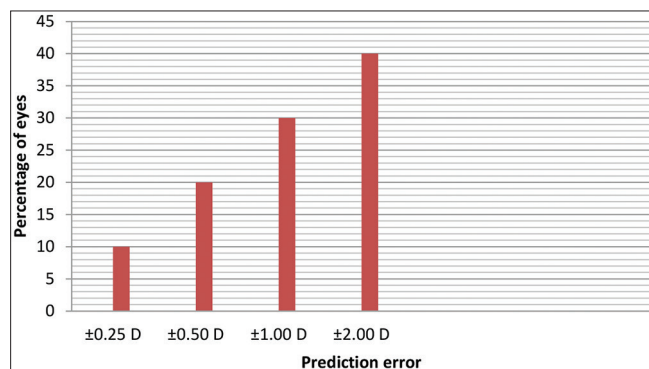


## Accuracy of the refractive prediction determined by intraocular lens power calculation formulas in high myopia

It was interesting to read the article “Accuracy of the refractive prediction determined by intraocular lens power calculation formulas in high myopia” by Zhou *et al.*<sup>[1]</sup> The authors have compared the predictive accuracy of five formulas and concluded that Barrett Universal II is the more reliable formula.

However, we wish to point out certain concerns which we thought were important:-

1. The type of intraocular lens used in the study is not mentioned specifically. Different IOL designs might affect the outcome precision<sup>[2,3]</sup>
2. Mean absolute error (MAE) among the formulas is compared. It is important to note that absolute errors are not a normal Gaussian distribution. Therefore, it is best to compare median absolute error (MedAE) rather than MAE.<sup>[4]</sup> In results MedAE is mentioned as a heading but under that MAE and interquartile range are described
3. The differences in mean numerical error and MAE of five formulas were compared but the results were not statistically proven (no *P* values mentioned)
4. In Fig. 1 and 2 of main article, X-axis should be mentioned as within  $\pm 0.25$  D,  $\pm 0.50$  D,  $\pm 1.00$  D and  $\pm 2.00$  D as depicted in Fig. 1.



**Figure 1:** Percentage of eyes with refractive prediction errors within  $\pm 0.25$  D,  $\pm 0.50$  D,  $\pm 1.00$  D and  $\pm 2.00$  D

5. Fig. 3 of the article, depicts as if all patients in groups 1, 2, and 3 have exactly the same axial length, this may not be in reality. Also, it is not fare enough to depict correlation of all three groups in the same figure
6. Which Holladay formula was used? – Holladay 1 or 2
7. There is confusion regarding type of biometer used in the study. In methodology Lenstar and contact-type A ultrasound are mentioned while in results IOL master. These three instruments use different technology for biometry. Contact ultrasound biometry is not optimal because of potential corneal compression and shorter axial length and anterior chamber depth measurement.<sup>[5]</sup>

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### Conflicts of interest

There are no conflicts of interest.

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