Screening for hydroxychloroquine retinopathy in Australia

To the Editor: We read with interest the perspective by Sonido and colleagues.[1] We wish to highlight that Australian and New Zealand guidelines on screening for hydroxychloroquine retinopathy have been published by the Royal Australian and New Zealand College of Ophthalmologists (RANZCO),[2] written by a panel of retinal specialists in consultation with relevant medical disciplines.

Key recommendations in the RANZCO guidelines include:

- baseline examination within the first year of hydroxychloroquine use;
- annual screening after 5 years of use for patients with no risk factors; and
- consideration of earlier review for patients at increased risk, such as those who receive hydroxychloroquine doses > 5 mg/kg/day; have renal impairment; use concurrent tamoxifen; have concomitant retinal or macular disease; or receive chloroquine.[2]

The guidelines recommend baseline examination within 1 year of beginning treatment to exclude concomitant retinal and macular disease, which may confound findings or add to the effects of hydroxychloroquine maculopathy.[2] This contrasts with the recently updated United Kingdom guidelines, which do not recommend any form of screening in the first 5 years of treatment.[3]

The RANZCO minimum requirements for screening include dilated fundus examination, automated visual field testing, and spectral domain optical coherence tomography of the macula. Although automated macular visual field testing is appropriate in Caucasian patients, additional wider field testing is recommended in Asian patients to detect pericentral changes. Fundus autofluorescence and multifocal electroretinography are additional useful investigations and require interpretation by ophthalmologists trained in their interpretation. Patients who are found to have signs of retinopathy at screening or who have equivocal findings should be promptly referred for specialist ophthalmologist retinal assessment.

Using the 2016 American Academy of Ophthalmology guidelines (comparable to the RANZCO guidelines), the cost-utility of screening for hydroxychloroquine retinopathy was found to range from US$33 155 to $344 172 per quality-adjusted life year.[4] By reducing unnecessary screening in the first 5 years of dosing, we anticipate costs in the lower range per quality-adjusted life year for screening using the RANZCO guidelines.

Education of prescribers is necessary. United States studies show that 27% of patients are prescribed dosages exceeding current retinal guidelines,[5] with significant non-adherence to screening recommendations by both prescribers and patients.

We encourage all prescribers of hydroxychloroquine to educate patients regarding screening, monitor for all complications, and report to the Therapeutic Goods Administration to obtain a comprehensive Australian dataset of all complications.

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Acknowledgements: We would like to acknowledge the RANZCO Clinical Standards Committee for writing the RANZCO Guidelines for Screening for Hydroxychloroquine Retinopathy.

Competing interests: Adrian Fung receives honoraria, speaker fees and travel and research grants from Bayer, Novartis, Allergan, Alcon, Roche and Syneos. Heather Mack has received speaker fees from Ionis and Novartis, and is on the Novartis advisory board for voretigene. ■

doi: 10.5694/mja2.51299

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4 McClellan AJ, Chang JS, Smiddy WE. Aiming for the bull's eye: the cost-utility of screening for hydroxychloroquine retinopathy. *Retina* 2016; 36: 1958–1963.
5 Chen RI, Chen AX, Greenlee TE, et al. Hydroxychloroquine prescription practices after 2016 AAO recommendations. *Ophthalmology* 2021; 128: 1112–1114. ■