Table II. Multivariable analysis using proportional hazards models

Endpoint	Events, n (%)	Adjusting for demographics only		Adjusting for all variables*	
		HR/SHR (95% CI)	*P* value	HR/SHR (95% CI)	*P* value
Overall survival					
White patients	60,342 (25.6)	1.00 (Reference)		1.00 (Reference)	
API patients	571 (33.9)	1.60 (1.47-1.74)	<.001	1.17 (1.07-1.28)	<.001
Melanoma-specific survival					
White patients	27, 776 (11.8)	1.00 (Reference)		1.00 (Reference)	
API patients	376 (22.3)	2.21 (1.99-2.45)	<.001	1.27 (1.12-1.43)	<.001

API, Asian and Pacific Islander; *CI*, confidence interval; *HR*, hazard ratio; *SHR*, subdistribution hazard ratio.
*All variables include demographics (age, sex, and region), county social factors (median income and language isolation), tumor characteristics (anatomic site, melanoma type, Breslow depth lymph node involvement, and ulceration), and treatment. The variable for stage is omitted because of its collinearity with depth.

A specific intervention we would recommend piloting is taking an educational intervention into frequently inhabited public spaces in API communities. This type of intervention has proven effective in promoting healthy living and improved screening for cardiometabolic diseases in African American men in barbershops.[5] Similarly, information about the risks of melanoma can be passed down to the API community through grassroots efforts such as holding workshops or engaging neighborhood shop owners.

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Rural health disparities in melanoma staging and prognostic outcomes in Iowa

To the Editor: Melanoma is currently the fifth most common cancer in men and the sixth most common cancer in women, with 91,000 estimated new cases of melanoma and 9300 deaths in the United States in 2018. Presentation at a higher stage and higher mortality rates for multiple cancers[1] have been found to be comparatively higher in numerous studies of

Table I. Modeling the probability of a patient living in a rural area: Multivariate results

			Rural/metropolitan		
Covariate	**Level**	**N**	**Odds ratio**	**95% CI**	***P* value**
Race	Other	428	0.36	0.21-0.62	**<.01**
	White	12,563	—	—	—
Sex	Female	5926	0.94	0.88-1.01	.11
	Male	7065	—	—	—
Stage	Metastatic	1967	1.13	1.03-1.24	**.01**
	Nonmetastatic	11,024	—	—	—
Site	Not specified	445	0.85	0.70-1.04	.12
	Trunk/limbs	9606	0.84	0.78-0.92	**<.01**
	Head/neck	2940	—	—	—
Marital status	Divorced/separated/widowed	1846	1.12	1.01-1.24	**.03**
	Single	1277	0.73	0.65-0.82	**<.01**
	Married	7986	—	—	—
Surgery	Yes	12,248	1.14	0.98-1.33	.08
	No	734	—	—	—
Chemotherapy	Yes	15	0.98	0.35-2.69	.96
	No	12,726	—	—	—
Radiation	Yes	400	1.18	0.97-1.45	.10
	No	12,587	—	—	—
Hormone therapy	Yes	15	0.97	0.35-2.68	.95
	No	12,975	—	—	—
Breslow depth (mm)	Stage II (0.77-1.50)	1985	1.04	0.93-1.15	.52
	Stage III (1.51-2.25)	708	1.05	0.90-1.23	.52
	Stage IV (2.26-3.0)	413	1.10	0.90-1.34	.37
	Stage V (3.0 or more)	992	1.22	1.06-1.40	**<.01**
	Stage I (0.75 or less)	4527	—	—	—
Age		12,991	1.01	1.01-1.01	**<.01**

Bolded text indicates that statistical significance was noted.
CI, Confidence interval.

rural populations. Geographic location strongly influences health care education, access to care, and outcomes.[2] Influential factors may include sociodemographic barriers such as access to finances, distance from providers, home environment, and patient cultural background. Of the US population, 14% to 19% (46.2-59 million people) live in rural areas,[3] representing a significant area for targeting and improving health care quality.

We sought to assess whether disparities existed in stage at diagnosis and mortality between rural and metropolitan patients with melanoma and took advantage of our status as a state with 36% rural residents.[4] We accessed the deidentified Surveillance, Epidemiology, and End Results Program of the National Cancer Institute public use data set for patients in the state of Iowa (Iowa Cancer Registry). Categories available included age, race, sex, marital status, stage at diagnosis (Breslow depth), treatment type, vital status, and site of melanoma. All patients with a first-time diagnosis of nonocular primary cutaneous melanoma between 1996 and 2015 were included. Location was categorized as rural or metropolitan by using the US Office of Management and Budget definition of metropolitan areas as urbanized areas with 50,000 or more people[5] and all other areas as rural. Multivariate statistical analysis was performed to assess whether geographic location was associated with metastatic disease or increased mortality.

