

Supplementary Table S1. Results of TCR clonality, STAT3 mutations and basic characteristics in 69 patients stratified in the T-LGL leukaemia cohort.

Patient no. / Sex / Age* (y)	Sample for testing	TCR rearrangement	STAT3 mutation (VAF %)	Splenomegaly	RF/ anti-CCP	Absolute lymphocyte count (×10 ⁹ /L)	Immunophenotype	Percentage of lymphocytes in the BM
1. / F / 55	PB	Mono	Y640F (4%); D661Y (0.6%)	+	+/+	2.028	CD3+, CD8+, CD5low/−, CD57+, CD16−	28.0
2. / F / 60	PB	Mono	N647I (8%)	+	+/+	1.653	CD3+, CD8+, CD5low/−, CD57+, CD16+	9.0
3. / F / 76	PB	Mono	−	+	+/+	1.792	CD3+, CD8+, CD5low/−, CD57−, CD16−	ND
4. / F / 61	PB	Mono	Y640F (4.25%); S614R (1.95%)	+	−/+	1.269	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
5. / F / 65	PB	Mono	N647I (10.2%)	−	+/+	2.898	CD3+, CD8+, CD5low/−, CD57+, CD16+	ND
6. / F / 65	PB	Mono	S614R (2%)	+	+/+	0.880	CD3+, CD8+, CD5low/−, CD57+	39.6
7. / F / 59	PB	Mono	−	+	−/+	0.728	CD3+, CD8+, CD5low/−, CD57+, CD16−	21.2
8. / F / 43	PB	Mono	−	−	+/−	1.250	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
9. / F / 70	PB	Mono	S614R (35%)	−	+/+	3.572	CD3+, CD8+, CD5low/−, CD57+, CD16+	ND
10. / F / 66	PB	Mono	D661Y (9.5%)	−	+/+	1.728	CD3+, CD8+, CD5low/−, CD57+, CD16+	39.5
11. / M / 65	PB	Mono	Y640F (3%)	−	+/+	2.332	CD3+, CD8+, CD5low/−, CD57+, CD16−	34.8
12. / F / 53	PB BM	Mono Mono	Y640F (3.4%) Y640F (5.4%)	−	+/+	1.776	CD3+, CD8+, CD5low/−, CD57+, CD16−	41.6
13. / M / 56	PB	Mono	Y640F (2.8%)	−	+/+	0.918	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
14. / F / 52	PB	Mono	N647I (46%)	−	−/+	7.140	CD3+, CD8+, CD5low/−, CD57+, CD16+	14.4
15. / F / 64	PB	Mono	D661Y (29.4%)	−	+/+	4.576	CD3+, CD8+, CD5low/−, CD57+, CD16−	40.8
16. / M / 63	PB	Mono	Y657_K658insY (2.6%)	−	+/+	1.258	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
17. / M / 67	PB	Mono	N647I (29.4%)	−	+/+	4.235	CD3+, CD8+, CD5low/−, CD57+, CD16−	80.3
18. / F / 62	PB	Mono	S614R (0.85%)	−	+/+	1.700	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
