Reviewer's report

Title: In vivo MRI volumetric measurement of prostate regression and growth in mice

Version: 1 Date: 17 April 2007

Reviewer: Peter Roberson

Reviewer's report:

General
This well-written paper describes the use of high-field MRI techniques to image the prostate in mice for the purposes of simplifying and improving the study of prostate regression and growth. Through the application of these techniques, the goal of studying changes in the prostate was accomplished.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
None.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
P8 line 8 Figure 1F is mentioned…should it be 1E?
P11 Discussion line16 strike ‘the’: In this study…

Discretionary Revisions (which the author can choose to ignore)
The initial MRI sequence used created images with chemical shift of fat layers. The image shifting appears to result in an apparent altering of the prostate contours (p 10 lines 5-6). There is a tendency to want to re-contour the prostate allowing for the shift of the fat tissues, at least a best guess at the effect. It was mentioned that the CHESS images were more reliable, but the point that the non-CHESS images produce less than accurate results might be discussed more thoroughly. For instance, how much would it have affected the regression of the prostate given that each time point could have a different impact of the chemical shift of the fat layers?

The CHESS technique being used as a follow-on work to the original affects the read of the abstract results. On first read, the third sentence presents results of prostate regression studies, then the fourth sentence goes back and and talks about the CHESS method. The abstract should be improved to differentiate the CHESS technique in the methods section as the follow-on technique used to improve the prostate volume determination and differentiate the sub-volumes of the prostate.

What next?: Accept after minor essential 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, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests