Correspondence

(The Editors do not hold themselves responsible for opinions expressed by correspondents)

Assessing the consistency of bladder filling using an ultrasonic Bladderscan® device: Author response

The Editor,

We acknowledge and agree with the majority of comments on our paper published in the September issue of BJR [1] made by Dr Dudley and thank him for his input. The study protocol stipulated that men entering the study had no previous pelvic surgery, an anatomically normal functioning bladder and an International Prostate Symptom Score of <15 without the use of either alpha-blockade or anti-muscarinic therapy. Even with this selected group the accuracy of the bladder ultrasound scanner (BUS) in clinical practice is limited.

Dr Dudley is entirely correct, correlation assesses the degree of association between two measurements and not how closely they agree, which is why we calculated the limits of agreement as demonstrated in figure 1 [1]. We accept that our comment on the relationship between the difference between the bladder volumes on BUS and CT and the average bladder volume was poorly worded and would have been more correctly stated as "at higher volumes CT tended to over estimate the bladder volume". Although the figure suggests that the magnitude of the difference is less at higher volumes, this is not what we tested for. What we did test for was the correlation between the difference and the value which shows that "at higher volumes CT tended to over estimate the bladder volume".

Despite the limitations of the BUS we continue to believe that the lack of consistent bladder filling from planning through a course of radiotherapy is clinically significant, with 53.9% (588/1090) of BUS measurements during that time in our patients beyond the limits of agreement from the planning study of which 44.1% (481/1090) were beyond the lower limit of agreement. When we examined data points that were beyond twice the limits of agreement, 25.6% (279/1090) were identified, with 22.2% (242/1090) on the inferior side. As such, we continue to look into how we can achieve a bladder volume at the time of planning which is more representative, consistent and reproducible over the course

of radical prostate radiotherapy than in the current study [1].

Yours etc.,

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Reference

1. Hynds S, McGarry CK, Mitchell DM, Early S, Shum L, Stewart DP, et al. Assessing the daily consistency of bladder filling, using an ultrasonic Bladderscan device in men receiving radical conformal, radiotherapy for prostate cancer. *Br J Radiol* 2011;84:813–18.

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