Reviewer’s report

Title: Prediction of lung cancer risk in a Chinese population using a multifactorial genetic model

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Reviewer: Jianxin Shi

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This manuscript investigated whether SNPs identified in genetic studies of European ancestry populations could be replicated in Chinese populations and whether these SNPs were useful for risk stratification in clinical practice. It would add some value to the literature of lung cancer risk assessment. Following are some comments.

(1) The authors shall proofread their manuscript carefully. Here, I just give a few examples. In Methods of Abstract, “GWA and large cohort studies” shall be “GWA or large cohort studies”; “resample method” shall be “resampling method”. In “Background” second paragraph, what is American population? Page 10, “weight risk score” shall be “weighted risk score”, I think. In statistical analysis, “lassicifcation” shall be “classification”. The first paragraph of “Results”, “remaining two SNPs”, these are not remaining two out of six. Page 11, hTERT-CLPM1L, what is this?

(2) In fact, adding SNPs to the risk model only add very modest effect. The authors shall state the limited usefulness of SNPs in the abstract and that the current clinical practices shall not be changed. Consequently, I would suggest the authors to change the conclusion of abstract, which was also admitted by the authors in the discussion part.

(3) The authors used 5E-6 as threshold to choose SNPs from GWAS. This is of course incorrect because 5E-8 is commonly used. As a consequence, the authors chose a SNP in Li et al. Lancet Oncology paper for never smoker, which has not be replicated in even EA populations. Choosing this SNP is a waste of resource. Probably, not report this SNP?

(4) I understand that the author chose SNPs before 06/2011. But, other recently identified SNPs, for example RAD52 for squamous (Shi et al, 2012) in EA population and several other SNPs in Chinese Han population should be cited.

(5) I would suggest to also report AUC for smoking only (is it 0.637-0.02=0.617?).

Level of interest: An article of importance in its field

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

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.