

## Intraprocedural bowel cleansing with the JetPrep cleansing system improves adenoma detection

A. Hoffman<sup>1,2</sup>, S. Murthy<sup>3</sup>, L. Pompetzki<sup>4</sup>, J.W. Rey<sup>1,2</sup>, M. Goetz<sup>2,5</sup>, A. Tresch<sup>6</sup>, P.R. Galle<sup>2</sup>, R. Kiesslich<sup>1,2</sup>

### *Point by point reply to the comments and suggestions*

*First of all we would like to thank you for the very constructive-minded suggestions.*

*We hope to have considered them all in our improved version of our manuscript.*

### **reviewer 02980552 comments :**

The results are scarcely described. Are lacking a lot of useful information: a more complete description of anamnestic data of selected population along the different categories and the exposure time, Must I understand more the exposure, Please clarify.

*We agree with this important comment; however, we strongly feel that the readers of the journal can easily follow our discussion and the presentation of the results with tables and figures. However, we have modified our results based on the recommendations of the reviewer but would like to present also our results for a clear and easy understanding in a table. All mistakes were changed subsequently and the new version has been revised. Unfortunately we have no clear data about the exposure time of the cleansing system. But we presented the difference between the examination time and the water consumption between the two groups in our results section. Even if the examination time with the JetPrep was longer, the total examination time did not differ between the two groups.*

**reviewer 2439987 comments :**

The manuscript is correctly designed and the results are interesting for clinical practice. Only two corrections are necessary (see Comments To Authors).:

*Thank you for raising these important points and mistakes. All changes have been made in the manuscript and we changed the misleading term of control and intervention group just in group A and B.*

**reviewer 2861605 comments :**

The authors have investigated an important issue in regards to bowel preparation in what appears to be the first randomized prospective cross-over study examining intraprocedural bowel cleansing with a new system in regards to looking at important colonoscopy quality outcomes like bowel preparation and adenoma detection rates. The study is novel and looks at very relevant issues like bowel preparation issues and sessile serrated lesions.

*We agree and thank the reviewer for this important comment.*

issues that require clarification are the standardization of bowel preparation, which is confusingly stated in the methods section

*Yes – we agree. We mentioned now how bowel preparation was performed in our study.*

**Introduction:**

*We thank the reviewer for raising these important points and All needed corrections were made*

**Methods:**

The methods section is not clear. The abstract implies in the methods section that all patients in the treatment arm underwent intraprocedural irrigation, regardless of the prep quality. If this is true, it obviously will influence the results. It is further clarified that patients with a 3 in the right colon on the BBPS were excluded, but is important to mention upfront that intraprocedural bowel prep cleansing was not done on all patients

*Good point – we have clarified this point in our revised manuscript.*

It is also not clear that patients underwent two colonoscopies. It should be stated that “the intervention arm underwent a first colonoscopy with standard *intraprocedural* bowel cleansing, followed by a *second colonoscopy immediately following, in a standardized cross-over fashion*, permitting irrigation by the use of the JetPrep cleansing system. The reverse sequence was used in the control arm.

*Yes – we agree and all corrections were made.*

The oral pre-colonoscopy bowel preparation given to patients is unclear. It says, “Bowel preparation was performed in a standard manner one day before the procedure (or split-dose)” This seems to imply that bowel preparation was not standardized in regards to how it was given.

Also, what about diet instructions prior to colonoscopy? Was this standardized? It is not mentioned.

The Jetprep system’s manufacturer/company and location is mentioned in the methods, but should be written in its first mention in the introduction.

*Yes – we agree, all corrections were made*

It is also unclear to me why it is mentioned that patients were specifically split or characterized into high and low risk groups which were announced after reaching the cecum. While the endoscopist should certainly know the patient’s history, specifically telling the endoscopist that this is a high or low risk patient could change the way the colon was inspected on withdrawal.

*We agree that the endoscopists knowing that a patient belonging to low or high risk group may bias the results. We clarify this problem now in our discussion.*

## Results

It is unclear why the miss rates mentioned in the results section of the abstract do not match the miss rates of those in Figure 5.

Table 1 is referred to in regards to inclusion and exclusion criteria. The sentence which states the inclusion criteria “...with a history of removed adenomas” is not clear. Is this referring to surveillance only or all patients included?

*We changed the not matched number in Table 5.*

*Furthermore, the history of a removed adenoma refers to surveillance only.*

## Discussion

This is obviously a relatively small single center study which needs to be pointed out in regards to limitations and generalizability.

There is no mention of procedure indication; however, it appears inferred from the fact that some patients were ambulatory and some were hospitalized that all patients were not undergoing colonoscopy for an indication of screening, which is clearly a limitation that needs to be mentioned.

The miss rates reported here (> 50%) seem to be high and higher than most other studies looking at adenoma and polyp miss rates in tandem colonoscopy studies and should be pointed out and addressed as to why the authors think this occurred.

*We also agree on the first two points, but miss rates reported > 50% are common with new endoscopic devices, that we have mentioned in our discussion, so that our results are not so different from the other ones (Lenze F, Beyna T, Lenz P, Heinzow HS, Hengst K, Ullerich H. Endocuff-assisted colonoscopy: a new accessory to improve adenoma detection rate? Technical aspects and first clinical experiences. Endoscopy. 2014 Jul;46(7):610-4./ Gralnek IM, Suissa A, Domanov S. Safety and efficacy of a novel balloon colonoscope: a prospective cohort study. Endoscopy. 2014 Oct;46(10):883-7. / Hasan N, Gross SA, Gralnek IM, Pochapin M, Kiesslich R, Halpern Z. A novel balloon colonoscope detects significantly more simulated polyps than a standard colonoscope in a colon model. Gastrointest Endosc. 2014 Dec;80(6):1135-40 / ).*

*We have endeavored to make all needed corrections and to improve our manuscript according to the editors and reviewers suggestions.*

*Arthur Hoffman*

*for all the authors*

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R. Kiesslich<sup>1,2</sup>

## *reply to the comments of the editor*

*First of all we thank the editor Prof. Tarnawski for the positive comments.*

*Maybe it was somehow confusing written in our manuscript. Of course we couldn't establish a total number of polyps, because there will be always a miss rate in every procedure. We clarified it now in the manuscript, that we meant the total number of polyps we discovered in the procedure without meaning that this is the absolut total number of all polyps. We hope that we could clarifiy this in the text.*

*Thank you*

*Arthur Hoffman*

*for all authors*