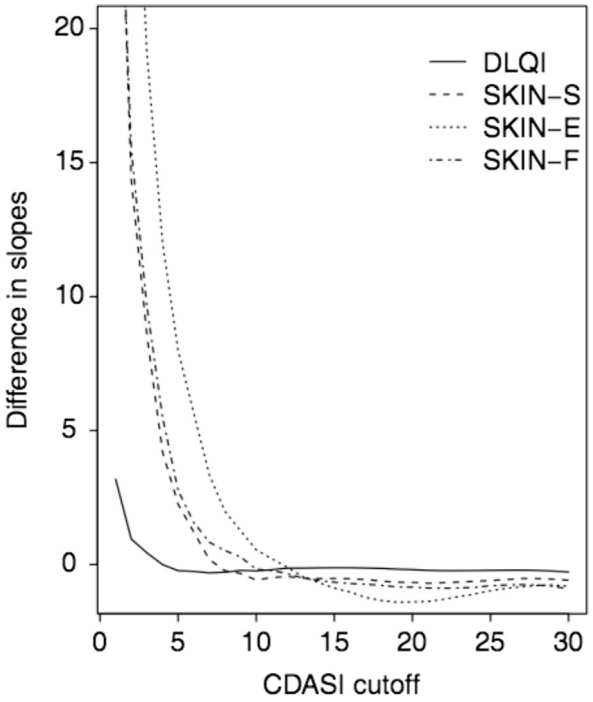


**Fig 1.** Slope-changing linear model of quality-of-life (QoL) instruments and CDASI values. A slope of 0 indicates a strong correlation whereas a slope >0 indicates a poor correlation. Therefore, CDASI cutoff values, or the lowest CDASI score at which the instrument correlates well with QoL, are determined by the inflection point for each QoL instrument. The cutoff values are 4 for DLQI, 7 for SKIN-S, 10 for SKIN-E, and 8 for SKIN-F. *CDASI*, Cutaneous Dermatomyositis Disease Area and Severity Index; *DLQI*, Dermatology Life Quality Index; *QoL*, quality of life; *SKIN-E*, Skindex-29 emotions subscale; *SKIN-F*, Skindex-29 functioning subscale; *SKIN-S*, Skindex-29 symptoms subscale.

Though the DLQI had the lowest CDASI cutoff value, a separate study by our group found that it is not sensitive in capturing QoL in the mild disease subgroup. Therefore, we propose the prioritization of the Skindex-29 subscale cutoff of 7 as a clinically meaningful endpoint. This study is limited as it was retrospective and performed at a single center. Future randomized controlled trials will be important to further examine CDASI cutoffs in a controlled trial setting. The results of this pilot study can be used to design trials to reach a meaningful clinical endpoint, instead of unnecessarily seeking total remission of skin findings in terms of QoL for patients. Using meaningful endpoints will optimize clinical trials and enable the development of essential treatments for dermatomyositis.

*Rebecca G. Gaffney, BA,[a,b] Rui Feng, PhD,[c] David R. Pearson, MD,[a,b] Meera Tarazi, BA,[a,b] and Victoria P. Werth, MD[a,b]*

*From the Corporal Michael J. Crescenz VAMC, Philadelphia, Pennsylvania[a]; Department of Dermatology,[b] and Department of Biostatistics,[c] University of Pennsylvania, Philadelphia, Pennsylvania*

*Funding sources: Supported by the U.S. Department of Veterans Affairs (Veterans Health Administration, Office of Research and Development and Biomedical Laboratory Research and Development). The funding sponsor was not involved.*

*Conflicts of interest: None disclosed.*

*Previous presented at the International Investigative Dermatology Meeting in May 2018 in Orlando, Florida.*

*Reprint requests: Victoria P. Werth, MD, Department of Dermatology, Perelman Center for Advanced Medicine, Ste 1-330A, 3400 Civic Center Blvd, Philadelphia, PA 19104*

*E-mail: werth@pennmedicine.upenn.edu*

**REFERENCES**

1. Strober B, Papp KA, Lebwohl M, et al. Clinical meaningfulness of complete skin clearance in psoriasis. *J Am Acad Dermatol*. 2016; 75:77-82.e77.
2. Wolstencroft PW, Chung L, Li S, Casciola-Rosen L, Fiorentino DF. Factors associated with clinical remission of skin disease in dermatomyositis. *JAMA Dermatol*. 2018;154:44-51.
3. Robinson ES, Feng R, Okawa J, Werth VP. Improvement in the cutaneous disease activity of patients with dermatomyositis is associated with a better quality of life. *Br J Dermatol*. 2015;172: 169-174.
4. Anyanwu CO, Fiorentino DF, Chung L, et al. Validation of the Cutaneous Dermatomyositis Disease Area and Severity Index: characterizing disease severity and assessing responsiveness to clinical change. *Br J Dermatol*. 2015;173:969-974.

https://doi.org/10.1016/j.jaad.2019.01.028

## Keratoacanthomas: A review of excised specimens

*To the Editor:* The management of keratoacanthomas (KAs) is variable.[1] Although some clinicians believe these lesions will regress, others regard them as a variant of squamous cell carcinoma (SCC) and treat them.[2] Because no guidelines exist, our goal was to provide evidence that informs KA management. The primary aim of our study was to quantify postbiopsy residual cancerous tissue rates in KA and well-differentiated SCC excision specimens. The authors hypothesized that the presence of residual tumors would be similar between the 2 specimen types. Our secondary aim was to determine risk factors for residual tumors in excision specimens.

