

Ocular Surface Pain: Online Medical Education Can Significantly Improve Ophthalmologists' Knowledge on Causative Factors, Diagnostic Methods, and Emerging Therapies and Increase Confidence for Patient Assessment

Presented at the
ARVO (The Association for
Research in Vision
and Ophthalmology)
Annual Meeting
May 2, 2022

Poster #3703028

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BACKGROUND

Ocular surface pain is a frequent cause of visits yet a complete understanding of its causative factors and tools for diagnostic workup are often lacking in many eye clinics. It can manifest as a result of a noxious stimulus or disruption in the ocular surface anatomy (nociceptive pain), or can result from abnormalities in the ocular surface neurosensory apparatus itself (neuropathic pain). Differentiation between both entities is valuable to inform treatment.¹ We aimed to determine if online medical education could improve knowledge and confidence regarding the assessment of patients with ocular surface pain and recalling new mechanisms of action for emerging treatment options.



METHODS

PRE-ASSESSMENT



Ophthalmologists
(n = 441)



An online 30-minute CPD-certified educational activity was presented in a roundtable discussion of 3 experts with accompanying, synchronized slides.

POST-ASSESSMENT



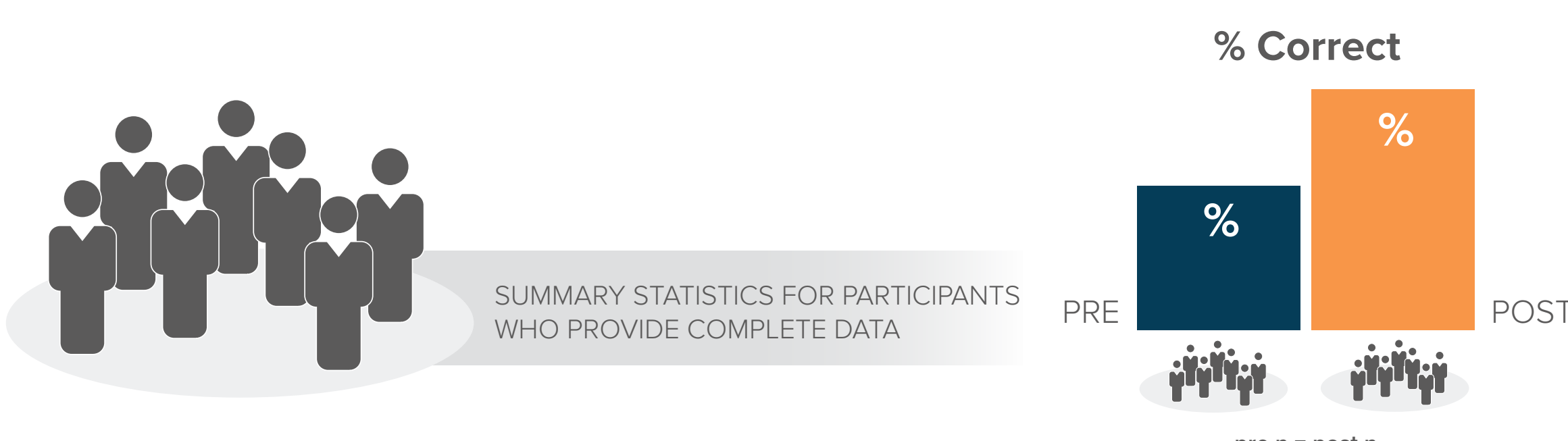
Ophthalmologists
(n = 441)

441 test completers; CME launched 16 Apr 2021; data are reported through 15 Jul 2021
> 3300 ophthalmologists had accessed the program by 31 Dec 2021

