

RESEARCH SAVES LIVES

HER2-positive breast cancer (HER2+) is a subtype of breast cancer that makes too much of a protein called HER2. HER2 normally helps a healthy breast cell grow and divide. But in about 25 percent of breast cancers, the HER2 gene doesn't work properly and makes too many copies of itself. As a result, HER2+ breast cancers tend to grow faster and are more likely to spread than other types of breast cancer.

Fortunately, therapies that specifically target HER2, such as trastuzumab (Herceptin®), are very effective and have had a significant impact on breast cancer survival for women with HER2+ breast cancer.

In spite of these advances, some HER2+ breast cancers do not respond to these therapies or become resistant to therapy. Komen is dedicated to finding new strategies for treating HER2+ breast cancer and identifying which women are most likely to respond to them.

Read the story of Komen Scholar alumnus Dr. Neil Spector and how his life experiences have shaped his fight against drug resistant HER2+ breast cancer in the lab. <http://sgk.mn/2xLPFxD>



Learn more about HER2-positive breast cancer <http://sgk.mn/1ASICOQ>

OUR RESEARCH INVESTMENT: (1982-2019)

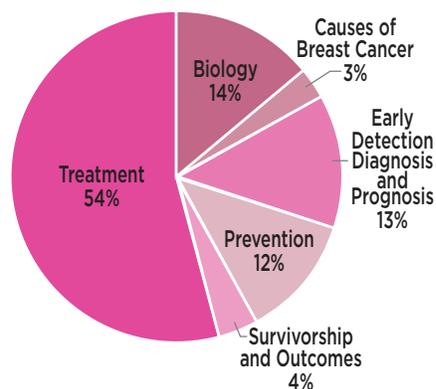
More than **\$111 million** in **200 research grants** and more than **25 clinical trials** focused on HER2+ breast cancer

What We're Investigating

- Developing and testing new treatments that target HER2, including new drug combinations, radiotherapy, gene therapy, immunotherapy, and vaccines.
- Identifying the genes and other factors that cause drug resistance to HER2 therapies and may lead to metastasis.
- Identifying biomarkers that can be used to predict which women will respond to or become resistant to HER2 therapies.



Topic Area of Total Investment



Read more about targeting sEcad to treat HER2 resistance from Komen grantee Dr. Sabine Brouxhon in our Science Buzz series. <http://sgk.mn/1s3Km4i>

WHAT WE'VE LEARNED from Komen-funded research

- A drug that targets a protein called sEcad may be used to treat HER2+ cancer cells that are resistant to Herceptin®.
- Resistance to HER2-targeted drugs—lapatinib and neratinib—may be reversed by combining the treatments with one of two drugs already approved by the FDA—pertuzumab and crizotinib. [Read more.](#)
- A simple blood test that measures specific biological markers may be used to predict who will respond or become resistant to HER2-targeted treatments.