



# ACCELERATING DISCOVERY

## Investing in Breast Cancer Research



Thank you, Dive for the Cure for your generous support that is enabling the OHSU Knight Cancer Institute to make strides against breast cancer. Below are a few recent highlights of our progress. Thank you for your commitment to ending cancer as we know it.

Breast cancer is the most common cancer among American women except for skin cancers. Breast cancer may also occur in men, making up less than 1% of all cases of breast cancer. About 1 in 8 women in the United States will develop invasive breast cancer during their lifetime. It is the second leading cause of cancer death in women. OHSU Knight Cancer Institute researchers are relentlessly determined to change these statistics. Philanthropy provides critical resources to drive better ways to treat, detect and prevent breast cancer.

“Is there a higher calling than curing cancer?”

— Phil Knight  
Nike Co-founder and Chairman Emeritus

### Advancing New Discoveries

Thanks to generous philanthropic investment, OHSU has been fortunate to add to its research team some of the world’s most renowned breast cancer researchers, including Joe Gray, Ph.D., a pioneer in cancer imaging and genetics; Lisa Coussens, Ph.D., a cancer biologist recognized for work in understanding how the immune system plays a role in breast cancer development; and Pepper Schedin,

Ph.D., who is working on chemo-preventive strategies to prevent and slow down progression of postpartum breast cancer in young women. Here are just a few examples of current research projects:

- Lisa Coussens, Ph.D., has two clinical trials in progress that are testing different immune therapies alongside standard of care chemotherapy to determine if they provide increased efficacy and outcomes.
- Pepper Schedin, Ph.D., is collaborating with Oregon State University to look into various recommendations for early screening options and timing to determine which of the myriad of testing options produce the best outcomes.
- Joe Gray, Ph.D., a physicist and biomedical engineer, is known for developing the FISH test that transformed how treatments are selected for breast cancer patients. He is spearheading OHSU’s work with Intel Corp., to develop a Collaborative Cancer Cloud to securely share patient genomic, imaging and clinical data for potentially life-saving discoveries. He is also leading a Smart Treatments initiative to find more effective approaches to cancer treatments and therapies that are uniquely tailored to each patient’s biological profile.



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- In honor of the work that Dive for a Cure has done to support breast cancer research, last year the OHSU Knight Cancer Institute established the **Barbara Ann Miller Research Award**. This award will be given each year to support pilot project research and/or clinical research to recognized junior faculty in memory of Barbara's life and legacy.
- OHSU recently recruited Sadik Esener, Ph.D., to lead the new Center for Early Detection Research at the OHSU Knight Cancer Institute. The five-year survival rate for breast cancer is nearly 99% if caught at stage 1. (Source: SEER Cancer Statistics, NCI 2013)
- Established a statewide cancer prevention and outreach network, expanded Oregonians' access to clinical trials and funded more than 30 projects in 31 Oregon counties for cancer prevention, early detection, treatment and survivorship initiatives.

## BREAST CANCER RISK FACTORS & SIGNS

The National Cancer Institute has identified risk factors for breast cancer including:

- A family history of breast cancer and other factors increase the risk of breast cancer.
- A personal history of invasive breast cancer, ductal carcinoma in situ (DCIS), or lobular carcinoma in situ (LCIS).
- A personal history of benign breast disease.
- A family history of breast cancer in a first-degree relative (mother, daughter, or sister).
- Inherited changes in the BRCA1 or BRCA2 genes or in other genes that increase breast cancer risk.
- Breast tissue that is dense on a mammogram.
- Exposure of breast tissue to estrogen made by the body. Causes may include menstruating at an early age, older age at first birth or never having given birth, starting menopause at a later age, taking hormones such as estrogen combined with progestin for symptoms of menopause, treatment with radiation therapy to the breast/chest, drinking alcohol, obesity and being white.

**Signs of breast cancer include a lump or change in the breast. Check with your doctor if you have any of the following:**

- A lump or thickening in or near the breast or in the underarm area.
- A change in the size or shape of the breast.
- A dimple or puckering in the skin of the breast.
- A nipple turned inward into the breast.
- Fluid, other than breast milk, from the nipple, especially if it's bloody.
- Scaly, red, or swollen skin on the breast, nipple, or areola.
- Dimples in the breast that look like the skin

FOR MORE INFORMATION OR TO MAKE A GIFT, CONTACT:

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