How to Read the Linked Learner Assessment

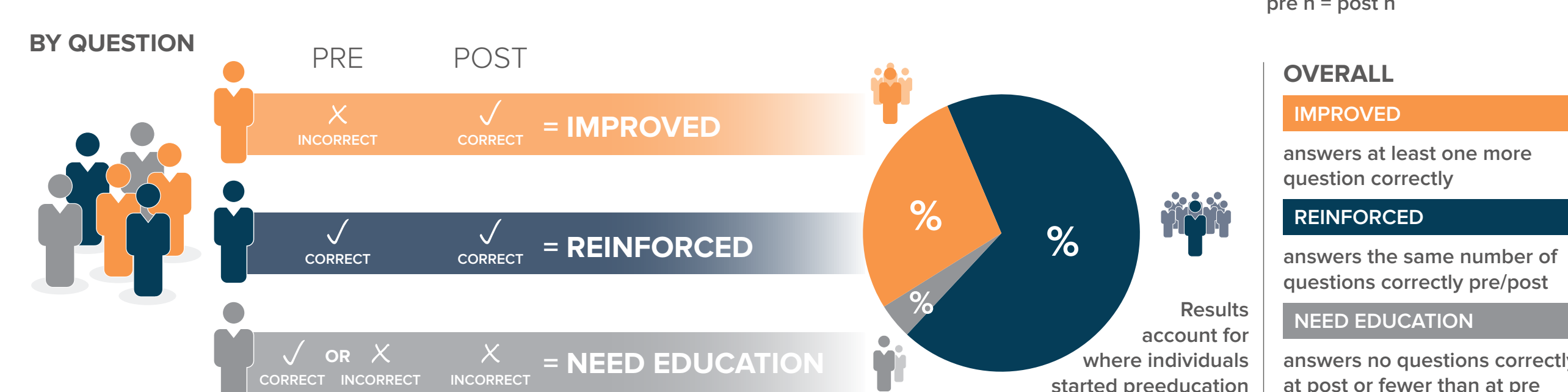
OUTCOMES COMPLETERS

Each individual completed BOTH the pre and post-education questions
SAME individuals pre and post-education



LINKED LEARNER

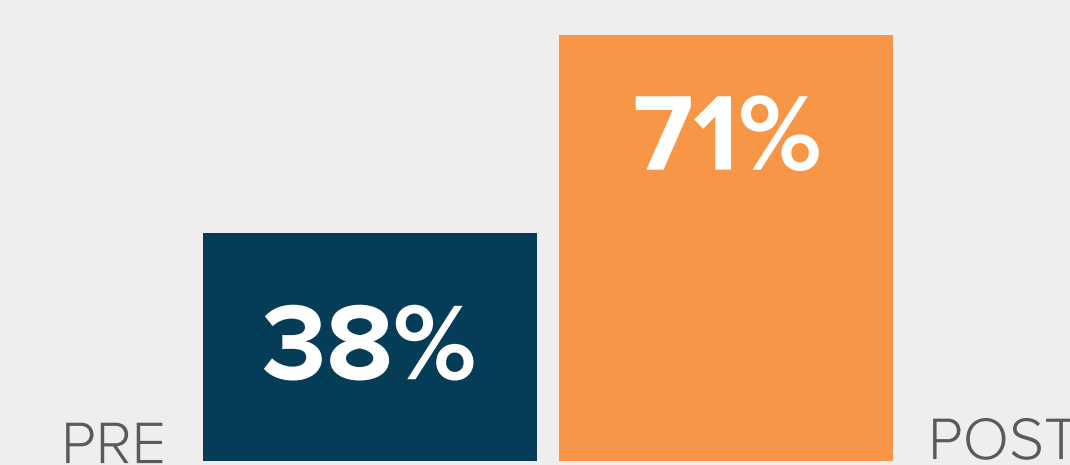
Each individual tracked pre and post-education
Learners serve as their own controls



RESULTS

Ophthalmologists (n = 441)

AGGREGATED RESULTS
3 out of 3 Correct Responses



COHEN'S D
0.61

Cohen's d with correction for paired samples estimated the effect size of the education on number of correct responses (<.20 modest, .20-.49 small, .50-.79 moderate, ≥.80 large)

EFFECT SIZE	EDUCATIONAL IMPACT
<.20	MODEST
.20-.49	SMALL
.50-.79	MODERATE
≥.80	LARGE

CHI-SQUARE TEST

P < .001

SIGNIFICANCE (P < .05)

