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OPEN PEER REVIEW

Predicting Factors Affecting Lymph Node Involvement in Breast Cancer Using Random Forest Approaches

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

1 comment · 29 Nov 2023

Associate Editor

MAJOR REVISION 29 Nov 2023

The article " Predicting Factors Affecting Lymph Node Involvement in Breast Cancer Using Random Forest Approaches" was studied. The following items are offered as suggestions:

1- The text needs revision in terms of English fluency.

2- "There has been no observed change in the mortality rate associated with breast cancer in Iran over the past three decades." This sentence is not true, and the mortality rate has declined over 3 decades.

3- This study is not a cohort study.

4- The prediction of lymph node metastasis may not be highly useful in certain cases. When diagnosing breast cancer, the evaluation of lymph node involvement is typically performed, and based on that assessment, the appropriate treatment is determined for the patient. Therefore, the prediction of lymph node metastasis may not significantly impact the treatment decision-making process.

5- In the introduction, it is better to explain more about breast cancer prediction factors.

6- In the objectives section, you should note that machine learning methods such as Random Forest are not used for diagnosis directly; they are used for prediction purposes. You should use prediction instead of diagnosis in order to avoid misconceptions.

7- In the method section, specify the sizes of the test and training data and the method for scaling the data, if you used any.

8- In the method section, specify the amount of missing data and explain the imputation method (for example, the limitations that were considered in the dataset, such as the exact mean value of missing data in each row or column).

9- In the method section, specify your evaluation methods for your prediction model.

Best regards

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

The opinions of Shahid Beheshti magazine's reviewers, dated December 3, 2023, about the following article:

Utilizing Random Forest Approaches to Forecast Factors Influencing Lymph Node Involvement in Breast Cancer

First editor:

The study "Prediction of factors influencing lymph node involvement in breast cancer using random forest methodologies" was examined, and the subsequent recommendations are outlined:

1- The text need a revision in terms of English fluency. The text was edited by the native language editor.

2- "There has been no observed change in the mortality rate associated with breast cancer in Iran over the past three decades." This sentence is not true and the mortality rate gas been declined over 3 decades. Despite providing a reference, the text was omitted from the article.

3- This study is not a cohort study. This study is a cohort study, and the reference regarding the accuracy of the study's cohort has been included in the reference list.

4- The prediction of lymph node metastasis may not be highly useful in certain cases. When diagnosing breast cancer, the evaluation of lymph node involvement is typically performed, and based on that assessment, the appropriate treatment is determined for the patient. Therefore, the prediction of lymph node metastasis may not significantly impact the treatment decision-making process. Relevant research on the significance of evaluating lymph nodes, along with their corresponding citations, was included in the introduction.

5- In the introduction, it is better to explain more about breast cancer prediction factors.The required alterations were implemented in the introduction.

6- In the objectives section, you should note that Machine learning methods such as Random Forest are not use for diagnosis directly, they use for prediction purposes. you should use prediction instead of diagnosis in order to avoid misconceptionsAnother. Another objective of Random Forest is to identify influential variables. It was included in the introduction with the references.

7- In the method section, specify the size of test and train data and the method for scaling the data if you used any. The table containing information about the training and test data has been included.

8- In the method section, specify the size of missing data and explain the imputation method (for example the limitations which had been considered in the dataset such as the exact mean value of missing data in each row or column).The results were supplemented with the count of missing data.

9- In the method section, specify your evaluation methods for your prediction model..
Explanations were appended to the conclusion of the method section.

With respect

2 Revision 1

1 comment · 29 Dec 2023

Associate Editor

ACCEPT 29 Dec 2023

The issues have been properly addressed, and in my opinion, the article is accepted.