Conflict of interest

The authors declare no conflict of interest.

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Sir,
Interval censoring for survival curves when reporting the results of glaucoma surgery

I read with interest the study by Anand and Wechsler[1], reporting the outcomes of deep sclerectomy in eyes with previous surgery. In common with many studies in the literature, however, they have failed to take account of interval censoring when plotting survival curves.

Interval censoring occurs when we do not know the exact time an event occurs, but only the interval in which it occurs. This is relevant to failure in glaucoma surgery because when we detect that the intraocular pressure has risen above a predetermined level at follow-up, we do not know exactly when this occurred, only that it occurred in the interval between two clinic visits.

This effect must be taken into account when plotting survival curves.[2,3] By failing to take it into account, the survival curve is effectively shifted to the right and the apparent survival is increased.

Many statistical packages do not allow for the analysis of interval-censored data. However, the freely available statistical package R has a survival plotting function that can correctly account for such data.[4]

For reference, my instructions for plotting an interval-censored survival curve using R are presented here, for those who want to plot interval-censored survival curves in their research.

Create a Microsoft Excel spreadsheet with the headings 'lefttime', 'righttime', and 'myevent' in cells A1, B1, and C1, respectively. Then enter survival data into each row (ie create a 'life table').

Righttime = the clinic visit where the patient 'failed' (time is usually measured in months after surgery; leave blank if the patient did not fail). Lefttime = the clinic visit immediately before the visit where the patient failed, or the final follow-up visit if the patient did not fail. Myevent = '0' if they have not failed and '3' if they have failed.

Save this as a .csv file in the R working directory—for example survival.csv. Open up the R console and type the following:

```
library(survival)
data1 <- read.csv(''survival.csv'',
header = TRUE)
mysurv <- with(data1, Surv(lefttime,
righttime, myevent, ''interval''))
```

To plot the survival curve type:

```
mysurvfit = survfit(mysurv ~ 1)
plot(mysurvfit)
```

This will plot an interval-censored survival curve with 95% confidence intervals for the data in the life table.

Conflict of interest

The author declares no conflict of interest.

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1 Anand N, Wechsler D. Deep sclerectomy with mitomycin C in eyes with failed glaucoma surgery and pseudophakia. *Eye* 2012; **26**: 70–79.

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Sir,
Comment on 'Deep sclerectomy with mitomycin C in eyes with failed glaucoma surgery and pseudophakia'

We read with interest Anand and Wechsler's recently published article on deep sclerectomy with mitomycin C[1] and would like to congratulate the authors on their excellent outcomes. We have retrospectively analysed the long-term outcomes of trabeculectomies with selective 5-fluorouracil (5-FU) enhancement performed by a single district general hospital ophthalmologist (author APM) and would like to share our results as they are remarkably similar.