	0.0049	TET2	p.G1861*	Nonsense	Pre-AML
EPIC_0397	sub	9	5073770	G	T	0.1488	JAK2	p.V617F	Missense	Pre-AML
EPIC_0399	indel	2	25462073	-	AGGGTTGGACTACA	0.0040	DNMT3A	p.M779fs*2	Frameshift	Control
EPIC_0400	sub	2	25463247	C	T	0.4181	DNMT3A	p.R749H	Missense	Control
EPIC_0402	sub	17	29527461	C	T	0.0094	NF1	p.R304*	Nonsense	Control
EPIC_0402	sub	2	25466793	A	T	0.0369	DNMT3A	p.L637Q	Missense	Control
EPIC_0404	sub	4	106164778	C	T	0.0049	TET2	p.R1216*	Nonsense	Control
EPIC_0408	sub	9	5073770	G	T	0.0126	JAK2	p.V617F	Missense	Control
EPIC_0409	sub	2	25459851	T	A	0.0174	DNMT3A	p.D811V	Missense	Control
EPIC_0409	sub	4	106193892	C	T	0.3680	TET2	p.R1452*	Nonsense	Control
EPIC_0410	sub	2	25463227	C	T	0.0036	DNMT3A	p.E756K	Missense	Control
EPIC_0410	sub	X	44969323	G	A	0.0054	KDM6A	p.?	Essential splice	Control
EPIC_0411	sub	2	25467099	G	C	0.0024	DNMT3A	p.Y592*	Nonsense	Control

EPIC_0412	indel	4	106155605	AT	-	0.0345	TET2	p.H169fs*14	Frameshift	Control
EPIC_0413	sub	17	7577545	T	C	0.0056	TP53	p.M246V	Missense	Control
EPIC_0413	sub	2	25463286	C	T	0.0163	DNMT3A	p.R736H	Missense	Control
EPIC_0413	sub	2	25467428	C	T	0.0044	DNMT3A	p.G550R	Missense	Control
EPIC_0415	sub	17	7578404	A	T	0.0033	TP53	p.C176S	Missense	Control
EPIC_0415	sub	2	25458595	A	G	0.0341	DNMT3A	p.W860R	Missense	Control
EPIC_0415	sub	2	25463182	G	A	0.0171	DNMT3A	p.R771*	Nonsense	Control
EPIC_0415	sub	2	198267370	T	G	0.0190	SF3B1	p.T663P	Missense	Control
EPIC_0415	sub	4	106190905	G	A	0.0131	TET2	p.?	Essential splice	Control
EPIC_0421	sub	2	25462014	A	G	0.0180	DNMT3A	p.L798P	Missense	Control
EPIC_0422	sub	2	25457242	C	T	0.0432	DNMT3A	p.R882H	Missense	Control
EPIC_0422	sub	2	25463316	C	T	0.0106	DNMT3A	p.G726D	Missense	Control
EPIC_0422	sub	2	25464456	T	A	0.0223	DNMT3A	p.D686V	Missense	Control
EPIC_0423	sub	2	25463170	C	T	0.0215	DNMT3A	p.?	Essential splice	Control
EPIC_0424	sub	4	106156211	T	A	0.0468	TET2	p.L371*	Nonsense	Pre-AML
EPIC_0426	sub	2	25466802	A	C	0.0063	DNMT3A	p.I634S	Missense	Control
EPIC_0427	indel	2	25463243	GGGGCG	-	0.0040	DNMT3A	p.R749fs*6	Frameshift	Control
EPIC_0428	sub	2	25464490	C	G	0.0040	DNMT3A	p.V675L	Missense	Control
EPIC_0431	sub	2	25463568	A	G	0.0501	DNMT3A	p.I705T	Missense	Control
EPIC_0431	sub	4	106156468	G	A	0.0036	TET2	p.A457T	Missense	Control
EPIC_0433	sub	4	106182926	T	A	0.0045	TET2	p.L1322Q	Missense	Control
EPIC_0435	sub	12	25380276	T	C	0.0030	KRAS	p.Q61R	Missense	Control
EPIC_0436	sub	2	25466799	C	T	0.0140	DNMT3A	p.R635Q	Missense	Control
EPIC_0436	sub	2	25467485	C	T	0.0040	DNMT3A	p.D531N	Missense	Control
EPIC_0436	sub	20	31022382	C	T	0.0075	ASXL1	p.Q623*	Nonsense	Control
EPIC_0445	sub	4	106162559	C	T	0.0088	TET2	p.A1158V	Missense	Control
EPIC_0447	sub	X	39933843	G	T	0.0069	BCOR	p.Y252*	Nonsense	Control
EPIC_0448	sub	17	7578259	A	T	0.0579	TP53	p.V197E	Missense	Pre-AML
EPIC_0448	indel	20	31022403	ACCACTGCCATAGAGGGCG	-	0.0483	ASXL1	p.H630fs*66	Frameshift	Pre-AML
EPIC_0448	sub	7	151884437	C	A	0.0039	KMT2C	p.E1640*	Nonsense	Pre-AML
EPIC_0449	sub	4	106197437	A	G	0.0041	TET2	p.K1924E	Missense	Control
EPIC_0450	sub	2	25463169	A	C	0.0943	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0452	sub	17	74732960	G	C	0.0042	SRSF2	p.P95A	Missense	Control
EPIC_0453	sub	4	106164772	C	T	0.0130	TET2	p.R1214W	Missense	Control
EPIC_0454	sub	2	25457282	C	A	0.0103	DNMT3A	p.G869C	Missense	Pre-AML
EPIC_0459	sub	2	25463566	C	T	0.0038	DNMT3A	p.G706R	Missense	Control
EPIC_0459	sub	2	25464451	G	A	0.0044	DNMT3A	p.R688C	Missense	Control
EPIC_0459	indel	4	106196515	CCCTTACC	-	0.0049	TET2	p.P1617fs*4	Frameshift	Control
EPIC_0460	indel	2	25467145	TAAATGGCTGCGGCGAC	-	0.0054	DNMT3A	571_K577deli	Inframe	Control
EPIC_0462	sub	2	25464460	C	T	0.0197	DNMT3A	p.G685R	Missense	Control
EPIC_0462	indel	20	31017747	CAG	-	0.0049	ASXL1	p.S204fs*49	Frameshift	Control
EPIC_0464	sub	2	25458696	T	G	0.0041	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0464	sub	2	25463184	G	A	0.1909	DNMT3A	p.S770L	Missense	Pre-AML
EPIC_0464	sub	9	5073770	G	T	0.2352	JAK2	p.V617F	Missense	Pre-AML
EPIC_0466	sub	2	25463290	A	G	0.0061	DNMT3A	p.Y735H	Missense	Control
EPIC_0468	sub	4	106164788	A	T	0.0347	TET2	p.H1219L	Missense	Control
EPIC_0469	sub	15	90631934	C	T	0.1137	IDH2	p.R140Q	Missense	Pre-AML
EPIC_0469	sub	2	25463184	G	A	0.1850	DNMT3A	p.S770L	Missense	Pre-AML
EPIC_0469	sub	2	25463536	C	T	0.0516	DNMT3A	p.V716I	Missense	Pre-AML
EPIC_0469	sub	2	25470584	C	T	0.0025	DNMT3A	p.W297*	Nonsense	Pre-AML
EPIC_0469	sub	9	5073770	G	T	0.0151	JAK2	p.V617F	Missense	Pre-AML
EPIC_0469	sub	X	44929280	A	T	0.0020	KDM6A	p.T794S	Missense	Pre-AML
EPIC_0470	sub	17	74732959	G	T	0.1429	SRSF2	p.P95H	Missense	Pre-AML
EPIC_0470	sub	20	31022288	C	A	0.1162	ASXL1	p.V591*	Nonsense	Pre-AML
EPIC_0470	sub	21	36164601	G	A	0.0042	RUNX1	p.P425L	Missense	Pre-AML
EPIC_0470	sub	21	36252882	G	T	0.0795	RUNX1	p.D160E	Missense	Pre-AML
EPIC_0470	sub	21	36259171	C	T	0.0076	RUNX1	p.R107H	Missense	Pre-AML
EPIC_0473	sub	20	31022902	G	A	0.3710	ASXL1	p.W796*	Nonsense	Pre-AML
EPIC_0473	sub	21	44514777	T	G	0.0049	U2AF1	p.Q157P	Missense	Pre-AML
EPIC_0473	indel	4	106196992	CT	-	0.0093	TET2	p.S1776fs*44	Frameshift	Pre-AML
EPIC_0474	sub	2	25464462	C	T	0.0034	DNMT3A	p.V684D	Missense	Control
EPIC_0474	indel	2	25471033	CTGGCCTCT	-	0.0130	DNMT3A	240_S243deli	Inframe	Control
EPIC_0476	indel	4	106196958	ATAACTACAG	-	0.0080	TET2	765_S1767de	Inframe	Control
EPIC_0477	indel	17	74732962	-	GAG	0.3155	SRSF2	p.R94fs*151	Frameshift	Pre-AML
EPIC_0477	sub	21	36171607	G	A	0.4910	RUNX1	p.R320*	Nonsense	Pre-AML
EPIC_0479	sub	21	36252940	G	A	0.0073	RUNX1	p.S141L	Missense	Pre-AML
EPIC_0479	sub	3	128200730	A	C	0.0678	GATA2	p.L359V	Missense	Pre-AML
EPIC_0486	sub	12	25398248	A	T	0.0040	KRAS	p.I24N	Missense	Control
EPIC_0490	indel	4	106164025	AG	-	0.0560	TET2	p.R1179fs*47	Frameshift	Pre-AML
EPIC_0493	sub	13	28592642	C	G	0.0778	FLT3	p.D835H	Missense	Pre-AML
EPIC_0496	sub	15	90631839	T	A	0.0036	IDH2	p.R172W	Missense	Pre-AML
EPIC_0497	sub	2	25463508	C	T	0.0046	DNMT3A	p.?	Essential splice	Control
EPIC_0498	sub	17	74732959	G	T	0.2079	SRSF2	p.P95H	Missense	Pre-AML
EPIC_0498	sub	2	209113112	C	A	0.0109	IDH1	p.R132L	Missense	Pre-AML
EPIC_0498	sub	4	106190843	G	A	0.0126	TET2	p.C1374Y	Missense	Pre-AML
EPIC_0501	sub	2	25463563	C	T	0.0105	DNMT3A	p.G707S	Missense	Control
EPIC_0501	sub	2	25469548	A	C	0.0030	DNMT3A	p.I407S	Missense	Control
EPIC_0503	sub	2	25458669	G	T	0.0027	DNMT3A	p.T835K	Missense	Control
EPIC_0504	sub	15	90631934	C	T	0.3390	IDH2	p.R140Q	Missense	Pre-AML
EPIC_0504	sub	17	74732959	G	A	0.0097	SRSF2	p.P95L	Missense	Pre-AML
EPIC_0504	sub	2	25467467	A	T	0.0603	DNMT3A	p.C537S	Missense	Pre-AML
EPIC_0504	sub	2	25469085	C	G	0.0067	DNMT3A	p.R458P	Missense	Pre-AML
EPIC_0507	sub	2	25457242	C	T	0.0635	DNMT3A	p.R882H	Missense	Pre-AML
EPIC_0507	sub	4	106182914	A	G	0.0084	TET2	p.?	Essential splice	Pre-AML
EPIC_0508	sub	2	25468120	A	G	0.0035	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0509	sub	2	25457171	T	C	0.0052	DNMT3A	p.K906E	Missense	Pre-AML
EPIC_0509	sub	2	25466800	G	A	0.3882	DNMT3A	p.R635W	Missense	Pre-AML
EPIC_0510	sub	2	209113112	C	T	0.3042	IDH1	p.R132H	Missense	Pre-AML
EPIC_0511	sub	2	25462012	G	T	0.0352	DNMT3A	p.P799T	Missense	Control
EPIC_0512	sub	2	25463289	T	G	0.0031	DNMT3A	p.Y735S	Missense	Pre-AML
EPIC_0512	sub	2	25467132	C	T	0.0053	DNMT3A	p.W581*	Nonsense	Pre-AML
EPIC_0512	sub	2	25467408	C	T	0.0154	DNMT3A	p.?	Essential splice	Pre-AML
EPIC_0512	sub	2	25469946	G	T	0.0076	DNMT3A	p.R366S	Missense	Pre-AML
EPIC_0512	sub	4	106155652	C	T	0.0111	TET2	p.Q185*	Nonsense	Pre-AML
EPIC_0512	sub	4	106164726	G	A	0.0112	TET2	p.?	Essential splice	Pre-AML
EPIC_0516	sub	4	106164764	G	A	0.0121	TET2	p.C1211Y	Missense	Pre-AML

Appendix 9: Mutations in validation cohort pre-AML, control and AML diagnostic samples

Sample ID	Type	Chromosome	Position	WT	MT	VAF	Gene	Protein	Effect	Group
PD29762b	sub	17	74732959	G	T	0.1500	SRSF2	p.P95H	Missense	Pre-AML
PD29762b	sub	4	106164913	C	A	0.0840	TET2	p.R1261S	Missense	Pre-AML
PD29762b	indel	4	106193849	G	GA	0.2857	TET2	p.R1440fs*38	Frameshift	Pre-AML
PD29762b	indel	4	106197311	GC	G	0.1362	TET2	p.T1883fs*4	Frameshift	Pre-AML
PD29764b	sub	4	106157827	C	T	0.0980	TET2	p.Q910*	Nonsense	Pre-AML
PD29792b	indel	4	106157182	AT	A	0.3197	TET2	p.M695fs*5	Frameshift	Pre-AML
PD29792b	sub	4	106158059	G	C	0.3500	TET2	p.?	Essential splice	Pre-AML
PD29810c	indel	12	49418417	C	CA	0.3988	KMT2D	p.M532fs*13	Frameshift	Control
PD29836b	sub	17	74732959	G	T	0.0077	SRSF2	p.P95H	Missense	Pre-AML
PD29836b	sub	4	106190900	C	T	0.0440	TET2	p.T1393I	Missense	Pre-AML
PD29836c	sub	17	74732959	G	T	0.0083	SRSF2	p.P95H	Missense	Pre-AML
PD29836c	sub	4	106190900	C	T	0.0440	TET2	p.T1393I	Missense	Pre-AML
PD29856c	sub	1	115256521	A	C	0.0340	NRAS	p.V64D	Missense	Pre-AML
PD29896b	indel	20	31022837	AT	A	0.2587	ASXL1	p.L775fs*1	Frameshift	Pre-AML
PD29918b	sub	17	74732959	G	C	0.3400	SRSF2	p.P95R	Missense	Pre-AML
PD29918b	sub	19	33972753	A	G	0.0868	CEBPA	p.S190P	Missense	Pre-AML
PD29918b	sub	4	106156160	C	G	0.1900	TET2	p.S354*	Nonsense	Pre-AML
PD29918c	sub	17	74732959	G	C	0.0950	SRSF2	p.P95R	Missense	Pre-AML
PD29918d	sub	17	74732959	G	C	0.3700	SRSF2	p.P95R	Missense	Pre-AML
PD29918d	sub	21	36259178	G	A	0.0680	RUNX1	p.H105Y	Missense	Pre-AML
PD29918d	sub	4	106156160	C	G	0.0220	TET2	p.S354*	Nonsense	Pre-AML
PD29931b	sub	17	74732959	G	C	0.1100	SRSF2	p.P95R	Missense	Pre-AML
PD29931b	sub	2	25457242	C	T	0.3700	DNMT3A	p.R882H	Missense	Pre-AML
PD29935b	sub	2	25463248	G	A	0.1300	DNMT3A	p.R749C	Missense	Pre-AML
PD29935c	sub	2	25463248	G	A	0.1200	DNMT3A	p.R749C	Missense	Pre-AML
PD29935d	sub	2	25463248	G	A	0.1500	DNMT3A	p.R749C	Missense	Pre-AML
PD29946b	sub	2	25457243	G	T	0.0159	DNMT3A	p.R882S	Missense	Pre-AML
PD29946b	sub	2	25463247	C	T	0.1300	DNMT3A	p.R749H	Missense	Pre-AML
PD29946b	sub	2	25470497	C	T	0.1500	DNMT3A	p.R326H	Missense	Pre-AML
PD29946c	sub	2	25457243	G	T	0.0074	DNMT3A	p.R882S	Missense	Pre-AML
PD29946c	sub	2	25463247	C	T	0.0510	DNMT3A	p.R749H	Missense	Pre-AML
PD29946c	sub	2	25470497	C	T	0.0690	DNMT3A	p.R326H	Missense	Pre-AML
PD29948b	indel	2	25469083	TC	T	0.0181	DNMT3A	p.K459fs*192	Frameshift	Pre-AML
PD29951b	sub	2	25467479	A	T	0.0340	DNMT3A	p.Y533N	Missense	Pre-AML
PD29962b	sub	12	25398284	C	T	0.0102	KRAS	p.G12D	Missense	Pre-AML
PD29962b	sub	4	106157653	G	T	0.0570	TET2	p.E852*	Nonsense	Pre-AML
PD29993b	sub	2	25463286	C	T	0.0217	DNMT3A	p.R736H	Missense	Pre-AML
PD29993b	sub	2	25469139	C	T	0.0140	DNMT3A	p.W440*	Nonsense	Pre-AML
PD29993b	sub	9	5073770	G	T	0.0051	JAK2	p.V617F	Missense	Pre-AML
PD30010b	sub	4	106156699	A	T	0.6400	TET2	p.R534*	Nonsense	Pre-AML
PD30010c	sub	4	106156699	A	T	0.6400	TET2	p.R534*	Nonsense	Pre-AML
PD30023b	sub	17	7576852	C	T	0.0830	TP53	p.?	Essential splice	Pre-AML
PD30023b	sub	2	25470015	T	A	0.0140	DNMT3A	p.K343*	Nonsense	Pre-AML
PD30023b	sub	21	44514777	T	G	0.0600	U2AF1	p.Q157P	Missense	Pre-AML
PD30023b	sub	7	151875055	G	A	0.0297	KMT2C	p.Q2495*	Nonsense	Pre-AML
PD30031b	sub	2	25467139	T	C	0.0420	DNMT3A	p.D579G	Missense	Pre-AML
PD30054b	sub	21	44514777	T	G	0.0470	U2AF1	p.Q157P	Missense	Pre-AML
PD30060b	sub	2	25464460	C	T	0.2100	DNMT3A	p.G685R	Missense	Pre-AML
PD30060b	sub	4	106190812	G	T	0.0099	TET2	p.E1364*	Nonsense	Pre-AML
PD30060c	sub	2	25464460	C	T	0.2100	DNMT3A	p.G685R	Missense	Pre-AML
PD30060c	sub	4	106190812	G	T	0.0077	TET2	p.E1364*	Nonsense	Pre-AML
PD30073b	sub	12	112924336	G	A	0.3600	PTPN11	p.V428M	Missense	Pre-AML
PD30073b	sub	4	106182914	A	G	0.3400	TET2	p.?	Essential splice	Pre-AML
PD30073b	sub	4	106196213	C	T	0.3400	TET2	p.R1516*	Nonsense	Pre-AML
PD30086b	sub	17	74732959	G	A	0.0220	SRSF2	p.P95L	Missense	Pre-AML
PD30089b	sub	17	74732959	G	T	0.2600	SRSF2	p.P95H	Missense	Pre-AML
PD30089b	sub	2	25466799	C	A	0.3600	DNMT3A	p.R635L	Missense	Pre-AML
PD30089c	sub	17	74732959	G	T	0.3700	SRSF2	p.P95H	Missense	Pre-AML
PD30089c	sub	2	25466799	C	A	0.4400	DNMT3A	p.R635L	Missense	Pre-AML
PD30089c	sub	9	5073770	G	T	0.1300	JAK2	p.V617F	Missense	Pre-AML
PD30120b	sub	17	7577099	C	T	0.0135	TP53	p.R280K	Missense	Pre-AML
PD30120b	sub	2	25464573	A	C	0.0078	DNMT3A	p.L647R	Missense	Pre-AML
PD30154b	sub	2	25470551	C	T	0.0082	DNMT3A	p.G308D	Missense	Pre-AML
PD30154b	sub	X	39922984	G	A	0.0117	BCOR	p.Q1242*	Nonsense	Pre-AML
PD35511b	sub	2	25457242	C	T	0.0056	DNMT3A	p.R882H	Missense	Control
PD35515b	indel	4	106193849	G	GA	0.0443	TET2	p.R1440fs*38	Frameshift	Control
PD35518b	sub	2	25457209	C	T	0.0110	DNMT3A	p.W893*	Nonsense	Control
PD35519c	sub	17	74732959	G	A	0.0178	SRSF2	p.P95L	Missense	Control
PD35520b	sub	12	25398284	C	G	0.0109	KRAS	p.G12A	Missense	Control
PD35520b	sub	2	25468935	T	A	0.0330	DNMT3A	p.?	Essential splice	Control
PD35520c	sub	12	25398284	C	G	0.0048	KRAS	p.G12A	Missense	Control
PD35520c	sub	2	25468935	T	A	0.1100	DNMT3A	p.?	Essential splice	Control
PD35525b	sub	20	31021295	C	T	0.0326	ASXL1	p.Q432*	Nonsense	Control
PD35529b	sub	17	7576865	A	T	0.0216	TP53	p.Y327*	Nonsense	Control
PD35531b	sub	4	106164079	A	T	0.0064	TET2	p.K1197*	Nonsense	Control
PD35531c	sub	4	106164079	A	T	0.0075	TET2	p.K1197*	Nonsense	Control
PD35534b	sub	12	25380275	T	G	0.0070	KRAS	p.Q61H	Missense	Control
PD35537b	sub	2	25467158	G	A	0.0074	DNMT3A	p.Q573*	Nonsense	Control
PD35538b	sub	2	25467407	A	G	0.0085	DNMT3A	p.?	Essential splice	Control
PD35538c	sub	2	25467407	A	G	0.0112	DNMT3A	p.?	Essential splice	Control
PD35539b	sub	2	25463308	G	A	0.0165	DNMT3A	p.R729W	Missense	Control
PD35539c	sub	2	25463308	G	A	0.0100	DNMT3A	p.R729W	Missense	Control
PD35539c	sub	2	25470535	C	T	0.0420	DNMT3A	p.W313*	Nonsense	Control
PD35542b	sub	4	106180868	A	G	0.0354	TET2	p.K1299R	Missense	Control
PD35542c	sub	4	106180868	A	G	0.1500	TET2	p.K1299R	Missense	Control
PD35545b	sub	2	25457242	C	T	0.0066	DNMT3A	p.R882H	Missense	Control
PD35545c	sub	2	25457242	C	T	0.0105	DNMT3A	p.R882H	Missense	Control
PD35548c	sub	21	44514780	C	T	0.0054	U2AF1	p.R156H	Missense	Control
PD35553c	indel	4	106164861	ACT	A	0.0444	TET2	p.Y1245fs*22	Frameshift	Control
PD35553c	sub	4	106182983	C	G	0.0165	TET2	p.A1341G	Missense	Control
PD35554b	sub	2	2.55E+07	T	C	0.0059	DNMT3A	p.R803G	Missense	Control
PD35554c	sub	2	2.55E+07	T	C	0.0106	DNMT3A	p.R803G	Missense	Control
PD35556b	sub	2	25459806	T	C	0.0233	DNMT3A	p.K826R	Missense	Control
PD35558b	sub	20	31021176	C	G	0.0184	ASXL1	p.S392*	Nonsense	Control
PD35558c	sub	2	198267369	G	A	0.0116	SF3B1	p.T663I	Missense	Control
PD35559b	sub	2	25466800	G	A	0.0178	DNMT3A	p.R635W	Missense	Control
PD35560b	sub	4	106180852	T	A	0.0102	TET2	p.Y1294N	Missense	Control
PD35563b	sub	2	25458688	T	A	0.0184	DNMT3A	p.K829*	Nonsense	Control
PD35563b	indel	2	25464450	CG	C	0.0100	DNMT3A	p.R688fs*17	Frameshift	Control
PD35563c	sub	2	25458688	T	A	0.0490	DNMT3A	p.K829*	Nonsense	Control
PD35568c	sub	20	31022903	G	A	0.0168	ASXL1	p.W796*	Nonsense	Control
PD35569b	sub	2	25467073	C	T	0.0070	DNMT3A	p.W601*	Nonsense	Control
PD35569c	sub	2	25467073	C	T	0.0044	DNMT3A	p.W601*	Nonsense	Control
PD35576c	indel	2	25467447	G	GC	0.1172	DNMT3A	p.R544fs*2	Frameshift	Control
PD35578c	sub	2	25462075	C	T	0.0186	DNMT3A	p.V778M	Missense	Control
PD35579b	sub	2	25470583	C	A	0.1800	DNMT3A	p.W297C	Missense	Control
PD35579c	sub	2	25470583	C	A	0.3200	DNMT3A	p.W297C	Missense	Control

