Sir,

We read the article by Watts and Adams with interest.[1] In essence, it reproduces the work of our earlier study in documenting the impact of an assisted conception programme on screening for and treatment of retinopathy of prematurity (ROP).[2] However, we would disagree with their conclusion that the major risk factor is assisted conception with *in vitro* fertilisation (IVF) specifically.

In their paper, Watts and Adams showed that infants born after IVF constituted a greater percentage of the stage 3 and treated ROP cases than might have been expected. As the number of infants conceived by either IVF or ovulation induction with gonadotrophins is very small, this observation should be interpreted with more care, particularly as there is no other evidence to support their conclusion. Furthermore, ovulation induction is commonly prescribed before patients are referred to hospital and so it is difficult to be certain that all the patients with ovulation induction had been identified, particularly in a retrospective review of obstetric notes.[3] It is therefore possible that more of the infants with ROP might have been the product of assisted conception other than IVF.

The major factor contributing to the workload of an ROP screening programme is the increased number of multiple births. These infants are often born prematurely, with a low birth weight, and this is associated with increased morbidity and mortality. All assisted conception techniques are associated with a high rate of multiple births. Both IVF and ovulation induction treatment increase the frequency of twin and higher multiple births from a natural rate of 1% to in excess of 20%.[4,5] As a result, ROP screening is indicated for less than 2% of infants conceived naturally and for more than 20% of those conceived by assisted conception.[2] Watts and Adams refer to a single study which failed to show a difference in ROP stage between single and multiple pregnancies, but fail to point out that this involved a selected group of infants, all of whom required screening for ROP, and the birth weight was the same in the two groups.[6] The authors address the issue of multiple births but refer to the observation that the perinatal outcome of both single and multiple pregnancies resulting from IVF may be different from those conceived naturally. The evidence for this has been conflicting, but it now seems likely that any difference in perinatal morbidity is a consequence of zygosity and maternal characteristics such as age and pregnancy-induced hypertension.[7,8]

Good obstetric care and a reduction in the frequency of twin and higher multiple births are most likely to reduce the impact of assisted conception on an ROP screening programme. The adverse outcome for infants conceived as a result of assisted conception is a consequence of their gestational age and birth weight, not the method of conception.

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Sir,

We thank Messsrs McKibbin, Booth and Dabbs for their interest in our paper. Our study was not intended to be a reproduction of their work[1] but aimed to define whether the risk of retinopathy of prematurity (ROP) varied with the method of assisted conception. Our data do have limitations in that they are retrospective and from a single centre. The hospital where our ROP screening was performed did not have an assisted conception unit and the patients were representative of the catchment area.[2] Data were retrieved from obstetric and neonatal charts, which had fields that required information on methods of conception stipulating specifically whether gonadotrophins or other methods of assisted conception were used. Therefore, although it is possible our study may not have included all the babies conceived by gonadotrophin stimulation, we are equally as likely to have failed to record some of those conceived by *in vitro* fertilisation (IVF).

McKibin and Dabbs' paper had screening data on 29 infants born by assisted conception of whom only 2 required treatment for threshold disease. Their data suggest that 18% of stage 3 cases and 25% of threshold cases were born after assisted conception. These figures are therefore not dissimilar to our study and show an over-representation of assisted conceptions in those reaching threshold disease. However, they do not state the method of assisted conception in those babies reaching threshold disease. Our data showed 28.6% of those reaching threshold disease were born by assisted conception, of which 83.3% were conceived through IVF, which supports our final statement. We would be most interested to know the details of assisted conception in their study.

We agree that while it is true that the majority of babies conceived by IVF are the product of multiple births, with a lower birth weight and gestational age,[3,4] the singleton assisted-conception babies are also more likely than normally conceived babies to be born premature with a low birth weight.[5] We noted in our paper that the babies conceived by IVF weighed more and were older than the rest of the infants reaching threshold disease, though this did not reach statistical significance. We therefore suggest that there may be factors other than low gestational age and low birth weight involved to account for the observation of a greater number of IVF babies reaching threshold disease.

Whatever factors may be responsible for the greater proportion of IVF babies in our cohort reaching threshold disease we do not believe that it is possible to state categorically, as McKibbin and Dabbs have suggested, that the adverse outcome for these infants is a consequence of their gestational age and birth weight and not the method of conception.

With regard to the reference to ROP in multiple gestation pregnancies,[6] only 17% of the neonates of multiple gestation pregnancies in this study required screening. The stage of ROP