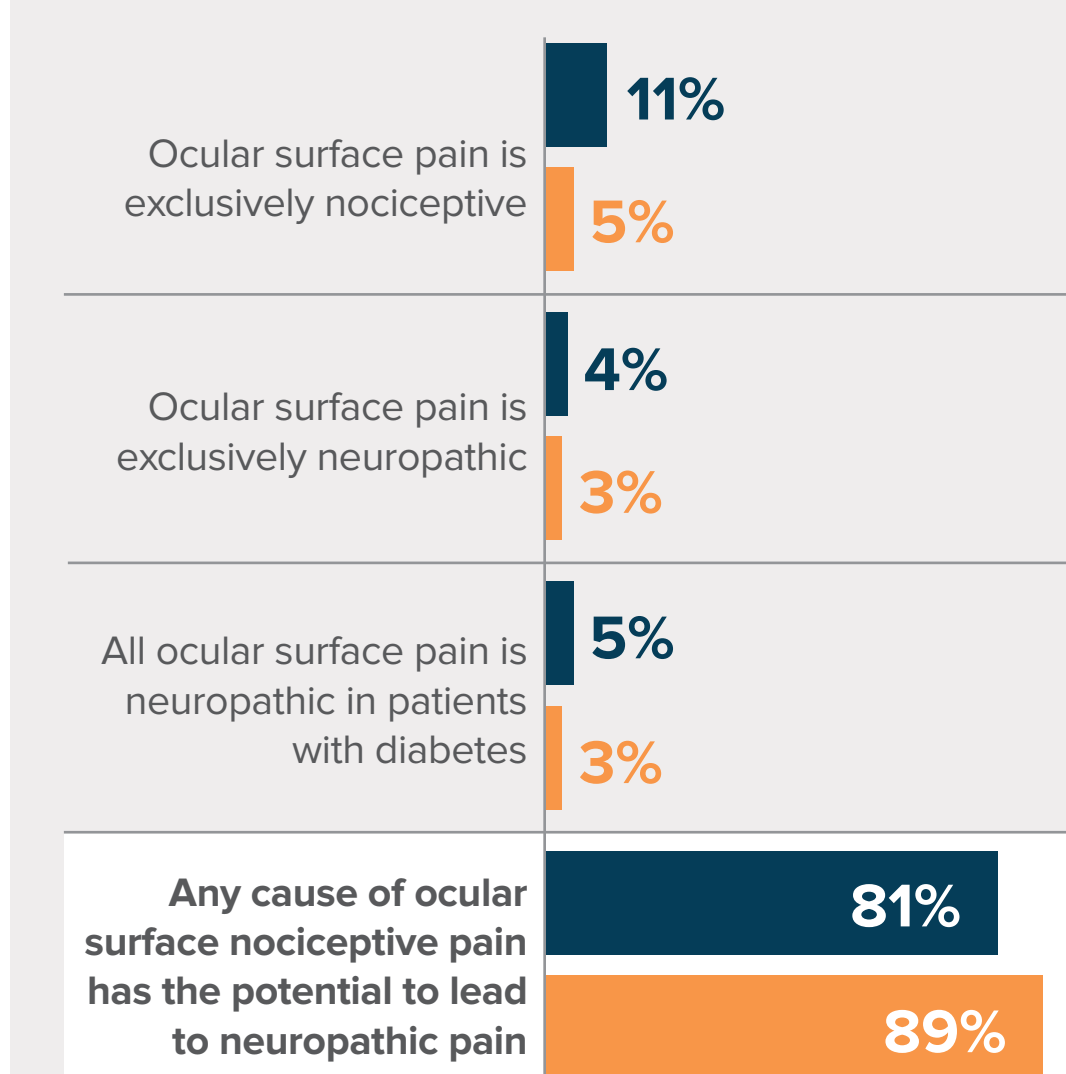
QUESTION 1 RESULTS

Significantly increased knowledge of causative factors for ocular surface pain

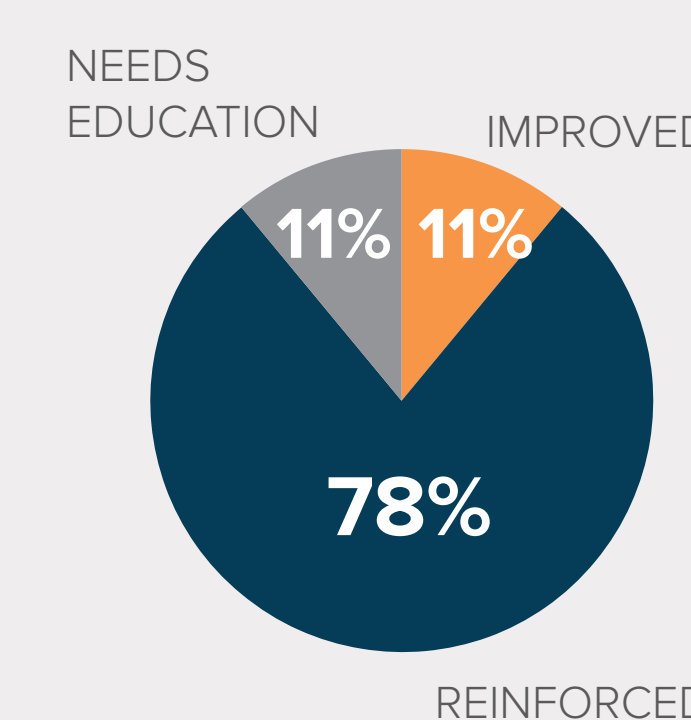
Ophthalmologists (n = 441)

AGGREGATED RESULTS

Which of the following is an underlying cause in patients with ocular surface pain?



