Patient preferences and factors affecting patient treatment decisions for chronic lymphocytic leukemia (CLL) in Japan

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Introduction: Bruton tyrosine kinase inhibitors (BTKis) have transformed the treatment landscape for CLL, offering significant improvement in patient outcomes. Despite the widespread adoption of BTKis and their proven clinical benefits, data on the treatment preferences and priorities of patients with CLL in Asia, particularly in Japan, are limited. Understanding patient preference is critical for optimizing clinical decision-making and tailoring treatment strategies for Japanese patients. A comprehensive quantitative analysis was conducted to evaluate patient preferences for covalent BTKi treatment attributes and trade-offs among these attributes.

Methods: An online survey applying discrete choice experiment (DCE) methodology was administered between April 29 and June 30, 2025 to Japanese adults (≥18 years of year) diagnosed with CLL. The design of DCE attributes and levels was informed by literature review and clinical consultations. Treatment attributes included efficacy (i.e., progression-free survival [PFS]), safety (i.e., impacts of diarrhea, headache, atrial fibrillation, and hypertension on quality of life [QoL]), and convenience (i.e., formulation type including tablet or capsule, and dosing frequency including once daily or twice daily). A conditional logistic regression was applied to estimate preference weights, which were used to calculate the relative importance as well as willingness-to-tradeoff between BTKi treatment attributes.

Results: The study included 50 patients (mean age: 62 years; 30% female; 38% employed full-time; 60% reported no comorbid conditions). More than half (60%) were diagnosed ≥5 years ago. Around one quarter (24%) were treatment naive, and 76% received ≥1 treatment (40% first-line, 26% second-line and 10% third-line or later). Most patients (82%) reported living with or near their caregiver. In terms of travel time to obtain CLL medication, 46% reported travel time of one hour, 40% traveled less than 30 minutes, and 14% traveled more than two hours. The majority of patients (66%) were using High-Cost Medical Expense Benefit, while an additional 10% were either currently applying or planning to apply. In general, patients preferred treatments with less impact of AEs on QoL, higher efficacy, and less dosing frequency ($P<.05$). The top three treatment attributes with the highest relative importance were the impact of atrial fibrillation (24.7%) and diarrhea (21.0%) on QoL, and PFS (15.8%), followed by impact of headache (15.7%) and hypertension (14.1%) on QoL, dosing frequency (7.8%), and formulation type (capsule or tablet) (0.9%). Patients were willing to trade off PFS for

improved *quality of life*: accepting reductions of 3.1 years for less impact from atrial fibrillation, 2.7 years for diarrhea, 2.0 years for headache, and 1.8 years for hypertension (none or mild vs. significant impact). Additionally, they were willing to accept a reduction of 1.0 years of PFS to receive a treatment given once daily rather than twice daily.

Conclusions: This is the first quantitative assessment of treatment preferences among Japanese patients with CLL using a DCE approach. Findings from this study provide valuable Japan-specific insights, highlighting that although efficacy is important, patients prioritize safety factors, such as the impact of atrial fibrillation and diarrhea on QoL. These findings support the integration of patient perspectives into treatment planning to enhance shared decision-making, personalize care, and promote better adherence to long-term therapies in CLL management.