

compared to female, white, and metropolitan patients, respectively (HRs 1.07, 1.13, and 1.21, respectively;  $P < .05$  for all).

This population-based study shows that the incidence of eccrine malignancies is increasing significantly and increasing age, black race, male sex, and rural residence are all associated with worse outcomes. Significant differences in incidence and mortality among demographic groups and different eccrine malignancies warrant further research regarding the biologic underpinnings of the various eccrine malignancies. Our findings also corroborate the growing literature showing differences in health care outcomes for common cutaneous malignancies with regard to the urban–rural continuum and different racial groups.<sup>5</sup>

Limitations of the SEER registries include inconsistent follow-up, as well as lack of verification of individual diagnoses and under-registration of patients.<sup>6,7</sup> Better characterizing clinical differences in eccrine malignancies related to race, sex, and residence is critical in better recognizing their epidemiologic characteristics, more precisely establishing a clinical approach, and providing more comprehensive patient education.

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### Comparative clinicopathologic analysis of cutaneous peripheral T-cell lymphoma, not otherwise specified, according to primary tumor site



*To the Editor:* Peripheral T-cell lymphoma, not otherwise specified (PTCL-NOS) is the rarest subtype of primary cutaneous lymphoma, accounting for approximately 2% of cutaneous lymphomas; therefore, clinicopathologic features of this subtype are not well established.<sup>1,2</sup> It is important to differentiate cases of systemic PTCL-NOS from primary cutaneous PTCL-NOS because the prognosis varies depending on the primary tumor site.<sup>3,4</sup> We analyzed the clinicopathologic characteristics according to the primary tumor site by comparing primary with secondary cutaneous PTCL-NOS. Primary cutaneous PTCL-NOS (group A) was defined as involving only the skin at the initial staging with no evidence of extracutaneous disease at that time or as cutaneous lesions preceding systemic involvement by >6 months. The initial staging workup included a complete blood cell count, serum lactate dehydrogenase level, obtaining a bone marrow biopsy specimen, and computed tomography.

A total of 53 cases of cutaneous PTCL-NOS were identified in the medical database at Asan Medical Center (Table I). The age of patients in secondary cutaneous PTCL-NOS (group B) was significantly higher than in primary cutaneous PTCL-NOS (group A) ( $P = .024$ ). Advanced stage, International Prognostic Index (IPI) score >2, and an elevated serum lactate dehydrogenase level

**Table I.** Clinical and pathologic features of cutaneous peripheral T-cell lymphoma, not otherwise specified, according to the primary tumor site

Feature	Primary cutaneous PTCL-NOS (n = 25), n (%)	Secondary cutaneous PTCL-NOS (n = 28), n (%)	P value
Sex			.707
Male	13 (52)	16 (57)	
Female	12 (48)	12 (43)	
Age (year)			
Range	28–75	46–90	
Mean	47.6	60.1	.024*
>60	12 (48)	21 (75)	
Cutaneous involvement			
Localized	16 (64)	8 (29)	.010*
Extensive <sup>†</sup>	9 (36)	20 (72)	
Multiple	12 (48)	23 (82)	
Single	13 (52)	5 (18)	.009*
Location of skin lesions			
Legs	7 (28)	7 (25)	.805
Arms	7 (28)	11 (39)	.386
Trunk	12 (48)	16 (57)	.506
Head and neck	14 (56)	8 (29)	.043*
Clinical features of skin lesions			
Nodules	16 (64)	9 (32)	.020*
Papules	6 (24)	5 (18)	.582
Maculopatches	5 (20)	13 (46)	.043*
Cellulitis-like swelling	1 (4)	2 (7)	1
Ann Arbor Stage at diagnosis			<.001*
Low (1-2)	25 (100)	6 (21)	
High (3-4)	0 (0)	22 (79)	
LN involvement during follow-up	7 (28)	25 (89)	<.001*
BM involvement during follow-up	5 (20)	9 (32)	.317
Visceral involvement other than primary site during follow-up	5 (20)	19 (68)	.003*
IPI score			<.001*
0-2	25 (100)	12 (43)	
3-5	0 (0)	16 (57)	
Serum LDH			
Elevated	8 (32)	24 (86)	<.001*
Histopathologic features			
Epidermotropism	0/23 (0)	0 (0)	
Pattern of dermal infiltration			
Perivascular	9 (36)	18 (64)	.040*
Periadnexal	6 (24)	12 (43)	.148
Nodular	12 (48)	6 (21)	.041*
Diffuse	5 (20)	6 (21)	.511
Angiocentricity	4 (16)	4 (14)	.862
Panniculitis-like infiltration	4 (16)	3 (11)	.694
Size of tumor cells			
Small	7 (28)	16 (57)	.033*
Medium	9 (36)	6 (21)	.240
Large	9 (36)	6 (21)	.240
Immunostaining and EBV status			
CD3	25 (100)	28 (100)	1
CD4+/CD8-	19 (76)	18 (64)	.354
CD4-/CD8+	1 (4)	1 (4)	1
CD4-/CD8-	2 (8)	1 (4)	1
CD4+/CD8+	3 (12)	8 (28)	.183
CD30	2 (8)	5 (18)	.426

