

LETTER TO THE EDITOR

“PET scan contribution in chest tumors management: a systematic review for thoracic surgeons”

To the Editor: The paper by Duranti *et al.*¹ “The PET contribution in chest tumors management: a systematic review for thoracic surgeons” was accurately investigated and discussed, concluding that the diagnostic benefits of FDG-PET are limited by false-positive results (the risk is around 10%)².

It is our opinion that another relevant pitfall of PET scan use in the modern staging of non-small cell lung carcinoma is represented also by the risk of a false-negative test. However, we saw in the references list of the excellent paper of Duranti *et al.* that only the papers by Nomori *et al.*³ and Verhagen *et al.*⁴ concerning this pitfall are mentioned.

The Leyn *et al.* suggested careful consideration about the reliability of PET scan for lymph node staging of non-small cell lung cancer. According to European Society of Thoracic Surgeons, the expected false-negative rate is about 10%⁵.

Al-Sarraf *et al.* reported two important data: a) higher incidence of occult mediastinal metastases after negative uptake of FDG-PET/CT scan⁶, and b) less sensitive staging by means of positron emission tomography in elderly patients with NSCLC⁷.

de Langen *et al.* emphasized the results of a recent meta-analysis with regard to this issue: a “post-test probability for N2 disease of 21% was found in patients with PET-negative nodes >16 mm⁸.”

Silvestri *et al.* took in consideration this particular pitfall of PET scan use in modern staging of NSCLC and suggested other non-invasive procedures before proceeding directly to mediastinal thoracotomy⁹.

Gomez-Caro *et al.* observed that the false-negative rate for lymph node involvement was 14.4% and concluded that mediastinal staging by ¹⁸F-FDG-PET/CT may jeopardize accurate treatment for early stage NSCLC patients¹⁰.

In conclusion, considering these data as well as the important role of mediastinal staging in NSCLC and the FONICAP contribution as a case report¹¹, we suggest that a further excellent and analytical processing of the data recorded by an authoritative team of the *Istituto Nazionale dei Tumori* in Milan should be extended to the

false-negative test, in part due probably to the biological characteristics of every single patient.

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