30216-SCIENTIFIC RESEARCH PROCESS

1. What did this study explore?
The significance of incidental prostatic uptake in men undergoing ^{18}F-FDG PET/CT for unrelated reasons.

2 How did the authors perform all experiments?
Retrospective analysis of patients undergoing ^{18}F-FDG PET/CT over a 5-year period January 2010 to September 2015. Analysis of prostatic uptake was assessed in a subset of patients undergoing prostate MRI to assess for differences between uptake in benign and malignant tissue and correlation to Gleason grade. For the second part of the study, the ^{18}F-FDG PET/CT reports were searched to identify patients with incidentally reported focal prostatic ^{18}F-FDG uptake. Patient records were examined for details of follow-up investigations and management. Two cases were included in both the first and second parts of the study.

3 How did the authors process all experimental data?
A paired two-tailed student's t-test was used to compare the ^{18}F-FDG uptake within suspicious or malignant sectors in patients, and versus controls. A one-way ANOVA was used to compare prostatic ^{18}F-FDG uptake between histopathological subgroups.

4 How did the authors deal with the pre-study hypothesis?
The pre-study hypothesis was that there would be correlation between prostatic malignancy and prostatic ^{18}F-FDG uptake and there would be of clinical utility in reporting incidental prostatic uptake. This was not seen in the results which showed no significant difference in benign and malignant sectors, with no correlation to Gleason grade in patients and overall prostate ^{18}F-FDG uptake in men with prostate cancer was comparable to that from age-matched controls. Reporting incidental prostatic ^{18}F-FDG uptake did not change the management of a single patient at this institute over a 5-year period.

5 What are the novel findings of this study?
This study suggests there may be little benefit in investigating incidental elevated prostatic ^{18}F-FDG uptake on PET/CT as subsequent patient management was not affected.