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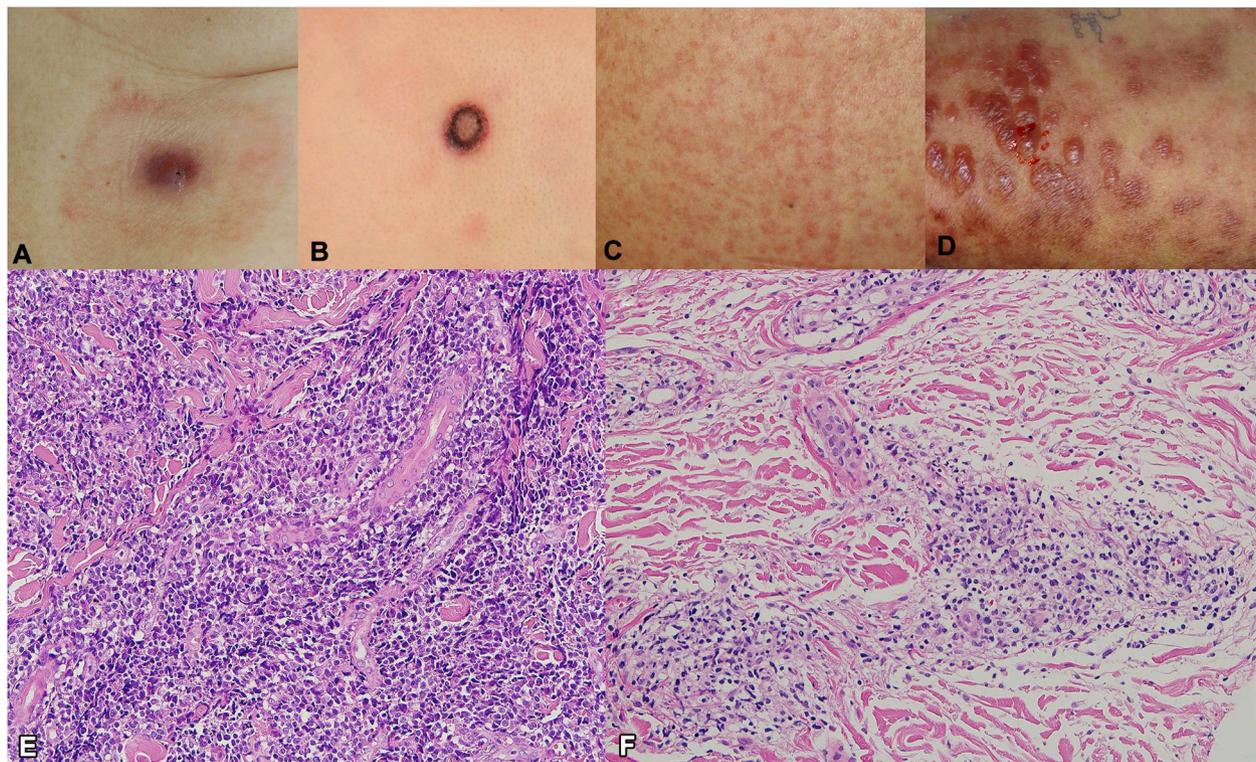
**Table I.** Cont'd

Feature	Primary cutaneous	Secondary cutaneous	P value
	PTCL-NOS (n = 25), n (%)	PTCL-NOS (n = 28), n (%)	
CD56	1 (4)	2 (7)	1
Beta F1	22 (88)	27 (96)	.333
EBV	2 (8)	2 (7)	1

BM, Bone marrow; EBV, Epstein–Barr virus; IPI, international prognostic index; LDH, lactic dehydrogenase; LN, lymph node; PTCL-NOS, peripheral T-cell lymphoma, not otherwise specified.

\*Statistically significant.

