

Deletions of the long arm of chromosome 5 define subgroups of T-cell acute lymphoblastic leukemia

Roberta La Starza,¹ Gianluca Barba,¹ Sofie Demeyer,^{2,3} Valentina Pierini,¹ Danika Di Giacomo,¹ Valentina Gianfelici,⁴ Claire Schwab,⁵ Caterina Matteucci,¹ Carmen Vicente,^{2,3} Jan Cools,^{2,3} Monica Messina,⁴ Barbara Crescenzi,¹ Sabina Chiaretti,⁴ Robin Foà,⁴ Giuseppe Basso,⁶ Christine J. Harrison,⁵ and Cristina Mecucci¹

¹Molecular Medicine Laboratory, Center for Hemato-Oncology Research, University of Perugia, Italy; ²Center for Human Genetics, KU Leuven, Belgium; ³Center for the Biology of Disease, VIB, Leuven, Belgium; ⁴Hematology, Department of Cellular Biotechnologies and Hematology, "Sapienza" University, Rome, Italy; ⁵Leukaemia Research Cytogenetic Group, Northern Institute for Cancer Research, Newcastle University, Newcastle-upon-Tyne, UK; and ⁶Pediatric Hemato-Oncology, Department of Pediatrics "Salus Pueri", University of Padova, Italy

©2016 Ferrata Storti Foundation. This is an open-access paper. doi:10.3324/haematol.2016.143875

Received: February 5, 2016

Accepted: April 29, 2016

Pre-published: May 5, 2016.

Correspondence: cristina.mecucci@unipg.it

Supplementary Table 1. Clinical, hematological, and most frequent molecular-cytogenetic lesions in 200 T-ALL

