**Study Published Showing Advantages of the PAM50 Gene Signature, the Basis for Prosigna, in Helping to Estimate Risk of Late Distant Recurrence in Postmenopausal Estrogen Receptor Positive Breast Cancer Patients**

*Authors concluded that PAM50 Gene Signature was better than Oncotype DX® and IHC4 Assays at Categorizing Patients into Low and High Risk for Late Distant Recurrence*

**SEATTLE — September 16, 2013 —** NanoString Technologies, Inc., (NASDAQ: NSTG) a provider of life science tools for translational research and molecular diagnostic products, today announced that a study published online in the *Journal of the National Cancer Institute* demonstrated that the PAM50 gene signature, which is the basis for the Prosigna™ Breast Cancer Prognostic Gene Signature Assay, provides important information to help estimate the risk of late distant recurrence in postmenopausal women with estrogen receptor positive (ER+) early-stage breast cancer. After comparing the PAM50 gene signature, the Onco*type* DX® Breast Cancer Assay and the IHC4 score, the authors concluded that the PAM50 gene signature provided the strongest prognostic information regarding risk of distant recurrence five to 10 years following diagnosis in postmenopausal ER+ early-stage breast cancer patients treated with five years of endocrine therapy.

Despite recent improvements in breast cancer treatment, some women with ER+ early-stage breast cancer remain at risk of disease recurrence after remaining disease-free for the first five years following diagnosis. Identifying newly diagnosed women with ER+ breast cancer who are at highest risk of having their cancer recur between five and 10 years after diagnosis is a priority for oncologists seeking a tool to help breast cancer patients make more informed treatment decisions.

The goal of this study was to compare the ability of three breast cancer assays to predict risk of distant recurrence separately in years 0 to 5 and years 5 to 10 after diagnosis for postmenopausal women with ER+ early-stage breast cancer. The three breast cancer assays included in the study were the PAM50 gene signature, the Onco*type* DX Breast Cancer Assay, and the IHC4 score, derived from immunohistochemical assessment of ER, PR, HER2 and Ki67 genes. The study included 940 samples from the landmark ATAC (Arimidex, Tamoxifen, Alone or in Combination) trial of postmenopausal women with ER+ early-stage breast cancer treated with five years of endocrine therapy. The study was performed on RNA extracted from tumor samples by Genomic Health, Inc. for validation of the Onco*type* DX Breast Cancer Assay.

The researchers concluded that the PAM50 gene signature was the only breast cancer assay of the three evaluated that showed promise in predicting late recurrence and in categorizing patients into low and high risk for late distant recurrence. Although PAM50, Onco*type* DX, and IHC4 each added overall prognostic information in the late follow-up period, PAM50 was the best discriminator of patients into low-risk and high-risk groups for late distant recurrence. Of the three assays evaluated, PAM50 provided the strongest risk score in the five to 10 year period for all patient subgroups evaluated in this study.

This publication expands upon a presentation at IMPAKT 2013 on a study in 1,478 patients from the ABCSG8 clinical trial, which demonstrated that the Prosigna Assay added prognostic information about the risk of late recurrence of breast cancer to the standard pathological variables in postmenopausal women with hormone receptor positive (HR+), node-positive and node-negative early-stage breast cancer

($p<0.0001$) . Patients categorized as low risk based on the Prosigna Assay had Distant Recurrence Free Survival (DRFS) between years five and 10 of 98.7%, while patients categorized as high risk had DRFS between years five and 10 of 91.5%.

"We are pleased that this study further differentiates the performance of the Prosigna Breast Cancer Assay from first-generation genomic breast cancer assays," said Brad Gray, President and Chief Executive Officer of NanoString Technologies. "This second peer-reviewed article follows quickly on the heels of the publication of our TransATAC clinical validation study and FDA 510(k) clearance, and contributes to a growing body of evidence of Prosigna's ability to provide prognostic information that supports future inclusion of Prosigna in treatment and reimbursement guidelines."