†The extent of a cutaneous lesion was classified as localized when skin lesions were restricted to 1 anatomic site or extensive when several noncontiguous anatomic sites were involved.



**Fig 1.** Clinical and histologic features of cutaneous peripheral T-cell lymphoma, not otherwise specified (PTCL-NOS). **A**, Solitary erythematous cutaneous nodule on the trunk of a patient with primary cutaneous PTCL-NOS. **B**, Solitary crusted cutaneous nodule on the back of a patient with primary cutaneous PTCL-NOS. **C**, Multiple erythematous patches on the trunk of a patient with secondary cutaneous PTCL-NOS. **D**, Multiple erythematous papules and patches on the leg of a patient with secondary cutaneous PTCL-NOS. **E**, Nodular infiltration of large lymphoid cells in primary cutaneous PTCL-NOS. **F**, Perivascular infiltration of small lymphoid cells in secondary cutaneous PTCL-NOS. (**E** and **F**, Hematoxylin–eosin stain; original magnification:  $\times 100$ .)

were significantly more common in group B than in group A. On follow-up, the frequency of lymph node ( $P < .001$ ) and visceral involvement other than the site at diagnosis ( $P = .003$ ) was significantly more common in group B than in group A (Table D).

Skin involvement of the head and neck was significantly more common in primary (14/25, 56.0%) than in secondary (8/28, 28.6%) cutaneous

PTCL-NOS (Table I;  $P = .043$ ). The most common morphology observed in group A was cutaneous nodules (Fig 1, A and B;  $P = .020$ ) and in group B was maculopatches (Fig 1, C and D;  $P = .043$ ). Thirty-five of 53 patients (66.0%) presented with multiple skin lesions, and the number of lesions was significantly higher in group B than in group A ( $P = .009$ ).

Histopathologic and immunophenotype findings are summarized in Table I. Small tumor cells were

significantly more common in group B ( $P = .033$ ). A nodular infiltration pattern was most common in group A (Fig 1, E;  $P = .041$ ), but perivascular infiltration was the most common pattern in group B (Fig 1, F;  $P = .040$ ). There were no significant differences between the immunophenotypic profiles in the 2 groups.

The present study demonstrated differences in clinical and pathologic features of primary and secondary cutaneous PTCL-NOS. Patients with secondary cutaneous PTCL-NOS had more extensive disease and a greater number of skin lesions than those with primary cutaneous disease. Cutaneous involvement in systemic PTCL-NOS suggests disease progression, consistent with the higher International Prognostic Index scores and the frequency of lymph node and other visceral involvement in secondary cutaneous PTCL-NOS. Skin lesions in primary cutaneous PTCL-NOS more commonly affected the head and neck area.

In conclusion, cutaneous PTCL-NOS had differences in clinicopathologic features depending on the primary tumor site. The present study would be helpful to differentiate cases of systemic PTCL-NOS from primary cutaneous PTCL-NOS.

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## Trends in scholarly productivity of dermatology faculty by academic status and gender



*To the Editor:* Gender differences in academic productivity and rank reportedly exist in many fields.<sup>1</sup> However, these disparities have not been assessed in dermatology. We used the Hirsch index (*b*-index), defined as the highest number (*n*) of an author's papers that are cited at least *n* number of times,<sup>2</sup> to assess academic productivity in dermatology. The *b*-index positively correlates with ascending academic rank in various other medical fields.

We performed a cross-sectional study of academic dermatologists listed on department websites identified through Electronic Residency Application Service. One hundred twenty US dermatology department websites were accessed between March 2017 and May 2017 to obtain information about dermatology faculty, including name, terminal degree, institutional affiliation, academic rank, and state. The author's gender was obtained from Google and biographies. *H*-indices and aggregate National Institutes of Health funding data from 1985 to 2016 were obtained from Scopus, which contains the largest citations database of peer-reviewed research dating back to 1970, and the National Institutes of Health Research Portfolio Online Reporting Tools, respectively. Career length was estimated as the difference between 2017 and the year of first publication. To normalize for career length, *m*-index was calculated by dividing the *b*-index by career length.<sup>2</sup> Inclusion criteria were professors with listed MD, MD and PhD, DO, and MBBS degrees. Exclusion criteria were nonclinical faculty, volunteer faculty, and joint faculty whose primary practice is not dermatology, or faculty without a unique Scopus profile. Statistical analysis was calculated using SPSS software (SPSS Inc, Chicago, IL). The Yale University Institutional Review Board exempted this study protocol.

We identified 685 profiles (Table 1), of which women represented 63%, 50%, and 36% of academic