Rebuttal to Reviewer Comments

We would like to thank the reviewer for their thorough and constructive feedback. We believe the manuscript has benefited greatly from your suggestions. Below, we have addressed each of the reviewer's comments in detail:

1. Overlength and Redundancy:

We appreciate your feedback regarding the redundancy of certain content in the discussion and tables. We agree that the repeated mention of specific bacterial genera (e.g., *Faecalibacterium*, *Fusobacterium*, *Bacteroides*) and their metabolites can be condensed. In response, we have streamlined the discussion and consolidated the sections where these genera are mentioned to avoid repetition while preserving the critical insights. Additionally, we have revised the tables to present the roles of these microbes and metabolites in a more concise manner, ensuring clarity without unnecessary duplication.

2. Figures and Tables:

Thank you for the suggestion to include a high-level summary figure or schematic illustrating the microbiome-endoscopy-complication axis. We recognize the value of visual aids for enhancing understanding, particularly for visual learners. In response, we have added a flowchart to the manuscript that clearly illustrates the interactions between the microbiome, endoscopic procedures, and the resulting complications. This figure is designed to complement the text and provide a clearer understanding of the discussed concepts.

3. Terminology Consistency:

We acknowledge the importance of consistent terminology throughout the manuscript. We have carefully reviewed the text to ensure that terms such as "microbiota" and "microbiome," "procedures" and "interventions," and "resection" and "removal" are used appropriately and consistently. We have standardized the terminology in line with the most widely accepted definitions in the field, ensuring clarity and consistency throughout the manuscript.

4. Grammar and Style:

Thank you for your feedback on the grammar and style. We have conducted a final round of proofreading to correct minor grammatical inconsistencies and streamline

complex sentences. This revision ensures that the manuscript is clearer, more concise, and easier to read, enhancing its overall quality and accessibility.

5. Conclusion:

We appreciate your positive feedback on the manuscript's insights and contribution to the field. We are pleased to hear that the review is deemed to be of high interest to clinicians and researchers in gastroenterology and microbiome science. With the revisions made in response to your suggestions, we believe the manuscript is now more concise, visually engaging, and stylistically polished. We are confident that these refinements enhance the manuscript's impact.