

# **PET scan can non invasively measure early assessment of treatment for common type of breast cancer**

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Non-invasive imaging can measure how well patients with the most common form of breast cancer - estrogen receptor positive type - respond to standard aromatase inhibitor therapy after only two weeks and shows similar findings that more invasive needle sampling identifies, according to a poster presentation to be presented at the ASCO annual meeting next week.

Using Positron Emission Tomography (PET) scanning and a [glucose](#) analogue called FDG, a research team led by Hannah Linden, M.D. and David Mankoff M.D., of the Seattle Cancer Care Alliance and the University of Washington, scanned 21 patients before and after two weeks of aromatase inhibitor therapy. Many of the patients also underwent a needle biopsy as a control measure to compare the two techniques.

The results - 16 of the 21 patients had a greater than 20 percent decline in FDG values - "paralleled perfectly" earlier work done by UK-based researchers who used needle biopsies to measure whether the proliferation of cancer cells was slowed by therapy, according to Linden, who is a breast cancer oncologist.

"Our findings are exciting because they suggest that we can measure a patient's response to therapy noninvasively, and PET scanning provides us simultaneous quantitative metabolic measurements at multiple tumor

sites," Linden said. "PET has the potential to be a powerful tool to help doctors make important treatment decisions in as little as two weeks instead of two or more months."

It's common for patients with [estrogen receptor](#) positive cancer to a bone-dominant type yet they have remained largely unstudied in clinical trials because they are very difficult to image, according to Linden. "Our work allowed us to study a common problem in a way that's not been done before and to help more people," she said. "More work needs to be done but in my mind this was a homerun," Linden said.

The study was funded by a "Progress for [Patients](#)" grant from the National Cancer Institute and the Avon Foundation. Joining Linden were researchers from the University of Washington, Fred Hutchinson Cancer Research Center and the University of Arizona Cancer Center.

Source: Fred Hutchinson [Cancer](#) Research Center ([news](#) : [web](#))

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