Reviewer's report

Title: ADAMTS2 gene dysregulation in T/myeloid mixed phenotype acute leukemia

Version: 3 Date: 4 November 2014

Reviewer: Seong Lin Khaw

Reviewer's report:

Major compulsory revisions
1. Nil

Minor essential revisions
2. Figure 1 legend refers to panels (C-D); this should be (B-C).
3. Figure 4: as samples were run in triplicate, please include error bars to indicate degree of variability in the assay.

Discretionary revisions
3. Case presentation, line 87: How was the “molecular remission” defined? Eg by PCR for clonal TCR rearrangement or flow cytometry? Was this technique also applied at the end of induction?

4. A paragraph could be included in the discussion to point out that no functional validation has been performed to characterize the leukaemogenic potential of this novel juxtaposition of a TCR locus/enhancer and possibly constitutively activated metalloprotease. It is entirely possible overexpression of ADAMTS2 is of no tumorigenic consequence, and this is simply a passenger mutation.

5. The authors might also wish to elaborate/speculate on why overexpression of a protein proposed to be a tumour suppressor (as per citation number 9) might be leukaemogenic in this context. It would be helpful to point this out to readers, that this is contrary to what might be expected based on other published literature. Could the truncated protein for example be functioning as a dominant negative mutation, and suppressing function of the wild-type protein?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

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