PD35580b	sub	2	25463181	C	A	0.0470	DNMT3A	p.R771L	Missense	Control
PD35580c	sub	2	25463181	C	A	0.1000	DNMT3A	p.R771L	Missense	Control
PD35580c	sub	2	25470569	C	T	0.0127	DNMT3A	p.G302D	Missense	Control
PD35582b	sub	2	25464538	G	C	0.0069	DNMT3A	p.R659G	Missense	Control
PD35587c	sub	2	198267484	G	A	0.0121	SF3B1	p.R625C	Missense	Control
PD35588b	sub	2	25467466	C	G	0.0054	DNMT3A	p.C537S	Missense	Control
PD35592c	sub	4	106190898	C	G	0.0430	TE2	p.S1392R	Missense	Control
PD35594c	indel	4	106158496	T	TG	0.0720	TE2	p.C1133fs*9	Frameshift	Control
PD35599b	sub	1	115256530	G	T	0.0077	NRAS	p.Q61K	Missense	Control
PD35599b	sub	2	25470545	A	C	0.0147	DNMT3A	p.I310S	Missense	Control
PD35600c	sub	2	25462018	T	C	0.1800	DNMT3A	p.N797D	Missense	Control
PD35600c	sub	2	25463287	G	A	0.0125	DNMT3A	p.R736C	Missense	Control
PD35600c	sub	2	25466796	A	C	0.0167	DNMT3A	p.V636G	Missense	Control
PD35601b	sub	2	25469646	C	T	0.0180	DNMT3A	p.?	Essential splice	Control
PD35606b	sub	2	25470583	C	T	0.0480	DNMT3A	p.W297*	Nonsense	Control
PD35606c	sub	2	25470583	C	T	0.0490	DNMT3A	p.W297*	Nonsense	Control
PD35612b	sub	15	90631934	C	T	0.0109	IDH2	p.R140Q	Missense	Control
PD35612b	sub	7	151970884	A	C	0.0499	KMT2C	p.Y306*	Nonsense	Control
PD35613b	sub	2	25470535	C	T	0.0052	DNMT3A	p.W313*	Nonsense	Control
PD35613c	sub	2	25470535	C	T	0.0063	DNMT3A	p.W313*	Nonsense	Control
PD35613c	sub	2	209113112	C	T	0.0115	IDH1	p.R132H	Missense	Control
PD35613c	sub	4	106156975	C	T	0.1100	TE2	p.Q626*	Nonsense	Control
PD35616c	sub	2	25467134	A	T	0.0073	DNMT3A	p.W581R	Missense	Control
PD35617b	sub	2	198266834	T	C	0.0084	SF3B1	p.K700E	Missense	Control
PD35618b	sub	2	198266834	T	C	0.0091	SF3B1	p.K700E	Missense	Control
PD35618c	sub	17	29576135	C	T	0.0070	NF1	p.Q1370*	Nonsense	Control
PD35618c	sub	17	74732959	G	A	0.0138	SRSF2	p.P95L	Missense	Control
PD35618c	sub	2	198266834	T	C	0.0590	SF3B1	p.K700E	Missense	Control
PD35618c	sub	4	106164778	C	T	0.0133	TE2	p.R1216*	Nonsense	Control
PD35620b	sub	2	25457242	C	T	0.0450	DNMT3A	p.R882H	Missense	Control
PD35620c	sub	2	25457242	C	T	0.0410	DNMT3A	p.R882H	Missense	Control
PD35621b	sub	7	151970855	G	T	0.0475	KMT2C	p.T316N	Missense	Control
PD35629b	sub	2	25457243	G	A	0.0052	DNMT3A	p.R882C	Missense	Control
PD35636b	sub	2	25467497	G	A	0.0450	DNMT3A	p.Q527*	Nonsense	Control
PD35637c	indel	12	49441815	GC	G	0.0262	KMT2D	p.A1390fs*27	Frameshift	Control
PD35638b	sub	2	25464451	G	T	0.0086	DNMT3A	p.R688S	Missense	Control
PD35639b	indel	2	25464469	TG	T	0.0105	DNMT3A	p.M682fs*23	Frameshift	Control
PD35647c	indel	20	31021175	TC	T	0.0053	ASXL1	p.S392fs*1	Frameshift	Control
PD35652c	sub	2	25462005	A	G	0.0095	DNMT3A	p.M801T	Missense	Control
PD35652c	sub	2	25467478	T	C	0.0076	DNMT3A	p.Y533C	Missense	Control
PD35653b	sub	2	25467099	G	C	0.0055	DNMT3A	p.Y592*	Nonsense	Control
PD35654b	sub	2	198266834	T	C	0.0600	SF3B1	p.K700E	Missense	Control
PD35659b	sub	4	106190849	A	T	0.0175	TE2	p.D1376V	Missense	Control
PD35659c	indel	2	25468168	G	GT	0.1286	DNMT3A	p.T503fs*43	Frameshift	Control
PD35659c	sub	4	106190849	A	T	0.1300	TE2	p.D1376V	Missense	Control
PD35660c	sub	17	74732959	G	T	0.0063	SRSF2	p.P95H	Missense	Control
PD35665c	indel	12	49434957	TA	T	0.1224	KMT2D	p.Y2199fs*65	Frameshift	Control
PD35666b	sub	2	25463290	A	T	0.0179	DNMT3A	p.Y735N	Missense	Control
PD35667b	sub	2	25458696	T	G	0.0077	DNMT3A	p.?	Essential splice	Control
PD35671b	sub	20	31024492	C	T	0.0110	ASXL1	p.P1326L	Missense	Control
PD35675b	sub	2	25457285	A	G	0.0154	DNMT3A	p.F868L	Missense	Control
PD35677b	sub	2	25457242	C	T	0.0051	DNMT3A	p.R882H	Missense	Control
PD35677c	sub	2	25457242	C	T	0.0057	DNMT3A	p.R882H	Missense	Control
PD35677c	indel	2	25467039	G	GT	0.0539	DNMT3A	p.N612fs*7	Frameshift	Control
PD35678b	sub	2	25463248	G	T	0.0145	DNMT3A	p.R749S	Missense	Control
PD35683b	sub	2	25470579	T	A	0.0082	DNMT3A	p.K299*	Nonsense	Control
PD35685b	sub	2	25463584	G	C	0.0102	DNMT3A	p.P700A	Missense	Control
PD35686b	sub	2	25469528	A	C	0.0330	DNMT3A	p.F414V	Missense	Control
PD35687b	sub	2	25457242	C	T	0.0079	DNMT3A	p.R882H	Missense	Control
PD35688b	sub	17	29562934	A	G	0.0383	NF1	p.?	Essential splice	Control
PD35688b	sub	9	5073770	G	T	0.0352	JAK2	p.V617F	Missense	Control
PD35693b	sub	8	117875485	A	T	0.0158	RAD21	p.L53*	Nonsense	Control
PD35700b	sub	2	25466852	C	T	0.0253	DNMT3A	p.?	Essential splice	Control
PD35704b	sub	11	119149280	G	A	0.1300	CBL	p.V430M	Missense	Control
PD35704c	sub	11	119149280	G	A	0.1100	CBL	p.V430M	Missense	Control
PD35705b	sub	2	25458580	C	T	0.0203	DNMT3A	p.E865K	Missense	Control
PD35709c	sub	2	25469632	C	T	0.0570	DNMT3A	p.R379H	Missense	Control
PD35711b	sub	12	25378562	C	T	0.0093	KRAS	p.A146T	Missense	Control
PD35719c	sub	4	106182972	T	A	0.0078	TE2	p.Y1337*	Nonsense	Control
PD35723b	sub	2	25467467	A	G	0.0156	DNMT3A	p.C537R	Missense	Control
PD35724b	sub	7	151873585	G	A	0.0054	KMT2C	p.Q2985*	Nonsense	Control
PD35724b	sub	8	117859932	T	A	0.0127	RAD21	p.?	Essential splice	Control
PD35732c	sub	2	25463283	A	T	0.0272	DNMT3A	p.L737H	Missense	Control
PD35733b	sub	2	25467449	C	A	0.0230	DNMT3A	p.G543C	Missense	Control
PD35733b	sub	4	106180931	G	A	0.1200	TE2	p.?	Essential splice	Control
PD35733c	sub	4	106180931	G	A	0.2000	TE2	p.?	Essential splice	Control
PD35755b	sub	2	25461994	C	T	0.0093	DNMT3A	p.?	Essential splice	Control
PD35755b	sub	2	25466800	G	A	0.0144	DNMT3A	p.R635W	Missense	Control
PD35755c	sub	2	25461994	C	T	0.0132	DNMT3A	p.?	Essential splice	Control
PD35755c	sub	2	25466800	G	A	0.0265	DNMT3A	p.R635W	Missense	Control
PD35756b	sub	2	25470498	G	A	0.0144	DNMT3A	p.R326C	Missense	Control
PD35756b	sub	4	106197285	T	C	0.0490	TE2	p.I1873T	Missense	Control
PD35756c	sub	4	106197285	T	C	0.0630	TE2	p.I1873T	Missense	Control
PD35760c	sub	17	29562957	C	T	0.0144	NF1	p.Q1298*	Nonsense	Control
PD35762c	sub	2	25467059	G	A	0.0085	DNMT3A	p.Q606*	Nonsense	Control
PD35763c	indel	20	31022951	TC	T	0.0324	ASXL1	p.I814fs*4	Frameshift	Control
PD35768b	sub	2	25457243	G	A	0.0065	DNMT3A	p.R882C	Missense	Control
PD35768c	sub	2	25457243	G	A	0.0870	DNMT3A	p.R882C	Missense	Control
PD35769c	indel	4	106190781	CA	C	0.0147	TE2	p.R1354fs*9	Frameshift	Control
PD35769c	sub	4	106197255	C	A	0.1300	TE2	p.A1863D	Missense	Control
PD35777b	sub	2	25464531	A	G	0.0114	DNMT3A	p.I661T	Missense	Control
PD35778b	sub	8	117874079	C	T	0.0411	RAD21	p.?	Essential splice	Control
PD35780b	sub	2	25463248	G	A	0.0258	DNMT3A	p.R749C	Missense	Control
PD35780c	sub	2	25457155	C	A	0.0133	DNMT3A	p.C911F	Missense	Control
PD35780c	sub	2	25463248	G	A	0.0620	DNMT3A	p.R749C	Missense	Control
PD35780c	sub	9	5073770	G	T	0.0082	JAK2	p.V617F	Missense	Control
PD35786b	sub	2	25457243	G	A	0.0093	DNMT3A	p.R882C	Missense	Control
PD35786b	sub	2	25463586	C	T	0.2100	DNMT3A	p.G699D	Missense	Control
PD35786c	sub	2	25463586	C	T	0.3100	DNMT3A	p.G699D	Missense	Control
PD35788b	sub	2	25458695	C	T	0.0373	DNMT3A	p.?	Essential splice	Control
PD35788b	sub	2	25466790	G	A	0.0550	DNMT3A	p.S638F	Missense	Control
PD35788b	sub	20	31023963	G	T	0.0353	ASXL1	p.G1150*	Nonsense	Control
PD35788c	sub	2	25458695	C	T	0.0381	DNMT3A	p.?	Essential splice	Control
PD29962a2	sub	4	106157653	G	T	0.022	TE2	p.E852*	Missense	AML diagnosis
PD29962a2	sub	11	119158556	GAATAGCAGC	T	0.076923	CBL	p.?	Missense	AML diagnosis
PD30054a2	sub	12	112888163	G	T	0.059	PTPN11	p.G60V	Missense	AML diagnosis
PD30054a2	sub	21	44514777	T	G	0.2	U2AF1	p.Q157P	Missense	AML diagnosis
PD30089d2	sub	9	5073770	G	T	0.034	JAK2	p.V617F	Missense	AML diagnosis
PD30089d2	sub	11	119167619	GGGAGCAAT	A	0.101695	CBL	p.?	Missense	AML diagnosis
PD30089d2	sub	X	129147566	A	AC	0.113208	BCORL1	p.L275fs*145	Missense	AML diagnosis

## Appendix 10: AML risk prediction model coefficients

Cox proportional hazards model trained on the discovery cohort

Variable	Coefficient*	P-value
ASXL1	0.964	2.97E-40
CALR	0.465	1.94E-01
CBL	0.178	3.21E-01
DNMT3A	0.370	2.64E-09
IDH1	1.185	1.41E-12
IDH2	0.403	4.22E-04
JAK2	0.953	8.25E-26
KDM6A	0.962	1.98E-48
KMT2C	1.193	1.54E-04
KRAS	0.905	3.75E-32
NF1	0.924	6.25E-35
PHF6	1.073	4.50E-62
PTPN11	1.251	1.10E-30
RUNX1	0.389	1.09E-08
SF3B1	1.550	1.21E-23
SRSF2	0.692	5.53E-16
TET2	0.323	1.33E-03
TP53	2.403	4.42E-30
U2AF1	1.966	9.67E-28
age	-0.090	3.68E-01
gender	-0.046	6.78E-01

Cox proportional hazards model trained on validation cohort

Variable	Coefficient*	P-value
ASXL1	0.735	7.54E-11
CBL	0.224	4.77E-01
DNMT3A	0.202	3.75E-04
JAK2	-0.085	7.22E-01
KMT2C	0.519	6.13E-02
KMT2D	0.013	9.51E-01
KRAS	0.614	2.37E-09
NF1	0.386	8.88E-02
NRAS	0.483	2.81E-07
RAD21	0.439	8.16E-03
SF3B1	0.392	1.16E-01
SRSF2	0.379	5.58E-08
TET2	0.329	5.11E-22
TP53	1.233	8.49E-08
U2AF1	1.587	8.08E-17
age	0.019	7.50E-01
gender	-0.014	8.88E-01
systolic_BP_100	0.017	7.04E-01
diastolic_BP_100	0.039	1.89E-01
BMI_10	0.153	6.88E-02
Total_cholesterol_10	0.002	8.77E-01
Triglycerides	-0.034	7.69E-01
HDL	-0.121	1.51E-01
LDL	0.132	2.48E-01
Lymphocytes	0.080	4.40E-01
MCV_100	-0.024	2.27E-03
RDW_10	0.067	5.41E-05
WBC_10	0.008	8.76E-01
PLT_100	0.084	3.99E-01
HGB_10	0.037	1.28E-01

Cox proportional hazards model trained on combined cohort

Variable	Coefficient*	P-value
ASXL1	0.986	7.20E-50
BCOR	1.058	8.00E-78
CBL	0.200	2.69E-01
DNMT3A	0.331	2.31E-09
IDH1	1.203	3.60E-13
IDH2	0.418	1.24E-04
JAK2	0.930	1.24E-21
KDM6A	0.960	2.67E-55
KMT2C	1.166	9.17E-04
KMT2D	0.079	7.41E-01
KRAS	0.982	2.13E-31
NF1	0.785	3.10E-04
NRAS	1.145	5.03E-76
PHF6	1.101	2.07E-71
PTPN11	1.074	4.45E-12
RAD21	0.909	4.59E-13
RUNX1	0.403	1.36E-09
SF3B1	1.539	5.35E-23
SRSF2	0.678	8.33E-20
TET2	0.477	3.08E-16
TP53	2.502	1.35E-37
U2AF1	2.047	2.60E-35
age	-0.101	2.40E-01
gender	-0.053	6.07E-01
cohort	0.020	8.35E-01

\* Gene coefficients indicate risk per 10% increase in VAF; P-values for the coefficients are calculated by Wald test

