Reviewer's report

Title: Clinical characteristics and prognostic factors of bone lymphoma: A single-center experience with focus on the clinical significance of multifocal bone involvement in primary bone lymphoma

Version: 2 Date: 24 September 2014

Reviewer: Brad Haverkos

Reviewer's report:

Major:
- A brief sentence or two on the new 2013 WHO criteria would be helpful to the reader. In doing so I would very clearly state how you defined “PBL” and “SBL.” The definitions of uPBL, mPBL, initial SBL, recurrent SBL are clear but further defining the differences between SBL and PBL for your paper is essential. For example, it is unclear how you labeled someone as mPBL with LN involvement rather than this person having SBL.

- A description of why you chose to stratify PBL between uPBL/mPBL and SBL into initial SBL/recurrent SBL would be important to include in the intro. Separating into these variables does not align with your objectives of describing differences between SBL and PBL. I agree they represent different entities, but I would alter the aims to reflect the rationale or alter the analysis to reflect your current aims of SBL v. PBL. At a minimum, I would explain your hypotheses on how/why you expected these groups to be different. Otherwise it just seems like you didn’t see a difference between PBL and SBL and so you decided post-hoc to separate out the groups to get statistical difference.

- Pg 7 lines 7-8: Having searched SSDI, it is quite possible that people die and cannot be located in the index. Under your parameters these patients would still be listed as living and censored after July 1, 2013. I think it would be more fair to censor from last follow up unless they have a death date in SSDI.

- It seems like a stretch to make any conclusion on T cell histology outcomes when so few pts had TCL. I would remove these statements about T-cell histology outcomes given small #s.

- There is no mention of treatment. I think this would be essential to add since your main conclusions are related to outcome. I assume you have this information. If not, I would state the rationale for not including this information.

- It appears there were no differences between non-DLBCL vs. DLBCL. I do find this hard to believe, but if this is true I think this as important as any other finding in the paper and needs to be highlighted. I would emphasize this point and more clearly separate out indolent vs. aggressive subtypes and see if there is a difference in outcome. More discussion on lymphoma subtype and treatment in relation to outcome is warranted.
Minor:
- Sentence on line 22 pg 4 to line 1 pg 5 needs grammar corrected.
- Table 1: should be SBL rather than SLB
- On several occasions you say SLB rather than SBL (pg 8). Please stay consistent
- Pg 12, lines 11-14: This is not clear. What is the main point? Proportions do not change based on the # of cases.
- Pg 13, line 13: BL is highlight associated with EBV only in endemic variant. I do not think I would include any of the discussion about EBV other than saying that all the DLBCL was EBER negative.

Discretionary:
- Pg 13, line 9-11: It seems obvious that patients with recurrent bone involvement would have worse prognosis (ie. Patients with relapsed disease do worse)
- Pg 11, line 13: I would not call SBL a “control group”
- I would elaborate in the discussion more on the characterization of PBL with loco regional LN involvement as PBL. In general, it is not clear in these cases if this is extra nodal extension of LN into bone or vice versa. In line 1-2 page 6, does this mean iliac bone marrow involvement by imaging or by bone marrow biopsy? Please clarify. I assume this is radiographic involvement and then followed by a CT guided biopsy? If that is the case I think this sentence should be removed as it adds more confusion. If these are patients that had a random bone marrow biopsy and were identified to have lymphoma, I question the validity of including these patients as they most likely would have other sites involved and couldn’t be considered PBL. If these patients are all SBL patients with involvement on bone marrow biopsy I would state that clearly.
- If allowable per the editor a key with definitions of PBL, uPBL, mPBL, SBL would be helpful to the reader.

Level of interest: An article of importance in its field

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

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

Declaration of competing interests:

None