BCC subtype and size, cosmetic outcome, and patient functional status or desire to pursue surgery. Prospective analyses with longer follow-up are needed to confirm similar favorable outcomes and assess whether clinical observation after complete biopsy of lower-risk BCCs reduces treatment-related morbidity and cost.[5]

We are indebted to Dr Barbara Egbert for her decades of dermatopathology service at Veterans Affairs Palo Alto Health Care System. This material is the result of work supported with resources and the use of facilities at the Veterans Affairs Palo Alto Health Care System in Palo Alto, California. The contents do not represent the views of Veterans Affairs or the United States Government.

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Funding sources: None.

Conflicts of interest: None disclosed.

IRB approval status: Reviewed and approved by the IRBs at Stanford University Medical Center and Veterans Affairs Palo Alto Health Care System.

Reprints not available from the authors.

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https://doi.org/10.1016/j.jaad.2020.03.061

Dermoscopy predicts outcome in hemoporfin-mediated photodynamic therapy of port-wine stains: A prospective observational study

To the Editor: Port-wine stain (PWS) is defined as ectasia of the vessels in the dermis, affecting the dermal papillae capillary loops, the horizontal plexus at the dermal-subcutaneous junction, or a combination of these.[1] Recent studies have identified 2 main dermoscopic patterns of PWS. Type 1 is a superficial pattern composed of red globules and dots that correspond to dilated capillary loops in the papillary dermis. Type 2 is a deep pattern that features red ring structures corresponding to dilated ectatic vessels located deep in the horizontal vascular plexus.[2] Histopathologic examination is the standard approach to determine the depth of the vascular lesion, but it is invasive.

Dermoscopy can preoperatively predict the outcome of treatment and the minimal effective fluence in pulsed dye laser treatment.[3,4] PWS in areas that typically respond well to laser treatment were more likely to have a superficial type 1 but those that have a poorer response were more likely to have a deeper type 2. The immediate vessel disappearance after pulsed dye laser treatment observed by dermoscopy can predict the minimal effective fluence and prevent adverse effects.

Table I. Profile of the patients in the study

Patient No.	Age, y	Sex	PWS location	Response*
Group A				
1	10	Female	Right cheek	CR
2	31	Male	Mandible and neck	GI
3	4	Female	Mandible	CR
4	8	Male	Right chin	GI
5	6	Male	Left cheek	GI
6	11	Male	Left cheek	GI
7	4	Female	Left cheek and orbit	CR
8	4	Female	Left temporal	CR
Group B				
1	8	Male	Right cheek	NI
2	40	Female	Mandible and neck	SI
3	6	Female	Right cheek	NI
4	7	Male	Right cheek	NI
5	18	Male	Left cheek	NI
6	9	Male	Left cheek	NI
7	8	Male	Right cheek	NI
8	19	Male	Right cheek	NI

PWS, Port wine stain.
*No improvement (*NI*): <20%; some improvement (*SI*): 20%-59%; great improvement (*GI*): 60%-89%; nearly completely resolved (*CR*): 90%.

