Reviewer's report

Title: Magnetic resonance imaging-radioguided occult lesion localization (ROLL) in breast cancer using Technetium-99m albumin macro-aggregated and distilled water control.

Version: 2 Date: 13 March 2013

Reviewer: Chiara Zuiani

Reviewer's report:

The paper is interesting and the article could be considered important in this field, but in my opinion some explanations regarding the following point are needed.

This paper describes the pre-operative localization of lesions visible with MRI solely with ROLL technique as an alternative to wire localization and to MRI-guided bioptic procedures.

As explained in the introduction, the retrieval of a lesion (with suspicious MRI enhancement) in the surgical specimen is related to an accurate and precise lesion localization.

In the clinical practice, many factors such as lesion's localization and size, breast's size and density, the movement of the breast during the insertion of the needle, patient's movement, duration time,.. may render difficult the accurate centricity of the lesion target.

Major Compulsory Revisions

Some points should be clarified by the Authors:

1) First of all: how did the Authors evaluate the correct position of the tip of the needle respect to the target-lesion before injection of radioactive substance? In particular in the 8 lesions presenting as NMLE?

2) The second unclear point is the following: all 16 procedures were defined accurate by the Authors' (see Abstract and Conclusions, first paragraph). They evaluated if there was a concordance between MRI findings and histologic results at surgical specimens.

If we look at the Tables 1 and 2: a “mass with oval shape, smooth margins and type 2 curve” was considered concordant with an histologic diagnosis of 7 mm IDC grade 1 in Table 1 and with a 6 mm fibroadenoma with atypia in Table 2.

The same MRI finding may be considered concordant with two very different histopathologic results (B5b and B3 lesion)?

3) In the last paragraph of the Results there is confusion between number of lesions and number of patients and also confusion between tip of the wire and tip of the needle.
Discretionary Revisions

Also, a comment regarding the economic aspect of pre-operative localization with ROLL versus pre-operative wire localization could be useful to obtain a more complete discussion.

**Level of interest:** An article of importance 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