19. / F / 36	PB	Mono	D661Y (12.12%)	+	+/+	1.827	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
20. / M / 61	PB BM	Mono Mono	Y657_K658insY (13.2%) Y657_K658insY (27.8%)	+	+/+	1.900	CD3+, CD8+, CD5low/−, CD57+, CD16−	33.0
21. / F / 46	PB	Mono	Y640F (16.3%)	+	+/+	3.432	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
22. / M / 48	PB BM	Mono Mono	S614R (1.6%); G618R (1.3%) ND	+	+/+	2.484	CD3+, CD8+, CD5low/−, CD57+, CD16−	14.5
23. / F / 59	PB BM	Mono Mono	N647I (12.9%); Y640F (0.9%); S614G (1.6%) ND	−	+/+	2.223	CD3+, CD8+, CD5low/−, CD57+	22.8
24. / F / 48	PB	Mono	−	−	−/+	6.557	CD3+, CD8+, CD5low/−, CD16−	16.6
25. / M / 49	PB BM	Mono Mono	− −	+	+/+	0.814	CD3+, CD8+, CD5+, CD57+, CD16−	8.1
26. / F / 47	PB	Mono	S614R (4.6%)	−	+/+	2.880	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
27. / F / 72	PB	Mono	−	+	+/+	7.452	CD3+, CD8+, CD5low/−, CD57+, CD16−	ND
28. / F / 27	PB BM	Mono Mono	Y657_K658insY (10.8%) ND	+	+/+	1.350	CD3+, CD8+, CD5low/−, CD57+, CD16−	52.0
29. / F / 57	PB BM	Mono Mono	D661V (15%); D661Y (15%) ND	+	+/+	2.350	CD3+, CD8+, CD5low/−, CD57+, CD16−	63.0
30. / F / 55	PB BM	Mono Mono	− Y640F (1.7%)	−	+/−	1.242	CD3+, CD8+, CD5low/−, CD57+, CD16−	22.4
31. / F / 46	PB Spleen	Mono Mono	− ND	+	+/+	0.876	CD3+, CD8+, CD5low/−, CD57+, CD16−	10.4
32. / F / 48	PB Spleen	Mono Mono	N647I (29.7%) ND	+	+/+	1.368	CD3+, CD8+, CD5low/−, CD57+, CD16−	13.2
33. / F / 49	PB Spleen	Mono Mono	Y640F (2.4%) Y640F (5.1%)	+	+/+	1.207	CD3+, CD8+, CD5low/−, CD57+, CD16−	62.6
34. / M / 62	PB BM	Mono Mono	− −	ND	−/−	2.009	CD3+, CD8+, CD5+, CD57+, CD16−	16.0
35. / F / 65	PB BM	Mono Mono	− −	−	−/−	1.924	CD3+, CD8+, CD5low/−, CD57+, CD16+	17.6
36. / F / 62	PB BM	Mono Mono	− −	+	+/+	1.420	CD3+, CD8+, CD5low/−, CD57+, CD16+	32.4
37. / M / 43	PB	Mono	Y640F (0.7%)	−	+/+	1.992	CD3+, CD8+, CD5+, CD57+, CD16−	ND
38. / M / 55	PB BM	Mono Mono	N647I (13.7%) N647I (20.4%)	+	+/+	1.350	CD3+, CD8+, CD5low/−, CD57+, CD16−	84.4
39. / F / 48	PB	Mono	N647I (32%)	+	+/+	3.403	CD3+, CD8+, CD5low/−, CD57+, CD16+	38.2

