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Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 2476-review.doc).

Title: Optical diagnosis of colorectal polyps using HD i-scan: an educational experience

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The manuscript has been improved according to the suggestions of reviewers:

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

- (1) Methods: I cannot sure whether a sessile serrated adenoma/polyp can be categorized as polyps with a non-adenomatous histology. A sessile serrated adenoma/polyp may be classified as neoplastic lesions rather than non-neoplastic lesions.

We agree with the reviewer that data on sessile serrated adenomas/polyps are controversial with some studies classifying them as non-adenomatous polyps (Ladabaum et al, Gastroenterology 2013), while others as adenomatous polyps (Paggi et al, Endoscopy 2012). In the present study, we preferred to classify sessile serrated adenomas/polyps as non-adenomatous polyps, in line with recent insights on the pit pattern of sessile serrated adenomas/polyps (Limketkai et al. Gastrointest Endosc 2013, Kashida et al. Hepatogastroenterology 2011, Kimura et al. Am J Gastroenterol 2012). It is possible that magnification endoscopy would add additional information to this classification, with recent data indicating a characteristic type "O" pit-pattern for sessile serrated adenomas/polyps (Kimura et al. Am J Gastroenterol 2012).

With regard to the current study, as only 1 out of the 50 colorectal polyps examined was a sessile serrated adenoma/polyp, its re-classification into adenomatous lesion is unlikely to change the results and conclusions. We addressed this issue in the method en discussion section of our revised manuscript (page 6, paragraph 1 / page 13, paragraph 2).

- (2) The discussion of far too long and could be cut in somewhat

We have critically revised the discussion and deleted redundant information.

- (3) Little is known about the learning curves for optical diagnosis of polyps. Although the present study is in agreement with existing literature data showing a short and rapid learning curve for accurate evaluation of still images using new IEE techniques, recent data reported a contrast result for endoscopists in a community setting. It is not known whether a community versus an academic setting could explain some of the differences between the current study and the study

by Ladabaum et al. In a study by Ladabaum et al, there was greater participation in the ex vivo than the in vivo phase. Therefore, learning programs including in vivo and ex vivo design might be considered, and it would be helpful if a reasonable education model might be discussed in the discussion.

We completely agree with the reviewer that learning programs comprising both the ex vivo and in vivo phase are needed to achieve and maintain skills in optical diagnosis. By analogy with our previous experience regarding training in the detection and management of non-polypoid lesions (Sanduleanu et al. *Gastrointest Endosc Clin N Am* 2010), we suggest the following steps might be considered: First, a short didactic training session might be offered to the endoscopists to familiarize them with the basic principles of optical diagnosis. Second, videotraining can help to shape the skills. Finally, individual feedback during colonoscopy by an experienced endoscopist and self-learning (i.e., comparison of optical diagnosis with formal histopathology) might be important to attain and maintain proficiency in optical diagnosis. We have addressed this issue in the revised version of our manuscript (page 12, paragraph 1).

- (4) In this study, the overall NPV for prediction of histology was 80.5%, and NPV for diminutive polyps was 71.0% only. To justify leaving (rectosigmoid) diminutive polyps in place, the NPV must be high, with a minimum 90% threshold recommended by the ASGE PIVI statement. The authors described this issue shortly in the discussion, it would be better to be described as a limitation of this study. Although a reasonable level of performance with education model is still missed, the level of proficiency in this study is not enough in a view point of NPV because authors suggested higher performance of endoscopist in optical diagnosis after a 20-minutes didactic training session.

The reviewer correctly points out that the endoscopists involved in this study did not reach the threshold recommended by the ASGE for a safe implementation of a leave in place approach of non-adenomatous polyps. These findings were not unexpected, as HD i-scan was only recently introduced at our institution, and hence, the endoscopists were still early in their learning curves. We have added this as a limitation of our study in the revised version of our manuscript (page 13, paragraph 2)

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely yours,



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