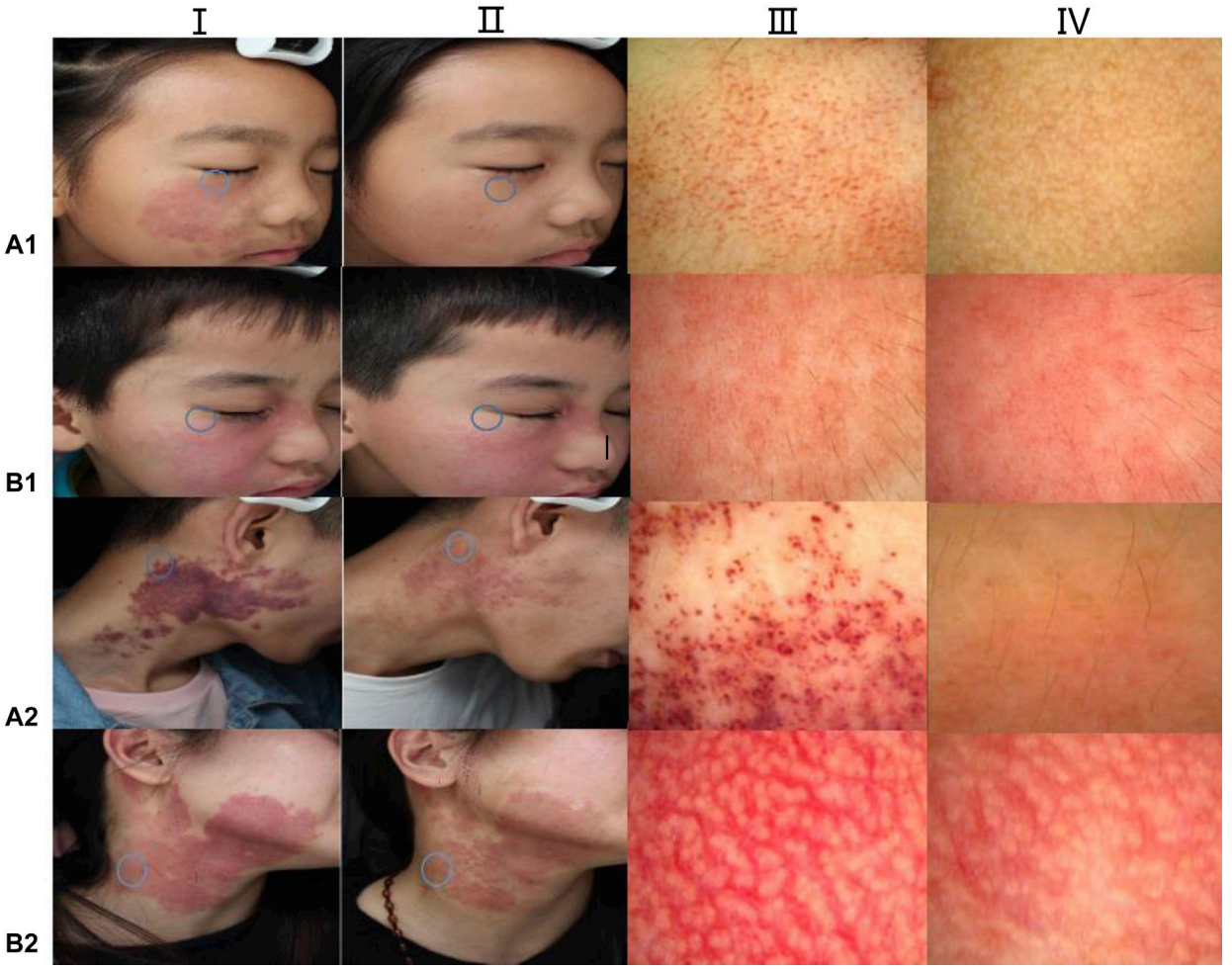

Fig 1. Port-wine stain. (**Column I**) Patients before hemoporfin-mediated photodynamic therapy (HMME-PDT) treatment (*A1*, *B1*, *A2*, *B2*). (**Column II**) After HMME-PDT treatment. (**Column III**) Dermoscopy shows different patterns before treatment (original magnification: ×50). (**Column IV**) Dermoscopy shows the blood vessels are cleared to varying degrees after HMME-PDT treatment (original magnification: ×50).

Hemoporfin-mediated photodynamic therapy (HMME-PDT) is considered to be a successful and well-tolerated treatment option for PWS.[5] The response of different depth vessels to HMME-PDT and the relationship between dermoscopic features and the efficacy of HMME-PDT have not been reported to our knowledge.

We present a prospective observational study of 16 patients with PWS who received HMME-PDT. The Ethics Committee of Tongji Medical College, Huazhong University of Science and Technology (2019S1170) approved this study. All of the detailed methods are in the Supplemental file available on Mendeley at https://doi.org/10.17632/b968gsy7bp.1. Group A consisted of 8 patients with the type 1 pattern, and group B consisted 8 patients with the type 2 pattern (Table I). Dermoscopic images of PWS lesions were taken from each patient using the hand-held dermoscope with 50× polarized light (CH-DSIS-2000 Plus; Guangzhou Chuanghong Medical Technology Co, Ltd, Guangzhou, China). Clinical efficacy was observed after 1 treatment of HMME-PDT.

