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Portable ultrasound performed by non-radiologists could improve breast cancer early detection in low-resource settings, new study in India shows

Lyon, France, 6 November 2026 – A new study in India shows that portable ultrasound used by trained non-radiologist clinicians can effectively triage women with abnormal clinical breast examination (CBE) findings. This point-of-care testing can identify CBE-positive women who would require further investigations and those who do not have any suspicious lesions. The study, conducted by researchers from the International Agency for Research on Cancer (IARC) and partner institutions, has been published in the journal *JCO Global Oncology*.[1]

CBE is widely used for breast cancer screening and the assessment of women with breast symptoms in low- and middle-income countries (LMICs), where access to mammography and specialist diagnostic services is often limited. However, the relatively high false-positive rate of CBE means that many women are referred for further investigations despite not having breast cancer.

Methodology

This prospective study included 319 women aged 40–75 years from two settings in India: community-based screening of asymptomatic women, and diagnostic clinics for women with breast symptoms. Trained non-radiologist clinicians used portable ultrasound devices to classify abnormal CBE findings as either requiring further assessment or likely to be benign.

Results

The results showed that triage with portable ultrasound achieved an overall sensitivity of 94.3% and specificity of 76.7% for detecting breast cancer. The approach identified all cancers among women in the screening group and all but nine cancers among women in the diagnostic group. The use of portable ultrasound triage improved the positive predictive value of CBE and reduced referrals for further assessment by approximately 50%.

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[1] Pai DK, Sarkar DK, Gangadharan H, Muwonge R, Lucas E, Ravindran VC, et al. (2026). Use of portable ultrasound by nonradiologists to triage women with abnormal clinical breast examination findings: a prospective study in India. *JCO Glob Oncol*. Published online 28 October 2026. https://doi.org/10.1200/GO-26-00354

“These findings suggest that portable ultrasound, when used by trained clinicians, could be a practical way to improve the efficiency of breast cancer early detection programmes, particularly in settings where access to specialist imaging services is limited,” says Dr Partha Basu, Head of the Early Detection, Prevention, and Infections Branch at IARC. “By helping to identify the women who are most likely to need further investigation, this approach could reduce unnecessary referrals while maintaining a high level of cancer detection. Using images collected through the project, IARC has already trained and tested an AI algorithm to detect breast cancers. Use of AI may be a game-changer in LMIC settings.”

Portable ultrasound units are small battery-powered devices that can be connected to tablets or smartphones. They may offer a practical option for point-of-care use in resource-constrained settings, where CBE is used as an early detection strategy because organized mammography screening is difficult to implement.

“These are encouraging results,” says Dr Basu. “Further large-scale studies conducted in programmatic settings are needed to confirm the feasibility and effectiveness of this approach in order to consider a potential wider implementation.”

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The International Agency for Research on Cancer (IARC) is part of the World Health Organization. Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships. If you wish your name to be removed from our press release emailing list, please write to com@iarc.who.int.