
Breast Cancer

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Breast cancer is the most common non-skin cancer and the second most common cause of cancer deaths for women in the United States.

- One in eight women will be diagnosed with breast cancer during her lifetime.
- An estimated 192,370 American women were diagnosed with the disease in 2009.
- That same year, breast cancer took the lives of an estimated 40,170 women in the United States.

Since 1980, the combined effort of cancer researchers has increased breast cancer five-year survival rates by nearly 19%, and new treatments like the drug Herceptin cut breast cancer recurrence in half.

Our Achievements in Breast Cancer Research

Damon Runyon scientists have been on the cutting-edge of breast cancer research for more than 30 years. Our scientists:

- ✓ co-discovered BRCA1, the first human gene to be identified as a cause of breast cancer.
- ✓ were the first to identify hereditary breast-ovarian cancer syndrome.
- ✓ made instrumental contributions to the development of the breast cancer drug Herceptin, approved by the FDA in 1998.
- ✓ developed a new way to predict the risk of breast cancer recurrence using immune cell patterns.

Current Breast Cancer Research Projects

Damon Runyon is currently funding many scientists that are researching ways to better diagnose, treat and cure breast cancer. These researchers are:

- researching the transition from a single tumor to metastatic disease, ultimately leading to therapies to block the spread of particularly invasive cancers, including breast cancer.
- defining DNA repair mechanisms that contribute to breast and ovarian cancers.
- developing a novel method to monitor the immune system in breast cancer patients with the goal of designing a targeted immunotherapy.
- examining the role of autophagy in tumor cell survival and responsiveness to chemotherapy. Autophagy is a process of “cellular self-digestion” that is used by both normal cells and tumor cells as a survival mechanism in times of metabolic stress. Ongoing preclinical and clinical studies managing autophagy in breast cancer could lead to improved patient response to treatment.

**Most Statistics adapted from the SEER Cancer Statistics Review, 1975-2006*