

## Peer Review File

Article information: <https://dx.doi.org/10.21037/gs-23-165>

### Reviewer A

Comment: The selected topic is original and the article writing is detailed and sufficient for publication in the journal.

Reply: We are very grateful for your comments on the manuscript.

### Reviewer B

Comment 1: Add a relevant paragraph in the discussion about the more complex quantitative and AI techniques on differentiating benign from malignant breast masses yielding similar accuracy metrics.

Reply 1: Thank you for your positive comments and valuable suggestions to improve the quality of our manuscript. According to your comments, we have added content about artificial intelligence to the manuscript, and the relevant references are added.

(See line 299-309). As you said, recently, Artificial intelligence (AI) -powered ultrasound has been applied increasingly in clinical breast lesion evaluation, which can assist to improve image acquisition, evaluate image quality and diagnose lesions. But at present, AI's main interest in breast ultrasound is to detect and distinguish benign and malignant breast masses by morphological and textural features based on the features of gray scale ultrasound. There are no researchers who have built machine-learning models for CEUS characteristics. This study found that the indicators related to the expansion of lesion scope in contrast-enhanced ultrasound are helpful for the differential diagnosis of benign and malignant lesions as well as the prognosis assessment of pathological grades. If combined with machine learning, it is believed that it will have a broader clinical application prospect.

Changes in the text: line 299-309.

Comment 2: It would be nice for the reader to see that simple metrics such as: longitudinal diameter increment, transverse diameter increment, area increment, percent increase in longitudinal diameter, percent increase in transverse diameter, and percent increase in area increment; are able to distinguish benign from malignant masses without the use of complex quantification techniques and AI models. This way, the power of CEUS in breast cancer is highlighted.

Reply 2: Thank you very much for your valuable comments, which are of great

significance to the study and will enrich the discussion part of the study. We have made corresponding changes in the manuscript. (See line 292 - 298). Measurements such as longitudinal diameter increment, transverse diameter increment, area increment, percentage longitudinal diameter increment, transverse diameter increment, and area increment mentioned in this study can distinguish benign and malignant masses without the use of sophisticated quantitative techniques and artificial intelligence models, enabling enhanced contrast-enhanced ultrasound to be used in daily clinical diagnosis. Changes in the text: line 292 - 298.

**Comment 3:** Indicative publications with complex frameworks:

i.e.,

<https://doi.org/10.1016/j.ejrad.2018.04.005>

<https://doi.org/10.1097%2FRLI.0000000000000543>

<https://doi.org/10.3390/diagnostics12020425>

**Reply 3:** These doi are not indicated in my manuscript, it would be convenient for me if I need to change the format of the reference.