

# The Hidden Impact of Seborrheic Keratoses: Analysis of a Psychometric Survey of an Ethnically Diverse Cohort of U.S. Adults

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## SYNOPSIS

- Seborrheic keratoses (SKs) are among the most common benign cutaneous lesions, affecting approximately 84 million individuals in the United States.<sup>1</sup> Removal of SKs by dermatologists often requires invasive cryosurgery, shave excision, electrosurgery, curettage, or laser- or light-based treatment<sup>2</sup>; an unmet treatment need exists for the safe, noninvasive, and effective removal of SKs<sup>3</sup>
- Key reasons that individuals with SKs prefer to have them treated or removed include concern with the seriousness of the lesion, physical irritation or pruritus, embarrassment from the visual appearance of the lesion, or the desire to look younger<sup>4</sup>
- Eskata (hydrogen peroxide topical solution, 40% [w/w]; HP40; Aclaris Therapeutics, Inc., Wayne, PA) is a proprietary, stabilized, noninvasive treatment with demonstrated safety and efficacy in the removal of SKs of the face, trunk, and extremities, and low risk of skin pigmentation changes or scarring<sup>3,5,6</sup>
  - HP40 is the first US Food and Drug Administration (FDA)-approved topical treatment for individuals with raised SKs<sup>3,6</sup>

## OBJECTIVE

- To describe segments of consumers with raised facial SKs, identify specific concerns regarding treatment to remove SKs and gain an understanding of barriers to treatment for facial/hairline SKs

## METHODS

### Study Design

- An online survey was conducted between September 28 and October 13, 2017 among 702 eligible participants aged 35–65 years
  - The sponsor was not identified to survey participants

### Inclusion Criteria

- Eligible participants were diagnosed with SKs by a health care provider (HCP) or self-confirmed the presence of SKs using the definition and example images provided for the survey
- In addition, participants were required to meet the following criteria
  - Bothered by appearance of SKs located on the face or hairline (score  $\geq 3$  on a 5-point Likert scale [1 = not at all bothered; 2 = slightly bothered; 3 = somewhat bothered; 4 = moderately bothered; 5 = extremely bothered])
  - At least somewhat interested in an FDA-approved topical treatment to remove SKs on the face or hairline
  - Annual income  $\geq$ \$75,000 and residing in an urban or suburban area

### Exclusion Criteria

- Survey participant or immediate family member was an employee or consultant for any pharmaceutical, advertising, marketing, market research, or public relations company at the time of survey completion

### Sample Recruitment Quotas

- The sample population was estimated to include 140 males (20%) and 560 females (80%);  $\geq 210$  subjects (30%) had visited a dermatologist in the past 2 years
- The estimated population by age was categorized as 35–39 years (10%), 40–49 years (40%), 50–59 years (40%), and 60–65 years (10%)
- The population recruited for the survey was selected to mirror US Census demographics for race and ethnicity
- $\geq 210$  subjects (30%) must have been to a dermatologist in the past 2 years

### Survey Questions

- A summary of survey questions is provided in **Table 1**

**Table 1. Number of Survey Questions Included by Category<sup>a</sup>**

Category	Number of Questions
1. Screening	17 questions
2. Demographics and media habits	4 questions
3. Lifestyle, personality, skin care attitudes and behaviors, and relationship with a dermatologist	24 questions
4. Experience with SKs	26 questions
5. Profile of a product for treatment of SKs	14 questions

SKs, seborrheic keratoses.  
<sup>a</sup>The inclusion of some questions was conditional based on previous participant responses.

### Statistics

- Categorical data were presented as frequency and percentage; continuous variables were presented as mean (standard deviation [SD])

## RESULTS

### Demographics

- A total of 702 survey participants were enrolled and were consistent with the sample recruitment quotas (**Table 2**)

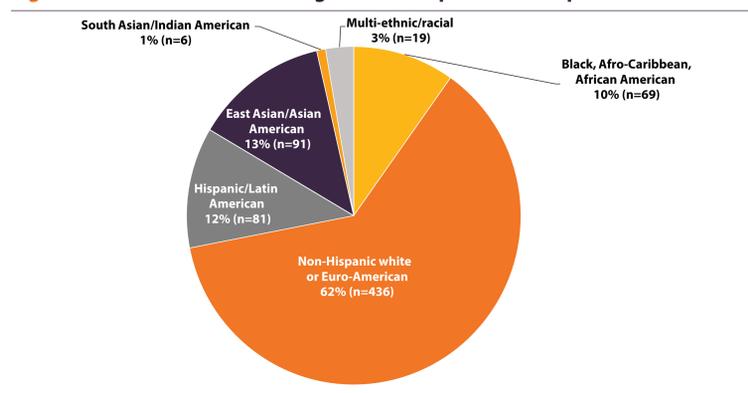
**Table 2. Demographics and Characteristics of Survey Participants**

