Reviewer's report

Title: Association of MTHFR Gene Polymorphisms with Breast Cancer Survival

Version: 1 Date: 11 August 2006

Reviewer: Donghui Li

Reviewer's report:

General
This study has observed an association between MTHFR polymorphisms and overall survival of breast cancer patients. The research question is relevant and the study was well done. Data analysis was thorough and the interpretation was reasonable. I have only some minor comments.

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

1. In the Statistical Analysis section, it was stated that “A statistical test for interaction was performed in Stata to determine if the effect of the two MTHFR genotypes on breast cancer survival was modified by other factors†”. The authors need to disclose more details on this test so others can replicate their study.

2. We were told, “The genotype frequencies for both SNPs were in Hardy-Weinberg equilibrium for a matched control population (n=317).† What about the distribution in cases?

3. Line 7 from the bottom of page 7, “the variant allele at codon 677 (A/C or C/C)† perhaps should be “codon 677 (T/T or T/C)†.

4. Was there an interaction between ethnicity and estrogen receptor status?

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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. The mean follow up time should be changed to median follow up time.

2. Did chemotherapy include both neoadjuvant and adjuvant therapy? Was there a difference in the type of therapy each group received?

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Discretionary Revisions (which the author can choose to ignore)

1. Page 8, first line, “the C allele lead to an increased survival hazard† is easily misunderstood as “increased survival† or “increased risk of dying† is probably a better expression.

What next?: Accept after minor essential revisions

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

Quality of written English: Acceptable

Statistical review: No

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