MEDICAL BREAKTHROUGHS
RESEARCH SUMMARY

TITLE: BREAST CANCER DISPARITIES ARE REAL!
REPORT: MB #4759

BACKGROUND: The American Cancer Society estimates there will be 279,100 new cases of breast cancer in the United States this year. Breast cancer is when breast tissue cells change and divide uncontrolled, typically resulting in a lump or mass. Most breast cancers begin in the lobules (milk glands) or in the ducts that connect the lobules to the nipple. Screening is vitally important for early detection because breast cancers typically have no symptoms when the tumor is small and that’s when it can be most easily treated. Sometimes breast cancer spreads to underarm lymph nodes and causes a lump or swelling before the original breast tumor can be felt. Less common signs and symptoms include breast pain or heaviness; persistent changes, such as swelling, thickening, or redness of the skin; and nipple changes, such as spontaneous discharge, scaliness, or retraction. Most masses seen on a mammogram and most breast lumps turn out to be benign (not cancerous). When cancer is suspected, tissue is usually obtained from a needle biopsy and less often from a surgical biopsy for microscopic analysis. The type of biopsy is based on multiple factors, including the size and location of the mass, as well as patient factors, preferences and resources.

TRIPLE-NEGATIVE BREAST CANCER: About 10-20% of breast cancers are triple-negative cancers. It’s a cancer that tests negative for estrogen receptors, progesterone receptors, and excess HER2 protein. Triple-negative breast cancer does not respond to hormonal therapy medicines or medicines that target HER2 protein receptors. Triple-negative breast cancer is typically treated with a combination of surgery, radiation therapy, and chemotherapy. The most common demographic to be diagnosed with triple-negative breast cancer are those younger than 50, African American and Hispanic women and people with the BRCA1 mutation.
(Source: https://www.breastcancer.org/symptoms/diagnosis/trip_neg)

WHY THE RACIAL DISPARITY?: Possible reasons that African American women might be more prevalent to triple-negative breast cancer are they tend to have lower rates of breastfeeding and tend to carry excess weight in the abdomen area which may increase the chances of having triple-negative breast cancer. Certain reproductive and lifestyle factors may protect more against estrogen receptor-positive breast cancers than ER-negative breast cancers. Also, African American women are more likely than white women to have more children, be a younger age at first childbirth and be overweight or obese before menopause. Melissa Davis, Scientific Director of the International Center for the Study of Breast Cancer Subtypes is working on a study and suggested “All the shared commonality of being African or having some degree of African ancestry is a major flag and clue that there must be a genetic predisposition. Therefore, if it is a predisposition, then there’s a biological mechanism that’s driving it, right? One of the genes that we’re interested in is a chemical receptor. We think it has something to do with an evolutionary shared genetic ancestry that somehow creates this microenvironment that feeds a triple-negative tumor.”
(Sources: https://ww5.komen.org/BreastCancer/RaceampEthnicity.html, Melissa Davis, Scientific Director of the International Center for the Study of Breast Cancer Subtypes)
FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

GRACE NAUGLE
MEDIA ASSOCIATE
GEN4001@MED.CORNELL.EDU

If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com