Individuals with Clinical Features Suggestive of CLL/SLL

Option 1 (Blood Only): CBC (includes Differential and Platelets) [6399], CLL/Lymphoma Diagnostic Panel [17817(X)], and CLL Prognostic Panel, Limited [17240].

Option 2 (Blood and Bone Marrow): Comprehensive Hematopathology Report [17734(X)], which will include morphology evaluation and immunophenotyping for CLL/SLL suspected cases. At the discretion of the hematopathologist, it may also include chromosome analysis, FISH, and/or PCR (CBC results are submitted together with specimens).

≥5x10⁹/L monoclonal B lymphocytes with CLL/SLL immunophenotype (Appendix 1) in PB for at least 3 months

OR

CLL lymphocytes in lymph nodes

<5x10⁹/L CLL lymphocytes in PB

AND

No lymph node involvement

Consider monoclonal B lymphocytosis; monitor PB and other sites for change in CLL lymphocytes

Markers of Low Risk

• Mutated IgVH gene
• ZAP-70 negative
• CD38 negative
• 13q deletion (associated with better risk if sole abnormality)

Markers of High Risk

• Unmutated IgVH gene
• ZAP-70 positive
• CD38 positive
• 11q deletion
• ↑ Serum beta-2-microglobulin
• Rapid PB lymphocyte doubling time (<12 months), determined by repeating CBC 3-6 months after diagnostic CBC

Markers of Greatest Risk

• 17p/P53 deletion
• P53 gene mutation

This algorithm is intended as a guide for using Quest Diagnostics laboratory tests to diagnose CLL or SLL and assess prognosis. The algorithm is based on the World Health Organization (WHO) and National Comprehensive Cancer Network (NCCN) guidelines for non-Hodgkin lymphomas (including CLL and SLL). The diagnostic threshold of ≥5x10⁹/L B lymphocytes with CLL/SLL immunophenotype is recommended by the WHO; however, practitioners often consider additional factors when establishing the diagnosis. Risk categorization is based on treatment-free interval, response to chemotherapy, and survival time. Trisomy 12 (+12) or 6q, 9p, or 14q deletions are usually associated with intermediate risk but their actual effects are dependent on the type of therapy received and/or the extent of the deletion. IgVH gene mutation is defined as >2% of CLL lymphocytes having a mutated IgVH gene; CD38 positivity is defined as ≥30% of CLL lymphocytes being positive for CD38. CLL indicates chronic lymphocytic leukemia; SLL, small lymphocytic lymphoma; CBC, complete blood count; FISH, fluorescence in situ hybridization; PCR, polymerase chain reaction; and PB, peripheral blood.

This figure was developed by Quest Diagnostics based on references 1 and 2. It is provided for informational purposes only and is not intended as medical advice. A physician’s test selection and interpretation, diagnosis, and patient management decisions should be based on his/her education, clinical expertise, and assessment of the patient.