Reviewer’s report

Title: Histology and localization of large colonic polyps (>20 mm) and their impact on occurrence of synchronous polyps.

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Reviewer: Jasper Vleugels

Reviewer’s report:

In this manuscript, Zhan et al. describe the histology and localization of large colonic polyps and their impact on the occurrence of synchronous polyps. I have read their manuscript with great interest. The authors retrospectively reviewed the database of 2 academic hospitals for patients that were referred for EMR. This creates substantial bias, as is addressed in the discussion. But there are still some major limitations that remain and should be acknowledged before this study is suitable to be considered for publication.

Major compulsory revisions

1. The title of the manuscript does not correspond with the message given in the manuscript. It was not clear to me what the purpose of the manuscript was until I read the conclusion. I would suggest that the authors describe that having a large colonic polyp can be associated with advanced adenomas/adenocarcinoma elsewhere in the colon and it is therefore advised to do a complete colonoscopy in patients with large colonic polyps, even when these patients are referred to an academic endoscopy unit. The authors should try to focus the displayed results in their manuscript on this matter.

2. There is substantial bias because only the most complicated cases are referred by endoscopists for EMR in academic endoscopy units. This is reflected in the results, since most of the large polyps are located in the proximal colon. Good quality evidence is available stating that proximal polypectomies are more technically demanding and have higher complication rates. Therefore, some variables should not be imported in the multivariate analysis. For instance results regarding location, since the location of these referred polyps does not correspond with true prevalence sites of large polyps throughout the colon.

3. The authors excluded large pedunculated polyps. It is not clear to me why these polyps were excluded and flat and sessile polyps not? This also created bias and these should be included in the analysis.

4. The authors do not include the optical assessment (Kudo pit pattern) of endoscopists prior to the resection. Only the results after histopathology reading are discussed. It would also have been interesting to see whether adenocarcinomas in both large colonic polyps and synchronous polyps were adequately suspected and managed. For adequate endoscopic management this is of utmost importance.
5. Please report the histology results according to the correct Vienna histolopathology criteria. Use hyperplastic polyps, sessile serrated adenomas/polyps and traditional serrated adenomas to describe the serrated lesions. Please make use of low- and high grade dysplasia. Use the common definition of advanced neoplasia.

Minor essential revisions

6. To what extent were hyperplastic polyps in the rectosigmoid included in the analysis?

7. Please provide a table with the histopathology findings of synchronous polyps

8. Please do not include tables of all regression models and choose one that provides most information

9. In the discussion, multiple statements are missing adequate references. Please adjust these.

10. Figure 2 does not add extra formation and creates confusion due to unclear cut-off values.

11. Were polyposis patients excluded from the analysis?

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests