Reviewer's report

Title: Mammographic density and inter-observer variability of pathologic evaluation of core biopsies among women with mammographic abnormalities

Version: 1 Date: 16 August 2012

Reviewer: Anna Sapino

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Major Compulsory Revisions

1. The title does not accurately convey what has been found “…..the mammographic abnormalities “ are not considered in the manuscript.

The lesion that causes the core biopsy is important in the final histological diagnosis. As stated by the authors in the discussion (page 6) “The European guidelines recommend to check that the histological findings correlate with the mammographic findings in order to interpret correctly the histological material of core biopsies of the breast and before to define the diagnosis.” Description of the radiological abnormalities and BIRADS or ACR RISK categories related to this lesion, cause of the core biopsy, should be given and evaluated in the statistical analysis.

2. The authors state that B1 and B2 histological categories usually require no further work up, and they consider B1 and B2 as the same category to calculate K regression model. But, B1 category may imply a second biopsy or a surgical approach depending on the type of lesion and on the radiological risk category. Thus, B1 should not be considered together with B2 in the statistical analysis.

3. The main limitation related to the radiological interpretation of the lesion target of the biopsy is not discussed. The reliability of the histological diagnosis may be related to the difficulties in centering the lesion by the radiologists in a dense breast and this is not taken into consideration at all.

Minor Essential Revisions

1. The methods are well described, but their interpretation is difficult for readers not specifically involved in radiology. Iconographic examples may be of some use for the definition of the type of density. The number of recruited women who underwent core biopsies is missing.

2. The authors do not clearly acknowledge some work upon which they are building, for example, citations related to BMI and age and agreement on the interpretation of mammographic densities are missed (discussion page 16).

Level of interest: An article whose findings are important to those with closely related research interests
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'