TO THE EDITOR: We would like to congratulate Melles et al for their article on the accuracy of intraocular lens calculation formulas in a large sample of diverse eyes. This was a well-designed study and will likely influence practice patterns of ophthalmologists at an international level. There were several conclusions from the study which we hope the authors could further clarify.

First, the authors reported that application of the Wang-Koch adjustment for eyes with axial lengths of >25.0 mm resulted in an overcorrection of hyperopic outcomes to myopic errors (Fig 4 in the original article). We believe the authors came to this conclusion because their implementation of the Wang-Koch nomograms differed from that described in the original paper from 2011. The original Wang-Koch nomograms were derived from long eye data, and serve as a way to modify existing formulae to improve outcomes in these eyes only. The original paper makes no recommendation as to whether outcomes in eyes with short and normal axial lengths should be reoptimized after applying the Wang-Koch adjustments to long eyes. However, it seems this is precisely what Melles et al did. First, they report mean numerical errors (MNEs) of zero for their Wang-Koch formulae (Tables 3 and 4 in the original article). Second, there were changes to the optimized lens constants (Table 2 in the original article) and in the prediction errors for short and normal axial length eyes when comparing unmodified formulae to their Wang-Koch counterparts (Fig 4 in the original article). We wonder whether the authors would have still found such a shift toward myopic errors in the long eyes if they had applied the Wang-Koch adjustments while keeping the optimized lens constants from the original formulae unchanged.

On a related note, instead of including the Wang-Koch adjusted formulae in Fig 2 (in the original article), perhaps it would have been more illustrative to publish a separate figure comparing all of the optimized formulae to the Wang-Koch adjusted formulae for long eyes only. A small study published by our group found the Wang-Koch–adjusted Holladay1 formula produced outcomes closer to 80% within 0.5 diopter for long eyes. Thus, we believe the analysis put forth by Melles et al may be under-representing how the Wang-Koch adjustments perform for long eyes.

Last, the authors report poorer performance of some formulae with increasingly narrow anterior chamber depths (Fig 8 in the original article). Because the dataset was obtained from Northern California, it included a high proportion of Asian eyes, a demographic that is known to differ in this very way from their European ancestral counterparts. We wonder if this factor may have led to an under-representation of performance in the formulae. It has been established that there are differences in biometrics of eyes of different races and, therefore, formula performance can vary across geographic regions and races. Perhaps a subgroup analysis stratified by race would make the results more applicable to audiences of less diverse patient populations.

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References