

## Peer Review File

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### Reviewer A

**Comment 1:** How did you conclude that the sample size helps prevent bias from an unbalanced distribution of cases? Could you specify the distribution in your data? A table confirming this distribution would be helpful.

**Response 1:** Thank you very much for reviewing our manuscript. With more than 160 cases, we thought this sample size was relatively large to decrease the bias owing to a small sample size, and a large number of literatures have used similar number of the sample size to get satisfactory results, further proving the reliability of this sample size and indicating that the sample size was appropriate for our study. Furthermore, we have used Synthetic Minority Over-Sampling Technique (SMOTE) to effectively improved the imbalance of the data distribution, with good ability to avoid overfitting. (see **Page 7, line 173-178**). We have added a table2 in the results section to show the distribution of these data (see **Page 7, line 173, table2**). Once again, thank you for your contributions.

**Comment 2:** Please report feature significance in your final model. Which feature is the most important?

**Response 2:** We appreciate your suggestion and your valuable feedback. We have added figure4 reflected the feature importance in the final model (see **Page 8, line 216, figure4**). Thank you again for your insightful suggestions.

**Comment 3:** Could you try other machine learning models and compare the results?

**Response 3:** Thank you for your insightful feedback. We have made comparisons among different machine learning models constructed by different machine learning algorithms, like KNN, and ET algorithm was the best one for the final model. The Delong tests showed that there were significant differences between the model constructed by ET algorithm and other algorithms. Additionally, we have compared the results by Delong tests between nomograph and other models, including clinic and radiomics (see **Page 6, line 147-151; Page 8, line 214-215**).

**Comment 4:** Please provide a table showing the clinical characteristics of the patients for both the training and testing sets.

**Response 4:** Thank you for your insightful feedback. We have added table2 to the Results part of this paper (see **Page 7, line 188-190**). Thank you for your valuable input.

**Comment 5:** In the discussion, please compare your study with others. Consider highlighting differences in AUC, clinical and radiomics features used, and any other notable distinctions.

**Response 5:** Thank you very much for your comments. Your input is highly appreciated, and we have made the following changes. The comparisons between our and previous studies have been made in the discussion section, and the AUC, clinical and radiomics features used have been recorded and compared (see **Page 9, line 239-249**).

## **Reviewer B**

### 1. Figures and tables

- Figures and tables should be cited **consecutively** in the text and numbered in the order in which they are discussed. Therefore, Figure 3C-3D, Figure 3E-3F should be cited before Figure 4. Please check through and revise.
- Please use **capital** letters to indicate the sub figures. For example, Figure 1A, Figure 1B.
- Please provide an **editable** version of Figure 1 as a stand-alone **WORD/PPT** file, so that the editor can slightly and properly adjust the lines and structures, and text during the editing.
- The images in Figure 1B are too vague. Please provide Figure 1B in higher resolution.
- **All abbreviations in figures/tables and legends should be explained.** DCE-MRI, TNM, ROC, DCA, ROI, VOI in Figure 1 for example. Please check all abbreviations and provide the full names in the corresponding legends/footnote. E.g., Figure 1. xxx. **Abbreviations: xxx, xxxx.**
- Figure 2: Please provide **the description of the x/y-axis.**
- Figure 3A-3B: Please provide **the description of the x-axis.**
- Please **remove Table 1.** TNM staging is the gold guideline. It is not necessary to list it as a Table.
- Table 2: Please add a **unit** to the age.
- Table 2: Please do **not** report  $P=1$ . Report  **$P>0.99$**  instead.

P· value
0.562
1.0

- Please indicate **what data is presented** in Table 2. For example, mean±SD.
- All abbreviations in the tables should be explained. TNM, HER, ER and PR in Table 2 for example. Please check all abbreviations and provide the full names in the corresponding foot.
- Table 3: Please do **not** report P=0. Report P<0.001 instead.

0.000	0.0
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- Table 2-3: If **P value ≥ 0.01**, report the specific P value to **2 decimal places**, e.g., "P=0.01" "P=0.06" "P=0.10" "P=0.90". When the P value is near 0.05, report the specific P value to 3 decimal places, e.g., "P=0.046" or "P=0.052".
- Table 4: The content in the first column is **repeated**. Please add explanations to distinguish.

Clinic
MR
Nomogram
Clinic
MR
Nomogram

**Response :** Thank you very much for your input. We have revised figures and tables according to all your suggestions. We have made sure the figures and tables cited consecutively. Please see **Page 10 Line268**. We have used capital letters to indicate the sub figures, provided an editable version of Figure 1 as a stand-alone WORD/PPT file, provided Figure 1B in higher resolution, explained all abbreviations in figures/tables and legends, and made corresponding changes in

Figure 2,3 and all tables. Please see **figure1-3 and table 1-3**. Once again, thank you for your contributions.

2. The following author's name you mentioned in the main text is **inconsistent** with that in the reference list. Please check and unfiy.

31. → **de Felice C**, Cipolla V, Stagnitti A, et al. Diagnostic accuracy of 1.5 Tesla breast magnetic resonance imaging in the pre-operative assessment of axillary lymph nodes. *Eur J Gynaecol Oncol.* 2015;36(4):447-51. ¶

role in classifying the TNM stage. **Felice et al.**<sup>31</sup> found that MRI is a reliable technique for examining the layout of axillary lymph nodes prior to surgery and shows promise as a standard procedure for

**Response :** Thank you very much for your reminder. We sincerely apologize for this oversight in our article. we have revised Felice to de Felice C. Please see **Page 12 Line311**.

3. Please check if more information should be cited since you mentioned **studies**.
  - However, many previous **studies** have focused on the TNM staging of other tumors using machine learning algorithm.

**Response:** Thank you very much for reviewing our manuscript. We have added two cited references after “studies”. Please see **Page 11 Line288**.