

## Peer Review File

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### Reviewer A

In the material and methods section, there are some problems in interpreting the tools used in the study. In some paragraphs of the text, there is no reference to the tools used and the reader may not understand how the analysis steps were conducted.

For example: on line 90... samples were analyzed using Pearson's correlation with the 'limma' package. The limma package is unreferenced. In the following paragraph, we can understand that R packages were used using the dplyr, ggalluvial and ggplot2 functions, without the necessary specifications that these functions are from R.

#### Reply 1:

I would like to thank you for your thorough review of our paper and for offering valuable comments and suggestions. You have pointed out an oversight in our manuscript, particularly in the Materials and Methods section regarding the description of the tools used. We understand the importance of this information for the readers' comprehension of the research and agree with your suggestion to cite and describe these tools in more detail.

In response to your specific concerns, we will make the following revisions:

**Regarding the citation of the 'limma' package:** We will add a citation for the 'limma' package in the text, detailing its version and source. For instance, "Pearson's correlation analysis was conducted using the R package 'limma' (Ritchie et al., 2015)." This reference will allow readers to better understand the specific tools and their sources relied upon for the analysis.

**Regarding the explanation of the R packages 'dplyr', 'ggalluvial', and 'ggplot2':** We agree that it should be explicitly stated that these functions are part of the R environment and provide the appropriate references. In the revised text, we will clearly indicate that these are R packages and briefly describe their functions and purposes, such as: "Data manipulation was performed using the R package 'dplyr' (Wickham et al., 2023), Sankey diagrams were generated with 'ggalluvial' (Brunson, 2020), and data visualization was conducted using 'ggplot2' (Wickham, 2016)."

**Changes in the text:** we have modified our text as advised (see Page 5, line 90-94).

2.3 – Question about the absolute shrinkage and selection operator (LASSO). How was this analysis conducted? It was made using which tool in R? Reference about this method?

I would like to see the result of the Cox regression in a supplementary file

The authors must collaborate in making the results generated in the analyses available in the supplementary material.

#### Reply 2

**Regarding the LASSO analysis:** "The LASSO analysis in our study was executed using the glmnet package within the R statistical environment, a tool specifically designed for regression analysis, including variable selection and regularization. This method employs cross-validation to select the optimal lambda parameter, effectively identifying the most predictive lncRNAs related to disulfidptosis. This selection process ensures a balance between model complexity and predictive accuracy, crucial for enhancing the model's generalizability and interpretability. For a comprehensive understanding of the methodology and application of the glmnet package,

we refer to the seminal work by Friedman, J., Hastie, T., & Tibshirani, R. (2010) in their article 'Regularization Paths for Generalized Linear Models via Coordinate Descent', published in the Journal of Statistical Software."

**Regarding Cox Regression Results:** Acknowledging the importance of transparency, we will include Cox regression analysis results as supplementary material, featuring a comprehensive table with regression coefficients, standard errors, hazard ratios, and p-values for each variable in the final model.

**Regarding Collaboration on Supplementary Material:** We agree with your suggestion to provide our analysis results in the supplementary material, ensuring full access to our findings.

**Changes in the text:**we have modified our text as advised (see Page 5, line 97-100、 Page 6, line 105-108、 Page 6-7, line 122-125、 Page 7, line 139-140).

## Reviewer B

Figures and table

- 1) Please revise “pvalue” to “**P value**”, and “Hazard ratio” to “**Hazard ratio (95% CI)**” in Figure 2C, 4D-4E.

**Reply:**

Revised "pvalue" to "P value" and "Hazard ratio" to "Hazard ratio (95% CI)" in Figure 2C, 4D-4E as requested.

- 2) Please revise “**socre**” to “**score**” in Figures 3A-3F.

Patients (increasing risk socre)

**Reply:**

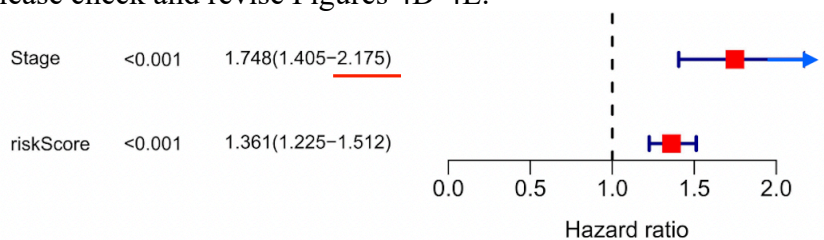
Revised "socre" to "score" in Figures 3A-3F as requested.

- 3) Please revise “1 years” to “1 year” in Figure 4A.

**Reply:**

Revised "1 years" to "1 year" in Figure 4A as requested.

- 4) It is suggested to use arrow for those data larger than the current scale in the X-axis. Please check and revise Figures 4D-4E.



**Reply:**

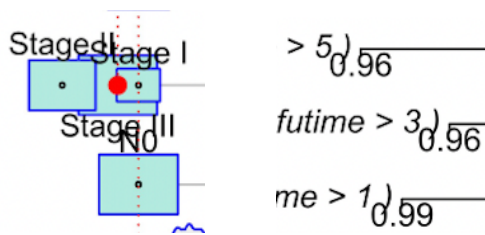
Arrows have been added to indicate data exceeding the current scale on the X-axis in Figures 4D-4E as suggested.

- 5) Please revise “riskScore” to “Risk score” in Figures 4D-4E.

**Reply:**

Revised "riskScore" to "Risk score" in Figures 4D-4E as requested.

6) Some descriptions are overlapping in Figure 5A, please check and revise.



**Reply:**

The descriptions in Figure 5A have been adjusted to ensure clarity and prevent overlap as requested.

7) Please define “\*” “\*\*” in Figure 5A.

**Reply:**

Defined "\*" and "\*\*" in Figure 5A legend: "\*" indicates  $P < 0.05$ ; "\*\*" indicates  $P < 0.001$ .

8) Please remove (%) in the axes of Figure 5B since their rates are 0-1.

**Reply:**

Removed "(%)" from the axes in Figure 5B as the rates are represented from 0 to 1 as requested.

9) Please check if it should be “> 20” in Figure 6E.



**Reply:**

Confirmed and corrected to “> 20” in Figure 6E as suggested.

10) Please define “\*” “\*\*” “\*\*\*” in Figure 7.

**Reply:**

In the legend of Figure 7, defined as follows: "\*" denotes  $P < 0.05$ ; "\*\*" denotes  $P < 0.01$ ; "\*\*\*" denotes  $P < 0.001$ .

11) Please define “\*\*\*” in Figure 9 legend.

**Reply:**

Defined "\*\*\*" in Figure 9 legend as "P < 0.001."

**Table 1**

12) Please revise “unknow” to “unknown” in Table 1.

**Reply:**

Revised "unknow" to "unknown" in Table 1 as requested.

13) Please indicate how data are presented in Table 1.

**Reply:**

In Table 1, the data are concisely explained beneath the table. For detailed information on how the data are represented (e.g., means, percentages), please refer directly to the document or the specific explanation provided under the table.

14) There no Type information, please check if “Type” row should be removed.

**Reply:**

Confirmed that the "Type" row has been removed from Table 1.