

Peer Review File

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Reviewer A:

Comment: The authors of the editorial commentary have provided a nice summary of the current situation we find ourselves in as transplanters when choosing Chemo or TBI for ALL.

Reply: We thank the reviewer for their comment.

Changes in the text: No changes required for this comment.

Reviewer B:

Comment: Thank you for the opportunity to review this Editorial. it is a very important topic, for years there has been debate about whether or not to use TBI in conditioning regimens, and the study you comment on certainly adds helpful information. I think you have done a very timely and detailed analysis of the study and context, and I have nothing to add. I think too that in adult ALL we will move toward the idea of using RT only "on demand" in selected cases because in all comers, it adds nothing. Unfortunately, in children, it retains its role, evidently because of a different biology and natural disease history.

I would only advise you to add that in any case, if it is performed, TBI could be today be a TMI/TMLI (already possible even if not on a large scale; I would cite Lancet Oncol review of Wong et al, ILROG TBI guidelines and Hoeben et al (peds): as examples where they try to modify classic TBI to reduce toxicity)

Reply: We thank the reviewer for their comment. We have now discussed that TBI can be administered as either TMI or TMLI, to reduce the risk of organ toxicity without compromising efficacy. We have also cited the paper by Wong et al. and Hoeben et al. as reference number 25 and 26, respectively.

Changes in the text: We have now added the following text “Efforts to minimize the toxicity associated with TBI have included administering it as either total marrow irradiation (TMI) or total marrow and lymphoid irradiation (TMLI). TMI/TMLI are considered to be organ sparing, with the main focus of irradiation being the bone marrow, lymph nodes and spleen. In certain circumstances, the brain and testes can be targeted with TMI/TMLI. Critical organs, particularly the lungs, are thought to be spared with TMI/TMLI, without compromising efficacy. Several studies are ongoing to evaluate the efficacy and safety of TMI/TMLI in both adults and children” on page 7, lines 6-12.

We have also cited the paper by Wong et al. and Hoeben et al. as reference number 25 and 26, respectively. These are under the reference section on page 10.