Reviewer’s report

Title: Diagnostic value of fine-needle aspiration biopsy for breast mass: a systematic review and meta-analysis

Version: 1 Date: 4 July 2011

Reviewer: Samuele Massarut

Reviewer’s report:

Dear Authors,

I have read your article carefully. The topic is surely important and a meta-analysis on the subject is really needed. Unfortunately, in my opinion, there are many limitations that make this article unacceptable at the moment unless Major Compulsory Revisions are provided.

Major Compulsory Revisions

POINT 1: all FNAB results should be classified from C1 to C5 as follows:

The National Cancer Institute recommends five categories for the diagnosis of breast aspiration cytology in order to bring a degree of uniformity to the diagnostic reporting.

These categories are:

unsatisfactory (C1),
benign lesion (C2),
atypical, probably benign (C3),
suspicious, probably malignant (C4) and
malignant (C5).

POINT 2: grouping categories 2,3,4 and 5 together, as you made in your article, is absolutely arbitrary, useless and confusing. As a breast surgeon I can confirm that everything should be done to obtain a diagnosis of a breast lump, palpable or unpalpable, that should be certain, quick and with biological informations (Er, Pgr, Her2 etc). What patients and clinicians do not want are diagnosis with some extent of doubt. From this point of view a core biopsy is, no doubt, much better than FNAB.

POINT 3: you have to calculate the percentage of each category in the meta-analysis including C1 (insufficient sample) and how often FNAB was repeated due to C1 diagnosis. Than you have to calculate sensitivity and specificity and , if you like, other statistical estimates such as PLR, NLR etc, in each diagnostic category.

In other words you have to evaluate how often FNAB is able to guide the surgical operation without further invasive procedures including core biopsies or open
surgical biopsies and without the need of frozen sections during the operation. It should be stressed that in an era of sentinel node biopsy and intraoperative radiotherapy an open surgical biopsy to obtain a "certain" diagnosis of breast cancer is simply not acceptable.

If you are willing to do all these calculations I think that their results will probably make you change a little bit your conclusions.

Minor Essential Revisions
There are several spelling and grammar mistakes that should be corrected.

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'