lens power calculation in patients with keratoconus is challenging. Determining the accurate keratometry readings, axial length, and anterior chamber depth can be difficult in these eyes, which can lead to inaccurate and unpredictable results with a tendency to hyperopic refractive surprises.[1–4] To the best of our knowledge, this is the first study that reports the Barrett Universal II as the most accurate formula in mild keratoconus (stages I and II).

Wang and associates[1] noted that it was not possible to apply the Barrett Universal II formula in more advanced stages (stage III) because the online calculator did not allow include keratometry entries >55 diopters (D). Currently, the online calculator provided by the Asia-Pacific Association of Cataract and Refractive Surgeons and other online calculators,[5,6] allow the input of keratometric powers ranging from 30 D-60 D (≤65 D in the Kane formula), which enables the inclusion of more advance stages of keratoconus.

Savini and associates[2] reported that the SRK/T formula was superior to the Barrett Universal II formula, providing the lowest predicted error and highest percentage of eyes with a predicted error within ±0.5 D, with the worst median absolute error in stage III eyes regardless of the formula.

Recently, Kane and associates[6] demonstrated that formulas with adjustments for keratoconus can be an interesting option, being even slightly superior to traditional formulas. Regarding traditional formulas, SRK/T and Barrett Universal II remain the best options, which is consistent with the findings in the study by Wang and associates.[1]

Considering the lower accuracy of intraocular lens power calculations in more severe cases of keratoconus,[1–4] we believe it would be interesting to explore the Barrett Universal II formula in severe cases such as those reported by Wang and associates, to determine its efficacy in more advanced cases that are usually the most questionable.

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Reply to Comment on: Accuracy of Intraocular Lens Formulas in Eyes With Keratoconus

EDITOR:

WE APPRECIATE THE COMMENTS AND INQUIRY FROM Gonzalez-Lubcke and associates. Intraocular lens (IOL) power calculations in eyes with keratoconus is indeed more unpredictable than in normal eyes using third and fourth-generation IOL formulas.

An exclusion criterion of our study was postoperative best spectacle–corrected visual acuity (BSCVA) of 20/40 or better, and many eyes with stage III keratoconus were contact lens–dependent and not able to achieve BSCVA of 20/40 or better. Thus, there were only 5 eyes with stage III keratoconus that were included in our study.[1] The Barrett Universal II calculator on the Asia-Pacific Association of Cataract and Refractive Surgeons (APACRS) website is able to accept input variables from 2 of our 5 stage III eyes.[2] In the 3 eyes where the online calculator is unable to be applied, 1 has a corneal power >60 diopters (D) and 2 have IOL models implanted that are not compatible with the Barrett calculator. In the 2 eyes where the online calculator is able to be used, the predicted errors are 3.82 D and 0.43 D. This result is only from 2 eyes; therefore, we cannot reliably assess the performance of the Barrett Universal II formula in stage III keratoconus.

Savini and associates[3] previously showed that the SRK/T formula was superior to the Barrett Universal II formulas in

eyes with keratoconus. However, their study cohort had notable differences in clinical characteristics compared with our cohort. In the study by Savini and associates,[3] there was a greater proportion of eyes with long axial lengths—34.1% of eyes were greater than 26.0 mm. Our study only had 26.0% greater than 26.0 mm.[1] The greater proportion of eyes with long axial lengths may have contributed to Savini and associates' finding[3] of the SRK/T formula's superiority in their sample.

Many groups have suggested adjustments to existing formulas in eyes with keratoconus.[4-6] The adjusted Kane formula modifies corneal power (K) and minimizes the effect of K on estimated lens position.[4] This suggests that measured K contributes to greater error in IOL power calculations among eyes with keratoconus. Consistent with this finding, our study demonstrated that biometers may not accurately measure K. There was a tendency for biometers to overestimate K,[1] which may contribute to hyperopic outcomes in IOL calculations for keratoconic eyes.[3,4,6]

Overall, IOL power calculations in patients with keratoconus remain challenging, especially in severe eyes. In addition, biometers tend to overestimate K. Error may be reduced by considering inaccuracies in K measurements when using formulas and adjustments in eyes with keratoconus.

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Corrigendum for Macular Vascularity in Ischemic Optic Neuropathy Compared to Glaucoma by Projection-Resolved Optical Coherence Tomography Angiography

EDITOR:

WE WOULD LIKE TO CLARIFY SOME ASPECTS OF OUR article, which appeared in the January 2020 issue of the *American Journal of Ophthalmology*.[1] Although 37 eyes with moderate and advanced glaucoma, 19 eyes with atrophic nonarteritic anterior ischemic optic neuropathy, and 40 eyes of normal subjects were included in this study and imaged using optical coherence tomography angiography (OCT-A), data from 5 glaucoma eyes, the entirety of the data from subjects enrolled from New York Eye and Ear Infirmary, lacked uniform OCT data (retinal nerve fiber layer and ganglion cell complex) as well as adequate quality macular OCT-A data. Therefore, those data elements from those 5 eyes were not used for the subsequent analyses. This means that, in Table 1,[1] the number of retinal nerve fiber layers and ganglion cell complex data of glaucoma cases were analyzed for 32 cases. Similarly, the analyzed number of glaucoma cases for which vessel densities were measured in the article and in Tables 2 and 4 was also 32 cases.[1] The authors regret not clearly delineating the sample numbers in the paper. These findings have no impact on the conclusions of the study.