Reviewer’s report

Title: Association between polymorphisms in RMI1, TOP3A, and BLM and risk of cancer: a case-control study

Version: 1 Date: 7 October 2008

Reviewer: C Seedhouse

Reviewer’s report:

Minor essential revisions
1. There is no mention of the ethnicity of the control and disease populations. Was it the same in the two populations? Polymorphic allele frequencies vary greatly between different ethnic groups.

2. It is important to indicate whether there were any differences in polymorphism distribution in males and females particularly because the proportion of males and females between control and cancer groups are so different for some of the analyses.

3. It is mis-leading to refer to the ‘leukemia’ group when a large proportion of this group have MDS, not leukemia.

Discretionary revisions
It would help the reader if the research goals were more clearly defined - see points below:

1. Why were the 3 different, unrelated, malignancies chosen? I would have expected cancers to be associated with Bloom syndrome to be chosen. Justification of the choice of cancers should be provided in the introduction.

2. Is there a rationale to combine all cancer cases? This needs justification in the manuscript. Firstly, the individual SNPs show different distributions between the different malignancies. Secondly, the etiology of the 3 diseases studied is diverse and each disease is associated with different DNA damage types with different DNA repair pathways expected to play an important role in the disease. Both these points raise the issue of whether the cancer cases should be combined.

3. Whilst the genomic position of the 4 selected SNPs is referred to, some discussion of whether these SNPs are likely to be functional would be useful.

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

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