Comment on 'Existing prognostic models, but not neutrophil-to-lymphocyte ratio, are prognostic in malignant mesothelioma'

S C-H Kao*1,2, N van Zandwijk1,3 and S Clarke1,4

Sir,

We feel compelled to comment on the article of Meniawy et al (2013) to provide perspective on the value of the neutrophil to lymphocyte ratio (NLR) as a prognostic indicator in patients with malignant pleural mesothelioma (MPM). The Western Australia-based authors of this article have concluded from their analysis that the NLR did not provide prognostic value, whereas the Cancer and Leukemia Group B (CALGB) and European Organisation for Research and Treatment of Cancer (EORTC) prognostic guides did.

However, there are some flaws in the data that have not been adequately acknowledged and that might have had a major impact on the conclusions. The principal one was that although intended to be an analysis of 369 consecutive patients presenting to a single treatment centre, this number was reduced by 95 (26%) based on failure to meet fairly arbitrarily defined inclusion criteria of: availability of a full blood count within 90 days of diagnosis; cytologically or histologically confirmed diagnosis of MPM; absence of concurrent haematological malignancy and duration of follow-up > 90 days. A majority of patients (61) were excluded on the basis of missing laboratory data (unspecified as to which). There was no attempt to compare the characteristics of those excluded with those included to determine comparability of populations. In addition, of the remaining 274 patients, 169 (46% of initial) were treated with chemotherapy, whereas 105 (28%) received no systemic chemotherapy. In spite of 28% of patients receiving no treatment at all, the median survival for the entire group was 13.3 months with a median of 15.3 months for the chemotherapy group. These data appear to show unusually good overall survivals and are suggestive of selection bias, possibly caused by the exclusion of the 95 patients. In our original study in consecutive patients receiving systemic chemotherapy, whereas 105 (28%) received no systemic chemotherapy. In addition, we felt that the interesting observation of the significant predictive value of normalisation of NLR after one cycle of chemotherapy was brushed over in the article. This confirmatory finding after our initial article (Kao et al, 2010), along with the recent study demonstrating normalisation of NLR (< 5) predicting for a survival benefit of 7 months in a series of 118 patients participating in phase I trials (Pinato et al, 2014), suggests that prospective validation of NLR is warranted.

Finally, there appears to be a misconception that we were seeking a universal prognostic marker that could guide treatment outcomes for all. The series investigated by us confirm that determination of the NLR is a relatively simple way to assess prognosis in certain groups of patients with MPM; however, (ongoing) prospective validation will teach us how to properly use this parameter in clinical practice.

In addition, we felt that the interesting observation of the significant predictive value of normalisation of NLR after one cycle of chemotherapy was brushed over in the article. This confirmatory finding after our initial article (Kao et al, 2010), along with the recent study demonstrating normalisation of NLR (< 5) predicting for a survival benefit of 7 months in a series of 118 patients participating in phase I trials (Pinato et al, 2014), suggests that prospective validation of NLR is warranted.

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