

Felty syndrome and large granular lymphocyte leukemia share many clinical features and analogous pathogenic molecular markers, including somatic *STAT3* mutations



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Felty syndrome patients



Identification of common molecular pathogenesis between Felty syndrome and LGL leukemia



PCR-based next generation sequencing



STAT3



STAT5B

- *STAT3* mutation
- Most common *STAT3* mutations
- *STAT5B* mutation
- LGL lymphocytosis in blood smears
- T-cell clone sizes
- VAFs
- Plasma cytokines

Felty syndrome



Y640F, D661



small

low

10/92 cytokines
high: IL-15RA*, CXCL10*, PD-L1

LGL leukemia



Y640F, D661



big

high

10/92 cytokines
high: IL-15RA*, CXCL10*, IL-8, CCL4