We identified 12,991 diagnosed patients who met these criteria during the 20-year period, of whom 6829 (52.6%) were in metropolitan areas and 6162 (47.4%) were in rural areas. A total of 8550 (65.8%) patients were alive, and 4441 (34.2%) were deceased. The mean age in rural areas was 61 years, and in metropolitan areas it was 58 years. Living in rural areas was associated with decreased odds of being an ethnic minority (odds ratio, 0.36; $P < .01$; 95% CI, 0.21-0.62). Multivariate analysis of the full population indicated that patients with metastatic disease had increased odds (odds ratio, 1.13; $P = .01$; 95% CI, 1.03-1.24) of being located in rural areas of Iowa compared to those diagnosed with nonmetastatic disease (Table I). Those diagnosed in rural areas also had increased all-cause mortality when

Table II. Overall survival on full population: Multivariate overall survival

Covariate	Level	N	Survival		
			Hazard ratio	95% CI	*P* value
Race	Other	427	0.08	0.05-0.14	**<.01**
	White	12,494	—	—	—
Sex	Female	5888	0.55	0.52-0.59	**<.01**
	Male	7033	—	—	—
Site	Not specified	445	2.88	2.55-3.25	**<.01**
	Trunk/limbs	9553	0.47	0.44-0.51	**<.01**
	Head/neck	2923	—	—	—
Stage	Distant/regional	1962	3.99	3.74-4.26	**<.01**
	Localized	10,959	—	—	—
Rural/metropolitan	Rural	6135	1.26	1.19-1.34	**<.01**
	Metropolitan	6786	—	—	—
Marital status	Divorced/separated/widowed	1836	2.08	1.93-2.23	**<.01**
	Single	1270	0.77	0.68-0.86	**<.01**
	Married	7942	—	—	—
Surgery	Yes	12,179	0.34	0.31-0.38	**<.01**
	No	733	—	—	—
Chemotherapy	Yes	15	6.66	3.87-11.49	**<.01**
	No	12,656	—	—	—
Radiation	Yes	400	5.62	4.99-6.33	**<.01**
	No	12,517	—	—	—
Hormone	Yes	15	3.34	1.80-6.21	**<.01**
	No	12,905	—	—	—
Breslow depth (mm)	Stage II (0.77-1.50)	1982	1.18	1.05-1.33	**<.01**
	Stage III (1.51-2.25)	708	2.14	1.86-2.47	**<.01**
	Stage IV (2.26-3.0)	412	3.23	2.76-3.77	**<.01**
	Stage V (3.0 or more)	989	4.95	4.46-5.51	**<.01**
	Stage I (0.75 or less)	4517	—	—	—
Age		12,921	1.07	1.07-1.07	**<.01**

Bolded text indicates that statistical significance was noted.
CI, Confidence interval.

compared to those diagnosed in metropolitan areas (hazard ratio, 1.26; $P < .01$; 95% CI, 1.19-1.34) (Table II).

Here, we report the correlation between location of diagnosis and stage at diagnosis and all-cause mortality. Limitations include that the Surveillance, Epidemiology, and End Results data set reports only all-cause mortality. Furthermore, only location of diagnosis was reported; hence, it cannot be definitively said whether patients lived in metropolitan or rural areas. Early staging and treatment of melanoma are crucial to prevent further future morbidity and mortality and to decrease costs. Disparities seen in rural populations may indicate the need for greater focus in these areas.

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PeakPASI: A new measurement tool in psoriasis care

To the Editor: Psoriasis can impair happiness and quality of life,[1] with people with a longer disease duration and more severe psoriasis showing higher impairment.[2] The Psoriasis Area and Severity Index (PASI) is a commonly used measuring tool, but it represents only a snapshot of a single visit. Accordingly, important factors like treatment outcomes or the individual lifetime burden may not be fully reflected.[3,4] Thus, we suggest implementing a stable, long-term score and using the highest ever-documented PASI, the PeakPASI.[5]

To test its feasibility, a cross-sectional study including patients with psoriasis aged 18 years or older from 36 dermatologic settings was performed in Germany between September 2018 and November 2019. Dermatologists were asked to recruit patients consecutively with any severity and to report the PeakPASI documented in each patient's file. Additionally, patients answered questions on the Dermatological Life Quality Index (DLQI) and regarding happiness.[1] To assess differences in patients, 2 classifications were calculated: (1) PeakPASI of less than 10.0 versus 10.0 or greater and (2) PeakPASI of less than 13.6 versus 13.6 or greater, based on a median split.

Overall, 398 patients (mean age, 49.1 ± 14.5 y; 42.5% women) were included (Table I and Supplemental Table I; available via Mendeley at https://doi.org/10.17632/2jxyvxw6t8.3). At study examination, 302 patients had a higher PeakPASI than PASI. In both classifications, people with a higher PeakPASI were more likely to be male, to have a higher PASI, to receive systemic treatment, and to have previously received UV therapy (Table I and Supplemental Table II; available via Mendeley at https://doi.org/10.17632/2jxyvxw6t8.3). Additionally, people having a PeakPASI of 13.6 or greater had significantly higher DLQI and lower happiness (Fig 1).

The mean value of PeakPASI was twice as high as the mean PASI, indicating that the cumulative burden is likely to be higher than 1 snapshot at a specific moment could depict. The PeakPASI might also be important when thinking about future treatment options and their effectiveness, because people with a higher PeakPASI were more likely to have received a higher number of previous systemic treatments. Possible explanations for this might be that people with a certain PeakPASI value have delayed responses to treatment, need early changes of treatment more often, were off treatment when the PeakPASI was documented, or did not adhere to the prescribed treatment.

One limitation is that the PeakPASI is a rather theoretical approach. It is not routinely documented, and information about the real highest lifetime PASI may get lost as patients consult several physicians, which generally could be prevented by using electronic health records accessible to all treating physicians. In this pilot study, a few important factors were not considered: status of treatment when PeakPASI was measured, time since onset of psoriasis, time span between PASI and PeakPASI, time span during which PeakPASI was documented, intervals at which patients were seen, and duration of current treatment. Additionally, in some patients with generally mild psoriasis, a high PeakPASI might be measured during a severe flare, which would overestimate the effect.

Future research should examine factors such as the length of time after which a change of therapy was initiated and whether the PeakPASI is helpful in determining the need for more comprehensive therapies.

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