

Comparative Evaluation of Fundus Image Interpretation Accuracy in Glaucoma Screening Among Different Physician Groups [Letter]

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Dear editor

We thank Wada-Koike et al¹ for their insightful evaluation of fundus image interpretation accuracy in glaucoma screening among different physician groups. We commend them for their invaluable contribution, and as medical students in the UK, we would like to offer our perspectives on the findings of this study and implications for future research.

The study highlights the disparities between the diagnostic accuracies of Glaucoma among non-ophthalmologists, non-specialist ophthalmologists and specialists. In the UK, becoming an ophthalmologist takes at least seven years after foundation training.² Showcasing the wealth of experience an ophthalmologist would have seeing eye conditions compared to another doctor, as demonstrated by this study's findings.¹

We wanted to suggest improvements to the methodology implemented by Wada-Koike et al¹ to provide more holistic and reproducible results. Firstly, we commend the efforts of Wada-Koike et al to obtain the fundus images; however, the inclusion of some physicians from the same institution where the images were collected could introduce bias, particularly if they had previously treated the patients or conditions depicted. To mitigate this, we propose utilising standardised fundus images to ensure the reproducibility and impartiality of results.

Additionally, there were only 29 physicians that participated in the study, 20 of whom are from the same current institution, albeit at different training levels. Therefore, due to the need for more diversity in the demographics, the results mainly demonstrate the level of understanding of Glaucoma at a single institution, Jikei University School of Medicine. Thus, results may reflect the teaching and cultural understanding of Glaucoma rather than variability amongst physicians. Implementing a larger sample size and diversity of institutional backgrounds can reflect the diverse demographics of physicians, providing greater generalisable results.³

Future research can also identify additional risk factors associated with inaccurate interpretations, such as by asking participants about the date of the last teaching session they attended and the number of teaching sessions attended over the past year. This approach could uncover correlations between different risk factors, such as educational engagement and diagnostic precision, informing future strategies that can be implemented to enhance diagnostic accuracies.

Furthermore, it was not indicated if the time spent on the image interpretation tasks was controlled. Additionally, the physicians were expected to perform their tasks "consistent with regular clinical practice";¹ however, information such as age and gender were omitted, aiding clinical judgement. Implementing obstructive structured clinical examinations can provide a greater understanding of physicians' clinical reasoning to reach their diagnosis, allowing them to interpret the fundus whilst demonstrating their thought process and approach.⁴

To conclude, we appreciate Wada-Koike et al,¹ as they shed light on fundus image interpretation in the context of Glaucoma among different physicians. There is scope for broader research as this study can be a foundation for future studies. This includes using a multi-centre approach to capture diverse results of accuracy among different physician

groups, which can help identify interventions which can be implemented to prevent diagnosis inaccuracies, ultimately improving patient outcomes.

Disclosure

The authors report no conflicts of interest in this communication.

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