EDITORIAL COMMENT

We appreciate the thoughtful editorial comment in regards to our manuscript. Although it is true that just over 50% of patients included in our study demonstrated prostate-specific membrane antigen (PSMA) Positron Emission Tomography (PET) avidity, this is actually a fairly high percentage given the population study. Inclusion of patients was limited to those with a prostate-specific antigen (PSA) <2.0 ng/dL, resulting in median PSA of 0.4 (0.28–0.63). PSMA PET sensitivity has been shown to be dependent on PSA levels and kinetics, and is associated with higher risk disease. Therefore, this population with a low PSA will inherently result in lower detection rates.

It is also noted that while 53% of patients exhibited positive findings on PSMA PET, only 20% of our population was found to have disease outside the salvage radiation fields. It is critical to recognize, however, our standard radiation targets included the prostatic fossa and pelvic lymph nodes. Salvage radiation historically is limited to the prostate bed alone. In our study, just 12% (15 of 125) of patients had PSMA detectable disease in the prostatic fossa, and 48% (60 of 125) had pelvic lymph nodes, meaning a majority of our cohort would have been insufficiently treated with traditional salvage radiation fields. Preliminary results of RTOG 0534/SPPORT trial demonstrated significantly improved 5-year freedom from progression when including pelvic nodes in salvage radiotherapy, although still nearly 20% of patients progressed despite this treatment.

It is important to note that while Gallium-68 PSMA-11 PET is an exciting and novel imaging technique, it is not yet FDA approved. Alternative nuclear imaging agents such as F-18 fluorodeoxyglucose and C-11 choline have been approved for use in biochemical recurrence, with much lower demonstrated sensitivity and specificity compared to PSMA PET. Furthermore, while false positives are a limitation of any imaging modality including PSMA PET, trained readers do not interpret celiac ganglia or other known anatomic aberrations as positive.

We do not yet know if changes to radiotherapy plans based on PSMA PET imaging will improve clinical outcomes (eg, time to biochemical failure, development of distant metastases, or overall survival). Prospective study of this modality in both the salvage and definitive setting is needed. In the era of precision medicine, just as genomic examination is being utilized to tailor prostate cancer treatment, PSMA PET imaging has the potential to lead to personalized treatments with superior outcome.

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References


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AUTHOR REPLY

The authors performed a retrospective study on 125 patients who experienced a biochemical relapse following radical prostatectomy (RP) and who were subjected to a PSMA-PET/CT in order to assess if the recurrent cancer foci were located within standard radiation target volumes. According to their data, 53% of the