¹⁸F-Choline PET/CT An Alternative Tracer for Hodakin Lymphoma?

To the Editor:

Ve have read with great interest the interesting image entitled "Incidental detection of a Hodgkin lymphoma on a F-choline PET/CT and comparison with ¹⁸F-FDG in a patient with prostate cancer." From the careful evaluation of the study, some considerations emerged. First, the authors reported that ¹⁸F-choline PET/CT detected more metastatic lymph nodes than ¹⁸F-FDG PET/CT in the patient, but no histological data from the site of significant uptake are provided. Second, no information about prostate-specific antigen (PSA) levels and prostate cancer history is available. Third, the description of FDG and ⁸F-choline uptake in the entire body is not reported, for example, by the inclusion of MIP images.

From the aforementioned "limitations," some suggestions would be added. First, the

pathological nodal distribution of lymphoma would be the same of prostate cancer recurrences (such as internal or external iliac nodes, lumbar nodes, and also distant nodes); therefore the histological assessment seems necessary for a correct differential diagnosis. Second, PSA levels and the setting of prostate cancer are required for the correct identification of the disease status. In fact, as extensively reported in literature, high PSA levels and high PSA doubling time or low PSA velocity are predictive of a positive ¹⁸F-choline PET/CT in patients with recurrent prostate cancer.^{2,3} Third, FDG and ¹⁸F-choline showed different biodistribution at PET/CT, and therefore the comparison between the MIP images would be useful to better understand the advantage, in terms of image's quality, between the 2 tracers in patients with concomitant prostate cancer and Hodgkin lymphoma. Lastly, the histological differentiation of Hodgkin lymphoma would be useful for addressing the use of ¹⁸F-choline PET/CT in this tumor. If all of these conditions are well established, new research field would be considered for the management of patients with Hodgkin lymphoma.

Laura Evangelista, MD, PhD

Radiotherapy and Nuclear Medicine Unit Veneto Institute of Oncology, IRCCS Padova, Italy laura.evangelista@ioveneto.it

Reccia Pasquale, MD

Radiotherapy and Nuclear Medicine Unit Veneto Institute of Oncology, IRCCS Padova, Italy

REFERENCES

- 1. Goineau A, Colombié M, Rousseau C, et al. Incidental detection of a Hodgkin lymphoma on ¹⁸F-Choline PET/CT and comparison with on ¹⁸F-Choline PET/CT and comparison with ¹⁸F-FDG in a patient with prostate cancer. *Clin Nucl Med.* 2015;40:670–671.
- 2. Cimitan M, Evangelista L, Hodolič M, et al. Gleason score at diagnosis predicts the rate of detection of ¹⁸F-choline PET/CT performed when biochemical evidence indicates recurrence of prostate cancer: experience with 1,000 patients. J Nucl Med. 2015;56:209–215.
- Marzola MC, Chondrogiannis S, Ferretti A, et al. Role of ¹⁸F-choline PET/CT in biochemically relapsed prostate cancer after radical prostatectomy: correlation with trigger PSA, PSA velocity, PSA doubling time, and metastatic distribution. *Clin Nucl Med.* 2013;38:e26–e32.