attempt to use evidence-based patient education resources whenever possible.

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High-risk body sites for actinic keratosis in outdoor and indoor workers: A retrospective review

To the Editor: Outdoor workers are at high risk for actinic keratosis, the most common form of precancer on skin damaged by solar ultraviolet exposure.[1,2] This study retrospectively reviewed medical skin examination data from outpatient studies conducted in Southern Germany between 2014 and 2017 to identify which body sites are most frequently affected by actinic keratosis in different outdoor professions and indoor workers.[2,3] Detected actinic keratosis lesions were categorized into 45 body sites based on human anatomy and preexisting literature.[4]

Actinic keratosis prevalence was age-standardized with the European Standard Population as a reference.

Overall, 3409 participants were included in this study (mean age 50.2 years [standard deviation 14.8 years]; 50.2% women), consisting of 2062 outdoor workers (79.5% farmers and foresters, 6.4% mountain guides, and 5.1% landscapers) and 1347 indoor workers. Age-standardized actinic keratosis prevalence (19.3%) increased with age and was higher in men than women (24.7% versus 12.6%), as well as higher in outdoor than indoor workers (21.3% versus 15.2%).

In both outdoor and indoor workers, actinic keratosis lesions were mostly localized on the head (92.2%), particularly on the face (75.6%), followed by the arms (18.8%), the trunk (0.6%), and the legs (0.4%) (Table I). Outdoor and indoor workers' actinic keratosis distribution was comparable, with actinic keratosis on the forehead (38.2% versus 32.2%; $P = .14$), the cheeks (21.6% versus 16.1%; $P = .11$), and the temples (21.9% versus 28.7%; $P = .06$) (Fig 1). Among outdoor workers, landscapers were 3 times more likely to have actinic keratosis on the nose (64.3% of women; 33.3% of men) than farmers and foresters (20.4% of women; 10.8% of men; $P < .001$) (Table I). Sex-related differences were identified for actinic keratosis of the scalp (40.8% of men versus 9.5% of women; $P < .001$).

Actinic keratosis prevalence was higher in outdoor than indoor workers, but high-risk body sites for actinic keratosis seem to be identical for outdoor professions and indoor workers. Work clothing and the wide variations in the proportion of outdoor workers who use protective clothes (7%-89%)[5] as well as other sun protection measures, however, have to be considered as influencing factors.

In line with previous findings in the general population, we found that the head was the most common localization of actinic keratosis and identified sex-related differences.[4] Most body sites previously identified by Hoeppe et al[4] as the most ultraviolet exposed were also high-risk sites for actinic keratosis in our sample. Profession- and sex-related differences in actinic keratosis localizations indicate that skin cancer screenings and self-examinations in different outdoor workers should focus on each group's high-risk body sites (eg, female landscapers' noses).

In conclusion, the identification of localizations of actinic keratosis in high-risk outdoor workers helps to improve primary prevention (eg, sunscreen, other sun protection on high-risk body sites) and

Table I. Percentage of anatomic locations of actinic keratosis on different body sites in different outdoor professions and indoor workers*

Locations	Total, %	Outdoor workers, %					Indoor workers, %
		Total	Farmers and foresters	Landscapers	Mountain guides	Other outdoor workers	
No. of cases	802	627	516	41	51	19	175
Head	92.2	92.3	92.6	92.7	88.2	94.4	92.0
Face	75.6	75.8	75.4	82.9	47.5	73.7	74.9
Forehead	36.9	38.2	38.3	34.1	37.3	50.0	32.2
Cheeks	20.4	21.6	21.6	19.5	23.5	22.2	16.1
Temples	23.4	21.9	22.9	9.8	23.5	16.7	28.7
Nose	15.9	15.7	**13.4**	**43.9**	**17.6**	**11.1**	**16.7**
Eyes	2.8	2.9	2.5	2.4	7.8	0	2.3
Mouth/chin	1.9	1.9	**1.2**	**0**	**9.8**	**5.6**	**1.7**
Scalp	31.8	32.1	34.3	14.6	25.5	26.3	30.9
Arms	18.8	19.4	20.0	14.6	17.6	16.7	16.7
Trunk	0.6	0.6	**0.2**	**0**	**5.9**	**0**	**0.6**
Legs	0.4	0.3	0.2	0	2.0	0	0.6

*The cumulative percentage might be greater than 100% because 1 person could have actinic keratosis in several locations. Significant results are presented in boldface ($P < .001$).

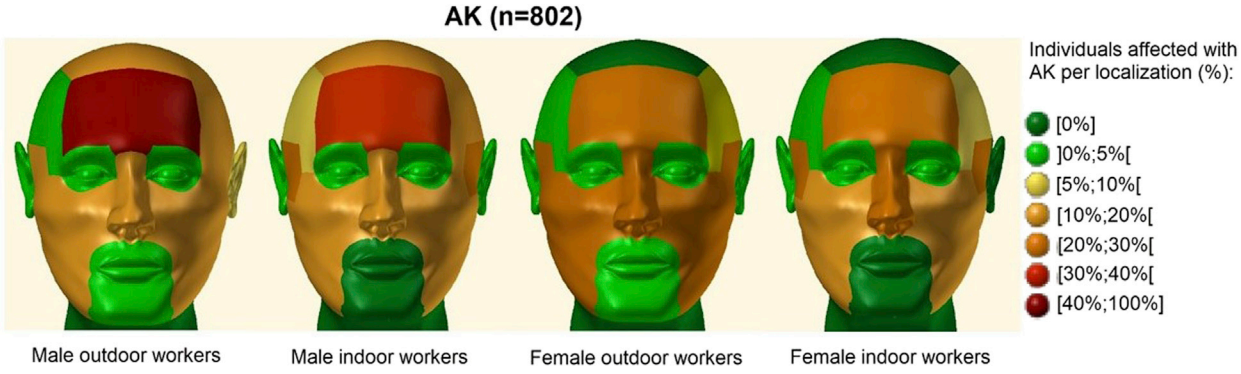

Fig 1. Anatomic locations of actinic keratosis on the faces of outdoor and indoor workers, stratified by sex. *AK*, Actinic keratosis.

secondary prevention (eg, skin screenings, self-examinations) on high-risk body sites.

