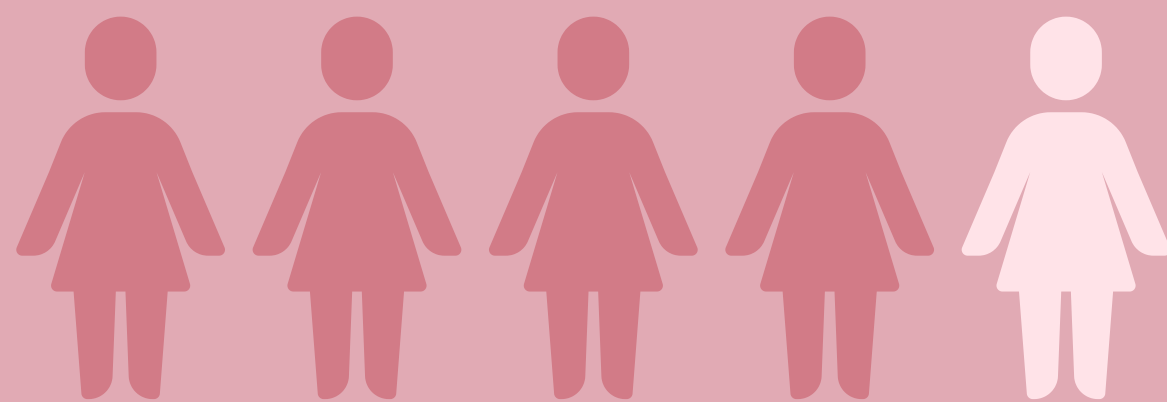




HER2

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INVOLVE RESEARCH

Biomarkers are genes that provide information about cancer and can lead to the progression of tumors in the body. These genes are integral to the understanding and identification of cancer for treatment the disease. There are many different functions and forms of biomarkers for each cancer. For this study, the researchers are specifically interested in breast cancer. After researching biomarkers associated with breast cancer, the group chose to investigate the HER2 gene and its role in cancer progression. HER2 breast cancer is considered extremely aggressive and accounts every 1 of 5 breast cancers in patients.



After understanding the preliminary features of biomarkers in breast cancer, the group analyzed the HER2 gene and its progression of tumor growth. HER2 is a gene that codes for the production of HER2 proteins which most commonly build receptors on breast cells. These proteins dictate how breast cells grow and divide. Mutations of the HER2 gene create mutations in the HER2 proteins and therefore the HER2 receptors. This causes amplification and overexpression of the gene which causes aggressive, uncontrolled division of breast cancer cells and possible metastasis in the body.