Reviewer's report

Title: Associations of Prostate Cancer Risk with the RNASEL R462Q Polymorphism and Viral Infection.

Version: 2 Date: 29 November 2009

Reviewer: Norihiko Tsuchiya

Reviewer's report:

Major Compulsory Revisions

1. The aim and hypothesis of the study are ambiguous. In the abstract, the aim of this study seems to be to compare viral infection and PC risk. In the main text, however, the hypothesis is stated as "The RNaseL variant R462Q increases susceptibility of PC". Therefore, the conclusion in the abstract is completely different from that in the main text, and the result of comparison between the genotypes and PC risk is not addressed in the abstract. The authors should clearly state the aim of the study and make consistency between the abstract and the main text.

2. The authors state that the association between the R462Q genotype and PC risk could not be determined due to the absence of PC patient with the Q/Q genotype. The chi-square test is available even in such case, and a dominant model (RR vs. R/Q and Q/Q) is also applicable, although the odds ratio is not able to be calculated.

3. The cancer detection rate reported in this study is quite low in patients with PSA level 4.1 – 8.0 ng/ml. Since the smaller number of biopsy specimens leads to higher contamination rate of PC patients in the control group. The number of biopsy specimens obtained should be described.

4. What is a definition of "benign prostatic tissue"? Does it mean normal prostate tissue without hyperplasia or prostatitis? Since "benign" is used as the opposite of "malignant", "benign" usually includes hyperplasia, prostatitis, and any other non-malignant condition. "Benign prostatic tissue" used in this article seems to be a confusing expression.

5. Table of multivariate analysis (and univariate analysis, if possible) should be needed. At least, variables included in the model and odds ratio of each variable should be indicated.

Discretionary Revisions

1. The content of the last paragraph of the discussion section should be moved to the result section.

2. Figure 1 (also figure 2) could be combined with table 2.

Minor Essential Revisions

1. Nomenclatures of the gene name and genotypes should be unified. (RNase L
or RNASEL? R/R or G/G, R/Q or G/A, and Q/Q or A/A?)

2. BTR in the last paragraph of the discussion section should be spelled out.

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests