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## Chronic Lymphocytic Leukemia with Leptomeningeal Involvement

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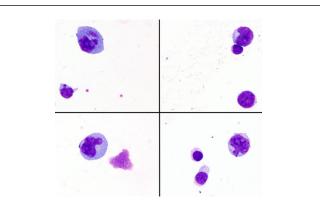
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## Case

An 80 year old woman with chronic lymphocytic leukemia (CLL) developed lymphocytosis with symptomatic anemia and axillary lymphadenopathy two years after her diagnosis. Her white count was  $27.9 \times 10^9$ /L with a lymphocyte count of  $4.185 \times 10^9$ /L and hemoglobin 89 g/L. Initial flow cytometric immunophenotyping confirmed a monoclonal B-cell population positive for CD19/CD5, dim CD20, CD23, and expressing dim kappa light chains. Repeat peripheral blood flow cytometry revealed the same monoclonal B-cell population, and an axillary node biopsy was consistent with CLL. Chlorambucil was initiated, but discontinued after two cycles due to multiple side effects. A month later, the patient presented with acute onset upper extremity weakness. A lumbar puncture and examination of cerebrospinal fluid revealed a mixed population of pleomorphic lymphocytes with the same immunophenotype as the peripheral blood lymphocytes (Figure 1), revealing leptomeningeal involvement of CLL. Given the poor prognosis, the decision was made to proceed with palliation, and the patient passed away peacefully.



**Figure 1:** Lymphocytes in the cerebrospinal fluid of an 80-year-old woman with CLL revealing the same immunophenotype as the peripheral blood lymphocytes, thereby demonstrating rare leptomeningeal involvement of CLL.