

**Supplemental Table 1. Patient characteristics.**

Pt #	Age years	Sex	# Prior Rx	WBC K/ $\mu$ l of blood	% Lym in blood	$\beta$ 2M $\mu$ g/ml	LDH $\mu$ g/ml	RAI stage	ZAP 70 status	IGHV status	% CD38 Positive cells	Cytogenetics
3	58	F	0	114.8	94	3.6	876	4	Pos	UN	86	2011: 46,XX[20]
4	61	M	0	183.1	97	3.1	516	1	Neg	MU	1.3	53,XY,+6,+7,+11,+15,+18,+19,+20[1]/46,XY[19]
5	72	M	0	50.5	89	2.8	515	1	np	MU	NA	not performed
6	46	M	3	172.6	89	np	956	4	Pos	UN	43	not performed
7	89	F	0	14.8	91	3.1	387	3	np	MU	NA	not performed
8	55	F	0	71.8	92	1.7	562	1	Pos	NR	NA	not performed
9	51	M	0	132	83	2.6	563	1	Pos	UN	26	45,X,add(Y)(q12),t(1;3)(p36.3;q21),-19[1]/48,XY,+X,-2,+3,+5,+6,+11,+12,-15,-16,-22[1]/46,XY[18]
10	53	F	0	124.9	85	1.4	512	1	Pos	UN	NA	46,XX[20]
11	62	M	0	92.7	90	2.7	591	1	Pos	UN	58	46,XY,add(18)(q23)[8]/46,XY[12]
12	62	F	0	160.3	93	2.2	511	0	Neg	MU	Neg	not performed
13	50	F	0	21.8	70	1	426	1	Pos	MU	NA	not performed
14	77	M	1	70	95	4.4	429	1	Neg	NR	NA	2005: 46,XY[20]
15	51	F	1	76.7	97	4.2	1238	4	Pos	UN	19.3	46,XX,del(20)(q11.2q13.1)[8]/47,XX,del(11)(q13q22),+12[2]/47,XX,del(11)(q13q22),+12,-17,+mar[1]/47,XX,del(9)(q22q34),del(11)(q13q22),+12,add(13)(q34),-17,+mar[2]/46,X,add(X)(p22.1),t(1;5)(p13;q13),-4,-11,+12,-17,-22,+3mar[2]/46,XX[5]
16	53	F	0	34.4	93	2.5	383	0	Pos	MU	NA	46,XX,del(13)(q12q14)[3]/46,XX[17]
17	72	M	1	74.6	96	3.9	521	4	Pos	MU	NA	46,XY[20]
18	71	M	0	12.2	41	2.7	498	1	Pos	np	NA	45,X,-Y[8]/46,XY,del(11)(q22)[1]/46,XY[11]
19	54	M	0	27.7	56	1.9	289	3	Pos	UN	18.8	46,XY[20]
20	54	F	0	102.6	94	1.9	605	0	Pos	UN	5.4	No mitotic cells recovered
21	60	M	0	76.2	88	1.5	771	4	Neg	NR	15	46,XY[20]
22	64	F	0	281.5	92	2.6	746	1	Neg	MU	NA	2002: 46,XX[20]
23	69	F	2	24	95	3.1	553	0	NR	Neg	NA	not performed

24	61	M	0	70.9	83	7	975	4	Pos	UN	21	42~46,X,- Y,del(2)(q32),del(11)(q23),del(17)(p13.1),+0~2mar[cp10]/46,XY[8]
25	65	M	0	33.7	84	2.5	512	1	np	np	NA	not performed
27	53	M	0	57.4	84	1.7	525	1	Pos	MU	NA	not performed
28	76	F	3	200.5	87	4.9	691	3	Pos	UN	NA	not performed
29	44	F	0	92	76	2	1417	0	Neg	UN	NA	not performed
30	51	F	1	26.3	83	4.4	886	2	Pos	UN	19.5	46,XX,del(20)(q11.2q13.1)[9]/47~48,XX,del(11)(q13q22),+12,-17,+1~2mar[cp3]/
31	79	F	0	104.5	90	2.9	609	2	Pos	UN	0.2	45,XX,del(13)(q12q14),-19[1]/45,X,- X,t(10;20;12)(q21;q13.3;q13)[1]/46,XX[18]
32	70	M	3	89.3	93	2.5	495	1	Neg	UN	23.4	46,XY,der(1;10)(p10;p10)[1]/46,XY,del(11)(q13q23)[1]/46,XY [18]
33	59	M	1	131.4	98	3.1	636	1	np	UN	NA	not performed
34	77	M	3	49.5	86	2.4	578	0	Neg	MU	NA	not performed
35	68	M	2	112.8	87	3.3	571	2	np	UN	NA	not performed
36	61	F	0	25	74	2.2	483	1	Pos	MU	NA	46,XX[20]
37	56	M	1	39.1	89	4.3	440	2	Pos	UN	62.3	45,XY,t(1;8)(q31;q21),-2[1]/46,XY[19]
38	91	M	1	224.9	84	20.8	823	3	Pos	UN	83.9	not performed
39	68	M	1	241.5	94	4.1	953	1	Pos	NR	17.8	45,X,- Y[5]/46,XY,del(11)(q21q23)[2]/45~47,XY,del(11)(q21q23),del(13)(q12q32), der(19)t(4;19)(q21;q13.3)[cp7]/46,XY[8]
40	70	M	3	96.1	95	3	550	1	Neg	UN	NA	46,XY,der(1;10)(p10;p10)[1]/46,XY,del(11)(q13q23)[1]/46,XY [18]
41	62	F	0	15.6	84	7.4	845	4	Pos	UN	84.2	44,XX,add(7)(q36),- 9,del(13)(q12q32),der(17;18)(q10;q10)[3]/44,idem, add(15)(p11.2)[2]/44,idem,add(22)(p11.2)[3]/46,XX[12]
42	66	M	0	45	87	2.8	554	1	Neg	NR	NA	46,XY[20]
43	83	M	0	20.7	70	2	434	0	Neg	MU	NA	not performed
44	70	F	0	95.9	78	2.8	467	0	Neg	MU	NA	No analyzable metaphases recovered
45	64	F	6	64.9	90	1.6	770	4	Pos	NR	NA	not performed

