PD-L1 expression levels should be considered when identifying risk factors in NSCLC patients treated with nivolumab

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Dear Editors,

We read with great interest the article recently published in your journal by Bonaventura and colleagues [1]. The article evaluated serum proprotein convertase subtilisin/kexin type 9 (PCSK9) in 44 elderly patients with advanced non-small-cell lung cancer (NSCLC) under nivolumab treatment and finally proved that circulating levels of PCSK9 < 95 ng/mL at the second cycle of nivolumab treatment served as an independent predictor for a better overall survival in elderly patients with advanced, pre-treated NSCLC. The authors have accomplished an excellent job; however, several questions must be answered before this conclusion can be drawn.

A limited number of 44 cases was included in the analysis only four variables including age, sex, smoking habit, and previous treatments were considered as potential confounders in the cox proportional hazards multivariate model. Indeed, age, sex, smoking habit, and previous treatments are risk factors which may exert substantial influence on patients' survival and there is no doubt these variables should be included in the analysis. This subset of 44 patients was enrolled in a previous study [2] in which patients received different lines of treatment. Thus, the authors should present a detailed description of the patients' prior treatment since it may have substantial influence on their survival.

Antibodies that block the programmed cell death-1 (PD-1)/programmed cell death ligand-1 (PD-L1) pathway offer a promising approach for the treatment of advanced NSCLC.

Most of the published studies report poorer prognosis for patients with high PD-L1 expression, and that these patients have the most benefit when treated with anti-PD-1/PD-L1 antibodies [3]. Accordingly, it would benefit the study to consider the PD-L1 expression level in the cox proportional hazards model and compare the difference of PD-L1 expression level between the high and low PCSK9 groups.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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