Reviewer's report

Title: New serum DNA isolation strategy enables simultaneous analyses of circulating tumor DNA and serum-autantibody testing

Version: 3 Date: 21 June 2011

Reviewer: Peter Gahan

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Minor Essential Revisions

1. The supplementary figure 2 is a repeat of the supplementary figure 1.
2. The title implies that all serum DNA will be isolated by the new strategy. However, the method results in the isolation of only methylated DNA.
3. The range of DNA values for the healthy cohort is rather large. Since the circulating DNA levels can be increased by so many different factors, perhaps the term “healthy” could be defined.
4. The authors have not demonstrated that the MBD methylated-DNA isolation method is either comparable to or better than other methylated-DNA isolation methods. The authors need to comment on this aspect.
5. The use of methylated DNA fractions is an acceptable approach since it is expected that there will be a higher level of such fragments in plasma and serum due to the higher levels of methylated DNA fractions released by tumour cells. However, the authors have not been able to separate healthy, benign and malignant breast cancer patients via the levels of methylated DNA. Could the authors be more specific about this aspect of the analysis.

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

Quality of written English: Acceptable

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