Reviewer’s report

Title: Comprehensive Analysis of NuMA Variation in Breast Cancer

Version: 1 Date: 11 October 2007

Reviewer: Angela Cox

Reviewer’s report:

General
This is a well-thought out study aimed at a thorough investigation of the role of NuMA gene variants in breast cancer, following another group’s publication of an association based on a genome-wide scan. In the present paper, the authors screen for new variants, test these in a series with positive family history, and test the previously reported variant in a larger set with family history and an unselected series. No associations were detected, despite the reasonable power of the study.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Abstract: the sentence "Five missense variants ...." is repeated in the methods and results and should be re-worded in the results section.

2. Introduction, para 2, line 5 and 6 should read: "interaction with the mitotic spindle...including a nuclear localisation signal"

3. Introduction, para 2, line 10 should read: "...common translocation involving a gene fusion....."

4. Introduction, para 2, line 18: should read: "...This interaction links the structural..."

5. Methods, variants screening section: A statement should be made re the duplicate samples genotyped whether the 100% concordance refers to all SNPs, and also the genotype call rates should be given

6. Discussion: Since the results are negative, a power statement should be given in the discussion. What is the power of the study to detect (a) an association of the new variants and (b) an association of ala794gly?

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Discretionary Revisions (which the author can choose to ignore)
What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests