

# **Measurement of Biological Age May Help to Assess the Risk of Colorectal Adenoma in Screening Colonoscopy**

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Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "Measurement of Biological Age May Help to Assess the Risk of Colorectal Adenoma in Screening Colonoscopy" (Manuscript No: 35018).

Those comments are all valuable and very helpful for revising and improving our paper, as well as being of important guiding significance to our research. We have studied the comments carefully and have made corrections, which we hope meet with your approval.

We would like to express our great appreciation to you for comments on our paper.

Looking forward to hearing good news from you as soon as possible.

Best regards.

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## Response to the comments

Thank you very much for reviewing our manuscript.

We reappraised the content again and replied to your comments one by one as follows:

### Reviewer Comments:

1. the age difference between those 2 groups is not great, thus I am not convinced that screening in relation to biological age will be of any clinical significance.

>>> This is a study of health check-up examiners. Therefore, the age difference between those 2 groups is not great as you commented.

It is described as Limitation in Discussion as below:

“This study was limited because the study population, who voluntarily attended health screening, may have been individuals more concerned about their health than average and trying harder to maintain their health than members of the general population. As a result, the age gap between BA and CA was not as large as expected. Therefore, further studies targeting members of the general population are needed in the future.”(p.10, line 7-12)

If we conduct prospective studies on the general population, we expect more meaningful results.

In addition, MS was higher in the BA group, thus this fact might bias the outcome as well. I suggest performing a multivariate analysis including MS to more accurately defining the risk for developing adenoma.

>>> As the multicollinearity diagnostic indicated multicollinearity issues among high blood pressure, fasting glucose, HbA1c, and metabolic syndrome, the multivariable analysis with metabolic syndrome and gender was performed.

As a result, the metabolic syndrome was marginally significant between the two groups ( $p=0.08$ ).

Since the correlation between colonic adenoma and MS is already known, it is meaningful to find out the prevalence of colorectal adenoma among 4 groups using MS and Age gap as shown in Fig. 2. As a result,  $p$  for trend showed statistical significance ( $p < 0.05$ ).