Approximately 10-20 percent of all breast cancers are diagnosed as triple negative breast cancer (TNBC). TNBC gets its name because it lacks the three receptors—estrogen (ER), progesterone (PR), and human epidermal growth factor 2 (HER2)—that are present in a majority of breast tumors. These receptors can be targeted with many current therapies. Because TNBC lacks all three receptors, it does not respond well to these therapies. TNBC can be more aggressive than other subtypes of breast cancer and is more likely to come back after treatment (recur).

TNBC is also more likely to effect young women, African-American women and people with a BRCA1 mutation. With few treatment options and no targeted therapies specifically for TNBC, more research is needed to better understand how this cancer develops and can be treated more effectively.

What We’re Investigating

• Identifying and developing new therapies for TNBC and testing them in clinical trials.
• Developing a blood test for early detection of TNBC that may also predict recurrence and identify which patients need more-aggressive therapy.
• Understanding why African-Americans, young women and women with a BRCA mutation appear to be at higher risk for TNBC.

WHAT WE’VE LEARNED from Komen-funded research

There are at least six different subtypes of TNBC, each with different abnormalities, which may be treated using drugs that target these abnormalities. Read more.

A new drug that targets two newly identified receptors on TNBC cells can shrink TNBCs, including those resistant to chemotherapy, and will soon be tested in clinical trials. Read more.

Bits of tumor DNA found in the blood, called “cell-free tumor DNA”, may be used as a biomarker to identify which TNBCs are more aggressive and aid in treatment decisions.