PTS	Code	S	A	GENETIC CATEGORIES	Sq deletion	Phenotype	NOTCH1 FBXW7	LEF1 4q25	del(6q)	MYC-t	CDKN2A/B 9p21	NUP214-ABL1	PTEN 10q23	WT1 11p13	RB1 13q14	NF1 17q12	PTPN2 18p12	Diagnosis	Last follow-up	Outcome	Status
1	1034/11	M	9	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	25-jun-05	16-oct-12	REL	alive
2	1035/11	M	12	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	del	nl	nl	1-set-05	31-mag-12	CR	alive
3	1036/11	M	46	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	11-mag-05	27-jun-09	CR	alive
4	1038/11	M	6	TLX3	no Sq		mut	nl	nl	nl	del	rear	nl	del	nl	nl	nl	3-dic-04	19-jun-11	CR	alive
5	1040/11	F	15	unclassified	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	18-nov-04	18-gen-05	CR	alive
6	1042/11	F	9	HOXA	1-5q		mut	nl	del	nl	nl	nl	nl	del	nl	nl	nl	15-oct-04	25-feb-10	REL	died
7	1045/11	M	9	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	9-mar-04	11-oct-11	CR	alive
8	1048/11	M	36	unclassified	no Sq		mut	del	nl	nl	del	nl	nl	nl	nl	nl	nl	1-dic-03	3-set-09	CR	alive
9	1049/11	M	8	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	17-dic-03	1-mar-12	CR	alive
10	1050/11	M	6	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	26-set-03			
11	1051/11	F	15	unclassified	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	25-set-03			
12	1054/11	M	17	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	3-set-03	1-set-09	CR	alive
13	1056/11	M	13	TLX3	no Sq		mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	21-dic-02			
14	1058/11	M	9	TLX3	no Sq		wt	nl	nl	nl	del	rear	nl	nl	nl	nl	nl	8-mar-96	15-apr-03	REL	alive
15	1643/11	M	13	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	del	nl	nl	nl	25-mag-97	24-set-09	CR	alive
16	1646/11	M	3	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	18-set-97	19-feb-09	CR	alive
17	1650/11	M	11	TLX3	no Sq		mut	nl	nl	nl	del	rear	nl	nl	nl	nl	nl	7-mag-98	20-jun-98	REL	died
18	1651/11	F	7	HOXA	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	17-oct-98	15-mag-08	CR	alive
19	1652/11	M	10	TLX3	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	del	nl	20-oct-99	4-jun-08	CR	alive
20	1653/11	M	6	unclassified	no Sq		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	18-oct-99	8-nov-07	CR	alive
21	1654/11	M	12	TLX3	no Sq		mut	nl	nl	nl	del	rear	nl	nl	nl	nl	nl	4-dic-99	7-gen-01	REL	died
22	1655/11	M	2	unclassified	no Sq		wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	18-feb-00	2-apr-09	CR	alive
23	1656/11	M	6	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	25-feb-00	3-set-09	CR	alive
24	1657/11	M	7	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	26-mar-00	16-oct-08	CR	alive
25	1659/11	M	10	HOXA	T-5q		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	7-ago-00	9-mag-08	CR	alive
26	1662/11	M	11	HOXA	no Sq		wt	nl	del	nl	del	nl	nl	nl	nl	nl	nl	27-set-00	14-mag-09	CR	alive
27	1663/11	M	13	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	12-dic-00	25-jun-05	CR	alive
28	1664/11	M	14	TALMO	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	8-gen-04	30-oct-09	CR	alive
29	1665/11	F	14	HOXA	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	10-set-01	16-mar-04	REL	died
30	1669/11	F	14	unclassified	no Sq		mut	del	nl	nl	del	nl	del	nl	nl	nl	nl	28-set-01	5-ago-09	CR	alive
31	1667/11	M	10	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	del	nl	nl	del	11-set-05	18-oct-12	CR	alive
32	1037/11	M	6	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	1-feb-05	11-oct-12	REL	alive
33	1039/11	M	10	TALMO	no Sq		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	26-nov-04	3-jun-11	CR	alive
34	1041/11	M	7	TALMO	no Sq		wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	15-nov-04	27-set-11	CR	alive
35	1043/11	M	16	TALMO	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	18-mag-04	16-oct-12	CR	alive
36	1046/11	M	14	TALMO	no Sq		mut	nl	nl	nl	del	nl	del	nl	nl	nl	nl	21-feb-04	19-oct-11	REL	alive
37	1047/11	M	3	TALMO	no Sq		mut	del	nl	nl	del	nl	nl	nl	nl	nl	nl	8-gen-04	15-mar-11	REL	died
38	1052/11	M	14	TALMO	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	19-set-03			
39	1053/11	M	14	TALMO	no Sq		wt	del	nl	nl	del	nl	del	nl	nl	nl	nl	5-set-03			
40	1055/11	M	10	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	4-jug-03			
41	1057/11	M	11	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	29-gen-02	19-mag-09	CR	alive
42	1644/11	F	14	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	31-mag-97	13-dic-97	REL	died
43	1645/11	M	8	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	6-jun-97	10-apr-98	REL	died
44	1647/11	M	24	TALMO	no Sq		wt	gain	nl	nl	del	nl	del	nl	nl	nl	nl	17-oct-97	4-apr-98	REL	died
45	1648/11	M	3	TALMO	no Sq		mut	del	nl	nl	del	nl	nl	nl	nl	nl	nl	29-oct-97	9-oct-08	CR	alive
46	1649/11	F	4	TALMO	no Sq		wt	nl	nl	nl	del	nl	nl	nl	gain	nl	nl	3-nov-97	17-mag-99	REL	died
47	1658/11	M	4	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	17-jug-00	30-set-09	CR	alive
48	1660/11	F	28	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	15-feb-00	30-ago-02	REL	died
49	1651/11	M	11	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	22-set-00	4-dic-01	REL	died
50	772/12	M	5	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	20-feb-98	20-oct-04	REL	died
51	774/12	F	3	unclassified	no Sq		wt	nl	nl	rear	del	nl	nl	nl	nl	nl	nl	4-gen-99	22-gen-09	CR	alive
52	775/12	M	10	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	14-mag-99	22-set-09	CR	alive
53	776/12	M	34	unclassified	no Sq		mut	nl	nl	nl	del	nl	del	nl	nl	nl	nl	1-oct-99	24-set-09	CR	alive
54	777/12	M	8	HOXA	no Sq		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	25-oct-99	13-nov-08	CR	alive
55	778/12	F	7	unclassified	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	12-dic-99	12-oct-09	CR	alive
56	779/12	M	2	NKX2-1	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	29-apr-00	22-set-09	CR	alive
57	780/12	M	20	HOXA	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	3-ago-00	27-dic-02	REL	died
58	781/12	M	10	unclassified	no Sq		wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	13-set-00	18-mar-01	REL	died
59	782/12	F	13	HOXA	no Sq		wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	5-gen-01	3-jun-01	REL	died
60	783/12	M	14	TLX3	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	20-gen-01	10-jug-04	REL	died
61	784/12	F	4	unclassified	T-5q		del	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	30-ago-01	18-dic-08	CR	alive
62	785/12	F	11	HOXA	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	31-ago-01	29-dic-01	REL	died
63	786/12	F	9	TALMO	no Sq		mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	12-oct-01	22-oct-09	CR	alive
64	787/12	F	9	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	17-feb-02	5-nov-08	CR	alive
65	788/12	M	14	TALMO	no Sq		wt	nl	del	nl	del	nl	del	nl	nl	nl	nl	18-apr-02	4-oct-04	REL	died
66	790/12	F	9	TALMO	no Sq		wt	F	nl	rear	del	nl	del	nl	nl	nl	nl	22-mag-02	16-jun-09	CR	alive
67	791/12	M	9	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	del	nl	nl	nl	23-mag-02	9-gen-04	REL	died
68	792/12	M	16	TLX3	no Sq		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	19-set-05	18-nov-09	CR	alive
69	794/12	M	2	unclassified	no Sq		mut	del	nl	nl	del	nl	del	nl	nl	nl	nl	26-oct-05	13-jug-12	CR	alive
70	795/12	M	7	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	5-dic-05	23-feb-12	CR	alive
71	796/12	F	12	HOXA	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	31-dic-05	16-oct-12	CR	alive
72	797/12	F	5	TLX1	no Sq		wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	28-gen-06	25-set-12	CR	alive
73	798/12	F	14	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	26-gen-06	26-jun-12	CR	alive
74	799/12	M	13	TLX3	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	3-mar-06	1-oct-12	CR	alive
75	800/12	M	9	TALMO	no Sq		mut	del	nl	nl	del	nl	del	nl	nl	nl	nl	22-apr-06	18-oct-12	CR	alive
76	801/12	M	13	HOXA	no Sq		mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	23-mag-06	18-jun-12	CR	alive
77	802/12	M	8	TALMO	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	17-jug-06	26-set-12	CR	alive
78	803/12	M	4	NKX2-1	no Sq		mut	nl	nl	nl	del	nl	nl	nl	nl	nl	del	28-jun-06	12-oct-12	CR	alive
79	804/12	F	5	TLX3	no Sq		wt	nl	nl	nl	del</										

