

Patients Frequently Overestimate Their Comprehension of Common Mohs Micrographic Surgery Terms: A Cross-Sectional Survey

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ABSTRACT

Background: Patients who understand their diagnosis and treatment are more likely to be satisfied with their care and more compliant with treatment. Dermatologic surgery is a specialized field with associated jargon that many patients may not understand.

Objective: The aim of the study was to assess patient understanding of dermatology medical terminology.

Methods: This was a single-blinded study conducted with patients 18 years and older from an academic dermatology clinic surveying patients on 12 terms that are frequently used in dermatologic surgery. Participants rated their level of confidence in their understanding of each term using a 5-point Likert scale, followed by explaining the definition of the term. 3 blinded physicians graded each participant's definition using a 5-point scale of accuracy of understanding, designed to mimic the Likert scale.

Results: A total of 200 respondents completed the survey (96% response rate). The average term perceived understanding was 3.90 ± 0.66 , the average term accuracy was 3.26 ± 0.93 . Patients overestimated their understanding 44% of the time, and underestimated their knowledge 17% of the time. The terms with the lowest respondent confidence were the terms *secondary intention*, *Mohs surgery*, and *flaps*. The terms with the lowest respondent accuracy was *secondary intention*, *defect*, and *Mohs surgery*.

Conclusion: There is a gap in knowledge in commonly used dermatologic surgery terms among patients. Certain demographics appear to be more at risk for not understanding medical jargon or overestimating their understanding of terms. Obtaining these patient demographics may help to identify patients needing additional education regarding dermatologic surgery.

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INTRODUCTION

Patient satisfaction and outcomes are impacted by an inability to understand medical jargon.^{1,2} Further, patients often don't understand, or overestimate their understanding of dermatology terminology.³⁻⁵ Comprehension during Mohs surgery is important as patients are alert during the procedure and uncertainty may increase anxiety levels. Moreover, lack of comprehension may impact adherence to post-operative recommendations and worsen clinical outcomes.

METHODS

An institutional review board-approved survey was conducted to assess patient comprehension of commonly used terms during Mohs surgery. Patients 18 and older were recruited from an academic dermatology clinic to complete a brief in-person survey which assessed comprehension of 12-terms. Each term was presented in a sentence for context. Participants rated their level of confidence in understanding each term using a 5-point Likert scale and then defined the term (5 denoted as extremely confident). Three blinded physicians graded each definition using a 5-point scale (termed "accuracy," 5 denoted

as completely accurate). Student t-tests were used to identify associations between patient confidence and physician-graded accuracy of understanding ($P < 0.05$ considered statistically significant). Fisher exact tests were substituted when parametric assumptions could not be verified.

RESULTS

Two-hundred respondents completed the survey (96% response rate) with an average age of 57 ± 20 years. Sixty percent were male, 90% white (3.5% black, 3% Asian, 2% Hispanic, 1.5% other) and 62% had a college degree (Table 1). The average patient confidence in Mohs terms was 3.90 ± 0.66 , the average term accuracy was 3.26 ± 0.93 . Patients overestimated their knowledge (reported a confidence score higher than the physician graded accuracy score) 44% of the time. The terms patients were least confident in included *secondary intention* and *Mohs surgery*. The terms they were least accurate with included *secondary intention* and *defect* (table 2).

College educated patients were more confident (3.98 ± 0.70 vs 3.76 ± 0.70 , $P < 0.001$) and accurate (3.34 ± 0.98 vs 3.01 ± 0.91 ,

TABLE 1.

| Demographic Comparison Between Confidence and Accuracy of Mohs Surgery Terms | | | | | | | | |
|--|-----|--------------------------|-------------|---|---------------------|--|--------------------|--|
| | n | Overall score, mean (SD) | | p-value | Underestimation (%) | p-value | Overestimation (%) | p-value |
| | | Self | Physician | | | | | |
| Education | | | | | | | | |
| High school | 76 | 3.76 ± 0.7 | 3.01 ± 0.91 | <0.0001 ^a 0.0394 ^b | 16 | 0.3096 ^a 0.0857 ^b | 47 | 0.04 ^a 0.0774 ^b |
| College | 81 | 3.98 ± 0.70 | 3.34 ± 0.98 | | 17 | | 44 | |
| Graduate School | 43 | 3.99 ± 0.58 | 3.52 ± 0.94 | | 20 | | 39 | |
| Age | | | | | | | | |
| 18-60 | 92 | 3.77 ± 0.67 | 3.17 ± 0.97 | 0.0184 | 19 | 0.0821 | 45 | 0.3864 |
| 61 and older | 108 | 4.02 ± 0.66 | 3.33 ± 0.92 | | 16 | | 43 | |
| Experience in medical field | | | | | | | | |
| Yes | 59 | 4.13 ± 0.55 | 3.48 ± 0.94 | 0.0002 | 16 | <0.0001 | 44 | 0.5116 |
| No | 141 | 3.82 ± 0.71 | 3.18 ± 0.94 | | 18 | | 44 | |
| Prior Mohs experience | | | | | | | | |
| Yes | 92 | 4.06 ± 0.62 | 3.58 ± 0.89 | <0.0002 | 18 | 0.2775 | 39 | <0.0001 |
| No | 108 | 3.77 ± 0.76 | 2.98 ± 0.99 | | 16 | | 49 | |
| Family Medical Experience | | | | | | | | |
| Yes | 71 | 3.93 ± 0.63 | 3.23 ± 0.92 | 0.2831 | 16 | 0.0631 | 47 | 0.1557 |
| No | 129 | 3.90 ± 0.67 | 3.28 ± 0.95 | | 16 | | 43 | |

