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Veracyte Announces New Data Published in Journal of Clinical Oncology Suggest the Prosigna Breast Cancer Test's Genomic Underpinning Drives Prognostic Performance

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)--Oct. 30, 2020-- Veracyte, Inc., (Nasdaq: VCYT) announced today that findings from the first study evaluating the molecular drivers underlying multiple prognostic genomic breast cancer tests were published in the *Journal of Clinical Oncology* (JCO). Results suggest that the genomic underpinnings of Veracyte's Prosigna ® Breast Cancer Gene Signature Assay, particularly the test's relative weighting of genes predicting tumor proliferation, may explain the classifier's previously demonstrated, higher likelihood of predicting long-term risk of recurrence among certain breast cancer patients, compared to other breast cancer tests.

The study compared the commercial forms of four breast cancer recurrence-risk tests: the PAM50-based Prosigna Risk of Recurrence (ROR), the Oncotype DX Risk Score (RS), EndoPredict (EP) and Breast Cancer Index (BCI). It expands upon a previous evaluation of these same tests using an identical dataset, which compared their ability to accurately predict 10-year distant disease recurrence.[1] The new study was intended to help determine why these tests commonly generate discordant results and thereby help to inform long-term therapeutic decision-making.

Researchers evaluated 785 patient samples from the TransATAC dataset using each of the four tests and then compared the resulting recurrence risk scores. Their comparisons included the molecular features driving each of the scores, without the clinicopathologic features that are integrated into the final prognostic result for the Prosigna ROR, EP and BCI. All TransATAC samples were derived from the randomized ATAC (Anastrozole, Tamoxifen Alone or in Combination) clinical trial, which involves postmenopausal women with hormone receptor-positive, HER2-negative, early-stage breast cancer who had received five years of endocrine therapy. A genomic test result indicating low risk of distant disease recurrence (i.e., disease recurrence within 10 years) among this population suggests the potential for a patient to safely forego chemotherapy.

"Gene expression assays can help physicians identify which ER+ breast cancer patients can safely avoid chemotherapy, a decision that can have meaningful clinical and quality-of-life implications," said Matthew Ellis, MBBChir, Ph.D., FRCP, Baylor College of Medicine, and one of the developers of the PAM50 genomic signature. "However, the four most prominent genomic classifiers often provide discordant results. This study is the first to provide a molecular explanation of discordance, which will enhance insights into the respective value of each test, and therefore the most appropriate usage, particularly in determining risk of distant recurrence."

Study results showed that there was low correlation between the Oncotype DX RS and the Prosigna ROR score, and between the RS and BCI scores. Researchers subsequently determined that genes predicting tumor proliferation (i.e., the rate at which cancer cells divide) accounted for 72.5% of the difference between the RS and Prosigna score and 54.3% of the difference between the RS and BCI scores. Among the four tests, researchers found that the Prosigna ROR score relies most heavily on proliferation-related features, while the RS is determined much more strongly by estrogen-related features. Tumor proliferation is known to be an important and reliable indicator of distant disease recurrence and is indicative of response to chemotherapy.

"Clarity about the relative influence of the proliferation vs. estrogen modules in each of these gene expression assays is important for several reasons, including the fact that this information helps clinicians evaluate the relative benefit of endocrine therapy alone vs. endocrine therapy plus chemotherapy for individual patients," said Dr. Ellis.

The Prosigna Breast Cancer Prognostic Gene Signature Assay, which is powered by the PAM50 gene signature, uses advanced genomic technology to classify breast cancers based on key biomarkers and the likelihood of cancer recurrence. Outside of the United States, it is also utilized to provide breast cancer intrinsic subtype information. Veracyte acquired the Prosigna test from NanoString Technologies, Inc. in December 2019 as part of its acquisition of the exclusive global diagnostic rights to the nCounter® Analysis System.

"The findings from this study further validate the molecular biology underlying the accuracy of our Prosigna test," said Bonnie Anderson, Veracyte's chairman and chief executive officer. "We are grateful to the study's investigators, who have provided the breast cancer community with important new data that will undoubtedly help inform treatment decisions for thousands of women."

