# HISTORICAL TRENDS IN THE FRONT-LINE TREATMENT OF PATIENTS WITH CHRONIC LYMPHOCYTIC LEUKEMIA: EXPERIENCE FROM A EUROPEAN CENTER

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## Background

- The **treatment** of chronic lymphocytic leukaemia **CLL** has dramatically **evolved** from chemo-based schemes to targeted therapies (TD).
- There is some preliminary data about the introduction of **TD in the front-line** of CLL patients in USA and Australia, but not in Europe.

## Objective

- **Main objective:** describe the trends in the patterns of front-line therapies in CLL patients from our centre.
- **Secondary objective** the impact of the TD on time to next treatment (TTNT) and overall survival (OS).

## Material & Methods

- **Design:** retrospective, single center, and non-interventional study.
- We included **313 patients** with **CLL** that received **front-line treatment** in our center, as in clinical trials and routine clinical practice.
- **Front-line treatment was classified as:** (1) alkylating agents, (2) purine analogues, (3) chemoimmunotherapy (CIT), (4) TD, or (5) others.

## Results

BASAL CHARACTERISTICS

- Median **age** at first-line treatment was 69.8 years (32.2-92.4), and the 53.6% were male.
- **Time to first treatment** was 2.23 years (0-20.6) by median.

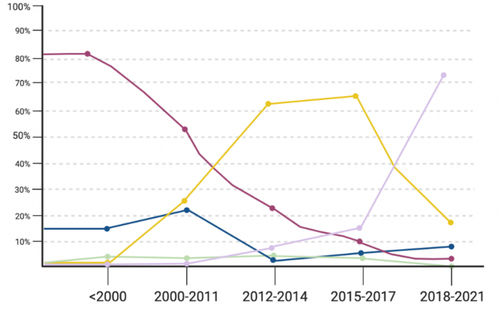
| Genetic characteristics | % |
|---|---|
| FISH del(11q) | 17.7% |
| *TP53* alterations | 13.7% |
| Unmutated IGHV | 59% |

Table 1. High-risk genetic characteristics of CLL patients ongoing first-line treatment.

HISTORICAL EVOLUTION OF CLL FRONT-LINE TREATMENT IN OUR CENTER

We found **3 temporary periods** (defined as the prefered scheme) (Figure 1):

- < 2012: alkylating agents (chlorambucile).
- 2012-2017: CIT (FCR).
- >2018: TD (Ibrutinib).




| | Alkylating agents | Purine analogues | Chemoimmunotherapy | Targeted therapies | Other |
|---|---|---|---|---|---|
| *<2000* | 83% | 14% | 0% | 0% | 3% |
| *2000-2011* | 52% | 21% | 25% | 0% | 2% |
| *2012-2014* | 23% | 2% | 63% | 9.4% | 3% |
| *2015-2017* | 10% | 5% | 65% | 16.5% | 4% |
| *2018-2021* | 2% | 9% | 17% | 74.1% | 0% |

Figure 1. Historical trends in the front-line treatment of patients with CLL in our center.

IMPACT ON SURVIVAL (Multivariant analyses)

- **TD**, CIT and mutated IGHV were associated independently with better **TTNT (Figure 3)**.
- **Mutated IGHV, sex female** and **age** less than 65 years were associated independently with better OS.

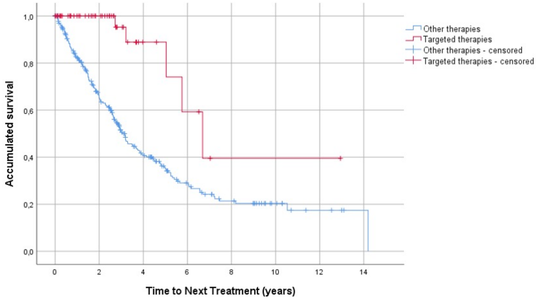



Figure 2. TTNT depending on receiving or not TD in the front-line.

## Summary

- In our center (Europe), TD are nowadays the preferred treatments in the front-line in CLL patients.
- TD are associated with longer TTNT, but the impact on OS must be assessed in longer follow-ups.