LINKED LEARNING RESULTS



P < .001

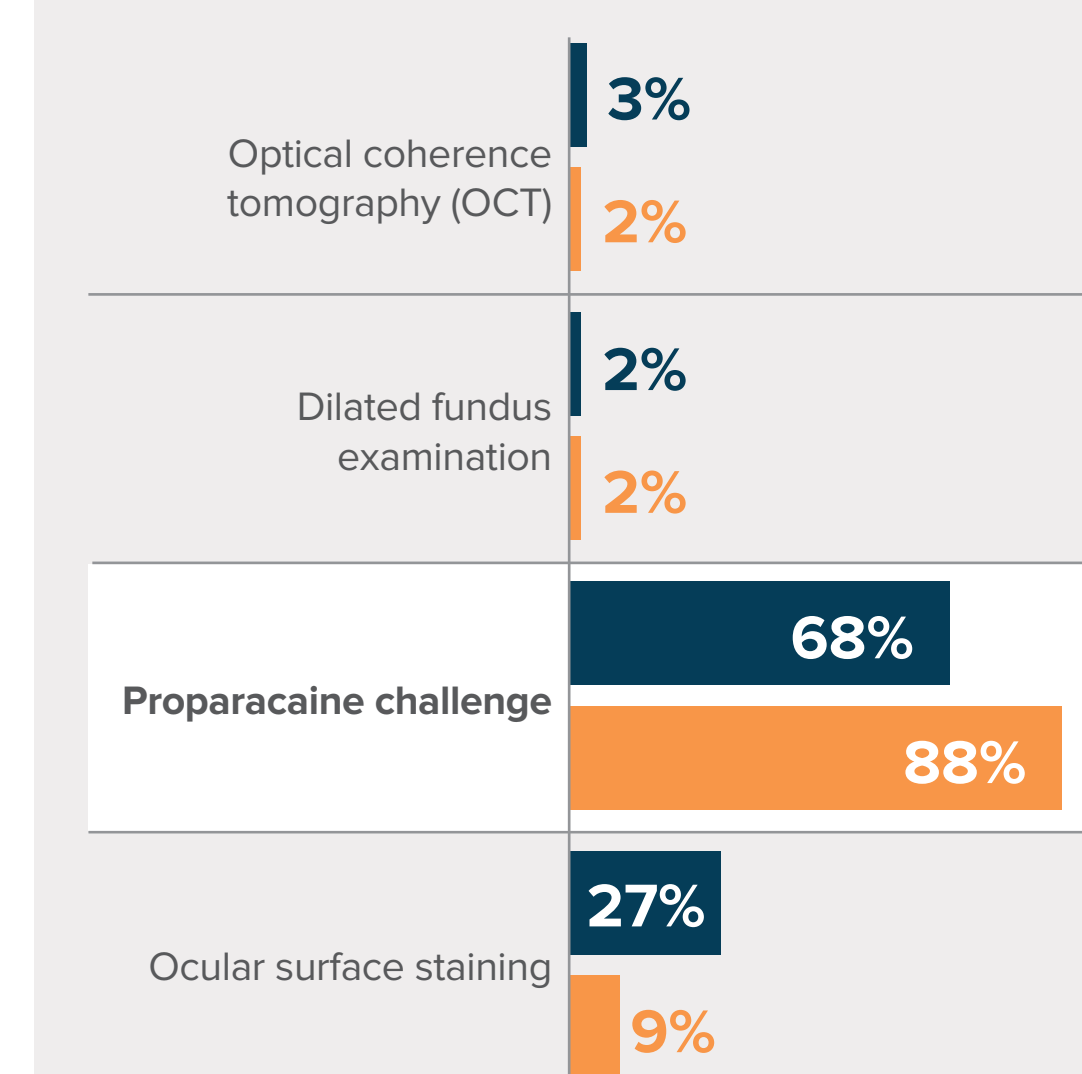
QUESTION 2 RESULTS

Significantly increased knowledge regarding the assessment of ocular surface pain