Male	142 (20)
Age category	
35–39	70 (10)
40–49	281 (40)
50–59	281 (40)
60–65	70 (10)
Visited dermatologist in previous 2 years	290 (41)
Mean (SD) household income, US dollars	120,566 (24,252)
Residing in a suburban area	547 (78)

Values are n (%) unless indicated otherwise.

- The racial and ethnic demographics of enrolled survey participants are summarized in **Figure 1**

**Figure 1. Racial and Ethnic Background of Population Sample<sup>a</sup>**



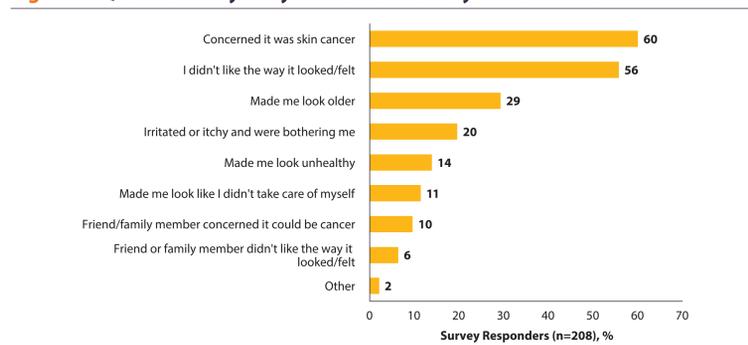
<sup>a</sup>The sum of the percentages is greater than 100% due to rounding.

- Survey participants reported a Fitzpatrick skin type of I or II (33%), III (42%), IV (16%), and V or VI (9%)
- Among survey participants who had visited a dermatologist, the most common reasons for doing so were routine skin cancer check (66%); removal of noncancerous skin growths, marks, or spots (52%); and to have a suspicious mole or spot checked (47%)
- A total of 39% of participants reported that they were previously diagnosed with SKs by an HCP
  - A total of 99% of participants confirmed the presence of spots, growths, or marks similar to the SKs in the images provided

### Concerns About SKs

- Among the 468 participants (67%) with SKs on multiple body locations, SKs on the face or hairline were of greatest concern (86%)
- A total of 314 participants (45%) had consulted a professional (eg, HCP, aesthetician) about the SKs on their face or hairline; when asked why, among 208 responders the most common reasons given were concern that the lesion could be cancerous (60%) and dislike of how the spots looked or felt (56%) (**Figure 2**)

**Figure 2. Question: Why did you first ask about your facial SKs?<sup>a</sup>**



SKs, seborrheic keratoses.

<sup>a</sup>Participants could choose more than one response.

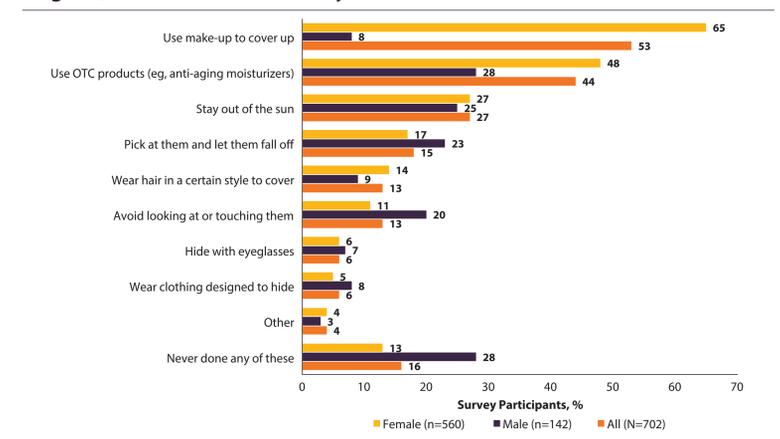
### Coping Strategies for SKs

- A majority of survey participants (n=591; 84%) reported attempts to mask or modify their SKs
  - Makeup application was the most common strategy (53%; 65% of females and 8% of males), followed by use of over-the-counter products, such as wart removers or anti-aging products (44%), and avoidance of sun exposure (27%) (**Figure 3**)

