



## 2021 Annual Spring Virtual Meeting | Abstract Submission

### **T-Cell Prolymphocytic Leukemia with Initial Clinical and Pathologic Presentation of Pernio**

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A woman in her sixties with history of chronic lymphocytic leukemia (CLL) and newly diagnosed rheumatoid arthritis (RA) presented with palmoplantar ulcerated nodules after starting Leflunomide for RA. Initial biopsy was consistent with pernio, but her lesions progressed despite systemic and topical steroids (Figure 1). Concerning for progressive CLL, Obinutuzumab was initiated, and she developed a full body rash 2 days later. The patient was hospitalized with dermatology and hematology-oncology consultation. Exam revealed scleral injection, pink papules on the soft palate, palmoplantar desquamation with dark violaceous papules, and numerous diffuse coalescing bright red scaly annular papules on the face, trunk, and extremities (Figures 2-4). Punch biopsy of the palmar hand revealed a dense dermal pleomorphic lymphocytic infiltrate, epidermotropism, marked dermal edema, and extravasated red blood cells in a “pernio”-like pattern (Figure 5). Immunohistochemistry revealed a CD4/CD8 ratio >50/1 in addition to CD99 and TCR beta positivity (Figure 6). Combined, peripheral flow cytometry, bone marrow biopsy and lymph node fine needle aspirate favored the diagnosis of T-cell prolymphocytic leukemia (T-PLL). The patient began treatment with Alemtuzumab. T-PLL is an aggressive post thymic T-cell malignancy accounting for 2% of mature lymphocytic leukemia in adults.<sup>1</sup> Though typically presenting with a brief history of B symptoms, hepatosplenomegaly, and marked lymphocytosis, erythematous or nodular lesions involving the trunk or limbs have been reported in up to one-quarter of patients.<sup>1</sup> This case demonstrates clinical findings of T-PLL and highlights the importance of pathology, ancillary data, and a multidisciplinary team to arrive at a proper diagnosis.<sup>2</sup>

#### References:

1. Sud A, Dearden C. T-cell Prolymphocytic Leukemia. *Hematol Oncol Clin North Am.* 2017 Apr;31(2):273-283.
2. Frater JL. T-cell prolymphocytic leukemia: Review of an entity and its differential diagnostic considerations. *Int J Lab Hematol.* 2020 Jun;42 Suppl 1:90-98.