Verruca vulgaris (common warts) are benign cutaneous lesions caused by human papillomavirus infection of keratinocytes. Common warts are transmissible, are associated with perceived social stigma, and may persist for several years without treatment. No specific antiviral therapies or United States Food and Drug Administration-approved prescription treatments are currently available for the treatment of common warts, and most of the commercially used therapies have limited clinical evidence of efficacy.

An internet research survey was recently conducted to determine the prevalence of 7 skin conditions, including common warts, in the United States and to determine common pathways in their treatment.

### RESULTS

#### Phase 1: General Population Survey

- Of 20,056 respondents from the US general population, 1,168 reported having common warts currently or within the past year, for an overall estimated prevalence of 5.8% (Table 1).
- The estimated prevalence of common warts was greater among adult survey respondents (5.6%) than among children (4.2%), and among women (6.0%) compared to men (5.0%).
- Common warts had the highest prevalence of the 7 skin conditions assessed.

#### Table 1. Estimated Prevalence Rates of Common Warts

<table>
<thead>
<tr>
<th>Anatomic Location</th>
<th>Total Numbers of Respondents</th>
<th>Respondents With Common Warts</th>
<th>Estimated Prevalence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>4,987</td>
<td>759</td>
<td>2.2%</td>
</tr>
<tr>
<td>Adults</td>
<td>15,069</td>
<td>710</td>
<td>4.7%</td>
</tr>
<tr>
<td>Total</td>
<td>20,056</td>
<td>1,469</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

#### Phase 2: Physician-Focused Survey

- Most respondents (45%) sought treatment for common warts from primary care physicians.
- 29% of respondents were treated by dermatologists. 31% of dermatologist-treated respondents were referred by another health care provider.
- Over half of adult respondents (58%) sought treatment for themselves within 1 week of symptoms.
- Common warts were more likely to be male (29%) than female (20%).
- Most physicians (54%) responded that patients with common warts were more likely to be male (Table 2) and more likely to be ≤ 19 years of age (Table 3).

#### Table 2. Physician-Reported Prevalence of Common Warts by Patient Sex and Type of Physician

<table>
<thead>
<tr>
<th>Sex</th>
<th>Pediatrician (%)</th>
<th>Primary Care (%)</th>
<th>Family Doctor (%)</th>
<th>Dermatologist (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>44%</td>
<td>43%</td>
<td>49%</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>Male</td>
<td>56%</td>
<td>57%</td>
<td>51%</td>
<td>56%</td>
<td>56%</td>
</tr>
</tbody>
</table>

#### Table 3. Physician-Reported Prevalence of Common Warts by Patient Age and Type of Physician

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>Pediatrician (%)</th>
<th>Primary Care (%)</th>
<th>Family Doctor (%)</th>
<th>Dermatologist (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>59%</td>
<td>10%</td>
<td>24%</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>10-19</td>
<td>38%</td>
<td>20%</td>
<td>24%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>20-29</td>
<td>28%</td>
<td>17%</td>
<td>15%</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>30-39</td>
<td>18%</td>
<td>12%</td>
<td>12%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>40-49</td>
<td>11%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>50-59</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>≥60</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

#### Figure 1. General Population Survey Design

- General Population 15,069 Respondents
- General Population Qualifying respondents with ≥ 1 skin condition
- General Population Qualifying respondents with the number of cases by the population size
- 7 skin conditions assessed: alopecia areata, atopic dermatitis, common warts, hidradenitis suppurativa, plaque psoriasis, psoriasis, and vitiligo

#### Figure 2. Physician-Focused Survey Design

- Physicians 300 respondents
- Qualifying respondents with ≥ 1 skin condition
- Phase 2: Physician-Focused Survey

#### Figure 3. Ages of Survey Respondents With Common Warts

- Over 70% of respondents had common warts on their hands and fingers.

#### Figure 4. Percentages of Respondents With Common Warts By Anatomic Location

- Hand/Fingers: 35%
- Face: 16%
- Ankle: 15%
- Leg: 10%
- Finger: 7%
- Cheek/nasal: 4%
- Ear: 5%
- Arm: 5%
- Other: 2%

#### Figure 5. Time From Common Wart Symptom Development to Treatment

- Most respondents (54%) had used over-the-counter treatments for their common warts.

#### Figure 6. Respondents Using Common Types of Wart Treatments

- Most likely to be male (29%) than female (20%).

#### Figure 7. Percentages of Survey Participants Satisfied With Management of Their Common Warts, Pediatric Versus Adult Respondents

- Among children, 71% were satisfied with management of their common warts.

#### CONCLUSIONS

- The estimated US prevalence of common warts is 5.8%, indicating over 19 million sufferers of this condition.
- Most respondents (45%) sought treatment from primary care physicians.
- 29% of respondents were treated by dermatologists. 31% of dermatologist-treated respondents were referred by another health care provider.
- Over half of adult respondents (58%) sought treatment for themselves within 1 week of symptoms.
- Common warts were more likely to be male (29%) than female (20%).
- Most physicians (54%) responded that patients with common warts were more likely to be male (Table 2) and more likely to be ≤ 19 years of age (Table 3).

### SYNOPSIS

- Verruca vulgaris (common warts) are benign cutaneous lesions caused by human papillomavirus infection of keratinocytes. Common warts are transmissible, are associated with perceived social stigma, and may persist for several years without treatment.
- No specific antiviral therapies or United States Food and Drug Administration-approved prescription treatments are currently available for the treatment of common warts, and most of the commercially used therapies have limited clinical evidence of efficacy.
- An internet research survey was recently conducted to determine the prevalence of 7 skin conditions, including common warts, in the United States and to determine common pathways in their treatment.

### METHODS

- This 2-phase internet survey collected data from 1) the general population and 2) physicians to identify the prevalence of 7 skin conditions (alopecia areata, atopic dermatitis, common warts, hidradenitis suppurativa, plaque psoriasis, psoriasis, and vitiligo) in the United States.
- Survey respondents, including consumers and physicians from the general population, were contacted by a vendor through previously established panels; participant selection was not based on screenings for skin conditions.
- Phase 1 of the survey assessed the general population and included questions about participants’ demographics, health conditions, and attitudes and behaviors related to their health (Figure 1).
- Pictures and descriptions of 7 skin conditions were shown in random order; qualifying respondents—those who reported having 1 or more of the conditions currently or within the past month, regardless of whether it was diagnosed by a health care professional—were randomly selected to proceed to condition-specific survey questions until the quota for that condition was filled (n = 200).
- Condition-specific survey questions addressed the condition’s onset, occurrence, diagnosis, anatomic location, and treatments and the types of providers seen.

### OBJECTIVE

- The objective of this presentation is to report key findings from the research survey related to the prevalence and treatment of common warts.

### REFERENCES


### Acknowledgments

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### Disclosures

PCK is a principal investigator and participant of advisory boards for Aclaris Therapeutics, Inc. BB is a consultant, investigator, and speaker for Aclaris Therapeutics, Inc. SW is an employee of Aclaris Therapeutics, Inc. and may own stock/stock options in that company.

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