Ridge regularised logistic regression model trained on discovery cohort

Variable	Coefficient
ASXL1	0.846
CALR	0.626
CBL	0.428
DNMT3A	0.479
IDH1	0.786
IDH2	0.849
JAK2	0.882
KDM6A	0.738
KMT2C	0.764
KRAS	0.733
NF1	0.735
PHF6	0.765
PTPN11	0.736
RUNX1	0.384
SF3B1	0.836
SRSF2	0.906
TET2	0.523
TP53	1.068
U2AF1	0.983
age_10	-0.116
gender	-0.026
Av. Genes	0.740

Ridge regularised logistic regression model trained on validation cohort

Variable	Coefficient*
ASXL1	0.809
CBL	0.312
DNMT3A	0.303
JAK2	0.606
KMT2C	0.643
KMT2D	0.195
KRAS	0.653
NF1	0.525
NRAS	0.561
RAD21	0.542
SF3B1	0.479
SRSF2	0.384
TET2	0.437
TP53	1.049
U2AF1	1.233
age_10	0.080
gender	-0.086
systol_100	-0.133
diastol_100	0.203
bmi_10	0.391
cholestl_10	0.011
triglyc	-0.011
hdl	-0.303
ldl	0.040
lym	0.012
mcv_100	-0.242
rdw_10	0.720
wbc_10	-0.067
plt_100	0.143
hgb_10	0.401
Av. Genes	0.581

Ridge regularised logistic regression model trained on combined cohort

Variable	Coefficient*	CI.2.5%	CI.97.5%
ASXL1	0.876	0.657	1.087
BCOR	0.690	0.577	0.939
CBL	0.370	0.123	0.988
DNMT3A	0.406	0.222	0.652
IDH1	0.725	0.617	0.935
IDH2	0.786	0.616	1.021
JAK2	0.826	0.662	1.115
KDM6A	0.665	0.556	0.927
KMT2C	0.698	0.566	0.944
KMT2D	0.321	0.171	0.856
KRAS	0.676	0.559	0.951
NF1	0.651	0.539	0.908
NRAS	0.664	0.558	0.925
PHF6	0.691	0.588	0.943
PTPN11	0.676	0.576	0.926
RAD21	0.660	0.554	0.923
RUNX1	0.364	0.168	0.914
SF3B1	0.758	0.606	0.979
SRSF2	0.684	0.385	1.080
TET2	0.407	0.223	0.917
TP53	1.070	0.818	1.314
U2AF1	1.032	0.786	1.321
age_10	-0.058	-0.183	0.039
gender	-0.013	-0.241	0.196
cohort	-0.573	-0.853	-0.293
Av. Genes	0.668	0.558	0.929

\* Gene coefficients indicate risk per 10% increase in VAF

## Appendix 11: AML prediction model based on electronic health record data

### AML case ascertainment from Clalit database

Cases included with diagnosis 205.0*	1696
Exclusion criteria	Number of retained cases
Prior diagnosis among the following: <ul style="list-style-type: none"> <li>• ESSENTIAL THROMBOCYTHEMIA</li> <li>• HIGH/LOW GRADE MYELODYSPLASTIC SYNDROME LESIONS</li> <li>• MYELODYSPLASTIC SYNDROME WITH 5Q DELETION</li> <li>• MYELODYSPLASTIC SYNDROME, UNSPECIFIED</li> <li>• POLYCYTHEMIA VERA</li> <li>• MYELOFIBROSIS</li> <li>• OPERATIONS ON BONE MARROW AND SPLEEN</li> <li>• CHRONIC MYELOMONOCYTIC LEUKEMIA</li> <li>• CHRONIC MYELOID LEUKEMIA</li> </ul>	1431
Received medications suggesting alternative diagnosis: <ul style="list-style-type: none"> <li>• IMATINIB</li> <li>• DASATINIB</li> <li>• METHOTREXATE</li> <li>• TRETINOIN</li> <li>• DASATINIB</li> <li>• ANAGRELIDE</li> <li>• HYDROXYCARBAMIDE</li> <li>• ASPARAGINASE</li> <li>• PEGASPARGASE</li> <li>• ARSENIC TRIOXIDE</li> </ul>	1210
No record of hospitalisation near time of diagnosis	1042
Age < 18	960
Received 6-mercaptopurine post diagnosis <ul style="list-style-type: none"> <li>• Multiple doses</li> <li>• Combined with ALL diagnosis</li> </ul>	929
Filter on onset year >=2003	875
Total number of AML cases retained	<b>875</b>

### Laboratory test result variables

Parameters included in clinical model	
Haematocrit (HCT)	SPECIFIC GRAVITY
Mean corpuscular volume (MCV)	CK-CREAT.KINASE(CPK)
Red blood cell count (RBC)	PT-INR
Haemoglobin (HGB)	MICRO%/HYPO%
mean corpuscular hemoglobin (MCH)	VITAMIN B12
mean corpuscular hemoglobin concentration (MCHC)	IRON
White blood cell count (WBC)	PT%
Platelet count (PLT)	Prothrombin time (PT-SEC)
Lymphocyte percentage (LYM%)	Chloride (Cl)
Neutrophil percentage (NEUT%)	LIPEMIC
Eosinophil percentage (EOS %)	ICTERIC
Monocyte percentage (MON%)	HEMOLYTIC
Basophil percentage (BASO %)	HEMOGLOBIN A1C CALCULATED
Absolute lymphocyte count (LYMP.abs)	CH
Absolute neutrophil count (NEUT.abs)	GLOBULIN
Absolute eosinophil count (EOS.abs)	FERRITIN
Absolute monocyte count (MONO.abs)	T4- FREE
BASOPHILES (abs)	APTT-sec
Mean platelet volume (MPV)	FOLIC ACID
Red cell distribution width (RDW)	PDW
CREATININE- BLOOD	Myeloperoxidase index (MPXI)
GLUCOSE- BLOOD	TRANSFERRIN
UREA- BLOOD	PCT
SODIUM	CHOLESTEROL HDL RATIO
POTASSIUM	BILIRUBIN INDIRECT
GLUTAMIC OXALOACETIC TRANSAMINASE	HCT/HGB RATIO
GLUTAMIC PYRUVIC TRANSAMINASE	CREATININE URINE SAMPLE
MICR %	SEDIMENTATION RATE
HYPO %	ERYTHROCYTES
MACRO%	LEUCOCYTES
PHOSPHATASE- ALKALINE	C-REACTIVE PROTEIN (CRP)
CHOLESTEROL	RDW-CV
TRIGLYCERIDES	M.ALBUM/CREAT RATIO
LUC%	AMYLASE- BLOOD
LUC	MICROALBU U SAMP
CHOLESTEROL- HDL	PROTEIN
CALCIUM- BLOOD	MAGNESIUM- BLOOD
HYPER%	Hemoglobin distribution width
URIC ACID- BLOOD	FIBRINOGEN
CHOLESTEROL- LDL	SODIUM- BLOOD
BILIRUBIN TOTAL	VITAMIN D3- 25-OH- RIA
ALBUMIN	POTASSIUM- BLOOD
PROTEIN-TOTAL-BLOOD	RDW-SD
PHOSPHORUS- BLOOD	Prostate specific antigen (PSA)
TSH (THYROID STIMULATING HORMONE)	T3- FREE
LACTIC DEHYDROGENASE (LDH)-BLOOD	Activated partial thromboplastin time
GAMMA-GLUTAMYL TRANSPEPTIDASE	NORMOBLAST.%
BILIRUBIN- DIRECT	ESTRADIOL (E-2)
NON-HDL_ CHOLESTEROL	Absolute normoblast count
PH-u	Leutinsing hormone (LH)

### Diagnostic code variables

Diagnoses included in clinical model
ACUTE BRONCHITIS
ACUTE NASOPHARYNGITIS (COMMON COLD)
ANEMIA OTHER/UNSPECIFIED
ANEMIA, UNSPECIFIED
BACK SYMPTOMS/COMPLAINTS
CELLULITIS AND ABSCESS OF UNSPECIFIED SITES
CHRONIC RENAL FAILURE
COLITIS, ENTERITIS, GASTROENTERITIS PRESUMED INFECTIOUS ORIGIN
CONGESTIVE HEART FAILURE
CONTACT DERMATITIS AND OTHER ECZEMA, UNSPECIFIED CAUSE
DEBILITY, UNSPECIFIED
DERMATOPHYTOSIS OF FOOT
DISEASES AND CONDITIONS OF THE TEETH AND SUPPORT.STRUCTURES
DISTURBANCE OF SKIN SENSATION
ESSENTIAL HYPERTENSION
FEVER
INFERTILITY, FEMALE
IRON DEFICIENCY ANEMIA, UNSPECIFIED
MIXED DISORDERS OF CONDUCT EMOTIONS
OSTEOARTHRITIS AND ALLIED DISORDERS
PAIN IN LIMB
PNEUMONIA, ORGANISM UNSPECIFIED
VARICOSE VEINS OF LOWER EXTREMITIES

Appendix 12: Discovery cohort pre-lymphoid neoplasm cases and controls metadata

Individual ID	Sample ID	Group	Gender	Systolic BP (mmHg)	Diastolic BP (mmHg)	BMI	Total cholesterol (mmol/L)	HDL (mmol/L)	LDL (mmol/L)	Triglycerides (mmol/L)	Lymphocytes (10 <sup>9</sup> /L)	MCV (fL)	RDW	WBC (10 <sup>9</sup> /L)	RBC (10 <sup>9</sup> /L)	Haematocrit (%)	Platelets (10 <sup>9</sup> /L)	Haemoglobin (g/dL)	HbA1c (%)	Age at first sample	Age at sample	Follow-up (years)
P000001	P000001a	Control	Female	138	80	36.6	6.1	1.5	4.1	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	56.7	56.7	23.9
P000001	P000001c	Control	Female	140	72	39.1	4.2	1.8	1.8	1.4	1.6	95.8	14.3	7.6	4.4	0.4	243	14.3	5.5	56.7	71.2	23.9
P000003	P000003b	Pre-LN	Female	147	92	27.1	5.2	1.7	2.7	1.9	2	89.1	12	6.6	4.1	0.4	246	13.3	5.2	62.4	62.4	15.7
P000003	P000003c	Pre-LN	Female	150	76	26.6	4.9	1.6	2.7	1.5	2.6	90	NA	11	4.5	0.4	250	13.7	5.5	62.4	70.9	15.7
P000004	P000004a	Pre-LN	Female	125	76	23.1	6.2	1.8	4.1	0.7	1.6	96.1	13	4.4	4.1	0.4	260	12.7	4.4	62.3	62	16
P000004	P000004b	Pre-LN	Female	120	70	23.5	7.1	2.2	4.7	0.5	1.8	98.7	13.2	4.6	4.5	0.4	192	15.5	4.9	62.4	65.3	16
P000005	P000005b	Control	Male	130	72	27.8	6.1	1.4	3.7	2.4	2.2	86.1	12.7	8	4.8	0.4	267	13.3	5.6	59.3	59.3	19.5
P000005	P000005c	Control	Male	126	70	29	5.7	1.3	3.9	1.1	2.8	87	NA	7	4.8	0.4	262	14.3	5.4	59.3	68.2	19.5
P000011	P000011b	Control	Female	158	93	23.8	6.3	1.5	4.3	1.1	1.8	87.1	13	6.1	4.2	0.4	271	12.4	5.7	66	66	19.5
P000017	P000017b	Pre-LN	Female	139	87	31.4	7.4	1.1	4.8	3.4	2	92.6	13.8	6.7	4.7	0.4	189	14	6.2	66.6	66.6	6.8
P000021	P000021a	Control	Male	129	84	28	7.6	1.6	5.5	1.1	1.5	88.8	13	5.7	4.7	0.4	311	14.6	4.9	57.8	57.8	13.7
P000022	P000022a	Control	Male	134	78	22.6	5.6	1.1	4	1	1.2	76.2	16.4	5	4.6	0.3	441	11.7	NA	71.8	71.8	8.7
P000023	P000023b	Control	Male	126	76	29.5	4.8	0.9	3.4	1.3	2.4	95.2	12.6	7.7	4.5	0.4	254	14.1	5.6	59	59	19.9
P000023	P000023c	Control	Male	108	74	28.3	3.8	1	2.4	1.2	1.7	92	NA	6.8	4.3	0.4	256	13.5	6	59	68	19.9
P000026	P000026b	Pre-LN	Male	149	91	23.7	5.9	0.9	4	2.2	1.6	92.7	12.6	5.2	4.4	0.4	206	14.4	5.4	64.7	64.7	12.8
P000031	P000031a	Control	Male	164	86	25.6	6.2	1	4.5	1.7	1.1	97.7	13.8	5.8	4.4	0.4	231	14	6	64.7	75	12.8
P000031	P000031a	Control	Male	107	61	25.7	5.8	1.1	4.2	1.2	2.2	91.2	13.7	6	4.5	0.4	144	14.1	NA	68.2	68.2	22.7
P000031	P000031c	Control	Male	132	82	28.5	2.8	1.3	1.3	0.5	1.2	95.9	14.7	7.2	4.1	0.4	118	13.3	5.8	68.2	80.5	22.7
P000034	P000034b	Control	Female	146	88	27.7	5.2	1.6	2.9	1.7	1.7	87.2	12.3	4.3	4.1	0.4	253	12.6	5.1	52.3	52.3	18.7
P000034	P000034c	Control	Female	180	92	27.6	5.4	1.7	3.1	1.5	1.7	88.9	13.2	5.9	4.4	0.4	291	13.2	5.3	52.3	60.5	18.7
P000035	P000035a	Pre-LN	Male	129	78	26.2	6.1	1.7	3.9	1	1.3	95.7	13.6	3.7	4.1	0.4	166	13.5	4.4	70.8	70.8	17.7
P000035	P000035b	Pre-LN	Male	131	82	27.1	6.3	1.6	4.5	1.1	2	92.6	13.2	5.3	4.1	0.4	187	14	5.2	74.5	74.5	17.7
P000036	P000036a	Control	Male	128	88	27	4.1	0.8	2.3	2.1	2.5	93.1	13	6.7	4.9	0.5	258	16.1	5.9	58.9	58.9	8.2
P000038	P000038a	Pre-LN	Female	122	78	23.6	5.5	0.9	3.8	1.8	2.3	89.8	12.5	6.7	4.1	0.4	377	12.1	5.3	49.4	49.4	18.4
P000038	P000038b	Pre-LN	Female	108	70	23.2	3.7	1.5	1.6	1.4	2	92.9	13.4	5.1	4.1	0.4	298	12.8	5.1	49.4	53	18.4
P000038	P000038c	Pre-LN	Female	115	68	22.1	6	1.6	3.4	2.2	1.6	95.5	13.8	3.7	4	0.4	294	13	5.8	49.4	63.8	18.4
P000041	P000041b	Control	Female	112	70	24.5	3	0.7	1.8	0.8	1.5	94.5	14.3	5.9	4.9	0.4	245	14.8	5.4	51.5	51.5	18.4
P000042	P000042a	Control	Female	146	84	19.9	6.6	1.6	4.5	1.1	1	90.5	13.4	3.5	4.6	0.4	332	14.3	NA	62.6	62.6	23.2
P000043	P000043b	Pre-LN	Male	142	81	26.6	6.1	1.1	4.1	2.1	1.7	92.2	13	5	4.8	0.4	214	14.2	6	68.9	68.9	11.4
P000049	P000049a	Pre-LN	Female	132	85	28.5	5.1	1.1	3.3	1.5	3.5	88.1	12.9	8.3	4.3	0.4	255	12.9	NA	61.5	61.5	16.7
P000049	P000049b	Pre-LN	Female	153	84	31.5	4.5	1.3	2.4	1.9	4	87.6	14.7	8.5	4.6	0.4	217	14.2	5.8	61.5	65.2	16.7
P000051	P000051b	Control	Female	142	82	26.9	5.4	1.2	3.3	2	2.3	89.1	13	7.4	4.5	0.4	255	14.4	5.6	65.8	65.8	18.2
P000051	P000051c	Control	Female	144	86	27.1	4.6	1.4	3.6	1.6	1.7	94.6	13.2	6.4	4.3	0.4	426	14.6	5.9	63.3	63.3	18.6
P000063	P000063a	Pre-LN	Female	136	74	24.8	5.8	2.9	2.5	0.8	4.3	95.4	12.7	8.8	3.9	0.4	360	12.7	NA	62.8	62.8	7.2
P000065	P000065b	Pre-LN	Female	128	76	31	6.5	1.9	4.2	0.9	2.2	85.8	13.4	7.4	4.1	0.3	287	12.2	5.7	54.2	54.2	2.5
P000068	P000068a	Control	Female	109	72	26.7	5.5	1.3	3.5	1.6	1.6	87.2	12.5	4.5	5	0.4	222	14.5	NA	47.4	47.4	20
P000068	P000068c	Control	Female	114	68	29.3	4.7	1.4	1.5	4.1	2.4	83	NA	7.4	4.3	0.4	212	12.3	5.4	47.4	55.6	20
P000069	P000069b	Pre-LN	Female	163	117	26.9	5.8	1.8	3.5	1.1	NA	93.7	13.3	NA	4.2	0.4	177	12.9	5.7	72.8	72.8	2.9
P000070	P000070a	Control	Female	154	95	24.6	6.3	1.8	4.3	2.6	2.1	88.8	13.2	6.5	4.2	0.4	236	14.2	5.2	70.2	70.2	13.7
P000070	P000070c	Control	Female	138	73	23	5.5	2.2	3.1	0.6	1.4	94.9	15.2	7.7	4	0.4	262	12.8	5.5	70.3	80.3	19.4
P000071	P000071b	Control	Female	157	84	27.5	5.7	2.7	1.6	3.2	2.1	90	12.4	6.2	3.7	0.3	162	12.2	5.7	71.5	71.5	17
P000073	P000073b	Control	Female	129	80	26	4.6	1.5	2.6	1.2	1.8	92.5	14	7	4	0.4	301	13	5.6	70.8	70.8	17.8
P000074	P000074b	Control	Male	129	84	24.5	6.5	1	3.8	3.8	1.2	87.6	14	4.9	5	0.4	186	14.9	5.2	59.3	59.3	18.4
P000075	P000075b	Control	Male	122	66	27.2	6.6	1.3	4.3	2.4	2.2	90.4	13.4	7.8	4.5	0.4	196	14.1	5.5	71.6	71.6	8.2
P000076	P000076b	Control	Male	153	92	27.4	6.3	0.7	4.9	1.6	2.5	94.6	12.8	5.4	6.1	0.4	187	14.6	5.3	52.6	52.6	12.6
P000077	P000077b	Control	Female	140	82	27.1	5.3	2.1	2.8	1	1.8	86.1	14.2	4.8	4.5	0.4	167	13.7	5.1	65.2	65.2	18.4
P000079	P000079b	Pre-LN	Male	178	106	25.9	6	0.9	3.5	3.6	4	92.9	12.6	10.2	4.8	0.4	135	14.4	5.5	69.5	69.5	5.3
P000080	P000080a	Control	Male	138	79	24.6	7.1	1.3	4.2	3.6	2.5	97	13.3	6.8	4.8	0.5	251	15	4.6	61	61	21
P000084	P000084b	Control	Female	150	92	24.9	7.2	1.6	5	1.5	3	93.8	13.3	7.3	3.5	0.3	282	11.8	5.5	57.7	57.7	19
P000089	P000089b	Pre-LN	Female	166	95	26	5.3	1.9	2.9	1.2	2	91.5	13.5	5.9	4.1	0.4	303	12.7	NA	52.2	52.2	13.7
P000089	P000089b	Pre-LN	Female	154	83	26.2	5	1.5	3.1	0.9	2.9	92.1	14.5	7	6.2	0.6	196	20.7	9.9	69	72	4.5
P000094	P000094b	Control	Male	132	74	27.4	6.3	2.1	3.8	0.9	1.9	93.5	13	5.8	4.5	0.4	247	14.7	4.9	73.8	73.8	18.6
P000095	P000095b	Pre-LN	Female	145	100	28.9	7.6	1	4.3	5.1	2.4	92.2	16.1	5.4	5.1	0.5	251	15.1	5.2	58	58	9.4
P000097	P000097a	Pre-LN	Female	121	75	29	6.8	1.4	4.8	1.4	1.6	89.4	15.2	4.9	4.2	0.4	273	12	5.3	64.5	64.5	13.7
P000097	P000097b	Pre-LN	Female	147	79	32.5	6.7	1.5	4.7	1.1	1.5	86.5	15.1	6.7	4	0.3	252	12.2	5.7	64.5	67	13.7
P000099	P000099b	Control	Female	158	98	24.9	5.8	1.4	3	1.7	2.3	92.8	13.2	6.1	5.1	0.4	249	14.2	5.3	63.3	63.3	18.6
P000100	P000100a	Control	Female	122	80	29.3	6.4	2.1	4	0.7	1.5	86.9	13.8	5.3	4.2	0.4	227	12.2	NA	64	64	21.9
P000100	P000100c	Control	Female	103	68	30.9	5.7	1.6	3.4	1.6	1.9	91.1	14.2	7.3	4	0.4	230	12.4	5.9	64	75.4	21.9
P000103	P000103a	Control	Male	104	54	17.6	5	1.5	3.1	0.8	0.8	90.8	12.7	2.3	4.3	0.4	182	13.7	5.2	48.3	48.3	21.8
P000103	P000103c	Control	Male	106	62	18.2	4.1	1.4	2.4	0.7	0.6	92	NA	2.4	3.8	0.3	185	12.2	5.4	48.3	58.6	21.8
P000106	P000106b	Pre-LN	Female	124	79	23	5.2	1.7	3.1	0.8	1.3	86.6	13.8	5.2	4.1	0.4	303	12.7	NA	52.2	52.2	13.7
P000106	P000106b	Pre-LN	Female	140	89	24.9	4.7	2.1	2.3	0.8	1.5	91.3	13.1	4.1	4	0.4	274					

