Reviewer's report

Title: Kinetics of cancer: a method to test hypotheses of genetic causation

Version: 4 Date: 15 September 2005

Reviewer: Darryl Shibata

Reviewer's report:

General: The authors have answered some of my concerns

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Although the paper is entitled “Kinetics of Cancer”, all of the epithelial tumors are adenomas, which are not cancers. There are inappropriate references to “cancer” throughout the manuscript when referring to adenomas. This terminology must be corrected.

I am concerned how much one can conclude from curves drawn from relatively few data points (as typical of mouse models). The response that trends can still be inferred is reasonable, but a question is whether any trends are significant, given the data. It would be extremely helpful to perform a statistical analysis or at least provide guidelines for how to perform a statistical analysis to help investigators distinguish between noise and a significant trend. For example, is an acceleration of 3 significantly different from 2.2? (Versus the current statistical analysis that appears to test whether the predictions match the experimental trends more often than by chance)

It would be helpful if the authors provide more biological meaning to the term “acceleration”

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Figure 2 is really a Table

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'