

Patient-Centric Screening Service – Hand-Held / Automated Breast Ultrasound”

Multiple studies provide substantial evidence that supplemental screening with ultrasound allows the detection of additional clinically important cancers obscured in mammography in women with dense breasts. However, the known relevant limitations of the traditional hand-held ultrasound (HHUS) has restricted its widespread implementation.

ABUS is a new tool that has been designed specifically for screening. It provides volumetric global visualization of the breast in x, y and z planes, the exams are reproducible and examiner independent. It allows complete documentation, access to evaluate the image data after the patient has left the clinic, batch reading, comparison with previous volumes and double reading. The results of our study showed the value of the new generation of ABUS and its integration into clinical practice, in a large cohort of 1,886 women [1]. ABUS yielded comparable results to HHUS and in some instances proved to be superior to HHUS, especially in the context of architectural distortions identified in the coronal reconstruction plane. Additionally, the results of the European Asymptomatic Screening Study (EASY) showed that supplemental screening with 3D ABUS to FFDSM in women with dense breasts significantly improved invasive breast cancer detection rate (additional 2.4 detected cancers per 1,000 women screened) with an almost stable recall rate of 2.3% [2]. **Conclusion:** ABUS is a promising imaging modality for supplemental screening in women with dense breasts. Its capability to assess structures in multiple perspectives shows to improve reading productivity and clinical confidence in patient-centric screening service.

Ref.

1. Vourtsis A, Kachulis A. 2017. The performance of 3D ABUS versus HHUS in the visualisation and BI-RADS characterisation of breast lesions in a large cohort of 1,886 women. Eur Radiol DOI 10.1007/s00330-017-5011-9.
2. Wilczek B, Wilczek HE, Rasouliyan L, Leifland K (2016) Adding 3D automated breast ultrasound to mammography screening in women with heterogeneously and extremely dense breasts: Report from a hospital-based, high-volume, single-center breast cancer screening program. Eur J Radiol 85:1554–1563.