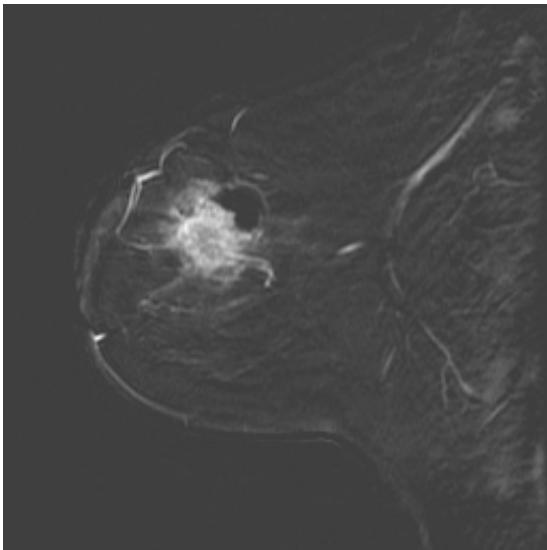


Microwave imaging can see how well treatment is progressing

April 23 2013

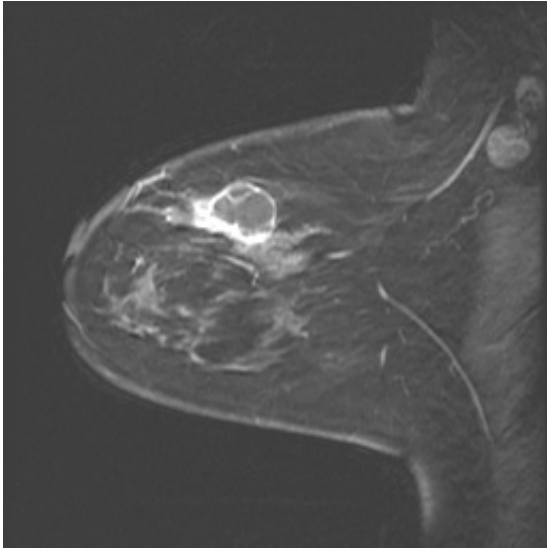


Microwave imaging can be used to monitor how well treatment for breast cancer is working, finds new research published in BioMed Central's open access journal *Breast Cancer Research*. Credit: Paul M Meaney

Microwave imaging can be used to monitor how well treatment for breast cancer is working, finds new research published in BioMed Central's open access journal *Breast Cancer Research*. Microwave tomography was able to distinguish between breast cancer, benign growths, and normal tissue.

Eight women with breast cancer were treated with chemotherapy until surgery, as part of their normal therapy. During treatment, [magnetic](#)

[resonance image](#) was supplemented with microwave tomography at the Dartmouth-Hitchcock Medical Center. Regions of high conductivity corresponded to the tumors, low conductivity to normal tissues, and unlike other imaging techniques, [body mass index](#) (indicating the amount of body fat), age or breast density did not appear to affect the results.



Microwave imaging can be used to monitor how well treatment for breast cancer is working, finds new research published in BioMed Central's open access journal *Breast Cancer Research*. Credit: Paul M Meaney

This imaging technique is low cost and can be repeated at numerous stages during treatment. Paul Meaney from Dartmouth College, who led the study explained, "By recalling patients for scans during their treatment we found that we could actually see tumors shrinking in women who responded to chemotherapy. Microwave tomography could therefore be used to identify women who are not responding to initial therapy and their treatment changed appropriately at an early stage."

More information: Microwave imaging for neoadjuvant

chemotherapy monitoring: initial clinical experience Paul M Meaney, Peter A Kaufman, Lori S Muffly, Michael Click, Steven P Poplack, Wendy A Wells, Gary N Schwartz, Roberta M di Florio-Alexander, Tor D Tosteson, Zhongze Li, Shireen D Geimer, Margaret W Fanning, Tian Zhou, Neil R Epstein and Keith D Paulsen Breast Cancer Research (in press)

Provided by BioMed Central

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