Reviewer’s report

Title: Accurate Detection of KRAS, NRAS and BRAF Mutations in Metastatic Colorectal Cancers by Bridged Nucleic Acid-Clamp Real-Time PCR

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Reviewer: Velizar Shivarov

Reviewer's report:

In this paper a Japanese group compares the performance of two commercially available kits for detection of KRAS, NRAS and BRAF mutations. As a real life material for analysis of the performance of the two kits they used 50 FFPE samples of CRC. The two methods showed virtually identical results. Three samples showed discordant results and were further tested by NGS. The authors claimed that the BNA-oligos based qPCR methods is slightly superior. I do not think this is a correct conclusion as they explained they used DNA from different sections and therefore it would be hard to make such a conclusion with not so many samples tested. Therefore, I think that a more general comparison would be to test the performance of the two assays using serial dilution of DNA carrying a mutation of interest. They can use clinical sample DNA or DNA extracted from a cell line with known mutation. By doing such a comparison they would be able to determine the sensitivity of the two assays and draw a more reliable conclusion. Besides, it is well known that liquid biopsies are expected to gain wider implication in diagnosis and follow-up of solid tumors. If one of the methods is sensitive enough it could be used to detect mutations in cell free DNA from CRC patients. It is advisable that the authors discuss this option as well. The manuscript is written in professional English language and in a logical way. The methods are described in sufficient details.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
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I am able to assess the statistics

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