Reviewer's report

Title: The clinical response to vemurafenib in a patient with a rare BRAFV600DK601del mutation-positive melanoma.

Version: 2 Date: 13 July 2014

Reviewer: Leisl Packer

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The paper by Trudel et al. describes a rare BRAF mutation (V500DK601del) in a melanoma patient treated with vemurafenib. A short-lived partial response was observed in this patient, but after 2 months, the patient relapsed. This mutation has been previously documented, again with a short-lived response. However, this is the first paper to show that this complex mutation occurred on the same allele. They went on to perform predictive structural analysis in attempt to explain how this mutant protein interacts with vemurafenib. This study provides insight into complex BRAF mutations and suggests that more comprehensive mutational analysis should be performed when screening melanoma patients for vemurafenib treatment. The paper is well-written and will be of interest to the melanoma field, as BRAF remains the major target of therapy in this disease.

My only comment is that reference number 25 is not complete. Please include the volume, pages etc of this reference.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.