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Patient no. / Sex / Age* (y)	Sample for testing	TCR rearrangement	STAT3 mutation (VAF %)	Splenomegaly	RF/ anti-CCP	Absolute lymphocyte count (×10 ⁹ /L)	Immunophenotype	Percentage of lymphocytes in the BM
40. / F / 67	PB	Mono	Y640F (9.2%)	+	+ / +	1.200	CD3+, CD8+, CD5low/–, CD57+, CD16–	17
41. / F / 61	PB BM	Mono Mono	D661Y (3.7%) D661Y (4.7%)	+	+ / +	0.420	CD3+, CD8+, CD5low/–, CD57+, CD16–	16.8
42. / F / 36	PB	Mono	D661Y (1%)	+	+ / +	1.840	CD3+, CD8+, CD5low/–, CD57+, CD16+	ND
43. / F / 51	PB BM	Mono Mono	– –	+	+ / +	0.240	CD3+, CD8+, CD5low/–, CD57+, CD16+	18.2
44. / F / 61	PB BM	Poly Mono	– –	+	+ / +	1.782	CD3+, CD8low, CD5low, CD16–	17.8
45. / F / 35	PB BM	Mono Mono	– –	+	– / –	1.222	CD3+, CD8+, CD5low/–, CD57+, CD16–	25.6
46. / M / 60	PB Spleen	Mono Mono	D661Y (2.8%) D661Y (10.4%)	+	+ / +	0.756	CD3+, CD8+, CD5low/–, CD57+, CD16–	10.0
47. / M / 39	PB BM Spleen	Poly Poly Mono	– – ND	+	+ / +	0.490	CD3+, CD8+, Granzyme B+	22.6
48. / M / 71	PB BM	Poly Mono	– –	+	+ / +	1.342	CD3+, CD8+, CD5low/–, CD57–, CD16–	17.0
49. / F / 63	PB BM	Mono Mono	K658R (69%) ND	+	+ / +	11.784	CD3+, CD8+, CD5low/–, CD57+, CD16–	32.0
50. / F / 72	PB BM	Mono Mono	– –	–	+ / +	2.480	CD3+, CD8+, CD5+, CD57+, CD16–	21.2
51. / M / 52	PB BM	Poly Mono	Y640F (1.5%); D661Y (1.1%) Y640F (0.8%); D661Y (1%)	+	+ / +	0.770	CD3+, CD8+, CD57–, TIA1+, Granzyme B+	20.2
52. / F / 55	PB	Mono	–	–	+ / +	0.912	CD3+, CD8low, CD5low/–, CD57+, CD16+	ND
53. / F / 52	PB	Mono	D661Y (9.6%)	–	+ / +	2.816	CD3+, CD8low, CD5–, CD57+, CD16–	ND
54. / M / 54	PB	Mono	Y640F (18.8%)	–	+ / +	5.852	CD3+, CD8+, CD5–, CD57–, CD16–	35.2
55. / F / 64	PB	Mono	N647I (1%)	–	+ / +	2.028	CD3+, CD8low/–, CD5–, CD57+, CD16low/–	16.4
56. / F / 67	PB BM	Mono Mono	Y640F (1.2%) Y640F (0.8%)	+	+ / +	1.148	CD3+, CD8–, CD5–, CD16–	8.4
57. / F / 57	PB	Mono	–	–	– / –	1.938	CD3+, CD8low, CD5low, CD57+, CD16+	ND
58. / M / 42	PB BM Spleen	Poly Mono Mono	– Y640F (0.8%) Y640F (14%)	+	+ / +	0.931	CD3+, CD8–, CD5–, TIA1+	7.8
59. / M / 76	Spleen (2015) PB (2018) BM (2018)	Mono Poly Mono	S614R (13.8%); N647I (3.5%); Y640F (0.8%) N647I (1%) S614R (9.2%)	+	+ / +	1.936	CD3+, CD8–, CD5–, CD57–, CD16–, TIA1+, Granzyme B+	16.2
60. / F / 58	PB BM Spleen	Poly Poly Mono	– S614R (0.8%) S614R (9.2%)	+	+ / +	0.476	CD3+, CD8–, CD5– CD57–, CD16+	18.4
61. / M / 62	PB BM	Mono Mono	S614R (1.2%) S614R (0.9%)	+	+ / –	2.075	CD3+, CD8–, CD5low, CD57+, CD16–	71.6
62. / F / 76	Spleen (2009) PB (2010)	Mono Mono	D661Y (2.4%) D661Y (5%)	+	+ / +	0.611	CD3+, CD8+, CD5–, CD57–, CD16+	21.6
63. / F / 69	PB BM Spleen	Poly Poly Mono	– ND ND	+	+ / +	0.460	CD3+, CD8–, CD5–, CD57–, CD16+, TIA1+	5.2
64. / F / 64	PB BM	Mono Mono	D661Y (6.7%) D661Y (5.9%)	+	+ / +	1.344	CD3+, CD8low, CD5low	25.8
65. / M / 39	PB BM	Mono Mono	S614R (8.6%); Y640F (0.8%); D661V (1.5%) ND	+	+ / +	2.044	CD3+, CD8+, CD5low/–, CD57+, CD16–	ND
66. / F / 55	PB	Mono	G618R (3.5%)	+	+ / +	1.073	ND	ND
67. / M / 56	PB BM	Mono Mono	Y640F (5.1%) Y640F (13.5%)	+	+ / +	1.624	CD3+, CD8+, CD5low/–, CD57–, CD16–	38.4
68. / F / 60	PB	Mono	Y640F (14.1%)	–	+ / +	2.415	CD3+, CD8low/–, CD5low, CD57+, CD16–	31.6
69. / F / 30	PB BM	Mono Mono	– –	–	+ / +	1.632	CD3+, CD8–, CD5low, CD57–, CD16–	21.6

