

CORRECTION

Correction: Value of ultrasonic shear wave elastography combined with vascularization-flow index in differential diagnosis of benign and malignant breast tumors in the elderlyJun Chang¹, Yingbin Chen^{1,*}, Na Chen¹, Jingjing Qiao¹, Xiaoli Lu¹, Congyan Xia¹¹Department of Ultrasound Medicine, Nanjing First Hospital, Nanjing Medical University, 210001 Nanjing, Jiangsu, China***Correspondence**

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The authors have identified inaccuracies in several references cited in the Introduction and Discussion sections of the original article [1]. These references were used solely to support background information, technical principles, and mechanistic explanations, and were not involved in the study design, methods, data analysis, results, or interpretation of the core findings.

After careful re-evaluation, the following references have been replaced with more accurate and directly relevant sources. The corresponding sentences in the article have been revised accordingly. These changes improve the precision of the citations but do not affect the study population, methods, statistical analyses, diagnostic performance results, or the overall conclusions of the paper.

In the Introduction:

The original sentence “Based on incomplete statistics, urban Chinese women with breast cancer are about 30–50 cases/100,000, while elderly women, especially those over 60, are about 100–150 cases/100,000 [2]. As patients age, prevalence and harm also increase. Early symptoms of breast cancer are often not apparent, so many patients are already in the middle or advanced stages when they are diagnosed and are too late for effective treatment.” has been revised to:

Based on recent national cancer statistics, breast cancer remains one of the most common malignancies among Chinese women. In 2022, approximately 357,200 new female breast cancer cases occurred in China, with an age-standardized incidence rate of 33.04 per 100,000 [2]. As the population ages, accurate diagnostic evaluation of breast tumors in elderly women remains clinically important.

The original sentence “By comparing shear wave propagation speeds in tissues of different stiffnesses [5]” has been revised to:

By imaging shear wave propagation and calculating Young’s modulus values, SWE can quantitatively assess tissue stiffness [5].

In the Discussion:

The original sentence “Therefore, assessment of tissue

stiffness changes and VFI can provide a reference for breast tumor diagnostic evaluations. SWE can determine tissue elasticity values [9, 10], which were higher in malignant breast tumors than in benign tissues.” has been revised to:

Therefore, assessment of tissue stiffness changes and VFI can provide a reference for breast tumor diagnostic evaluations. SWE can determine tissue elasticity values [9, 10], which are generally higher in malignant breast tumors than in benign tissues.

The original sentence “During the continuous growth of breast tumors, interstitial pressure inside the tumor will change [15]. SWE can detect this elastic change derived from alteration in interstitial pressure.” has been revised to:

During the continuous growth and progression of breast tumors, the tumor microenvironment undergoes changes in physical properties, including tissue stiffness and pressure-related mechanical cues [15].

The original sentence “SWE can reflect the hardness of tumor tissue, and CDU can reflect the vascularity and blood flow of tumor [16]” has been revised to:

SWE can reflect the hardness of tumor tissue, and CDU-derived vascular indices can reflect the vascularity and blood-flow characteristics of breast masses [16].

Replaced references:

[2] Sun K, Zhang B, Lei S, Zheng R, Liang X, Li L, *et al.* Incidence, mortality, and disability-adjusted life years of female breast cancer in China, 2022. *Chinese Medical Journal*. 2024; 137: 2429–2436.

[5] Yang H, Xu Y, Zhao Y, Yin J, Chen Z, Huang P. The role of tissue elasticity in the differential diagnosis of benign and malignant breast lesions using shear wave elastography. *BMC Cancer*. 2020; 20: 930.

[9] Marukatat N, Parklug P, Issaragrisil S, Sumanasrethakul C. Shear wave elastography for solid breast masses evaluation: quantitative measurement of mean elasticity value and elasticity ratio. *European Journal of Radiology Open*. 2024; 12: 100573.

[15] Akinpelu A, Akinsipe T, Avila LA, Arnold RD, Mistriotis P. The impact of tumor microenvironment: unraveling the role of physical cues in breast cancer progression. *Cancer and Metastasis Reviews*. 2024; 43: 823–844.

[16] Wang H, Yan B, Yue L, He M, Liu Y, Li H. The diagnostic value of 3D power doppler ultrasound combined with VOCAL in the vascular distribution of breast masses. *Academic Radiology*. 2020; 27 :198–203.

REFERENCES

- [1] Chang J, Chen YB, Chen N, Qiao JJ, Lu XL, Xia CY. Value of ultrasonic shear wave elastography combined with vascularization-flow index in differential diagnosis of benign and malignant breast tumors in the elderly. *European Journal of Gynaecological Oncology*. 2025; 46: 105–110.