

Beyond mammography: Complementary methods in breast imaging

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Breast cancer is the most common cancer among women and the likelihood of surviving the disease is higher if the cancer is detected early and the tumor is relatively small and not very aggressive.

Mammography [screening](#) is used to identify early breast cancer by an X-ray examination of the breast. The reliability of the method in detecting breast cancer is however decreased among women who have a large proportion of glandular and [connective tissue](#) in their breasts compared to women who have a large proportion of fatty tissue. These women would benefit from additional imaging methods such as ultrasound or [magnetic resonance](#) imaging (MRI). One major hindrance to such an approach is the drastic increase in cost for each extra detected cancer.

In her thesis, Roxanna Hellgren, Ph.D. student at the Department of Medical Epidemiology and Biostatistics and senior radiologist and head of department at Södersjukhuset department of breast imaging, therefore tested some alternative methods that may potentially be less costly. In her studies, she compared a new ultrasound method (ABVS) to the traditional ultrasound examination and found that it had a similar ability to detect breast cancer. She also tested if adding infrared imaging to [mammography screening](#) would increase our ability to find more breast cancers. Further, she compared a hypothetical situation with an MRI examination of 5 minutes instead of 30 minutes and found that the shorter examination was sufficient for finding the same proportion of breast cancers.

What are the most important results in your thesis?

We were able to broaden the knowledge on the diagnostic accuracy of two different imaging modalities which hopefully will lead to further studies. We also highlighted the importance of good study design for diagnostic accuracy studies.

Why did you choose to study this particular area?

Its important to improve breast cancer treatment through [early diagnosis](#). Early detection leads to less aggressive treatment as well improved survival. This benefit both patients and society as a whole

What do you think should be done moving forward in this research area?

The true cost of each extra detected [breast cancer](#) by using the methods we have investigated has to be further studied in screening trials. We must also allocate more research to understanding women who do not participate in screening programs and overcome obstacles to participation in health-promoting activities

More information: Beyond mammography: an evaluation of complementary modalities in breast imaging.
openarchive.ki.se/xmlui/handle/10616/48561

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