

Researchers discover link between obesity gene and breast cancer

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New research aimed to better identify the genetic factors that lead to breast cancer has uncovered a link between the fat mass and obesity associated gene (FTO) and a higher incidence of breast cancer.

According to the study conducted at Northwestern Memorial Hospital, people who possess a variant of the FTO gene have up to a 30 percent greater chance of developing breast cancer. Research to identify why the link exists is ongoing, but experts say the finding takes us one step closer to personalized medicine based on genetic risk which would allow for better monitoring and prevention of illness, as well as targeted treatment.

"This is a fascinating early finding, which fits with the known connections between obesity and [breast cancer](#)," said Virginia Kaklamani, MD, oncologist at Northwestern Memorial, co-director of the Cancer Genetics Program at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University and lead author of the study.

Each individual carries the [FTO gene](#), but only 18 percent have this variant of the gene. Kaklamani, who specializes in cancer genetics, says testing for the FTO variant is not available currently, but it may be available in the future, similar to how genetic testing for the BRCA [gene mutation](#) exists today.

"Ten years ago we didn't know about the BRCA gene mutation which has been linked to breast and ovarian cancer. Today, we offer genetic testing and a specialized clinic for those at risk in order to minimize their risk and detect any indication of cancer early," said Kaklamani,

who is also an associate professor of medicine at Northwestern University Feinberg School of Medicine. "This knowledge helps us better identify who is at an increased risk so one day, we can counter that risk through preventative measures and advanced screening."

The research, published in *BMC [Medical Genetics](#)* is part of an ongoing group of studies to further knowledge of [genetic risk factors](#) for breast cancer.

More information: For more information about the study, visit www.biomedcentral.com/1471-2350/12/52

Provided by Northwestern Memorial Hospital

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