*At the time of detection neutropenia, lymphocytosis or splenomegaly.

y: years; PB: peripheral blood; BM: bone marrow; TCR: T cell receptor gene; Mono: monoclonal TCR gene rearrangement; Poly: polyclonal TCR gene rearrangement; STAT3: signal transducer and activator of transcription 3 gene; +: present; –: absent; ND: no data; VAF: variant allele frequency; RF: rheumatoid factor; anti-CCP: antibodies against cyclic citrullinated peptides

Supplementary Table S2. Results of *TCR* clonality, *STAT3* mutations and basic characteristics in 31 patients stratified in the Felty syndrome cohort.

Patient no. / Sex / Age* (y)	Sample for testing	<i>TCR</i> rearrangement	<i>STAT3</i> mutation (VAF %)	Splenomegaly	RF / anti-CCP	Absolute lymphocyte count (×10 ⁹ /L)	Percentage of lymphocytes in the BM
1. / M / 51	PB	Poly	–	+	+ / +	1.364	ND
2. / M / 61	PB	Poly	–	ND	+ / ND	1.323	ND
3. / M / 79	PB	Poly	–	+	+ / +	1.092	ND
4. / F / 50	PB	Poly	–	+	+ / +	0.880	13.4
	BM	Poly	–				
5. / F / 59	PB	Poly	–	+	+ / +	0.570	ND
6. / F / 69	PB	Poly	–	+	+ (low) / +	0.533	17.2
7. / M / 67	PB	Poly	–	+	+ / +	0.714	12.4
	BM	Poly	ND				
8. / F / 63	PB	Poly	–	–	+ (low) / +	1.386	9.2
	BM	Poly	–				
9. / F / 56	PB	Poly	–	+	+ / +	1.079	18.4
	Spleen	Poly	ND				
10. / F / 52	PB	Poly	–	+	+ / +	1.242	ND
11. / F / 52	PB	Poly	–	+	+ / +	0.848	ND
12. / F / 52	PB	Poly	–	–	+ / –	0.888	13.2
13. / F / 47	PB	Poly	–	+	+ (low) / +	1.394	14.4
	BM	Poly	–				
	Spleen	Poly	–				
14. / F / 61	PB	Poly	–	–	+ / +	1.072	ND
15. / F / 46	PB	Poly	D661Y (2.2%)	–	+ / +	1.768	ND
16. / F / 71	PB	Poly	–	ND	– / +	1.144	ND
17. / M / 47	PB	Poly	–	+	– / +	1.705	10.0
	BM	Poly	–				
18. / F / 54	PB	Poly	–	+	+ (low) / +	1.530	12.4
	BM	Poly	–				
19. / F / 30	PB	Poly	–	+	+ / +	0.420	3.8
	BM	Poly	ND				
20. / F / 44	PB	Poly	–	+	+ / +	1.254	ND
21. / F / 49	PB	Poly	–	+	+ / +	0.572	ND
22. / F / 69	PB	Poly	–	+	+ / +	1.020	10.2
	BM	Poly	–				
23. / F / 59	PB	Poly	–	+	+ / +	2.320	12.2
	BM	Poly	–				
24. / F / 57	PB	Poly	–	+	+ (low) / +	0.600	ND
	BM	Poly	–				
25. / F / 35	PB	Poly	–	+	+ / +	1.302	9.6
	BM	Poly	–				
26. / F / 32	PB	Poly	–	–	+ / +	0.682	6.4
	BM	Poly	ND				
27. / F / 52	PB	Poly	–	+	+ (low) / +	1.026	16.5
	BM	Poly	–				
28. / F / 39	PB	Poly	–	–	+ / +	0.736	17.6
	BM	Poly	–				
29. / M / 67	PB	Poly	–	+	+ / +	1.323	16.5
30. / M / 66	PB	Poly	D661Y (2.4%); Y640F (0.5%)	+	+ / +	0.528	20.8
	BM	Poly	D661Y (5.0%); Y640F (1.3%); N647I (0.8%)				
31. / F / 43	PB	Poly	D661V (0.5%); D661Y (1.3%); Y640F (0.6%); G618R (1.3%)	+	– / +	1.376	22.8
	BM	Poly	G618R (1.3%)				

*At the time of detection neutropenia or splenomegaly.
y: years; PB: peripheral blood; BM: bone marrow; *TCR*: T cell receptor gene; Mono: monoclonal *TCR* gene rearrangement; Poly: polyclonal *TCR* gene rearrangement; *STAT3*: signal transducer and activator of transcription 3 gene; +: present; –: absent; ND: no data; VAF: variant allele frequency; RF: rheumatoid factor; anti-CCP: antibodies against cyclic citrullinated peptides