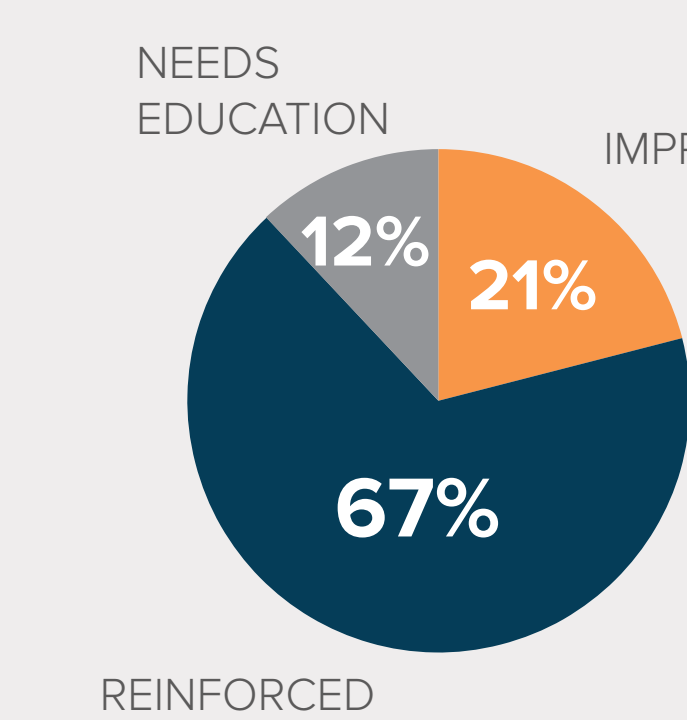
Ophthalmologists (n = 441)

AGGREGATED RESULTS

Which of the following assessment methods helps to distinguish between ocular pain of central or peripheral origin?



