

PSMA PET/CT and Therapy Response Evaluation in Metastatic Prostate Cancer: Is It Time to Surpass the Old Way?

TO THE EDITOR: I have read with great interest the paper recently published in your journal entitled, “⁶⁸Ga-PSMA PET/CT for Response Assessment and Outcome Prediction in Metastatic Prostate Cancer Patients Treated with Taxane-based Chemotherapy” by Shagera et al. (1). The paper is very interesting and thought-provoking.

First, it is useful to standardize the criteria for therapy response evaluation, and although much has been accomplished in this regard through the European Organization for Research and Treatment of Cancer criteria (2), PERCIST (3), and other methods, the key to evaluating treatment response may perhaps be evaluation of the entire tumor volume expressing prostate-specific membrane antigen (PSMA), either for hormone therapies or for the taxane-based regimen. The entire tumor volume expressing PSMA can easily and reproducibly be evaluated using specific software, without focusing on a few selected lesions. Moreover, response-monitoring data similar in terms of survival outcome have already been reported for other radiopharmaceutical therapeutic agents, such as ²²³Ra-dichloride (4), and data from Anton et al. (5) and Simsek et al. (6) found that total volume PSMA expression on PET is linked to the response to taxane-based therapy.

Second, careful attention should be given to disease extent at the bone level, to avoid an overestimation that can be linked to a poor prognosis rather than a better prognosis. Again, it is important to have a specific tool to detect bone metastases and monitor their changes during therapy. One such tool has already been tested (7) but is not yet available worldwide.

Finally, the authors concluded that PSMA PET/CT can be useful for assessing response early during therapy, but the available studies have not used this assessment until the end of therapy (5,6). Therefore, as correctly stated by the authors, prospective trials are needed to test the value of a PSMA-based response soon (4–8 wk) after the

start of chemotherapy. I believe that PSMA PET/CT in the evaluation of therapy response will surpass the limits of morphologic imaging and is ready to move forward. Furthermore, PSMA PET/CT would also be useful in guiding the introduction of ¹⁷⁷Lu-PSMA-based therapy, which has an important role in the early phase of metastatic disease as recently demonstrated by the PSMAfore trial (8).

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Laura Evangelista
University of Padua
Padua, Italy

E-mail: laura.evangelista@unipd.it

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