Reviewer’s report

Title: P53 genetic polymorphisms, interactions with lifestyle factors and lung cancer risk: a case control study in a Chinese population

Version: 2 Date: 20 May 2013

Reviewer: Janet Hall

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The manuscript of Li et al., reports the association between two TP53 polymorphisms rs 2078486 and rs 1042522 and lung cancer risk and interactions with lifestyle factors in a Chinese population. The authors found that the variant allele of rs 2078486 was associated with a significantly increased risk of lung cancer among smokers and individuals with high indoor air pollution and that homozygous carriers of rs 1042522 had a significantly increased risk of lung cancer. The results presented were not corrected for multiple testing.

Minor Essential Revisions

There are a number of points that need addressing:

1. The gene should be labelled as TP53.

2. There are probably as many studies (and meta-analyses) on the cancer risks associated with carriage of the TP53 intron 3 duplication polymorphism (rs17878362) as rs1042522 and this should be acknowledged.

3. Where is the SNP rs 2078486 located within the TP53 gene and what would be the expected impact of the T>C base change?

4. The minor allele frequencies for both SNPs should be given for the cases and controls and are allele ratios compatible with Hardy–Weinberg equilibrium?

5. Are the two SNPs in linkage disequilibrium?

6. Table 3 – what is cOR and aOR (crude and adjusted)? Please use same abbreviations as Table 2.

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

Quality of written English: Acceptable

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 other than working and publishing in the TP53 field.