Reviewer's report

**Title:** Prognostic value of hematogenous dissemination and biological profile of the tumor in early breast cancer patients. A prospective observational study

**Version:** 2  **Date:** 19 January 2011

**Reviewer:** Markus Zuber

**Reviewer's report:**

This is a thoroughly designed, carefully performed study, and well written manuscript.

The aim of the study was to analyze the prevalence and prognostic value of DTC in the bone marrow compartment in early breast cancer patients in correlation with nodal involvement.

According to my knowledge it is the first study that will be published with outcome data correlating SLN and BM findings.

**QUESTIONS AND REMARKS**

- The BM positivity of 22% is a good quality marker, the same holds true for the 28% positive lymph nodes.
- As it is a clear clinical trial it would be adequate to use the title "PATIENTS AND METHODS" for this corresponding paragraph.
- Why were the BM aspirates done "during" the surgical procedure and not just prior to the first incision? Did you try to aspirate 10ml on both sides (range up to 15ml)?
- How many histological sections were performed on the lymph nodes (step sections, multilevel sectioning)?
- All patients means consecutively accrued?
- It is astonishing that all patients received a kind of adjuvant therapy (pT < 3 cm and 28% positive nodal involvement)
- What are the institutional and what are the international guidelines?
- Does the follow up of patients last longer than 5 years? What kind of FU was performed after this time point?
- In former years did the authors use the combination of dye and radioactive tracer for the identification of the SLN? Were the results not better (SLN not detected n
- Internal mammary nodes were harvested because of the study design or on a routine basis?
- AATRM trial: does it mean that the same patient was accrued for TWO studies?
- The results of percentage in table 2 should be modified the way that all patients are 100% (cp. Tabl. 2 in Langer I et al. see below). Five BM positive patients of a total of 104 cases result in 4.8% and not 17%. So a modification of the text is necessary.
- What are the numbers of local, regional and distant relapses?
- Which is the reason that for illustration reasons no DFS and OS curves are included in the manuscript (small number of events)?
- For the discussion paragraph: there is a first, a large, and an important published paper lacking, dealing with small tumor infiltrates in the SLN and BM without survival data. The results of Langer I et al. Ann Surg Oncol 2007; 14 (6): 1896 - 1903 should be discussed or at least mentioned.
- When mentioning the results of ACOSOG Z-10 it would be important to say that they had only a very low percentage a positive BM findings (3%). Correct reference (to be changed in the reference paragraph): J Clin Oncol 2010 28; 18 Suppl: CRA504
- In the conclusion paragraph I suggest to mention the proper figures 22% and 28% instead of 20% and 30% (reasons for false citations in case of quick readers).
- Typing errors: reference 32 WeinschenKer = Weinschenker; Tab.1. sentinal = sentinel; Tab. 4. time, motnhs / LI- 56., number after the dot is lacking.
- I suggest to omit Fig. 1, 2, and 4. Nowadays they do not ad more to the understanding of the different procedures.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests' Markus Zuber M.D.