HER2-positive breast cancer (HER2+) is a subtype of breast cancer that makes too much HER2. HER2 normally helps a healthy breast cell grow and divide. But in about 25% of breast cancers, the HER2 gene doesn’t work correctly and makes too many copies of itself. HER2+ breast cancers tend to grow faster and are more likely to spread. However, therapies that specifically target HER2, such as Herceptin® (trastuzumab), are very effective. Research has shown that Herceptin has reduced breast cancer recurrence by as much as 40%

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

**Total Investment In HER2 Research**

- **Biology** 27%
- **Early Detection** 29%
- **Scientific Model Systems** 3%
- **Prevention** 12%
- **Survivorship** 2%
- **Etiology** 3%

Susan G. Komen has invested nearly $53 million in over 130 grants focused on the causes, prevention, and treatment of HER2+ breast cancer.

**What We’re Investigating**

Komen-funded researchers are:

- Developing and testing new drugs that target HER2, including gene therapy and vaccines
- Identifying new drug combinations that are more effective against HER2+ breast cancer and testing them in clinical trials
- Identifying biological markers that can be used to predict which women will respond or become resistant to HER2 therapies
- Testing new ways to prevent the development of HER2+ breast cancer including chemoprevention and dietary approaches such as flaxseed

**What We’ve Learned**

Komen-funded research has helped us to understand that:

- Adding a drug called a PI3K inhibitor to Herceptin treatment can kill cancer cells that have become resistant to Herceptin treatment alone
- Combinations of vaccines and other immunotherapies that use the body’s own immune system may be able to improve survival for women with advanced HER2+ breast cancer
- A simple blood test that measures specific biological markers may be used to predict who will respond or become resistant to Herceptin treatment

**More Than Research**

These research investments reflect only part of our commitment to women with HER2+ breast cancer. Komen also provides educational materials, Affiliate programs nationwide and the 1-877-GO-KOMEN helpline.

Bonnie Olson shares her experience with HER2+ breast cancer.

The Susan G. Komen for the Cure® promise is to save lives and end breast cancer forever.