

## Excimer Laser Keratectomy for Astigmatism after PK

Dear Editor:

In the article entitled "Excimer Laser Keratectomy for Astigmatism after Penetrating Keratoplasty" (*Ophthalmology* 1996;103:458-64), the authors do not state which scientific methodology is used to determine the vector axis change in Table 3. Instead of the customary acknowledgment of the scientific work and its researcher by referring to the peer-review literature, the only acknowledgment is to a commercial product, providing insufficient guidance regarding methodology used in the analysis.

The meaning of the term used in the article, *the vector axis change*, is unclear. I expect the term refers to the angular separation between axis of achieved astigmatism change versus the axis of desired axis change, in this case using refractive astigmatism values. If this is the case, then I do not believe that positive numbers indicate with-the-rule change and negative numbers against-the-rule change, as stated in the legend. Instead, positive numbers

Table 1. Results of Vector Axis Change

Eye No.	Angle of Error	Vector Axis Change
1	-40°	34°
2	0°	0°
3	6°	5°
4	-14°	-12°
5	0°	0°
6	-12°	-11°
7	-22°	-19°

would indicate the applied treatment to be counterclockwise of the desired axis, and negative numbers would indicate that treatment was applied clockwise to its desired axis of placement.

Using the methodology I have described in a previous article,<sup>1</sup> this value would be termed the *angle of error*, which represents the angle subtended between the surgically induced astigmatism vector and the target-induced astigmatism vector.

Using my methodology, the values are shown in Table 1 above, along with those from Table 3 from the article. I have been unable to precisely reproduce the results displayed in the "Vector Axis Change" section of the article. In particular, eye 1 obtains a negative sign, indicating that a clockwise rotation of treatment has occurred, not counterclockwise as reported with the positive value.

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#### Reference

1. Alpíns NA. A new method of analyzing vectors for changes in astigmatism. *J Cataract Refract Surg* 1993;19:524-33.