



Quest Diagnostics Launches Test to Help Oncologists Predict Risk of Breast Cancer Recurrence in Women with Estrogen Receptor (ER)-Positive, Lymph Node- Negative Cancers

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SAN ANTONIO, Dec. 14 /PRNewswire-FirstCall/ -- Clinicians will have a new prognostic tool in the battle against breast cancer, as Quest Diagnostics Incorporated (NYSE: DGX) announced today that it has introduced its newly developed test, the Breast Cancer Gene Expression Ratio (HOXB13:IL17BR), to help physicians predict the risk of disease recurrence in women with estrogen receptor (ER)-positive, lymph node-negative breast cancer. Quest Diagnostics is the first company to develop a breast cancer recurrence test based on licensed gene-expression profiling technology from AviraDx Inc., a molecular cancer profiling company located in Carlsbad, California.

Launched at the San Antonio Breast Cancer Symposium, December 14 - 17, 2006, the Breast Cancer Gene Expression Ratio is based on the ratio of the expression of two genes: the homeobox gene-B13 (HOXB13) and the interleukin- 17B receptor gene (IL17BR). In breast cancers that are more likely to recur, the HOXB13 gene tends to be over-expressed, while the IL-17BR gene tends to be under-expressed.

In an 852-patient retrospective study published recently in the *Journal of Clinical Oncology*(1), Ma and colleagues found that the HOXB13:IL17BR ratio (H:I expression ratio) independently predicted breast cancer recurrence in patients with ER-positive, lymph-node negative cancer. The H:I expression ratio was found to be predictive in patients who received tamoxifen therapy as well as in those who did not.

The clinical value of the Breast Cancer Gene Expression Ratio also is supported by a study published earlier this year in *Clinical Cancer Research*(2). That study found that a high H:I expression ratio is associated with an increased rate of relapse and mortality in ER-positive, lymph node- negative cancer patients treated with surgery and tamoxifen.

According to the American Cancer Society (ACS), more than 210,000 cases of breast cancer are diagnosed annually in the United States. Data from the National Cancer Institute and ACS indicate that approximately half of these cases -- about 100,000 women -- are diagnosed with ER-positive, node-negative cancers(3). It is this group of patients who may benefit from H:I testing.

"Until recently, a patient's breast cancer prognosis depended on limited variables, such as tumor size and grade, patient age, lymph node involvement and hormone-receptor status," explains Richard A. Bender, M.D., F.A.C.P, Quest Diagnostics' Medical Director for Oncology. "With the H:I measurement, we now have more information to help predict the likelihood of disease recurrence in patients with ER-positive, node-negative breast cancers. Physicians and patients will want to consider this new information when deciding on treatment options."

As the nation's leading provider of diagnostic testing, information and services, Quest Diagnostics will provide Breast Cancer Gene Expression Ratio testing to physicians through Quest Diagnostics Nichols Institute, the company's esoteric testing laboratory in San Juan Capistrano, California, which has validated the test.

"The Breast Cancer Gene Expression Ratio represents a significant advance in personalized medicine in oncology," says Antonius Schuh, Ph.D., Chief Executive Officer of AviraDx Inc., the company that discovered and validated the molecular markers used in the index. "As we identify prognostic biomarkers in tumor types, we can further pinpoint and classify cancers so clinicians can appropriately benefit from the promising new targeted cancer therapies and make treatment decisions that may yield optimal outcomes for their patients."

The H:I two-gene expression ratio was developed as part of a clinical research collaboration between Harvard Medical School and Massachusetts General Hospital. The study that led to the discovery was designed to identify prognostic biomarkers in breast cancer that provide new, independent information as well as expand on standard clinical and pathological prognostic markers. The collaboration results were published in June 2004 in *Cancer Cell*(4).

About Quest Diagnostics

Quest Diagnostics is the leading provider of diagnostic testing, information and services that patients and doctors need to make better healthcare decisions. The company offers the broadest access to diagnostic testing services through its national network of laboratories and patient service centers, and provides interpretive consultation through its extensive medical and scientific staff. Quest Diagnostics is a pioneer in developing innovative new diagnostic tests and advanced healthcare information technology solutions that help improve patient care. Additional company information is available at: www.questdiagnostics.com.

About AviraDx, Inc.

AviraDx, Inc. is focused on developing and commercializing molecular diagnostic technologies for personalized medicine in cancer treatment. The company is targeting the oncology market with three first-in-class molecular cancer profiling technologies: Molecular Cancer Identification (MCID), Breast Cancer Profiling (BCP) and Drug Response Profiling (DRP). AviraDx has licensed its technologies for specific clinical indications to Quest Diagnostics and other reference laboratories in the United States and Europe.

The statements in this press release that are not historical facts or information may be forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause actual results and outcomes to be materially different. Certain of these risks and uncertainties may include, but are not limited to, competitive environment, changes in government regulations, changing relationships with customers, payers, suppliers and strategic partners and other factors described in the Quest Diagnostics Incorporated 2005 Form 10-K and subsequent SEC filings.

(1) Ma X, et al. The HOXB13:IL17BR Expression Index Is a Prognostic Factor in Early-Stage Breast Cancer. *Journal of Clinical Oncology*. October 2006 24(28):4611-4619.

- (2) Goetz, Matthew P, et al. A Two-Gene Expression Ratio of Homeobox 13 and Interleukin-17B Receptor for Prediction of Recurrence and Survival in Women Receiving Adjuvant Tamoxifen. Clinical Cancer Research. April 2006 12: 2080-2087.
- (3) Swain SM. A step in the right direction. J Clin Onco 2006;24:3717-3718.
- (4) Ma, Xiao-Jun, et al. A two-gene expression ratio predicts clinical outcome in breast cancer patients treated with tamoxifen. Cancer Cell. June 2004 5: 607 - 616

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