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OPEN PEER REVIEW

Is Digital Breast Tomosynthesis Superior to Digital Mammography? A Preclinical Evaluation of Tumor Histopathological Markers Using Digital Breast Tomosynthesis

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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

4 comments · 5 Mar 2021 – 12 Apr 2021

Referee 1 Reviewer

MINOR REVISION 5 Mar 2021

Dear author
Thank you for submitting your article to IJR.

In my opinion, there are a number of problems that need to be corrected, and I have some questions.
1- Your sample size is small.
2- There are a number of misspellings.
3- Please organize the abstract into 5 sections: 1-background 2-objectives 3-material and methods 4-results 5-conclusions.
4- According to ACR, density is divided into three groups: high, iso, and low density. This is correct in the table but not in the text.
5- Please fully describe the morphology of microcalcifications in the method section.
6- Was your study blinded? Did the radiologists know that the lesions were malignant?
7- What would you do if two radiologists disagreed? Why don't you use a third radiologist?

Referee 2 Reviewer

MAJOR REVISION 6 Mar 2021

In general, it can be said that it is suitable in terms of scientific writing and study design, but it has two main problems, which are:
1. Very small sample size
2. Failure to perform ROC analysis and calculate sensitivity, specificity, and predictive value: It is necessary to compare the results of each method with the gold standard method in order to determine the superior method.

Referee 3 Reviewer

ACCEPT 18 Mar 2021

The article is relevant and original.
The English writing, referencing, and method are almost correct.

Editor-in-Chief

MAJOR REVISION 12 Apr 2021

Dear authors,
Your article needs Major Revision.
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.

Author's response to review

ID:113846

Is There Any Superiority of Digital Breast Tomosynthesis to Digital Mammography? Pre-clinical Evaluation of Tumoral Histopathological Markers with Digital Breast Tomosynthesis.

Iranian journal of radiology

Author's response to review: see over

REQUESTED REVISIONS:

Reviewer 2:

1. Very small sample size

I agree with you, however, we had few malignant cases with both DM and DBT. Since there was not enough studies and information on the subject, we aimed to give the first results with the existing cases.

2. Failure to perform ROC analysis and calculation of sensitivity, specificity and predictive value: It is necessary to compare the results of each method with the gold standard method in order to determine the superior method.

The sentence "To determine the superiority of DBT against DM, interval likelihood ratio, sensitivity and specificity values were calculated." was added to methods and written in the red. Page number 3 and line 86.

The sentence "A mass margin of spiculated, a high density, and presence of architectural distortion were strongly predictive of a diagnosis of malignant tumors in DBT as the likelihood ratio was 3.63 (1.92 – 6.82), 2.14 (1.38 – 3.31), and 1.39 (1.06 – 1.83) with sensitivity were 80.5%, 83.3%, and 88.8%, respectively." was added to methods and written in the red. Page number 4 and line 102.

Supplementary Table was also added and upload.

Reviewer 3:

1-your sample size is small

I agree with you, however, we had few malignant cases with both DM and DBT. Since there was not enough studies and information on the subject, we aimed to give the first results with the existing cases.

2- There are a number of misspellings

Our paper re-edited by English speakers and grammatical mistakes were corrected by an online Editing company.

3-please organize abstract in 5 section; 1-background2-objectives3-material and methods4-results5-conclusions

Abstract was organized and divided into five segment.

4-According to ACR, density is divided into three groups; high, iso, low density. It is true in the table but not in the text .

Medium density is corrected as iso according to ACR. Page number 2 and line 63.

5. Please write the morphology of microcalcifications in the method section completely

The sentence was corrected as "it was divided into groups according to microcalcification morphology as typically bening (punctate) and suspicious morphology (amorphous , coarse heterogeneous, fine pleomorphic and fine linear or fine-linear branching)." Page number 2 and line 66.

6. Has your study been blind? Did the radiologists know that the lesions were malignant?

The study was not designed blindly. The lesions were known to be malignant.

7-What would you do if two radiologists disagreed?, why do not you use the third radiologist?

There was no conflict between radiologists in any of the cases. It should be our goal to performed blind and large-scaled studies that evaluate interobserver variability. Thank you for your valuable and complementary comments.

We did the revisions that you suggested. I believe my manuscript is more valuable for publication in the journal in the light of advices of you.

2 Revision 1

3 comments · 14 May 2021 – 25 Aug 2021

Referee 1 Reviewer

ACCEPT 14 May 2021

Dear author
Thank you for the revision. I think your article is suitable for publication.
best regards

Referee 2 Reviewer

ACCEPT 16 May 2021

Thanks to the dear authors for their revisions and explanations.
Currently, this draft is acceptable from a methodological point of view.