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IRB approval status: Study data were obtained from 3 cross-sectional studies that were approved by the Ethics Committee of the Faculty of Medicine of the Technical University of Munich (references 385/16 s, 197/15 s, and 522/16 s). Because of the retrospective nature of the study, no additional approval was required.

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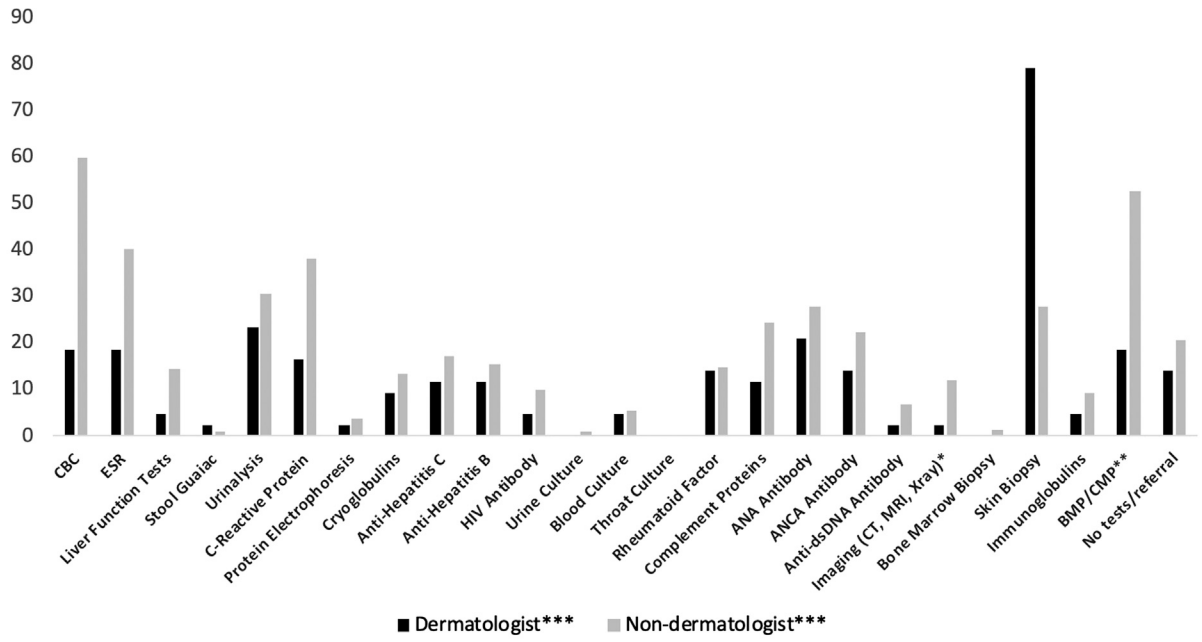
Assessing practice gaps in the outpatient management of cutaneous small vessel vasculitis

To the Editor: Leukocytoclastic vasculitis (LCV) is a heterogenous group of inflammatory vascular disorders commonly encountered in clinical practice.[1,2] LCV is characterized by inflammation of small vessels of the body (ie, arterioles, venules, capillaries) and may have varying clinical manifestations.[3] In most cases, LCV is a self-limited skin eruption that does not recur. The etiology commonly falls into 4 categories: primary (idiopathic), medication related, infection induced, or autoimmune connective tissue disorders. Many patients with LCV receive an expensive laboratory evaluation to elucidate an underlying cause. However, in clinical practice, a patient history with review of systems, physical examination, and targeted workup consisting of skin biopsy and urinalysis is often sufficient to rule out underlying systemic involvement or disease triggers.[4]

Our study aimed to evaluate the cost of LCV workup directed by dermatologists versus nondermatologists. An outpatient cohort of patients with nonrecurrent LCV was identified in TriNetX using International Classification of Diseases L95.9 diagnostic codes from December 2015 through April 2019. Patient demographic information, laboratory tests, procedures ordered, and provider type were identified in the electronic medical records and compiled in REDCap (Vanderbilt University, Nashville, TN) as deidentified information. Because insurance plans vary, up-front costs of LVC workup were extrapolated from online cost analysis databases available to the general public. Total number of laboratory tests ordered and total cost were calculated and compared by specialty type, and an analysis of variance (ANOVA) was conducted between provider groups.



CBC= Complete Blood Count; ESR = Erythrocyte Sedimentation Rate; ANA = Anti-Nuclear Antibody; ANCA = Antineutrophil Cytoplasmic Antibody; BMP = Basic Metabolic Panel; CMP = Comprehensive Metabolic Panel
* Imaging studies include but are not limited to CT, MRI, and Xrays.
**Total costs calculated for BMP/CMP are the average of both laboratory tests.
***Percentages of dermatologists and non-dermatologists that order individual laboratory tests for LCV work-up are shown.

Fig 1. Comparison of laboratory tests ordered by dermatologists and nondermatologists.