- 11 Kerrison JB, Lounsbury D, Thirkill CE, Lane RG, Schatz MP, Engler RM. Optic neuritis after anthrax vaccination. Ophthalmology 2002; 109: 99-104.
- 12 Miller AE, Morgante LA, Buchwald LY, Nutile SM, Coyle PK, Krupp LB et al. A multicenter, randomized, double-blind, placebo-controlled trial of influenza immunization in multiple sclerosis. Neurology 1997; 48: 312-314.
- Payne DC, Rose CE, Kerrison J, Aranas A, Duderstadt S, McNeil MM. Anthrax vaccination and risk of optic neuritis in the United States military, 1998-2003. Arch Neurol 2006;
- Ascherio A, Zhang SM, Hernan MA, Olek MJ, Coplan PM, Brodovicz K et al. Hepatitis B vaccination and the risk of multiple sclerosis. N Engl J Med 2001; 344: 327-332.
- Destefano F, Verstraeten T, Jackson LA, Okoro CA, Benson P, Black SB et al. Vaccinations and risk of central nervous system demyelinating diseases in adults. Arch Neurol 2003; **60**: 504–509.
- 16 Hernan MA, Jick SS, Olek MJ, Jick H. Recombinant hepatitis B vaccine and the risk of multiple sclerosis: a prospective study. Neurology 2004; 63: 838-842.

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## Benefits of early awareness in age-related macular degeneration

We commend the fresh perspectives offered by Cervantes-Castaneda et al<sup>1</sup> on the possible lack of benefit of early awareness in age-related macular degeneration

However, the basis of such a conclusion is questionable in view of several limitations and inadequacies of the study design. Fundamentally, the determination of early awareness of AMD may be biased as it was solely based on the patients' recall of having been previously diagnosed of AMD, given oral supplementation or advised Amsler monitoring. More details could also be provided with regards to the source of such diagnosis and recommendations as clinical competencies and management of AMD may be variable across the spectrum of general practitioners, optometrists and ophthalmologists. Furthermore, we agree that even in patients who were aware of their condition, it is difficult to assess their compliance to treatment and self-examination regimens, which could then influence the rate of detection of neovascular AMD. Lastly, the single-centre design and the associated geographical bias, although minimised by the peculiar referral pattern in the study region, preclude the generalisation of findings to the population.

Contrary to what the authors had suggested, we believe that the benefits of early awareness of AMD are far reaching.<sup>2</sup> Awareness of diseases promotes positive

health-seeking behavioural changes in patients; patient education<sup>3</sup> and a prior diagnosis of chronic eye diseases, such as AMD,<sup>4</sup> are associated with increased utilisation of eye-care services. Coupled with effective counselling by clinicians, an early awareness of AMD allows the patient to take an active approach towards selfmonitoring (with the Amsler chart remaining as a simple and inexpensive home-based test of choice despite its low sensitivity<sup>5</sup>) and regular eye follow-up. These may also facilitate the detection of other age-related eye diseases such as cataract and glaucoma as well.

As such, it may be premature to disprove the benefits of early awareness in the long-term management of AMD.

## References

- Cervantes-Castañeda RA, Banin E, Hemo I, Shpigel M, Averbukh E, Chowers I. Lack of benefit of early awareness to age-related macular degeneration. Eye 2008; 22: 777-781.
- Woo JH, Au Eong KG. Don't lose sight of age-related macular degeneration: need for increased awareness in Singapore. Singapore Med J 2008; 49: 850-853.
- Müller A, Keeffe JE, Taylor HR. Changes in eye care utilization following an eye health promotion campaign. Clin Experiment Ophthalmol 2007; 35: 305-309.
- Puent BD, Klein BE, Klein R, Cruickshanks KJ, Nondahl DM. Factors related to vision care in an older adult cohort. Optom Vis Sci 2005; 82: 612-616.
- Crossland M, Rubin G. The Amsler chart: absence of evidence is not evidence of absence. Br J Ophthalmol 2007; 91: 391-393.

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## Reply to Woo et al

We thank Woo et al for their insightful comments. Our study aimed to evaluate how many patients with age-related macular degeneration (AMD) are aware of their disease beore developing choroidal neovascularization (CNV) and to assess whether such awareness confers benefit. Unfortunately, we found that many patients were not aware that they had AMD, and that prior awareness did not confer benefit for patients who develop CNV.