Reply to Baisi et al.

Tomohiro Murakawa* and Jun Nakajima

Department of Thoracic Surgery, Graduate School of Medicine, University of Tokyo, Tokyo, Japan

* Corresponding author. Department of Thoracic Surgery, Graduate School of Medicine, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-8655, Japan. Tel: +81-3-38155411; fax: +81-3-56843989; e-mail: murakawa-tky@umin.ac.jp (T. Murakawa).

Received 29 October 2012; accepted 4 November 2012

Keywords: Lung cancer • Diagnosis • Computed tomography • Positron emission tomography

We thank Baisi et al. [1] for their interest in, and comments on, our article [2]. First, all of the patients in this retrospective study underwent brain computed tomography (CT) or brain magnetic resonance imaging (MRI) to evaluate brain metastasis, and most underwent F-18 fluorodeoxyglucose positron emission tomography (FDG-PET) for systemic screening to evaluate the N and the M parameters. For the small-sized pure ground glass opacities without solid component, PET scans were sometimes skipped.

To our understanding, the current clinical TNM staging system, assessing tumour extent, is essentially based on morphological evaluation by means of chest X-ray, CT or MRI [3]. To date, the role of PET scan in TNM staging is supplemental. In this study, we tried a morphological approach to adenocarcinoma, and it may work well at least in the area of adenocarcinoma.

We totally agree that the current TNM staging system is not totally affordable and, therefore, a more precise evaluation is required to predict survival. We know that adenocarcinoma includes a wide spectrum, and the biological behaviour of each subclass varies very much (i.e. adenocarcinoma in situ vs solid predominant invasive adenocarcinoma). By FDG-PET, tumour extent can be assessed precisely [4]. Moreover, previous studies clearly show that grading the FDG uptake may distinguish the intrinsic biological behaviour of the tumours, probably reflecting tumour pathology [5]. The application of FDG-PET for the evaluation of tumour aggressiveness seems to be a promising approach, however, the heterogeneity of PET techniques and performance and the difficulty of interinstitutional standardization are challenges in need of solutions [2, 5] before incorporating PET findings into TNM staging, particularly into the T-factor.

The current TNM staging system involves of three-dimensional assessment. Adding new vectors reflecting biological factors (B-factor: CEA level, FDG uptake, pathological grading, etc.) might be necessary for a new-generation system.

REFERENCES