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Comments from the reviewers:

Number ID 00532996: The review has been well written and has covered details of mesenchymal stem cells definition, characteristics features, and clinical applications, Further authors have covered aspects of GVHD acute and chronic and how MSC or their exosomes can help regulate the incidence of GVHD. This was done using a digital library-based review of studies published previously. Authors have provided acceptable evidence that MSC can be of therapeutic modality for controlling GVHD post allogeneic stem cell transplantation.

Response:

Thank you for your helpful comments and for taking the time to point out options to improve our manuscript. The detailed results of the statistical analysis are shown in table 2. With unadjusted p values, only the variable “age at transplantation” was statistically significant. The manuscript was reviewed by a native English speaker and the typographical and grammatical errors were corrected. Changes to the revised manuscript are underlined to indicate where the revisions are located in the Text.
As suggested, the sentences were revised for clarity. In the first paragraph of page 6, the following sentences have been added: “The cumulative incidence of transplant-related mortality and relapse at 2 years was 13% and 16%, respectively. Relapse was more common in patients beyond CR1.”

Number 03246626: This review concluded clinical studies in MSCs, animal models, and limited human patient trials. MSCs have been widely studied and growingly used in GVHD treatment with promising effects. Nevertheless, the studies differed in the cell concentration and the dose of MSCs infused in each patient, which could explain the variety of results. This review delineated real insights into this clinical entity, emphasized diagnostic and therapeutic considerations, and generated pathophysiology hypotheses to identify research avenues, which gave a comprehensive review of MSCs strategies. 1. It is well established that extensive culture expansion of primary donor-derived MSCs leads to marked changes in functionality, and that there is a high level of inter-donor variability in MSC properties, which should be further discussed in this study. 2. Meanwhile, further adequately powered prospective studies are required to confirm the efficacy and establish the place of MSC therapy in the treatment of this condition. The ongoing clinical trials are better to be included in this review.

Response:

Thank you for the positive reviews and for providing us with valuable feedback. We

gratefully acknowledge the reviewer's comments and suggestions very much, which are valuable in improving the quality of our manuscript.