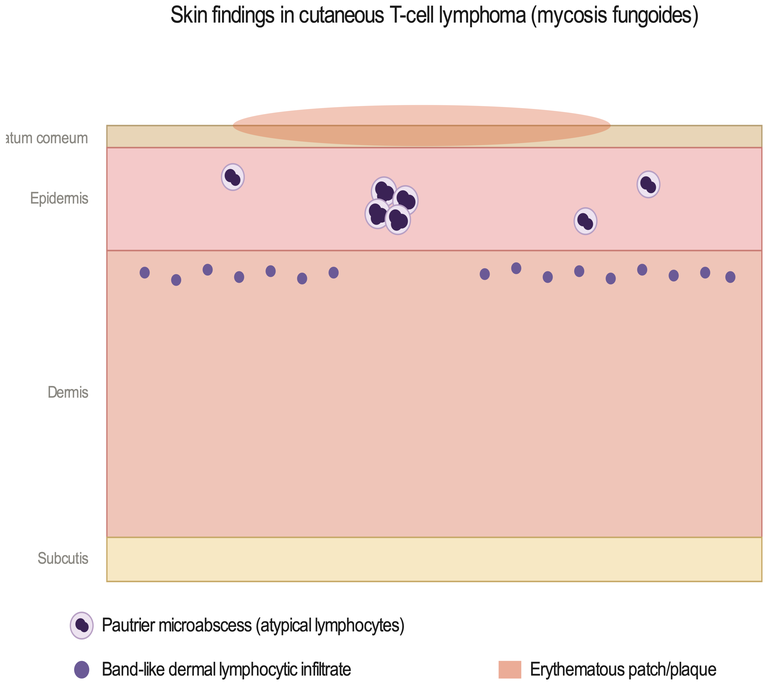
Second Primary Malignancies in Cutaneous T-Cell Lymphoma: A Retrospective Population-Based Analysis

Jeffrey Afrifa-Yamoah |Damilola Ologbe | Lanny Ntukidem | Nnamdi Omenuko | Michael Asare | Olena Leshchyshen | Trinity Health Ann Arbor & Livingston

Background

Cutaneous T-cell lymphoma (CTCL) is a heterogeneous group of extranodal non-Hodgkin lymphomas characterized by cutaneous infiltration of malignant monoclonal T lymphocytes. Second primary malignancies (SPMs) represent a significant complication among cancer survivors, with meaningful effects on morbidity and mortality. Although SPMs have been described in CTCL, updated population-based data using contemporary registry data remain limited. We aim to evaluate the incidence and risk of SPMs among CTCL patients using a large national registry



Methods

We analyzed the Surveillance, Epidemiology, and End Results (SEER) Research Data, 8 Registries, November 2025 submission (1975–2023), including all CTCL cases diagnosed from 1975 to 2023. A second primary malignancy was defined as any malignancy developing 6 or more months after the index CTCL diagnosis. The SEER Multiple Primary and Standardized Incidence Ratio (MP-SIR) session was used to calculate observed-to-expected (O/E) ratios and absolute excess risk (AER) per 10000 person-years, referenced against the general US population

Results

A total of 1624 CTCL cases met inclusion criteria; 325 (20%) developed second primary malignancies, with a mean age at SPM diagnosis of 59.16 years. The overall risk of solid tumor SPM was elevated compared to the general population (O/E, 1.2; 95% CI, 1.07–1.34; P<0.05). Significantly elevated risks were observed for anorectal cancer (O/E, 4.37; 95% CI, 1.19–11.18; P<0.05), mesothelioma (O/E, 5.36; 95% CI, 1.46–13.72; P<0.05), non-Hodgkin lymphoma (O/E, 6.03; 95% CI, 4.71–7.61; P<0.05), and Hodgkin lymphoma (O/E, 6.47; 95% CI, 1.76–16.56; P<0.05)

Conclusion

Compared to the general population, CTCL patients carry a significantly elevated risk of SPMs, including both hematologic malignancies—notably Hodgkin and non-Hodgkin lymphoma—and specific solid tumors including anorectal cancer and mesothelioma. These findings highlight the importance of proactive SPM surveillance and structured oncologic follow-up in CTCL survivors.