PTS	Code	S	A	GENETIC CATEGORIES	5q deletion	Phenotype	NOTCH1 FBXW7	LEF1 4q25	del(6q)	MYC-t	CDKN2A/B 9p21	NUP214-ABL1	PTEN 10q23	WT1 11p13	RB1 13q14	NF1 17q12	PTPN2 18p12	Diagnosis	Last follow-up	Outcome	Status
129	630/07 ¹	M	37	TAL/LMO	no 5q	early	wt	nl	nl	nl	nl	del	nl	nl	nl	nl	nl	16-mag-07	13-mag-11	CR	alive
130	780/06 ¹	M	26	TAL/LMO	no 5q	cortical	wt	nl	del	nl	nl	nl	nl	nl	nl	nl	nl	16-gen-06	29-gen-07	REL	died
131	596/05 ¹	F	53	TAL/LMO	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	16-giu-05	25-lug-05	REL	died
132	85/09 ³	M	18	HOXA	T-5q	ETP	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	27-dic-06	25-dic-08	REL	died
133	831/06 ¹	M	54	HOXA	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	29-ago-06	5-lug-08	REL	died
134	280/06 ¹	M	38	HOXA	no 5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	20-dic-05	14-mar-08	CR	alive
135	112/03 ³	M	20	HOXA	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	13-gen-03	23-nov-05	CR	alive
136	904/03 ³	F	39	HOXA	T-5q	mature	wt	nl	del	nl	nl	del	nl	nl	nl	nl	nl	30-ott-03	28-nov-05	CR	alive
137	266/06 ¹	M	19	HOXA	no 5q	early	mut	nl	del	nl	nl	nl	del	nl	nl	nl	nl	14-feb-06	29-ago-07	REL	died
138	267/06 ¹	F	27	HOXA	l-5q	early	mut	nl	del	nl	nl	nl	del	del	nl	nl	nl	23-apr-97	20-apr-98	REL	died
139	185/08 ¹	M	47	HOXA	no 5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	4-apr-06			
140	828/03 ³	M	19	TLX1	no 5q	cortical	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	6-ott-03	10-apr-09	CR	alive
141	787/06 ¹	M	48	unclassified	no 5q	ETP	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	7-ago-06	15-set-06	REL	died
142	886/05 ¹	F	30	unclassified	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	22-set-05	12-set-06	REL	died
143	669/01 ¹	M	38	TAL/LMO	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	1-ott-01	2-giu-02	REL	died
144	116/02 ³	F	41	unclassified	no 5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	del	18-feb-03	20-apr-03	REL	died
145	827/07 ³	M	41	TLX1	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	20-mar-01	11-lug-02	REL	died
146	828/07 ³	M	20	unclassified	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	28-ott-06	1-mag-09	REL	died
147	829/07 ³	M	28	unclassified	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	11-giu-03	12-gen-06	CR	alive
148	830/07 ¹	F	26	NKX2-1	no 5q	early	mut	del	del	nl	del	nl	nl	nl	nl	nl	nl	7-mar-05	16-feb-06	REL	died
149	106/12 ¹	F	26	TAL/LMO	no 5q	cortical vs mature	wt	nl	nl	rear	del	nl	nl	nl	nl	nl	nl	26-lug-11	28-feb-12	REL	died
150	832/07 ¹	M	17	unclassified	T-5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	del	nl	nl	19-dic-05	20-set-06	REL	died
151	1063/07 ³	F	39	HOXA	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	30-gen-01	12-set-02	REL	died
152	882/04 ³	M	22	TLX3	T-5q	cortical	mut	del	nl	nl	del	nl	nl	nl	nl	nl	nl	28-set-04	26-gen-06	CR	alive
153	456/05 ³	M	20	HOXA	T-5q	early	wt	nl	nl	nl	del	nl	del	nl	del	nl	nl	1-gen-03	30-apr-04	REL	died
154	77/05	M	44	HOXA	no 5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	25-gen-06	8-ott-13	REL	died
155	1053/08	M	23	HOXA	no 5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	7-nov-08			
156	1335/12	M	29	TLX1	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	del	6-ago-12	13-gen-15	CR	alive
157	1338/12	M	22	HOXA	T-5q	ETP	mut	nl	del	nl	nl	nl	nl	nl	del	nl	nl	1-giu-11	15-mar-13	REL	died
158	831/07 ³	M	40	unclassified	no 5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	30-mar-06	27-ott-10	CR	alive
159	491/10	M	21	HOXA	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	20-apr-10	20-mag-10	CR	alive
160	1746/12	M	11	HOXA	no 5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	24-set-01	12-mag-14	CR	alive
161	523/13	M	34	TLX1	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	11-ott-12	19-feb-13	REL	died
162	381/06 ¹	M	32	HOXA	T-5q	early	mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	19-apr-97	27-feb-98	REL	died
163	87/07	F	24	HOXA	T-5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	15-set-07	15-set-13	CR	alive
