Letter to the Editor

Complete and detailed methodological design is a prerequisite to ensure the stability of meta-analysis

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We read with great interest the article entitled "Systematic review and meta-analysis: transplanted hematopoietic stem cells and killer cells on leukemia" by Zhang *et al.* The authors gathered currently available evidence and provided valuable information about the combined effects of hematopoietic stem cell transplantation and killer cells on leukemia. They concluded that hematopoietic stem cell transplantation combined with killer cells effectively reduced the incidence of graft-versus-host disease in patients after stem cell transplantation, with no significant effect on overall survival or recurrence (1). Nevertheless, we would like to underline some issues when interpreting these findings.

First, the registration information of the study should be explained and highlighted in detail in the method section of the article. Registering an systematic review protocol is important because it promotes transparency and avoids potential biases, including selection and selective outcome reporting biases (2). Second, the search strategy of this study is not well established; the authors did not use MeSH terms in PubMed search. When we use MeSH terms, PubMed searches pertinent articles. Third, the authors chosed an inappropriate evaluation model when assessing the quality of the included articles. The Cochrane Collaboration's tool should not be used to evaluate non-randomized controlled trials (3). Thus, we recommend that the Downs and Black tools (modified version) be used to evaluate the methodological quality of non-randomized cohort studies (4). In addition, Kappa scores measuring consistency between reviewers should also be provided in the paper. Finally, although the authors intended to compare the differences between combination therapy and monotherapy, subgroup analysis should be performed based on the type of treatment in the control group, since the pooling outcomes of leukemia-free survival rate showed a high degree of heterogeneity.

We respectfully appreciate Zhang *et al.* for providing us with an important meta-analysis that may guide clinical decision making. However, more large-sample, scientifically well-designed studies should be further conducted to clarify this issue.

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Footnote

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