2025 RESEARCH FAST FACTS

Hereditary Breast Cancers

RESEARCH INVESTMENT AT A GLANCE:
(1982-2025)

Nearly **$90 million** in over **200** research grants and more than **40** clinical trials focused on hereditary and/or *BRCA* breast cancers

ABOUT HEREDITARY BREAST CANCERS

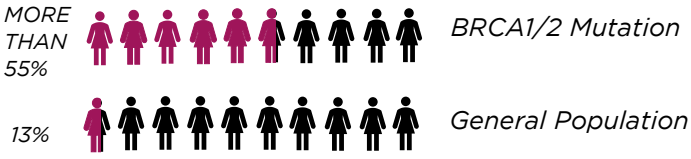
Most breast cancers occur by chance. But, in hereditary breast cancer, the cancer is caused by a changed or damaged gene that's inherited from either your mother or father. Around 5-10% of all breast cancers in the U.S. are thought to be hereditary. Identifying inherited gene mutations is a crucial step in determining a person's individual risk, empowering them to take charge of their health and taking steps that may reduce their risk of breast cancer.

WHAT WE'RE INVESTIGATING

- Studying how inherited gene mutations in young women can be linked to higher breast cancer risk, recurrence risk and poorer outcomes to improve treatment options for these women.
- Investigating the potential for using the body's own immune system to prevent breast cancer in people who carry *BRCA* gene mutations.
- Understanding how genetic testing for inherited mutations in known breast cancer-associated genes can potentially reduce disparities in breast cancer outcomes for Black women.

INHERITED *BRCA* GENE MUTATIONS AND CANCER RISK

Lifetime risk of developing breast cancer in women:



While everyone has the *BRCA1* and *BRCA2* genes (BReast CAncer susceptibility genes 1 and 2), those who have an inherited mutation in one or both genes have an increased risk of inherited, or hereditary, breast cancer. Learn more about *BRCA1* and *BRCA2* mutations and breast cancer risk in women here and men here.

SPOTLIGHT

Komen Scholar Dr. Tracy Battaglia is developing an artificial intelligence (AI) tool to improve access to genetic testing for hereditary breast cancer, both overall and within diverse populations.

WHAT WE'VE LEARNED FROM KOMEN-FUNDED RESEARCH

- A recent study suggests that risk-reducing double mastectomies may be overused in women who carry certain genetic mutations in *ATM* and *CHEK2* genes and who are likely at lower risk for breast cancer.
- A recent pilot study of a new Internet-based tool indicated that the tool works for increasing confidence and decision-making about genetic testing among high-risk Ashkenazi Jewish women, but barriers to genetic testing remain.
- Women from The Bahamas appear to be twice as likely to have a *BRCA1* mutation than the general population.

LEARN MORE ABOUT BREAST CANCER | **MORE KOMEN-FUNDED RESEARCH STORIES** | **GET INVOLVED & SUPPORT RESEARCH**

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