# Outcomes of Hairy Cell Leukemia Treatment: a single centre experience

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## Background

Hairy cell leukemia (HCL) is a rare, chronic B-cell lymphoproliferative disorder. Recent treatment advances, especially purine analogs such as cladribine with or without Rituximab, have led to substantially improved patient outcomes. In this study we aim to analyze treatment outcomes for HCL patients.

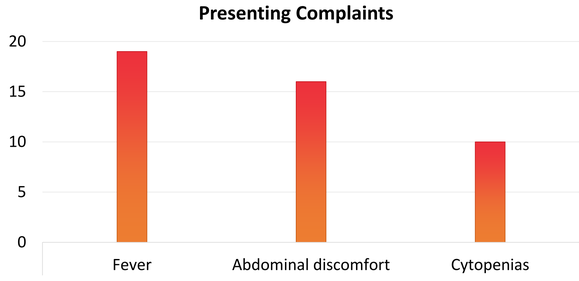
## Methods

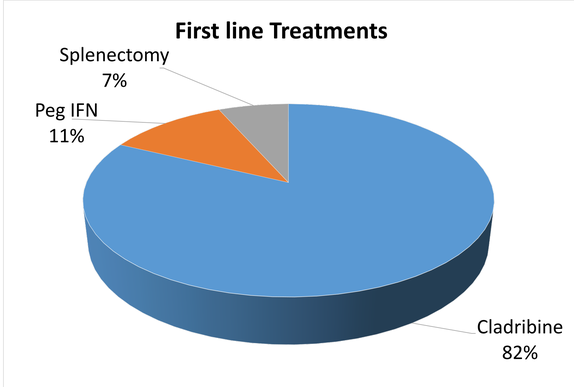
We retrospectively collected the data of HCL patients enrolled at our Institute. Data was then analysed to record the demographics, clinical presentation details, treatment record, response to treatment, PFS and OS. The data was analyzed utilizing SPSS 25

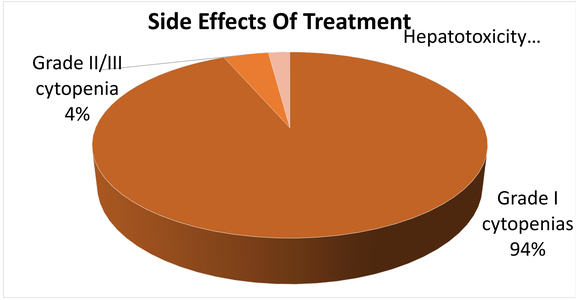
## Results

From Jan 2010 till December 2024, a total of 52 patients with HCL were enrolled. Data of 45 patients were available for final analysis. Median age of patients was 50 years (range 32-74). 91.1%(n=41) were male and 8.9%(n=4) were female. Most common presenting complaint was fever in 42.2%(n=19), followed by abdominal discomfort in 35.6%(n=16) and incidental finding of cytopenias in 22.2%(n=10) patients. Diagnosis was made on basis of BME and Immunohistochemistry reports. BRAF mutational analysis was done in 66.7%(n=30) patients. BRAF mutation was positive in 57.8% (n=26), negative in 8.9%(n=4) and was not done in 33.3%(n=15) patients. First line treatment was Cladribinein 82.3%(n=37) patients followed by Peg IFN and Splenectomy in 11.21%(n=5) and 6.6%(n=3) patients respectively. Cladribine was given as weekly dose in 82.3%(n=27) and as daily dose in 27.1%(n=10) patients.

Post treatment Grade I cytopenias were seen in 93.3%(n=42) patients while 4.4%(n=2) and 2.1%(n=1)patients developed Grade II/III cytopenia and hepatotoxicity respectively. Response assessment was done after six moths of treatment. PFS was 76.5%, 60% and 33% for Cladribine, Peg IFN and splenectomy respectively. For 17.7%(n=8) patients who relapsed after first line treatment, R-Cladribine, CHOP or Cladribine was given in 50%(n=4), 25%(n=2) and 25%(n=2) patients respectively. No patient received BRAF inhibitors. Median follow up period was 33.8 months. PFS and OS was 68.9% and 91.1% respectively.




## Keywords

Outcome; Cladribine; Hairy cell leukaemia, BRAF mutation; Treatment response

## Conclusion

Patients with HCL experience long-term survival with cladribine as first-line therapy. Combining rituximab with cladribine further improves the response rate, suggesting a synergistic benefit of this combination.

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