

# Antecedent Chronic Lymphocytic Leukemia May Be Associated With More Aggressive Mycosis Fungoides

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## PRACTICE POINTS

- Patients with mycosis fungoides (MF) are at increased risk for second hematologic malignancies, including chronic lymphocytic leukemia (CLL).
- Anecdotal information suggests that patients with CLL prior to developing MF may have more severe phenotypes of MF.

To the Editor:

Mycosis fungoides (MF) is the most common form of primary cutaneous T-cell lymphoma. It has been associated with increased risk for other visceral and hematologic malignancies.<sup>1</sup> Chronic lymphocytic leukemia (CLL) is one of the most common hematologic malignancies. In the United States, a patient's lifetime risk for CLL is 0.6%. Chronic lymphocytic leukemia often is diagnosed as an incidental finding and typically is not detrimental to a patient's health. Six cases of MF with antecedent or concomitant CLL were identified in a cohort of patients treated at the University of Minnesota (Minneapolis, Minnesota) from 2005 to 2017 (Table).

All 6 patients were male, with a mean age of 80.5 years. The mean age at CLL diagnosis was 62.5 years, while the mean age at MF diagnosis was 75.3 years. Three patients were younger than 60 years when their CLL was diagnosed: 49, 55, and 57 years. Notably, 4 patients had more aggressive types of MF: 3 with tumor-stage disease, and 1 with folliculotropic MF. Five patients were

diagnosed with CLL before their MF was diagnosed (mean, 13.4 years prior; range, 3–31 years), and 1 was diagnosed as part of the initial MF workup.

Given the frequency of both MF and CLL, the co-occurrence of these diseases is not surprising, as other case reports and a larger case series have described the relationship between MF and malignancy.<sup>2</sup> It is possible that CLL patients are more likely to be diagnosed with MF because of their regular hematology/oncology follow-up; however, none of our patients were referred from hematology/oncology to dermatology. Alternatively, patients with MF may be more likely to be diagnosed with CLL because of repeated bloodwork performed for diagnosis and screening, which occurred in only 1 of 6 cases. Most of the other patients were diagnosed with MF more than a decade after being diagnosed with CLL.

Does having CLL make patients more likely to develop MF? It is known that patients with CLL may experience immunodeficiency secondary to immune dysregulation, making them more susceptible to infection and secondary malignancies.<sup>3</sup> Of our 6 cases, 4 had aggressive or advanced forms of MF, which is similar to the findings of Chang et al.<sup>2</sup> In their report, of 8 patients with MF, 2 had tumor-stage disease and 2 had erythrodermic MF. They determined that these patients had worse overall survival.<sup>2</sup> Our data corroborate the finding that patients with CLL may develop more severe MF, which leads to the conclusion that patients diagnosed with CLL before, concomitantly, or after their diagnosis of MF should be closely monitored. It is notable that patients with more advanced disease tend to be older at the time

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## Cases of Concomitant MF and CLL

	Gender/ Current Age, y	MF Subtype	MF Stage	Age at CLL Diagnosis, y	Age at MF Diagnosis, y	Interval Between CLL and MF Diagnoses, y	Means of CLL Diagnosis
Patient 1	M/85	Tumor	2B	83	83	0	Found on flow cytometry for MF workup
Patient 2	M/58	Folliculotropic	1B	49	52	3	Found on bloodwork for nephrolithiasis
Patient 3	M/86 <sup>a</sup>	Tumor	2B	70	72	2	Unknown
Patient 4	M/80	Patch/plaque	1B	55	80	15	Unknown
Patient 5	M/86	Tumor	2B	61	77	16	Unknown
Patient 6	M/88	Patch/plaque	1B	57	88	31	Screening bloodwork

Abbreviations: MF, mycosis fungoides; CLL, chronic lymphocytic leukemia; M, male.

<sup>a</sup>Deceased.

of diagnosis and that patients who are diagnosed at 57 years or older have been found to have worse disease-specific survival.<sup>4,5</sup>

This report is limited by the small sample size (6 cases), but it serves to draw attention to the phenomenon of co-occurrence of MF and CLL, and the concern that patients with CLL may develop more aggressive MF.

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