Conflict of interest

The authors declare no conflict of interest.

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Disclaimer

Patient details are anonymised.

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**Sir,
Response to 'Opaque intraocular lens implantation'**

We thank Professor MacEwen and coauthors¹ for responding to our letter describing the factors influencing primary black intraocular lens (IOL) selection.² They present the first study describing the clinical outcomes following primary implantation of a large (>7 mm optic) black IOL within the capsular bag. The Ophtec Black Ani II IOL (Ophtec BV, Groningen, The Netherlands) is a novel device produced from a material that is identical to the Artisan 201 iris-claw IOL, which has been proven to be occlusive to near infra-red (NIR) light.³ This series adds to the growing experience with black IOL implantation, and several observations warrant further comment.

The mechanism of light perception following black IOL implantation is a curious phenomenon and its identification is critical to minimize the risk of treatment failure.^{4,5} High rates of postoperative satisfaction are reported in patients with NIR-transmitting black IOLs,⁶ despite near universal postoperative light perception.⁵ We have suggested previously that trans-optical NIR light transmission across NIR-transmitting black IOLs may underlie intractable ghosting and treatment failure.^{4,5} Such symptoms are extinguished by secondary NIR-blocking Ophtec black iris-claw IOL implantation.^{4,7} Postoperative light perception in this series suggests para-optical light leakage despite a 9 mm occlusive optic, exceeding the scotopic pupil diameter. It is unlikely that formed, foveal images would result as a consequence: perceptions of 'ghosting' following Ophtec Ani II Black IOL implantation are unlikely.

Numerous black IOLs are available for clinical use, each with specific dimensions and properties that must be tailored to lens status/pupil size and the risk of retinal or optic nerve disease in each individual patient.² We have recently described ultra-widefield imaging in a patient with a NIR-transmitting black IOL using the Heidelberg Spectralis Scanning Laser Ophthalmoscope (Heidelberg Engineering, Heidelberg, Germany). This novel discovery may drive primary implantation of NIR-transmitting black IOLs to achieve a balance of efficacy and safety – permitting detection of retinal and optic nerve pathology across the life of the implant.

All black IOLs are likely to alleviate symptoms in patients with intractable diplopia and represent valid treatment modalities. However, it is essential that both patient and surgeon are informed of the risks of treatment failure and the possibility of ultra-widefield retinal imaging when a primary black IOL is selected.

Conflict of interest

The authors declare no conflict of interest.

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**Sir,
Where is the junction of zone 2 and zone 3 temporal retina in RetCam images of acute retinopathy of prematurity?**

A limitation of the use of RetCam imaging for Retinopathy of Prematurity (ROP) screening is the inability to determine whether a temporally placed ROP ridge is in Zone 2 or Zone 3.¹ Observation of the retinal vasculature close to the nasal ora serrata is necessary to determine whether disease is in zone 2 or zone 3,² and this is difficult to achieve with RetCam imaging.¹ We have performed a pilot study to determine the location of the junction of Zone 2 and Zone 3 in the temporal retina of RetCam images.

In a series of routine ROP screening examinations in our nursery, video indirect ophthalmoscope with scleral indentation examination of the nasal ora serrata was used to identify eyes in which ROP was located at (within 1 disc diameter), or near to (1–2 disc diameters) the junction of zone 2 and zone 3. RetCam images of these eyes, with the optic disc placed at the nasal edge of the image were recorded. The distance from the temporal edge of the image to the temporal ROP ridge was measured, expressed in disc diameter units. A line through the optic disc and bisecting the temporal arcades was used to orientate the images (Figure 1). Any small amount of offset of the position of the optic disc relative to the nasal edge of the RetCam image was corrected when making measurements on the temporal side.

Forty-eight eye examinations (26 patient screening examinations) in 13 infants were analysed. The median gestation was 27 weeks (range 24–29 weeks), the median birth weight 810 g (range 650–1295 g). Nine of the infants were female. The junction between zone 2 and zone 3 was reached at a median time of 38 weeks (range 35–42 weeks) post-menstrual age (PMA). The junction of zone 2 and zone 3 temporal retina was found to lie 1.3–2.7 (median 1.8 disc diameters) disc diameters posterior to the temporal edge of the RetCam image of the temporal retina (Table 1).

It is likely that a RetCam examination that excludes plus disease, or active ROP in the part of the retina visualised using RetCam examination, including a view of the temporal periphery, is in general sufficient to determine whether treatment-requiring disease is present,³ and whether further ROP screening examinations are necessary. The nasal retina should also be examined.

Figure 1 RetCam image of an eye with ROP at the junction of Zone 2 and Zone 3. The temporal ROP ridge is positioned 1.5 disc diameters posterior to the temporal edge of the image.

Table 1 Position of the ROP ridge in the temporal retina, relative to the temporal edge of the RetCam image

	Anterior zone 2	Junction 2 and 3	Posterior zone 3	All examinations
Number eye examinations	18	22	8	48
Position (disc diameters)				
Median	1.54	1.8	1.15	1.66
Range	0.57–2.85	1.3–2.7	0–1.81	0–2.94

Conflict of interest

The author declares no conflict of interest.

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