2021 RESEARCH FAST FACTS
Hereditary Breast Cancer

RESEARCH SAVES LIVES

Most cases of breast cancer occur by chance. However, breast cancer can occur more often than usual in some families because of their genetic make-up. This type of breast cancer is called hereditary breast cancer. In these cases, a mutated gene is passed from parent to child. This mutated gene increases the risk of developing breast cancer.

About 5 to 10 percent of all breast cancers in the U.S. are thought to be hereditary. Hereditary breast cancer occurs more often in younger people and can be more aggressive than other types of breast cancer. Women with inherited breast cancer gene mutations also have increased risk for developing other cancers, such as ovarian cancer.

Learn about your risk of breast cancer.

Two gene mutations commonly associated with hereditary breast cancer are mutations in *BRCA1* (BReast CAncer gene one) and *BRCA2* (BReast CAncer gene two). But BRCA mutations account for only 20 to 25 percent of all hereditary breast cancers. There are many other inherited gene mutations that may increase the risk of developing breast cancer. Some of these are known and include mutations in the *PALB2, CHEK2, ATM* and *TP53* genes. But many are yet to be discovered.

Identifying other inherited gene mutations is an important step in helping people understand their individual risk, and empowering them to take preventive or protective measures.

Learn more about hereditary breast cancer.
http://sgk.mn/1ScS5KM

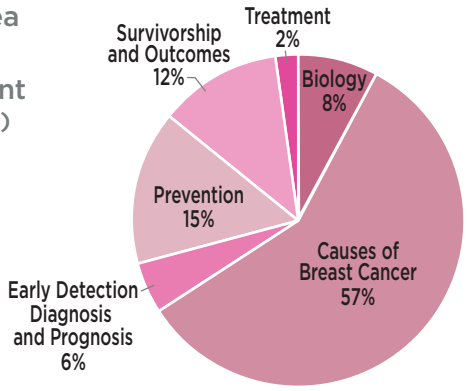
OUR RESEARCH INVESTMENT:
(1982-2021)

More than $37 million in over 100 research grants and more than 20 clinical trials focused on hereditary breast cancer

What We're Investigating

- Identifying the cellular factors that affect why some people with a BRCA mutation develop breast cancer and others do not.
- Using cutting edge technology to identify new genes or areas in the genome linked to inherited breast cancer.
- Testing whether the abnormal function of specific breast cells can be targeted to prevent breast cancer in people with inherited genes mutations like BRCA.

Topic Area of Total Investment (1982-2021)



Read how Komen Scholar Alum Dr. William Foulkes and collaborators identified a new inherited breast cancer risk gene, *RECQL*, in Komen's Stories of Discovery series.
http://sgk.mn/1QOqFg6

WHAT WE'VE LEARNED from Komen-funded research

- Mutations in a gene called *RECQL* are associated with inherited breast cancer and may increase risk by as much as 50 percent, depending on the mutation.
- An inherited mutation in the *PALB2* gene may increase the risk of breast cancer by 30 to 60 percent.
- Including a family history of other cancers, such as prostate and pancreas, may help improve breast cancer risk prediction tools like BRCAPRO.

Learn more about breast cancer | More Komen-funded Research Stories | Get Involved & Support Komen Research