Manuscript ID Submission ID 101934v1

This paper is related to reviewing the manuscript titled "A novel model based on three-dimensional CT reconstruction to predict the risk factors of postoperative complications after pancreaticoduodenectomy in pancreatic ductal adenocarcinoma patients"

In this study, a retrospective analysis of 204 pancreatic ductal adenocarcinoma (PDAC) patients who underwent pancreaticoduodenectomy (PD) assessed the association between adipose tissue volumes, systemic inflammation, and postoperative complications. Three-dimensional computed tomography measured visceral and subcutaneous adipose volumes, while the Clavien-Dindo classification graded complications. Logistic regression analysis identified visceral adipose volume, systemic inflammation response index (SIRI), triglyceride glucose-body mass index (TyG-BMI), and prognostic nutritional index (PNI) as independent risk factors for complications. A nomogram incorporating these factors demonstrated excellent discrimination (C-index: 0.812, AUC: 0.836) and strong clinical utility.

Firstly, Although the proposed study is successful in terms of organization, presentation, content and results, major revision given in the following items need to be performed.

- 1) According to the authors, a predictive model was constructed based on the results of least absolute shrinkage and selection operator (LASSO) and multivariate logistic regression analysis. However, the estimation method is not explained in the methods section.
- 2) The authors suggested using an artificial intelligence-based deep learning model for predicting of the pancreatic adenocarcinoma disease, however, neither the mathematical nor algorithmic expressions of these prediction methods are given in the paper text. The authors urgently need to find a solution to this issue, and the artificial network models and mathematical equations of the methods and deep learning must be given in the paper.
- 3) What are the contributions of the authors in this study in terms of computer science and artificial intelligence? It is essential to clarify this issue.
- 4) Although the sensitivity in the ROC curve in Figure 3 is almost 100%, a lower score of 0.8xx AUC was obtained in the same result. This situation proves the inconsistency in the results of the study.
- 5) In addition, the proposed model should be compared with new methods, from the results except Figures 4 and 5.
- 6) Performance analyses and results are very few and insufficient. Increasing the results and including more detailed analyses in the article would increase the value and scope of this paper.

My decision is major revision. I do not see any harm in publishing the manuscript once the above revisions are made.