Reviewer’s report

Title: Machine learning enables detection of early-stage colorectal cancer by whole-genome sequencing of plasma cell-free DNA

Version: 0 Date: 04 Apr 2019

Reviewer: Shailesh Advani

Reviewer’s report:

Abstract:

Can authors summarize how the stratification impacted AUCs, particularly in reference to age or institution?

Introduction:

a) Can authors provide some information on background of CRC epidemiology?

b) How are previous studies on ctDNA or cfDNA in colorectal cancer different from your paper? Or how has this method studied previously in CRC, early and late stage?

Methods:

a) None

Results:

a) Well written, no comments. May be dividing results into separate sections will be helpful

Discussion:

a) Can other confounders affect your results? Synchronous vs metachronous, tumor mutation profiles?

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

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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