Reviewer's report

Title: Characterization of prostate cancer detected at repeat biopsy

Version: 3 Date: 18 June 2008

Reviewer: Mesut Remzi

Reviewer's report:

Comments:

- The cohort is very heterogeneous. As stated in table 2A, 15% of the patients diagnosed with prostate cancer at initial biopsy had M1, but 0 at repeat biopsy. The whole analysis is strongly biased by these patients. I think that the significant p-values in table 2A derive from these patients. I recommend exclusion of M1 patients and to repeat the analysis. This would clearly increase the clinical value.

- How about DRE? The authors show clinical T stage (Table 2A). I highly recommend inclusion of all T stages and not only <=T2b and >=T3a. It is important for the urologist to know, how many DREs were actually positive before repeat biopsy and how many were T1. In addition, the table excludes T2c tumors, but I think that this is a typing error.

- The prostatectomy cohort is different from the biopsy cohort. This difference should be somewhere explained in the manuscript and stated how many patients underwent surgery/radiation/hormone ablation etc.

- The authors determined a cut-off for PSAV and PSAD by ROC curve analysis. The authors should explain how they determined the cut-off from these ROC graphs (Methods). Therefore, it may be reasonable to include the ROC curves as a Figure and to show the cut-off.

- The number of cores taken by biopsy was not standardized (6 or 10). To account for this difference, the authors should perform a multivariate logistic regression analysis that controls for this variable.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

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