The study, entitled "Factors predicting late recurrence for estrogen receptor positive breast cancer," was conducted by researchers in London at the Centre for Cancer Prevention, Wolfson Institute of Preventive Medicine, Queen Mary University and the Academic Department of Biochemistry, Royal Marsden Hospital, in cooperation with scientists at NanoString Technologies. It was published online in JNCI, and can be found at: http://jnci.oxfordjournals.org/content/early/2013/09/10/jnci.djt244.full.pdf+html.

**About the Prosigna™ Breast Cancer Prognostic Gene Signature Assay**

The Prosigna Assay provides a risk category and numerical score for assessment of the risk of distant recurrence of disease at 10 years in postmenopausal women with node-negative (Stage I or II) or node-positive (Stage II), hormone receptor-positive (HR+) breast cancer. Based on the PAM50 gene signature initially discovered by Charles Perou, Ph.D. and colleagues, the Prosigna Assay is an *in vitro* diagnostic tool that utilizes gene expression data weighted together with clinical variables to generate a risk category and numerical score, to assess a patient's risk of distant recurrence. The Prosigna Assay measures gene expression levels of RNA extracted from formalin-fixed paraffin-embedded (FFPE) breast tumor tissue previously diagnosed as invasive breast carcinoma.

The Prosigna Assay requires minimal hands-on time and runs on NanoString's proprietary nCounter® Dx Analysis System, which offers a reproducible and cost-effective way to profile many genes simultaneously with high sensitivity and precision.

The Prosigna Assay is 510(k) cleared by the FDA and will be available for diagnostic use when ordered by a physician in the U.S. The Prosigna Assay has been CE-marked and is available for use by healthcare professionals in the European Union and other countries that recognize the CE Mark and in which Prosigna is registered.

In the U.S., Prosigna is indicated in female breast cancer patients who have undergone surgery in conjunction with locoregional treatment consistent with standard of care, either as:

1. 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 to be treated with adjuvant endocrine therapy alone, when used in conjunction with other clinicopathological factors.

2. A prognostic indicator for distant recurrence-free survival at 10 years in post-menopausal women with Hormone Receptor-Positive (HR+), lymph node-positive (1-3 positive nodes), Stage II breast cancer to be treated with adjuvant endocrine therapy alone, when used in conjunction with other clinicopathological factors. The device is not intended or patients with 4 or more positive nodes.

Prosigna is not intended for diagnosis, to predict or detect response to therapy, or to help select the

optimal therapy for patients in the U.S.

For more information, please visit www.prosigna.com.

**About NanoString Technologies, Inc.**
NanoString Technologies provides life science tools for translational research and molecular diagnostic products. The company's nCounter® Analysis System, which has been employed in basic and translational research since it was first introduced in 2008 and cited in more than 240 peer-reviewed publications, has also now been applied to diagnostic use as the nCounter Dx Analysis System. The company's technology offers a cost-effective way to easily profile the expression of hundreds of genes, miRNAs, or copy number variations, simultaneously with high sensitivity and precision. The company's technology enables a wide variety of basic research and translational medicine applications, including biomarker discovery and validation. The nCounter-based Prosigna™ Breast Cancer Prognostic Gene Signature Assay is the first *in vitro* diagnostic assay to be marketed through the company's diagnostics business.

For more information, please visit www.nanostring.com.

**Forward Looking Statements**
*This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding the potential for the Journal of the National Cancer Institute publication to further differentiate the performance of Prosigna from first-generation genomic breast cancer assays and support the Company's efforts to incorporate Prosigna into guidelines for treatment and reimbursement. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: risks associated with keeping pace with rapidly changing technology and customer requirements; risks regarding our ability to successfully introduce new products; risks that new market opportunities may not develop as quickly as expected; risks associated with competition in marketing and selling products; risks of increased regulatory requirements; as well as the other risks set forth in the company's filings with the Securities and Exchange Commission. These forward-looking statements speak only as of the date hereof. NanoString Technologies disclaims any obligation to update these forward-looking statements.*



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