46	62	F	0	31.2	89	2.1	538	0	np	MU	NA	No mitotic cells recovered
47	61	M	0	30	52	2.1	501	0	Neg	MU	NA	46,XY[20]
48	66	F	1	75.5	85	5.7	554	4	Pos	UN	0.7	39,X,-X,-7,add(8)(p23),-9,-20,-21,-21,-22,-22,+mar[1]/44,XX,add(1)(p36.1),del(2)(p13),-16,add(17)(p13),-18[1]/45,XX,t(5;17)(q31;p13),del(6)(q21),-20[1]/46,XX,add(6)(p21),add(14)(q32)[1]/46,XX[16]
49	83	F	4	52.9	85	3.7	2067	0	Pos	UN	47	47,XX,+12[19]/46,XX[1]
51	68	F	1	34.6	90	1.8	np	0	Neg	MU	1.5	not performed
52	59	F	0	72.3	88	2	741	1	Pos	UN	1.7	47,XX,i(7)(q10),+12[16]/46,XX,i(7)(q10)[cp2]/46,XX[2]
54	49	M	1	43.4	89	2.2	np	4	Neg	UN	3.5	not performed
55	54	M	0	43.9	73	2.1	448	1	Pos	UN	NA	not performed
56	71	M	0	32.4	72	2.2	518	1	Neg	MU	NA	not performed
57	53	M	0	32.9	75	2	387	1	Neg	MU	NA	No mitotic cells recovered
63	53	M	1	42.5	85	1.4	578	4	Neg	UN	3.5	46,XY[20]
64	74	F	1	125	92	3	462	2	Neg	UN	0.2	not performed
103	64	F	0	19.4	58	2.3	383	0	Neg	MU	NA	46,XX[20]
104	57	M	0	66.5	92	1.9	498	1	Neg	MU	NA	46,XY[20]
105	42	F	2	132.8	79	6.1	795	2	np	UN	NA	not performed
105 b	58	M	1	56.6	88	4.3	615	1	Pos	UN	91	45,X,-Y[4]/45~46,XY,+2,i(17)(q10),del(20)(q11.2q13.3)[cp7]/46,XY,t(13;14)(q21;q32)[1]/46,XY[8]
106	65	M	0	32.6	88	2.2	623	0	Neg	MU	NA	47,XY,+12[5]/46,XY[15]
107	47	F	0	23.6	82	2.2	529	0	Neg	MU	NA	not performed
108	56	M	0	32.4	80	1.3	533	0	Neg	MU	NA	46,XY[20]
110	78	M	2	41.9	79	3.8	414	1	Neg	MU	NA	not performed
112	72	M	0	55	89	4.3	715	0	Pos	NR	NA	not performed
115	47	M	0	18.3	87	1.6	367	1	Neg	MU	NA	No mitotic cells recovered
116	83	F	0	42.8	80	3.2	550	3	np	MU	NA	not performed

118	67	M	1	27.6	81	3.8	481	0	Neg	MU	NA	46,XY[20]
119	43	F	0	23.3	69	2.1	392	0	Neg	UN	NA	46,XX,del(9)(q13),del(11)(q21),+2mar[cp4]/46,XX[16]
117	67	F	0	97.4	97	1.5	556	0	Neg	MU	NA	not performed
120	69	M	2	38.3	91	3.4	558	0	Pos	MU	0.2	48,XY,+12,+19[5]/48,idem,-13,-16,+2mar[1]/46,XY[14]
121	54	M	0	51.3	83	2.7	511	0	Pos	UN	NA	not performed
122	62	M	0	48.5	92	1.8	483	0	Neg	MU	NA	46,XY[20]
125	49	M	0	40.4	84	1.7	429	1	Pos	UM	8.9	45,XY,t(2;14)(p12;q32),-11[1]/46,XY[19]
130	62	M	0	16.9	52	1.7	417	1	Neg	MU	1	46,XY[20]
133	76	F	0	77.3	93	2	567	2	Neg	NR	NA	not performed
134	63	M	0	136	93	3.6	785	1	Pos	UM	NA	not performed
135	50	M	1	40.9	91	1.8	486	0	Neg	MU	NA	46,XY[20]
136	63	M	0	55.3	81	2.5	530	0	Pos	UM	NA	46,XY,add(17)(p13)[4]/46,XY[16]

Pt #, Patient number; # Prior Rx, number of prior therapies – 0 means previously untreated; F, female; M, male; % Lym, % lymphocyte in peripheral blood as measured by the CBC count in the clinic;  $\beta$ 2M,  $\beta$ 2 microglobulin

MU=Mutated; np= not performed; NR= Not Reported; UN= Unmutated; NA= not available