About Prosigna

Prosigna is a prognostic Breast Cancer Gene Signature assay indicated in female breast cancer patients who have undergone either mastectomy or breast-conserving therapy in conjunction with locoregional treatment consistent with standard of care, either as a prognostic indicator for distant recurrence-free survival at 10 years in post-menopausal women with Hormone Receptor-Positive (HR+), lymph node-negative, Stage I or II breast cancer or lymph node-positive (1–3 positive nodes, or 4 or more positive nodes), Stage II or IIIA breast cancer to be treated with adjuvant endocrine therapy alone, when used in conjunction with other clinicopathological factors. Outside of the U.S., the Prosigna test also provides the intrinsic subtypes of the tumor tissue within three groups, low, intermediate and high by the nCounter technology with high accuracy by decentral performance.

The Prosigna test is FDA 510(k) cleared in the United States for use on the nCounter instrument and is available for use when ordered by a physician. The Prosigna test has received CE Mark, showing that it conforms with European Union regulations, and is available for use by healthcare professionals in the European Union and other countries that recognize the CE Mark, as well as in Canada, Israel, Australia, New Zealand and Hong Kong. The test is covered by Medicare and leading private payers in the United States and is widely covered by government and private payers in the countries where it is available.

About Veracyte

Veracyte (Nasdaq: VCYT) is a global genomic diagnostics company that improves patient care by providing answers to clinical questions, informing diagnosis and treatment decisions throughout the patient journey in cancer and other diseases. The company's growing menu of genomic tests leverage advances in genomic science and technology, enabling patients to avoid risky, costly diagnostic procedures and quicken time to appropriate

treatment. The company's tests in thyroid cancer, lung cancer, breast cancer and idiopathic pulmonary fibrosis are available to patients and its lymphoma subtyping test is in development. With Veracyte's exclusive global license to a best-in-class diagnostics instrument platform, the company is positioned to deliver its tests to patients worldwide. Veracyte is based in South San Francisco, California. For more information, please visit www.veracyte.com and follow the company on Twitter (@veracyte).

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements, including, but not limited to, our statements related to our plans, objectives, expectations (financial and otherwise) or intentions with respect to Veracyte's Prosigna ® Breast Cancer Gene Signature Assay for use in predicting long-term risk of recurrence among breast cancer patients. Forward-looking statements can be identified by words such as: "anticipate," "intend," "plan," "expect," "believe," "should," "may," "will" and similar references to future periods. Actual results may differ materially from those projected or suggested in any forward-looking statements. Examples of forward-looking statements include, among others, statements regarding Veracyte's belief that its Prosigna "PAM50" molecular classifier helps physicians accurately predict long-term risk of recurrence among breast cancer patients. These statements involve risks and uncertainties, which could cause actual results to differ materially from our predictions, and include, but are not limited to: Veracyte's ability to achieve and maintain Medicare coverage for its tests, the benefits of Veracyte's tests and the applicability of clinical results to actual outcomes. Factors that may impact these forward-looking statements can be found in Item 1A – "Risk Factors" in our Annual Report on Form 10-K filed with the SEC on February 25, 2020 and in our Quarterly Report on Form 10-Q filed with the SEC on July 30, 2020. A copy of these documents can be found at the Investors section of our website at www.veracyte.com. These forward-looking statements speak only as of the date hereof and Veracyte specifically disclaims any obligation to update these forward-looking statements or reasons why actual results might differ, whether as a result of new information, future events or otherwise.

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Dr. Ellis was not involved in the analysis, but he does receive income from royalties on PAM50-based diagnostics.

[1] *Sestak I., Buus R., et. al. Comparison of the Performance of 6 Prognostic Signatures for Estrogen Receptor-Positive Breast Cancer: A Secondary Analysis of a Randomized Clinical Trial. JAMA Oncol. 2018 Apr 1;4(4):545-553.*

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