



## Nature Medicine Publication Highlights use of the GeoMx Digital Spatial Profiler to Characterize Mechanism of Neurotoxicity in Immuno-Therapy

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### Third Nature Medicine Publication to Include Novel Discoveries Using Digital Spatial Profiling, Sixth Peer-Reviewed Publication to Date

SEATTLE, July 23, 2019 (GLOBE NEWSWIRE) -- NanoString Technologies, Inc. (NASDAQ:NSTG), a provider of life science tools for translational research and molecular diagnostic products, today announced the publication of a study in the journal *Nature Medicine* that demonstrates the capability of the GeoMx™ Digital Spatial Profiler (DSP) to characterize toxicities associated with immunotherapy using checkpoint inhibitors.

While checkpoint inhibitors can lead to durable responses in a range of metastatic cancers, unanticipated immune-related adverse events can limit the utility of these life-saving therapies. A group of researchers led by Dr. Justin Balko recently published a study entitled "A case report of clonal EBV-like memory CD4+ T cell activation in fatal checkpoint inhibitor induced encephalitis." In this case report, investigators used the GeoMx DSP to characterize immune infiltrates in the brain of a patient who passed away from neurotoxicity following immunotherapy treatment for metastatic melanoma. The GeoMx DSP revealed the presence of activated T cells in the inflamed, non tumor-containing region of the brain. These T cells were characterized on other platforms and found to be potentially specific for Epstein Barr Virus-associated proteins. GeoMx DSP profiling of non-inflamed regions from the same patient, as well as patients with other forms of encephalitis, did not show evidence of activated T cells, suggesting that population was specific to the inflamed region within the immunotherapy treated patient. (<https://www.nature.com/articles/s41591-019-0523-2>).

"We elected to characterize the samples from this patient with the GeoMx DSP because the patient tissue was limited and had been preserved in FFPE. The GeoMx platform enabled high-plex characterization that would not have been possible on other platforms," said Justin Balko, Pharm.D., Ph.D., Department of Medicine, Vanderbilt University Medical Center. "We used the information we obtained from the DSP to guide our other profiling of the patient and in doing so, uncover new biology behind checkpoint inhibitor-induced neurotoxicity."

"This study is the sixth peer-reviewed publication to highlight the importance of spatial profiling for characterizing mechanisms of action and toxicity of immunotherapies, which may ultimately result in improved treatment options for patients," said Brad Gray, NanoString's president and CEO.

The data for this publication was generated as part of a collaboration with NanoString Technologies, and samples are processed at NanoString using a prototype GeoMx Digital Spatial Profiler.

The GeoMx Digital Spatial Profiler enables researchers to rapidly and quantitatively characterize tissue morphology with a high-throughput, high-plex RNA and protein profiling system that preserves samples for future analyses. NanoString and its collaborators have presented DSP data in more than 25 abstracts at major scientific meetings, demonstrating the utility of DSP technology to address a wide range of biological questions in Formalin Fixed Paraffin Embedded (FFPE) tissues.

Interested parties can learn more about DSP by visiting <https://www.nanostring.com/scientific-content/technology-overview/digital-spatial-profiling-technology>.

#### About NanoString Technologies, Inc.

NanoString Technologies is a leading provider of life science tools for translational research and molecular diagnostic products. The company's nCounter® Analysis System is used in life sciences research and has been cited in more than 2,650 peer-reviewed publications. The nCounter Analysis System offers a cost-effective way to easily profile the expression of hundreds of genes, proteins, miRNAs, or copy number variations, simultaneously with high sensitivity and precision, facilitating a wide variety of basic research and translational medicine applications, including biomarker discovery and validation. The company's GeoMx™ Digital Spatial Profiler enables highly-multiplexed spatial profiling of RNA and protein targets in a variety of sample types, including FFPE tissue sections. The company's technology is also being used in diagnostics. The Prosigna® Breast Cancer Prognostic Gene Signature Assay together with the nCounter Dx Analysis System is FDA 510(k) cleared for use as a prognostic indicator for distant recurrence of breast cancer.

For more information, please visit [www.nanostring.com](http://www.nanostring.com).

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