**Figure S1. Comparison of CLL prognostic variables and correlation with total sFLC**

(A) Forest plot indicating Hazard Ratios (HR) and 95% Confidence Interval (CI) of prognostic variables obtained by univariate Cox analysis. Binet stage B and C (HR 2.5, 95% CI 1.8–3.5), CD38 positive (HR 2.7, 95% CI 1.9–3.9), ZAP-70 positive (HR 4.4, 95% CI 3.1–6.3), unmutated *IGHV* (HR 4.1, 95% CI 2.8–6.0) and abnormal sFLC(κ/λ) (HR=2.5, 95% CI 1.8–3.4, *P*<.0001) were at higher risk of starting treatment as compared with the corresponding negative cases (HR=1). (B) Abnormal sFLC(κ/λ) (HR=2.2, 95% CI 1.5–3.2) retained an independent association with TFS upon multivariate analysis along with ZAP-70 expression (HR=3.0, 95% CI 1.9–4.8), *IGHV* mutational status (HR=1.9, 95% CI 1.1–3.2) and Binet stage (HR=2.4, 95% CI 1.6–3.7), whereas CD38 expression was no longer statistically significant.

**Figure S2. Distribution of the novel parameter sFLC(κ+λ)**

(A) sFLC(κ+λ) concentrations (mg/ml, median value 39.0; range 8.2–1430.4) of the entire CLL patient series and (B) subdivided by treatment. A higher proportion of cases exceeding the sFLC(κ+λ) cut-off value (60.6 mg/ml, as determined by ROC analysis) was observed in the treated CLL group.

**Figure S3. Kaplan-Meier curves of CLL cases stratified by cytogenetic risk show estimated median times to treatment need were 12.1, 6.5, and 3.1 years for cases with low, intermediate and high risk, respectively**

**Figure S4. Immunohistochemical detection of κ and λ FLC in bone marrow multiple myeloma infiltrates**

(A–B) Specific staining with κ FLC monoclonal antibody is observed in a case of neoplastic plasma cells of a κ-chain multiple myeloma (MM) (A), in which only few non-clonal plasma cells are identified by λ FLC expression (B). (C–D) An opposite result is observed in a λ-chain MM case. Immunohistochemistry performed by the streptavidin-biotin-enzyme complex (strept-ABC) using the 3-3′-diaminobenzidine (DAB) chromogen (brown signal). Original magnifications ×200 for all panels and ×400 for insets.
Figure S1

A

- Binet stage B+C: \( P < 0.0001 \)
- CD38 positive: \( P < 0.0001 \)
- ZAP-70 positive: \( P < 0.0001 \)
- IgHV unmutated: \( P < 0.0001 \)
- sFLC (κ/λ) ratio abnormal: \( P < 0.0001 \)

B

- Binet stage B+C: \( P < 0.0001 \)
- CD38 positive: \( P = \text{NS} \)
- ZAP-70 positive: \( P < 0.0001 \)
- IGHV unmutated: \( P = 0.014 \)
- sFLC (κ/λ) ratio abnormal: \( P < 0.0001 \)

Hazard Ratio, 95% C.I.
Figure S2
Figure S3