

## To the WJG reviewers and editorial board

We thank reviewers for their supportive comments and suggestions for improvement.

Specifically, we have included some references addressing recent studies on the application of AI to IBD and ulcerative colitis.

The new text can be found in the section “*Inflammatory bowel disease (IBD) and AI*”, which now states the following (additions in blue):

*Recently, AI solutions have been explored to better define mucosal healing in IBD [70]. With the incidence and global burden of IBD still on the rise, involving a large number of young patients with normal life expectancy, there is a constant need for more accurate ways to stratify risks and predict prognosis in these patients. Because the concept of mucosal healing is a rather new concept, the authors expect that AI tools for healing evaluation through endoscopic monitoring, which have recently been developed, could play a key role in better standardizing it[70].*

*Waljee et al.[71] used RF methods to develop and validate prediction models of remission in patients with moderate to severe Crohn’s disease. In 401 participants, they showed an AUC of 0.78 at week 8 and an AUC of 0.76 at week 6. Also, Klang et al. reported on the training of a CNN to detect Crohn’s disease ulcers, using 17,640 capsule endoscopy images from 49 patients[72].*

*Assessment of ulcerative colitis (UC) can sometimes be a very difficult task. In early stages of the disease, erythema can be attributed to a number of other conditions, delaying UC diagnosis. On the other hand, foci of dysplasia in advanced disease are often missed due to the small amount of colonic mucosa sampled in surveillance colonoscopy. Thus, the development of AI solutions aimed at helping assess UC activity is a hot research topic.*

*For instance, Gutierrez et al. proposed an automated end-to-end system using DL to binary predict the Mayo Clinic Endoscopic subscore, which showed a high degree of precision and robustness, with an AUC of 0.84[73]. In this connection, Kirchberger-Tolstik et al. recently reported a non-destructive biospectroscopy technique assisted by neural networks to assess the severity of the disease according to the Endoscopic Mayo Score, with a mean sensitivity of 78% and a mean specificity of 93%[74].*

*Maeda et al. developed and evaluated a CAD system for predicting persistent histologic inflammation using endocytoscopy. To do so, they classified the endoscopic studies according to the histological findings of the corresponding biopsies, obtaining a predictive model with a high specificity and sensitivity[75]. In addition, Bossuyt et al. constructed an algorithm tracking mucosal redness density in the red channel of endoscopic images along with vascular patterns. The results were accurately correlated with the activity of the disease at the endoscopic and histological level[76].*

Sincerely,

Antonio Luna on behalf of the authors