Reviewer's report

Title: How texture analysis of MRI is predictive of non-response to NAC in patients with breast cancer? A pilot study

Version: 7 Date: 7 August 2014

Reviewer: Hannu Eskola

Reviewer's report:

The article deals with an essential clinical problem. The prevalence of breast cancer is high and the choice of appropriate treatment is essential. The authors have tested the ability of MRI texture analysis to find non-respondent patients to neoadjuvant chemotherapy of breast cancer. The material consisted of 69 patients scanned by contrast-enhanced MRI. By combining four texture parameters it was possible to gain a sensitivity of 84% for identifying the non-respondent patients.

The question posed by the authors is well defined

The methods appropriate and well described.

The data are sound, but consist of relatively small number of patients in each disease group.

The manuscript is well reported?

The discussion and conclusions are adequately supported by the data

Most limitations of the work are clearly stated. Support of the literature is widely utilized.

The writing is acceptable with minor corrections.

Minor issues not for publication:

1. All acronyms, such as pCR and HER2, are not explained in the text.
3. Row 225: “all calculations” refers probably not only to the subtitle Statistical analysis, but is under that title. Please clarify.
4. The tables should be self-explanatory. Please explain all acronyms in the captions or in the table contents in Tables 2, 4 and 5.
5. Table 4: the accuracy of texture analysis is probably not four digits. The number of digits should follow the accuracy.
6. Give the units for “Dynamics” in Figure2

Minor Essential Revisions:

7. Row 187: what is visual texture? The word “visual” is in general connected
with human vision, while texture analysis is based on numbers and expressed numerically.

8. Rows 304 to 306: this sentence is unclear. It is obvious that textures in general differ according to some parameters only.

9. Rows 315 to 316: also this sentence is unclear to me. Please explain.

10. You have performed the analysis on subtraction images. Please discuss the application of texture analysis to such processed images. Subtraction can also produce systematic texture errors.

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