Reviewer's report

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

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Reviewer: Chiara Zuiani

Reviewer's report:

As texture analysis is a quite novel approach, it is important to state the software used and the background physics. As this is not the aim of the article, I suggest to state more clearly in the introduction where a complete description of the technique can be found (as in the citations 28-29) and which software was available.

MINOR REVISION

Intro
Pg 4, R69: state what pCR stands of (pathological Complete Response)
Pg 5, R84: revise English in the sentence “..distribution of the grey levels in the image; both resulting..”
Pg 5, R87-88: the classification of texture analysis should be stated more clearly.
Pg 5, R93-95: i suggest to leave all the comments od statystical approach in Materials and Methods. Also the comment on the analysis of biological parameters is not well integrated in the context of the explanation of the study.

Materials and Methods
Pg 6: What is the study period? State more clearly weather only pure IDC or also IDC with DCIS were included. To clarify the overall number of tumors diagnosed and how many of them were IDC and were included could be interesting. Why did all patients undergo MRI? A diagnosis of IDC is not an indication.
Pg 8: there are some imprecisions in the technical parameters. To perform breast MRI a dedicated breast coil is essential. From images and given parameters, I believe a dedicated coil was used but this is not clearly specified. Slice thickness is 1.25 mm? Please specify also the matrix and fat suppression technique. Did the MRI study include also T2w sequences and DWI? Even is this sequences were not analysed in this work, I suggest to specify the whole protocol (it is not necessary to specify parameters of the sequences not analysed in this work).
Bracco is an Italian company, and the dose according to published data is 0,1 mmol/kg.

Why is the third post-contrast image used? Usually first or second post contrast image should be use for the analysis (see Kuhl, Radiology 2007 and EUSOMA guidelines).
BI-RADS lexicon uses the definitions “mass enhancement” and “non mass enhancement”. I suggest to use these definitions, rather than “pattern”.

Table 2 does not show only mass or non mass. I suggest not to cite it like it is now.

Results
As I don not feel adequately qualified to assess the statistics, I suggest a revision from a statistics.

Discussion
Pg 14: insert reference number for cited articles (Uematsu, Pickles – 24, 25?). Also, cite authors names and not only citation number.

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

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

**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