LINKED LEARNING RESULTS



P < .001

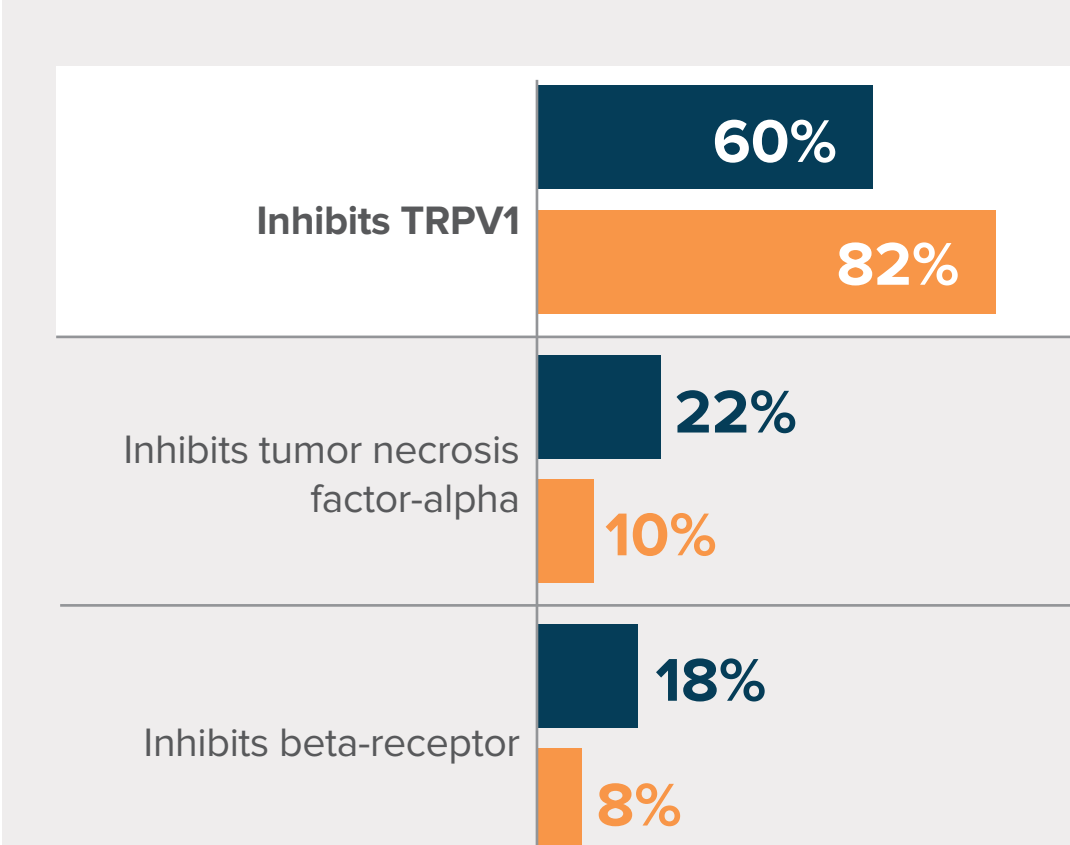
QUESTION 3 RESULTS

Significantly increased knowledge regarding the emerging therapies for ocular surface pain

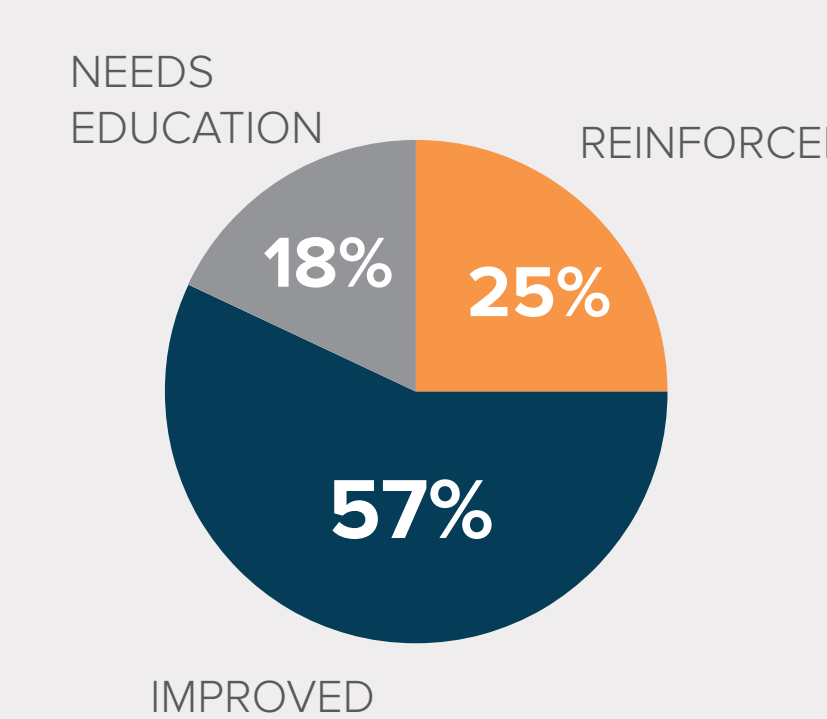
Ophthalmologists (n = 441)

