

Developing a Molecular Breast Health Tool for Women with a Germline *BRCA* Mutation

**Are you breastfeeding
and know that you
have a mutation in a
BRCA gene?**

We need your help.

Analysis of somatic mutations and DNA methylation in cells from your breastmilk may provide a tool for detecting early breast cancer.

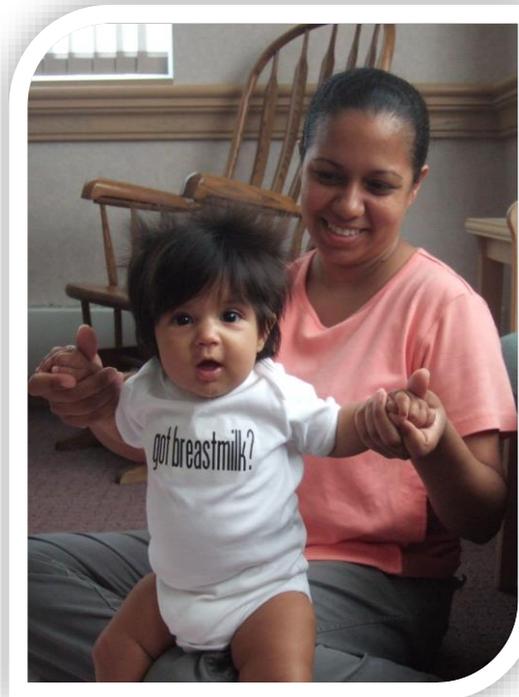
Want to know more?

BreastmilkResearch.org

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Breastmilk Research to Prevent *BRCA* Breast Cancer

University of Massachusetts researchers are looking for breastfeeding mothers who **have tested positive for a *BRCA* mutation** to donate a sample of their breastmilk. Mothers can live anywhere in the continental US.

Why study breastmilk?

We study breastmilk in an effort to reduce breast cancer risk. Breastmilk provides a unique opportunity to examine the breast through the sloughed cells and secreted proteins in the milk.

Mutations in genes called *BRCA1* & *BRCA2* limit a cell's ability to repair DNA. A poor repair system is a serious problem as the DNA in dividing cells, such as cells in the breast, continuously need repair.

Women with a *BRCA* gene mutation are at increased risk of additional mutations accumulating in specific cells (somatic mutations), especially breast cells. These mutations along with changes in DNA methylation, which occur throughout our lives, can lead to cancer.

Lifetime Risk of Breast Cancer



www.cancer.gov/brca-fact-sheet

About this Study

The purpose of this study is to determine if the cells naturally present in breastmilk can be used to assess an individual woman's risk of developing breast cancer, and to discover new molecular targets for preventing breast cancer. Women with an inherited *BRCA* mutation have an increased risk of developing breast cancer and are more likely to develop breast cancer at a younger age. A greater understanding of the molecular profile in breast cells will help in the development of therapeutic and preventative strategies for women with a *BRCA* mutation, and maybe for all women. The analysis may also aid development of early diagnosis tools for lactating women.

What will I need to do?

You will be asked to complete an informed consent document, a questionnaire, and to send us a copy of your *BRCA* test results. Then you will need to provide milk and saliva samples.

How much milk do I need to donate?

We ask participants to pump and donate all the milk in each breast on one occasion.

How will I donate my milk?

We will send you a collection kit with containers for your samples. The kit will include a prepaid return FedEx mailing label. You will call FedEx to have your milk picked up and returned by express mail.

Is there a cost to me for participating?

No, there is no cost to you.

Will I benefit from participating?

No, there is no direct benefit to you, but your participation may help others in the future.

How will my privacy be protected?

All information related to you will be given a code and your name will not be used in any publication. Identifying information about you will not be released to anyone.

Will I receive compensation?

Yes, all participants will receive \$50.

Can I stop participating?

Yes, you can stop participating at any time and we will not contact you again.