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## Drs. Carter and Do reply

To the Editor:

We thank Dr. Martin-Iglesias, et al for their comments¹ on our recent case report published in *The Journal*². We reported on a case of hydroxychloroquine (HCQ) retinopathy, and showcased the characteristic optical coherence tomography (OCT) and fundus autofluorescence imaging findings in a patient who had been taking approximately 13.6 mg/kg/day for 8 years, almost triple the recommended dose.

Ethics board approval is not required because this is a single case report and no intervention had been made for research. The patient gave written informed consent to publish the material.

HCQ retinopathy is rare at 0.33% incidence with short-term therapy (< 5-7 yrs)<sup>3</sup>, especially when treatment follows the American Academy of Ophthalmology (AAO) guideline of doses  $\leq 5$  mg/kg/day<sup>4</sup>. Dr. Martin-Iglesias, *et al*<sup>1</sup> emphasize the point that there is increased risk of toxicity among patients receiving greater doses. In a prior study from this group following a cohort receiving HCQ at  $\leq 5$  mg/kg/day, no clinically significant retinal changes or cases of toxicity were detected by OCT over a 5-year period<sup>5</sup>. These findings align with the AAO-recommended HCQ dosage guideline.

However, duration of therapy relative to daily dose also plays a significant role and is considered a critical factor when screening for HCQ retinopathy<sup>4</sup>. After 10 years of daily HCQ use within the 4–5 mg/kg range, risk of retinopathy increases dramatically<sup>6</sup>. It would be interesting to further follow the study cohort for retinal changes at the decade timepoint and beyond.

Overall, we highlight the comment of Dr. Martin-Iglesias, *et al*<sup>1</sup> that HCQ retinal toxicity is most dependent on daily dose. For those on a high dose, or long-duration HCQ therapy, it is especially important to have regular ophthalmologic screenings.

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