Patients in the 2 groups had markedly different responses after 1 treatment with HMME-PDT. Patients in group A (type 1 pattern) had an excellent response to HMME-PDT, whereas those in group B (type 2 pattern) had a poor response (Fig 1).

In HMME-PDT treatment, the 532-nm laser can activate the photosensitizer injected into the blood vessels to produce highly reactive singlet oxygen, which can destroy the endothelial cells.[5] HMME-PDT can more easily destroy or remove deformed vessels that are superficial because of the limited range of wavelength penetration. It is still difficult to penetrate PWS lesions with thicker vessel walls, deeper locations, and larger diameters. Possibility of the need for multiple treatments should be discussed in the initial consultation.

Dermoscopy is a simple, noninvasive technique that allows the microvascular patterns in PWS to be assessed and recorded. We have observed that the type 1 pattern is readily treated with HMME-PDT and an excellent response can be expected, whereas the type 2 pattern resists treatment. Further studies will increase the sample size, refine the dermoscopic patterns, and study the relationship between different patterns and HMME-PDT results.

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Funding sources: This work was supported by the National Natural Science Foundation of China (Grant No. 81772913) and Fundamental Research Funds for the Central Universities (Huazhong University of Science and Technology: 2019kfyXKJC013).

Conflicts of interest: None disclosed.

IRB approval status: The Ethics Committee of Tongji Medical College, Huazhong University of Science and Technology approved this study (2019 S1170).

Reprints not available from the authors.

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https://doi.org/10.1016/j.jaad.2020.03.063

The association of broadband internet access with dermatology practitioners: An ecologic study

To the Editor: Teledermatology may improve dermatologic outcomes in rural communities, but it necessitates high-speed broadband internet for real-time (video visits) and store-and-forward (transmission of high-resolution photographs) methods.[1,2] There lacks a clear relationship between access to local dermatologic care and access to high-speed broadband internet. We assessed this association via geospatial analysis using publicly available federal data. We used an ecologic design to assess the relationship between dermatologist density, broadband prevalence, and demographic data in United States counties.

County-level demographics and physician density for 2015 were obtained from the Area Health Resource File. The Federal Communications Commission's Mapping Broadband Health in America platform was used to obtain broadband speed, defined as internet download speeds of ≥25 megabits (Mbit)/s and internet upload speeds of ≥3 Mbit/s. Adequate internet service was defined as ≥50% of county participants having the option to participate in broadband internet. Maps, regression, and analysis of variance analyses were performed using R 3.4.1 software (The R Foundation, Vienna, Austria).

In 2015, 846 of 3106 counties (27.2%) did not have access to adequate broadband internet, and 2119 of 3106 counties (68.2%)—approximately 49.5 million people or 15.3% of the United States population—had no practicing dermatologist. Of these 2119 counties, 1313 (62.0%), representing 37.7 million people without a practicing dermatologist had access to adequate broadband internet. The other 806 of 2119 counties (38.0%), representing 11.8 million people without a practicing dermatologist, lacked adequate broadband internet access. Thus, 272.4 million Americans live in 947 of 3106 counties (30.5%) with at least 1 practicing dermatologist and accessible broadband internet. Another1.3 million Americans live in 40 of 947 counties (4.2%) in which there is at least 1 practicing dermatologist but poor broadband access (Fig 1). Demographics of the included population are described in Table I.

Counties without broadband and dermatology access were more likely to be rural (odds ratio [OR], 10.3; 95% confidence interval [CI], 8.1-13.2) and designated as a whole-county (OR, 9.1; 95% CI, 6.2-13.6) or partial-county (OR, 2.6; 95% CI, 1.8-3.8) health professional shortage area. Increasing age and unemployment status were associated with living in