P000230	P000230c	Control	Female	142	62	26.8	4.4	1.7	2.1	1.4	1.2	88	NA	6.9	4.8	0.4	308	14.1	6	70.2	78.3	19
P000239	P000239c	Control	Female	132	77	20.7	6.9	2.7	3.8	1	1.8	87	13.5	5.2	4.6	0.4	258	13.9	5.3	72.8	72.8	17.9
P000239	P000239c	Control	Female	76	19.2	5.3	2.6	2.2	1.2	0.8	87.3	14.5	6.6	4.4	0.4	221	13.9	5.4	72.8	80.8	17.9	
P000241	P000241b	Pre-LN	Female	140	78	26	6.3	1.4	4.3	1.5	1.4	89.1	13.2	5.2	4.5	0.4	259	12.7	4.7	69.4	60.4	1.5
P000241	P000241c	Pre-LN	Female	135	72	26.3	5.3	1.6	3.2	1.1	1.9	93	NA	5.6	4.3	0.4	219	13.6	5.6	60.4	69	1.5
P000243	P000243a	Control	Female	124	78	23.6	5.9	1.7	3.5	1.6	2	81.1	15.5	5.1	5	0.4	270	13.3	NA	51.8	51.8	23.4
P000243	P000243c	Control	Female	141	78	25.4	5.7	1.9	3.2	1.5	2.3	91.7	14.4	5.5	4.6	0.4	224	14	5.7	51.8	65.8	23.4
P000247	P000247a	Control	Female	156	90	30.8	5.9	1.3	3.6	2.1	1.9	86.1	12.7	5.7	4.2	0.4	372	12.5	6.1	70.4	70.4	21.2
P000251	P000251a	Pre-LN	Male	120	78	25.7	6.7	1.1	4.5	2.6	1.9	88.3	13.4	7.7	4.8	0.4	302	14.7	6	68.4	68.4	6.6
P000253	P000253a	Control	Female	134	87	26.2	5.3	0.9	3.2	2.5	2.1	88.5	13.4	7.4	5.2	0.5	318	16.2	5.6	56.8	56.8	22.1
P000254	P000254a	Pre-LN	Male	140	84	26.7	5.6	1.2	3.7	1.6	1.5	90.4	13.2	5	4.2	0.4	247	13.4	4.8	67	67	12.8
P000254	P000254b	Pre-LN	Male	130	80	29	6	1.3	3.6	2.5	1.8	92.5	12.6	5.4	4.2	0.4	176	14	5.1	67	70.4	12.8
P000257	P000257a	Control	Female	138	72	24.6	6.7	1.7	4.6	1	1.7	89.2	12.9	4.8	4.5	0.4	177	13.6	5	74.8	74.8	20.8
P000259	P000259c	Control	Female	125	78	27.6	5.5	1.7	3.5	0.7	2.7	87.3	12.9	7.8	4.6	0.4	223	14.7	5.1	56.4	56.4	19.1
P000259	P000259c	Control	Female	116	72	25.7	4.7	1.8	2.6	0.8	NA	NA	NA	NA	NA	0.4	188	14	6	56.4	55.9	19.1
P000263	P000263a	Pre-LN	Male	146	88	31.5	4.8	1	3.2	1.2	3	87	12.9	8.8	5.3	0.5	305	16.5	NA	48.7	48.7	15
P000266	P000266a	Control	Male	138	87	31	6.5	1.1	4.4	2.2	1.9	94.1	13.3	6	4.7	0.4	203	15.5	NA	68.4	68.4	23
P000266	P000266c	Control	Male	129	72	33.8	5.1	1	3.5	1.5	1.9	94	NA	7	4.1	0.4	179	13	NA	68.4	79.6	23
P000270	P000270a	Control	Male	124	84	23.1	6.4	1.6	4.2	1.5	2.7	86	12.2	7.6	4.8	0.4	283	14.8	5.5	53.5	53.5	21.1
P000270	P000270c	Control	Male	134	83	22.9	6	1.7	3.8	1.2	2.1	91.2	13.6	6.1	4.4	0.4	287	13.5	5.3	53.5	64.6	21.1
P000272	P000272b	Control	Male	128	86	28.7	5.5	0.9	3.8	1.9	2.2	90.8	12.6	6.2	4.5	0.4	220	13	5.9	54	54	19.8
P000273	P000273b	Pre-LN	Female	132	86	25.3	5.3	2	2.6	1.6	3	93	31.1	8.4	4.7	0.4	305	14.7	5.3	50	50	14.8
P000275	P000275b	Control	Male	136	98	29	7.6	1	6.1	1.2	1.8	91.7	12.2	6	5.2	0.5	206	16	5	56	56	19.9
P000275	P000275c	Control	Male	139	94	28.6	6.9	1.1	5.3	1.2	1.3	86.5	15.7	5.1	5.2	0.4	240	15.2	5.5	56	66.2	19.9
P000276	P000276a	Pre-LN	Female	170	103	25.8	6.5	1.4	3.8	2.8	1.7	90.1	13.6	6.8	4.6	0.4	327	14.1	6.3	75	75	8.6
P000276	P000276b	Pre-LN	Female	183	106	27.3	6.7	1.3	3.3	2.1	1.8	89.3	13.7	6.8	4.6	0.4	267	14.1	6.3	75	78.8	8.6
P000277	P000277b	Control	Female	111	78	24.6	6.1	1.3	3.7	2.6	1.9	92.2	13.5	5.3	4.8	0.4	315	14.8	5.4	51.6	51.6	19.1
P000277	P000277c	Control	Female	124	76	25.2	6.7	1.1	4.3	3	2.3	98.4	14.5	5.4	4.2	0.4	210	13.8	5.6	51.6	60.9	19.1
P000281	P000281b	Pre-LN	Female	116	69	29.2	5.7	1.5	3.4	1.9	1.5	93	12.8	4.4	4	0.4	315	12.5	5.4	65.8	65.8	13
P000282	P000282b	Pre-LN	Male	123	70	30.8	5	0.8	2.9	2.9	2.3	94.8	12.2	7	4.5	0.4	278	14.6	5.1	58.1	58.1	15.3
P000282	P000282c	Pre-LN	Male	131	71	33.6	5.4	0.8	3.1	3.3	2.7	97.3	13.6	6.5	4.3	0.4	269	14.3	5.6	58.1	68.3	15.3
P000285	P000285a	Pre-LN	Male	150	86	29.6	6.6	1	4.8	1.7	NA	NA	NA	NA	NA	0.4	188	14	6	68	68	15.2
P000287	P000287a	Control	Female	110	70	22.5	7.2	1.6	4.9	1.5	2.8	93.8	12.4	7.1	4.3	0.4	313	14.1	NA	47.7	47.7	22.9
P000289	P000289b	Control	Male	147	88	23.8	7.5	1.5	4.8	2.8	1.4	86.3	14.3	4.8	4.4	0.4	220	14.2	5.6	65.3	65.3	19.2
P000289	P000289c	Control	Male	166	87	23.6	5.2	1.8	2.3	2.6	1.9	84.8	15.9	6.1	4.5	0.4	240	12.8	6.5	65.3	74.9	19.2
P000292	P000292b	Control	Female	147	80	20.9	10	2.3	6.9	1.8	2.6	95.9	12.3	8.5	4.1	0.4	282	14.1	5.9	72.6	72.6	19
P000292	P000292c	Control	Female	146	70	22.8	4.1	1.8	1.8	0.8	1.7	89.3	13.7	6.3	4.1	0.4	216	13.3	5.3	72.6	82.4	19
P000294	P000294b	Control	Male	159	90	25.9	5.6	1.1	3.5	2.4	1.3	90.5	13.6	6.2	4.2	0.4	255	13.9	5.8	77.5	77.5	18.4
P000294	P000294c	Control	Male	160	88	26.4	4.9	1.3	3.1	1.1	1.2	89.6	15.7	6.6	4.3	0.4	305	13.3	5.9	77.5	87.3	18.4
P000297	P000297b	Pre-LN	Female	136	82	21.9	6.7	1.9	4.1	1.7	2	92.3	13.9	5.9	4.4	0.4	240	13.3	6	55.9	55.9	10.4
P000299	P000299b	Pre-LN	Male	120	72	30.2	6.4	1.6	4.2	1.5	2.3	90.3	14.8	5.1	5.1	0.5	263	14.9	5.7	54.4	54.4	6.7
P000301	P000301b	Pre-LN	Female	142	92	29.4	5.2	1.5	2.7	2.3	1.6	90.8	13	6.5	5	0.5	171	15.3	5.8	66.9	66.9	2.2
P000302	P000302b	Pre-LN	Male	157	96	31.7	6.5	1.7	3.2	3.5	2.2	87.2	14.7	6.2	4.7	0.4	217	14.2	5.7	72.6	72.6	8.2
P000304	P000304a	Control	Female	160	95	28.5	5.4	1.2	2.5	3.6	2.3	85.9	12.6	7	4.3	0.4	294	13.3	5.7	62.6	62.6	2.2
P000304	P000304b	Pre-LN	Female	162	94	27	5	1.2	2.5	3	3.9	88	12.6	6.6	5.5	0.5	315	16.6	6.1	62.6	65.5	8.2
P000304	P000304c	Pre-LN	Female	142	79	26.5	4.3	1.2	1.9	2.7	1.7	90.2	13.9	8	3.8	0.3	309	11.8	6.7	62.6	75	8.2
P000310	P000310a	Pre-LN	Male	148	93	26	5.9	1	3.6	3	2.5	85.8	14.2	7.1	5.5	0.5	182	15.2	5.4	65.4	65.4	17.4
P000310	P000310b	Pre-LN	Male	174	102	26.6	6.8	1.1	3.5	5	2.2	82.2	14.6	8.3	5.6	0.5	192	16.3	5.5	65.4	67.9	17.4
P000310	P000310c	Pre-LN	Male	146	72	27.9	4.9	1.1	1.9	2.9	2.6	89.3	14.2	6.2	4.4	0.4	186	14.6	6.1	69.4	79.1	17.4
P000312	P000312b	Control	Male	130	74	26.7	4.8	1.4	3	0.9	1.7	97.7	12.1	6.2	3.9	0.4	194	14.3	5.2	57	57	19.1
P000312	P000312c	Control	Male	142	90	27.7	5.3	1.6	3.2	1.1	2	101.6	14.2	5.7	4	0.4	162	14.1	5.6	57	66.7	19.1
P000318	P000318a	Pre-LN	Female	120	76	23.3	6.8	1.3	4.7	1.7	NA	NA	NA	NA	NA	0.4	NA	NA	NA	53	53	20.2
P000322	P000322a	Pre-LN	Male	139	82	22	4.9	1.2	3	1.6	2	87.8	13.4	7.4	4.9	0.4	284	14.8	6	60	60	8.5
P000322	P000322b	Pre-LN	Male	146	88	28.2	6.1	1.2	3.4	0.9	1.9	89.7	13.9	8.5	4.2	0.4	269	14.2	5.7	66.8	66.8	18.2
P000330	P000330b	Pre-LN	Male	134	84	21.5	4.9	1	3.1	1.8	1.8	88.7	12.7	6.3	4.2	0.4	260	13.8	5.3	53.3	53.3	15.2
P000330	P000330c	Pre-LN	Male	116	61	22.3	4	0.8	2.8	1.3	2.1	89.7	14.5	4.9	3.7	0.3	142	11.1	5.3	53.3	62.7	15.2
P000332	P000332a	Pre-LN	Male	118	70	20.1	6.6	2	4	1.4	3.8	93.4	13	12.6	4.2	0.4	279	12.9	5.7	68	68	9.2
P000332	P000332b	Pre-LN	Male	92	60	19.5	6.6	1.9	4.2	1.1	2.4	94.7	13.6	8.3	4.1	0.4	341	13.1	6.3	68	71.9	9.2
P000334	P000334b	Control	Female	104	65	23.8	6.9	1.9	4.8	0.6	2	95.7	12.1	5	4.3	0.4	261	14.3	5	47.9	47.9	17.6
P000336	P000336b	Control	Male	106	74	24	6.2	1.2	3.5	2.4	1.7	88.5	13.3	6.6	4.3	0.4	218	12.8	5.7	68.8	68.8	11.3
P000336	P000336c	Control	Male	102	70	NA	4.2	1.4	2.3	1.3	1.5	90.4	14.2	6.8	4.1	0.4	218	12.8	5.9	65.8	74.9	11.3
P000337	P000337a	Control	Female	116	78	29.4	5.6	1.9	2.9	1.7	1.9	88	13.5	7.2	4	0.4	293	12	NA	49.5	49.5	22.2
P000338	P000338b	Pre-LN	Female	131	75	24.9	6.5	1.6	4.3	1.4	2.1	89.7	13.5	6.4	4.3	0.4	251	12.7	5.6	72	72	9.5
P000341	P000341b	Control	Female	148	98	24.8	5.1	1.7	2.8	1.4	2	92	12.8	8.5	4.6</							

