



**Laboratory and Other Studies for CLL**

Test	Notes
CBC	Look for a marked lymphocytosis (ALC >5 x 10 <sup>9</sup> /L). Anemia and thrombocytopenia are rare at diagnosis. Immune thrombocytopenia and granulocytopenia are seen in <10%.
Basic metabolic panel	A basic metabolic panel to include calcium, magnesium, phosphate, Cr levels.
LDH	Elevated level carries a poor prognosis.
β-2M	Elevated level carries a poor prognosis.
Direct antiglobulin test (Coomb's)	A positive Coomb's test result is seen in approximately 30% of patients during the course of disease but is uncommon in early stages (<5%).
Immunophenotyping with flow cytometry of peripheral lymphocytes	CD5, CD19, and CD23 are adequate for diagnosis. However, CD20, CD38, and ZAP70 provide therapeutic and prognostic information.
FISH for cytogenetics and PCR to detect gene mutations of bone marrow lymphocytes	Not necessary for clinical care of most patients with CLL. Used to detect chromosomal deletions, trisomies, and, less frequently, translocations.
Bone marrow aspirate and biopsy	Not required for making a diagnosis. Often performed at diagnosis to establish the pattern of lymphoid infiltration, which has been linked with prognosis. Is more commonly needed if anemia or thrombocytopenia occurs to help determine etiology.
CT scan of the chest, abdomen, and pelvis	For identifying enlarged lymph nodes and spleen size, especially in the abdomen where palpation is unreliable.

β-2M = β-2 microglobulin; ALC = absolute lymphocyte count; CBC = complete blood count; CLL = chronic lymphocytic leukemia; CT = computed tomography; Cr = creatinine; FISH = fluorescent in situ hybridization; LDH = lactic dehydrogenase; PCR = polymerase chain reaction.

Table from *Physicians Information and Education Resource (PIER)*, Chronic Lymphocytic Leukemia module.