Supplemental material for "A clinical practice comparison of patients with chronic lymphocytic leukemia with and without deletion 17p receiving first-line treatment with ibrutinib"

1. Interval censoring

Interval censoring was recognized when a patient was lost to follow up at time t_L but encountered a death event at t_D before study end. In this situation, treatment discontinuation happened within the interval $[t_L, t_D]$.

In this analysis, interval-censored data had to be analyzed differently from regular true loss-to-follow up data (right-censored).

2. Analysis method

Non-Parametric Maximum Likelihood Estimator (NPMLE) is a modified version of the Kaplan-Meier estimator and one of the standard methodologies for analyzing interval-censored data. The discontinuation survival analysis was conducted using the ICLIFETEST procedure**,** the NPMLE method in SAS version 9.4. Please refer to SAS documentation for calculation details. A generalized log rank test was used in the NPMLE analysis for statistical testing.(1)

3. Analysis results

Detailed outputs are provided for the discontinuation analysis using NPMLE. Supplemental Table 1 shows sample distributions by censoring status. Supplemental Table 2 details quantile estimations for the population, stratified by del(17p) status.

Supplemental Table 1. Time to discontinuation analysis sample, distribution by censorship.

Cohort	Total	Left-censored		Interval-censored		Right-censored		Uncensored	
	N	N	%	N	%	N	%	N	%
Del(17p) present	254	0	0.00%	18	7.1%	141	55.5%	95	37.4%
Del (17p) absent	815	0	0.00%	34	4.2%	533	65.4%	248	30.4%
Total	1069	0	0.00%	52	4.9%	674	63.0%	343	32.1%

Del(17p): 17p deletion.

Supplemental Table 2. Quantile estimations, using SAS ICLIFETEST procedure.

Cohort	Percentile	Estimate	Lower 95% CI	Upper 95% CI
Del(17p) absent	75	.	.	.
	50	42.875	38.144	48.394
	25	8.9035	6.7023	11.992
Del(17p) present	75	.	.	.
	50	32.493	23.951	39.162
	25	10.251	6.9651	12.715

CI: confidence interval; Del(17p): 17p deletion.

References

1. Zhao X, Zhao Q, Sun J, Kim JS. Generalized log-rank tests for partly interval-censored failure time data. Biom J. 2008;50(3):375-385.