P000512	P000512c	Pre-LN	Female	132	76	20.3	5.7	1.8	3.4	1.3	2.3	91	NA	9.2	4.2	0.4	264	12.4	5.6	69.4	77.8	14.8	
P000514	P000514b	Control	Male	132	79	27.8	5.5	1.1	3.6	1.8	1.7	117	13.8	6.3	5.2	0.5	174	17.2	5.4	62.6	62.6	18.4	
P000515	P000515a	Pre-LN	Female	118	72	26.5	4.3	0.8	2.8	1.5	1.6	86.6	13.6	8	4.9	0.4	204	14.8	NA	NA	61.7	23.4	
P000516	P000515c	Control	Male	133	76	27.1	4	1.1	3.4	1.1	1.7	89.9	14.6	8.9	4.9	0.4	291	14.3	5.7	61.7	76.4	13.4	
P000516	P000516a	Pre-LN	Female	110	66	23	4.6	2	2.3	0.6	1.4	94.5	12.2	5.1	3.8	0.4	224	12.3	NA	NA	49.6	10.4	
P000516	P000516b	Pre-LN	Female	90	56	22.4	4	1.8	1.9	0.7	2.1	93.3	11.2	6.6	3.7	0.3	206	12.6	4.8	49.6	53.2	10.4	
P000516	P000516c	Pre-LN	Female	108	64	21.3	4.1	1.9	2	0.5	0.9	99.9	13.3	3.3	3.7	0.4	176	12.4	5	49.6	63.5	10.4	
P000517	P000517a	Pre-LN	Female	116	80	24.8	4.5	1.1	2.4	2.3	1.8	86.4	12.5	4.9	3.7	0.3	237	11.4	4.7	54.8	54.8	4.1	
P000517	P000517b	Pre-LN	Female	126	76	26.5	5.2	1.8	3.2	1.5	2.1	89	13.7	5.5	4.1	0.4	238	12.4	5.3	54.8	57.8	4.1	
P000517	P000517c	Pre-LN	Female	136	82	25.9	5.2	1.2	3.4	1.5	1.8	91.7	13.5	5.3	3.8	0.3	252	12.1	5.4	54.8	67.4	4.1	
P000518	P000518a	Control	Female	128	68	20.8	5.5	1.4	3.3	1.7	1.7	84	13.2	5.6	4.4	0.4	277	12.4	NA	NA	56.9	22.9	
P000519	P000519a	Control	Male	121	80	25.8	6	1.2	3.9	2.1	2.6	93.2	13.3	8.3	4.7	0.4	190	14.8	4.1	60.2	60.2	15.6	
P000519	P000519c	Control	Male	123	80	25.8	5.7	1.7	3.7	0.7	1.5	98	NA	5.8	4.6	0.4	NA	15.6	6.1	60.2	69.5	15.6	
P000521	P000521a	Pre-LN	Female	120	81	25.9	4.5	1.1	2.7	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	59.8	59.8	16.6	
P000525	P000525a	Control	Male	142	80	23.5	6.5	2.6	3	0.8	1.7	89.1	13.1	8.1	4.4	0.4	349	14.2	NA	NA	64.8	22.1	
P000528	P000528a	Pre-LN	Female	140	79	24.5	6.1	2	3.7	0.9	2.6	91.8	12.8	8.3	4.2	0.4	369	12.4	4.6	62	62	11	
P000528	P000528b	Pre-LN	Female	149	92	25.6	5.6	1.9	3.3	1	2.8	88.2	12.5	12.4	4.4	0.4	404	13.6	5.4	62	64.3	11	
P000530	P000530b	Pre-LN	Male	130	86	27.4	4.1	1	2.6	1.2	2.4	84.7	13.6	5.6	5.4	0.5	180	15.7	5.6	57.9	57.9	15.9	
P000532	P000532a	Pre-LN	Female	174	110	27.9	7.3	1.6	4.7	2.4	2.2	92.5	13.4	7.9	4.9	0.4	315	14	5.8	72	72	9.1	
P000539	P000539a	Pre-LN	Female	124	74	22.5	6.8	1.8	4.3	1.6	1.9	88	13.7	7.8	4.2	0.4	315	13.1	5.5	51.2	51.2	16.4	
P000543	P000543b	Control	Female	112	68	21.3	7.5	1.3	5.7	1.3	0.8	91.2	14.3	3.7	4.4	0.4	243	11.9	5.3	52.5	52.5	17.5	
P000543	P000543c	Control	Female	120	71	22.3	4.3	1.4	2.6	0.8	1.2	91.8	15	7	3.8	0.3	221	11.8	5.8	52.5	61.3	17.5	
P000551	P000551b	Pre-LN	Female	128	76	25.4	6.7	1.5	4.3	2	2	91.8	14.8	6.2	4	0.4	230	12.8	5.3	61.6	61.6	11.4	
P000551	P000551c	Pre-LN	Female	122	72	24.1	4.8	1.4	2.8	1.4	2.2	96	NA	6.1	3.9	0.4	255	12.4	5.5	61.6	69.9	11.4	
P000553	P000553b	Control	Male	115	68	22.7	4.4	2.1	2.9	1	2	94	13.7	6	4.4	0.4	272	15	5.3	59.9	59.9	18.2	
P000555	P000555a	Pre-LN	Female	104	68	22.5	5.2	2	1.9	1.2	1.4	91.8	13.9	5.4	5	0.4	222	15.4	5	57.8	57.8	16.9	
P000561	P000561b	Pre-LN	Female	134	90	20.4	6.4	2.7	3.2	1.1	1.8	90.4	14.7	6.1	3.9	0.3	245	12.1	4.8	51.4	51.4	5	
P000561	P000561c	Pre-LN	Female	140	98	18.7	7.7	1.5	5.7	1.3	1.1	95.7	15.6	4.6	3.8	0.4	277	12.7	5.3	51.4	59.5	5	
P000565	P000565b	Pre-LN	Female	128	74	27.9	7.1	1.4	4.6	2.6	1.4	85.5	14.2	5.2	4.4	0.4	343	12.9	5.7	73.3	73.3	11	
P000569	P000569a	Pre-LN	Male	141	88	29.7	5.2	1	3.7	1.1	2.3	89.8	13.2	6.4	5.1	0.5	240	15.8	4.8	64.3	64.3	11.8	
P000569	P000569b	Pre-LN	Male	148	92	30.4	4.7	0.9	3.2	1.5	2.5	91.8	13.6	7	5.1	0.5	219	16	3	64.3	67.5	11.8	
P000571	P000571a	Control	Female	134	80	22.8	5.1	1.4	3.1	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	57.8	57.8	19.6	
P000571	P000571c	Control	Female	120	70	34.4	3.9	1	2.6	0.7	1.2	109.3	17	3.7	3.4	0.4	112	12.7	4.9	57.8	72.8	19.6	
P000576	P000576b	Control	Male	144	82	23.1	5.2	0.8	3.8	1.5	1.8	92.9	14.3	7.9	3.7	0.3	715	11.4	5.5	74.3	74.3	13.6	
P000576	P000576c	Control	Male	114	70	24.1	4.7	1.1	2.8	1.8	1.9	92	13.6	7.2	3.7	0.3	232	11.5	5.8	74.3	82.5	13.6	
P000578	P000578a	Pre-LN	Female	114	72	31.2	5.1	1	3.4	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	58.6	58.6	11.8	
P000578	P000578b	Pre-LN	Female	118	62	30.3	3.7	0.8	4.1	1.7	2.3	90	12.8	6.1	4.5	0.4	205	13.6	5.7	58.6	62.5	11.8	
P000581	P000581a	Control	Male	118	70	20.7	5.7	2.2	2.7	1	1.4	85.7	13.2	5.9	4.7	0.4	220	14.3	NA	NA	48.1	22.5	
P000581	P000581c	Control	Male	144	86	20.1	5.5	2.7	2.5	0.7	NA	90	14.2	4.7	4.7	0.4	228	14.2	5.6	48.1	61.5	22.5	
P000584	P000584b	Control	Male	102	64	21	5.3	1.4	3.7	0.6	1.2	93.1	14.3	4.3	4.7	0.4	159	14.2	4.8	59.6	59.6	17.6	
P000585	P000585b	Pre-LN	Female	148	90	25.4	8.9	1.8	6.6	1.2	1.2	84.5	13.1	3.6	4.4	0.4	136	13	5.4	75	75	10.6	
P000588	P000588b	Pre-LN	Female	120	83	25.4	5.6	1.5	3.6	1.3	1.8	93.2	13.4	5.7	3.8	0.4	204	13	5.6	58.9	58.9	6.6	
P000590	P000590a	Pre-LN	Female	121	72	24.3	7.1	1.4	4.7	2.7	2.2	90.8	13.7	6.9	2.9	0.4	205	12.5	5.2	58.9	58.9	18.9	
P000591	P000591b	Control	Male	106	62	22.8	5.2	1.5	3.3	0.9	1.5	92.6	13.4	9.7	4.8	0.4	272	15.3	6	74.5	74.5	18	
P000591	P000591c	Control	Male	140	71	23.1	3.4	1.5	1.5	0.9	1.2	94.5	13.9	6.5	4.8	0.5	187	15.3	7	74.5	82.5	18	
P000604	P000604a	Pre-LN	Female	119	70	23.9	6.4	1.4	4.5	1.2	2.1	96.7	13	4.8	4.4	0.4	191	13.7	5.2	73.7	73.7	4.6	
P000604	P000604b	Pre-LN	Female	126	73	24	6.1	1.5	3.8	1.9	2.2	95.7	13.7	5.9	4.3	0.4	304	13.7	5.8	73.7	76.2	4.6	
P000605	P000605a	Control	Male	137	88	30.1	5.4	1.1	3.1	2.5	2.2	90.3	12.6	5.8	4.6	0.4	132	14.6	NA	NA	57.3	23.2	
P000605	P000605c	Control	Male	137	72	31.9	3.7	0.8	NA	5	2	95	14.9	5.9	4.4	0.4	131	15.1	5.6	57.3	69.7	23.2	
P000606	P000606a	Pre-LN	Male	132	82	26.3	8.9	1.2	5.6	4.8	2.5	95.2	12	7.4	4.3	0.4	149	13.9	5.2	54.3	54.3	8.2	
P000606	P000606b	Pre-LN	Male	118	82	26.6	8	1.4	5.3	3	2.6	93.6	13.1	7.2	4.4	0.4	156	14.4	5.6	54.3	56.8	8.2	
P000606	P000606c	Pre-LN	Male	106	64	28.7	4.1	2.1	1.6	1	1	95.1	14	9.1	4.2	0.4	116	13.4	NA	NA	64.3	67.7	8.2
P000607	P000607b	Pre-LN	Male	132	94	24.7	7.4	1.4	5.3	1.7	1.5	91	13.3	5.4	4.9	0.4	196	15.9	5.7	55.9	55.9	2.9	
P000610	P000610a	Pre-LN	Female	134	83	26.3	6.6	1.9	4.1	1.3	1.8	96.3	13.9	6.4	4.1	0.4	293	14.1	5.4	52.5	72.5	16.6	
P000611	P000611b	Control	Male	139	90	29.3	6.7	1.2	4.7	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	51.8	51.8	12.3	
P000611	P000611c	Control	Male	148	82	29.5	6	1.6	3.9	1.2	2.2	100.3	12.9	8.1	4	0.4	221	13.6	5.8	51.8	60.4	12.3	
P000613	P000613b	Pre-LN	Female	120	74	22.1	5.6	1.6	3.5	1.1	3.5	91.9	14.4	6.9	4.1	0.4	210	12.5	5.5	54.6	54.6	15.1	
P000618	P000618a	Control	Female	127	85	23.5	6.4	1.5	4.3	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	61.2	61.2	23.7	
P000618	P000618c	Control	Female	153	88	24.1	4	1.4	2.2	1	NA	97.6	16	3.3	3.7	0.4	189	12.3	5.2	61.2	75.8	23.7	
P000623	P000623a	Control	Female	176	108	30.9	5.7	2.1	3.4	1.6	2.1	94.6	14.4	6.1	4.9	0.4	189	13.9	5.2	61.2	67.7	21	
P000627	P000627b	Pre-LN	Male	144	94	24.6	5.7	1.7	3.5	1.1	1.4	93.4	12.7	5.5	4.7	0.4	281	14	5.1	50.7	50.7	9	
P000627	P000627c	Pre-LN	Male	146	90	23.4	6.1	2.1	3.4	1.4	1.2	97.6	15.8	4.7	4.5	0.4	212	14	5.6	50.7	59.4	9	
P000628	P000628b	Control	Male	156	90	35.9	6.5	1.3	4.3	2.1	2.5	87.2	12.7	8.7	4.7	0.4	269	14.8	5.4	60.5	60.5	18.8	
P000628	P000628c	Control	Male	161	88	39.4	5.9	1.2	3.5	2.7	2.8	89.8	14.1	10.6</									

PD00749	PD00749c	Control	Female	160	91	27.3	6.5	0.7	NA	4.6	1.1	82.4	15.4	4.7	4.3	0.4	241	11.3	6.7	70.3	84.7	23.7
PD00751	PD00751a	Control	Male	122	78	30.9	5.8	1.1	2.9	3.9	2	88.6	12.8	7.9	4.7	0.4	216	15.3	NA	58.6	58.6	22.5
PD00754	PD00754b	Control	Female	128	106	28.7	6.4	2	3.8	1.5	1.3	87.1	14.3	6.6	4.3	0.4	180	13.8	5.2	79.5	79.5	16.1
PD00756	PD00756a	Control	Male	126	74	30.5	6	1	4.3	1.5	2.2	85.2	14.9	6.3	5.4	0.5	145	15.6	5.7	67.5	67.5	21.6
PD00756	PD00756c	Control	Male	126	62	34.9	3.9	1	2.4	1.1	1.5	91.7	16	7.6	4.9	0.4	118	14.6	6.6	67.5	80.5	21.6
PD00761	PD00761a	Control	Female	146	86	23.9	6.7	2	4.3	0.9	1.6	90.1	13	5.8	4.1	0.4	269	13.2	NA	49.6	49.6	22.5
PD00763	PD00763b	Control	Female	116	72	30	7.2	1.5	4.9	1.9	2.4	95	15.3	7.3	4.6	0.4	243	14.1	5.1	50	50	17.8
PD00764	PD00764b	Pre-LN	Female	137	84	25.4	7.7	1.7	5.2	1.8	2	87.1	13	5.7	4.1	0.4	284	12.7	5.4	56.7	56.7	9.8
PD00765	PD00765a	Control	Male	124	76	29.9	5.4	1	2.6	1.1	1.7	91	14	5.9	4.5	0.4	198	14.2	NA	75	75	23
PD00772	PD00772b	Control	Female	134	80	24.9	6.1	1.4	3.3	3.1	1.8	91.5	14	7.1	4.3	0.4	261	14.1	5.1	77.4	77.4	18.9
PD00772	PD00772c	Control	Female	129	68	22.9	3.6	1	2	1.4	1.9	90.6	14.9	14.9	3.5	0.3	541	10.5	6.1	77.4	85.9	18.9
PD00773	PD00773a	Pre-LN	Female	100	60	21.8	5.7	2.2	3	1.1	1.7	95.2	12.2	5.6	4.3	0.4	190	13.7	NA	60.7	60.7	10.4
PD00774	PD00774b	Control	Male	129	72	27.4	3.6	1.4	1.9	0.8	2.2	88.1	12.7	6.3	5.2	0.5	229	15.9	5.3	58.4	58.4	19.4
PD00775	PD00775a	Control	Male	88	25.2	4.7	1.3	3	0.8	1.8	1.8	93.7	12.9	6.5	4.8	0.5	205	15.6	NA	47.8	47.8	22.9
PD00776	PD00776b	Control	Female	156	92	27.1	7.4	2	4.5	2	2.4	94.4	13.2	5.6	3.8	0.4	285	12.5	6	68.5	68.5	18.4
PD00776	PD00776c	Control	Female	148	84	22	8.1	1.8	5.5	2.1	NA	100.6	13.8	5.2	3.9	0.4	311	12.8	6.2	68.5	77.8	18.4
PD00780	PD00780b	Control	Male	134	92	28.4	6.7	1.1	4.3	3	2.5	93	12.4	6.4	4.4	0.4	284	13.2	6.1	68.9	68.9	19.8
PD00780	PD00780c	Control	Male	141	93	29	8.2	1.2	5	4.5	2.4	90.6	14.8	6.9	4.4	0.4	317	13.4	6.3	68.9	79.3	19.8
PD00781	PD00781b	Control	Male	134	88	27.3	6.6	1.3	4.5	1.9	2.2	91.2	13.7	6.3	4.8	0.4	349	14	5.4	61.8	61.8	17.5
PD00783	PD00783a	Control	Female	158	95	31.1	8.3	1.9	5.4	2.2	2.3	78.3	14.2	7.1	4.9	0.4	231	12.5	5.7	53.3	53.3	20.8
PD00783	PD00783c	Control	Female	156	83	31.4	7.8	1.8	5.3	1.6	2	87.8	13.2	6.5	4.4	0.4	240	13.3	5.6	53.3	64.2	20.8
PD00786	PD00786b	Control	Male	118	72	25.4	5.6	1.2	3.9	1.3	2.3	88.5	14	6.6	5.3	0.5	236	16	4.8	60.5	60.5	19.3
PD00787	PD00787b	Pre-LN	Female	118	77	28.1	6.5	1.2	4.6	1.7	2	89.2	14.1	5.4	4.7	0.4	309	13.8	5.1	63.4	63.4	4.2
PD00790	PD00790a	Control	Male	128	88	23.8	5.8	1.2	3.7	2.1	2	89.3	13.5	6.4	4.9	0.4	262	14.3	5.5	50.6	50.6	20.9
PD00791	PD00791a	Control	Male	128	83	28.2	4.1	0.9	2.6	1.3	2.2	90.1	12.8	7.1	4.5	0.4	219	14.1	NA	59	59	23.6
PD00791	PD00791c	Control	Male	140	78	30	4.1	1	2.6	1.3	1.6	94.1	14	7.4	4.5	0.4	202	14.2	6.7	59	73	23.6
PD00792	PD00792a	Control	Male	122	72	26.1	5.1	1	3.1	2.2	2.6	88.7	13.3	7.9	5	0.4	268	15	5.3	66.7	66.7	20.8
PD00793	PD00793b	Pre-LN	Female	116	78	27.2	6.9	1.7	3.9	2.9	2.6	87.1	12.9	6.8	3.7	0.3	304	11.1	5.1	66	66	6.6
PD00793	PD00793c	Pre-LN	Female	111	72	25.5	7	1.2	4.8	2.2	1.7	88.5	14.3	5.8	4.3	0.4	228	12.9	5.7	66	76.1	6.6
PD00794	PD00794a	Control	Male	110	67	26.4	6.2	1.6	4	1.4	1.9	89.7	12.3	7	4.9	0.4	268	14.8	5.1	48.2	48.2	21.8
PD00794	PD00794c	Control	Male	116	71	27.6	6.6	1.8	4.3	1.2	1.1	92.3	12.8	5.3	4.9	0.5	217	15.1	5.7	48.2	61.9	21.8
PD00795	PD00795a	Pre-LN	Male	128	76	23.8	6.4	0.8	4.2	3.2	1.2	92.5	12.5	4.5	4.5	0.4	195	14.2	5.4	68.2	68.2	17
PD00795	PD00795c	Pre-LN	Male	135	81	24.2	3.2	0.9	1.5	1.9	1.6	97	NA	5.6	3.6	0.3	300	11.8	5.8	68.2	76.5	1.7
PD00799	PD00799a	Control	Male	120	76	26.3	6.3	1.4	4.1	1.9	2.1	93.3	13.2	7	4.8	0.5	280	14.8	7.6	61.7	61.7	19.8
PD00799	PD00799c	Control	Male	112	74	24.2	4.9	1.4	3.1	1	1.5	92	NA	9.1	4.1	0.4	241	12.7	7.7	61.7	71.9	19.8
PD00800	PD00800a	Control	Male	140	81	23.2	5.1	1.6	2.8	1.5	2.2	89.3	12.8	6.3	4.9	0.4	232	15.2	5.3	65.6	65.6	21.8
PD00802	PD00802a	Control	Male	107	64	25.2	7.7	1.1	5.3	2.9	3.6	89.7	13.2	40	5.1	0.5	226	15.3	5	44.4	44.4	21.5
PD00804	PD00804b	Control	Female	124	72	23.9	5.3	2.1	2.7	1.2	1.9	83	13	5.5	4	0.4	154	13.6	5.3	58.1	58.1	19.1
PD00806	PD00806b	Control	Male	135	88	26.2	5.2	1.7	3	1.2	2	89	13.5	6.3	4.8	0.4	293	14.1	5.3	58.3	58.3	18.2
PD00806	PD00806c	Control	Male	149	88	27.5	4.3	1.6	2.2	1.3	2.2	90.3	13.9	7.8	4.6	0.4	273	14.5	5.4	58.3	66.4	18.2
PD00807	PD00807b	Control	Male	121	68	32.3	4.7	1	2.2	3.5	2	92.8	12.9	6.6	4.7	0.4	114	15.4	5.4	70.9	70.9	17.2
PD00812	PD00812b	Control	Female	122	74	27.7	6.2	2.7	3.1	1.3	2.1	89.2	13.4	7.7	4.5	0.4	406	13.7	5.1	53.9	53.9	18.2
PD00813	PD00813a	Control	Female	152	90	24.7	6.1	1.9	3.2	3.2	2.3	87.7	12.6	8	4.6	0.4	178	14.2	5.4	76.8	76.8	19.4
PD00814	PD00814a	Control	Female	171	108	28.9	6.4	1.8	4	1.2	1.8	91	12.7	5.9	4.2	0.4	193	13.2	NA	72	72	19.9
PD00819	PD00819b	Pre-LN	Male	144	88	27.8	4.8	0.8	3	2.2	2.7	85.2	15.3	7.9	4.6	0.4	337	12.9	5.2	61.7	61.7	3.7
PD00820	PD00820a	Pre-LN	Male	134	84	27.2	4.4	1.3	2.8	0.8	3.8	96.2	13.4	9.8	4.7	0.5	273	15.3	4.4	70.5	70.5	10
PD00820	PD00820b	Pre-LN	Male	125	74	26.4	4.2	1.4	2.7	0.5	2	97.9	14	7	4	0.4	285	12.6	4.8	70.5	73.7	10
PD00821	PD00821a	Control	Female	154	96	28.2	7.8	1.1	5.9	1.9	2.9	88.7	12.5	7	4	0.4	287	12.5	5.2	54.7	54.7	21.1
PD00827	PD00827c	Control	Female	126	80	26.3	4.4	1.1	2.3	1.2	1.7	96.9	14.2	4.2	4.6	0.4	179	15.1	5.9	75.7	75.7	17.2
PD00831	PD00831c	Control	Male	159	84	31.6	3.5	0.8	1.8	2.1	2.3	93.1	14.3	8.1	4.5	0.4	151	14.4	5.7	72.9	72.9	6.5
PD00833	PD00833c	Control	Male	138	74	24.2	3.5	1.5	1.5	1.1	1.4	93.3	13.7	6.6	4.4	0.4	172	13.6	6	75.2	75.2	8.9
PD00835	PD00835c	Control	Female	125	74	30.3	5.6	1.9	2.9	1.8	NA	106.6	13.8	6.1	4.1	0.4	203	13.2	6.4	61.8	61.8	8.9
PD00836	PD00836c	Control	Male	139	94	28.6	6.9	1.1	5.3	1.2	1.3	86.5	15.7	5.1	5.2	0.4	240	15.2	5.5	66.2	66.2	9.7
PD00844	PD00844c	Control	Female	129	80	24.9	5.1	1.8	2.8	1.1	1.5	93.7	15.3	4.5	3.9	0.4	216	12.7	4.9	58.1	58.1	9.9
PD00849	PD00849c	Control	Female	108	68	20.5	5	1.7	2.8	1.1	2.3	95.5	13.1	6.4	3.9	0.4	190	12.8	5.6	55.1	55.1	7.4
PD00852	PD00852c	Control	Female	142	78	22.8	5.9	2.9	2.8	0.5	2.6	101.2	15	5.2	4.2	0.4	182	13.2	5.9	75	75	9.1
PD00856	PD00856c	Control	Female	123	72	24.5	4.9	1.6	2.5	1.8	2.1	92.3	13.6	7.5	4.2	0.4	258	13.1	5.5	72.2	72.2	10
PD00860	PD00860c	Control	Male	126	76	26.8	5.2	1.2	3	2.2	1.9	89.5	13.8	9.1	4.9	0.4	200	14.6	NA	61.2	61.2	8.7
PD00861	PD00861c	Control	Female	158	77	34.2	3	1	1.3	1.7	1.8	86.7	14.9	8	4	0.4	238	11.7	7.4	67	67	7.7
PD00864	PD00864c	Control	Male	164	88	24	3.8	2.1	1.6	0.4	2	94.1	13.3	7.9	4.6	0.4	176	14.6	5.8	75.5	75.5	6.5
PD00865	PD00865c	Control	Male	128	77	30.1	6.9	1.3	4.6	2.2	1.6	83.6	13.1	8.6	5.7	0.5	135	16.1	6	78.5	78.5	7.7
PD00866	PD00866c	Control	Male	149	84	23.7	5.8	1.6	3.6	1.3	2.3	86.5	15.2	7	5.1	0.4	170	14.9	5.4	66.7	66.7	10.5
PD00870	PD00870c	Control	Female	108	68	32.3	7	1	5	2.2	1.5	90.2	14.1	5.2	4.8	0.4	221	14.5	5.8	60.7	60.7	7.1
PD00889	PD00889c	Control	Female	136	70	24.1	5.2	2.3	2.6	0.7	2.4</											

