Reviewer's report

Title: K-ras Mutation Analysis in Ovarian Samples Using a High Sensitivity Biochip Assay

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Reviewer: Martin R Berger

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BMC Cancer
The article by Veronika Auner, et al., entitled 'K-ras Mutation Analysis in Ovarian Samples Using a High Sensitivity Biochip Assay' describes the K-ras codon 12 and 13 mutation rates in a large series of ovarian tumor samples.

Major Compulsory Revisions
The article has its merits for the large number of samples investigated, but it also suffers from a series of flaws that need to be improved:

1. The technique of detecting K-ras mutations is insufficiently described, especially with regard to the sensitivity of the method, with regard to false positive or negative outcomes, as well as to statistics performed with the raw data.
2. Such a detection limit is of vital importance when stating that fewer mutations were found in serous carcinomas than in borderline lesions.
3. The conclusions state that a k-ras mutation was of no prognostic value for patients under standard therapy. I have not found the description of data that would justify that statement.
4. There is not split up of data originating from frozen or from FFPE tissues, but a single sentence in the discussion states that there is no difference. Again, without data this is not convincing.
5. As mutations are alterations in a given base sequence it is not adequate to give the amino acid changes only (Table 1).
6. The main conclusion, that the determination of K-ras mutation status prior to the use of EGFR-targeted therapies may prove beneficial, is rather a hypothesis than a conclusion.

Minor Essential Revisions
1. The statement in the abstract and the conclusions that k-ras mutations are frequent in ovarian carcinoma is at least questionable in view of a 10-15% rate reported by the authors and by others.
2. Reference 15 refers to using gefitinib only, not to EGFR- related therapy in general.
3. The English should be thoroughly edited.

Discretionary Revisions

**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.