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## **Genomic Health Announces Publication in Journal of Clinical Oncology Demonstrating Oncotype DX® Predicts Late Distant Recurrence in Breast Cancer**

### **Findings Confirm that Oncotype DX May Help Identify Breast Cancer Patients with Greatest Potential to Benefit from Extended Hormonal Therapy**

REDWOOD CITY, Calif., May 25, 2016 /PRNewswire/ -- [Genomic Health](#), Inc. (Nasdaq: GHDX) today announced that the [Journal of Clinical Oncology](#), the official journal of the American Society of Clinical Oncology (ASCO), published results from a large study confirming the ability of the Oncotype DX® Breast Recurrence Score™, in combination with quantitative estrogen-receptor (ER) expression, to accurately predict after five years of tamoxifen therapy the risk of late distant recurrence up to 15 years in patients with early-stage, hormone receptor-positive breast cancer. These findings suggest that Oncotype DX may help identify which patients are most likely to benefit from extended hormonal treatment with tamoxifen.

"Extending tamoxifen treatment for 10 years has been shown to be associated with better outcomes, but not all patients have the same risk of late distant recurrence - meaning cancer coming back after five years - and it is important to know a patient's risk in order to better understand who will benefit the most from extended hormonal treatment," said Norman Wolmark, M.D., chairman of the National Surgical Adjuvant Breast and Bowel Project (NSABP) Foundation, the organization that carried out the study in conjunction with Genomic Health. "The results of this large study confirm that Oncotype DX helps better define who is at greatest risk of a late distant recurrence and who would likely derive the greatest benefit from extended tamoxifen therapy."

The study analyzed the results of two clinical trials: NSABP B-14 (668 patients) and B-28 (1,065 patients). Patients were followed up on for a median of 13.9 years (B-14) and 11.2 years (B-28). The results reconfirm earlier findings from validation studies of Oncotype DX which demonstrated that Breast Recurrence Score results were strongly associated with distant recurrence up to 15 years for patients with node-positive and node-negative disease. The new study also showed that in patients with greater ER expression, the association of the continuous Breast Recurrence Score with distant recurrence was significant after adjustment for age, grade and tumor size.

The results suggest that extending tamoxifen beyond five years may provide greater benefit in patients with high and intermediate Breast Recurrence Score results who also show high ER expression. Conversely, patients with low Breast Recurrence Score results have a much lower risk of late distant recurrence and would be expected to have less benefit from extended tamoxifen beyond five years.

Findings from a separate study of Oncotype DX were also recently published in the [Journal of Clinical Oncology](#). That study evaluated the ability of the Breast Recurrence Score to provide information on breast cancer progression and survival in newly diagnosed stage IV breast cancer patients. About five percent of patients are diagnosed with stage IV disease, and there is limited molecular information on the impact of tumor biology on patient outcomes. Results showed that the Breast Recurrence Score independently predicted both time to progression and two-year overall survival in patients with ER-positive, HER2-negative metastatic breast cancer, indicating that biology is the major determinant of outcome, not only for patients diagnosed with node-negative and node-positive breast cancer, but also for patients diagnosed with stage IV disease.

"The publication of these two studies in the *Journal of Clinical Oncology* further demonstrates our leadership in the area of breast cancer precision medicine and our ongoing commitment to evaluate our genomic tests in a wide range of cancer patients," said Frederick Baehner, M.D., vice president, Pathology, Genomic Health. "The impressive amount of evidence that we have generated over the last decade has helped us better understand the biology of breast and other types of cancer throughout the disease continuum - from early-stage to advanced metastatic disease - and continues to inform our liquid biopsy development efforts focused on late-stage solid tumor cancers."

#### **About Oncotype DX®**

The Oncotype DX® portfolio of breast, colon and prostate cancer tests applies advanced genomic science to reveal the unique biology of a tumor in order to optimize cancer treatment decisions. The company's flagship product, the Oncotype

DX breast cancer test, has been shown to predict the likelihood of chemotherapy benefit as well as recurrence in invasive breast cancer. Additionally, the test predicts the likelihood of recurrence in a pre-invasive form of breast cancer called DCIS. With 600,000 patients tested in more than 90 countries, the Oncotype DX tests have redefined personalized medicine by making genomics a critical part of cancer diagnosis and treatment. To learn more about Oncotype DX breast cancer tests, visit: [www.OncotypeDX.com](http://www.OncotypeDX.com) or [www.mybreastcancertreatment.org](http://www.mybreastcancertreatment.org).

## About Genomic Health

[Genomic Health](http://www.GenomicHealth.com), Inc. (NASDAQ: GHDX) is the world's leading provider of genomic-based diagnostic tests that address both the overtreatment and optimal treatment of cancer, one of the greatest issues in healthcare today. With its Oncotype IQ™ Genomic Intelligence Platform, the company is applying its world-class scientific and commercial expertise and infrastructure to lead the translation of clinical and genomic big data into actionable results for treatment planning throughout the cancer patient journey, from diagnosis to treatment selection and monitoring. The Oncotype IQ portfolio of genomic tests and services currently consists of the company's flagship line of Oncotype DX gene expression tests that have been used to guide treatment decisions for more than 600,000 cancer patients worldwide. Genomic Health is expanding its test portfolio to include additional liquid and tissue-based tests. The company is based in [Redwood City](http://www.RedwoodCity.com), California, with international headquarters in Geneva, Switzerland. For more information, please visit, [www.GenomicHealth.com](http://www.GenomicHealth.com) and follow the company on Twitter: [@GenomicHealth](https://twitter.com/GenomicHealth), [Facebook](https://www.facebook.com/GenomicHealth), [YouTube](https://www.youtube.com/GenomicHealth) and [LinkedIn](https://www.linkedin.com/company/genomic-health).

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