Appendix 13: Validation cohort pre-lymphoid neoplasm cases and controls metadata

Individual ID	Sample ID	Group	Gender	Systolic BP (mmHg)	Diastolic BP (mmHg)	BMI	Total cholesterol (mmol/L)	HDL (mmol/L)	LDL (mmol/L)	Triglycerides (mmol/L)	Lymphocytes (10 <sup>9</sup> /L)	MCV (fL)	RDW	WBC (10 <sup>9</sup> /L)	RBC (10 <sup>12</sup> /L)	Haematocrit (%)	Platelets (10 <sup>9</sup> /L)	Haemoglobin (g/dL)	HbA1c (%)	Age at first sample	Age at sample	Follow-up (years)	
PD00006	PD00006b	Control	Female	110	66	33.2	4.9	1	3.2	1.7	2.1	90.9	13.8	8.9	4.1	0.4	207	12.7	5.5	44.6	44.6	17.8	
PD00007	PD00007b	Control	Male	116	74	27.3	5.9	1	3.7	2.8	2.7	91.7	13	13.4	5.1	0.5	278	16.1	5.3	51.9	51.9	19.3	
PD00008	PD00008b	Pre-LN	Female	162	96	20.6	6.8	1.8	4.5	1	1.6	84.5	14.3	6.4	4.9	0.4	232	14.3	NA	71.7	71.7	9.7	
PD00012a	PD00012a	Pre-LN	Male	182	106	26	5.5	1.3	3.7	1	3.1	82.9	14.6	7.1	4.9	0.4	187	14.7	NA	72.7	72.7	6.1	
PD00012b	PD00012b	Pre-LN	Male	149	88	25.9	5.9	1	4.4	1.3	16.7	88	14.6	22.8	5	0.4	193	14.7	5.6	72.7	72.7	6.1	
PD00013	PD00013b	Control	Female	120	84	18.6	5.8	2.9	2.4	1.1	2.2	88.3	13.3	5.6	4.3	0.4	252	12.7	5.9	57	57	19.7	
PD00013c	PD00013c	Control	Female	109	72	19.9	5.3	2.2	2.8	0.7	2	92	NA	6.4	4.3	0.4	313	13.2	6	57	66	19.7	
PD00018a	PD00018a	Control	Female	148	84	31	8.4	1.8	5.7	1.9	1.2	86.1	14.5	3.7	4.3	0.4	234	12.9	NA	70	70	21.5	
PD00020	PD00020b	Control	Male	126	82	25.3	6.7	0.8	4.4	3.5	3.5	88.5	12.6	7.4	5.3	0.5	225	16.8	5.3	55.8	55.8	18.7	
PD00028	PD00028a	Pre-LN	Female	144	84	27.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	66.6	66.6	16
PD00030	PD00030b	Control	Male	140	88	27.3	6.6	2.1	3.9	1.5	2.3	94.4	13.1	6.1	4.9	0.5	216	14.8	5.7	63.6	63.6	19.7	
PD00030c	PD00030c	Control	Male	156	98	25.9	4.9	2	2.5	0.9	1.9	94.1	14.5	6	4.4	0.4	202	14	5.5	63.6	73.4	19.7	
PD00033	PD00033a	Pre-LN	Male	149	89	23.9	6.4	1	4.5	2	2.3	83.2	12.9	7.5	5.4	0.5	333	15.3	NA	51.4	51.4	3.8	
PD00033b	PD00033b	Pre-LN	Male	128	74	19.1	4.5	0.9	3.2	0.9	1.1	68.9	15.6	7.7	5.1	0.4	737	10.5	6.4	51.4	55.2	3.8	
PD00033c	PD00033c	Pre-LN	Male	120	82	23.6	3.5	0.8	2	1.6	1.1	87	NA	5.1	4.7	0.4	189	13.4	6.1	51.4	64	3.8	
PD00045	PD00045b	Control	Female	130	79	27.4	6	2	3.5	1.2	1.8	89.3	12.8	4.4	4.2	0.4	213	13.1	5	76	76	14.2	
PD00045c	PD00045c	Control	Female	121	74	27.1	5.7	1.7	3.4	1.4	1.7	91.2	14.1	4.2	4.5	0.4	213	13.5	5.6	76	85.8	14.2	
PD00046	PD00046a	Pre-LN	Female	139	88	31.3	6.7	1.4	4.5	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	64.3	64.3	7.5	
PD00050	PD00050b	Control	Female	146	74	22.5	7.2	2.3	4.6	0.8	1.8	86.8	13.9	5.5	3.6	0.3	254	11.7	5.8	78.2	78.2	19.1	
PD00052	PD00052a	Pre-LN	Female	152	98	30.7	7.1	1.6	4.7	1.8	2.8	96.3	13.6	9.8	4.2	0.4	402	13.1	6.3	62.6	62.6	4.5	
PD00053	PD00053a	Pre-LN	Female	106	70	20.6	6.2	1.2	3.2	4	3.6	92.2	12.5	7.9	4	0.4	322	13	NA	63.7	63.7	10.6	
PD00059	PD00059b	Control	Female	151	90	30.7	6.9	1.6	3.1	4.9	2.7	86.3	12.4	8	3.9	0.4	267	13	5	76.2	76.2	18.4	
PD00061	PD00061a	Control	Female	110	67	26.2	6.1	4.3	1.6	2.2	85.7	14.9	6.1	4.2	0.4	293	11.8	NA	47.6	47.6	22.7		
PD00064	PD00064b	Control	Male	146	99	29.1	8.3	1.2	6	2.5	1.8	98.2	12.2	8.1	4.6	0.4	231	14.7	5.8	71.4	71.4	19.9	
PD00064c	PD00064c	Control	Male	122	72	29.3	4.4	1.3	2.5	1.4	1.2	101.5	13.9	7.2	4.3	0.4	196	14.6	6.4	71.4	81.9	19.9	
PD00072	PD00072a	Control	Male	158	102	21.7	7.5	1.6	5.3	1.4	2.9	88.5	13.6	8.2	5.2	0.5	288	16.5	5.3	64.8	64.8	21.6	
PD00081	PD00081a	Control	Female	116	76	17.3	6.3	2.4	3.3	1.3	1.5	87.6	13.2	9.4	4.3	0.4	279	13.3	NA	65.7	65.7	22.6	
PD00082	PD00082b	Control	Female	139	85	25	6.9	1.9	4.5	1.3	2.5	87.2	14.2	6.4	4.7	0.4	288	13.8	4.7	59.3	59.3	18.4	
PD00083	PD00083a	Control	Female	148	93	23.7	5.9	2	4.1	1.8	2.6	92.2	12.9	10.6	4.3	0.4	339	13.5	NA	68.3	68.3	9	
PD00085	PD00085b	Control	Male	146	78	25.8	7.2	2	4.9	0.8	1.5	90.7	12.9	4.7	4.5	0.4	208	14.5	5.2	65.7	65.7	18.3	
PD00087	PD00087a	Control	Female	136	83	26.1	8	1.5	4.9	3.7	1.7	88.7	12.9	5.4	4.3	0.4	341	12.4	5.6	63.3	63.3	20.7	
PD00090	PD00090b	Control	Female	148	90	28	5.1	1.1	3.5	1.2	2	82	14.4	5.4	4	0.3	289	11.1	5.8	71.3	71.3	19.4	
PD00090c	PD00090c	Control	Female	152	76	27.4	5.2	1	3.6	1.4	1.8	90.9	16.3	5.9	4	0.4	234	12.4	6.1	71.3	81.1	19.4	
PD00096	PD00096a	Control	Female	110	70	28.1	5	1.2	3.4	0.9	2.4	94.4	13.4	7.9	4.1	0.4	222	12.6	4.8	59.7	59.7	20.9	
PD00104	PD00104b	Control	Male	123	76	33.9	5.4	1.2	3.4	1.8	2.3	89.1	13.5	8.2	6.3	0.6	379	16.6	5.1	44	44	17.6	
PD00104c	PD00104c	Control	Male	126	79	34.2	5	1.1	3	2.1	2.3	88	NA	7.8	4.8	0.4	260	14.7	5.5	44	49.5	17.6	
PD00105	PD00105a	Control	Female	132	88	23.3	5.3	2	3.2	0.7	2.4	92.5	12.6	7	3.9	0.4	332	12	7.9	69.7	69.7	7	
PD00119	PD00119a	Pre-LN	Female	150	88	27.3	7.5	0.8	5.9	1.9	1.6	88.1	13.5	5.9	4.4	0.4	181	12.3	4.6	65.1	65.1	17.5	
PD00128	PD00128b	Control	Female	128	82	27.5	5.2	1.8	3	1.2	1.9	83	14.1	6.9	4.4	0.4	325	13	8.2	70	70	17.8	
PD00133	PD00133a	Pre-LN	Female	144	93	35	7.6	1.3	5.5	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	69.7	69.7	7	
PD00137	PD00137a	Pre-LN	Male	146	93	29.7	7.3	0.9	4.8	3.7	3.4	87.1	13.1	9.7	5.1	0.4	268	14.5	5.3	76.1	76.1	3.9	
PD00137b	PD00137b	Pre-LN	Male	126	82	31.7	7.7	0.7	4.1	6.4	5.6	86.3	13.6	11.4	4.9	0.4	269	14.5	5.8	76.1	78.3	3.9	
PD00138	PD00138a	Control	Female	140	80	33	6.2	1.7	3.5	2.1	2.3	89.9	13.7	8.3	4.2	0.4	203	13	NA	68.4	68.4	19.5	
PD00139	PD00139a	Pre-LN	Female	145	90	28.6	7.2	1.6	5	1.2	2.1	94.2	13	6	4.5	0.4	313	14.1	NA	62.5	62.5	19	
PD00144	PD00144b	Control	Female	148	88	22	5.3	1.9	2.5	2	1.4	89.5	12.6	7	3.9	0.4	332	12	7.9	69.7	69.7	7	
PD00145	PD00145a	Pre-LN	Male	180	102	31.3	4.5	1.1	2.2	2.8	2.8	90.1	13.7	9.7	5.6	0.5	176	17.4	4.5	71.4	71.4	4.5	
PD00146	PD00146b	Control	Male	127	68	24.9	6.3	1	3	5.2	2.9	85.5	14.2	8.6	4.7	0.4	199	14	5.4	74.1	74.1	15.9	
PD00149	PD00149b	Control	Female	105	66	21.9	7	2.4	3.7	2.1	1.7	92.8	12.5	4.8	4.1	0.4	233	13.1	5.3	66.3	66.3	18.8	
PD00149c	PD00149c	Control	Female	111	66	22.2	7.2	2.2	4.5	1.1	1.6	95	NA	4.5	4.4	0.4	247	13.7	5.5	66.3	74.5	18.8	
PD00151	PD00151a	Control	Male	148	90	28.6	5.9	1	3.9	2.2	2.5	87.6	12.9	7.7	4.8	0.4	259	15.3	NA	63.5	63.5	22.5	
PD00155	PD00155a	Control	Female	113	72	24.2	4.9	1.4	3	1.3	2	91.9	12.2	6.5	4.7	0.4	333	13.9	4.6	66.1	66.1	21.5	
PD00158	PD00158c	Control	Female	146	72	26.5	3.4	1.4	1.5	1.3	1.6	98.7	16.3	8.1	4	0.4	71	13	5.5	76.4	76.4	8.5	
PD00167	PD00167a	Control	Female	156	93	23.7	7.3	1.6	5.9	2.2	1.7	82.5	14.6	6.2	5.3	0.4	188	15.7	NA	65.1	65.1	21.9	
PD00167c	PD00167c	Control	Female	142	90	35.2	4.4	1.5	1.9	2.2	1.6	86	NA	7.3	5.6	0.5	157	16.2	8.1	65.1	75.8	21.9	
PD00169	PD00169a	Pre-LN	Female	113	69	24.5	4.6	1.4	2.2	2.1	0.9	93.7	13.1	4.6	4.5	0.4	285	13.2	NA	62.9	62.9	11.8	
PD00173	PD00173a	Control	Female	116	79	25.9	5.5	1.2	3.8	1	1.2	84.8	14.9	6.1	4.6	0.4	305	13.7	NA	62.8	62.8	22.9	
PD00173b	PD00173b	Control	Female	121	68	21.9	4.8	1.5	2.8	1.3	0.9	88.1	17.8	5.7	4.3	0.4	272	12.2	5.9	62.8	76.1	22.9	
PD00180	PD00180a	Control	Female	157	91	34.3	5.3	1.1	3.2	2.2	3.5	94.3	12.8	8.7	4.8	0.5	209	15.5	NA	68.9	68.9	21.2	
PD00180c	PD00180c	Control	Female	142	70	31.8	4.8	1.8	2.6	0.9	1.7	100.4	13.6	5.2	3.8	0.4	127	13	6	68.9	83.3	21.2	
PD00181	PD00181a	Pre-LN	Male	120	72	27.3	6.8	1.3	4.8	1.7	1.3	97.6	13.1	5.4	4.3	0.4	174	14.2	5.8	69.2	69.2	3.5	
PD00181c	PD00181c	Pre-LN	Male	126	68	23.6	7.7	1.5	5.6	1.3	1.7	82.5	13.2	5.6	3.9	0.4	188	13.7	5.5	69.2	72.5	3.5	
PD00187	PD00187b	Control	Female	110	70	28.1	4.9	2.1	2.4	0.9	1.1	102.3	13.6	3.2	3.6	0.4	227	11.9	5.2	65.9	65.9	17.	

PD00434	PD00434b	Pre-LN	Female	137	81	23.1	6.1	2	3.8	0.8	2	93.6	12.8	7.5	3.8	0.4	255	12.4	4.9	53.1	53.1	10.1
PD00435	PD00435a	Pre-LN	Female	172	84	23.2	5.5	1.8	3.2	1.1	1.1	64	17.3	4	4.4	0.3	526	8.7	5.6	57.6	57.6	14.6
PD00437	PD00437a	Control	Female	123	70	28	6.2	1.6	4.3	0.7	2	88	13.1	5	4.4	0.4	220	13.6	NA	63.5	63.5	23
PD00437	PD00437c	Control	Female	148	88	31.8	5.8	1.9	2.9	2.3	1.8	91.7	13.7	4.3	4.2	0.4	214	12.7	5.7	63.5	63.5	23
PD00440	PD00440a	Control	Female	132	74	28.1	8.2	1.6	5.9	1.6	1.6	92.9	12.1	5	4.8	0.4	239	14.5	6.7	65.6	65.6	20.9
PD00441	PD00441a	Control	Male	148	90	24.1	4.8	0.8	3.3	1.6	2.9	91.5	12.6	6.4	4.3	0.4	164	13.4	NA	68.5	68.5	23.4
PD00442	PD00442a	Control	Female	136	82	27.6	6	1.2	4.1	1.6	2.3	88	12.4	6.1	4.4	0.4	272	13.2	NA	59.2	59.2	23.1
PD00442	PD00442c	Control	Female	144	84	26.7	4.9	1.1	3.1	1.5	1.8	88	13.7	4.4	4.6	0.4	195	13.4	5.7	59.2	74.2	23.1
PD00457	PD00457a	Control	Female	127	86	19	6.6	2.3	4	0.8	1.3	89.8	16	3.5	4.6	0.4	127	13	5	61.2	61.2	20.6
PD00460	PD00460a	Control	Female	156	88	25.1	5.8	2.4	2.7	1.7	1.8	95	12.7	6.2	3.5	0.3	287	12.1	5.5	72.7	72.7	17.8
PD00461	PD00461a	Pre-LN	Male	141	77	22.9	6	1.5	4.2	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	73.8	73.8	11.7
PD00470	PD00470a	Control	Male	151	90	23.9	3.8	1.3	2	1.2	2.3	85.2	14.4	7.6	4.8	0.4	368	14.2	NA	64	64	22.4
PD00470	PD00470c	Control	Male	138	82	27.8	3.5	1	1.8	1.6	1.9	90.4	15.5	5.9	4.6	0.4	203	13.4	5.7	64	74	22.5
PD00471	PD00471a	Control	Female	140	84	26.1	5.9	2.1	3.3	1	1.7	85.3	13.5	4.2	4.7	0.4	243	14.1	NA	61.3	61.3	22.4
PD00471	PD00471c	Control	Female	154	85	29.2	5.7	1.7	3.3	1.6	2.2	84	NA	5	4.5	0.4	187	13.1	NA	61.3	72.2	22.4
PD00476	PD00476a	Control	Male	114	68	30.4	6.7	1.1	4.5	2.3	2.2	89	12.9	6.3	4.7	0.4	225	13.6	4.8	65.5	65.5	20.3
PD00476	PD00476c	Control	Male	110	67	30.3	3.2	0.8	2	1	8.6	87.9	14.4	12.8	4.3	0.4	124	12.8	6.3	65.5	80.6	20.3
PD00493	PD00493b	Pre-LN	Female	174	103	26.4	7	1.9	4.4	1.7	2.7	81.4	13.7	6.8	5.2	0.4	340	14.7	5.6	68	68	4.2
PD00499	PD00499a	Pre-LN	Female	126	81	28.4	7.4	1	5.3	2.3	3.1	91.5	12.6	9.1	4.8	0.4	292	15.3	NA	50.8	50.8	9.1
PD00501	PD00501b	Control	Female	158	96	26.8	6.6	1.5	4.5	1.5	2.3	81	13.3	6	4.5	0.4	256	12.7	5.5	60.7	60.7	19.4
PD00502	PD00502a	Pre-LN	Female	165	91	27.6	6	0.9	1.6	1.1	1.3	94.8	14	4.5	3.9	0.4	253	11.8	5.4	75	75	0.8
PD00529	PD00529a	Control	Female	108	68	23	4.4	2	2.1	0.7	2	88.5	13	5.6	4.4	0.4	167	13.4	NA	65.3	65.3	22.8
PD00537	PD00537a	Control	Female	169	98	31.2	7.4	1.2	4.8	3	2.9	93.8	12.4	8.2	4.3	0.4	276	13.3	NA	63.4	63.4	22.6
PD00537	PD00537c	Control	Female	138	66	30.9	4.2	1.6	1.9	1.6	2.2	94.9	13.8	7.1	4	0.4	210	12.4	5.9	63.4	78.2	22.6
PD00540	PD00540b	Control	Female	148	79	29.2	3.5	1.2	1	2.9	3.1	76.9	18	9.8	5.2	0.4	312	11.8	5.4	53.5	53.5	17.7
PD00540	PD00540c	Control	Female	152	90	27.1	3.9	1	2	2.4	2.5	87	NA	NA	5.3	0.5	197	15.7	5.1	53.5	59.4	17.7
PD00541	PD00541a	Pre-LN	Female	122	76	25.4	5.6	1.1	3.2	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	73.2	73.2	15.3
PD00546	PD00546a	Pre-LN	Female	129	78	24.8	5.4	1.7	3.8	2	2	85.2	14.4	7.6	4.8	0.4	232	14.2	NA	59.3	59.3	4.1
PD00547	PD00547a	Pre-LN	Female	144	84	26.1	6.5	1.1	4.5	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	70.8	70.8	0.7
PD00548	PD00548a	Control	Female	111	70	19.2	4.2	1.3	2.5	1	1.9	87.6	13	6.5	4.1	0.4	225	12.2	5.4	46.4	46.4	5.4
PD00550	PD00550a	Control	Male	150	90	25.8	5.6	0.8	4.2	1.4	1.5	92.4	13.5	7.2	5	0.5	397	16.3	NA	73.3	73.3	10
PD00552	PD00552a	Pre-LN	Female	144	76	22.3	4.8	0.7	3.2	2.1	1	95.5	13.9	5.3	3.5	0.3	329	11.5	5	67.6	67.6	3.8
PD00554	PD00554a	Control	Female	142	88	27.2	5.1	1	2.9	2.7	1.6	85.6	14.6	5.5	4.6	0.4	284	12.1	5.4	58.5	58.5	20.5
PD00556	PD00556a	Control	Male	145	84	25.3	4.8	1.6	2.9	0.7	2.6	83.4	14.5	6.8	4.7	0.4	238	13	5.4	64.8	64.8	20
PD00562	PD00562b	Control	Female	144	82	27.9	6.5	0.8	4.1	3.7	2	87.7	12.7	5.2	5.1	0.4	363	15.4	4.9	52.9	52.9	19.2
PD00562	PD00562c	Control	Female	168	92	26.4	6.3	1.4	3.5	3.3	1.6	91	NA	4.2	5.2	0.5	262	13.4	5	52.9	61.2	19.2
PD00566	PD00566b	Control	Female	134	80	27.7	5.1	1.5	2.7	2.1	2.1	88.4	13.6	5.4	5	0.4	207	14.3	5.7	57.7	57.7	19.7
PD00566	PD00566c	Control	Female	110	71	29	4.8	1.4	2	2.9	2.1	86.9	13.9	6.7	5	0.4	200	14.8	6	57.7	67.6	19.7
PD00580	PD00580b	Control	Female	132	78	25.1	5.4	1.2	3.6	1.5	2.6	90.2	13.1	5.2	4.6	0.4	351	13.2	5.3	67.4	67.4	19.3
PD00580	PD00580c	Control	Female	143	84	25.5	6	1.4	3.8	2	2.1	92	NA	5.1	3.9	0.4	317	11.8	5.4	67.4	74.4	19.3
PD00583	PD00583b	Control	Male	131	72	21.2	7.1	2	4.7	1	1.6	84.2	14	5	5.7	0.4	209	14.8	5	57.7	57.7	19.2
PD00593	PD00593b	Control	Female	128	77	29.1	7.7	2.3	4.9	1.3	1.2	85.7	13.5	3.6	4.6	0.4	166	14	5.1	66.4	66.4	18.9
PD00595	PD00595b	Control	Male	144	75	24.7	9.3	1.6	6.5	2.8	1.9	88.2	14.6	6.3	4.6	0.4	400	14	6	73.5	73.5	18.4
PD00597	PD00597a	Control	Female	130	88	26.5	5.4	1.4	2.8	2.6	2	85.4	13	8.3	4.7	0.4	232	14.2	NA	62.2	62.2	23.8
PD00599	PD00599a	Control	Male	163	92	24.3	5.9	1	3.7	2.7	1.3	95	12.4	6	4.6	0.4	191	14.8	NA	69	69	22.7
PD00600	PD00600a	Pre-LN	Female	156	108	27.4	7.7	1	5.5	2.7	2.4	88.2	13.4	7.7	4.6	0.4	244	14.3	NA	68.2	68.2	12.7
PD00620	PD00620a	Pre-LN	Female	134	68	19.3	5.1	1.4	3.1	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	73.9	73.9	5.2
PD00621	PD00621b	Control	Male	113	66	26.5	6	1.1	3.5	3.1	1.5	90	13	4.7	4.8	0.4	201	13.8	5.7	69.2	69.2	10.4
PD00621	PD00621c	Control	Male	127	69	24.6	4.1	1.4	2	1.7	1.3	87	NA	6.6	4.4	0.4	201	13.1	5.7	69.2	77.4	10.4
PD00622	PD00622b	Control	Female	102	64	19.7	4.4	1.6	2.4	1	1.4	92.3	15.2	4.8	4.1	0.4	187	13.2	5	52.7	52.7	18.7
PD00624	PD00624a	Pre-LN	Female	122	76	20.8	6.3	1.4	4.6	0.7	2.2	88.2	12.4	5.5	4.5	0.4	420	13.1	4.8	44.5	44.5	14.3
PD00624	PD00624c	Pre-LN	Male	118	72	26.8	4.8	1.4	3	0.9	1.5	92.8	13.9	4.8	4.4	0.4	246	13.9	5.6	44.5	58.4	14.3
PD00626	PD00626a	Pre-LN	Female	124	76	35.1	4.6	1.1	3.1	1	2	80.1	12.9	8.6	4.5	0.4	310	12	5.8	50.2	50.2	13.3
PD00646	PD00646b	Control	Female	116	65	23	4.6	2.1	2.3	0.6	1.5	93.9	13.3	5.3	4.5	0.4	160	14.4	5.7	64.6	64.6	19.4
PD00652	PD00652b	Control	Male	148	92	21	4.5	0.8	3.2	1.3	1.7	89.6	13.4	7.4	4.8	0.4	255	15.1	4.6	64.3	64.3	19.2
PD00656	PD00656b	Control	Female	104	58	22.4	6.3	0.8	5	1.2	1.9	99.1	15.4	5.2	4.2	0.4	194	12.9	4.8	62.8	62.8	17.6
PD00659	PD00659a	Pre-LN	Male	155	86	26.2	8.2	1.6	5.6	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	69	69	4.5
PD00659	PD00659b	Pre-LN	Male	169	89	26.3	5	0.9	3	2.5	26.6	86.9	15.6	33.4	4.6	0.4	104	13	7.2	69	73.4	4.5
PD00663	PD00663a	Pre-LN	Female	122	70	26.3	7.4	1.9	2.1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	67.6	67.6	14.1
PD00664	PD00664a	Pre-LN	Male	155	80	27.4	4.6	1.1	2.5	2.2	2.1	89	13.3	6.4	4.1	0.4	153	13.1	6	75.9	75.9	3.1
PD00665	PD00665b	Control	Male	116	65	27.9	6.3	1.6	3.7	2.2	3	89.7	15.6	8.4	5.1	0.5	224	13.9	5.2	74.9	74.9	17.3
PD00673	PD00673a	Pre-LN	Male	128	76	27.6	6	1	4.5	1	2.5	89.4	13.4	6.3	5	0.4	208	15.4	NA	65.3	65.3	19.4
PD00690	PD00690a	Control	Male	130	80	30.3	5.7	0.8	3.6	2.9	1.9	90.8	12.7	6.1	4.7	0.4	246	14.6	5.7	54.9	54.9	21.6
PD00692	PD00692b	Control	Female	142	88	20.9	6.7	2.6	3.7	0.9	1.7	85.8	14.3	5.1	4.5	0.4	322	12.6	5.8	66.3	66.3	19.6
PD00695	PD00695a	Pre-LN	Male	154	90																	

