Reviewer's report

Title: Serial enumeration of circulating tumor cells predicts treatment response and prognosis in metastatic breast cancer: a prospective study in 393 patients

Version: 2 Date: 21 April 2014

Reviewer: Peter Fasching

Reviewer's report:

The authors report on the

#1) METHODS: There is no section about patient selection. The authors write that patients were included consecutively. In case there was no 100% recruitment rate, a statement should be added, which patients were not included. It reads somehow confusing that patients were excluded because of missing CTC data after assessment for eligibility. Were patients included, who were not eligible, but had CTC measures (compare Figure 1)?

#2) METHODS: It is unclear what “partially blinded” means. Which drugs were given in a blinded way? Why was drug administration blinded?

#3) METHODS: Lots of cooperation partners are listed. Who did what?

#4) METHODS: What is a “local” with regard to the site of metastasis?

#5) METHODS: Why did CTC(BL) have a larger completeness?

#6) METHODS: It is not completely clear, which patients were not assessed concerning CTC(1C) status. Please clarify. According to figure 1 there are more than the first 100 patients who have not been assessed concerning CTC(1C) data. 128 patients out of 393 patients (>30%), who did not proceed to cycle 1 (how many weeks? 3-4?) seems a lot. Please provide exact reason for exclusion, how many patients died how many patients did not proceed?

#7) RESULTS: As the p-Value was 0.050 and the sample size for the + to + group is rather low (6) I would not insist on the technical term statistical significant.

#8) RESULTS: How does the sentence “Survival depended significantly on the result of radiological assessment 3 months after inclusion as median [95% confidence interval (CI)] OS times were 29.9 [27.4–37.1] months for patients who achieved at least SD, and 13.6 [9.1–16.4] months for patients with PD (P < 0.001).” Fit into the section about CTC and response?

Alltogether the article provides important information about monitoring metastatic breast cancer disease and adds substantial knowledge for the scientific community. My major comment is the clarification about the patient selection.
Level of interest: An article of outstanding merit and interest in its field

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