Reviewer’s report

Title: Hierarchical Cluster Analysis of Immunophenotype Classify AML Patients with NPM1 Gene Mutation into Two Groups with Distinct Prognosis

Version: 2 Date: 17 October 2012

Reviewer: Wu Depei

Reviewer’s report:

In this study, the authors performed a hierarchical cluster analysis of the immunophenotype expression profiles in a relatively homogeneous cohort of AML patients with NPM1 mutations, and found that in NPM1-mutated AML, the antigen expression pattern of HLADR(+)CD34(+)CD7(+) is independent to FLT3-ITD mutation and associated with poor prognosis. However, there are some major issues that have to be critized.

Major Compulsory Revisions

1. It is hard to believe that 94 NPM1 mutated AML parients was recruited with informed consent for NPM1 mutations in this study from 1987 to 2007. NPM1 was found with prognostic significance in the past few years.

2. The choice and intensity of treatment might serve as important values for survival, and the authors should clearly state the treament of NPM1 mutated AML patients in this manuscript. Actually, idarubicin (12 mg/m²*3 )plus cytarabine is of great toxicity in Asian patients, especially for the aged patients (the median age of 58 years in validation cohort). How about the TRM? How many patients received HSCT? The discription of the treatment is unconvincing.

3. The cohort of 36 patients is not sufficient to test the conclusion.

Minor Essential Revisions

1. In Table 3, Cytogenetic should be evaluated as a prognostic factor.

2. Which exon of NPM1 were detected? exon 12? The authors should provide methods of gene mutations in detail.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.