Revision

Comments from reviewers:

1. Specific Comments To Authors: Results and conclusion: The section devoted to the explanation of the results suffers from the same problems revealed so far. Your storyline in the results section (and conclusion) is hard to follow. Moreover, the conclusions reached are really far from what one can infer from the empirical results.

Response: Thank you for your valuable advice. Undoubtedly, higher-grade liver cancer cells exhibit stronger proliferative capabilities. Our approach involves utilizing differential analysis to identify gene expression variances between patients with advanced-stage (Stage III and IV) and lower-stage (Stage I and II) conditions. Furthermore, our functional analysis validates the regulatory role of these differentially expressed genes in cellular proliferation. Subsequently, employing PPI and lasso-cox methods, we systematically eliminate superfluous genes and retain prognostically relevant feature genes to construct a prognostic model, which is subsequently validated. The results indicate that the functional attributes of genes align reasonably with the interpretability of the predictive outcomes of the model. We have made necessary revisions to the issues in the results and conclusions sections.

2. We suggest that change the manuscript into "meta-analysis". -----Please reply within seven days, thank you! Only one file is available in F6publishing system, please upload all files with zip format, or send to me by email (y.l.chen@wjgnet.com).

Response: Thank you for your suggestions. Meta-analysis and the methodology employed in this study are distinct approaches. Meta-analysis involves the aggregation and statistical analysis of effect sizes from multiple articles, providing a comprehensive evaluation of models or results across various publications. In contrast, our study involves in-depth data mining of raw data, leading to the development of an entirely novel model. On this basis, we compare it with other research findings within the same field to demonstrate its clinical significance. During the initial submission, we might not have thoroughly reviewed the submission guidelines of this journal. In reality, this article should be classified as a retrospective study.

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The manuscript written by Lijie Sun et al. analyze the risk factor for insulin resistance (IR) and investigate the effects of vitamin D supplementation on glucose and lipid metabolism in patients with T2DM and IR by a retrospective analysis of 162 patients with T2DM. I found it's well conducted with good methodology and intelligible English. The topic is actual and well described. The design of the study is very good. The results are excellent. Their conclusions may provide an objective reference basis to plan a clinical intervention. The whole manuscript is well drafted. Also, the manuscript also reviewed previous related literature. However, the reviewer suggests that the flow chart of FIGURE 1 should be simplified, which is too cumbersome at present.

Re: We have noted your comment regarding the complexity of Figure 1. We understand that a simpler diagram would aid the understanding of our study design and appreciate this suggestion. We are pleased to inform you that we have revised the figure by focusing on key elements, therefore enhancing clarity without compromising the crucial information. We believe that the updated figure will present a more streamlined visualization of the study process, and hope that it now meets your expectations.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The study deals with an interesting theme, investigating the risk factors of insulin resistance and the effects of vitamin D supplementation on glucose and lipid metabolism in patients with T2DM. The

patients included in the study were divided into the resistance group and non-resistance group based on the diagnostic criteria of IR. Subsequently, patients in the resistance group were subdivided to a conventional group or a joint group according to the treatment regimens. Logistic regression was used to analyze the risk factors of IR in T2DM patients, and the changes of glucose and lipid metabolism indicators after treatment in T2DM patients with vitamin D deficiency were evaluated. The discussion section gave emphasis to the new contribution of the study in its field. Patients with IR exhibit significant abnormalities in glucose and lipid metabolism parameters compared to the non-insulin resistant group. The authors stated that 25(OH)D3 is an independent risk factor influencing IR. The manuscript presents sufficient quality to be published in this journal.

Re: We appreciate your detailed summary of our research and your acknowledgment of the novel contribution of our work to the field. Your comments encourage us to pursue further research in this direction.

We believe we have addressed all the comments and hope the manuscript will be found suitable for publication.

Once again, we would like to thank both reviewers for their constructive feedback and for their time in evaluating our manuscript. We are looking forward to any further comments or suggestions.

Best regards,