164	426/09 ¹	M	25	HOXA	T-5q	cortical	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	6-mar-09	20-set-12	CR	died
165	1544/13 ³	F	9	HOXA	T-5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	10-set-13	24-mar-14	REL	alive
166	1317/11 ¹	M	44	TAL/LMO	no 5q	cortical	wt	nl	nl	rear	del	nl	del	nl	nl	nl	nl	23-apr-11	25-mar-14	CR	alive
167	304/09	M	27	TLX1	no 5q	cortical	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	del	16-mar-09	20-dic-09	REL	died
168	1005/10	M	35	TLX1	no 5q	cortical	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	2-set-10	20-dic-11	REL	died
169	885/10 ¹	M	37	HOXA	T-5q	early	wt	nl	del	nl	del	nl	nl	nl	nl	nl	nl	17-giu-10	16-lug-10	REL	died
170	348/05	M	14	TLX3	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	13-mar-00	14-feb-02	REL	died
171	1460/11	M	36	TLX1	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	del	4-nov-11	6-gen-13	REL	died
172	1123/11	M	69	unclassified	no 5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	9-ago-11	10-ott-12	REL	alive
173	1044/11	M	11	NKX2-1	no 5q	cortical	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	31-mar-04	7-giu-12	CR	alive
174	1051/08 ¹	M	48	TLX1	no 5q	cortical	wt	nl	nl	rear	del	nl	nl	del	nl	nl	nl	6-nov-08	16-mag-10	REL	died
175	011/09	M	41	TAL/LMO	no 5q	early	wt	nl	del	nl	del	nl	nl	nl	nl	nl	nl	1-gen-08	16-apr-09	REL	died
176	1032/11	M	16	TAL/LMO	no 5q	cortical	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	18-ago-11	1-mag-14	CR	alive
177	1100/05 ³	F	44	HOXA	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	13-dic-05	15-feb-08	REL	died
178	2456/14 ³	M	25	TLX3	T-5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	9-nov-01	18-ott-04	REL	died
179	420/02	F	17	TLX3	no 5q	mature	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	7-giu-02	1-lug-04	REL	died
180	486/08 ¹	M	39	HOXA	no 5q	early	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	14-mag-08	13-giu-11	REL	died
181	291/98 ¹	F	16	HOXA	l-5q	ETP	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	29-apr-98	13-ago-03	REL	died
182	1349/14	M	51	HOXA	T-5q	early	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	29-feb-00	1-mag-02	REL	died
183	789/98	M	19	TAL/LMO	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	27-nov-98	13-lug-99	REL	died
184	1770/13 ³	M	20	HOXA	no 5q	early	wt	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	1-lug-01	9-mar-06	CR	alive
185	1672/13	M	41	TLX1	no 5q	cortical	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	26-set-13	9-mag-14	REL	died
186	2145/13	M	7	TLX3	no 5q	early	mut	nl	nl	nl	del	rear	nl	nl	nl	nl	nl	1-dic-13	30-nov-14	REL	alive
187	3/14	M	50	TLX1	no 5q	early	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	del	2-gen-14	3-feb-15	CR	alive
188	209/14 ¹	F	12	TAL/LMO	no 5q	cortical	wt	nl	nl	rear	del	nl	nl	nl	nl	nl	nl	1-mar-12	12-apr-13	REL	died
189	246/14	M	14	TAL/LMO	no 5q	early	wt	del	nl	rear	del	nl	nl	nl	nl	nl	nl	16-apr-05	7-mag-14	CR	died
190	990/13 ³	M	26	HOXA	T-5q	cortical	mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	27-mar-07	4-apr-14	CR	alive
191	501/00	M	30	TLX1	no 5q	early	mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	19-set-00	23-mag-05	REL	died
192	1120/06	F	49	MEP2C	l-5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	1-dic-06	6-giu-07	REL	died
193	1277/14	F	7	unclassified	T-5q	cortical	mut	nl	del	nl	del	nl	nl	nl	gain	nl	nl	1-ott-13	21-lug-14	REL	died
194	1721/14	M	8	unclassified	no 5q	early	mut	nl	del	nl	del	nl	nl	nl	nl	nl	nl	4-set-14	23-feb-15	CR	alive
195	1820/14	M	47	TLX3	no 5q	early	mut	nl	nl	nl	nl	nl	nl	nl	nl	nl	del	17-set-14	30-gen-15	CR	alive
196	334/11	M	8	unclassified	no 5q	early	wt	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	25-set-10	21-mag-11	REL	died
197	2425/14	M	39	TLX1	no 5q	cortical	mut	nl	del	nl	del	nl	nl	nl	nl	del	del	26-nov-14	23-feb-15	CR	alive
198	2502/14 ¹	M	39	unclassified	no 5q	early	mut	nl	del	nl	del	nl	nl	nl	del	nl	nl	1-apr-11	1-mag-12	REL	died
199	34/15	F	22	unclassified	no 5q	early	mut	nl	nl	nl	del	nl	nl	nl	nl	nl	nl	15-feb-15	23-feb-15	CR	alive
200	797/04 ¹	M	37	unclassified	l-5q	ETP	wt	nl	del	nl	del	nl	nl	nl	del	nl	nl	23-set-04	26-ott-04	REL	died