We read with interest the findings reported by Chong et al. (1) in their recent article about meat consumption and risk of age-related macular degeneration (AMD). It is certainly worthwhile to examine which dietary factors are potentially modifiable in order to reduce the risk of AMD. These include antioxidants (2), omega-3 fatty acids (3), and the glyceremic index of foods consumed (4). We have some concerns in relation to this report, however, and believe that these findings will need further exploration and confirmation in longitudinal cohort studies that have examined eye disease in relation to diet.

Principally, meat is known to be a rich source of zinc, and zinc has previously been found to be protective against AMD in population-based cohort studies and clinical trials (e.g., the Age-Related Eye Disease Study) (2, 5). We note that the authors adjusted for zinc intake in their analyses. Given that meat is the principal source of zinc in our diets (35.1% in the Blue Mountains Eye Study cohort) (6), we believe it is inappropriate to adjust for zinc intake when assessing the association between meat intake and AMD. This analysis effectively adjusts for the beneficial aspects of the exposure (the zinc content of the meat). It would have been more useful to consider the models of risk before and after adjustment for zinc. It is also quite plausible that some participants with known signs of early AMD or associated visual changes may have increased their meat intake (indication bias)—for example, after being told that they had early signs of AMD. We would be interested in seeing the findings of these additional analyses, without adjustment for zinc intake.

Second, we are concerned about the determination of eye disease signs solely on the basis of photographs of the eye taken at follow-up. That is, no information was available about eye disease at the baseline examination, at which time the dietary data were collected. This means that the authors were unable to determine incident cases of eye disease; thus, at least some of the cases of eye disease may have existed at the time of dietary assessment, approximating the valid concerns experienced in the analysis of cross-sectional data. This is a major limitation of these findings. Although this drawback was briefly acknowledged in the Discussion, it might require greater emphasis.

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