Reviewer's report

Title: Computer-aided transrectal ultrasound: Does prostate HistoScanning™ improve detection performance in repeat biopsies?

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Reviewer: Mehmet Ruhi Onur

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COMMENTS ON MANUSCRIPT

1. Title: ‘Computer-aided transrectal ultrasound: Does prostate HistoScanning™ improve detection performance in repeat biopsies?’ Do the authors mean detection of prostate cancer? If so, they should add ‘prostate cancer’ in title.

2. Abstract
   a. Objective: Appropriate
   b. Methods:
      - Page 2 Line 35: Please start sentence with ‘three’ instead of ‘3’
      - ‘3 PHS positive foci were defined in accordance with 6 bilateral prostatic sectors.’ May authors explain why this statement is settled in methods section?
   c. Results:
      - ‘Detection rate in tBx was significantly higher.’ May authors add a statistical value after this statement?
      - ‘Detection rate in tBx and sBx did not differ on patient level.’ May authors add a statistical value after this statement?
   d. Conclusion: Appropriate

3. Introduction:
   a. Page 3 Line 55-56: ‘However, the power to identify, and in particular to exclude cancer reliably is limited due to low PCa specificity of grey scale ultrasound patterns’ Please add a reference after this statement.
   b. In the introduction section, it would be better to briefly describe the prostate histoscanning method.

4. Patients and Methods
   a. Page 4 line 77: ‘At one center, data was collected from 97 consecutive men ----’ Please add age range and mean age of patients as stated in the abstract.
   b. Page 4 line 93 - 95: ‘Based on the PHS image, the physician defined the most prominent (largest) target regions, up to a maximum of three.’ May authors explain how they defined target regions on PHS? How was the appearance of target areas on PHS?

5. Results
a. Page 7 Line 143 – 145: ‘Detection rate for each PHS positive region was significantly higher in both targeted transperineal and targeted transrectal Bx compared to systematic Bx.’ Please add a statistics number (P ----) after this statement.

b. Did authors search the efficiency of PHS guided biopsy in different regions of the prostate? For example prostate base, apex, transitional zone, peripheral zone? Was there any difference between sensitivity and specificity of PHS guided biopsy in terms of prostate zones?

6. Discussion

May authors explain why transperineal PHS guided biopsy yielded more accurate results than transrectal PHS guided prostate biopsy?

7. References: OK

8. Figures: It would be better to add PHS figures which demonstrate sectors with prostate abnormality.

Level of interest: An article of outstanding merit and interest in its field

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