Appendix 14: Driver mutations in pre-lymphoid neoplasm cases and controls

Cohort	Individual ID	Sample ID	Group	Type	Chromosome	Position	WT	MT	VAF	Gene	Protein	Effect
Discovery	PD00004	PD00004b	Case	sub	17	7577082	C	T	0.0231	TP53	p.E286K	Missense
Discovery	PD00017	PD00017b	Case	sub	2	25457242	C	T	0.0167	DNMT3A	p.R882H	Missense
Discovery	PD00035	PD00035b	Case	sub	4	106196794	T	A	0.16	TET2	p.C1709*	Nonsense
Discovery	PD00063	PD00063a	Case	sub	12	25378561	G	A	0.099	KRAS	p.A146V	Missense
Discovery	PD00089	PD00089b	Case	sub	11	108216546	G	T	0.12	ATM	p.R2832L	Missense
Discovery	PD00107	PD00107c	Case	sub	2	25457242	C	T	0.0069	DNMT3A	p.R882H	Missense
Discovery	PD00110	PD00110b	Case	indel	2	25459847	C	CATAA	0.0682	DNMT3A	p.K812fs*44	Frameshift
Discovery	PD00110	PD00110b	Case	sub	2	25467091	A	G	0.042	DNMT3A	p.L595P	Missense
Discovery	PD00179	PD00179b	Case	sub	1	115258747	C	G	0.0108	NRAS	p.G12A	Missense
Discovery	PD00179	PD00179b	Case	sub	4	106196551	T	G	0.22	TET2	p.Y1628*	Nonsense
Discovery	PD00179	PD00179b	Case	sub	7	140453136	A	T	0.0071	BRAF	p.V600E	Missense
Discovery	PD00185	PD00185b	Case	sub	2	25463289	T	C	0.0282	DNMT3A	p.Y735C	Missense
Discovery	PD00186	PD00186b	Case	indel	12	49434894	GC	G	0.0855	KMT2D	p.A2220fs*44	Frameshift
Discovery	PD00197	PD00197b	Case	sub	2	25457242	C	T	0.22	DNMT3A	p.R882H	Missense
Discovery	PD00197	PD00197b	Case	indel	4	106156452	AG	A	0.0213	TET2	p.E452fs*34	Frameshift
Discovery	PD00197	PD00197b	Case	indel	4	106197132	C	CA	0.132	TET2	p.N1823fs*1	Frameshift
Discovery	PD00199	PD00199b	Case	sub	21	44514780	C	T	0.0027	U2AF1	p.R156H	Missense
Discovery	PD00199	PD00199b	Case	indel	6	26156839	AG	A	0.0147	HIST1H1E	p.K75fs*14	Frameshift
Discovery	PD00200	PD00200b	Case	sub	2	25463286	C	T	0.0412	DNMT3A	p.R736H	Missense
Discovery	PD00226	PD00226b	Case	sub	2	25466790	G	C	0.097	DNMT3A	p.S638C	Missense
Discovery	PD00241	PD00241b	Case	sub	2	25458661	T	C	0.086	DNMT3A	p.N838D	Missense
Discovery	PD00241	PD00241b	Case	sub	2	25466800	G	A	0.0247	DNMT3A	p.R635W	Missense
Discovery	PD00254	PD00254b	Case	indel	11	108121593	CA	C	0.428	ATM	p.K468fs*5	Frameshift
Discovery	PD00273	PD00273b	Case	indel	2	25463206	C	CGTTA	0.04	DNMT3A	p.V763fs*1	Frameshift
Discovery	PD00282	PD00282c	Case	indel	11	108202611	CTCTAGAAAT	C	0.3761	ATM	p.R2547_S2549delRIS	Inframe
Discovery	PD00285	PD00285a	Case	indel	17	58740541	GACTTT	G	0.0815	PPM1D	p.T483fs*4	Frameshift
Discovery	PD00297	PD00297b	Case	sub	2	61719472	C	T	0.0105	XPO1	p.E571K	Missense
Discovery	PD00301	PD00301b	Case	indel	4	106193849	G	GA	0.1179	TET2	p.R1440fs*38	Frameshift
Discovery	PD00310	PD00310c	Case	sub	7	140481417	C	A	0.0123	BRAF	p.G464V	Missense
Discovery	PD00330	PD00330c	Case	sub	2	25457209	C	G	0.0196	DNMT3A	p.W893S	Missense
Discovery	PD00330	PD00330c	Case	sub	7	124503682	T	C	0.11	POT1	p.K90E	Missense
Discovery	PD00330	PD00330c	Case	sub	9	139391843	G	C	0.076	NOTCH1	p.Y2116*	Nonsense
Discovery	PD00332	PD00332b	Case	sub	2	25463289	T	C	0.016	DNMT3A	p.Y735C	Missense
Discovery	PD00338	PD00338b	Case	sub	2	25457242	C	T	0.0136	DNMT3A	p.R882H	Missense
Discovery	PD00351	PD00351a	Case	sub	2	25467134	A	T	0.22	DNMT3A	p.W581R	Missense
Discovery	PD00455	PD00455b	Case	sub	4	106164829	T	G	0.0204	TET2	p.W1233G	Missense
Discovery	PD00561	PD00561b	Case	sub	2	25457242	C	T	0.0045	DNMT3A	p.R882H	Missense
Discovery	PD00588	PD00588b	Case	sub	17	7577120	C	T	0.0138	TP53	p.R273H	Missense
Discovery	PD00607	PD00607b	Case	sub	2	25466799	C	T	0.0121	DNMT3A	p.R635Q	Missense
Discovery	PD00666	PD00666b	Case	indel	2	25469976	GGT	G	0.1547	DNMT3A	p.H355fs*37	Frameshift
Discovery	PD00666	PD00666b	Case	indel	4	106193849	G	GA	0.0642	TET2	p.R1440fs*38	Frameshift
Discovery	PD00684	PD00684b	Case	sub	17	7578394	T	C	0.018	TP53	p.H179R	Missense
Discovery	PD00711	PD00711b	Case	sub	2	25467073	C	T	0.12	DNMT3A	p.W601*	Nonsense
Discovery	PD00711	PD00711b	Case	indel	2	25468894	ATGTTCCGG	A	0.0609	DNMT3A	p.R488fs*1	Frameshift
Discovery	PD00711	PD00711b	Case	indel	4	106194058	AG	A	0.0417	TET2	p.A1508fs*63	Frameshift
Discovery	PD00715	PD00715c	Case	indel	7	151882659	TC	T	0.041	KMT2C	p.E1689fs*28	Frameshift
Discovery	PD00719	PD00719c	Case	sub	11	108196083	A	T	0.047	ATM	p.K2207*	Nonsense
Discovery	PD00723	PD00723b	Case	sub	4	106196546	C	T	0.0215	TET2	p.Q1627*	Nonsense
Discovery	PD00764	PD00764b	Case	sub	2	25463289	T	C	0.0089	DNMT3A	p.Y735C	Missense
Discovery	PD00793	PD00793b	Case	sub	11	119149251	G	A	0.0137	CBL	p.R420Q	Missense
Discovery	PD00793	PD00793b	Case	sub	2	25470546	T	A	0.0304	DNMT3A	p.I310F	Missense
Discovery	PD00795	PD00795b	Case	sub	2	25468202	G	G	0.14	DNMT3A	p.?	Essential splice
Discovery	PD00820	PD00820b	Case	sub	17	74732959	G	A	0.0127	SRSF2	p.P95L	Missense
Discovery	PD00820	PD00820b	Case	sub	2	25463289	T	C	0.0037	DNMT3A	p.Y735C	Missense
Discovery	PD00021	PD00021a	Control	sub	2	25457243	G	A	0.0078	DNMT3A	p.R882C	Missense
Discovery	PD00068	PD00068a	Control	sub	12	25398284	C	G	0.0051	KRAS	p.G12A	Missense
Discovery	PD00068	PD00068a	Control	sub	2	25468935	T	A	0.045	DNMT3A	p.?	Essential splice
Discovery	PD00070	PD00070c	Control	sub	2	25457176	G	A	0.0125	DNMT3A	p.P904L	Missense
Discovery	PD00071	PD00071b	Control	sub	11	108186841	G	A	0.028	ATM	p.?	Essential splice
Discovery	PD00159	PD00159b	Control	sub	11	119148991	G	A	0.0181	CBL	p.C404Y	Missense
Discovery	PD00259	PD00259c	Control	sub	2	25463283	A	T	0.0304	DNMT3A	p.L737H	Missense
Discovery	PD00259	PD00259c	Control	indel	4	106156403	AC	A	0.0188	TET2	p.H436fs*11	Frameshift
Discovery	PD00385	PD00385c	Control	sub	4	106190898	C	G	0.038	TET2	p.S1392R	Missense
Discovery	PD00421	PD00421c	Control	sub	2	25463182	G	A	0.0077	DNMT3A	p.R771*	Nonsense
Discovery	PD00431	PD00431b	Control	sub	2	25463234	C	T	0.049	DNMT3A	p.W753*	Nonsense
Discovery	PD00465	PD00465b	Control	sub	2	25463566	C	T	0.0689	DNMT3A	p.G706R	Missense
Discovery	PD00571	PD00571c	Control	sub	2	25467478	T	C	0.0095	DNMT3A	p.Y533C	Missense
Discovery	PD00651	PD00651b	Control	sub	2	25457176	G	A	0.0169	DNMT3A	p.P904L	Missense
Discovery	PD00683	PD00683a	Control	sub	2	25463289	T	C	0.0736	DNMT3A	p.Y735C	Missense
Discovery	PD00688	PD00688a	Control	sub	2	25463289	T	C	0.0149	DNMT3A	p.Y735C	Missense
Discovery	PD00745	PD00745a	Control	sub	2	25457242	C	T	0.0108	DNMT3A	p.R882H	Missense
Discovery	PD00751	PD00751a	Control	sub	2	25467467	A	G	0.0109	DNMT3A	p.C537R	Missense
Discovery	PD00776	PD00776c	Control	sub	2	25463601	T	C	0.0378	DNMT3A	p.?	Essential splice
Discovery	PD00895	PD00895c	Control	sub	11	119148919	T	C	0.0057	CBL	p.L380P	Missense
Discovery	PD00928	PD00928c	Control	indel	2	25469539	GC	G	0.033	DNMT3A	p.A410fs*241	Frameshift
Discovery	PD00930	PD00930c	Control	sub	2	25470575	A	C	0.0547	DNMT3A	p.L300R	Missense
Discovery	PD00930	PD00930c	Control	sub	4	106158563	T	C	0.031	TET2	p.L1155S	Missense
Extension	PD00027	PD00027a	NA	sub	2	25463586	C	T	0.21	DNMT3A	p.G699D	Missense
Extension	PD00039	PD00039b	NA	sub	2	25457243	G	T	0.011	DNMT3A	p.R882S	Missense
Extension	PD00050	PD00050b	NA	sub	2	25467448	C	G	0.11	DNMT3A	p.G543A	Missense
Extension	PD00117	PD00117c	NA	sub	20	31024770	A	T	0.0168	ASXL1	p.K1419*	Nonsense
Extension	PD00122	PD00122b	NA	indel	4	106180853	AC	A	0.0138	TET2	p.Y1295fs*68	Frameshift
Extension	PD00161	PD00161c	NA	sub	4	106196491	T	A	0.0312	TET2	p.Y1608*	Nonsense
Extension	PD00165	PD00165c	NA	sub	2	25462018	T	C	0.18	DNMT3A	p.N797D	Missense
Extension	PD00165	PD00165c	NA	sub	2	25466796	A	C	0.0139	DNMT3A	p.V636G	Missense
Extension	PD00170	PD00170c	NA	sub	2	25457242	C	T	0.0301	DNMT3A	p.R882H	Missense
Extension	PD00180	PD00180c	NA	sub	2	25457243	G	A	0.0876	DNMT3A	p.R882C	Missense