AGGREGATED RESULTS

SAF312 is an eye drop currently being studied to treat ocular surface pain. Which of the following is its mechanism of action?



LINKED LEARNING RESULTS

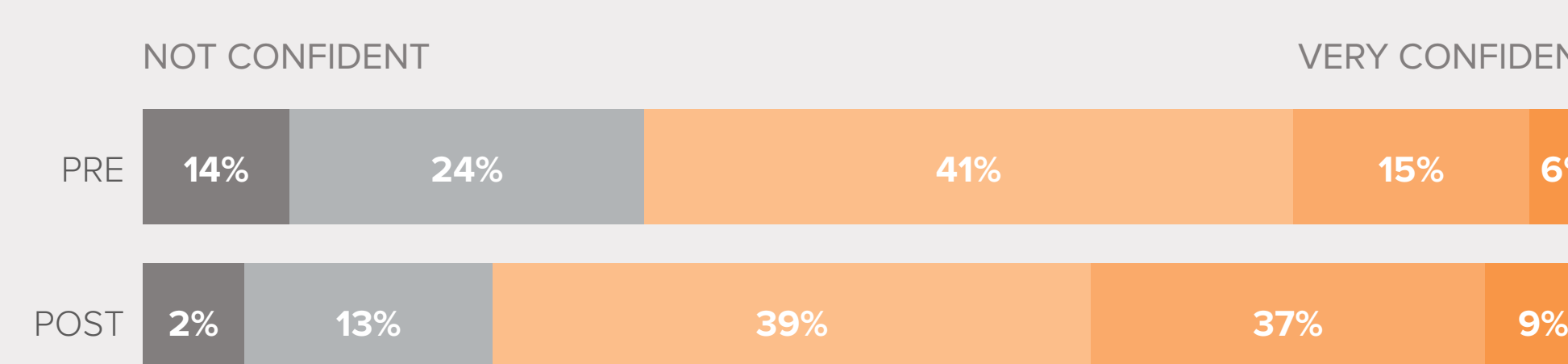


P < .001

CONFIDENCE ANALYSIS

Improved confidence in learners' ability to assess patients with ocular surface pain

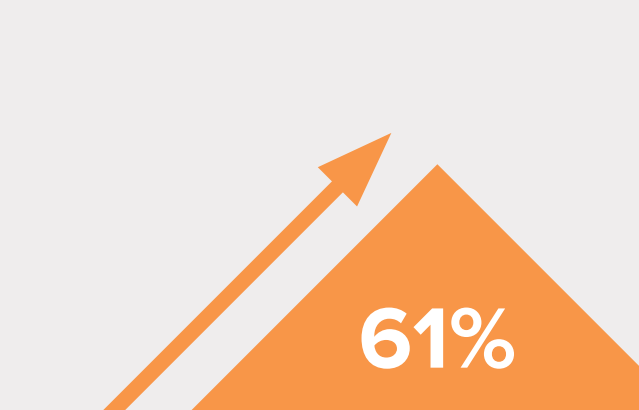
Ophthalmologists (n = 441)