Editor-in-Chief

MINOR REVISION 25 Aug 2021

Dear authors,
Your article needs Minor Revision.
Regards

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Revision 2

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.

Author's response to review

ID:113846

Is There Any Superiority of Digital Breast Tomosynthesis to Digital Mammography? Pre-clinical Evaluation of Tumoral Histopathological Markers with Digital Breast Tomosynthesis.

Iranian journal of radiology

Author's response to review: see over

REQUESTED REVISIONS:

Reviewers' Comments:

Reviewer 1:

Dear author

Thank you for revision,I think your article is suitable for publication best regards

Reviewer 2:

Thanks from dear authors for their edition and explanation. Currently, this draft is acceptable according methodology point of view.

Reviewer 3:

Reference number 22 is not cited in the manuscript. Please cite it.

Reference 22 is added to the Discussion section (page 6 line 180).

Associate Editor's Comments:

Associate Editor 1:

Dear authors,

Thank you for appropriate changes. The manuscript could be accepted.

Associate Editor 2:

113846

1-malign should be corrected to malignant.

The word “malign” is corrected as “malignant” within the text.

2-please write the paper classically, for example, this part should be written with complete sentences: A total of 36 patients' mean age was 53. Please follow in whole paper.

Line 91 is edited as "A total of 36 patients' mean age was 53."

3-this part is unclear: 'The relationship between DBT findings and hormone receptor status and ki67 proliferation index; while in patients with PR positive irregular shape (89,7%) was observed, In patients with PR negative, skin changes and nipple retraction were more than PR positive"

Line 110 is corrected as "When the relationship between DBT findings and hormone receptor status and ki67 proliferation index was examined; irregular shape was mostly observed in PR positive patients (89.7%), while PR negatives were mostly round (57%) (p=0.003). In patients with PR negative, skin changes and nipple retraction was more frequently seen compare to patients with PR positive (p=0.03 for skin change, p = 0.049 for nipple retraction)."

4-please consult with an expert editor. The paper needs a considerable dose of editing.

The paper has edited via paid edited company.

5-in line 14, fibroglandulary should be fibroglandular.

The word "fibroglandulary" is corrected as "fibroglandular".

6-line 11, acquired should be acquire.

The word "acquired" is corrected as "acquire".

7-please mention the full term of abbreviations in the first time such as ER, PR, ….[in abstract and paper separately]

"The estrogen receptors (ER), The progesterone receptor (PR), HER2 (human epidermal growth factor receptor 2), Bloom-Richardson grading system (BRG)" is added to the line 20 page 1.

8-please separate the objective part before method section of paper. in addition, please add sequential numbers to titles.

The sequential numbers to titles is added and the objective part is separated from background.

9- this part in abstract seems wrong: "and evaluated the effect of density". It seems this part should be written as: "and the effect of density were evaluated" or "and the effect of density on these relationships were evaluated".

Edited as “and the effect of density on these relationships were evaluated” on suggestion.

10-please introduce full term of abbreviations once the word is used for the first time.

“The estrogen receptors (ER), The progesterone receptor (PR), HER2 (human epidermal growth factor receptor 2)” is added to the line 20 page 1.

“The American College of Radiology (ACR)” is added to the line 61 page 2.

11-in line 91, please change the 63% to sixty three percent. The number is at the beginning of sentence. Please follow this format is all paper.

“Sixty-three percent of” is added to the line 91.

12-please introduce the abbreviations in tables in the footnote of table.

All of the abbreviations in tables added as the footnotes.

13-in table 1, the position is side and pattern should be density pattern.

The word “position” is corrected as “side”. And the word “pattern” is corrected as “density pattern”.

14-in table 2 and 3 and 5, Microcalsification should be corrected to Microcalcification. What is the meaning of Imln in this table?

The grammar mistakes is corrected.

15-what is verilemez in table 5? please use the correct words in all paper.

“verilemez” is corrected as “grade cannot be given” in table 5.

16-please cite reference 22 in text.

Reference 22 is added to the Discussion section (page 6 line 180).

We did the revisions that you suggested. I believe my manuscript is more valuable for publication in the journal in the light of advices of you.

3 Revision 2

1 comment · 5 Sep 2021

Editor-in-Chief

ACCEPT 5 Sep 2021

Dear authors,
Your article is acceptable for publication in IJR>
Regards