**Table I.** Patient and tumor characteristics

| Characteristic | Keratoacanthoma, n = 85 | Well-differentiated SCC, n = 93 | *P* value |
|---|---|---|---|
| Age, y, mean ± SD | 67.7 ± 12.0 | 69.5 ± 12.0 | .312 |
| Male sex, n (%) | 43 (50.6) | 54 (58.1) | .317 |
| Time from biopsy to excision, d | 34 | 33 | .866 |
| Tumor location, n/total (%) | | | |
| Head and neck | 5/85 (5.9) | 6/93 (6.5) | .887 |
| Trunk | 12/85 (14.1) | 16/93 (17.2) | .571 |
| Upper extremities | 41/85 (48.2) | 52/93 (55.9) | .305 |
| Lower extremities | 27/85 (31.8) | 19/93 (20.4) | .084 |
| Positive residual tumor, n/total (%) | 23/85 (27.1) | 23/93 (24.7) | .718 |
| Head and neck | 2/5 (40.0) | 1/6 (16.7) | .545 |
| Trunk | 1/12 (8.3) | 4/16 (25.0) | .355 |
| Upper extremities | 14/41 (34.1) | 14/52 (26.9) | .450 |
| Lower extremities | 6/27 (22.2) | 4/19 (21.1) | 1.0 |

*SCC*, Squamous cell carcinoma; *SD*, standard deviation.

After institutional review board approval, we retrospectively reviewed and identified KA and well-differentiated SCC biopsy specimens obtained during 2010-2015. Regressing KAs were excluded. Only biopsies with corresponding excision specimens were included. Demographics, tumor location, diagnosis, and time between biopsy and excision were collected. Histologic features supporting KA diagnosis included endoexophytic crateriform morphology, neutrophilic abscesses, central keratotic plugging, symmetrical keratinocytic proliferation, and epithelial lipping. Histologic features supporting a diagnosis of well-differentiated SCC included increased epidermal and dermal proliferation of irregular-shaped keratinocytes with premature cornification. Residual tumors were assessed with vertical sectioning of both specimen tips followed by serial sectioning every 3 mm. Specimens were excised with 4-mm margins. No curetting was performed before excision.

We included 178 specimens, 85 KAs and 93 well-differentiated SCCs (Table I). No significant difference was found between the rates of residual cancer ($P = .723$) (Fig 1). Mean age of KA patients with and without residual cancer was 72.6 and 65.8 years, respectively ($P = .02$). Mean age of patients with well-differentiated SCC with and without residual cancer was 74.2 and 67.9 years, respectively ($P = .04$). The residual cancer rate did not differ by location ($P = .526$).

We show that excision specimens of KA and well-differentiated SCC have similar residual cancer rates of 27.1% and 24.1%, respectively ($P = .723$). These results correspond with those of Grelck et al, who found that 27.9% (n = 43) of excision specimens had

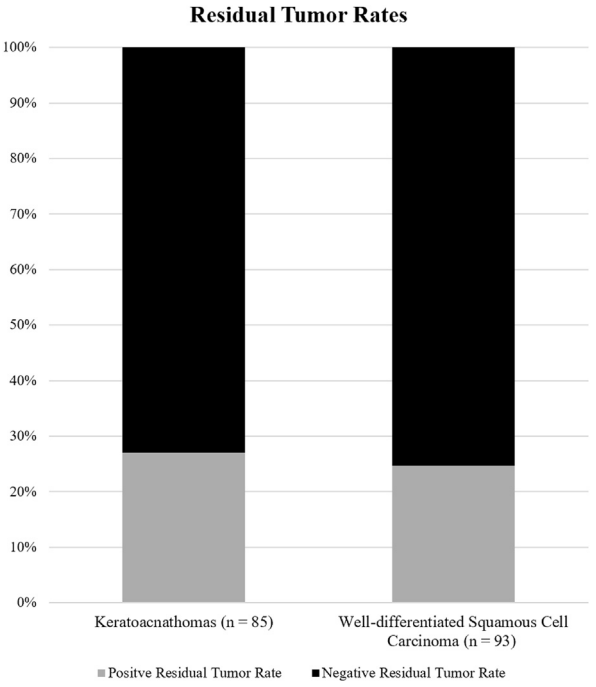


**Fig 1.** Residual cancer rates for keratoacanthomas and well-differentiated squamous cell carcinomas.

residual SCC, regardless of subtype.[3] A study conducted with veterans showed a residual SCC rate of 60.0%, but our population is strikingly different.[4] Direct comparisons of residual cancer rates in excisions of KA and well-differentiated SCC lesions are limited; however, Jackson et al reported similar residual cancer rates of 21% in KAs (n = 24) and 22% in well-differentiated SCCs (n = 59).[5]

In our study, older age is associated with residual cancer. Jackson et al reported a similar trend, with

residual cancer rates of 42% in patients ≥60 years and 26% in patients <60 years ($P = .089$).[5] Although Swetter et al did not find age to be a risk factor, their veteran population was older, making comparisons less reliable.[4] They also found location to be a risk factor for residual tumor in nonmelanoma skin cancer, but they did not separate out SCC.[4] These differences in study parameters might explain the differences between our findings.