"Underestimation" is defined as instances when a patient reported a confidence lower than physician graded accuracy. "Overestimation" is defined as instances when a patient reported a confidence higher than physician graded accuracy

Statistically significant values (p<0.05) denoted in bold

SD, Standard deviation

^ap value comparison of high school vs college (including graduate school) education

^bp value comparison of graduate school vs non-graduate school education

TABLE 2.

| Term Specific Confidence and Accuracy | | | | | |
|---------------------------------------|--------------------------|-------------|-------------------|------------------|---|
| | Overall Score, mean (SD) | | | | |
| Terms | Self | Physician | Underestimation % | Overestimation % | Common Accurate Definitions ^a |
| Suture | 4.60 ± 0.88 | 4.47 ± 1.22 | 15 | 16 | "Stitch" |
| Local Anesthetic | 4.69 ± 0.71 | 4.14 ± 1.20 | 11 | 36 | "Numbing" |
| Repair | 4.24 ± 1.0 | 3.99 ± 1.29 | 30 | 35 | "Closure" |
| Graft | 4.37 ± 1.03 | 4.16 ± 1.28 | 24 | 28 | "Piece of skin taken from one site to the other" |
| Margins | 3.68 ± 1.37 | 3.24 ± 1.68 | 26 | 41 | "Edge" |
| Defect | 4.14 ± 1.09 | 2.19 ± 1.16 | 7 | 82 | "Wound" |
| Layer | 4.2 ± 1.12 | 3.35 ± 1.28 | 14 | 60 | "A deeper or wider portion" |
| Flap | 3.63 ± 1.36 | 3.03 ± 1.49 | 24 | 53 | "Using nearby skin to cover wound" |
| Stages | 4.17 ± 1.11 | 2.80 ± 1.27 | 10 | 69 | "Another portion/part" |
| Excise | 3.77 ± 1.44 | 3.96 ± 1.66 | 31 | 19 | "Cut out" or "Remove" |
| Secondary Intention | 2.51 ± 1.42 | 1.49 ± 1.20 | 9 | 55 | "Heal on its own" |
| Mohs Surgery | 2.89 ± 1.72 | 2.3 ± 1.57 | 9 | 39 | "Tissue sparing surgery" or "Surgery for skin cancers in high risk or cosmetically sensitive areas" |

SD, Standard deviation

^aThe most frequent accurate definitions patients gave that received full credit with physician grading.

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$P < 0.0001$) in their definitions compared to those without college degrees. Patients without college education also overestimated more frequently (47% vs 44% with a college degree, $P = 0.04$). Patients over 60 were more confident (4.02 ± 0.66 vs 3.77 ± 0.67 , $P < 0.0001$) and accurate (3.33 ± 0.92 vs 3.17 ± 0.97 , $P = 0.0184$) when compared to younger patients. Patients with previous medical experience were more confident (4.13 ± 0.55 vs 3.82 ± 0.71 , $P < 0.0001$) and more accurate (3.48 ± 0.94 vs 3.18 ± 0.94 , $P < 0.001$) compared to those without. Patients who previously underwent Mohs surgery were more confident (4.06 ± 0.62 vs 3.77 ± 0.76 , $P < 0.0001$), accurate (3.58 ± 0.89 vs 2.98 ± 0.99 , $P < 0.0001$), and less likely to overestimate (39% of the time vs 49%, $P < 0.0001$) compared to those who had not.

DISCUSSION

This study is limited in diversity as a single institution sample; however, it illustrates the frequent lack of comprehension with Mohs surgery terms. Patients overestimated their knowledge nearly half of the time which reinforces the need to discuss with patients in non-medical terms to prevent instances of miscommunication and uncertainty.^{4,5} We suggest using alternate terms or descriptive phrases patients are more familiar with, as demonstrated in table 2 under "Common Accurate Definitions." Further research can evaluate patient satisfaction and surgical complication rates when using simplified terminology.

DISCLOSURES

All authors listed above have no conflict of interest.

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