

PB1881 IBRUTINIB REDUCES THE RISK OF RICHTER'S TRANSFORMATION IN PREVIOUSLY TREATED CLL PATIENTS: A POPULATION-BASED STUDY IN BRITISH COLUMBIA

Topic: 06. Chronic lymphocytic leukemia and related disorders - Clinical

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Background: Richter Transformation (RT) presents in approximately 5% of Chronic Lymphocytic Leukemia (CLL) patients. Richter transformation is a rare and aggressive complication of CLL, with little information in current literature regarding possible predictive factors. In this study we assessed the possible factors for incidence of Richter's transformation. This is a population-based study in British Columbia, Canada.

Aims: To evaluate the possibility of Ibrutinib reducing the incidence of Richter transformation in patients with Chronic Lymphocytic Leukemia. Evaluating risk factors for Richter's transformation can help implement Ibrutinib in widespread usage as a first-line treatment for cases presenting the evaluated risk factors.

Methods:

An electronic database search of 1056 patients with confirmed diagnosis of CLL who presented at St Paul's Hospital, Vancouver, Canada over 30 years and between 1991 and 2021 was performed with 520 having a complete data set. 197 have undergone at least one treatment. 48 received Ibrutinib (Ibr group), and 149 patients received other non-novel therapies (non-Ibr group). Their Transformation-Free Survival (TFS) is then calculated using SPSS and incorporated in the Kaplan Meier Method.

Results:

The median age at diagnosis of CLL and RT was 61 y (range 34-86 y) and 64.5 y (range 33-84 y) respectively. The median lymphocyte count at diagnosis was $12 \times 10^9/L$. The median time to transformation for Richter Patients was 60.1 months. By 5 years, the percentage of CLL patients who transformed in the non-Ibr group is 9%, while for the Ibr-group is 0%. By 10 years, the percentage of CLL patients who transformed in the non-ibr group is 17%, while for the Ibr group is 2% ($p = 0.012$). Other factors such as age, gender, and lymphocyte count at diagnosis were not significant predictors for RT on univariate analysis. On multivariate analysis, previous ibrutinib therapy retained its significance and lowered the risk of RT.

Image:

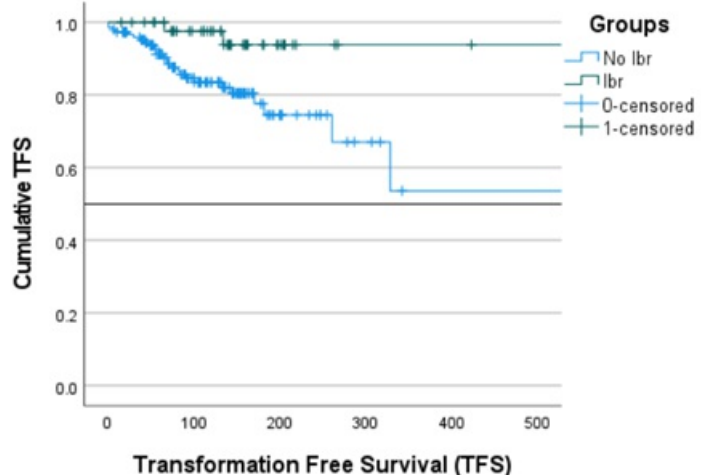
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Risk of Transformation Based on Previous Treatment with Ibrutinib



Summary/Conclusion: Previous Ibrutinib therapy reduced the risk for RT in CLL patients. Incorporating Ibrutinib based therapy in management of CLL is a reasonable strategy in reducing the risk of RT.

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