Overall, the insignificant difference in postbiopsy residual cancerous tissue rates between KAs and well-differentiated SCCs suggests management of these entities should be similar. Limitations of this study include its retrospective design, inability to assess tumors that were not excised, examination using vertical sectioning, and unknown biopsy type.

*Mitchell Gibbons, BA,[a] Alexander Ernst, MD,[b] Ashaki Patel, MD,[c] Eric Armbrecht, PhD,[d] and Ramona Behshad, MD[b]*

*From the Saint Louis University School of Medicine, St. Louis, Missouri[a]; Saint Louis University Department of Dermatology, St. Louis, Missouri[b]; Medical College of Wisconsin, Wauwatosa, Wisconsin[c]; and Saint Louis University Department of Internal Medicine, St. Louis, Missouri[d]*

*Funding sources: None.*

*Conflicts of interest: None disclosed.*

*Reprint requests: Mitchell Gibbons, BA, 1402 S Grand Blvd, St. Louis, MO 63104*

*E-mail: gibbonsms@slu.edu*

**REFERENCES**

1. Watchorn RE, Thomas S, Miller C, et al. Keratoacanthoma management: results of a survey of UK. dermatologists and surgeons. *Br J Dermatol*. 2017;178(1):e49-e50.
2. Ko CJ. Keratoacanthoma: facts and controversies. *Clin Dermatol*. 2010;28(3):254-261.
3. Grelck K, Sukal S, Rosen L, Suciu GP. Incidence of residual nonmelanoma skin cancer in excisions after shave biopsy. *Dermatol Surg*. 2013;39(3 Pt 1):374-380.
4. Swetter SM, Boldrick JC, Pierre P, Wong P, Egbert BM. Effects of biopsy-induced wound healing on residual basal cell and squamous cell carcinomas: rate of tumor regression in excisional specimens. *J Cutan Pathol*. 2003;30(2):139-146.
5. Jackson JE, Kelly B, Petitt M, Uchida T, Wagner RF Jr. Predictive value of margins in diagnostic biopsies of nonmelanoma skin cancers. *J Am Acad Dermatol*. 2012;67(1):122-127.

https://doi.org/10.1016/j.jaad.2019.02.011

## A comparison of apremilast monotherapy and combination therapy for psoriatic arthritis in a real-life setting: Data from the Leeds Combined Psoriatic Service

*To the Editor:* Randomized controlled trials have shown that the phosphodiesterase-4 inhibitor apremilast is an effective and safe option in the treatment of psoriasis and psoriatic arthritis (PsA),[1] with real-world data now emerging from dermatology and rheumatology settings.[2-5] The Canadian multicenter retrospective study showed no increase in reported adverse events (AEs) when apremilast was used in monotherapy or in combination therapy with systemic drugs in patients with plaque psoriasis; the combination therapy group did not have superior efficacy, likely reflecting more resistant disease.[2] Such data is still sparse from the real-world experience in PsA patients.

In the first real-life report of apremilast 30 mg twice daily in active PsA, data were retrospectively reviewed in 71 patients at the tertiary Leeds Combined Psoriatic Service.[4] Herein, we report a subanalysis of the safety and response to therapy by treatment regimen. The proportions and means were compared by using Fisher's exact test and 2-tailed unpaired *t* test, respectively. Statistical analysis was performed with GraphPad Prism 7 (GraphPad Software, San Diego, CA), with $P$ values ≤ .05 considered significant.

Clinical characteristics and AEs are reported in Table I and Table II, respectively. Of 71 PsA patients, 39 (54.9%) were on monotherapy and 32 (45.1%) on combination therapy (Table I). Subanalysis of the 2 groups showed no increased number of reported AEs when apremilast was used in monotherapy or in combination therapy with conventional or biologic disease-modifying antirheumatic drugs (DMARDS) (Table II), confirming the result of Ighani et al.[2] We did not perform a statistical analysis because of the small number of AEs. Unlike in randomized controlled trials[1] and the retrospective study of Ighani et al,[2] unwanted weight loss and upper respiratory tract infections were not reported in our experience (Table II).[4] Of the 51 patients with a mean follow-up of ≥6 months, in which we could assess the response to therapy,[4] 28 were on monotherapy and 23 were taking apremilast in combination with conventional (n = 16) or biologic (n = 5) DMARDs or both (n = 2). According to the response criteria,[4] a slightly greater proportion of monotherapy patients achieved response (monotherapy 64.3% [18/28] vs combination 56.5% [13/23]) but without a significant difference. As in the plaque psoriasis real-world