Ground glass opacity and T-factor in staging lung adenocarcinoma

Alessandro Baisia, Matilde De Simoneb, Federico Ravegliac and Ugo Ciofibia,*

a Thoracic Surgery Unit, Azienda Ospedaliera San Paolo, University of Milan, Milan, Italy
b Department of Surgery, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Milan, Italy

* Corresponding author. Department of Surgery, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Via F. Sforza 35, 20122 Milano, Italy. Tel: +39-02-55035568; fax: +39-02-55034165; e-mail: ugo ciofi policlino mi it (U. Ciofi).

Received 20 October 2012; accepted 4 November 2012

Keywords: Lung cancer • Diagnosis • Computed tomography

We have read with interest the paper by Murakawa et al. [1] about the role of ground glass opacity (GGO) on T-factor assessment of lung adenocarcinoma. According to the seventh edition of the TNM classification of the Union for International Cancer Control, the measurement of the diameter of the tumour must include GGO [2]. The GGO component of an adenocarcinoma reflects a non-invasive carcinoma in situ [3] and, including that component, the measurement of the T-factor could be overestimated. To investigate this hypothesis, the authors evaluated the effect of the GGO component of adenocarcinoma on the survival of patients T1–2, N0, M0. The data, supported by four different types of statistical analysis, showed that the recurrence-free survival was dependent on the solid component of the tumour, and that the GGO component has no impact on prognosis. They concluded by suggesting that the T-factor must be measured only on the solid component of the tumour, changing the current TNM classification.

We must congratulate the authors for the idea, the complexity of the study and the accurate statistical analysis. However, some criticism can also be presented. The study includes, in the same group, T1–T2 patients (they have a different prognosis), and they are never divided when studying the GGO and solid component. Was the GGO component equally distributed between T1 and T2 tumours? It would be interesting as well, to have some information on the grading of the tumours that also have an impact on survival. The authors assert that the fluorodeoxyglucose-positron emission tomography (FDG-PET) scan was not considered because it was not available for all patients. However, nowadays, we cannot exclude FDG-PET scan results in evaluating lung cancer patients [4, 5] and, in this particular study, we are very curious about the uptake eventually present in GGO and its effect on patient survival. Lastly, it is not reported how the M parameter was studied before surgery, whether all patients were staged in the same way, and whether bone scan and brain evaluation were included.

The TNM classification is the more diffuse and accepted staging system of lung cancer, and is commonly used to suggest therapies, compare patient data and make a prognosis. It is also well known that this staging system is not totally affordable. We must keep in mind that patients with very early stage lung cancer can survive for only a few months, while patients with advanced stage lung cancer survive for years despite their dramatic prognosis. This mainly means that lung cancer is a complex entity with a different biological behaviour, and many relevant factors are still unknown. TNM is currently the best way to stage lung cancer patients, but the clinical experience shows that it is not perfect. Any suggestion for improving TNM staging, such as that of Murakawa et al. is therefore welcome, but must be introduced only after a deeper evaluation.

REFERENCES