

RESPONSE TO REVIEWERS' COMMENTS

Name of journal: *World Journal of Radiology*

Manuscript type: RETROSPECTIVE COHORT STUDY

Clinical significance of prostate ¹⁸F-FDG uptake on PET/CT: A five-year review

Madhurima R Chetan, Tristan Barrett, Ferdia A Gallagher

REVIEWER 1

Chetan, et al. have made a retrospective study examining the clinical significance of ¹⁸F-FDG uptake in men undergoing PET-CT for other indications. Fifteen patients were identified from a five year period of time in hospital databases that had both PET-CT and MRI for the prostate with histopathology reports. SUVmax and SUVmean were determined for F18-FDG in prostates divided into six sectors, measured blindly with respect to the MRI and histopathology. Age matched controls were selected and results were compared using a paired t-test and one way ANOVA. PET-CT reports were also searched for incidental uptake in the prostate and patient follow up. The authors found a trend towards increased F18-FDG uptake in biopsy proven prostate cancer, that was neither clinically nor statistically significant. There was no correlation with histological grading, and F18-FDG uptake was comparable to controls. In patients with incidental uptake no cases of prostate cancer were diagnosed. The major conclusion of the study is that patients in this cohort found with incidental F18-FDG uptake in the prostate when being screened for other indications, did not indicate the presence of prostate cancer. The reporting of incidental uptake did not affect subsequent clinical management of any patients. Since there is low clinical utility of F18-FDG in distinguishing between benign and malignant tumors, the authors suggest there is little benefit in investigating elevated F18-FDG under these circumstances. The conclusions of the authors are reasonable, and clinically relevant. They mention that the sample size is small and that future prospective studies should be done. I was curious when reading this study how well elderly men tolerated PET-CT in general. This is not the focus of the study however it could be easily addressed in a sentence or two.

We thank the reviewer for these comments. We agree that the sample size is small and that future prospective studies would be beneficial – a comment to address this has been added to the discussion. We have included a brief comment about the tolerability of PET/CT in the first paragraph of the introduction.

REVIEWER 2

This is an interesting study which investigates the clinical significance of incidental FDG uptake. Although the number of eligible patients was small, this is an well written retrospective study. However, the authors need to revise tables concisely.

We thank the reviewer for these comments. We appreciate this suggestion and we have revised the text in tables 1 and 3 so that they are more concise. However, we have retained each data item as it is important that the data is available to readers. Tables 1 and 3 could be placed in an appendix if required, which will ensure that they do not interrupt the narrative.