LINKED LEARNER RESULTS



TOTAL AVERAGE CONFIDENCE SHIFT FOR THOSE WHO INCREASED CONFIDENCE

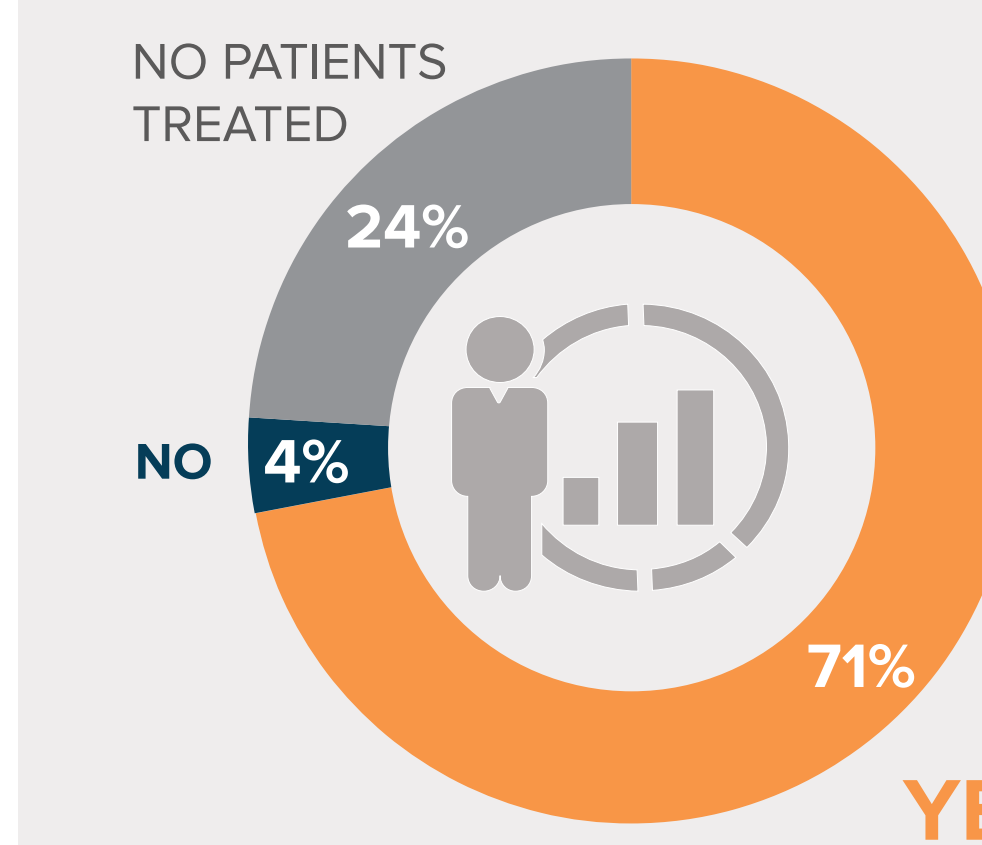


How confident are you right now in your ability to assess patients with ocular surface pain? (Select ranking from 1 [Not confident] to 5 [Very confident])

POLLING QUESTION

Ophthalmologists state a high unmet need for new therapies for ocular surface pain

Ophthalmologists (n = 441)



Is there a need for new therapies to treat chronic ocular surface pain?

CONCLUSIONS

Online medical education in the form of expert roundtable discussions with accompanying slides can:

- Significantly improve ophthalmologists' knowledge and confidence on assessing patients with ocular surface pain to raise awareness and improve diagnosis of peripheral and central neuropathic pain
- Increase knowledge on emerging treatments, such as topical TRPV-1 inhibitors

Polling confirmed a high unmet need for new treatments to better control chronic ocular surface pain.

Additional education is warranted to:

- Shorten time to diagnosis for neuropathic ocular pain
- Disseminate latest clinical data for emerging treatments
- Share evidence-based patient selection guidance for clinical practice

ACKNOWLEDGEMENTS

Sources of support: Developed through an independent educational grant from Novartis.
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REFERENCE

1. Mehra D, Cohen NK, Galor A. Ocular surface pain: a narrative review. Ophthalmol Ther. 2020;9:1-21.



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