## CONCLUSIONS

- Individuals with SKs on the face or hairline have concerns about potential skin cancer and/or appearance
- Over two-thirds of patients reported interest in removal of SKs but did not have them removed; reasons cited included lack of awareness that removal treatment options exist (29%) and never being offered the option by their HCPs (19%)
- Findings from this survey highlight the negative impact that benign SKs could have on patients. In addition, the findings inform dermatologists and other HCPs on missed opportunities to improve communications with patients on SK treatment options

**Figure 3. Question: Which of the following things have you ever done to hide, disguise, or deal with the SKs on your face or hairline?<sup>a</sup>**

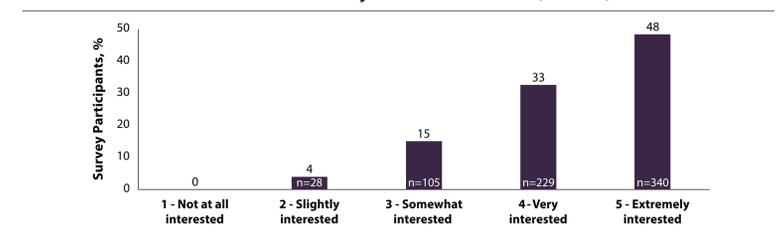


OTC, over-the-counter; SKs, seborrheic keratoses.

<sup>a</sup>Participants could choose more than one response.

- A majority of survey participants (n=569; 81%) were extremely interested or very interested in receiving treatment for their face/hairline SKs (mean [SD] score = 4.3 [0.8]; **Figure 4**)

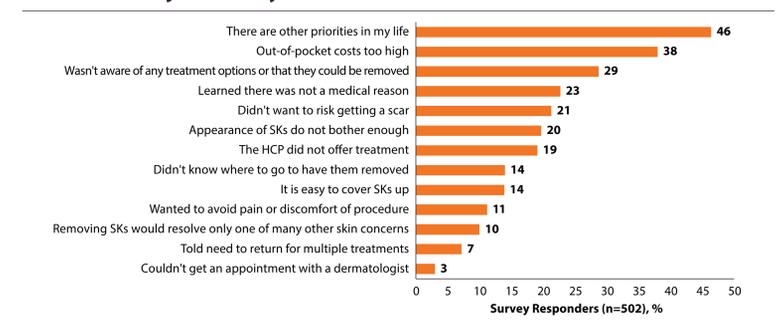
**Figure 4. Question: Suppose that there was a new FDA-approved topical treatment to remove SKs on the face and hairline. The treatment would be applied in the dermatologist's office, but your insurance considers this a cosmetic treatment and you'd have to pay for the treatment on your own. Assuming the cost of treatment was reasonable to you, how interested would you be in getting this treatment to remove the SKs on your face/hairline? (N=702)**



SKs, seborrheic keratoses.

- Despite expressing high levels of interest in treatment, the majority of survey participants (n=502; 72%) elected not to have their facial or hairline SKs removed (**Figure 5**)
- A total of 112 participants (24%) who had SKs on the rest of the body had had them removed or treated

**Figure 5. Question: Earlier you said you had not had any of the SKs on your face or hairline removed or treated. Please indicate if the factors presented here were a major reason you have not had them treated or removed.<sup>a</sup>**



SKs, seborrheic keratoses.

<sup>a</sup>Participants could choose more than one response.

## References

- Bickers DR, et al. *J Am Acad Dermatol.* 2006;55:490-500.
- Jackson JM, et al. *J Drugs Dermatol.* 2015;14:1119-25.
- Baumann LS, et al. *J Am Acad Dermatol.* 2018 Jun 1 [Epub ahead of print].
- Del Rosso JQ. *J Clin Aesthet Dermatol.* 2017;10:16-25.
- DuBois JC, et al. *Dermatol Surg.* 2018;44:330-40.
- Eskata [package insert]. Wayne, PA: Aclaris Therapeutics, Inc.; 2017.

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## Disclosures

Shuai Xu, MD, MSc, reports consulting for Aclaris Therapeutics. He also reports grant support from Pfizer Inc, Leo Pharma, and Novartis. Stacy Wang, PharmD, is an employee of Aclaris Therapeutics, Inc., and Esther Estes, MD, MPH, is a former employee of Aclaris Therapeutics, Inc.

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