which can impede ambulation and limit hand dexterity, interfered with daily activities in 88.5% of support group members and 62.5% of PHS patients.

PRP worsened with sun exposure in 65.3% of support group members and 64.3% of PHS patients. Ectropion developed in 38.8% of support group members and in 7.1% of PHS patients. Skin disease led to hospitalization in 25.6% of support group members and 21.4% of PHS patients. Of note, support group members and PHS patients reported they would trade 7.7 and 14.4 years of salary, respectively, to be free of disease. This patient-reported outcome is utilized as a valuation measure in QoL studies and further emphasizes the profoundly negative impact PRP has on QoL.

This is the first study to assess the effect of PRP on patient QoL and to analyze PRP-related sequelae in relationship to QoL. To our knowledge, this is also the largest study to assess demographic features and characteristics of disease history in patients with PRP. We found that PRP affects patient QoL even more so than many debilitating dermatologic and medical conditions. Limitations of this study include its small sample size, self-reported data, and potential selection bias, as support group members might have more severe disease. Additional investigation is necessary to further elucidate treatment options for PRP and to determine the impact of treatment on QoL over time.

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Factors associated with the utilization of Mohs micrographic surgery in the treatment of microcystic adnexal carcinoma

To the Editor: Microcystic adnexal carcinoma (MAC) is a rare cutaneous malignancy, and in the dermatology literature, the preferred treatment is Mohs micrographic surgery (MMS).[1] However, in a previous analysis of cases from 1973 to 2004, only 12.3% of those treated surgically were removed by MMS.[2]

Given the previously reported low use of MMS, we used descriptive statistics and a logistic regression model to investigate factors associated with the utilization of MMS to treat MAC. We also investigated trends in the utilization of MMS to treat MAC.

Data from the National Cancer Database (NCDB) for the period 2004 to 2015 were analyzed. The NCDB is operated by the American Cancer Society and American College of Surgeons; it captures 70% of all American cancer diagnoses.[3] Individuals with missing demographic data were excluded from the analysis. Covariates were compared between individuals whose tumors were treated with MMS versus with a different type of surgery. When appropriate, covariates with small sample sizes were condensed. To assess patient comorbidities, we used the Charlson-Deyo score, according to which a larger value represents an increasing number of comorbidities.

Table I. Demographics of microcystic adnexal carcinoma by surgical treatment

Characteristic	MMS	Other surgery	*P* value
Total cases	155 (27.7%)*	405 (72.3%)*	
Age, y†	65.03	68.30	.006
Sex			
Male	62 (24.7%)	189 (75.3%)	.156
Female	93 (30.1%)	216 (69.9%)	
Race			
White	153 (29.0%)	375 (71.0%)	.004
Other	2 (6.3%)	30 (93.8%)	
Year of diagnosis‡			
2004	8 (21.1%)	30 (78.9%)	.021
2005	10 (21.3%)	37 (78.7%)	
2006	13 (24.5%)	40 (75.5%)	
2007	13 (28.9%)	32 (71.1%)	
2008	17 (30.9%)	38 (69.1%)	
2009	12 (21.4%)	44 (78.6%)	
2010	10 (23.3%)	33 (76.7%)	
2011	12 (29.3%)	29 (70.7%)	
2012	16 (30.2%)	37 (69.8%)	
2013	12 (22.2%)	42 (77.8%)	
2014	14 (40.0%)	21 (60.0%)	
2015	18 (45.0%)	22 (55.0%)	
Radiation			
No	133 (29.3%)	321 (70.7%)	.077
Yes	22 (20.8%)	84 (79.2%)	
Charlson-Deyo score			
0	142 (29.8%)	335 (70.2%)	.008
≥1	13 (15.7%)	70 (84.3%)	
Insurance			
Private	78 (34.4%)	149 (65.6%)	.011
Medicare	68 (22.8%)	230 (77.2%)	
Other	9 (25.7%)	26 (74.3%)	
Facility type			
Academic	99 (32.8%)	203 (67.2%)	.003
Not academic	56 (21.7%)	202 (78.3%)	
Metastatic disease			
No	155 (27.8%)	403 (72.2%)	1.000
Yes	0 (0.0%)	2 (100%)	
Primary site			
Head and neck	141 (30.9%)	316 (69.1%)	<.001
Other	14 (13.6%)	89 (86.4%)	

MMS, Mohs micrographic surgery.
*Data reported as number (percentage).
†Data reported as mean.
‡Spearman $\rho = 0.095$.

Differences between individuals treated with MMS and those treated with a different type of surgical procedure were compared by using the chi-square test, Fisher exact test, or *t* test. A test for trend in the use of MMS over time was performed by using Spearman rank correlation. Logistic regression with stepwise forward selection was used to identify factors associated with greater or less frequent utilization of MMS. Year of diagnosis was not included in the logistic regression model, nor were metastatic disease at diagnosis or race (owing to the small sample sizes). All tests were performed with SPSS software (IBM, Armonk, NY) at the .05 level of significance.

