

Dear Reviewers,

Thank you for reading our manuscript and reviewing it, which will help us improve it to a better scientific level. We revised our manuscript, and quite a lot of changes have taken place. So we have sent the revised manuscript. At the following, the points mentioned by the reviewers will be discussed:

Response to reviewers

Reviewer #1: To treat esophageal cancer, radiotherapy has been a critical treatment option that may be combined with chemotherapy in patients with unresectable esophageal cancer. However, resistance might result in treatment failures and cancer relapse. In most cases, radio-resistance studies typically look at changes in cellular mechanisms and tumor-associated microenvironmental factors, such as cell cycle checkpoints, stem cells, macrophages, and so on. Of course, the study of radio-resistance by long noncoding RNAs has been actively carried out recently, but the suggestion of long non-coding RNAs Rpph1 for studying radio-resistance was considered as a very novel field. In this study, reflecting this background, this reviewer did not find any major issues in the research flow and whole contents. Instead, there are two minor issues. 1. There is no discussion on the theoretical background of using TE-1 and Kyse150 cell lines. It should be stated whether the two cell lines have the characteristics for representative of radio-resistance. 2. Labels in all figures need to be modified. This reviewer had to zoom in each time to check its label.

Response: Thanks for your meticulous reading and valuable suggestions. We have added related references in the discussion section to show that TE-1 and Kyse150 cells are representative of sensitivity to radiotherapy. Besides, we have modified the size of labels in all figures for better reading experiences.

Reviewer #2: the manuscript is really well organised and well studied. As you said, the signalling pathway has also great importance.

Response: Thanks for your comments. We will work harder in a more serious attitude in the future.