Extension	PD00307	PD00307c	NA	indel	17	58740653	CA	C	0.3164	PPM1D	p.M521fs*1	Frameshift
Extension	PD00398	PD00398c	NA	sub	17	74732959	G	A	0.0354	SRSF2	p.P95L	Missense
Extension	PD00398	PD00398c	NA	sub	2	25467448	C	T	0.0061	DNMT3A	p.G543D	Missense
Extension	PD00418	PD00418c	NA	sub	2	25462075	C	T	0.0272	DNMT3A	p.V778M	Missense
Extension	PD00462	PD00462a	NA	sub	2	25457242	C	T	0.0064	DNMT3A	p.R882H	Missense
Extension	PD00470	PD00470c	NA	indel	20	31022951	TC	T	0.0306	ASXL1	p.I814fs*4	Frameshift
Extension	PD00537	PD00537c	NA	sub	2	25470583	C	A	0.3	DNMT3A	p.W297C	Missense
Extension	PD00540	PD00540c	NA	sub	4	106196823	G	A	0.0133	TET2	p.G1719E	Missense
Extension	PD00592	PD00592c	NA	sub	2	25463182	G	A	0.0254	DNMT3A	p.R771*	Nonsense
Extension	PD00605	PD00605c	NA	indel	17	58740684	CT	C	0.1781	PPM1D	p.P531fs*8	Frameshift
Extension	PD00636	PD00636b	NA	indel	2	25469967	CCTGGTGGAAAC	A	0.0613	DNMT3A	p.S352fs*48	Frameshift
Extension	PD00648	PD00648c	NA	indel	20	31021175	TC	T	0.0169	ASXL1	p.S392fs*1	Frameshift
Extension	PD00655	PD00655b	NA	indel	2	25466846	AG	A	0.0604	DNMT3A	p.P619fs*32	Frameshift
Extension	PD00671	PD00671a	NA	sub	2	25467497	G	A	0.0476	DNMT3A	p.Q527*	Nonsense
Extension	PD00718	PD00718c	NA	indel	2	25463566	CA	C	0.0739	DNMT3A	p.I705fs*74	Frameshift
Extension	PD00732	PD00732b	NA	sub	2	25457242	C	T	0.0139	DNMT3A	p.R882H	Missense
Extension	PD00734	PD00734c	NA	sub	11	119149280	G	A	0.1	CBL	p.V430M	Missense
Extension	PD00736	PD00736a	NA	sub	17	29562934	A	G	0.0305	NF1	p.?	Essential splice
Extension	PD00736	PD00736a	NA	sub	9	5073770	G	T	0.0338	JAK2	p.V617F	Missense
Extension	PD00740	PD00740c	NA	sub	4	106180868	A	G	0.14	TET2	p.K1299R	Missense
Extension	PD00748	PD00748c	NA	sub	2	25457242	C	T	0.0078	DNMT3A	p.R882H	Missense
Extension	PD00748	PD00748c	NA	indel	2	25467039	G	GT	0.0656	DNMT3A	p.N612fs*7	Frameshift
Extension	PD00772	PD00772c	NA	sub	2	25466852	C	T	0.0494	DNMT3A	p.?	Essential splice
Extension	PD00784	PD00784c	NA	sub	4	106197374	C	T	0.048	TET2	p.Q1903*	Nonsense
Extension	PD00807	PD00807b	NA	sub	21	44524456	G	A	0.0107	U2AF1	p.S34F	Missense
Extension	PD00828	PD00828c	NA	sub	12	25398285	C	T	0.0118	KRAS	p.G12S	Missense
Extension	PD00828	PD00828c	NA	sub	2	25467484	T	C	0.0251	DNMT3A	p.D531G	Missense
Extension	PD00832	PD00832c	NA	sub	2	25463170	C	T	0.0071	DNMT3A	p.?	Essential splice
Extension	PD00832	PD00832c	NA	sub	2	25470579	T	A	0.0129	DNMT3A	p.K2299*	Nonsense
Extension	PD00834	PD00834c	NA	sub	2	25457243	G	T	0.014	DNMT3A	p.R882S	Missense
Extension	PD00837	PD00837c	NA	indel	17	58740653	CA	C	0.1576	PPM1D	p.M521fs*1	Frameshift
Extension	PD00850	PD00850c	NA	sub	X	129148664	G	T	0.0496	BCOR1L	p.R639L	Missense
Extension	PD00858	PD00858c	NA	sub	2	25463289	T	C	0.0109	DNMT3A	p.Y735C	Missense
Extension	PD00863	PD00863c	NA	sub	2	198267359	C	A	0.0067	SF3B1	p.K666N	Missense
Extension	PD00869	PD00869c	NA	indel	4	106156933	TGGGGGGCTCC	C	0.0425	TET2	p.P612fs*21	Frameshift
Extension	PD00872	PD00872c	NA	sub	21	44524456	G	A	0.0065	U2AF1	p.S34F	Missense
Extension	PD00884	PD00884c	NA	sub	2	25463182	G	A	0.0146	DNMT3A	p.R771*	Nonsense
Extension	PD00885	PD00885c	NA	sub	4	106193977	C	G	0.0141	TET2	p.S1480C	Missense
Extension	PD00887	PD00887c	NA	indel	2	25471082	CA	C	0.0536	DNMT3A	p.V227fs*89	Frameshift
Extension	PD00900	PD00900c	NA	sub	20	31021295	C	T	0.092	ASXL1	p.Q432*	Nonsense
Extension	PD00913	PD00913c	NA	sub	2	25457163	A	C	0.0321	DNMT3A	p.Y908*	Nonsense
Extension	PD00927	PD00927c	NA	indel	2	25505536	CACCTGCAAAATC	C	0.0879	DNMT3A	p.?	Essential splice
Extension	PD00943	PD00943c	NA	sub	2	25466800	G	A	0.0105	DNMT3A	p.R635W	Missense
Extension	PD00957	PD00957c	NA	sub	10	112333508	G	T	0.0601	SMC3	p.?	Essential splice
Extension	PD00957	PD00957c	NA	sub	4	55604646	G	C	0.0237	KIT	p.D952H	Missense
Extension	PD00968	PD00968c	NA	sub	2	25457242	C	T	0.011	DNMT3A	p.R882H	Missense
Extension	PD00969	PD00969c	NA	sub	2	25463182	G	A	0.0201	DNMT3A	p.R771*	Nonsense
Extension	PD00970	PD00970c	NA	sub	2	25457209	C	T	0.0277	DNMT3A	p.W893*	Nonsense
Extension	PD00972	PD00972c	NA	sub	2	25457242	C	T	0.0078	DNMT3A	p.R882H	Missense
Validation	PD00008	PD00008a	Case	sub	2	25457243	G	A	0.0319	DNMT3A	p.R882C	Missense
Validation	PD00012	PD00012a	Case	sub	6	41903706	G	C	0.13	CCND3	p.P284R	Missense
Validation	PD00028	PD00028a	Case	sub	2	25457243	G	A	0.13	DNMT3A	p.R882C	Missense
Validation	PD00052	PD00052a	Case	sub	17	7578190	T	C	0.055	TP53	p.Y220C	Missense
Validation	PD00053	PD00053a	Case	indel	1	120458435	T	TG	0.0534	NOTCH2	p.I2304fs*9	Frameshift
Validation	PD00105	PD00105a	Case	sub	2	25457176	G	A	0.057	DNMT3A	p.P904L	Missense
Validation	PD00133	PD00133a	Case	indel	2	25468914	CA	C	0.0154	DNMT3A	p.V483fs*168	Frameshift
Validation	PD00169	PD00169a	Case	sub	4	106196580	C	G	0.0132	TET2	p.S1638*	Nonsense
Validation	PD00181	PD00181a	Case	sub	2	25463182	G	A	0.068	DNMT3A	p.R771*	Nonsense
Validation	PD00290	PD00290a	Case	sub	9	5073770	G	T	0.0218	JAK2	p.V617F	Missense
Validation	PD00315	PD00315a	Case	sub	2	198266834	T	C	0.0213	SF3B1	p.K700E	Missense
Validation	PD00375	PD00375a	Case	sub	1	36937219	C	T	0.419	CSF3R	p.R367Q	Missense
Validation	PD00435	PD00435a	Case	sub	4	106164778	C	T	0.0269	TET2	p.R1216*	Nonsense
Validation	PD00461	PD00461a	Case	sub	17	40474482	G	A	0.035	STAT3	p.Y640F	Missense
Validation	PD00541	PD00541a	Case	sub	2	25457176	T	A	0.0072	DNMT3A	p.P904L	Missense
Validation	PD00546	PD00546a	Case	sub	4	106197318	C	T	0.093	TET2	p.T1884I	Missense
Validation	PD00547	PD00547a	Case	sub	2	61719471	T	C	0.0285	XPO1	p.E571G	Missense
Validation	PD00600	PD00600a	Case	sub	2	25463289	T	C	0.0077	DNMT3A	p.Y735C	Missense
Validation	PD00620	PD00620a	Case	sub	X	39921510	G	C	0.053	BCOR	p.S1437*	Nonsense
Validation	PD00659	PD00659a	Case	sub	2	25457242	C	T	0.11	DNMT3A	p.R882H	Missense
Validation	PD00664	PD00664a	Case	sub	9	5073770	G	T	0.0123	JAK2	p.V617F	Missense
Validation	PD00695	PD00695a	Case	indel	2	25463554	AG	A	0.0669	DNMT3A	p.C710fs*69	Frameshift
Validation	PD00708	PD00708a	Case	sub	4	106180865	G	A	0.045	TET2	p.C1298Y	Missense
Validation	PD00769	PD00769a	Case	sub	17	7574003	G	A	0.11	TP53	p.R342*	Nonsense
Validation	PD00769	PD00769a	Case	indel	9	139390648	CAG	C	0.0696	NOTCH1	p.P2514fs*4	Frameshift
Validation	PD00789	PD00789a	Case	indel	2	25464532	TG	T	0.0306	DNMT3A	p.Y660fs*1	Frameshift
Validation	PD00798	PD00798a	Case	sub	4	106197377	C	T	0.056	TET2	p.H1904Y	Missense
Validation	PD00815	PD00815a	Case	sub	11	108216597	G	C	0.044	ATM	p.R2849P	Missense
Validation	PD00255	PD00255b	Control	sub	2	25462077	G	A	0.0181	DNMT3A	p.P777L	Missense
Validation	PD00261	PD00261b	Control	sub	2	25457243	G	T	0.0065	DNMT3A	p.R882S	Missense
Validation	PD00333	PD00333c	Control	sub	17	7578268	A	C	0.078	TP53	p.L194R	Missense
Validation	PD00387	PD00387a	Control	sub	2	25457242	C	T	0.0133	DNMT3A	p.R882H	Missense
Validation	PD00408	PD00408b	Control	sub	4	106180794	G	C	0.0283	TET2	p.Q1274H	Missense
Validation	PD00471	PD00471a	Control	sub	2	25467449	C	A	0.0205	DNMT3A	p.G543C	Missense
Validation	PD00471	PD00471a	Control	sub	4	106180931	G	A	0.095	TET2	p.?	Essential splice
Validation	PD00476	PD00476a	Control	sub	7	140453155	C	T	0.0027	BRAF	p.D594N	Missense
Validation	PD00554	PD00554a	Control	sub	17	7577117	A	T	0.0145	TP53	p.V274D	Missense
Validation	PD00566	PD00566c	Control	indel	9	21974794	CATGCTGCTCCCC	A	0.0743	CDKN2A	p.A4 P11delAAGSSMEP	Inframe
Validation	PD00597	PD00597a	Control	indel	2	25505536	CACCTGCAAAATC	C	0.0413	DNMT3A	p.?	Essential splice
Validation	PD00809	PD00809a	Control	sub	2	25457209	C	T	0.0143	DNMT3A	p.W893*	Nonsense
Validation	PD00809	PD00809a	Control	sub	4	55593639	G	T	0.0059	KIT	p.V569F	Missense
Validation	PD00810	PD00810c	Control	sub	20	31022592	C	T	0.0087	ASXL1	p.R693*	Nonsense
Validation	PD00810	PD00810c	Control	indel	4	106155537	TA	T	0.0281	TET2	p.K147fs*5	Frameshift
Validation	PD00810	PD00810c	Control	indel	4	106197288	AG	A	0.0389	TET2	p.E1874fs*13	Frameshift

Validation	PD00830	PD00830c	Control	sub	2	25463170	C	T	0.0075	DNMT3A	p.?	Essential splice
Validation	PD00911	PD00911c	Control	sub	20	31021295	C	T	0.11	ASXL1	p.Q432*	Nonsense
Validation	PD00918	PD00918c	Control	sub	2	25466800	G	A	0.0102	DNMT3A	p.R635W	Missense
Serial sample	PD00003	PD00003b	NA	sub	12	25398281	C	T	0.0104	KRAS	p.G13D	Missense
Serial sample	PD00004	PD00004a	NA	sub	17	7577082	C	T	0.0143	TP53	p.E286K	Missense
Serial sample	PD00012	PD00012b	NA	sub	6	41903706	G	C	0.27	CCND3	p.P284R	Missense
Serial sample	PD00035	PD00035a	NA	sub	4	106196794	T	A	0.083	TET2	p.C1709*	Nonsense
Serial sample	PD00068	PD00068c	NA	sub	2	25468935	T	A	0.075	DNMT3A	p.?	Essential splice
Serial sample	PD00107	PD00107b	NA	sub	2	25457242	C	T	0.0083	DNMT3A	p.R882H	Missense
Serial sample	PD00166	PD00166c	NA	sub	2	25469632	C	T	0.0271	DNMT3A	p.R379H	Missense
Serial sample	PD00181	PD00181b	NA	sub	2	25463182	G	A	0.0443	DNMT3A	p.R771*	Nonsense
Serial sample	PD00186	PD00186a	NA	indel	12	49434894	GC	G	0.1189	KMT2D	p.A2220fs*44	Frameshift
Serial sample	PD00199	PD00199a	NA	sub	21	44514780	C	T	0.0087	U2AF1	p.R156H	Missense
Serial sample	PD00200	PD00200a	NA	sub	2	25463286	C	T	0.0316	DNMT3A	p.R736H	Missense
Serial sample	PD00226	PD00226a	NA	sub	2	25466790	G	C	0.078	DNMT3A	p.S638C	Missense
Serial sample	PD00241	PD00241c	NA	indel	17	58740401	A	AT	0.0768	PPM1D	p.P437fs*6	Frameshift
Serial sample	PD00241	PD00241c	NA	sub	2	25458661	T	C	0.15	DNMT3A	p.N838D	Missense
Serial sample	PD00241	PD00241c	NA	sub	2	25466800	G	A	0.0347	DNMT3A	p.R635W	Missense
Serial sample	PD00282	PD00282b	NA	indel	11	108202611	CTCTAGAATT	C	0.3809	ATM	p.R2547_S2549delRIS	Inframe
Serial sample	PD00310	PD00310a	NA	sub	7	140481417	C	A	0.0035	BRAF	p.G464V	Missense
Serial sample	PD00310	PD00310b	NA	sub	7	140481417	C	A	0.0077	BRAF	p.G464V	Missense
Serial sample	PD00315	PD00315b	NA	sub	11	108117757	T	G	0.0512	ATM	p.I323R	Missense
Serial sample	PD00315	PD00315b	NA	sub	11	108203543	C	T	0.0649	ATM	p.Q2615*	Nonsense
Serial sample	PD00315	PD00315b	NA	sub	2	61719471	T	A	0.0128	XPO1	p.E571V	Missense
Serial sample	PD00315	PD00315b	NA	sub	2	198266834	T	C	0.23	SF3B1	p.K700E	Missense
Serial sample	PD00330	PD00330b	NA	sub	2	25457209	C	G	0.0135	DNMT3A	p.W893S	Missense
Serial sample	PD00332	PD00332a	NA	sub	2	25463289	T	C	0.0038	DNMT3A	p.Y735C	Missense
Serial sample	PD00471	PD00471c	NA	sub	2	25467449	C	A	0.0071	DNMT3A	p.G543C	Missense
Serial sample	PD00471	PD00471c	NA	sub	4	106180931	G	A	0.22	TET2	p.?	Essential splice
Serial sample	PD00476	PD00476c	NA	sub	17	7577538	C	G	0.19	TP53	p.R248P	Missense
Serial sample	PD00476	PD00476c	NA	sub	6	41903688	A	G	0.21	CCND3	p.I290T	Missense
Serial sample	PD00476	PD00476c	NA	sub	7	140453155	C	T	0.24	BRAF	p.D594N	Missense
Serial sample	PD00561	PD00561c	NA	sub	2	25457242	C	T	0.11	DNMT3A	p.R882H	Missense
Serial sample	PD00659	PD00659b	NA	indel	16	3781420	TG	T	0.2509	CREBBP	p.I1649fs*95	Frameshift
Serial sample	PD00659	PD00659b	NA	sub	2	25457242	C	T	0.055	DNMT3A	p.R882H	Missense
Serial sample	PD00659	PD00659b	NA	sub	6	41903710	T	C	0.078	CCND3	p.T283A	Missense
Serial sample	PD00666	PD00666a	NA	indel	2	25469976	GGT	G	0.1158	DNMT3A	p.H355fs*37	Frameshift
Serial sample	PD00666	PD00666c	NA	indel	2	25469976	GGT	G	0.0549	DNMT3A	p.H355fs*37	Frameshift
Serial sample	PD00666	PD00666c	NA	sub	2	198266834	T	C	0.31	SF3B1	p.K700E	Missense
Serial sample	PD00666	PD00666c	NA	indel	4	106193849	G	GA	0.0465	TET2	p.R1440fs*38	Frameshift
Serial sample	PD00793	PD00793c	NA	sub	11	119149251	G	A	0.0274	CBL	p.R420Q	Missense
Serial sample	PD00793	PD00793c	NA	sub	2	25470546	T	A	0.1	DNMT3A	p.I310F	Missense
Serial sample	PD00795	PD00795c	NA	sub	2	25468202	C	G	0.069	DNMT3A	p.?	Essential splice
Serial sample	PD00820	PD00820a	NA	sub	17	74732959	G	A	0.0069	SRSF2	p.P95L	Missense
Serial sample	PD00820	PD00820a	NA	sub	2	25463289	T	C	0.0097	DNMT3A	p.Y735C	Missense

## Appendix 15: Lymphoid neoplasm risk prediction model coefficients

Cox proportional hazards model trained on the discovery cohort

Variable	Coefficient	P value	Adjusted P value
ATM	0.946	5.45E-09	1.25E-07
BRAF	2.996	8.01E-19	1.84E-17
CBL	2.341	1.57E-04	3.61E-03
DNMT3A	0.861	2.26E-03	5.20E-02
KMT2D	3.691	3.15E-05	7.23E-04
KRAS	3.621	3.45E-05	7.93E-04
SRSF2	2.962	4.94E-21	1.14E-19
TET2	2.408	8.83E-12	2.03E-10
TP53	3.982	1.16E-29	2.68E-28
U2AF1	2.718	2.16E-18	4.97E-17
TC	-0.222	1.51E-04	3.48E-03
Diastolic BP	0.129	2.17E-01	1.00E+00
HbA1c	-0.037	6.62E-01	1.00E+00
HDL	-0.475	2.91E-03	6.69E-02
LDL	-0.047	5.66E-01	1.00E+00
LYM	0.355	5.14E-03	1.18E-01
MCV	0.131	2.15E-02	4.94E-01
RBC	-0.301	6.28E-02	1.00E+00
RDW	-0.243	9.85E-02	1.00E+00
Systolic BP	-0.094	5.48E-01	1.00E+00
WBC	0.144	2.83E-01	1.00E+00
Gender	-0.323	1.79E-02	4.12E-01
Age	0.086	3.86E-01	1.00E+00

Cox proportional hazards model trained on validation cohort

Variable	Coefficient	P value	Adjusted P value
ASXL1	0.472	4.49E-01	1.00E+00
DNMT3A	2.214	8.38E-05	1.51E-03
JAK2	1.651	1.68E-04	3.03E-03
TET2	0.857	1.01E-01	1.00E+00
TP53	1.642	6.90E-03	1.24E-01
TC	-0.092	3.27E-01	1.00E+00
Diastolic BP	0.031	5.45E-01	1.00E+00
HbA1c	-0.044	7.17E-01	1.00E+00
HDL	-0.284	1.47E-02	2.65E-01
LDL	0.165	9.53E-02	1.00E+00
LYM	0.097	4.28E-01	1.00E+00
MCV	-0.084	4.57E-05	8.23E-04
RBC	-0.031	7.96E-01	1.00E+00
RDW	0.042	3.70E-01	1.00E+00
Systolic BP	0.180	1.97E-02	3.55E-01
WBC	0.151	4.03E-02	7.26E-01
Gender	0.143	2.13E-01	1.00E+00
Age	0.078	5.03E-01	1.00E+00

TC, total cholesterol; BP, blood pressure; HDL, high-density lipoprotein; LDL, low density lipoprotein; LYM, lymphocytes; width; WBC, white blood cells  
MCV, mean corpuscular volume; RBC, red cell distribution

Cox proportional hazards model trained on combined cohort

Variable	Coefficient	P value	Adjusted P value
ASXL1	0.362	6.32E-01	1.00E+00
ATM	0.951	1.33E-09	3.72E-08
BRAF	2.639	2.31E-18	6.46E-17
CBL	1.995	3.99E-04	1.12E-02
DNMT3A	1.192	8.74E-06	2.45E-04
JAK2	3.112	1.26E-28	3.53E-27
KMT2D	3.315	6.36E-05	1.78E-03
KRAS	3.579	1.59E-05	4.46E-04
NOTCH1	3.747	1.71E-06	4.78E-05
SRSF2	2.550	1.39E-17	3.90E-16
TET2	1.700	1.23E-06	3.43E-05
TP53	1.888	2.25E-03	6.31E-02
U2AF1	2.392	3.12E-18	8.74E-17
XPO1	3.228	1.92E-31	5.38E-30
TC	-0.198	1.12E-03	3.14E-02
Diastolic BP	0.120	2.51E-01	1.00E+00
HbA1c	-0.047	5.71E-01	1.00E+00
HDL	-0.544	9.67E-05	2.71E-03
LDL	0.035	6.04E-01	1.00E+00
LYM	0.258	1.61E-02	4.52E-01
MCV	0.002	9.72E-01	1.00E+00
RBC	-0.283	4.19E-02	1.00E+00
RDW	-0.150	2.90E-01	1.00E+00
Systolic BP	0.162	2.76E-01	1.00E+00
WBC	0.286	5.14E-02	1.00E+00
Gender	-0.142	1.90E-01	1.00E+00
Age	0.115	1.58E-01	1.00E+00