A majority of MAC tumors (72.3%) were removed by a surgical procedure other than MMS (Table I). MAC was more common in women (55.2%) and whites (94.3%), and only 2 of 560 individuals had metastatic disease at the time of diagnosis. Whites ($P = .004$), younger patients ($P = .006$), and patients with private insurance ($P = .011$) were statistically more likely to be treated with MMS. Between 2004 and 2015, a statistically significant positive trend in the utilization of MMS was observed ($P = .024$, Spearman $\rho = .095$).

In a multivariate logistic regression model, factors associated with an increased utilization of MMS relative to other surgical procedures were treatment at an academic institution (odds ratio [OR], 1.645; $P = .013$), primary site on the head or neck (OR, 3.259; $P < .001$), and Charlson-Deyo score of 0 (OR, 2.134; $P = .020$) (Table II).

A limitation of this study is that the NCDB data come from hospitals accredited by the American College of Surgeons Commission on Cancer.[4] Because skin cancers are often removed in private clinics, MAC is likely under-represented in NCDB.

The use of MMS for MAC is increasing. This is likely due to the availability of MMS and to recognition of the fact that cure rates are increased with this modality.[1] Higher rates of MMS were observed at academic centers, which may reflect a referral to dermatology as opposed to other specialties. Whites, individuals with head and neck tumors, and individuals with a higher baseline functional status were also more likely to be treated with MMS.

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Table II. Univariate and multivariate logistic regression models of factors associated with utilization of MMS

Variable	Univariate (95% CI)*	*P* value	Multivariate (95% CI)*	*P* value
Age	0.980 (0.965-0.994)	.006	0.984 (0.962-1.006)	.157
Sex				
Male	1.0		1.0	
Female	1.312 (0.901-1.912)	.156	1.252 (0.845-1.855)	.263
Radiation				
No	1.582 (0.949-2.637)	.079	1.655 (0.972-2.819)	.63
Yes	1.0		1.0	
Charlson-Deyo score				
0	2.282 (1.223-4.258)	.009	2.134 (1.127-4.041)	.020
≥1	1.0		1.0	
Insurance				
Private	1.771 (1.205-2.602)	.004	1.266 (0.718-2.234)	.415
Medicare	1.0		1.0	
Other	1.171 (0.524-2.618)	.701	0.924 (0.372-2.294)	.865
Facility type				
Academic	1.759 (1.202-2.576)	.004	1.645 (1.109-2.439)	.013
Not academic	1.0		1.0	
Primary site				
Head and neck	2.837 (1.561-5.155)	.001	3.259 (1.758-6.041)	<.001
Other	1.0		1.0	

CI, Confidence interval; *MMS*, Mohs micrographic surgery.
*Data reported as odds ratio (95% confidence interval).

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Association of acetaminophen exposure with increased risk of eczema in children: A meta-analysis

To the Editor: Many studies[1-5] have assessed the relationship between acetaminophen exposure and the risk of development of eczema (atopic dermatitis) in children. However, the results remain controversial. Here we report a meta-analysis to evaluate the potential association between acetaminophen exposure and the risk of development of eczema in children.

We used the EMBASE, PubMed, and Cochrane Library databases to conduct a meta-analysis of studies published before September 29, 2018, and written in English. The search for studies related to acetaminophen was performed by using the key words and subject terms: *acetaminophen*, *paracetamol, Panadol,* and *Tylenol*, using OR to link the relevant text within the search field. To acquire studies related to eczema, OR was used to associate the key words, which included *dermatitis*, *eczema*, *neurodermatitis*, and *dermatitis, atopic*. We combined these terms using AND to retrieve the relevant studies. Animal studies, studies with adult participants, reports with no indication of the association between acetaminophen and eczema, duplicated reports, case reports, reviews, and meta-analyses were excluded.

Two reviewers (D.X. and X.S.) performed data extraction, evaluated the methodologic quality of the included reports with the Newcastle-Ottawa scale, and discussed disagreements to reach a consensus.

The literature search yielded 314 reports. In total, 15 reports with 901,875 participants were included (see https://data.mendeley.com/datasets/kjbx2v3w6z/1/files/958a9e46-adbc-42c2-92c5-1e9876aa960a/Table%201%20of%20Research%20letter%20of%20JAAD.docx?dl=1). According to the random effects model, acetaminophen exposure increased the risk of eczema (odds ratio [OR], 1.41; 95% confidence interval [CI], 1.23-1.62; $P < .05$) in children. Children exposed prenatally to acetaminophen did not seem to have increased risk of eczema (OR, 1.31; 95% CI, 0.97-1.76; $P > .05$), and children exposed to acetaminophen during the most recent year seemed to have the greatest risk of eczema